





# **IMPLANTAÇÃO DO PROJETO BÁSICO AMBIENTAL UHE SÃO MANOEL**

## **PROGRAMA DE MONITORAMENTO CLIMATOLÓGICO**

### **3<sup>o</sup> RELATÓRIO SEMESTRAL**

3<sup>o</sup> Relatório Semestral, referente ao Acompanhamento do Programa de Monitoramento Climatológico. Período: de 01/08/2015 a 31/12/2015. Licença de Instalação - LI nº. 1017/2014 – IBAMA Processo n. 02001.004420/2007-65

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## **1. INTRODUÇÃO**

O Programa de Monitoramento Climatológico, que está sendo implantado pela E.E.S.M - Empresa de Energia São Manuel, atende às premissas apresentadas no Projeto Básico Ambiental (PBA) da UHE São Manuel.

Este serviço está sendo executado pela empresa VERACRUZ Soluções Geofísicas e Geológicas Ltda e tem por finalidade monitorar o microclima da região de entorno da UHE São Manoel, a qual está sendo construída nas coordenadas 09°11'32" S e 57°03'13" O, no rio São Manoel, divisa entre os estados do Mato Grosso e Pará.

### **1.1. OBJETIVOS**

A implantação deste programa ambiental visa atender aos seguintes objetivos:

- Registro diário dos parâmetros meteorológicos de precipitação, temperatura do ar, intensidade e direção dos ventos, evaporação, umidade relativa do ar, pressão atmosférica e horas de insolação;
- Monitoramento climatológico e análise dos parâmetros meteorológicos citados acima, na região de entorno da UHE São Manoel, em especial na região do reservatório da usina hidrelétrica. O acompanhamento dinâmico desses parâmetros fornecerão dados para análise de mudanças no microclima local, em conjunto com as informações da estação meteorológica de Alta Floresta, contribuindo assim para o aprimoramento da rede de estações meteorológicas na região;
- Caracterização de microclima local a partir da comparação com a tipologia clássica climática da região;
- Disponibilização dos dados coletados a institutos de pesquisas nacionais, como o Instituto Nacional de Meteorologia (INMET) e o Instituto Nacional de Pesquisas Espaciais (INPE);
- Assessorar a Empresa de Energia São Manoel em assuntos relacionados aos estudos meteorológicos na UHE São Manoel, prestando esclarecimentos e atendendo a requerimentos efetuados pelos órgãos ambientais e pela população local.

## 2. ATIVIDADES REALIZADAS NO PERÍODO

As atividades do programa prosseguiram durante os meses de agosto a dezembro de 2015, sendo que a estação climatológica, instalada no canteiro de obras, continuou registrando os dados continuamente a cada 60 minutos, e os enviando por telemetria. Os parâmetros medidos pela estação compreendem todos os indicados no PBA, conforme listado abaixo:

- Precipitação;
- Temperatura do ar;
- Evaporação
- Velocidade e direção dos ventos
- Umidade relativa do ar
- Pressão atmosférica
- Radiação solar

Em atendimento à recomendação do IBAMA, através da Nota Técnica 02001.001703/2015-65 COHID IBAMA uma placa de identificação foi instalada no cercado da estação, e no dia 21 de novembro de 2015 a estação foi realocada para as coordenadas 09°09'53,9"S e 57°01'45,1"W (WGS-84), nas proximidades da ETE (**Figura 2.1**). No ANEXO I deste relatório está apresentada a nota explicativa sobre a necessidade de realocação da estação protocolada junto ao IBAMA, a qual já havia sido encaminhada ao IBAMA antes da relocação.

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**Figura 2.1: Registros fotográficos da estação meteorológica UHE São Manoel, após a realocação.**

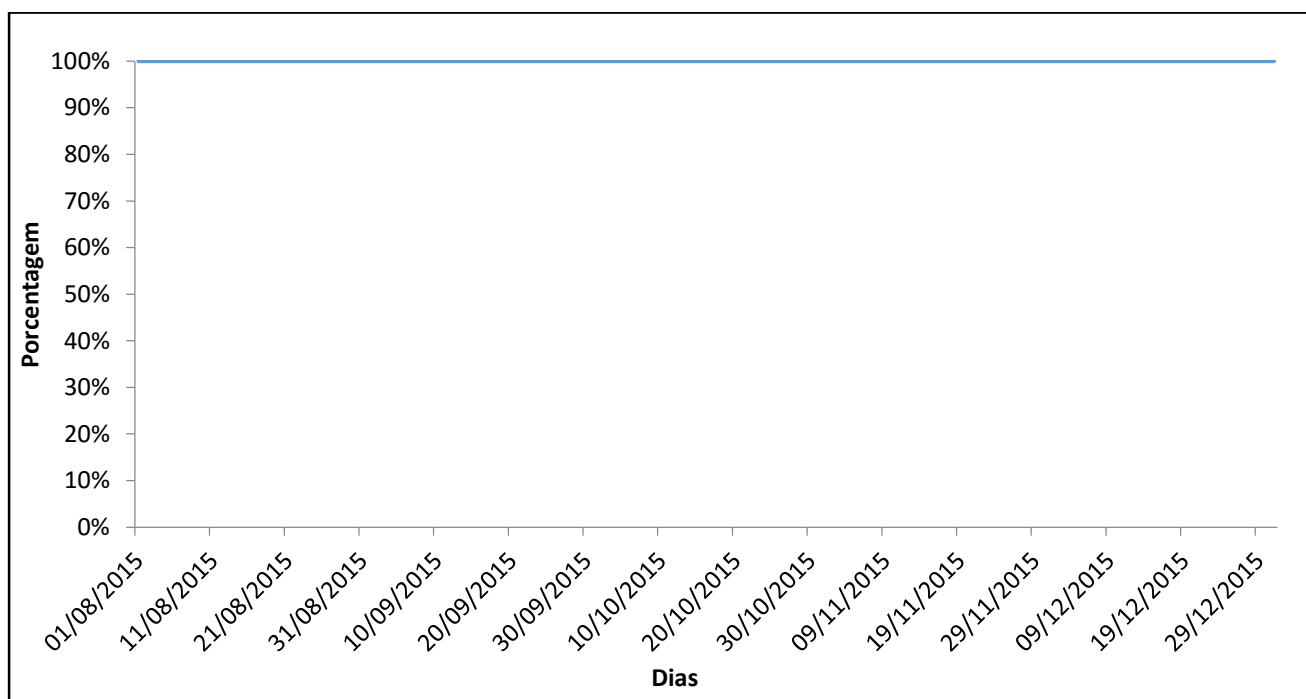
Ressalta-se que a modificação do local da estação não invalida os dados registrados desde o início do monitoramento, já que nenhum fenômeno meteorológico pode acarretar alterações microclimáticas em uma escala espacial tão pequena, inferior a 500m, levando-se em conta que entre os dois pontos não ocorrem alterações geomorfológicas evidentes, como modificação do tipo de superfície e alteração de altitude (AHRENS, 2009).



### 3. ATENDIMENTO AS METAS E INDICADORES DO PROGRAMA

As metas e indicadores do presente Programa Ambiental foram atendidas no período entre o dia 1 de agosto e 31 de dezembro de 2015, conforme apresentado no gráfico da **Figura 3.1** e no **Quadro 3.1**.

No gráfico o nível 100% indica que a totalidade dos equipamentos da estação encontra-se em atividade e 0% representa a desativação da estação por problemas técnicos, com nenhum sensor em funcionamento.



**Figura 3.1: Porcentagem de funcionamento dos sensores da estação UHE São Manoel entre os dias 1 de agosto e 31 de dezembro de 2015.**

**Quadro 3.1: Status das metas indicadores do Programa de Monitoramento Climatológico.**

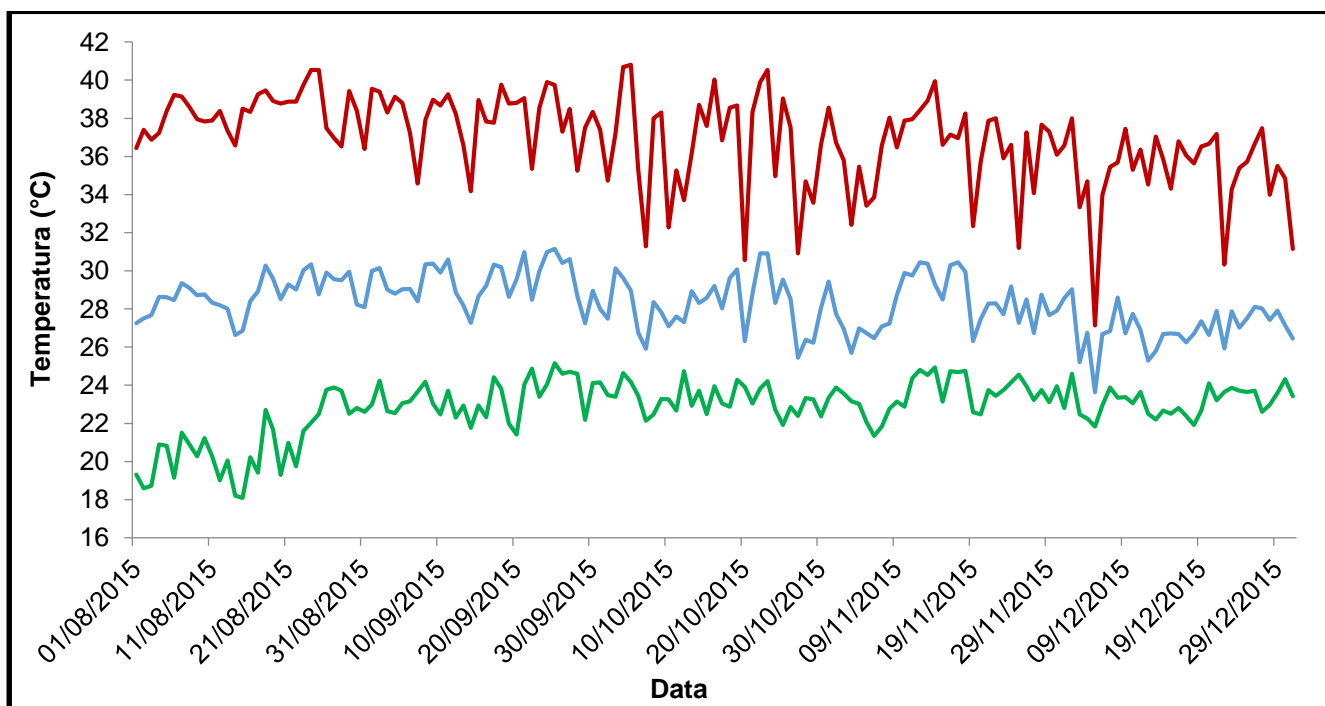
<b>METAS</b>	<b>INDICADORES</b>	<b>STATUS DE ATENDIMENTO</b>
Implantação e início de operação de 01 (uma) estação climatológica nas proximidades do canteiro de obra do barramento em até 180 dias após o início das obras.	Número de falhas mensais e anuais para medição de temperatura do ar, precipitação, umidade relativa do ar, pressão atmosférica, dados de vento e insolação.	Atendido (Instalada estação automatizada monitorando os parâmetros definidos no PBA)
Coletar e registrar em intervalo horário (ou menor) as informações pluviométricas e elaborar boletins mensais para os demais parâmetros monitorados.		Em atendimento (Coleta de dados a cada 60min. Os boletins estão sendo elaborados a partir do mês de junho)
Analisar e consistir os valores correlacionados com as condições anteriores à implantação do empreendimento, de acordo com as falhas aceitas na metodologia.		Não se aplica (A estação ainda tem um curto período de funcionamento)

#### 4. RESULTADOS E DISCUSSÃO

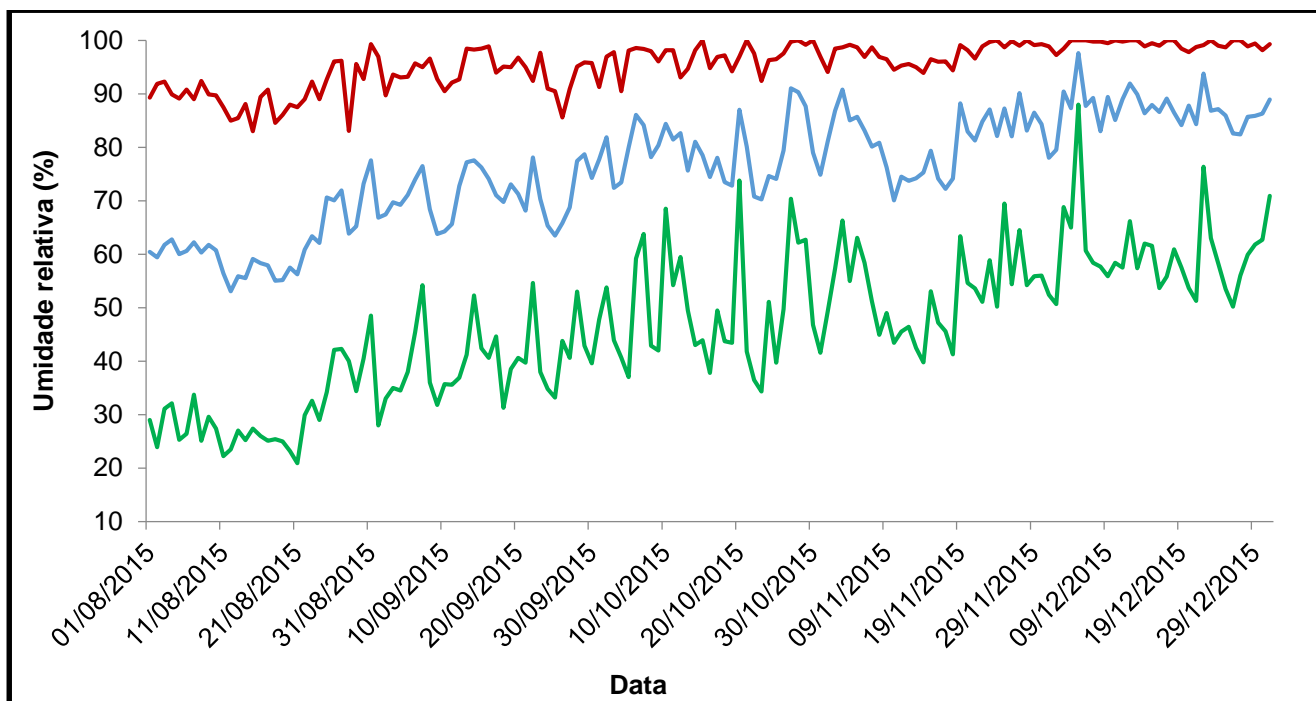
Os resultados dos parâmetros registrados na estação meteorológica UHE São Manoel, entre os dias 1 de agosto e 31 de dezembro de 2015, podem ser observados nos gráficos das **Figuras 4.1 a 4.11** e na Tabela A1 do ANEXO II.

Para facilitar a visualização dos dados optou-se por apresentar os valores médios, mínimos e máximos diários de cada parâmetro, exceto para as medidas de: (i) precipitação, em que foram mostrados os valores acumulados durante o intervalo de um dia (24 horas); (ii) insolação, em que foi apresentado o total de horas de sol durante o dia; e (iii) evapotranspiração, calculada em função da altura da coluna de água evaporada do tanque classe A por dia.

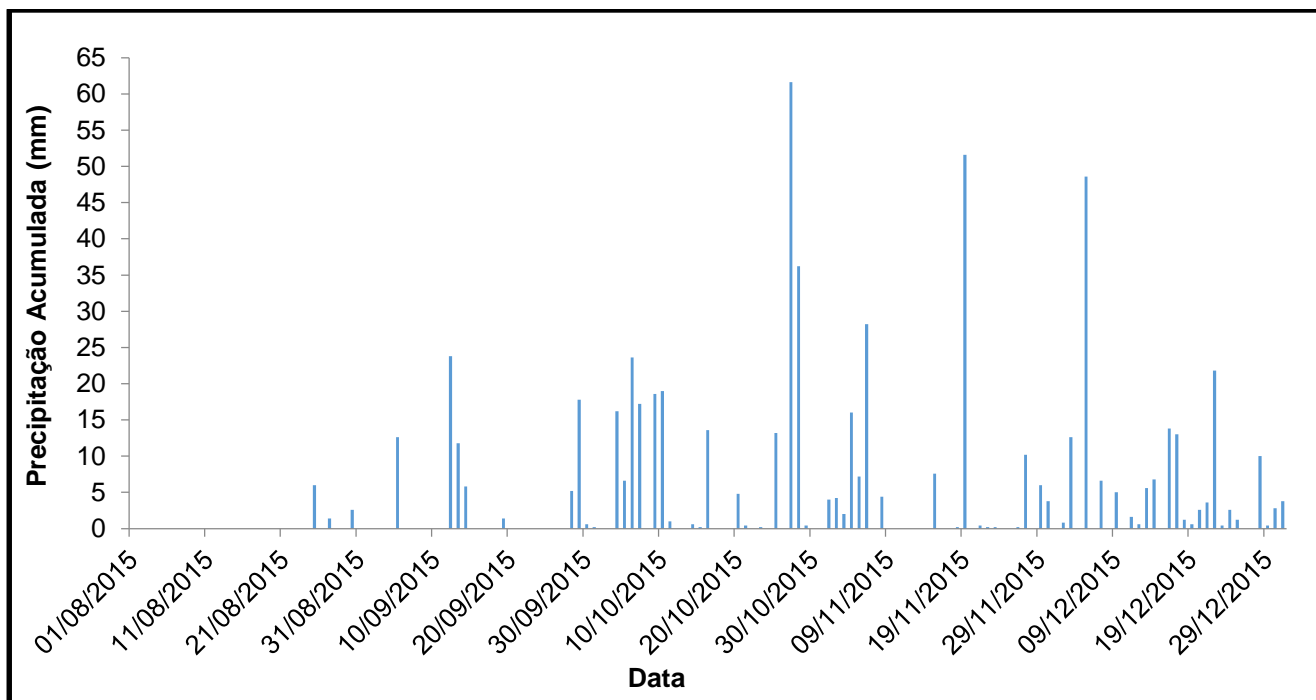
No que se refere aos parâmetros de vento, optou-se por plotar os resultados de velocidade e rajada em dois gráficos distintos: um abrangendo a velocidade média diária do vento; e o outro contendo os valores de rajadas de vento, que correspondem a máxima velocidade do vento medido em um intervalo de tempo. Para a direção do vento, por se tratar de uma grandeza vetorial e não escalar optou-se por não plotar seus respectivos valores máximos e mínimos.



**Figura 4.1: Variação da temperatura mínima, média e máxima diária (°C) na estação meteorológica UHE São Manoel, registro entre os dias 1 de agosto e 31 de dezembro de 2015. A linha vermelha corresponde a máxima diária, a linha azul a média e a linha verde a mínima.**



**Figura 4.2:** Variação da umidade relativa do ar (%) mínima, média e máxima diária na estação meteorológica UHE São Manoel, registro entre os dias 1 de agosto e 31 de dezembro de 2015. A linha vermelha corresponde a máxima diária, a linha azul a média e a linha verde a mínima diária.



**Figura 4.3:** Variação da precipitação acumulada diária (mm) na estação meteorológica UHE São Manoel, registro entre os dias 1 de agosto e 31 de dezembro de 2015.

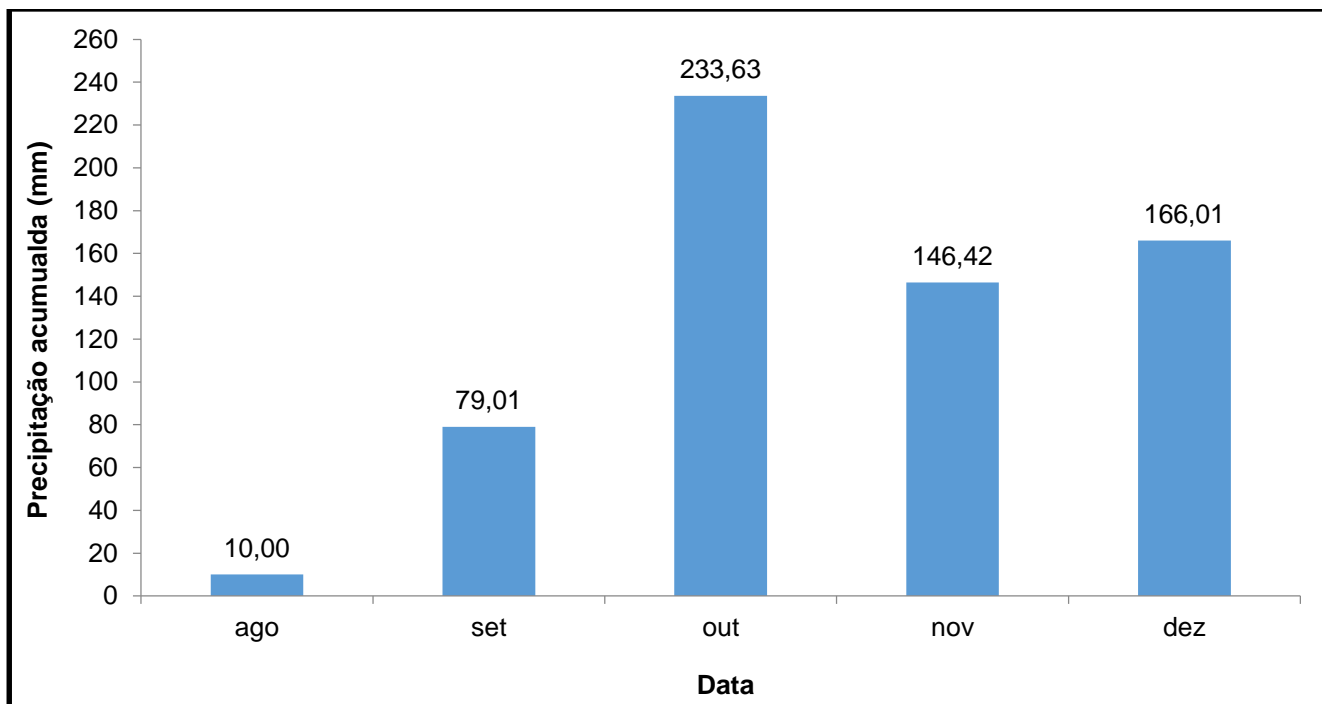


Figura 4.4: Variação da precipitação acumulada mensal (mm) na estação meteorológica UHE São Manoel, registro entre os meses de agosto e dezembro de 2015.

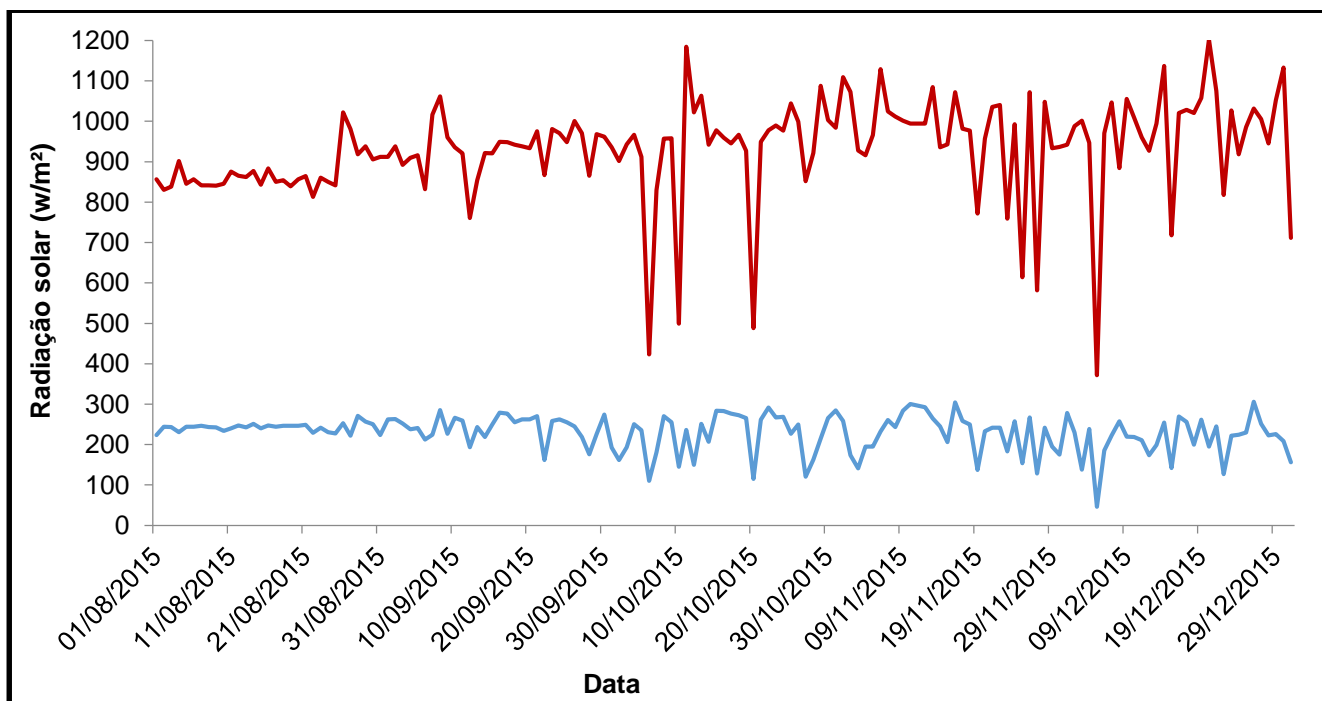
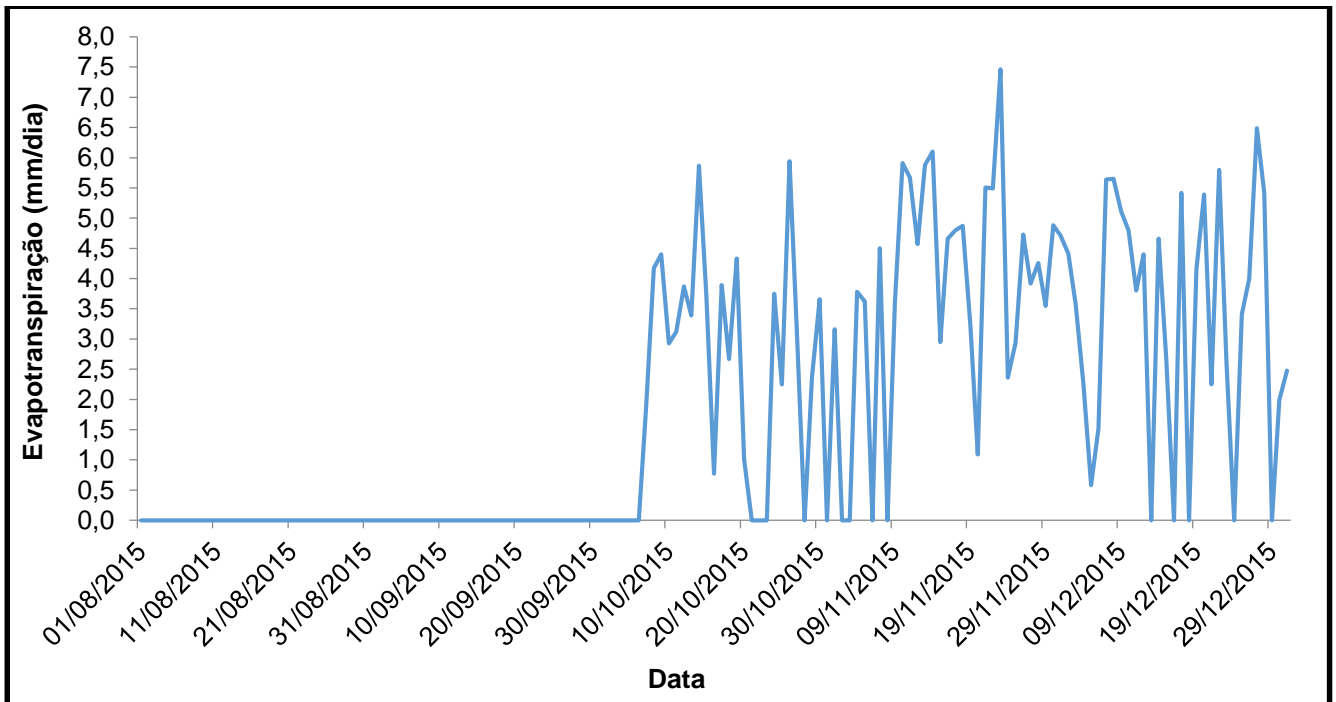
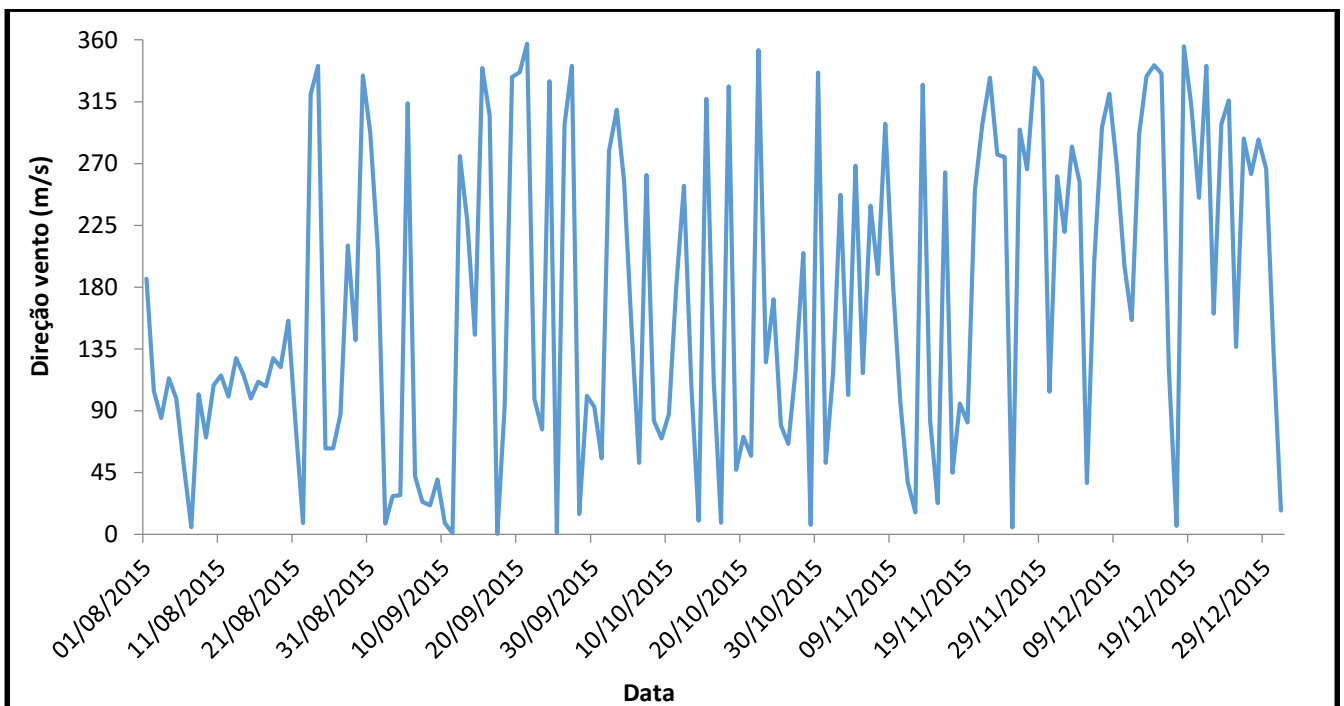


Figura 4.5: Variação da radiação solar ( $W/m^2$ ) mínima, média e máxima diária na estação meteorológica UHE São Manoel, registro entre os dias 1 de agosto e 31 de dezembro de 2015. A linha vermelha corresponde a máxima diária e a linha azul a média diária. O valor mínimo diário corresponde a  $0,63W/m^2$  para todos os dias.

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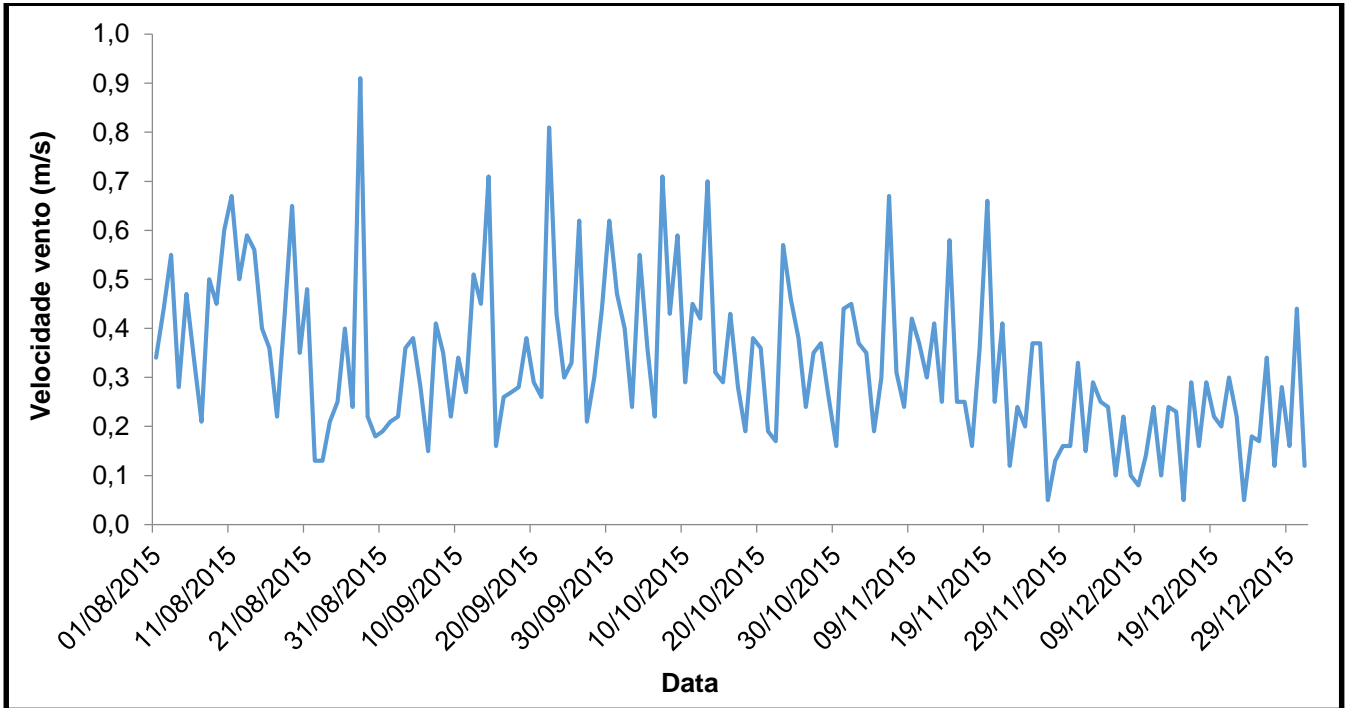


**Figura 4.6: Variação da evapotranspiração (mm/dia) na estação meteorológica UHE São Manoel, registro entre os dias 1 de agosto e 31 de dezembro de 2015. Entre o dia 1 de agosto e o dia 5 de outubro o nível do tanque esteve abaixo do nível do sensor, impossibilitando o registro dos dados.**

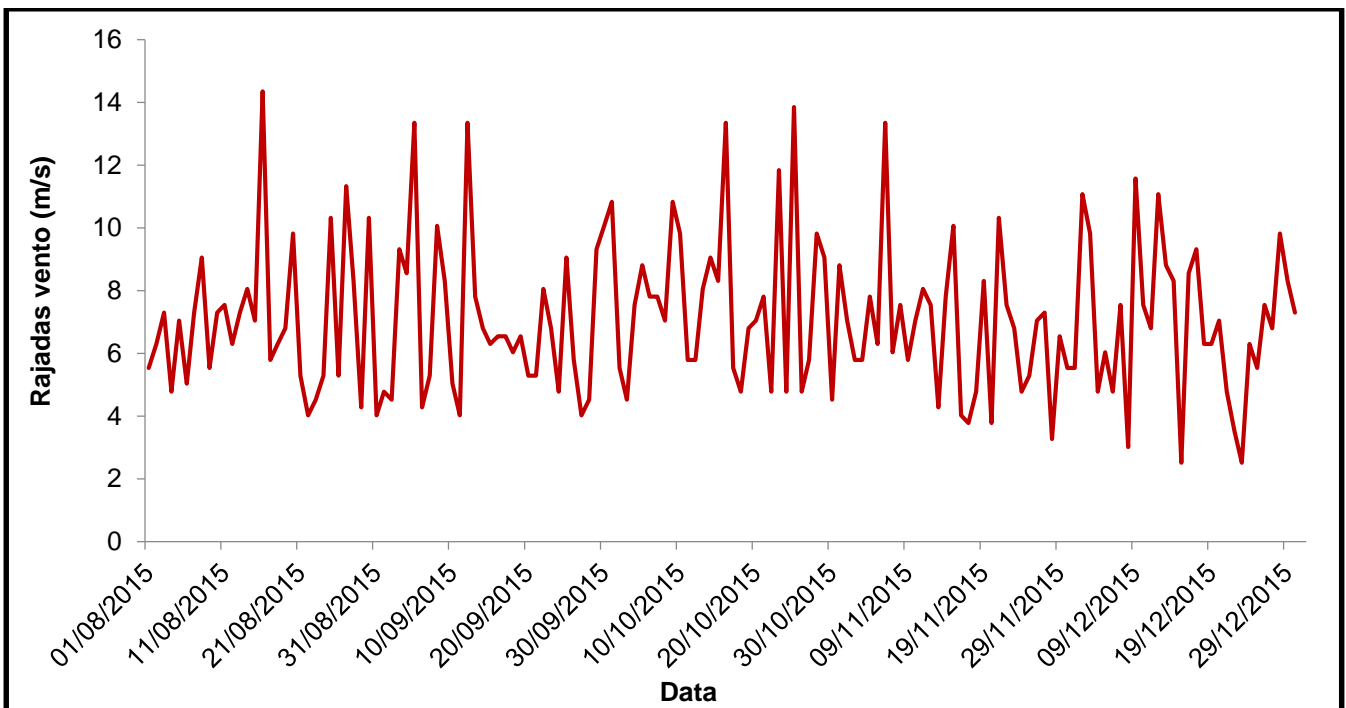


**Figura 4.7: Direção do vento (m/s) na estação meteorológica UHE São Manoel, registro entre os dias 1 de agosto e 31 de dezembro de 2015.**

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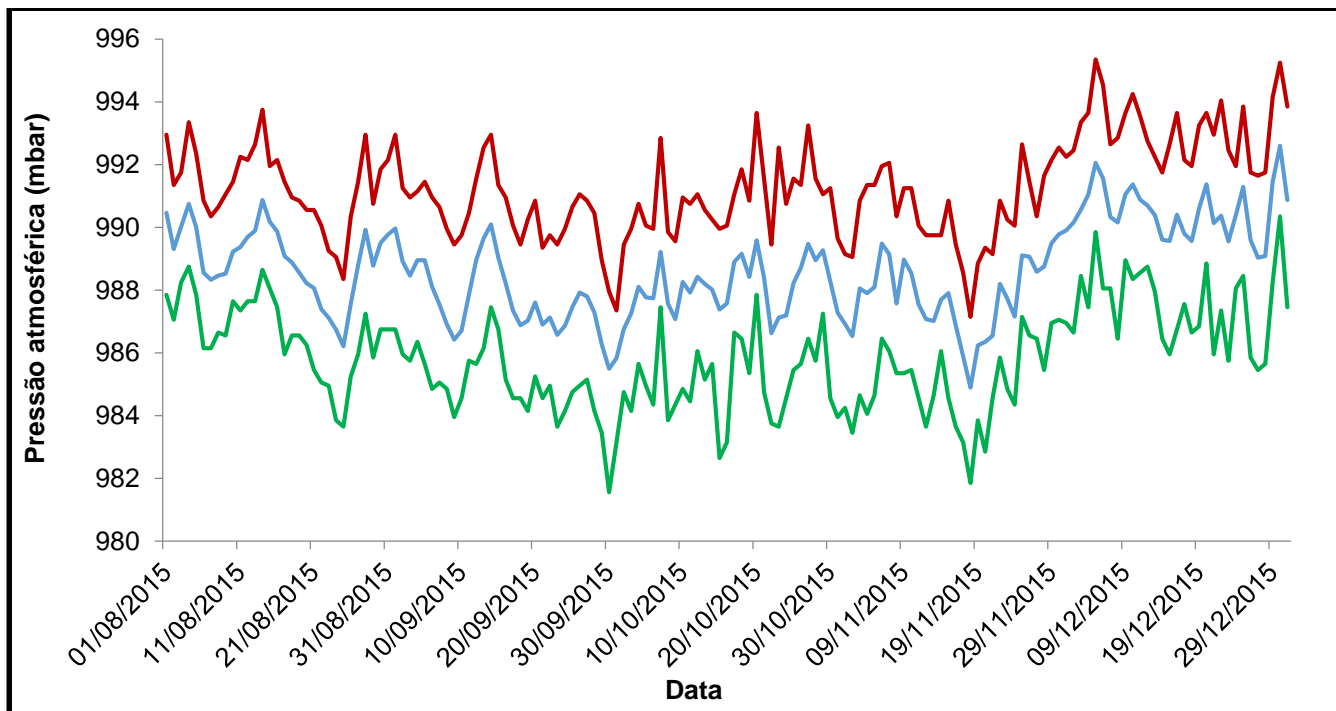


**Figura 4.8: Velocidade do vento média diária (m/s) na estação meteorológica UHE São Manoel, registro entre os dias 1 de agosto e 31 de dezembro de 2015.**

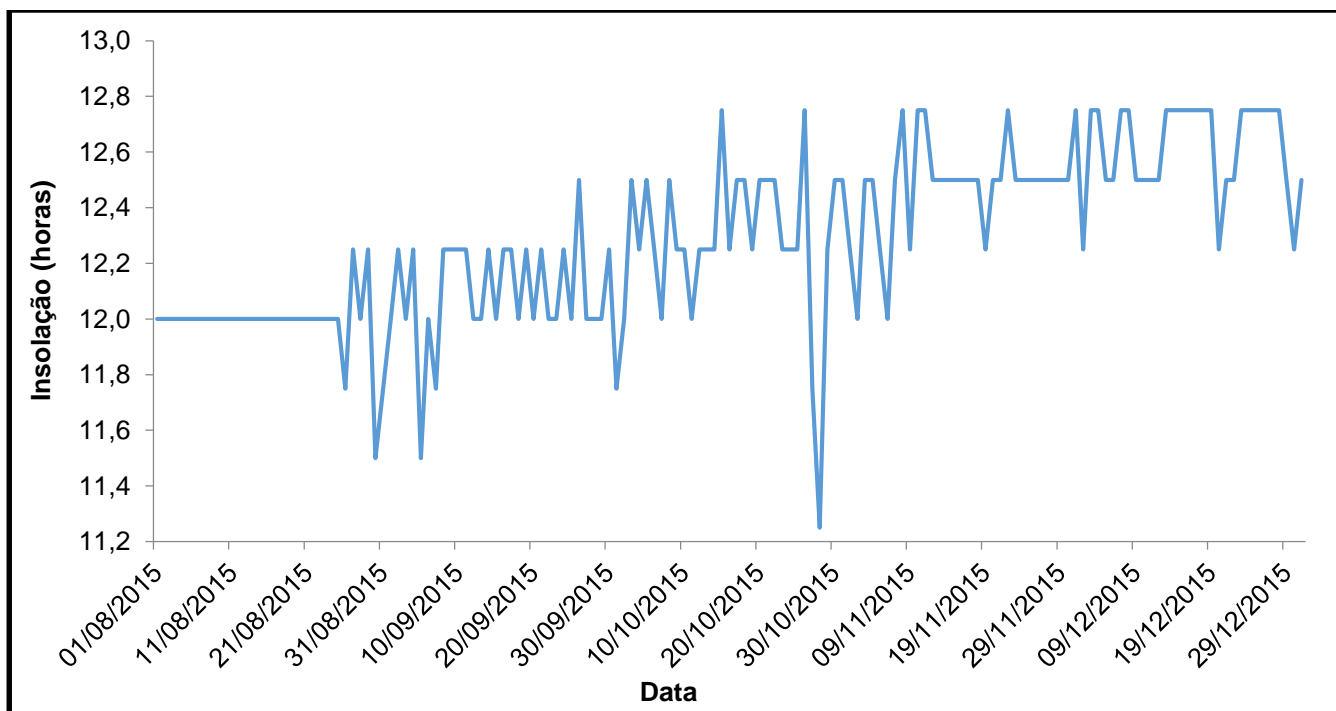


**Figura 4.9: Variação das rajadas de vento diárias (m/s) na estação meteorológica UHE São Manoel, registro entre os dias 1 de agosto e 31 de dezembro de 2015.**

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**Figura 4.10: Variação da pressão atmosférica (mbar) mínima, média e máxima diária na estação meteorológica UHE São Manoel, registro entre os dias 1 de agosto e 31 de dezembro de 2015. A linha vermelha corresponde a máxima diária, a linha azul a média e a linha verde a mínima diária.**



**Figura 4.11: Variação da insolação (horas) na estação meteorológica UHE São Manoel, registro entre os dias 1 de agosto e 31 de dezembro de 2015.**



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Na **Tabela 4.1** são mostrados os valores médios, máximos e mínimos das variáveis registradas pela estação UHE São Manoel entre os meses de agosto e dezembro de 2015. É possível observar que: a temperatura oscilou entre 18,08°C e 40,80°C, com o valor médio de 28,33°C; a umidade relativa do ar variou entre 20,9°C e 100,0°C, com a média de 76,01°C; a precipitação diária acumulada variou entre 0,0 e 61,61mm, sendo que, no período ocorreram 69 dias com precipitação (45,1% dos dias), totalizando 635,07 mm de precipitação acumulada; e a radiação solar variou entre 0,63 e 1201,88 W/m<sup>2</sup>, com média de 230,39W/m<sup>2</sup>.

Os sensores de vento registraram velocidades entre 0,0 e 5,79m/s, com rajadas de até 14,35 m/s (51,6 km/h), e direções entre 0,0 e 358,0 graus, com média de 170,56 graus (componente SSE). Os valores de pressão atmosférica variaram entre 981,55 e 995,35mbar; e a insolação diária variou entre 11,25 e 12,75 horas.

Os valores de evapotranspiração variaram entre 0,0 e 7,46 mm/dia, com o valor médio diário de 1,85 mm/dia.

**Tabela 4.1: Valores médios, máximos e mínimos de cada parâmetro monitorado pela estação meteorológica UHE São Manoel entre os dias 1 de agosto e 31 de dezembro de 2015.**

	TEMPERATURA (°C)	UR (%)	PRECIPITAÇÃO ACUMULADA (mm)	RADIAÇÃO SOLAR (W/m <sup>2</sup> )	EVAPOTRANSPIRAÇÃO (mm/dia)	DIREÇÃO DO VENTO (GRAUS)	VELOCIDADE VENTO (m/s)	RAJADAS DE VENTO (m/s)	PRESSÃO ATMOSFÉRICA (mbar)	INSOLAÇÃO (horas)
Média	28.33	76.01	4.15	230.39	1.85	170.56	0.33	2.02	988.62	12.29
Máxima	40.80	100.00	61.61	1201.88	7.46	358.00	5.79	14.35	995.35	12.75
Mínima	18.08	20.90	0.00	0.63	0.00	0.00	0.00	0.00	981.55	11.25

## **5. JUSTIFICATIVAS (ANÁLISE DE CONFORMIDADE)**

Nesse relatório semestral foram apresentados os resultados do processamento dos dados registrados pela estação meteorológica UHE São Manoel entre os meses de agosto e dezembro de 2015.

Todas as atividades previstas estão sendo executadas conforme previsto no Projeto Básico Ambiental da UHE São Manoel, sendo que não foram verificadas dificuldades técnicas para sua realização.

O monitoramento continua a ser realizado ininterruptamente através dos registros contínuos na estação meteorológica, e em concordância com o PBA do programa os seguintes itens foram atendidos ou estão sendo implantados no programa:

- Elaboração do Plano de Trabalho e Plano de Manutenção Preventiva: elaborado no início dos trabalhos e apresentado no 1º e 2º relatórios semestrais;
- Relatório de Instalação e Calibração: elaborado no início dos trabalhos e apresentado no 1º relatório semestral;
- Banco de dados climatológicos: atualizado periodicamente a cada mês, contendo todos os dados brutos registrados pela estação.
- Tratativas a respeito do Acordo de Cooperação Técnica com o INMET: iniciados a partir de contato telefônico e e-mail no dia 04 de novembro de 2015. Estamos aguardando posicionamento do Instituto.

Quanto ao questionamento levantado no Parecer PAR nº 003941/2015-10 (COHID/IBAMA) sobre a realização de vistoria conjunta para a definição do local de implantação da estação entre as equipes do empreendedor e do INMET, constatou-se junto com o INMET que não essa vistoria não se trata de um procedimento padrão realizado por esse instituto. Sendo assim, uma nota técnica detalhada será enviada para o mesmo, a fim de que o local seja aprovado. Ressalta-se que todas as normas de instalação foram seguidas conforme a Organização Mundial de Meteorologia e o INMET.

Além disso, em abril de 2015 foi iniciado o envio do Boletim Meteorológico Diário da Estação Meteorológica São Manoel, contendo os registros coletados pela estação no dia anterior.

## 6. CRONOGRAMA – PREVISTO E EXECUTADO

No **Quadro 6.1** são apresentadas as atividades previstas e executadas no Programa de Monitoramento Climatológico.

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**Quadro 6.1: Atividades previstas e executadas no âmbito do Programa de Monitoramento Climatológico.**

Atividades		Marcos	Previsto/Realizado	2014				2015				2016				2017				2018							
				T1	T2	T3	T4	T1	T2	T3	T4	T1	T2	T3	T4	T1	T2	T3	T4	T1	T2	T3	T4				
ETAPAS			P/R	IMPLANTAÇÃO																OPERAÇÃO COMERCIAL							
P08 - Programa de Monitoramento Climatológico																											
1	Planejamento, Contratação de serviços e Plano de Trabalho		P																								
			R																								
2	Seleção do local e aquisição, instalação e calibração de equipamentos.		P																								
			R																								
3	Coleta de dados (estação implantada e obtenção de dados de estações já existentes).		P																								
			R																								
4	Análise e consistência dos dados climatológicos das estações utilizadas.		P																								
			R																								
5	Elaboração de Plano de Manutenção Preventiva.		P																								
			R																								
6	Relatório semestral		P																								
			R																								

Previsto	
Realizado	

## 7. ANEXOS

ANEXO I: Nota técnica explicativa da realocação da estação meteorológica.

ANEXO II: Dados brutos registrados pela estação.

## **8. REFERENCIAS BIBLIOGRAFICAS**

Ahrens, C. D., *Meteorology Today: An Introduction to Weather, Climate, and the Environment*, 9th ed., Thomson Brooks/Cole, Belmont, CA, 2009.

## **ANEXO I**

Nota técnica explicativa da realocação da estação meteorológica.

**PROGRAMA DE MONITORAMENTO CLIMATOLÓGICO DA UHE SÃO MANOEL**

**NOTA TÉCNICA Nº 01**

**PROPOSTA DE REALOCAÇÃO DA ESTAÇÃO METEOROLÓGICA UHE SÃO MANOEL**

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Dr. Afonso E. Vasconcelos Lopes – Geofísico

A estação meteorológica UHE São Manoel foi instalada no dia 12 de março de 2015 (**Figura 1**) no canteiro de obras da UHE São Manoel, especificamente nas coordenadas geográficas S 09°09'57,2'' e W 57°01'30,2'', e encontra-se em pleno funcionamento, coletando dados de temperatura do ar (°C), umidade relativa do ar (UR), pressão atmosférica (mbar), precipitação (mm), evaporação (mm/dia), radiação solar (W/m<sup>2</sup>), velocidade (m/s) e direção do vento (graus), a cada 60 minutos e os transmitindo em tempo real.



**Figura 1.** Vista da estação meteorológica UHE São Manoel no dia da instalação, em 12 de março de 2015.

A escolha do local para instalação da estação meteorológica no mês de março de 2015 envolveu a análise da posição das edificações e estruturas presentes no canteiro de obras, tendo em vista que a alocação dessa estação deve priorizar áreas em que a vista do observador possa alcançar grandes distâncias, não devendo haver sombreamento por obstáculos.



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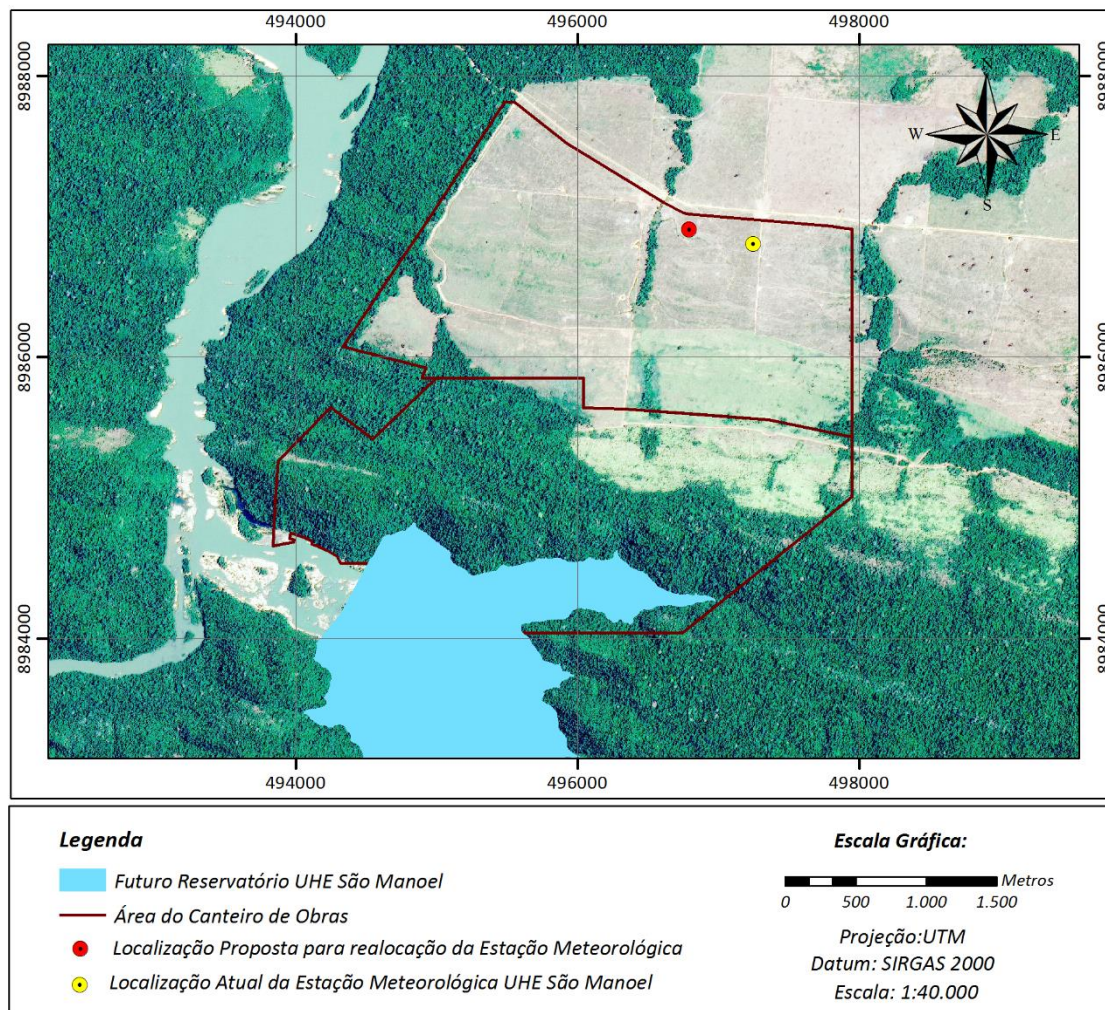
Com o avanço das obras, e alterações nas posições dos alojamentos e escritórios, a estação meteorológica, que nos meses de março e abril encontrava-se isolada, ficou muito próxima à área dos alojamentos instalada no mês de maio de 2015. Dessa forma, a distância de pelo menos 10 vezes a altura do obstáculo mais próximo à estação, recomendada para a coleta dos dados meteorológicos, não foi mantida devido à presença do alojamento.

Com isso, recomenda-se a realocação da estação meteorológica para um local isolado, sem a presença de edificações próximas e com passagem reduzida de pedestres e veículos. Considerando essas premissas, a VERACRUZ juntamente com a equipe técnica da UHE São Manoel, selecionou um novo local situado nas coordenadas geográficas S9° 09' 53,9" W57° 01' 45,1" (WGS-84), nas proximidades da Estação de Tratamento de Esgoto (ETE), conforme documentação fotográfica da **Figura 2** e representação cartográfica da **Figura 3**.



**Figura 2.** Local proposto para a realocação da estação climatológica da UHE São Manoel.

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**Figura 3.** Localização proposta e atual da estação meteorológica UHE São Manoel.

Ressalta-se que a modificação do local da estação não acarretará na invalidação dos dados registrados até o momento, já que nenhum fenômeno meteorológico pode acarretar alterações microclimáticas em uma escala espacial tão pequena, inferior a 500m, levando-se em conta que entre os dois pontos não ocorrem alterações geomorfológicas evidentes, como modificação do tipo de superfície e alteração de altitude (AHRENS, 2009).

Além disso, em atendimento à solicitação do IBAMA, através da Nota Técnica 02001.001703/2015-65 COHID IBAMA, será instalada uma placa de identificação da estação, conforme modelo apresentado na **Figura 4**.

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**Figura 4.** Modelo da placa de identificação da estação meteorológica UHE São Manoel.

Com relação ao Acordo de Cooperação Técnica a ser firmado com o INMET informamos que já foram iniciadas as tratativas, realizadas através de contatos telefônicos e também por e-mail, porém, até o momento ainda não houve resposta do INMET .

Salienta-se que realocação da estação meteorológica será realizada tão logo haja a aprovação da presente proposta pelo IBAMA.

## REFERÊNCIAS

Ahrens, C. D., *Meteorology Today: An Introduction to Weather, Climate, and the Environment*, 9th ed., Thomson Brooks/Cole, Belmont, CA, 2009.

## **ANEXO II**

Dados brutos da estação meteorológica UHE São Manoel, no período entre 1 de agosto e 31 de dezembro de 2015.



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Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
1/8/2015 0:00:00	21.89	78.60	0.00	0.63	140.39	0.00	1.51	991.25	0.00
1/8/2015 1:00:00	21.18	83.40	0.00	0.63	285.00	0.00	0.50	991.55	0.00
1/8/2015 2:00:00	21.39	77.40	0.00	0.63	283.59	0.00	0.00	991.35	0.00
1/8/2015 3:00:00	20.65	83.70	0.00	0.63	283.59	0.00	0.00	990.95	0.00
1/8/2015 4:00:00	20.22	85.10	0.00	0.63	283.59	0.00	0.00	990.45	0.00
1/8/2015 5:00:00	19.75	88.40	0.00	0.63	283.59	0.00	0.00	990.65	0.00
1/8/2015 6:00:00	19.32	89.30	0.00	0.63	283.59	0.00	0.00	991.05	0.00
1/8/2015 7:00:00	19.44	88.70	0.00	1.88	283.59	0.00	0.00	991.45	0.00
1/8/2015 8:00:00	21.58	83.60	0.00	158.13	283.59	0.00	0.00	992.05	0.00
1/8/2015 9:00:00	26.89	67.80	0.00	353.13	172.68	0.00	0.00	992.55	0.00
1/8/2015 10:00:00	29.62	57.70	0.00	531.88	277.98	0.00	2.77	992.95	0.00
1/8/2015 11:00:00	32.43	44.80	0.00	694.38	154.43	0.76	3.53	992.95	0.00
1/8/2015 12:00:00	34.26	41.70	0.00	810.63	190.93	1.51	5.29	992.45	0.00
1/8/2015 13:00:00	35.18	34.50	0.00	856.88	196.55	1.51	5.54	991.55	0.00
1/8/2015 14:00:00	36.01	32.80	0.00	374.38	158.64	1.26	5.04	990.35	0.00
1/8/2015 15:00:00	36.44	30.20	0.00	738.13	189.53	1.01	4.03	988.85	0.00
1/8/2015 16:00:00	35.93	29.00	0.00	433.13	207.78	1.51	4.53	988.25	0.00
1/8/2015 17:00:00	35.66	29.70	0.00	349.38	183.91	0.50	3.78	987.85	0.00
1/8/2015 18:00:00	33.76	32.20	0.00	54.38	172.68	0.00	2.02	987.95	0.00
1/8/2015 19:00:00	30.93	39.60	0.00	0.63	96.87	0.00	0.76	988.25	0.00
1/8/2015 20:00:00	28.62	44.60	0.00	0.63	192.34	0.00	1.01	988.25	0.00
1/8/2015 21:00:00	25.50	62.00	0.00	0.63	241.48	0.00	0.50	988.85	0.00
1/8/2015 22:00:00	24.48	70.30	0.00	0.63	133.37	0.00	0.00	989.45	0.00
1/8/2015 23:00:00	23.09	74.80	0.00	0.63	151.62	0.00	0.00	989.75	0.00
2/8/2015 0:00:00	22.37	78.60	0.00	0.63	113.72	0.00	0.00	989.85	0.00
2/8/2015 1:00:00	20.63	85.80	0.00	0.63	112.31	0.25	5.79	990.35	0.00
2/8/2015 2:00:00	21.53	82.80	0.00	0.63	301.84	0.00	1.01	989.95	0.00
2/8/2015 3:00:00	20.60	87.80	0.00	0.63	131.97	0.00	0.00	989.45	0.00
2/8/2015 4:00:00	20.15	88.40	0.00	0.63	131.97	0.00	0.00	988.95	0.00

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Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
2/8/2015 5:00:00	19.84	88.10	0.00	0.63	130.57	0.00	0.00	988.95	0.00
2/8/2015 6:00:00	19.01	90.70	0.00	0.63	115.12	0.00	0.00	989.25	0.00
2/8/2015 7:00:00	18.60	91.90	0.00	3.13	115.12	0.00	0.00	989.85	0.00
2/8/2015 8:00:00	21.10	84.20	0.00	159.38	115.12	0.00	0.00	990.55	0.00
2/8/2015 9:00:00	25.77	72.00	0.00	356.88	115.12	0.00	3.02	991.05	0.00
2/8/2015 10:00:00	30.50	51.90	0.00	543.13	110.91	0.00	2.27	991.35	0.00
2/8/2015 11:00:00	34.41	40.40	0.00	695.63	110.91	0.00	3.53	991.05	0.00
2/8/2015 12:00:00	35.16	33.80	0.00	806.88	161.45	1.01	4.28	990.55	0.00
2/8/2015 13:00:00	36.72	27.50	0.00	830.63	120.74	2.02	6.30	989.55	0.00
2/8/2015 14:00:00	37.40	23.90	0.00	803.13	119.33	1.76	5.04	988.55	0.00
2/8/2015 15:00:00	36.80	25.30	0.00	683.13	81.43	1.76	4.78	987.65	0.00
2/8/2015 16:00:00	36.77	25.30	0.00	523.13	77.22	2.02	5.29	987.05	0.00
2/8/2015 17:00:00	35.88	26.40	0.00	328.13	94.06	1.51	3.27	987.15	0.00
2/8/2015 18:00:00	33.70	30.20	0.00	111.88	99.68	0.25	1.76	987.45	0.00
2/8/2015 19:00:00	30.77	39.30	0.00	0.63	148.82	0.00	0.76	987.85	0.00
2/8/2015 20:00:00	28.32	48.70	0.00	0.63	123.55	0.00	0.50	988.35	0.00
2/8/2015 21:00:00	25.82	63.40	0.00	0.63	56.16	0.00	0.00	988.85	0.00
2/8/2015 22:00:00	24.68	66.70	0.00	0.63	56.16	0.00	0.00	989.75	0.00
2/8/2015 23:00:00	23.50	73.20	0.00	0.63	73.00	0.00	0.00	990.05	0.00
3/8/2015 0:00:00	20.82	86.60	0.00	0.63	91.26	0.25	2.27	990.25	0.00
3/8/2015 1:00:00	22.20	79.30	0.00	0.63	186.72	0.00	0.76	989.95	0.00
3/8/2015 2:00:00	21.44	81.30	0.00	0.63	106.70	0.00	0.00	989.65	0.00
3/8/2015 3:00:00	20.72	85.50	0.00	0.63	106.70	0.00	0.00	989.55	0.00
3/8/2015 4:00:00	20.53	85.70	0.00	0.63	106.70	0.00	0.00	989.35	0.00
3/8/2015 5:00:00	19.60	89.30	0.00	0.63	106.70	0.00	0.00	989.45	0.00
3/8/2015 6:00:00	18.72	92.30	0.00	0.63	99.68	0.00	1.76	989.95	0.00
3/8/2015 7:00:00	18.99	89.90	0.00	3.13	96.87	0.00	0.00	990.15	0.00
3/8/2015 8:00:00	21.94	81.60	0.00	125.63	101.08	0.00	1.26	990.75	0.00
3/8/2015 9:00:00	24.82	73.90	0.00	346.88	113.72	0.25	1.51	991.55	0.00

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3/8/2015 10:00:00	29.62	59.20	0.00	530.63	99.68	0.25	2.77	991.75	0.00
3/8/2015 11:00:00	32.67	48.60	0.00	684.38	92.66	0.76	3.78	991.65	0.00
3/8/2015 12:00:00	35.13	38.40	0.00	799.38	80.02	1.51	6.04	991.45	0.00
3/8/2015 13:00:00	35.93	33.90	0.00	838.13	87.04	2.02	5.29	990.85	0.00
3/8/2015 14:00:00	36.63	31.70	0.00	828.13	82.83	2.52	7.30	989.85	0.00
3/8/2015 15:00:00	36.88	31.30	0.00	690.63	91.26	2.27	4.53	988.95	0.00
3/8/2015 16:00:00	36.88	31.10	0.00	520.63	63.18	1.26	4.28	988.25	0.00
3/8/2015 17:00:00	36.36	32.30	0.00	339.38	77.22	1.01	4.28	988.25	0.00
3/8/2015 18:00:00	34.10	36.50	0.00	124.38	91.26	1.01	2.27	988.55	0.00
3/8/2015 19:00:00	31.56	44.80	0.00	0.63	209.18	0.00	1.01	988.85	0.00
3/8/2015 20:00:00	29.49	51.20	0.00	0.63	148.82	0.00	0.76	989.55	0.00
3/8/2015 21:00:00	28.05	55.60	0.00	0.63	153.03	0.00	0.00	990.05	0.00
3/8/2015 22:00:00	26.67	65.40	0.00	0.63	153.03	0.00	0.00	990.75	0.00
3/8/2015 23:00:00	24.51	76.50	0.00	0.63	153.03	0.00	0.00	991.05	0.00
4/8/2015 0:00:00	24.17	81.20	0.00	0.63	153.03	0.00	0.00	991.15	0.00
4/8/2015 1:00:00	22.37	86.90	0.00	0.63	147.41	0.00	0.00	991.15	0.00
4/8/2015 2:00:00	22.35	85.30	0.00	0.63	146.01	0.00	0.00	991.25	0.00
4/8/2015 3:00:00	22.32	86.40	0.00	0.63	244.28	0.00	2.77	990.75	0.00
4/8/2015 4:00:00	22.15	87.30	0.00	0.63	272.36	0.00	1.01	990.55	0.00
4/8/2015 5:00:00	21.63	88.40	0.00	0.63	82.83	0.00	0.00	990.45	0.00
4/8/2015 6:00:00	20.89	89.90	0.00	0.63	94.06	0.00	0.00	991.15	0.00
4/8/2015 7:00:00	21.37	89.70	0.00	3.13	301.84	0.00	0.00	991.55	0.00
4/8/2015 8:00:00	22.94	83.80	0.00	153.13	157.24	0.00	0.00	991.85	0.00
4/8/2015 9:00:00	28.07	70.10	0.00	345.63	116.53	0.00	0.00	992.55	0.00
4/8/2015 10:00:00	31.00	52.20	0.00	520.63	153.03	0.00	4.53	993.35	0.00
4/8/2015 11:00:00	33.97	44.80	0.00	676.88	110.91	1.51	3.78	993.05	0.00
4/8/2015 12:00:00	36.01	41.60	0.00	799.38	70.20	0.76	4.78	992.45	0.00
4/8/2015 13:00:00	37.23	36.90	0.00	874.38	65.98	1.01	4.03	991.45	0.00
4/8/2015 14:00:00	37.12	33.40	0.00	901.88	148.82	1.51	4.28	990.45	0.00

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4/8/2015 15:00:00	36.80	33.30	0.00	616.88	168.47	0.25	3.53	989.65	0.00
4/8/2015 16:00:00	35.45	35.30	0.00	388.13	214.80	0.50	2.27	989.15	0.00
4/8/2015 17:00:00	36.99	32.10	0.00	121.88	140.39	0.25	3.27	988.85	0.00
4/8/2015 18:00:00	34.26	37.40	0.00	126.88	94.06	1.01	2.27	988.75	0.00
4/8/2015 19:00:00	31.61	46.90	0.00	0.63	103.89	0.00	1.01	989.25	0.00
4/8/2015 20:00:00	30.47	47.40	0.00	0.63	158.64	0.00	0.76	989.05	0.00
4/8/2015 21:00:00	26.70	67.20	0.00	0.63	154.43	0.00	0.00	989.85	0.00
4/8/2015 22:00:00	26.23	73.60	0.00	0.63	119.33	0.00	0.00	989.95	0.00
4/8/2015 23:00:00	25.14	75.90	0.00	0.63	119.33	0.00	0.00	990.25	0.00
5/8/2015 0:00:00	24.20	76.40	0.00	0.63	119.33	0.00	0.25	990.45	0.00
5/8/2015 1:00:00	22.11	86.70	0.00	0.63	39.31	0.00	0.00	990.75	0.00
5/8/2015 2:00:00	22.75	83.10	0.00	0.63	343.96	0.00	0.00	990.15	0.00
5/8/2015 3:00:00	22.39	84.40	0.00	0.63	219.01	0.00	0.00	989.95	0.00
5/8/2015 4:00:00	21.87	85.80	0.00	0.63	219.01	0.00	0.00	989.75	0.00
5/8/2015 5:00:00	21.56	87.20	0.00	0.63	219.01	0.00	0.00	989.75	0.00
5/8/2015 6:00:00	21.27	89.10	0.00	0.63	219.01	0.00	0.00	990.45	0.00
5/8/2015 7:00:00	20.82	88.70	0.00	3.13	219.01	0.00	0.00	990.65	0.00
5/8/2015 8:00:00	22.85	83.80	0.00	159.38	219.01	0.00	0.00	991.35	0.00
5/8/2015 9:00:00	27.19	71.40	0.00	353.13	116.53	0.00	0.00	992.05	0.00
5/8/2015 10:00:00	31.89	55.30	0.00	543.13	342.56	0.00	0.00	992.35	0.00
5/8/2015 11:00:00	33.57	49.30	0.00	690.63	80.02	0.00	4.03	992.25	0.00
5/8/2015 12:00:00	34.84	41.80	0.00	809.38	85.64	1.51	4.78	991.85	0.00
5/8/2015 13:00:00	36.74	31.80	0.00	845.63	110.91	2.27	5.54	990.75	0.00
5/8/2015 14:00:00	37.34	28.70	0.00	799.38	99.68	2.02	6.04	989.75	0.00
5/8/2015 15:00:00	38.39	25.30	0.00	681.88	94.06	2.02	7.05	988.45	0.00
5/8/2015 16:00:00	37.92	26.00	0.00	516.88	89.85	1.76	4.53	988.05	0.00
5/8/2015 17:00:00	37.62	26.50	0.00	323.13	136.18	0.76	3.27	987.85	0.00
5/8/2015 18:00:00	34.33	31.10	0.00	131.88	89.85	1.01	2.52	987.95	0.00
5/8/2015 19:00:00	31.66	38.50	0.00	0.63	98.28	0.00	0.76	988.15	0.00



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Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
5/8/2015 20:00:00	29.72	43.80	0.00	0.63	164.26	0.00	0.50	988.75	0.00
5/8/2015 21:00:00	27.43	57.40	0.00	0.63	154.43	0.00	1.01	989.05	0.00
5/8/2015 22:00:00	25.09	70.30	0.00	0.63	247.09	0.00	0.00	989.65	0.00
5/8/2015 23:00:00	23.28	77.90	0.00	0.63	234.46	0.00	0.00	989.95	0.00
6/8/2015 0:00:00	22.71	80.50	0.00	0.63	234.46	0.00	0.00	989.65	0.00
6/8/2015 1:00:00	22.44	76.60	0.00	0.63	162.86	0.00	0.00	989.55	0.00
6/8/2015 2:00:00	21.44	83.60	0.00	0.63	174.09	0.00	0.00	989.25	0.00
6/8/2015 3:00:00	20.96	85.50	0.00	0.63	256.92	0.00	0.00	988.95	0.00
6/8/2015 4:00:00	20.39	86.50	0.00	0.63	255.51	0.00	0.00	988.65	0.00
6/8/2015 5:00:00	19.91	88.60	0.00	0.63	255.51	0.00	0.00	988.55	0.00
6/8/2015 6:00:00	19.48	89.60	0.00	0.63	255.51	0.00	0.00	988.85	0.00
6/8/2015 7:00:00	19.15	90.80	0.00	3.13	255.51	0.00	0.00	989.15	0.00
6/8/2015 8:00:00	21.15	86.60	0.00	160.63	255.51	0.00	0.00	989.95	0.00
6/8/2015 9:00:00	26.67	71.80	0.00	354.38	349.58	0.00	0.00	990.65	0.00
6/8/2015 10:00:00	30.57	51.00	0.00	535.63	242.88	0.00	3.53	990.85	0.00
6/8/2015 11:00:00	32.54	46.80	0.00	688.13	254.11	0.76	2.77	990.85	0.00
6/8/2015 12:00:00	36.85	34.50	0.00	815.63	82.83	0.50	4.53	989.95	0.00
6/8/2015 13:00:00	36.72	32.00	0.00	856.88	82.83	2.27	4.78	988.95	0.00
6/8/2015 14:00:00	37.70	30.70	0.00	798.13	65.98	1.51	5.04	987.75	0.00
6/8/2015 15:00:00	39.23	26.40	0.00	678.13	56.16	1.01	3.78	986.65	0.00
6/8/2015 16:00:00	38.70	29.60	0.00	518.13	235.86	0.25	3.53	986.25	0.00
6/8/2015 17:00:00	36.80	32.50	0.00	318.13	299.04	1.51	3.27	986.15	0.00
6/8/2015 18:00:00	35.21	34.50	0.00	128.13	287.80	0.25	1.76	986.25	0.00
6/8/2015 19:00:00	32.38	43.50	0.00	0.63	262.53	0.00	1.51	986.65	0.00
6/8/2015 20:00:00	30.27	48.50	0.00	0.63	164.26	0.00	1.51	986.95	0.00
6/8/2015 21:00:00	29.34	59.90	0.00	0.63	168.47	0.00	0.50	987.65	0.00
6/8/2015 22:00:00	26.52	72.30	0.00	0.63	197.95	0.00	0.00	988.45	0.00
6/8/2015 23:00:00	25.94	73.00	0.00	0.63	196.55	0.00	1.26	988.65	0.00
7/8/2015 0:00:00	24.90	77.60	0.00	0.63	189.53	0.00	0.25	988.65	0.00

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
7/8/2015 1:00:00	24.03	76.30	0.00	0.63	87.04	0.00	1.26	988.45	0.00
7/8/2015 2:00:00	22.61	86.10	0.00	0.63	82.83	0.00	0.00	988.25	0.00
7/8/2015 3:00:00	23.11	82.00	0.00	0.63	82.83	0.00	0.00	987.85	0.00
7/8/2015 4:00:00	22.11	87.20	0.00	0.63	82.83	0.00	0.00	987.75	0.00
7/8/2015 5:00:00	22.27	84.10	0.00	0.63	82.83	0.00	0.00	987.75	0.00
7/8/2015 6:00:00	21.51	88.20	0.00	0.63	84.24	0.00	0.00	988.35	0.00
7/8/2015 7:00:00	21.75	89.00	0.00	3.13	84.24	0.00	0.00	988.85	0.00
7/8/2015 8:00:00	22.82	85.80	0.00	136.88	84.24	0.00	0.00	989.55	0.00
7/8/2015 9:00:00	27.65	69.00	0.00	336.88	290.61	0.00	0.00	990.15	0.00
7/8/2015 10:00:00	31.13	57.00	0.00	516.88	290.61	0.00	0.25	990.35	0.00
7/8/2015 11:00:00	34.73	47.10	0.00	671.88	339.75	0.00	3.02	989.95	0.00
7/8/2015 12:00:00	35.96	46.10	0.00	789.38	16.85	0.25	3.27	989.95	0.00
7/8/2015 13:00:00	36.31	44.90	0.00	841.88	338.35	0.76	3.53	988.95	0.00
7/8/2015 14:00:00	37.95	38.10	0.00	799.38	51.95	0.76	4.53	987.65	0.00
7/8/2015 15:00:00	37.87	36.00	0.00	699.38	22.46	1.01	5.04	986.55	0.00
7/8/2015 16:00:00	39.15	33.70	0.00	568.13	14.04	0.50	3.27	986.15	0.00
7/8/2015 17:00:00	37.23	36.00	0.00	378.13	155.84	0.76	7.30	986.45	0.00
7/8/2015 18:00:00	35.08	38.90	0.00	169.38	280.78	1.01	3.02	986.55	0.00
7/8/2015 19:00:00	33.29	42.40	0.00	0.63	138.99	0.00	1.26	987.25	0.00
7/8/2015 20:00:00	31.03	46.80	0.00	0.63	193.74	0.00	0.00	987.75	0.00
7/8/2015 21:00:00	28.47	65.30	0.00	0.63	192.34	0.00	0.00	988.45	0.00
7/8/2015 22:00:00	27.14	68.60	0.00	0.63	196.55	0.00	0.00	989.05	0.00
7/8/2015 23:00:00	26.43	67.30	0.00	0.63	211.99	0.00	0.00	989.25	0.00
8/8/2015 0:00:00	24.61	77.90	0.00	0.63	68.79	0.00	0.00	989.15	0.00
8/8/2015 1:00:00	24.48	78.40	0.00	0.63	174.09	0.00	0.00	989.15	0.00
8/8/2015 2:00:00	24.03	79.60	0.00	0.63	141.80	0.00	0.00	988.45	0.00
8/8/2015 3:00:00	23.02	85.50	0.00	0.63	141.80	0.00	0.00	987.95	0.00
8/8/2015 4:00:00	23.16	84.10	0.00	0.63	141.80	0.00	0.00	987.85	0.00
8/8/2015 5:00:00	22.51	86.60	0.00	0.63	270.96	0.00	0.00	987.75	0.00

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
8/8/2015 6:00:00	21.13	92.10	0.00	0.63	147.41	0.00	0.00	988.35	0.00
8/8/2015 7:00:00	20.89	92.40	0.00	3.13	120.74	0.00	0.00	988.65	0.00
8/8/2015 8:00:00	23.11	86.10	0.00	146.88	120.74	0.00	0.00	989.75	0.00
8/8/2015 9:00:00	27.73	72.60	0.00	339.38	99.68	0.00	0.00	990.15	0.00
8/8/2015 10:00:00	32.38	56.90	0.00	518.13	300.44	0.00	0.00	990.45	0.00
8/8/2015 11:00:00	33.81	49.90	0.00	678.13	82.83	0.50	4.28	990.65	0.00
8/8/2015 12:00:00	35.21	40.80	0.00	803.13	95.47	1.51	4.53	990.35	0.00
8/8/2015 13:00:00	36.28	37.00	0.00	841.88	80.02	2.27	5.54	989.45	0.00
8/8/2015 14:00:00	37.37	33.60	0.00	834.38	71.60	2.27	9.07	987.85	0.00
8/8/2015 15:00:00	38.59	25.10	0.00	714.38	122.14	2.02	6.30	986.95	0.00
8/8/2015 16:00:00	38.37	26.20	0.00	525.63	153.03	1.26	5.79	986.65	0.00
8/8/2015 17:00:00	36.96	27.00	0.00	324.38	112.31	1.76	4.28	986.75	0.00
8/8/2015 18:00:00	34.84	31.10	0.00	113.13	143.20	0.50	2.52	986.95	0.00
8/8/2015 19:00:00	31.87	40.10	0.00	0.63	143.20	0.00	1.01	987.05	0.00
8/8/2015 20:00:00	30.29	45.80	0.00	0.63	183.91	0.00	0.76	987.35	0.00
8/8/2015 21:00:00	28.10	57.20	0.00	0.63	292.02	0.00	0.25	987.95	0.00
8/8/2015 22:00:00	25.21	71.20	0.00	0.63	244.28	0.00	0.25	988.65	0.00
8/8/2015 23:00:00	24.51	70.40	0.00	0.63	119.33	0.00	0.50	988.75	0.00
9/8/2015 0:00:00	22.11	85.90	0.00	0.63	96.87	0.25	1.51	988.95	0.00
9/8/2015 1:00:00	23.26	80.80	0.00	0.63	210.59	0.00	0.00	988.85	0.00
9/8/2015 2:00:00	22.68	83.00	0.00	0.63	210.59	0.00	0.00	988.15	0.00
9/8/2015 3:00:00	23.67	78.30	0.00	0.63	213.40	0.00	1.01	987.95	0.00
9/8/2015 4:00:00	22.82	80.10	0.00	0.63	160.05	0.00	0.25	987.95	0.00
9/8/2015 5:00:00	21.20	87.40	0.00	0.63	155.84	0.00	0.00	987.95	0.00
9/8/2015 6:00:00	21.06	88.30	0.00	0.63	155.84	0.00	0.00	988.35	0.00
9/8/2015 7:00:00	20.27	89.90	0.00	3.13	178.30	0.00	1.51	989.25	0.00
9/8/2015 8:00:00	22.08	87.00	0.00	156.88	105.29	0.00	1.26	989.85	0.00
9/8/2015 9:00:00	26.35	73.90	0.00	348.13	105.29	0.25	3.02	990.45	0.00
9/8/2015 10:00:00	31.33	56.70	0.00	534.38	106.70	0.25	2.27	991.05	0.00

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
9/8/2015 11:00:00	35.29	39.20	0.00	684.38	78.62	0.25	4.78	990.65	0.00
9/8/2015 12:00:00	34.52	36.40	0.00	806.88	78.62	2.27	5.54	990.35	0.00
9/8/2015 13:00:00	36.34	34.20	0.00	840.63	88.45	1.76	5.04	989.35	0.00
9/8/2015 14:00:00	37.62	29.60	0.00	806.88	64.58	1.51	5.54	988.15	0.00
9/8/2015 15:00:00	37.45	30.30	0.00	675.63	71.60	2.27	4.78	987.35	0.00
9/8/2015 16:00:00	37.95	30.50	0.00	520.63	43.52	1.51	3.53	986.55	0.00
9/8/2015 17:00:00	36.17	34.00	0.00	318.13	341.15	0.50	2.77	986.55	0.00
9/8/2015 18:00:00	34.94	37.30	0.00	125.63	320.09	0.00	2.02	986.85	0.00
9/8/2015 19:00:00	32.30	42.40	0.00	0.63	103.89	0.00	1.26	986.65	0.00
9/8/2015 20:00:00	30.24	58.10	0.00	0.63	123.55	0.00	0.00	987.45	0.00
9/8/2015 21:00:00	27.26	73.00	0.00	0.63	70.20	0.00	0.00	988.05	0.00
9/8/2015 22:00:00	26.57	71.90	0.00	0.63	70.20	0.00	0.00	988.85	0.00
9/8/2015 23:00:00	25.60	73.20	0.00	0.63	70.20	0.00	0.00	988.95	0.00
10/8/2015 0:00:00	24.92	71.80	0.00	0.63	108.10	0.00	2.27	989.25	0.00
10/8/2015 1:00:00	22.90	83.90	0.00	0.63	120.74	0.00	1.26	989.15	0.00
10/8/2015 2:00:00	23.06	83.60	0.00	0.63	115.12	0.00	0.00	988.55	0.00
10/8/2015 3:00:00	22.63	86.40	0.00	0.63	71.60	0.00	0.00	988.25	0.00
10/8/2015 4:00:00	22.68	85.90	0.00	0.63	68.79	0.00	0.00	987.95	0.00
10/8/2015 5:00:00	21.84	88.40	0.00	0.63	68.79	0.00	0.00	988.35	0.00
10/8/2015 6:00:00	21.82	87.50	0.00	0.63	112.31	0.00	0.00	988.55	0.00
10/8/2015 7:00:00	21.22	89.70	0.00	3.13	112.31	0.00	0.00	989.25	0.00
10/8/2015 8:00:00	22.39	86.80	0.00	148.13	112.31	0.00	0.00	989.55	0.00
10/8/2015 9:00:00	27.73	71.30	0.00	330.63	108.10	0.00	0.00	990.05	0.00
10/8/2015 10:00:00	31.13	54.10	0.00	531.88	91.26	0.00	4.03	991.05	0.00
10/8/2015 11:00:00	33.81	51.00	0.00	681.88	74.41	1.26	4.78	991.45	0.00
10/8/2015 12:00:00	35.24	37.60	0.00	798.13	92.66	2.02	6.55	991.05	0.00
10/8/2015 13:00:00	36.39	29.50	0.00	845.63	102.49	3.27	7.30	990.05	0.00
10/8/2015 14:00:00	37.59	27.40	0.00	796.88	99.68	3.27	7.30	989.15	0.00
10/8/2015 15:00:00	37.84	28.20	0.00	659.38	141.80	1.76	5.54	988.25	0.00

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
10/8/2015 16:00:00	36.85	32.00	0.00	511.88	117.93	1.26	4.28	987.65	0.00
10/8/2015 17:00:00	35.77	32.20	0.00	194.38	144.60	1.01	3.78	987.85	0.00
10/8/2015 18:00:00	33.91	39.20	0.00	104.38	165.66	0.50	2.02	988.15	0.00
10/8/2015 19:00:00	31.48	44.90	0.00	0.63	155.84	0.00	1.01	988.95	0.00
10/8/2015 20:00:00	29.64	52.00	0.00	0.63	172.68	0.00	0.50	989.15	0.00
10/8/2015 21:00:00	28.35	54.10	0.00	0.63	165.66	0.00	0.50	989.95	0.00
10/8/2015 22:00:00	26.40	67.20	0.00	0.63	138.99	0.00	0.00	989.95	0.00
10/8/2015 23:00:00	24.99	73.50	0.00	0.63	138.99	0.00	0.00	989.95	0.00
11/8/2015 0:00:00	24.27	76.10	0.00	0.63	138.99	0.00	0.00	989.65	0.00
11/8/2015 1:00:00	23.93	73.70	0.00	0.63	138.99	0.00	0.00	989.45	0.00
11/8/2015 2:00:00	23.02	77.70	0.00	0.63	138.99	0.00	0.00	989.15	0.00
11/8/2015 3:00:00	21.80	83.90	0.00	0.63	134.78	0.00	0.00	988.85	0.00
11/8/2015 4:00:00	22.13	83.80	0.00	0.63	134.78	0.00	0.00	988.65	0.00
11/8/2015 5:00:00	21.20	85.20	0.00	0.63	134.78	0.00	0.00	988.75	0.00
11/8/2015 6:00:00	21.29	84.60	0.00	0.63	204.97	0.00	0.00	989.05	0.00
11/8/2015 7:00:00	20.27	87.50	0.00	3.13	134.78	0.00	0.00	990.05	0.00
11/8/2015 8:00:00	22.13	83.80	0.00	160.63	161.45	0.00	0.00	990.55	0.00
11/8/2015 9:00:00	26.84	68.60	0.00	354.38	92.66	0.00	0.00	991.45	0.00
11/8/2015 10:00:00	30.02	58.80	0.00	539.38	89.85	0.00	3.53	992.25	0.00
11/8/2015 11:00:00	33.05	43.40	0.00	700.63	95.47	2.27	6.55	991.45	0.00
11/8/2015 12:00:00	35.64	28.00	0.00	823.13	116.53	2.77	7.05	990.75	0.00
11/8/2015 13:00:00	36.93	26.00	0.00	859.38	119.33	2.27	5.54	989.85	0.00
11/8/2015 14:00:00	37.40	22.70	0.00	875.63	105.29	2.52	7.30	988.95	0.00
11/8/2015 15:00:00	37.89	22.20	0.00	689.38	113.72	2.52	7.55	988.15	0.00
11/8/2015 16:00:00	37.23	23.20	0.00	528.13	134.78	1.76	5.04	987.35	0.00
11/8/2015 17:00:00	36.04	27.60	0.00	108.13	133.37	1.01	3.78	987.65	0.00
11/8/2015 18:00:00	34.20	28.70	0.00	123.13	131.97	1.01	3.53	987.65	0.00
11/8/2015 19:00:00	31.10	36.10	0.00	0.63	158.64	0.00	1.26	988.15	0.00
11/8/2015 20:00:00	29.04	41.50	0.00	0.63	148.82	0.00	0.76	988.65	0.00

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
11/8/2015 21:00:00	26.43	54.50	0.00	0.63	206.38	0.00	0.00	989.15	0.00
11/8/2015 22:00:00	24.51	66.20	0.00	0.63	165.66	0.00	1.01	989.35	0.00
11/8/2015 23:00:00	23.62	70.90	0.00	0.63	85.64	0.00	0.00	989.95	0.00
12/8/2015 0:00:00	22.51	75.20	0.00	0.63	109.51	0.00	2.77	990.15	0.00
12/8/2015 1:00:00	22.78	73.10	0.00	0.63	109.51	0.00	0.25	989.95	0.00
12/8/2015 2:00:00	22.97	68.90	0.00	0.63	147.41	0.00	1.01	989.55	0.00
12/8/2015 3:00:00	21.44	73.30	0.00	0.63	153.03	0.00	1.51	989.05	0.00
12/8/2015 4:00:00	20.75	76.60	0.00	0.63	102.49	0.00	1.26	989.05	0.00
12/8/2015 5:00:00	20.13	82.60	0.00	0.63	127.76	0.00	0.00	988.85	0.00
12/8/2015 6:00:00	20.20	80.00	0.00	0.63	126.35	0.00	3.02	989.65	0.00
12/8/2015 7:00:00	19.01	85.00	0.00	4.38	349.58	0.00	1.76	990.35	0.00
12/8/2015 8:00:00	21.41	78.90	0.00	166.88	289.21	0.00	2.02	991.25	0.00
12/8/2015 9:00:00	25.04	65.50	0.00	361.88	102.49	0.50	2.02	991.55	0.00
12/8/2015 10:00:00	30.70	50.60	0.00	526.88	112.31	0.50	3.02	992.15	0.00
12/8/2015 11:00:00	33.99	37.00	0.00	703.13	108.10	1.51	6.30	992.15	0.00
12/8/2015 12:00:00	35.26	30.80	0.00	816.88	106.70	2.52	6.30	991.25	0.00
12/8/2015 13:00:00	36.74	26.30	0.00	865.63	96.87	2.77	6.30	990.25	0.00
12/8/2015 14:00:00	37.87	24.30	0.00	818.13	103.89	1.26	4.78	989.05	0.00
12/8/2015 15:00:00	37.32	25.20	0.00	698.13	82.83	2.02	5.29	988.55	0.00
12/8/2015 16:00:00	38.39	23.50	0.00	531.88	54.75	0.50	3.53	987.95	0.00
12/8/2015 17:00:00	37.43	24.60	0.00	323.13	174.09	0.25	3.27	987.65	0.00
12/8/2015 18:00:00	34.68	27.70	0.00	119.38	165.66	0.25	1.76	988.15	0.00
12/8/2015 19:00:00	31.48	35.20	0.00	0.63	189.53	0.00	1.01	988.35	0.00
12/8/2015 20:00:00	28.62	42.70	0.00	0.63	153.03	0.00	1.01	988.85	0.00
12/8/2015 21:00:00	27.97	45.80	0.00	0.63	189.53	0.00	0.25	989.35	0.00
12/8/2015 22:00:00	25.72	52.00	0.00	0.63	162.86	0.00	0.00	989.95	0.00
12/8/2015 23:00:00	24.32	69.10	0.00	0.63	181.11	0.00	0.00	989.85	0.00
13/8/2015 0:00:00	22.49	74.30	0.00	0.63	136.18	0.00	2.27	989.95	0.00
13/8/2015 1:00:00	23.21	69.40	0.00	0.63	179.70	0.00	2.27	989.65	0.00

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
13/8/2015 2:00:00	22.11	74.50	0.00	0.63	261.13	0.00	2.02	989.45	0.00
13/8/2015 3:00:00	22.44	76.40	0.00	0.63	258.32	0.00	1.51	989.25	0.00
13/8/2015 4:00:00	21.01	82.00	0.00	0.63	185.32	0.00	0.00	989.25	0.00
13/8/2015 5:00:00	20.65	83.40	0.00	0.63	176.89	0.00	0.00	989.35	0.00
13/8/2015 6:00:00	20.39	85.00	0.00	0.63	110.91	0.00	0.00	989.95	0.00
13/8/2015 7:00:00	20.06	85.50	0.00	3.13	110.91	0.00	0.00	990.85	0.00
13/8/2015 8:00:00	21.18	83.50	0.00	124.38	110.91	0.00	0.00	991.85	0.00
13/8/2015 9:00:00	26.09	69.70	0.00	326.88	105.29	0.00	0.00	991.95	0.00
13/8/2015 10:00:00	30.80	49.50	0.00	536.88	102.49	0.00	5.54	992.55	0.00
13/8/2015 11:00:00	32.74	38.00	0.00	694.38	101.08	3.27	7.30	992.65	0.00
13/8/2015 12:00:00	34.65	33.60	0.00	815.63	102.49	3.27	6.80	991.75	0.00
13/8/2015 13:00:00	36.53	28.70	0.00	861.88	130.57	2.02	5.04	990.65	0.00
13/8/2015 14:00:00	36.80	29.60	0.00	806.88	141.80	1.51	6.55	989.45	0.00
13/8/2015 15:00:00	36.72	27.00	0.00	683.13	169.88	1.26	4.03	988.55	0.00
13/8/2015 16:00:00	37.34	27.00	0.00	516.88	161.45	1.01	4.28	987.75	0.00
13/8/2015 17:00:00	36.20	28.00	0.00	321.88	171.28	1.01	3.78	987.65	0.00
13/8/2015 18:00:00	34.12	30.30	0.00	123.13	161.45	0.76	2.52	988.45	0.00
13/8/2015 19:00:00	30.90	38.50	0.00	0.63	126.35	0.00	1.26	988.75	0.00
13/8/2015 20:00:00	29.12	42.30	0.00	0.63	161.45	0.00	0.50	988.85	0.00
13/8/2015 21:00:00	27.55	52.30	0.00	0.63	181.11	0.00	0.25	989.25	0.00
13/8/2015 22:00:00	24.65	64.90	0.00	0.63	174.09	0.00	0.00	989.45	0.00
13/8/2015 23:00:00	24.41	67.40	0.00	0.63	176.89	0.00	0.76	990.15	0.00
14/8/2015 0:00:00	22.66	68.50	0.00	0.63	123.55	0.00	0.50	990.75	0.00
14/8/2015 1:00:00	21.08	79.40	0.00	0.63	134.78	0.00	0.00	990.95	0.00
14/8/2015 2:00:00	21.87	75.10	0.00	0.63	200.76	0.00	0.00	990.45	0.00
14/8/2015 3:00:00	20.70	81.60	0.00	0.63	200.76	0.00	0.00	990.25	0.00
14/8/2015 4:00:00	19.29	85.90	0.00	0.63	143.20	0.00	0.00	990.95	0.00
14/8/2015 5:00:00	19.41	84.60	0.00	0.63	143.20	0.00	0.00	990.65	0.00
14/8/2015 6:00:00	18.96	86.00	0.00	0.63	143.20	0.00	0.00	990.75	0.00



**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
14/8/2015 7:00:00	18.20	88.10	0.00	4.38	154.43	0.00	0.00	991.25	0.00
14/8/2015 8:00:00	20.29	80.90	0.00	169.38	141.80	0.00	0.00	992.45	0.00
14/8/2015 9:00:00	24.51	62.10	0.00	369.38	98.28	0.00	3.53	993.15	0.00
14/8/2015 10:00:00	28.07	47.40	0.00	559.38	87.04	2.02	5.29	993.75	0.00
14/8/2015 11:00:00	32.00	37.20	0.00	718.13	101.08	2.27	7.05	993.45	0.00
14/8/2015 12:00:00	33.05	31.60	0.00	835.63	99.68	3.02	8.06	992.95	0.00
14/8/2015 13:00:00	35.18	28.90	0.00	876.88	117.93	1.51	5.54	991.85	0.00
14/8/2015 14:00:00	36.17	26.60	0.00	819.38	127.76	1.26	4.53	990.85	0.00
14/8/2015 15:00:00	36.58	25.20	0.00	691.88	113.72	1.01	4.53	989.45	0.00
14/8/2015 16:00:00	34.49	26.80	0.00	524.38	200.76	1.51	4.28	989.05	0.00
14/8/2015 17:00:00	35.13	25.80	0.00	325.63	174.09	0.50	3.27	988.65	0.00
14/8/2015 18:00:00	33.11	28.80	0.00	124.38	200.76	0.25	1.76	989.05	0.00
14/8/2015 19:00:00	30.22	35.00	0.00	0.63	108.10	0.00	1.01	989.15	0.00
14/8/2015 20:00:00	27.33	44.40	0.00	0.63	157.24	0.00	0.76	989.75	0.00
14/8/2015 21:00:00	25.50	53.60	0.00	0.63	165.66	0.00	0.50	989.75	0.00
14/8/2015 22:00:00	23.16	64.10	0.00	0.63	87.04	0.00	0.50	990.65	0.00
14/8/2015 23:00:00	22.49	65.40	0.00	0.63	287.80	0.00	0.50	990.85	0.00
15/8/2015 0:00:00	21.44	72.20	0.00	0.63	103.89	0.00	0.00	990.95	0.00
15/8/2015 1:00:00	20.53	74.60	0.00	0.63	103.89	0.00	0.76	990.55	0.00
15/8/2015 2:00:00	19.32	81.20	0.00	0.63	124.95	0.00	0.00	990.75	0.00
15/8/2015 3:00:00	19.03	83.00	0.00	0.63	126.35	0.00	0.00	990.45	0.00
15/8/2015 4:00:00	19.10	79.10	0.00	0.63	179.70	0.00	0.00	990.15	0.00
15/8/2015 5:00:00	18.25	82.70	0.00	0.63	178.30	0.00	0.00	990.25	0.00
15/8/2015 6:00:00	18.13	81.00	0.00	0.63	178.30	0.00	0.00	990.55	0.00
15/8/2015 7:00:00	18.08	82.20	0.00	3.13	130.57	0.00	0.00	991.05	0.00
15/8/2015 8:00:00	19.94	75.90	0.00	145.63	136.18	0.00	0.00	991.75	0.00
15/8/2015 9:00:00	23.33	68.20	0.00	340.63	113.72	0.00	3.78	991.65	0.00
15/8/2015 10:00:00	27.80	50.70	0.00	523.13	101.08	1.51	3.78	991.65	0.00
15/8/2015 11:00:00	31.33	43.50	0.00	705.63	103.89	1.51	4.53	991.95	0.00



**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
15/8/2015 12:00:00	34.07	38.80	0.00	811.88	106.70	1.51	4.53	991.15	0.00
15/8/2015 13:00:00	35.64	31.30	0.00	843.13	89.85	1.76	5.79	990.55	0.00
15/8/2015 14:00:00	37.10	29.90	0.00	795.63	96.87	1.26	4.78	989.65	0.00
15/8/2015 15:00:00	37.23	29.60	0.00	671.88	60.37	0.76	4.03	989.05	0.00
15/8/2015 16:00:00	38.50	27.40	0.00	504.38	327.11	0.25	7.05	988.35	0.00
15/8/2015 17:00:00	36.91	30.50	0.00	303.13	290.61	0.25	3.02	988.35	0.00
15/8/2015 18:00:00	33.60	35.70	0.00	108.13	217.61	0.76	2.52	988.35	0.00
15/8/2015 19:00:00	31.41	41.80	0.00	0.63	206.38	0.00	0.76	988.05	0.00
15/8/2015 20:00:00	28.17	63.50	0.00	0.63	216.20	0.00	0.00	988.75	0.00
15/8/2015 21:00:00	27.21	62.30	0.00	0.63	216.20	0.00	0.00	989.55	0.00
15/8/2015 22:00:00	24.80	75.50	0.00	0.63	228.84	0.00	0.00	990.05	0.00
15/8/2015 23:00:00	23.79	79.10	0.00	0.63	181.11	0.00	0.50	990.75	0.00
16/8/2015 0:00:00	23.69	75.10	0.00	0.63	146.01	0.00	0.50	991.05	0.00
16/8/2015 1:00:00	24.75	67.60	0.00	0.63	181.11	0.00	0.50	990.85	0.00
16/8/2015 2:00:00	22.66	78.40	0.00	0.63	117.93	0.00	1.76	990.55	0.00
16/8/2015 3:00:00	21.65	82.60	0.00	0.63	44.93	0.00	0.76	990.25	0.00
16/8/2015 4:00:00	21.68	84.70	0.00	0.63	7.02	0.00	0.25	989.95	0.00
16/8/2015 5:00:00	20.91	86.30	0.00	0.63	78.62	0.00	0.00	989.95	0.00
16/8/2015 6:00:00	20.22	89.40	0.00	0.63	123.55	0.00	0.00	990.45	0.00
16/8/2015 7:00:00	20.25	89.40	0.00	4.38	127.76	0.00	0.00	990.65	0.00
16/8/2015 8:00:00	21.84	87.80	0.00	153.13	126.35	0.00	0.00	991.45	0.00
16/8/2015 9:00:00	25.79	75.50	0.00	346.88	109.51	0.00	0.00	991.95	0.00
16/8/2015 10:00:00	31.08	57.20	0.00	539.38	106.70	0.00	0.00	992.15	0.00
16/8/2015 11:00:00	33.18	38.20	0.00	700.63	179.70	0.00	3.78	991.85	0.00
16/8/2015 12:00:00	35.16	37.80	0.00	814.38	119.33	1.51	4.78	991.05	0.00
16/8/2015 13:00:00	37.37	27.70	0.00	883.13	141.80	1.01	7.05	990.35	0.00
16/8/2015 14:00:00	37.89	26.00	0.00	731.88	113.72	1.76	14.35	989.45	0.00
16/8/2015 15:00:00	38.34	26.20	0.00	736.88	81.43	1.51	5.29	988.55	0.00
16/8/2015 16:00:00	37.98	26.30	0.00	570.63	75.81	1.51	4.28	987.45	0.00

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
16/8/2015 17:00:00	36.77	26.20	0.00	325.63	134.78	0.76	3.53	987.55	0.00
16/8/2015 18:00:00	34.44	30.40	0.00	115.63	190.93	0.50	2.27	987.85	0.00
16/8/2015 19:00:00	31.61	36.30	0.00	0.63	186.72	0.00	0.76	987.75	0.00
16/8/2015 20:00:00	28.74	52.20	0.00	0.63	186.72	0.00	0.25	988.05	0.00
16/8/2015 21:00:00	27.06	55.50	0.00	0.63	189.53	0.00	0.00	988.95	0.00
16/8/2015 22:00:00	25.07	69.00	0.00	0.63	190.93	0.00	0.00	989.25	0.00
16/8/2015 23:00:00	23.95	75.10	0.00	0.63	157.24	0.00	0.50	989.45	0.00
17/8/2015 0:00:00	23.76	73.50	0.00	0.63	89.85	0.00	0.00	989.75	0.00
17/8/2015 1:00:00	21.49	79.40	0.00	0.63	120.74	0.50	2.27	990.55	0.00
17/8/2015 2:00:00	23.28	74.10	0.00	0.63	265.34	0.00	0.00	990.15	0.00
17/8/2015 3:00:00	21.80	83.70	0.00	0.63	285.00	0.00	0.00	989.65	0.00
17/8/2015 4:00:00	21.22	86.90	0.00	0.63	285.00	0.00	0.00	989.85	0.00
17/8/2015 5:00:00	21.25	84.30	0.00	0.63	115.12	0.00	0.00	989.85	0.00
17/8/2015 6:00:00	20.03	86.20	0.00	0.63	348.17	0.00	0.00	989.95	0.00
17/8/2015 7:00:00	19.41	90.80	0.00	4.38	105.29	0.00	0.00	990.25	0.00
17/8/2015 8:00:00	20.79	87.70	0.00	139.38	129.16	0.00	0.50	990.85	0.00
17/8/2015 9:00:00	25.84	71.40	0.00	339.38	95.47	0.00	0.00	991.15	0.00
17/8/2015 10:00:00	30.07	55.80	0.00	524.38	87.04	0.00	0.00	991.25	0.00
17/8/2015 11:00:00	34.26	42.70	0.00	698.13	91.26	0.00	0.00	991.45	0.00
17/8/2015 12:00:00	35.61	37.70	0.00	806.88	88.45	0.00	3.27	990.95	0.00
17/8/2015 13:00:00	38.39	30.20	0.00	850.63	82.83	0.25	4.53	989.85	0.00
17/8/2015 14:00:00	39.26	26.70	0.00	833.13	167.07	0.76	5.79	988.65	0.00
17/8/2015 15:00:00	38.56	25.60	0.00	690.63	81.43	1.76	5.79	986.95	0.00
17/8/2015 16:00:00	38.87	25.10	0.00	531.88	99.68	1.51	5.54	986.45	0.00
17/8/2015 17:00:00	38.20	26.20	0.00	314.38	146.01	0.25	4.03	985.95	0.00
17/8/2015 18:00:00	35.77	30.30	0.00	113.13	160.05	0.25	2.02	986.25	0.00
17/8/2015 19:00:00	33.24	36.50	0.00	0.63	175.49	0.00	0.25	986.15	0.00
17/8/2015 20:00:00	30.72	44.60	0.00	0.63	219.01	0.00	0.00	986.95	0.00
17/8/2015 21:00:00	29.37	50.50	0.00	0.63	219.01	0.00	0.00	987.55	0.00

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
17/8/2015 22:00:00	26.87	68.30	0.00	0.63	219.01	0.00	0.00	988.55	0.00
17/8/2015 23:00:00	26.13	71.80	0.00	0.63	219.01	0.00	1.76	989.15	0.00
18/8/2015 0:00:00	24.39	80.20	0.00	0.63	70.20	0.00	1.51	989.25	0.00
18/8/2015 1:00:00	26.26	69.20	0.00	0.63	233.05	0.00	1.51	988.95	0.00
18/8/2015 2:00:00	25.23	71.80	0.00	0.63	162.86	0.00	4.78	988.65	0.00
18/8/2015 3:00:00	24.92	70.50	0.00	0.63	73.00	0.00	1.01	988.45	0.00
18/8/2015 4:00:00	24.32	77.80	0.00	0.63	77.22	0.00	1.76	988.45	0.00
18/8/2015 5:00:00	23.09	83.20	0.00	0.63	133.37	0.50	2.27	988.65	0.00
18/8/2015 6:00:00	22.71	84.60	0.00	0.63	277.98	0.00	0.76	989.15	0.00
18/8/2015 7:00:00	22.71	83.30	0.00	4.38	277.98	0.00	0.00	989.95	0.00
18/8/2015 8:00:00	24.87	79.20	0.00	155.63	277.98	0.00	1.51	990.35	0.00
18/8/2015 9:00:00	29.34	62.50	0.00	349.38	283.59	0.00	2.27	990.75	0.00
18/8/2015 10:00:00	33.16	52.10	0.00	543.13	110.91	0.00	3.02	990.95	0.00
18/8/2015 11:00:00	35.02	38.10	0.00	705.63	95.47	1.76	5.54	990.95	0.00
18/8/2015 12:00:00	36.20	32.60	0.00	823.13	101.08	2.02	6.30	990.45	0.00
18/8/2015 13:00:00	37.84	29.90	0.00	854.38	103.89	2.02	5.29	989.85	0.00
18/8/2015 14:00:00	38.20	28.90	0.00	810.63	153.03	1.51	4.03	988.95	0.00
18/8/2015 15:00:00	39.46	25.40	0.00	696.88	210.59	0.76	3.02	987.45	0.00
18/8/2015 16:00:00	38.64	27.30	0.00	514.38	172.68	0.76	3.78	986.85	0.00
18/8/2015 17:00:00	37.65	27.20	0.00	331.88	182.51	0.76	3.02	986.55	0.00
18/8/2015 18:00:00	36.28	28.70	0.00	124.38	162.86	0.25	2.02	986.85	0.00
18/8/2015 19:00:00	33.24	36.40	0.00	0.63	195.15	0.00	3.02	987.25	0.00
18/8/2015 20:00:00	30.67	45.70	0.00	0.63	190.93	0.00	0.50	987.85	0.00
18/8/2015 21:00:00	29.12	54.00	0.00	0.63	193.74	0.00	0.00	988.15	0.00
18/8/2015 22:00:00	27.11	61.60	0.00	0.63	224.63	0.00	0.00	989.05	0.00
18/8/2015 23:00:00	26.18	70.60	0.00	0.63	224.63	0.00	1.51	989.35	0.00
19/8/2015 0:00:00	25.57	72.50	0.00	0.63	238.67	0.00	0.00	989.65	0.00
19/8/2015 1:00:00	24.10	80.20	0.00	0.63	115.12	0.00	0.00	989.05	0.00
19/8/2015 2:00:00	23.35	82.50	0.00	0.63	61.77	0.00	0.00	988.75	0.00

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
19/8/2015 3:00:00	23.74	78.90	0.00	0.63	144.60	0.00	0.00	988.45	0.00
19/8/2015 4:00:00	24.39	77.10	0.00	0.63	240.07	0.00	0.00	988.65	0.00
19/8/2015 5:00:00	22.94	81.80	0.00	0.63	241.48	0.00	0.00	988.45	0.00
19/8/2015 6:00:00	22.75	82.70	0.00	0.63	240.07	0.00	0.00	988.65	0.00
19/8/2015 7:00:00	21.68	86.10	0.00	3.13	140.39	0.00	0.00	989.45	0.00
19/8/2015 8:00:00	23.23	81.70	0.00	170.63	95.47	0.00	0.00	989.75	0.00
19/8/2015 9:00:00	27.43	66.70	0.00	290.63	94.06	0.00	2.77	990.05	0.00
19/8/2015 10:00:00	31.10	49.90	0.00	600.63	92.66	1.26	6.30	990.75	0.00
19/8/2015 11:00:00	34.49	35.40	0.00	721.88	105.29	3.02	6.80	990.85	0.00
19/8/2015 12:00:00	35.96	29.90	0.00	839.38	102.49	2.77	6.80	989.95	0.00
19/8/2015 13:00:00	37.59	26.60	0.00	836.88	96.87	2.27	6.04	989.35	0.00
19/8/2015 14:00:00	38.90	25.20	0.00	818.13	116.53	1.76	5.54	988.55	0.00
19/8/2015 15:00:00	38.45	25.60	0.00	686.88	200.76	1.26	4.53	987.25	0.00
19/8/2015 16:00:00	38.20	25.00	0.00	520.63	157.24	1.51	4.78	986.75	0.00
19/8/2015 17:00:00	36.99	26.10	0.00	280.63	169.88	1.26	3.27	986.55	0.00
19/8/2015 18:00:00	36.17	28.20	0.00	136.88	192.34	0.50	2.02	986.55	0.00
19/8/2015 19:00:00	32.77	35.20	0.00	0.63	214.80	0.00	1.51	986.85	0.00
19/8/2015 20:00:00	31.74	35.10	0.00	0.63	216.20	0.00	0.76	987.05	0.00
19/8/2015 21:00:00	26.92	60.50	0.00	0.63	211.99	0.00	0.76	987.75	0.00
19/8/2015 22:00:00	26.79	60.70	0.00	0.63	248.49	0.00	0.00	987.95	0.00
19/8/2015 23:00:00	24.85	70.00	0.00	0.63	99.68	0.00	0.00	988.05	0.00
20/8/2015 0:00:00	24.03	74.50	0.00	0.63	99.68	0.00	1.01	988.05	0.00
20/8/2015 1:00:00	22.94	75.80	0.00	0.63	116.53	0.00	0.00	988.15	0.00
20/8/2015 2:00:00	22.56	79.80	0.00	0.63	200.76	0.00	1.01	987.55	0.00
20/8/2015 3:00:00	20.96	85.40	0.00	0.63	129.16	0.00	0.00	987.55	0.00
20/8/2015 4:00:00	20.10	87.30	0.00	0.63	140.39	0.00	0.00	987.55	0.00
20/8/2015 5:00:00	20.79	87.20	0.00	0.63	140.39	0.00	0.00	987.65	0.00
20/8/2015 6:00:00	20.37	86.10	0.00	0.63	141.80	0.00	0.00	988.05	0.00
20/8/2015 7:00:00	19.29	88.00	0.00	4.38	141.80	0.00	0.00	988.85	0.00

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
20/8/2015 8:00:00	22.37	80.90	0.00	166.88	141.80	0.00	1.01	989.55	0.00
20/8/2015 9:00:00	26.06	65.90	0.00	365.63	89.85	0.00	3.27	990.15	0.00
20/8/2015 10:00:00	29.02	51.00	0.00	551.88	223.22	1.26	3.78	990.55	0.00
20/8/2015 11:00:00	31.66	45.80	0.00	715.63	209.18	0.50	4.03	990.45	0.00
20/8/2015 12:00:00	35.18	38.30	0.00	833.13	234.46	0.25	6.30	990.15	0.00
20/8/2015 13:00:00	37.26	32.00	0.00	856.88	119.33	0.76	5.54	989.15	0.00
20/8/2015 14:00:00	37.67	33.10	0.00	788.13	306.06	1.01	9.82	988.15	0.00
20/8/2015 15:00:00	38.78	26.90	0.00	694.38	99.68	2.02	6.30	987.25	0.00
20/8/2015 16:00:00	38.59	23.20	0.00	513.13	122.14	1.51	8.06	986.65	0.00
20/8/2015 17:00:00	37.15	25.60	0.00	308.13	202.17	0.76	3.78	986.35	0.00
20/8/2015 18:00:00	35.74	28.40	0.00	110.63	176.89	0.25	1.51	986.25	0.00
20/8/2015 19:00:00	32.36	38.30	0.00	0.63	167.07	0.00	0.00	986.55	0.00
20/8/2015 20:00:00	30.62	42.70	0.00	0.63	188.13	0.00	0.00	987.45	0.00
20/8/2015 21:00:00	27.75	58.00	0.00	0.63	188.13	0.00	0.00	987.85	0.00
20/8/2015 22:00:00	26.13	69.20	0.00	0.63	188.13	0.00	1.01	988.45	0.00
20/8/2015 23:00:00	27.01	56.30	0.00	0.63	249.90	0.00	2.77	988.85	0.00
21/8/2015 0:00:00	23.83	78.10	0.00	0.63	46.33	0.00	3.02	989.25	0.00
21/8/2015 1:00:00	25.91	64.00	0.00	0.63	206.38	0.00	1.26	988.85	0.00
21/8/2015 2:00:00	23.26	78.30	0.00	0.63	51.95	0.00	0.00	988.05	0.00
21/8/2015 3:00:00	22.39	81.70	0.00	0.63	301.84	0.00	0.76	987.65	0.00
21/8/2015 4:00:00	20.98	87.50	0.00	0.63	95.47	0.00	0.76	987.65	0.00
21/8/2015 5:00:00	21.75	82.90	0.00	0.63	300.44	0.00	0.00	987.85	0.00
21/8/2015 6:00:00	21.13	86.50	0.00	0.63	300.44	0.00	0.00	988.25	0.00
21/8/2015 7:00:00	21.08	86.60	0.00	4.38	300.44	0.00	2.27	988.45	0.00
21/8/2015 8:00:00	21.94	85.50	0.00	171.88	146.01	0.00	2.77	989.35	0.00
21/8/2015 9:00:00	26.48	69.00	0.00	338.13	95.47	0.50	2.52	990.25	0.00
21/8/2015 10:00:00	31.20	51.10	0.00	538.13	98.28	0.76	3.27	990.55	0.00
21/8/2015 11:00:00	35.45	38.80	0.00	709.38	106.70	0.25	3.27	990.25	0.00
21/8/2015 12:00:00	36.91	31.80	0.00	828.13	75.81	1.26	4.28	989.85	0.00

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
21/8/2015 13:00:00	37.43	31.00	0.00	864.38	68.79	1.26	4.78	988.85	0.00
21/8/2015 14:00:00	38.00	28.20	0.00	821.88	81.43	1.76	5.29	987.85	0.00
21/8/2015 15:00:00	38.64	25.20	0.00	720.63	64.58	1.76	5.29	986.85	0.00
21/8/2015 16:00:00	38.87	20.90	0.00	559.38	87.04	2.27	4.53	986.05	0.00
21/8/2015 17:00:00	38.53	23.40	0.00	295.63	65.98	0.76	3.53	985.45	0.00
21/8/2015 18:00:00	36.12	28.00	0.00	108.13	82.83	1.01	2.27	985.95	0.00
21/8/2015 19:00:00	32.15	40.00	0.00	0.63	73.00	0.00	0.50	986.15	0.00
21/8/2015 20:00:00	30.95	42.70	0.00	0.63	169.88	0.00	0.25	986.65	0.00
21/8/2015 21:00:00	28.17	56.60	0.00	0.63	25.27	0.00	0.50	987.35	0.00
21/8/2015 22:00:00	26.30	67.40	0.00	0.63	16.85	0.00	0.00	988.05	0.00
21/8/2015 23:00:00	25.60	64.90	0.00	0.63	245.69	0.00	0.00	987.95	0.00
22/8/2015 0:00:00	23.33	78.50	0.00	0.63	116.53	0.00	0.00	987.65	0.00
22/8/2015 1:00:00	23.16	74.70	0.00	0.63	116.53	0.00	0.00	987.75	0.00
22/8/2015 2:00:00	22.68	76.10	0.00	0.63	110.91	0.00	0.00	987.35	0.00
22/8/2015 3:00:00	21.65	82.50	0.00	0.63	102.49	0.00	0.00	986.75	0.00
22/8/2015 4:00:00	21.41	81.50	0.00	0.63	102.49	0.00	0.00	986.95	0.00
22/8/2015 5:00:00	20.79	84.70	0.00	0.63	242.88	0.00	0.00	986.75	0.00
22/8/2015 6:00:00	19.75	89.00	0.00	0.63	116.53	0.00	0.00	987.35	0.00
22/8/2015 7:00:00	20.51	86.20	0.00	5.63	117.93	0.00	0.00	987.75	0.00
22/8/2015 8:00:00	22.47	82.30	0.00	148.13	116.53	0.00	0.00	988.75	0.00
22/8/2015 9:00:00	26.40	71.40	0.00	345.63	102.49	0.00	0.00	989.15	0.00
22/8/2015 10:00:00	32.07	54.50	0.00	521.88	78.62	0.00	0.00	989.35	0.00
22/8/2015 11:00:00	34.94	44.40	0.00	681.88	60.37	0.00	0.00	990.05	0.00
22/8/2015 12:00:00	37.07	37.10	0.00	781.88	18.25	0.00	3.53	989.25	0.00
22/8/2015 13:00:00	37.43	35.60	0.00	813.13	9.83	1.01	4.03	988.65	0.00
22/8/2015 14:00:00	37.67	35.70	0.00	763.13	30.89	0.76	3.53	987.55	0.00
22/8/2015 15:00:00	38.87	31.90	0.00	629.38	11.23	0.50	4.03	986.45	0.00
22/8/2015 16:00:00	38.59	29.90	0.00	465.63	324.31	0.50	3.02	985.35	0.00
22/8/2015 17:00:00	37.40	31.00	0.00	275.63	8.42	0.25	2.52	985.15	0.00

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
22/8/2015 18:00:00	35.24	38.20	0.00	51.88	348.17	0.00	1.51	985.75	0.00
22/8/2015 19:00:00	32.18	48.70	0.00	0.63	293.42	0.00	0.50	985.05	0.00
22/8/2015 20:00:00	30.17	57.80	0.00	0.63	287.80	0.00	0.00	986.45	0.00
22/8/2015 21:00:00	28.82	63.90	0.00	0.63	292.02	0.00	0.50	987.05	0.00
22/8/2015 22:00:00	26.84	72.60	0.00	0.63	64.58	0.00	0.00	987.45	0.00
22/8/2015 23:00:00	26.82	72.00	0.00	0.63	242.88	0.00	0.00	987.65	0.00
23/8/2015 0:00:00	25.31	80.00	0.00	0.63	176.89	0.00	0.00	987.75	0.00
23/8/2015 1:00:00	24.63	80.70	0.00	0.63	143.20	0.00	0.00	987.35	0.00
23/8/2015 2:00:00	23.86	83.30	0.00	0.63	144.60	0.00	0.00	987.05	0.00
23/8/2015 3:00:00	23.38	86.60	0.00	0.63	144.60	0.00	0.00	986.65	0.00
23/8/2015 4:00:00	22.99	86.60	0.00	0.63	262.53	0.00	0.00	986.55	0.00
23/8/2015 5:00:00	21.60	92.30	0.00	0.63	143.20	0.00	0.00	986.75	0.00
23/8/2015 6:00:00	22.08	89.90	0.00	0.63	115.12	0.00	0.00	987.45	0.00
23/8/2015 7:00:00	21.84	90.50	0.00	5.63	115.12	0.00	0.00	987.95	0.00
23/8/2015 8:00:00	23.79	86.30	0.00	144.38	115.12	0.00	0.00	988.45	0.00
23/8/2015 9:00:00	28.54	72.00	0.00	335.63	341.15	0.00	0.00	988.75	0.00
23/8/2015 10:00:00	33.18	57.20	0.00	531.88	95.47	0.00	0.00	989.05	0.00
23/8/2015 11:00:00	35.56	50.30	0.00	694.38	349.58	0.00	0.00	989.25	0.00
23/8/2015 12:00:00	37.81	41.90	0.00	808.13	348.17	0.00	0.25	988.15	0.00
23/8/2015 13:00:00	38.59	36.20	0.00	838.13	35.10	0.00	0.25	987.25	0.00
23/8/2015 14:00:00	37.23	37.00	0.00	860.63	289.21	1.51	3.78	986.35	0.00
23/8/2015 15:00:00	39.74	33.80	0.00	683.13	0.00	0.76	4.53	985.45	0.00
23/8/2015 16:00:00	38.78	34.70	0.00	500.63	318.69	0.25	2.77	984.95	0.00
23/8/2015 17:00:00	39.01	32.60	0.00	305.63	0.00	0.50	2.77	984.95	0.00
23/8/2015 18:00:00	37.07	36.40	0.00	84.38	342.56	0.00	1.51	985.35	0.00
23/8/2015 19:00:00	32.59	49.50	0.00	0.63	122.14	0.00	0.50	986.15	0.00
23/8/2015 20:00:00	30.47	54.90	0.00	0.63	112.31	0.00	0.76	986.45	0.00
23/8/2015 21:00:00	29.12	61.60	0.00	0.63	144.60	0.00	0.00	987.35	0.00
23/8/2015 22:00:00	27.80	68.20	0.00	0.63	262.53	0.00	0.25	987.45	0.00



**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
23/8/2015 23:00:00	25.74	78.90	0.00	0.63	5.62	0.00	0.76	988.05	0.00
24/8/2015 0:00:00	25.82	77.70	0.00	0.63	262.53	0.00	0.76	987.75	0.00
24/8/2015 1:00:00	24.99	79.10	0.00	0.63	181.11	0.00	0.00	987.35	0.00
24/8/2015 2:00:00	24.00	87.60	0.00	0.63	199.36	0.00	0.00	987.05	0.00
24/8/2015 3:00:00	23.64	82.80	0.00	0.63	129.16	0.00	3.02	986.75	0.00
24/8/2015 4:00:00	22.47	84.80	0.00	0.63	110.91	0.25	1.76	986.75	0.00
24/8/2015 5:00:00	22.18	85.10	0.00	0.63	131.97	0.00	1.51	987.25	0.00
24/8/2015 6:00:00	22.49	87.60	0.00	0.63	285.00	0.00	2.02	987.65	0.00
24/8/2015 7:00:00	22.03	89.00	0.00	6.88	292.02	0.00	0.00	988.35	0.00
24/8/2015 8:00:00	24.17	83.80	0.00	143.13	88.45	0.00	0.76	988.95	0.00
24/8/2015 9:00:00	29.24	68.60	0.00	335.63	206.38	0.00	1.26	989.05	0.00
24/8/2015 10:00:00	32.79	56.90	0.00	530.63	113.72	0.00	1.76	989.05	0.00
24/8/2015 11:00:00	35.56	48.10	0.00	693.13	286.40	0.25	3.53	988.75	0.00
24/8/2015 12:00:00	36.39	42.90	0.00	815.63	283.59	1.51	4.03	988.25	0.00
24/8/2015 13:00:00	39.35	35.60	0.00	850.63	321.50	0.76	4.28	986.95	0.00
24/8/2015 14:00:00	40.23	35.20	0.00	838.13	19.66	0.76	5.29	985.95	0.00
24/8/2015 15:00:00	40.54	30.20	0.00	678.13	30.89	0.76	3.53	984.95	0.00
24/8/2015 16:00:00	39.40	29.00	0.00	300.63	19.66	0.50	4.53	983.95	0.00
24/8/2015 17:00:00	39.29	29.00	0.00	284.38	112.31	0.25	2.77	983.85	0.00
24/8/2015 18:00:00	36.17	37.70	0.00	55.63	0.00	0.00	1.51	984.15	0.00
24/8/2015 19:00:00	33.86	44.10	0.00	0.63	286.40	0.00	0.25	984.55	0.00
24/8/2015 20:00:00	30.52	63.10	0.00	0.63	293.42	0.00	0.76	985.15	0.00
24/8/2015 21:00:00	28.79	69.50	0.00	0.63	279.38	0.00	0.00	986.15	0.00
24/8/2015 22:00:00	28.17	65.10	0.00	0.63	148.82	0.00	0.00	986.45	0.00
24/8/2015 23:00:00	26.28	78.20	0.00	0.63	150.22	0.00	0.00	986.65	0.00
25/8/2015 0:00:00	25.31	83.10	0.00	0.63	150.22	0.00	0.00	986.55	0.00
25/8/2015 1:00:00	23.74	86.30	0.00	0.63	108.10	0.00	0.00	986.25	0.00
25/8/2015 2:00:00	24.00	83.70	0.00	0.63	103.89	0.00	0.00	986.15	0.00
25/8/2015 3:00:00	23.62	84.70	0.00	0.63	103.89	0.00	0.00	985.55	0.00



**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
25/8/2015 4:00:00	22.99	87.70	0.00	0.63	103.89	0.00	0.00	985.65	0.00
25/8/2015 5:00:00	23.14	88.80	0.00	0.63	138.99	0.00	0.00	985.75	0.00
25/8/2015 6:00:00	22.80	88.20	0.00	0.63	130.57	0.00	0.00	986.45	0.00
25/8/2015 7:00:00	22.49	88.50	0.00	8.13	150.22	0.00	0.00	987.25	0.00
25/8/2015 8:00:00	24.65	83.80	0.00	155.63	164.26	0.00	0.00	987.85	0.00
25/8/2015 9:00:00	28.00	70.30	0.00	360.63	293.42	0.00	0.00	988.25	0.00
25/8/2015 10:00:00	32.51	54.50	0.00	551.88	328.52	0.00	0.00	988.35	0.00
25/8/2015 11:00:00	34.94	51.70	0.00	715.63	254.11	0.00	4.53	987.95	0.00
25/8/2015 12:00:00	36.23	41.90	0.00	826.88	82.83	1.76	4.53	987.75	0.00
25/8/2015 13:00:00	38.42	39.20	0.00	841.88	28.08	0.50	4.53	986.95	0.00
25/8/2015 14:00:00	39.32	37.30	0.00	790.63	353.79	1.01	4.78	985.75	0.00
25/8/2015 15:00:00	40.54	34.20	0.00	656.88	29.48	0.25	3.27	984.35	0.00
25/8/2015 16:00:00	37.89	37.90	6.00	274.38	63.18	0.76	10.32	983.65	0.00
25/8/2015 17:00:00	26.18	73.80	0.00	168.13	94.06	1.51	3.78	983.95	0.00
25/8/2015 18:00:00	31.28	58.90	0.00	106.88	37.91	0.00	1.01	983.95	0.00
25/8/2015 19:00:00	28.39	75.30	0.00	0.63	32.29	0.00	0.50	984.85	0.00
25/8/2015 20:00:00	27.01	83.70	0.00	0.63	36.50	0.00	1.26	985.05	0.00
25/8/2015 21:00:00	26.43	79.40	0.00	0.63	130.57	0.00	0.76	985.75	0.00
25/8/2015 22:00:00	25.36	92.70	0.00	0.63	53.35	0.25	2.27	987.35	0.00
25/8/2015 23:00:00	25.33	89.30	0.00	0.63	165.66	0.00	0.76	987.75	0.00
26/8/2015 0:00:00	26.13	83.20	0.00	0.63	303.25	0.00	0.25	987.45	0.00
26/8/2015 1:00:00	26.01	83.90	0.00	0.63	300.44	0.00	0.50	986.55	0.00
26/8/2015 2:00:00	25.60	89.30	0.00	0.63	58.97	0.00	0.50	986.65	0.00
26/8/2015 3:00:00	25.38	91.20	0.00	0.63	43.52	0.00	0.00	986.35	0.00
26/8/2015 4:00:00	25.16	90.10	0.00	0.63	280.78	0.00	0.00	986.15	0.00
26/8/2015 5:00:00	24.46	93.60	0.00	0.63	280.78	0.00	0.00	986.75	0.00
26/8/2015 6:00:00	24.10	96.10	0.00	0.63	146.01	0.00	0.00	986.95	0.00
26/8/2015 7:00:00	23.76	95.80	0.00	8.13	112.31	0.00	0.00	987.75	0.00
26/8/2015 8:00:00	26.70	86.00	0.00	174.38	241.48	0.00	0.00	988.75	0.00

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
26/8/2015 9:00:00	29.02	75.10	0.00	375.63	47.73	0.00	0.00	989.75	0.00
26/8/2015 10:00:00	30.47	68.90	0.00	574.38	84.24	0.00	3.78	990.25	0.00
26/8/2015 11:00:00	33.50	59.50	0.00	829.38	63.18	1.51	5.29	990.35	0.00
26/8/2015 12:00:00	33.55	58.90	0.00	666.88	98.28	1.01	3.53	989.95	0.00
26/8/2015 13:00:00	34.97	50.80	0.00	1021.88	30.89	0.50	4.28	988.75	0.00
26/8/2015 14:00:00	37.48	44.70	0.00	586.88	33.69	1.26	5.29	987.85	0.00
26/8/2015 15:00:00	37.23	42.10	0.00	794.38	58.97	1.51	4.53	986.35	0.00
26/8/2015 16:00:00	36.15	44.60	0.00	568.13	70.20	1.76	4.53	985.45	0.00
26/8/2015 17:00:00	35.82	45.30	0.00	348.13	73.00	1.01	3.27	985.25	0.00
26/8/2015 18:00:00	34.05	49.00	0.00	116.88	60.37	1.01	3.27	985.25	0.00
26/8/2015 19:00:00	31.71	61.40	0.00	0.63	35.10	0.00	1.51	985.75	0.00
26/8/2015 20:00:00	30.62	61.00	0.00	0.63	200.76	0.00	1.26	987.25	0.00
26/8/2015 21:00:00	30.12	60.80	0.00	0.63	193.74	0.00	1.01	988.35	0.00
26/8/2015 22:00:00	28.54	69.10	0.00	0.63	178.30	0.00	0.76	988.95	0.00
26/8/2015 23:00:00	27.28	82.00	0.00	0.63	207.78	0.00	0.00	988.65	0.00
27/8/2015 0:00:00	26.55	88.90	0.00	0.63	224.63	0.00	0.25	989.05	0.00
27/8/2015 1:00:00	26.38	84.70	0.00	0.63	266.75	0.00	0.00	989.05	0.00
27/8/2015 2:00:00	26.21	85.00	0.00	0.63	146.01	0.00	0.00	988.45	0.00
27/8/2015 3:00:00	25.82	89.10	0.00	0.63	146.01	0.00	0.00	988.05	0.00
27/8/2015 4:00:00	25.02	91.60	0.00	0.63	265.34	0.00	0.00	988.15	0.00
27/8/2015 5:00:00	25.07	90.80	0.00	0.63	265.34	0.00	0.00	988.45	0.00
27/8/2015 6:00:00	24.20	93.90	0.00	0.63	265.34	0.00	0.00	989.25	0.00
27/8/2015 7:00:00	23.88	96.20	0.00	11.88	263.94	0.00	0.00	989.45	0.00
27/8/2015 8:00:00	25.53	91.70	0.00	170.63	263.94	0.00	0.00	990.65	0.00
27/8/2015 9:00:00	27.48	81.70	0.00	383.13	315.88	0.00	0.00	990.95	0.00
27/8/2015 10:00:00	31.51	64.70	0.00	564.38	324.31	0.00	0.25	991.15	0.00
27/8/2015 11:00:00	34.10	54.10	0.00	758.13	22.46	0.50	3.78	991.45	0.00
27/8/2015 12:00:00	34.73	53.50	0.00	886.88	47.73	1.01	4.28	990.35	0.00
27/8/2015 13:00:00	36.96	45.10	0.00	980.63	317.29	0.76	4.03	989.65	0.00

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
27/8/2015 14:00:00	36.17	49.00	0.20	200.63	318.69	0.25	3.78	988.45	0.00
27/8/2015 15:00:00	30.04	61.40	1.20	390.63	122.14	3.27	11.33	987.85	0.00
27/8/2015 16:00:00	35.26	42.90	0.00	539.38	259.73	0.00	1.51	986.45	0.00
27/8/2015 17:00:00	36.58	42.30	0.00	324.38	57.56	0.00	1.76	985.95	0.00
27/8/2015 18:00:00	34.94	46.20	0.00	118.13	355.19	0.00	1.26	986.55	0.00
27/8/2015 19:00:00	30.77	63.00	0.00	0.63	95.47	0.00	0.76	986.75	0.00
27/8/2015 20:00:00	29.99	66.30	0.00	0.63	320.09	0.00	0.00	987.45	0.00
27/8/2015 21:00:00	27.80	80.50	0.00	0.63	254.11	0.00	1.01	988.45	0.00
27/8/2015 22:00:00	27.70	78.60	0.00	0.63	268.15	0.00	2.02	989.35	0.00
27/8/2015 23:00:00	26.84	85.40	0.00	0.63	265.34	0.00	2.27	989.95	0.00
28/8/2015 0:00:00	27.04	78.30	0.00	0.63	297.63	0.00	1.26	990.15	0.00
28/8/2015 1:00:00	26.16	78.90	0.00	0.63	342.56	0.00	4.03	989.85	0.00
28/8/2015 2:00:00	26.87	72.50	0.00	0.63	256.92	3.27	8.31	989.55	0.00
28/8/2015 3:00:00	26.30	74.00	0.00	0.63	228.84	2.77	7.05	989.75	0.00
28/8/2015 4:00:00	25.74	73.30	0.00	0.63	234.46	2.77	6.30	989.95	0.00
28/8/2015 5:00:00	24.39	77.60	0.00	0.63	235.86	1.51	6.30	990.35	0.00
28/8/2015 6:00:00	23.86	82.00	0.00	0.63	214.80	2.27	6.80	990.45	0.00
28/8/2015 7:00:00	23.71	83.10	0.00	11.88	179.70	0.25	3.27	991.45	0.00
28/8/2015 8:00:00	24.94	79.90	0.00	195.63	174.09	0.00	3.53	992.05	0.00
28/8/2015 9:00:00	27.68	71.00	0.00	480.63	195.15	0.50	4.53	992.35	0.00
28/8/2015 10:00:00	29.72	63.60	0.00	601.88	126.35	1.01	4.03	992.95	0.00
28/8/2015 11:00:00	31.31	57.90	0.00	776.88	138.99	1.26	5.04	992.75	0.00
28/8/2015 12:00:00	32.98	50.00	0.00	896.88	183.91	1.76	4.53	991.45	0.00
28/8/2015 13:00:00	34.57	46.70	0.00	918.13	182.51	1.51	5.04	990.65	0.00
28/8/2015 14:00:00	35.05	44.30	0.00	858.13	178.30	1.51	3.78	989.45	0.00
28/8/2015 15:00:00	36.53	40.40	0.00	724.38	196.55	1.01	3.78	988.65	0.00
28/8/2015 16:00:00	35.93	40.00	0.00	575.63	183.91	0.25	3.78	987.55	0.00
28/8/2015 17:00:00	35.88	41.50	0.00	336.88	192.34	0.25	2.52	987.25	0.00
28/8/2015 18:00:00	34.84	40.80	0.00	113.13	167.07	0.00	1.51	987.25	0.00

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
28/8/2015 19:00:00	32.72	48.00	0.00	0.63	199.36	0.00	1.01	987.75	0.00
28/8/2015 20:00:00	29.87	61.10	0.00	0.63	127.76	0.00	0.25	988.45	0.00
28/8/2015 21:00:00	28.39	69.20	0.00	0.63	217.61	0.00	0.00	988.75	0.00
28/8/2015 22:00:00	27.26	77.40	0.00	0.63	217.61	0.00	0.00	989.45	0.00
28/8/2015 23:00:00	26.28	80.30	0.00	0.63	109.51	0.00	0.00	989.85	0.00
29/8/2015 0:00:00	25.70	84.20	0.00	0.63	101.08	0.00	0.00	989.95	0.00
29/8/2015 1:00:00	25.09	85.70	0.00	0.63	318.69	0.00	0.00	990.15	0.00
29/8/2015 2:00:00	23.91	92.10	0.00	0.63	54.75	0.00	0.00	989.55	0.00
29/8/2015 3:00:00	24.41	85.40	0.00	0.63	313.08	0.00	0.00	988.65	0.00
29/8/2015 4:00:00	23.52	92.90	0.00	0.63	126.35	0.00	0.00	988.75	0.00
29/8/2015 5:00:00	23.30	93.40	0.00	0.63	110.91	0.00	0.00	988.85	0.00
29/8/2015 6:00:00	23.18	90.40	0.00	0.63	26.68	0.00	0.00	988.95	0.00
29/8/2015 7:00:00	22.51	95.60	0.00	11.88	137.58	0.00	0.00	989.25	0.00
29/8/2015 8:00:00	25.87	82.50	0.00	186.88	137.58	0.00	0.00	989.95	0.00
29/8/2015 9:00:00	28.49	74.40	0.00	399.38	82.83	0.00	0.00	990.25	0.00
29/8/2015 10:00:00	32.20	57.80	0.00	589.38	74.41	0.00	0.25	990.45	0.00
29/8/2015 11:00:00	34.26	52.20	0.00	591.88	133.37	0.00	3.53	990.75	0.00
29/8/2015 12:00:00	35.56	47.60	0.00	878.13	161.45	1.01	4.28	990.25	0.00
29/8/2015 13:00:00	37.02	42.20	0.00	919.38	192.34	0.76	3.78	989.35	0.00
29/8/2015 14:00:00	38.90	37.60	0.00	938.13	143.20	0.76	4.03	988.15	0.00
29/8/2015 15:00:00	39.43	36.90	0.00	740.63	73.00	0.25	4.28	987.05	0.00
29/8/2015 16:00:00	38.67	36.50	0.00	485.63	160.05	0.25	3.78	986.35	0.00
29/8/2015 17:00:00	37.98	34.40	0.00	318.13	195.15	0.76	3.78	985.85	0.00
29/8/2015 18:00:00	36.28	36.20	0.00	91.88	175.49	0.00	3.78	986.35	0.00
29/8/2015 19:00:00	30.72	56.20	0.00	0.63	73.00	1.51	4.28	986.85	0.00
29/8/2015 20:00:00	29.29	56.90	0.00	0.63	71.60	0.00	1.26	988.05	0.00
29/8/2015 21:00:00	28.57	59.80	0.00	0.63	261.13	0.00	0.76	988.45	0.00
29/8/2015 22:00:00	26.74	69.50	0.00	0.63	329.92	0.00	0.76	989.15	0.00
29/8/2015 23:00:00	27.36	65.80	0.00	0.63	280.78	0.00	4.03	989.45	0.00

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
30/8/2015 0:00:00	26.01	74.60	0.00	0.63	133.37	0.00	1.26	989.95	0.00
30/8/2015 1:00:00	25.77	75.20	0.00	0.63	0.00	0.00	1.51	989.55	0.00
30/8/2015 2:00:00	25.11	78.80	0.00	0.63	265.34	0.00	0.00	988.75	0.00
30/8/2015 3:00:00	24.07	82.50	0.00	0.63	33.69	0.00	0.00	988.35	0.00
30/8/2015 4:00:00	24.34	83.00	0.00	0.63	209.18	0.00	0.00	988.65	0.00
30/8/2015 5:00:00	23.02	90.20	0.00	0.63	130.57	0.00	0.00	989.05	0.00
30/8/2015 6:00:00	23.23	88.70	0.00	0.63	217.61	0.00	0.00	989.25	0.00
30/8/2015 7:00:00	22.80	91.30	0.00	14.38	101.08	0.00	0.00	990.05	0.00
30/8/2015 8:00:00	24.46	86.10	0.00	174.38	329.92	0.00	0.00	990.65	0.00
30/8/2015 9:00:00	28.17	72.30	0.00	380.63	12.64	0.00	0.00	991.25	0.00
30/8/2015 10:00:00	31.28	59.60	0.00	584.38	4.21	0.00	0.50	991.65	0.00
30/8/2015 11:00:00	34.20	53.20	0.00	760.63	40.71	0.00	3.53	991.85	0.00
30/8/2015 12:00:00	34.68	53.20	0.00	871.88	353.79	0.50	4.03	991.75	0.00
30/8/2015 13:00:00	36.17	48.70	0.00	905.63	25.27	1.01	3.27	990.55	0.00
30/8/2015 14:00:00	38.39	43.90	0.00	873.13	277.98	0.25	3.53	988.95	0.00
30/8/2015 15:00:00	36.31	44.60	0.00	733.13	285.00	1.26	3.78	987.65	0.00
30/8/2015 16:00:00	37.34	40.50	0.00	563.13	349.58	0.25	2.77	986.75	0.00
30/8/2015 17:00:00	34.44	49.90	1.60	141.88	29.48	0.50	10.32	987.15	0.00
30/8/2015 18:00:00	24.70	88.80	1.00	5.63	311.67	0.00	2.77	989.15	0.00
30/8/2015 19:00:00	24.70	88.90	0.00	0.63	301.84	0.50	3.53	988.65	0.00
30/8/2015 20:00:00	24.92	87.60	0.00	0.63	294.82	0.00	0.00	987.85	0.00
30/8/2015 21:00:00	24.15	92.80	0.00	0.63	331.33	0.00	0.00	989.35	0.00
30/8/2015 22:00:00	24.29	92.50	0.00	0.63	129.16	0.00	0.00	990.15	0.00
30/8/2015 23:00:00	24.99	90.00	0.00	0.63	174.09	0.00	0.00	990.95	0.00
31/8/2015 0:00:00	24.27	92.30	0.00	0.63	77.22	0.00	0.00	990.45	0.00
31/8/2015 1:00:00	23.83	94.90	0.00	0.63	77.22	0.00	0.00	990.05	0.00
31/8/2015 2:00:00	23.52	97.00	0.00	0.63	78.62	0.00	0.00	989.25	0.00
31/8/2015 3:00:00	23.11	97.60	0.00	0.63	88.45	0.00	0.00	989.05	0.00
31/8/2015 4:00:00	23.21	96.70	0.00	0.63	88.45	0.00	0.00	988.95	0.00

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
31/8/2015 5:00:00	23.21	96.90	0.00	0.63	87.04	0.00	0.00	988.95	0.00
31/8/2015 6:00:00	22.61	97.70	0.00	0.63	87.04	0.00	0.00	989.45	0.00
31/8/2015 7:00:00	22.66	98.80	0.00	8.13	87.04	0.00	0.00	990.55	0.00
31/8/2015 8:00:00	23.06	99.30	0.00	63.13	115.12	0.00	0.00	991.35	0.00
31/8/2015 9:00:00	25.96	90.20	0.00	438.13	81.43	0.00	0.00	991.95	0.00
31/8/2015 10:00:00	28.47	80.60	0.00	559.38	277.98	0.00	0.00	992.05	0.00
31/8/2015 11:00:00	31.74	66.40	0.00	741.88	304.65	0.00	0.00	992.15	0.00
31/8/2015 12:00:00	33.70	59.40	0.00	848.13	338.35	0.00	0.00	991.55	0.00
31/8/2015 13:00:00	34.78	55.60	0.00	911.88	352.38	0.00	2.77	990.55	0.00
31/8/2015 14:00:00	36.39	50.30	0.00	866.88	329.92	0.50	3.78	989.65	0.00
31/8/2015 15:00:00	33.78	51.90	0.00	214.38	286.40	0.76	3.53	987.95	0.00
31/8/2015 16:00:00	35.21	48.50	0.00	433.13	255.51	1.76	4.03	986.75	0.00
31/8/2015 17:00:00	34.94	49.60	0.00	225.63	328.52	0.50	3.78	987.45	0.00
31/8/2015 18:00:00	30.47	62.10	0.00	41.88	7.02	0.76	4.03	987.65	0.00
31/8/2015 19:00:00	29.09	66.90	0.00	0.63	4.21	0.00	1.76	988.65	0.00
31/8/2015 20:00:00	28.32	73.60	0.00	0.63	292.02	0.00	1.76	989.15	0.00
31/8/2015 21:00:00	27.51	78.70	0.00	0.63	249.90	0.00	2.52	989.75	0.00
31/8/2015 22:00:00	28.05	73.90	0.00	0.63	251.30	0.25	1.76	990.55	0.00
31/8/2015 23:00:00	26.57	82.20	0.00	0.63	269.55	0.00	0.76	990.65	0.00
1/9/2015 0:00:00	26.26	84.10	0.00	0.63	301.84	0.00	0.00	991.15	0.00
1/9/2015 1:00:00	25.60	87.40	0.00	0.63	331.33	0.00	0.00	990.95	0.00
1/9/2015 2:00:00	24.68	91.70	0.00	0.63	331.33	0.00	0.00	990.95	0.00
1/9/2015 3:00:00	25.31	88.80	0.00	0.63	213.40	0.00	0.00	990.65	0.00
1/9/2015 4:00:00	23.33	95.30	0.00	0.63	154.43	0.00	0.00	990.05	0.00
1/9/2015 5:00:00	23.42	96.00	0.00	0.63	103.89	0.00	0.00	989.85	0.00
1/9/2015 6:00:00	23.14	96.30	0.00	0.63	140.39	0.00	0.00	990.15	0.00
1/9/2015 7:00:00	22.99	97.00	0.00	10.63	117.93	0.00	0.00	991.35	0.00
1/9/2015 8:00:00	24.24	94.50	0.00	210.63	103.89	0.00	0.00	991.75	0.00
1/9/2015 9:00:00	28.02	83.70	0.00	350.63	113.72	0.00	0.00	992.55	0.00

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
1/9/2015 10:00:00	30.65	68.00	0.00	583.13	286.40	0.00	0.25	992.95	0.00
1/9/2015 11:00:00	32.79	58.90	0.00	750.63	285.00	0.00	3.78	992.65	0.00
1/9/2015 12:00:00	34.49	48.10	0.00	906.88	261.13	1.26	4.53	991.95	0.00
1/9/2015 13:00:00	37.29	42.90	0.00	911.88	301.84	0.25	3.02	990.85	0.00
1/9/2015 14:00:00	38.00	38.10	0.00	878.13	318.69	0.76	3.53	989.35	0.00
1/9/2015 15:00:00	39.55	28.00	0.00	716.88	150.22	1.51	4.53	988.35	0.00
1/9/2015 16:00:00	38.45	28.00	0.00	529.38	171.28	1.26	4.78	987.55	0.00
1/9/2015 17:00:00	38.23	38.40	0.00	329.38	331.33	0.00	3.27	986.95	0.00
1/9/2015 18:00:00	36.15	32.10	0.00	103.13	197.95	0.00	1.01	986.75	0.00
1/9/2015 19:00:00	33.63	38.60	0.00	0.63	202.17	0.00	0.50	987.15	0.00
1/9/2015 20:00:00	30.02	60.40	0.00	0.63	226.03	0.00	1.51	987.85	0.00
1/9/2015 21:00:00	29.69	56.70	0.00	0.63	220.42	0.00	0.00	988.75	0.00
1/9/2015 22:00:00	27.97	70.10	0.00	0.63	140.39	0.00	0.00	989.15	0.00
1/9/2015 23:00:00	26.16	81.90	0.00	0.63	140.39	0.00	0.00	989.45	0.00
2/9/2015 0:00:00	26.26	78.30	0.00	0.63	157.24	0.00	0.00	990.35	0.00
2/9/2015 1:00:00	24.99	86.00	0.00	0.63	95.47	0.00	0.00	990.05	0.00
2/9/2015 2:00:00	25.48	84.80	0.00	0.63	285.00	0.00	0.00	988.45	0.00
2/9/2015 3:00:00	25.82	85.10	0.00	0.63	262.53	0.00	0.00	989.75	0.00
2/9/2015 4:00:00	24.29	89.70	0.00	0.63	241.48	0.00	0.00	989.65	0.00
2/9/2015 5:00:00	24.24	88.70	0.00	0.63	224.63	0.00	0.00	989.55	0.00
2/9/2015 6:00:00	24.51	86.00	0.00	0.63	280.78	0.00	0.00	989.75	0.00
2/9/2015 7:00:00	24.24	86.80	0.00	13.13	282.19	0.00	0.00	989.95	0.00
2/9/2015 8:00:00	25.55	84.40	0.00	190.63	290.61	0.00	0.00	990.65	0.00
2/9/2015 9:00:00	28.10	78.30	0.00	371.88	308.86	0.00	0.00	990.55	0.00
2/9/2015 10:00:00	30.98	68.70	0.00	606.88	300.44	0.00	3.02	991.25	0.00
2/9/2015 11:00:00	33.97	59.10	0.00	788.13	349.58	0.50	2.77	991.05	0.00
2/9/2015 12:00:00	35.72	53.60	0.00	911.88	42.12	0.50	3.53	990.55	0.00
2/9/2015 13:00:00	37.34	46.10	0.00	938.13	18.25	0.76	3.78	989.45	0.00
2/9/2015 14:00:00	38.48	40.00	0.00	891.88	26.68	1.01	4.53	988.25	0.00



**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
2/9/2015 15:00:00	39.40	33.00	0.00	806.88	353.79	1.01	3.53	986.85	0.00
2/9/2015 16:00:00	37.21	38.40	0.00	511.88	11.23	0.25	2.77	986.45	0.00
2/9/2015 17:00:00	37.18	37.00	0.00	224.38	18.25	0.76	2.77	986.05	0.00
2/9/2015 18:00:00	34.28	46.90	0.00	46.88	332.73	0.00	1.01	985.95	0.00
2/9/2015 19:00:00	31.74	57.90	0.00	0.63	276.57	0.00	2.77	986.65	0.00
2/9/2015 20:00:00	29.74	67.90	0.00	0.63	331.33	0.00	1.01	987.45	0.00
2/9/2015 21:00:00	28.47	72.00	0.00	0.63	283.59	0.50	1.51	988.45	0.00
2/9/2015 22:00:00	28.15	73.60	0.00	0.63	261.13	0.00	0.76	988.35	0.00
2/9/2015 23:00:00	27.60	76.70	0.00	0.63	263.94	0.00	0.00	988.35	0.00
3/9/2015 0:00:00	26.16	82.90	0.00	0.63	105.29	0.00	0.00	988.55	0.00
3/9/2015 1:00:00	24.82	87.80	0.00	0.63	106.70	0.00	0.76	988.55	0.00
3/9/2015 2:00:00	24.53	88.10	0.00	0.63	144.60	0.00	0.00	988.35	0.00
3/9/2015 3:00:00	23.76	89.10	0.00	0.63	133.37	0.00	1.51	988.05	0.00
3/9/2015 4:00:00	23.88	88.10	0.00	0.63	116.53	0.00	0.00	988.15	0.00
3/9/2015 5:00:00	22.85	92.90	0.00	0.63	78.62	0.00	0.00	988.25	0.00
3/9/2015 6:00:00	22.63	93.60	0.00	0.63	345.37	0.00	0.00	988.65	0.00
3/9/2015 7:00:00	22.71	93.60	0.00	13.13	336.94	0.00	0.00	989.55	0.00
3/9/2015 8:00:00	25.26	88.00	0.00	179.38	338.35	0.00	0.00	989.75	0.00
3/9/2015 9:00:00	28.52	75.60	0.00	386.88	335.54	0.00	0.25	990.35	0.00
3/9/2015 10:00:00	31.13	65.70	0.00	590.63	332.73	0.00	2.52	990.45	0.00
3/9/2015 11:00:00	33.31	55.40	0.00	764.38	314.48	1.01	4.03	990.95	0.00
3/9/2015 12:00:00	35.74	49.80	0.00	885.63	338.35	0.76	3.53	990.55	0.00
3/9/2015 13:00:00	36.88	49.00	0.00	891.88	23.87	0.50	3.53	989.65	0.00
3/9/2015 14:00:00	37.89	41.30	0.00	861.88	2.81	1.01	4.53	988.35	0.00
3/9/2015 15:00:00	37.92	41.00	0.00	665.63	334.13	1.26	3.78	986.95	0.00
3/9/2015 16:00:00	38.31	35.00	0.00	629.38	56.16	0.50	9.32	985.75	0.00
3/9/2015 17:00:00	31.94	49.30	0.00	150.63	80.02	3.53	8.56	985.85	0.00
3/9/2015 18:00:00	31.13	50.90	0.00	26.88	306.06	0.00	1.01	986.45	0.00
3/9/2015 19:00:00	30.04	56.80	0.00	0.63	101.08	0.00	0.50	986.55	0.00



**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
3/9/2015 20:00:00	28.35	66.30	0.00	0.63	57.56	0.00	0.76	987.35	0.00
3/9/2015 21:00:00	27.46	70.50	0.00	0.63	87.04	0.00	0.50	987.95	0.00
3/9/2015 22:00:00	26.06	80.50	0.00	0.63	35.10	0.00	1.26	988.75	0.00
3/9/2015 23:00:00	25.28	82.30	0.00	0.63	136.18	0.00	0.76	989.35	0.00
4/9/2015 0:00:00	25.79	80.80	0.00	0.63	251.30	0.00	1.01	989.05	0.00
4/9/2015 1:00:00	24.32	86.90	0.00	0.63	171.28	0.00	0.00	988.85	0.00
4/9/2015 2:00:00	23.76	88.00	0.00	0.63	164.26	0.00	0.00	988.55	0.00
4/9/2015 3:00:00	23.62	91.00	0.00	0.63	224.63	0.00	1.01	988.95	0.00
4/9/2015 4:00:00	23.67	89.00	0.00	0.63	196.55	0.00	1.01	988.85	0.00
4/9/2015 5:00:00	22.97	91.40	0.00	0.63	143.20	0.00	0.00	989.05	0.00
4/9/2015 6:00:00	23.23	90.60	0.00	0.63	143.20	0.00	0.76	989.15	0.00
4/9/2015 7:00:00	22.54	93.10	0.00	14.38	103.89	0.25	1.76	989.95	0.00
4/9/2015 8:00:00	23.98	90.60	0.00	155.63	143.20	0.00	1.51	990.65	0.00
4/9/2015 9:00:00	28.42	77.50	0.00	401.88	110.91	0.00	1.76	991.05	0.00
4/9/2015 10:00:00	31.18	65.00	0.00	389.38	270.96	0.00	1.76	990.85	0.00
4/9/2015 11:00:00	35.13	49.90	0.00	820.63	315.88	0.25	2.77	991.15	0.00
4/9/2015 12:00:00	34.70	50.40	0.00	715.63	292.02	0.76	3.27	990.45	0.00
4/9/2015 13:00:00	37.70	40.80	0.00	909.38	0.00	0.50	3.02	989.25	0.00
4/9/2015 14:00:00	38.42	39.00	0.00	859.38	348.17	0.76	3.78	988.05	0.00
4/9/2015 15:00:00	37.76	39.10	0.00	541.88	23.87	1.01	3.53	986.95	0.00
4/9/2015 16:00:00	39.12	36.80	0.00	374.38	353.79	0.76	7.55	986.35	0.00
4/9/2015 17:00:00	35.80	34.50	0.00	399.38	179.70	1.26	8.56	986.35	0.00
4/9/2015 18:00:00	28.72	55.20	0.00	128.13	47.73	2.52	6.30	987.25	0.00
4/9/2015 19:00:00	26.70	69.70	0.00	0.63	51.95	0.76	3.78	987.55	0.00
4/9/2015 20:00:00	26.01	73.10	0.00	0.63	112.31	0.25	1.51	987.95	0.00
4/9/2015 21:00:00	26.55	71.90	0.00	0.63	80.02	0.00	0.76	988.95	0.00
4/9/2015 22:00:00	25.45	78.20	0.00	0.63	98.28	0.00	1.26	989.85	0.00
4/9/2015 23:00:00	25.60	79.40	0.00	0.63	178.30	0.00	1.01	989.75	0.00
5/9/2015 0:00:00	25.40	81.10	0.00	0.63	127.76	0.00	1.01	989.95	0.00

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
5/9/2015 1:00:00	24.82	85.00	0.00	0.63	296.23	0.00	0.50	989.75	0.00
5/9/2015 2:00:00	24.61	86.90	0.00	0.63	289.21	0.00	0.00	989.45	0.00
5/9/2015 3:00:00	24.44	87.50	0.00	0.63	289.21	0.00	0.00	988.85	0.00
5/9/2015 4:00:00	24.12	88.10	0.00	0.63	270.96	0.00	0.50	989.35	0.00
5/9/2015 5:00:00	23.79	91.70	0.00	0.63	136.18	0.00	0.25	988.95	0.00
5/9/2015 6:00:00	23.18	93.20	0.00	0.63	103.89	0.00	0.76	989.15	0.00
5/9/2015 7:00:00	23.06	93.20	0.00	13.13	103.89	0.00	1.26	990.25	0.00
5/9/2015 8:00:00	25.26	88.50	0.00	189.38	105.29	0.00	0.76	990.85	0.00
5/9/2015 9:00:00	29.52	73.20	0.00	386.88	338.35	0.00	1.51	991.05	0.00
5/9/2015 10:00:00	33.50	57.30	0.00	586.88	296.23	0.00	2.52	991.45	0.00
5/9/2015 11:00:00	35.21	51.40	0.00	741.88	311.67	0.25	2.77	991.05	0.00
5/9/2015 12:00:00	37.23	47.30	0.00	871.88	341.15	0.50	3.53	990.45	0.00
5/9/2015 13:00:00	38.50	42.20	0.00	915.63	338.35	0.76	3.53	989.35	0.00
5/9/2015 14:00:00	38.81	41.40	0.00	858.13	353.79	0.50	4.28	988.05	0.00
5/9/2015 15:00:00	38.45	39.00	0.00	819.38	51.95	1.01	4.03	986.25	0.00
5/9/2015 16:00:00	37.70	38.00	0.00	274.38	306.06	0.50	2.77	985.65	0.00
5/9/2015 17:00:00	35.29	46.20	0.00	103.13	308.86	0.25	3.53	985.95	0.00
5/9/2015 18:00:00	33.05	56.30	12.00	20.63	286.40	0.76	13.35	986.15	0.00
5/9/2015 19:00:00	23.47	81.90	0.60	0.63	238.67	1.76	6.30	987.65	0.00
5/9/2015 20:00:00	23.45	85.90	0.00	0.63	96.87	0.50	3.02	988.15	0.00
5/9/2015 21:00:00	24.36	84.40	0.00	0.63	292.02	0.00	0.50	989.15	0.00
5/9/2015 22:00:00	25.31	78.30	0.00	0.63	204.97	0.00	2.27	988.75	0.00
5/9/2015 23:00:00	24.44	87.80	0.00	0.63	313.08	0.00	0.00	989.05	0.00
6/9/2015 0:00:00	24.10	91.60	0.00	0.63	99.68	0.00	1.76	989.15	0.00
6/9/2015 1:00:00	24.00	89.70	0.00	0.63	98.28	0.00	0.00	988.35	0.00
6/9/2015 2:00:00	23.95	90.40	0.00	0.63	255.51	0.00	0.00	988.15	0.00
6/9/2015 3:00:00	23.93	92.50	0.00	0.63	230.24	0.00	0.00	987.75	0.00
6/9/2015 4:00:00	24.10	88.70	0.00	0.63	270.96	0.00	0.00	987.65	0.00
6/9/2015 5:00:00	23.40	95.20	0.00	0.63	262.53	0.00	0.00	988.05	0.00

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
6/9/2015 6:00:00	23.16	95.70	0.00	0.63	261.13	0.00	0.00	988.95	0.00
6/9/2015 7:00:00	23.86	93.60	0.00	19.38	261.13	0.00	0.00	989.65	0.00
6/9/2015 8:00:00	24.70	93.30	0.00	115.63	151.62	0.00	0.00	990.35	0.00
6/9/2015 9:00:00	26.84	82.40	0.00	309.38	65.98	0.00	0.00	990.95	0.00
6/9/2015 10:00:00	29.62	70.80	0.00	488.13	103.89	0.00	0.00	990.95	0.00
6/9/2015 11:00:00	32.33	63.50	0.00	653.13	110.91	0.00	0.00	990.85	0.00
6/9/2015 12:00:00	34.31	58.10	0.00	574.38	106.70	0.00	3.27	989.75	0.00
6/9/2015 13:00:00	34.44	56.00	0.00	585.63	89.85	1.26	3.78	988.75	0.00
6/9/2015 14:00:00	36.20	49.50	0.00	831.88	64.58	0.25	3.78	987.35	0.00
6/9/2015 15:00:00	36.93	46.50	0.00	729.38	15.44	0.76	4.28	986.25	0.00
6/9/2015 16:00:00	37.23	45.40	0.00	433.13	14.04	1.01	3.53	985.25	0.00
6/9/2015 17:00:00	35.29	47.40	0.00	330.63	348.17	0.25	2.02	984.85	0.00
6/9/2015 18:00:00	33.31	55.00	0.00	15.63	324.31	0.00	1.01	985.55	0.00
6/9/2015 19:00:00	31.84	62.00	0.00	0.63	266.75	0.00	0.76	986.05	0.00
6/9/2015 20:00:00	30.17	72.80	0.00	0.63	157.24	0.00	0.00	986.75	0.00
6/9/2015 21:00:00	28.42	80.30	0.00	0.63	138.99	0.00	2.02	986.95	0.00
6/9/2015 22:00:00	28.32	77.90	0.00	0.63	98.28	0.00	2.02	988.55	0.00
6/9/2015 23:00:00	27.06	77.30	0.00	0.63	270.96	0.00	1.76	987.85	0.00
7/9/2015 0:00:00	26.28	83.00	0.00	0.63	155.84	0.00	0.00	987.85	0.00
7/9/2015 1:00:00	25.65	86.60	0.00	0.63	168.47	0.00	0.25	987.35	0.00
7/9/2015 2:00:00	24.63	90.80	0.00	0.63	259.73	0.00	0.00	987.25	0.00
7/9/2015 3:00:00	24.22	92.30	0.00	0.63	197.95	0.00	0.00	986.85	0.00
7/9/2015 4:00:00	24.10	93.40	0.00	0.63	144.60	0.00	0.00	987.15	0.00
7/9/2015 5:00:00	24.15	92.60	0.00	0.63	117.93	0.00	0.00	987.15	0.00
7/9/2015 6:00:00	24.36	92.50	0.00	0.63	120.74	0.00	0.00	987.65	0.00
7/9/2015 7:00:00	23.67	95.00	0.00	9.38	116.53	0.00	5.29	988.15	0.00
7/9/2015 8:00:00	24.51	91.70	0.00	189.38	119.33	1.01	3.53	989.35	0.00
7/9/2015 9:00:00	27.43	80.30	0.00	391.88	39.31	0.25	4.28	990.35	0.00
7/9/2015 10:00:00	30.60	65.60	0.00	610.63	40.71	0.50	3.53	990.65	0.00

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
7/9/2015 11:00:00	32.46	59.70	0.00	763.13	9.83	1.01	5.04	990.65	0.00
7/9/2015 12:00:00	33.11	57.50	0.00	911.88	26.68	1.26	4.78	990.05	0.00
7/9/2015 13:00:00	33.78	57.30	0.00	351.88	11.23	0.76	4.78	988.45	0.00
7/9/2015 14:00:00	34.57	54.60	0.00	1016.88	19.66	1.01	5.29	986.55	0.00
7/9/2015 15:00:00	34.07	54.20	0.00	528.13	46.33	1.26	4.53	985.95	0.00
7/9/2015 16:00:00	32.92	57.40	0.00	338.13	21.06	1.01	3.53	985.55	0.00
7/9/2015 17:00:00	32.05	61.00	0.00	198.13	18.25	0.50	2.77	985.05	0.00
7/9/2015 18:00:00	30.62	66.80	0.00	59.38	314.48	0.00	1.76	985.35	0.00
7/9/2015 19:00:00	29.52	71.80	0.00	0.63	353.79	0.00	1.01	985.65	0.00
7/9/2015 20:00:00	28.10	78.40	0.00	0.63	273.77	0.76	1.76	986.15	0.00
7/9/2015 21:00:00	27.48	81.20	0.00	0.63	277.98	0.50	1.26	987.25	0.00
7/9/2015 22:00:00	27.43	82.50	0.00	0.63	268.15	0.00	1.01	987.05	0.00
7/9/2015 23:00:00	25.72	89.80	0.00	0.63	105.29	0.00	0.00	987.45	0.00
8/9/2015 0:00:00	25.91	90.00	0.00	0.63	105.29	0.00	0.50	987.25	0.00
8/9/2015 1:00:00	26.28	87.80	0.00	0.63	242.88	0.00	0.00	986.75	0.00
8/9/2015 2:00:00	24.73	94.70	0.00	0.63	241.48	0.00	0.00	986.35	0.00
8/9/2015 3:00:00	25.14	92.10	0.00	0.63	241.48	0.00	0.00	986.15	0.00
8/9/2015 4:00:00	25.31	92.50	0.00	0.63	241.48	0.00	0.00	986.35	0.00
8/9/2015 5:00:00	24.32	95.50	0.00	0.63	241.48	0.00	0.00	986.55	0.00
8/9/2015 6:00:00	24.29	96.60	0.00	0.63	115.12	0.00	0.00	987.25	0.00
8/9/2015 7:00:00	24.20	96.30	0.00	24.38	115.12	0.00	0.00	988.05	0.00
8/9/2015 8:00:00	27.11	88.50	0.00	231.88	242.88	0.00	0.00	988.85	0.00
8/9/2015 9:00:00	29.77	80.80	0.00	389.38	99.68	0.00	0.00	989.25	0.00
8/9/2015 10:00:00	32.82	64.60	0.00	633.13	51.95	0.00	4.03	989.45	0.00
8/9/2015 11:00:00	34.92	54.20	0.00	870.63	18.25	1.26	5.04	989.95	0.00
8/9/2015 12:00:00	36.31	47.80	0.00	1061.88	16.85	1.01	5.04	989.15	0.00
8/9/2015 13:00:00	35.42	44.90	0.00	863.13	26.68	1.76	5.29	987.95	0.00
8/9/2015 14:00:00	36.77	40.90	0.00	981.88	23.87	1.26	5.29	986.45	0.00
8/9/2015 15:00:00	37.92	37.10	0.00	829.38	4.21	1.01	10.07	985.35	0.00

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
8/9/2015 16:00:00	37.78	36.90	0.00	584.38	42.12	1.01	3.78	985.15	0.00
8/9/2015 17:00:00	37.76	36.00	0.00	348.13	11.23	0.50	3.27	984.85	0.00
8/9/2015 18:00:00	34.33	41.60	0.00	20.63	11.23	0.50	2.52	985.05	0.00
8/9/2015 19:00:00	32.41	50.30	0.00	0.63	342.56	0.00	0.50	985.05	0.00
8/9/2015 20:00:00	31.03	55.00	0.00	0.63	266.75	0.00	1.01	985.15	0.00
8/9/2015 21:00:00	29.17	66.50	0.00	0.63	266.75	0.00	0.00	985.85	0.00
8/9/2015 22:00:00	28.12	71.90	0.00	0.63	266.75	0.00	0.00	986.65	0.00
8/9/2015 23:00:00	26.62	79.00	0.00	0.63	268.15	0.00	0.00	987.05	0.00
9/9/2015 0:00:00	25.94	81.10	0.00	0.63	268.15	0.00	0.00	987.05	0.00
9/9/2015 1:00:00	25.14	86.30	0.00	0.63	268.15	0.00	0.00	986.85	0.00
9/9/2015 2:00:00	24.44	90.40	0.00	0.63	266.75	0.00	0.00	986.05	0.00
9/9/2015 3:00:00	23.74	92.50	0.00	0.63	157.24	0.00	0.00	985.55	0.00
9/9/2015 4:00:00	23.71	92.30	0.00	0.63	123.55	0.00	0.00	985.55	0.00
9/9/2015 5:00:00	23.33	92.10	0.00	0.63	113.72	0.00	0.00	985.75	0.00
9/9/2015 6:00:00	23.26	90.20	0.00	0.63	115.12	0.00	0.00	986.35	0.00
9/9/2015 7:00:00	23.02	92.80	0.00	19.38	108.10	0.00	0.00	987.05	0.00
9/9/2015 8:00:00	25.33	86.30	0.00	216.88	108.10	0.00	0.00	987.65	0.00
9/9/2015 9:00:00	30.12	67.80	0.00	430.63	78.62	0.00	0.00	988.25	0.00
9/9/2015 10:00:00	32.92	57.80	0.00	641.88	127.76	0.00	0.25	988.95	0.00
9/9/2015 11:00:00	35.66	50.40	0.00	823.13	339.75	0.00	4.03	989.45	0.00
9/9/2015 12:00:00	36.93	42.50	0.00	960.63	19.66	0.76	4.53	988.65	0.00
9/9/2015 13:00:00	37.32	41.00	0.00	324.38	60.37	0.50	4.53	987.25	0.00
9/9/2015 14:00:00	38.09	35.50	0.00	181.88	49.14	1.01	5.04	986.15	0.00
9/9/2015 15:00:00	38.98	32.60	0.00	761.88	70.20	1.51	5.54	984.85	0.00
9/9/2015 16:00:00	38.17	33.00	0.00	605.63	324.31	0.76	8.31	984.15	0.00
9/9/2015 17:00:00	37.89	31.80	0.00	340.63	51.95	0.50	3.78	983.95	0.00
9/9/2015 18:00:00	36.17	34.80	0.00	133.13	346.77	0.25	1.76	984.45	0.00
9/9/2015 19:00:00	33.52	42.20	0.00	0.63	325.71	0.00	0.50	984.65	0.00
9/9/2015 20:00:00	31.64	52.10	0.00	0.63	263.94	0.00	0.00	985.45	0.00

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
9/9/2015 21:00:00	28.89	65.10	0.00	0.63	252.71	0.00	0.00	986.15	0.00
9/9/2015 22:00:00	28.10	67.80	0.00	0.63	256.92	0.00	0.00	986.95	0.00
9/9/2015 23:00:00	26.57	73.30	0.00	0.63	277.98	0.00	0.00	987.05	0.00
10/9/2015 0:00:00	25.28	80.60	0.00	0.63	277.98	0.00	0.50	987.15	0.00
10/9/2015 1:00:00	24.56	83.60	0.00	0.63	147.41	0.00	0.00	986.35	0.00
10/9/2015 2:00:00	24.00	85.60	0.00	0.63	147.41	0.00	0.00	985.75	0.00
10/9/2015 3:00:00	23.91	85.60	0.00	0.63	147.41	0.00	0.00	985.45	0.00
10/9/2015 4:00:00	23.21	88.20	0.00	0.63	147.41	0.00	0.00	985.15	0.00
10/9/2015 5:00:00	22.85	89.50	0.00	0.63	146.01	0.00	0.00	985.65	0.00
10/9/2015 6:00:00	22.63	89.20	0.00	0.63	137.58	0.00	0.00	986.15	0.00
10/9/2015 7:00:00	22.47	90.50	0.00	16.88	113.72	0.00	0.00	987.45	0.00
10/9/2015 8:00:00	24.22	86.60	0.00	174.38	113.72	0.00	0.00	988.15	0.00
10/9/2015 9:00:00	26.77	75.30	0.00	376.88	110.91	0.00	5.04	989.05	0.00
10/9/2015 10:00:00	30.04	65.70	0.00	621.88	70.20	1.26	4.28	989.75	0.00
10/9/2015 11:00:00	34.76	48.20	0.00	774.38	51.95	0.50	4.53	989.55	0.00
10/9/2015 12:00:00	36.12	41.50	0.00	896.88	14.04	1.01	4.28	988.55	0.00
10/9/2015 13:00:00	37.76	36.70	0.00	935.63	30.89	0.76	4.28	987.25	0.00
10/9/2015 14:00:00	37.95	37.40	0.00	903.13	21.06	0.76	4.53	986.55	0.00
10/9/2015 15:00:00	38.67	36.10	0.00	775.63	356.60	1.01	4.78	985.05	0.00
10/9/2015 16:00:00	38.23	35.70	0.00	519.38	325.71	1.26	4.28	984.75	0.00
10/9/2015 17:00:00	37.65	36.40	0.00	305.63	0.00	0.50	3.53	984.55	0.00
10/9/2015 18:00:00	35.16	41.80	0.00	88.13	329.92	0.25	2.27	984.95	0.00
10/9/2015 19:00:00	32.36	51.20	0.00	0.63	290.61	0.76	2.02	985.85	0.00
10/9/2015 20:00:00	31.48	55.30	0.00	0.63	287.80	0.00	0.00	986.45	0.00
10/9/2015 21:00:00	30.37	57.80	0.00	0.63	287.80	0.00	0.00	986.75	0.00
10/9/2015 22:00:00	28.47	74.00	0.00	0.63	287.80	0.00	0.00	987.35	0.00
10/9/2015 23:00:00	28.64	69.90	0.00	0.63	287.80	0.00	0.00	987.35	0.00
11/9/2015 0:00:00	26.52	80.10	0.00	0.63	287.80	0.00	0.00	987.15	0.00
11/9/2015 1:00:00	25.36	86.40	0.00	0.63	287.80	0.00	0.00	986.55	0.00

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
11/9/2015 2:00:00	24.87	89.70	0.00	0.63	287.80	0.00	0.00	986.25	0.00
11/9/2015 3:00:00	24.34	89.60	0.00	0.63	174.09	0.00	0.00	986.35	0.00
11/9/2015 4:00:00	24.70	86.90	0.00	0.63	259.73	0.00	0.00	986.75	0.00
11/9/2015 5:00:00	23.91	91.30	0.00	0.63	199.36	0.00	0.00	986.65	0.00
11/9/2015 6:00:00	23.95	89.90	0.00	0.63	255.51	0.00	0.00	987.35	0.00
11/9/2015 7:00:00	23.71	92.10	0.00	19.38	96.87	0.00	0.00	988.85	0.00
11/9/2015 8:00:00	25.53	88.50	0.00	171.88	131.97	0.00	2.77	989.65	0.00
11/9/2015 9:00:00	27.90	78.90	0.00	358.13	96.87	1.51	3.02	990.35	0.00
11/9/2015 10:00:00	31.59	64.80	0.00	544.38	91.26	0.25	2.02	990.25	0.00
11/9/2015 11:00:00	35.32	51.90	0.00	764.38	9.83	0.25	3.02	990.45	0.00
11/9/2015 12:00:00	36.36	45.70	0.00	875.63	314.48	1.01	3.53	990.05	0.00
11/9/2015 13:00:00	37.62	41.50	0.00	910.63	7.02	0.76	4.03	989.15	0.00
11/9/2015 14:00:00	38.09	40.10	0.00	920.63	313.08	0.50	4.03	987.95	0.00
11/9/2015 15:00:00	39.09	35.90	0.00	715.63	339.75	1.26	3.78	986.75	0.00
11/9/2015 16:00:00	39.26	35.60	0.00	534.38	327.11	0.50	2.77	985.95	0.00
11/9/2015 17:00:00	38.06	35.60	0.00	306.88	356.60	0.25	3.02	985.75	0.00
11/9/2015 18:00:00	35.77	42.10	0.00	96.88	356.60	0.25	2.27	986.05	0.00
11/9/2015 19:00:00	33.00	50.10	0.00	0.63	349.58	0.00	1.26	986.85	0.00
11/9/2015 20:00:00	32.56	53.20	0.00	0.63	263.94	0.00	0.25	987.55	0.00
11/9/2015 21:00:00	29.54	66.40	0.00	0.63	197.95	0.00	1.01	988.15	0.00
11/9/2015 22:00:00	29.17	64.10	0.00	0.63	349.58	0.00	0.00	988.55	0.00
11/9/2015 23:00:00	27.88	75.10	0.00	0.63	349.58	0.00	0.00	989.05	0.00
12/9/2015 0:00:00	27.46	77.50	0.00	0.63	349.58	0.00	0.00	989.15	0.00
12/9/2015 1:00:00	26.11	85.40	0.00	0.63	348.17	0.00	0.50	988.75	0.00
12/9/2015 2:00:00	25.79	87.20	0.00	0.63	303.25	0.00	0.00	988.35	0.00
12/9/2015 3:00:00	25.07	90.30	0.00	0.63	306.06	0.00	0.00	987.95	0.00
12/9/2015 4:00:00	24.82	90.50	0.00	0.63	8.42	0.00	0.00	987.85	0.00
12/9/2015 5:00:00	24.68	91.20	0.00	0.63	61.77	0.00	0.00	987.65	0.00
12/9/2015 6:00:00	24.15	92.70	0.00	0.63	78.62	0.00	0.00	988.45	0.00



**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
12/9/2015 7:00:00	24.15	92.70	0.00	18.13	126.35	0.00	0.25	989.25	0.00
12/9/2015 8:00:00	25.94	88.40	0.00	178.13	105.29	0.00	0.00	990.35	0.00
12/9/2015 9:00:00	28.79	77.20	0.00	383.13	98.28	0.00	0.00	991.05	0.00
12/9/2015 10:00:00	33.00	62.00	0.00	580.63	115.12	0.00	0.00	991.55	0.00
12/9/2015 11:00:00	34.60	54.30	0.00	760.63	329.92	0.25	4.03	991.35	0.00
12/9/2015 12:00:00	35.77	50.00	0.00	689.38	242.88	1.01	4.03	990.55	0.00
12/9/2015 13:00:00	36.28	45.80	0.00	601.88	285.00	1.51	4.03	989.35	0.00
12/9/2015 14:00:00	36.17	43.80	0.00	324.38	279.38	1.76	4.03	987.65	0.00
12/9/2015 15:00:00	37.15	40.20	0.00	366.88	276.57	1.01	3.78	986.35	0.00
12/9/2015 16:00:00	38.23	36.90	0.00	499.38	300.44	0.76	3.27	985.65	0.00
12/9/2015 17:00:00	36.25	43.20	5.80	221.88	5.62	0.25	13.35	985.85	0.00
12/9/2015 18:00:00	22.30	74.70	18.00	4.38	269.55	5.79	11.08	987.35	0.00
12/9/2015 19:00:00	23.02	82.70	0.00	0.63	352.38	0.00	3.27	988.95	0.00
12/9/2015 20:00:00	25.36	85.40	0.00	0.63	231.65	0.00	1.26	989.25	0.00
12/9/2015 21:00:00	25.72	86.20	0.00	0.63	292.02	0.00	0.76	990.05	0.00
12/9/2015 22:00:00	26.84	77.90	0.00	0.63	262.53	0.00	2.02	991.05	0.00
12/9/2015 23:00:00	25.31	90.10	0.00	0.63	273.77	0.00	0.25	991.35	0.00
13/9/2015 0:00:00	25.55	87.70	0.00	0.63	301.84	0.00	3.53	990.85	0.00
13/9/2015 1:00:00	24.58	92.50	0.00	0.63	283.59	0.00	1.26	990.05	0.00
13/9/2015 2:00:00	24.36	93.50	0.00	0.63	252.71	0.00	0.00	989.45	0.00
13/9/2015 3:00:00	24.03	95.50	0.00	0.63	119.33	0.00	0.00	988.65	0.00
13/9/2015 4:00:00	23.95	95.20	0.00	0.63	146.01	0.00	0.00	988.45	0.00
13/9/2015 5:00:00	23.33	97.10	0.00	0.63	217.61	0.00	0.00	988.85	0.00
13/9/2015 6:00:00	22.94	98.50	0.00	0.63	103.89	0.00	0.00	989.45	0.00
13/9/2015 7:00:00	23.16	96.80	0.00	16.88	146.01	0.00	0.00	989.85	0.00
13/9/2015 8:00:00	24.12	91.80	0.00	153.13	123.55	0.00	0.25	990.85	0.00
13/9/2015 9:00:00	25.96	87.20	0.00	359.38	85.64	0.00	0.25	992.15	0.00
13/9/2015 10:00:00	29.37	76.40	0.00	565.63	334.13	0.00	3.27	992.55	0.00
13/9/2015 11:00:00	31.23	69.70	0.00	731.88	276.57	0.76	3.02	992.45	0.00



**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
13/9/2015 12:00:00	33.55	60.60	0.00	838.13	153.03	0.50	3.02	991.65	0.00
13/9/2015 13:00:00	35.40	55.30	0.00	854.38	219.01	0.25	3.27	990.15	0.00
13/9/2015 14:00:00	35.66	51.30	0.00	810.63	273.77	1.51	3.78	988.75	0.00
13/9/2015 15:00:00	36.17	48.40	0.00	664.38	207.78	1.26	3.53	987.25	0.00
13/9/2015 16:00:00	36.58	41.20	0.00	476.88	203.57	0.76	4.53	986.45	0.00
13/9/2015 17:00:00	35.10	50.70	0.00	264.38	256.92	2.27	4.28	986.15	0.00
13/9/2015 18:00:00	33.81	51.10	0.00	90.63	247.09	0.76	4.78	986.55	0.00
13/9/2015 19:00:00	29.59	70.40	11.60	0.63	50.54	0.50	7.81	988.65	0.00
13/9/2015 20:00:00	23.57	84.00	0.20	0.63	204.97	1.01	5.29	989.85	0.00
13/9/2015 21:00:00	23.81	90.50	0.00	0.63	269.55	0.00	1.51	989.85	0.00
13/9/2015 22:00:00	25.26	85.70	0.00	0.63	151.62	0.25	5.79	990.95	0.00
13/9/2015 23:00:00	25.14	82.50	0.00	0.63	117.93	1.01	6.80	991.75	0.00
14/9/2015 0:00:00	24.22	88.00	1.40	0.63	113.72	1.76	4.78	992.55	0.00
14/9/2015 1:00:00	22.94	95.20	3.20	0.63	99.68	0.00	2.27	992.95	0.00
14/9/2015 2:00:00	22.71	96.10	1.00	0.63	276.57	1.51	6.80	990.75	0.00
14/9/2015 3:00:00	22.73	94.20	0.00	0.63	272.36	3.53	6.04	988.35	0.00
14/9/2015 4:00:00	22.51	95.40	0.20	0.63	120.74	1.26	4.28	988.95	0.00
14/9/2015 5:00:00	22.27	96.60	0.00	0.63	102.49	0.00	0.50	988.85	0.00
14/9/2015 6:00:00	21.77	98.30	0.00	0.63	99.68	0.00	3.53	989.15	0.00
14/9/2015 7:00:00	21.87	98.10	0.00	23.13	113.72	0.76	3.27	990.05	0.00
14/9/2015 8:00:00	22.56	95.90	0.00	108.13	120.74	0.25	2.77	991.25	0.00
14/9/2015 9:00:00	24.46	90.60	0.00	280.63	109.51	0.50	2.27	991.55	0.00
14/9/2015 10:00:00	28.64	78.30	0.00	574.38	101.08	0.00	2.52	992.45	0.00
14/9/2015 11:00:00	30.57	64.40	0.00	524.38	106.70	1.26	3.53	992.65	0.00
14/9/2015 12:00:00	32.51	56.10	0.00	408.13	137.58	1.01	4.03	992.15	0.00
14/9/2015 13:00:00	32.02	57.70	0.00	921.88	140.39	1.76	6.04	991.55	0.00
14/9/2015 14:00:00	33.68	53.40	0.00	918.13	134.78	1.51	4.28	990.15	0.00
14/9/2015 15:00:00	33.55	53.30	0.00	560.63	119.33	1.01	4.03	988.65	0.00
14/9/2015 16:00:00	34.18	52.30	0.00	635.63	127.76	0.50	2.77	987.75	0.00

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
14/9/2015 17:00:00	32.41	57.90	0.00	188.13	186.72	0.00	1.51	987.75	0.00
14/9/2015 18:00:00	31.03	60.70	0.00	94.38	179.70	0.00	1.26	987.45	0.00
14/9/2015 19:00:00	28.99	71.00	0.00	0.63	126.35	0.00	1.26	988.15	0.00
14/9/2015 20:00:00	27.97	72.00	0.00	0.63	175.49	0.50	2.02	988.95	0.00
14/9/2015 21:00:00	27.24	77.00	0.00	0.63	106.70	0.00	0.76	989.75	0.00
14/9/2015 22:00:00	27.09	79.70	0.00	0.63	141.80	0.00	1.51	990.25	0.00
14/9/2015 23:00:00	26.62	79.60	0.00	0.63	116.53	0.00	0.00	990.35	0.00
15/9/2015 0:00:00	25.82	85.90	0.00	0.63	147.41	0.00	0.00	990.05	0.00
15/9/2015 1:00:00	25.26	89.50	0.00	0.63	147.41	0.00	0.00	989.75	0.00
15/9/2015 2:00:00	24.94	90.60	0.00	0.63	263.94	0.00	0.00	988.85	0.00
15/9/2015 3:00:00	24.41	92.30	0.00	0.63	263.94	0.00	0.00	988.25	0.00
15/9/2015 4:00:00	23.59	96.10	0.00	0.63	263.94	0.00	0.00	987.95	0.00
15/9/2015 5:00:00	23.14	96.60	0.00	0.63	263.94	0.00	0.00	988.45	0.00
15/9/2015 6:00:00	22.94	97.40	0.00	0.63	147.41	0.00	0.00	988.75	0.00
15/9/2015 7:00:00	23.04	98.50	0.00	19.38	171.28	0.00	0.00	989.45	0.00
15/9/2015 8:00:00	24.61	95.00	0.00	200.63	157.24	0.00	0.00	990.35	0.00
15/9/2015 9:00:00	27.83	82.80	0.00	404.38	95.47	0.00	0.00	991.15	0.00
15/9/2015 10:00:00	30.70	73.20	0.00	606.88	119.33	0.00	0.25	991.25	0.00
15/9/2015 11:00:00	34.15	58.90	0.00	788.13	22.46	0.00	0.25	991.35	0.00
15/9/2015 12:00:00	34.89	54.80	0.00	883.13	290.61	0.00	3.27	990.75	0.00
15/9/2015 13:00:00	35.45	51.40	0.00	920.63	289.21	1.26	3.53	989.85	0.00
15/9/2015 14:00:00	37.32	47.10	0.00	891.88	310.27	0.50	3.27	988.35	0.00
15/9/2015 15:00:00	38.95	42.40	0.00	739.38	47.73	0.00	3.02	986.85	0.00
15/9/2015 16:00:00	34.78	51.70	0.00	120.63	349.58	0.76	6.30	986.95	0.00
15/9/2015 17:00:00	31.66	61.20	0.00	300.63	39.31	1.26	4.03	986.75	0.00
15/9/2015 18:00:00	30.65	64.30	0.00	103.13	1.40	0.00	3.53	987.25	0.00
15/9/2015 19:00:00	28.69	69.80	0.00	0.63	67.39	0.00	0.76	987.45	0.00
15/9/2015 20:00:00	27.73	76.50	0.00	0.63	342.56	0.00	1.01	988.45	0.00
15/9/2015 21:00:00	26.16	83.60	0.00	0.63	53.35	0.00	0.76	989.15	0.00

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
15/9/2015 22:00:00	25.82	84.40	0.00	0.63	28.08	0.00	0.76	989.35	0.00
15/9/2015 23:00:00	25.67	85.80	0.00	0.63	270.96	0.00	1.26	989.95	0.00
16/9/2015 0:00:00	24.73	88.60	0.00	0.63	283.59	0.00	0.00	989.95	0.00
16/9/2015 1:00:00	24.68	89.70	0.00	0.63	283.59	0.00	0.76	989.65	0.00
16/9/2015 2:00:00	23.71	94.90	0.00	0.63	101.08	0.00	0.50	988.85	0.00
16/9/2015 3:00:00	23.55	95.90	0.00	0.63	117.93	0.00	0.76	988.55	0.00
16/9/2015 4:00:00	23.28	95.60	0.00	0.63	296.23	0.00	0.50	988.15	0.00
16/9/2015 5:00:00	22.78	97.00	0.00	0.63	119.33	0.00	0.76	988.55	0.00
16/9/2015 6:00:00	23.38	94.80	0.00	0.63	106.70	0.00	0.50	989.05	0.00
16/9/2015 7:00:00	22.32	98.90	0.00	21.88	103.89	0.00	0.76	989.65	0.00
16/9/2015 8:00:00	24.44	93.90	0.00	209.38	116.53	0.00	0.76	990.25	0.00
16/9/2015 9:00:00	28.05	82.00	0.00	431.88	91.26	0.00	0.76	990.85	0.00
16/9/2015 10:00:00	32.61	64.90	0.00	630.63	84.24	0.00	1.76	990.95	0.00
16/9/2015 11:00:00	33.91	57.60	0.00	815.63	341.15	0.00	2.52	990.65	0.00
16/9/2015 12:00:00	34.76	52.20	0.00	919.38	286.40	1.01	5.29	989.95	0.00
16/9/2015 13:00:00	37.07	46.20	0.00	949.38	334.13	0.76	3.78	988.55	0.00
16/9/2015 14:00:00	37.21	46.20	0.00	925.63	322.90	0.76	6.30	987.05	0.00
16/9/2015 15:00:00	36.23	44.40	0.00	736.88	279.38	0.50	4.53	985.85	0.00
16/9/2015 16:00:00	37.84	40.60	0.00	551.88	327.11	1.26	4.78	985.45	0.00
16/9/2015 17:00:00	37.40	41.10	0.00	375.63	332.73	0.76	5.54	985.15	0.00
16/9/2015 18:00:00	31.82	60.60	0.00	116.88	168.47	1.26	6.55	985.85	0.00
16/9/2015 19:00:00	30.65	67.60	0.00	0.63	339.75	0.00	1.01	985.55	0.00
16/9/2015 20:00:00	29.34	74.50	0.00	0.63	336.94	0.00	0.25	986.05	0.00
16/9/2015 21:00:00	28.32	77.80	0.00	0.63	74.41	0.00	0.00	986.95	0.00
16/9/2015 22:00:00	26.82	86.20	0.00	0.63	73.00	0.00	0.50	987.55	0.00
16/9/2015 23:00:00	26.50	87.80	0.00	0.63	123.55	0.00	0.00	988.25	0.00
17/9/2015 0:00:00	25.70	87.80	0.00	0.63	122.14	0.00	0.50	988.45	0.00
17/9/2015 1:00:00	25.33	92.10	0.00	0.63	115.12	0.00	0.00	987.65	0.00
17/9/2015 2:00:00	24.56	93.70	0.00	0.63	71.60	0.00	1.51	987.25	0.00

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
17/9/2015 3:00:00	24.56	94.00	0.00	0.63	101.08	0.00	0.00	986.75	0.00
17/9/2015 4:00:00	24.41	93.30	0.00	0.63	123.55	0.00	1.01	987.15	0.00
17/9/2015 5:00:00	24.41	93.70	0.00	0.63	204.97	0.00	1.76	987.35	0.00
17/9/2015 6:00:00	24.61	90.90	0.00	0.63	301.84	0.00	2.02	987.55	0.00
17/9/2015 7:00:00	25.02	88.30	0.00	29.38	221.82	0.00	1.76	988.05	0.00
17/9/2015 8:00:00	26.30	86.90	0.00	218.13	292.02	0.00	2.02	988.95	0.00
17/9/2015 9:00:00	30.02	72.70	0.00	440.63	318.69	0.00	1.51	989.35	0.00
17/9/2015 10:00:00	33.86	59.60	0.00	634.38	311.67	0.00	3.53	989.85	0.00
17/9/2015 11:00:00	33.65	60.70	0.00	830.63	32.29	1.26	4.78	990.05	0.00
17/9/2015 12:00:00	34.62	55.50	0.00	936.88	44.93	0.76	4.28	989.55	0.00
17/9/2015 13:00:00	36.07	52.10	0.00	814.38	11.23	0.76	4.03	988.45	0.00
17/9/2015 14:00:00	37.76	47.70	0.00	948.13	63.18	0.76	3.27	986.95	0.00
17/9/2015 15:00:00	36.28	48.10	0.00	753.13	345.37	1.26	6.55	985.65	0.00
17/9/2015 16:00:00	37.67	44.80	0.00	555.63	289.21	0.76	3.78	984.75	0.00
17/9/2015 17:00:00	36.47	44.60	0.00	324.38	287.80	1.01	3.27	984.55	0.00
17/9/2015 18:00:00	35.96	46.60	0.00	140.63	346.77	0.00	1.51	985.15	0.00
17/9/2015 19:00:00	33.31	54.80	0.00	0.63	343.96	0.00	3.78	985.55	0.00
17/9/2015 20:00:00	30.65	64.70	0.00	0.63	136.18	0.00	1.01	985.85	0.00
17/9/2015 21:00:00	30.04	73.30	0.00	0.63	204.97	0.00	0.00	986.25	0.00
17/9/2015 22:00:00	28.25	78.60	0.00	0.63	282.19	0.00	0.00	987.65	0.00
17/9/2015 23:00:00	28.37	80.20	0.00	0.63	282.19	0.00	0.00	987.35	0.00
18/9/2015 0:00:00	27.83	81.00	0.00	0.63	277.98	0.00	0.25	987.15	0.00
18/9/2015 1:00:00	26.87	81.40	0.00	0.63	96.87	0.00	0.00	986.75	0.00
18/9/2015 2:00:00	25.48	88.90	0.00	0.63	122.14	0.00	0.00	986.45	0.00
18/9/2015 3:00:00	25.16	89.80	0.00	0.63	113.72	0.00	0.00	986.15	0.00
18/9/2015 4:00:00	24.85	91.50	0.00	0.63	113.72	0.00	0.00	986.05	0.00
18/9/2015 5:00:00	24.10	94.10	0.00	0.63	23.87	0.00	0.00	986.45	0.00
18/9/2015 6:00:00	24.63	92.10	0.00	0.63	207.78	0.00	0.00	986.85	0.00
18/9/2015 7:00:00	23.81	95.10	0.00	23.13	147.41	0.00	0.00	987.45	0.00

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
18/9/2015 8:00:00	25.53	91.60	0.00	115.63	102.49	0.00	0.00	988.55	0.00
18/9/2015 9:00:00	27.36	85.10	0.00	333.13	105.29	0.00	0.00	989.45	0.00
18/9/2015 10:00:00	31.74	71.30	0.00	590.63	141.80	0.00	0.00	989.45	0.00
18/9/2015 11:00:00	34.41	60.40	0.00	766.88	301.84	0.00	0.76	989.35	0.00
18/9/2015 12:00:00	35.40	56.40	0.00	906.88	85.64	1.01	5.29	988.95	0.00
18/9/2015 13:00:00	36.61	48.40	0.00	941.88	91.26	1.76	4.53	987.75	0.00
18/9/2015 14:00:00	37.48	44.10	0.00	896.88	99.68	1.76	6.04	986.35	0.00
18/9/2015 15:00:00	37.92	39.00	0.00	651.88	92.66	1.01	4.28	985.05	0.00
18/9/2015 16:00:00	39.77	35.70	0.00	559.38	304.65	0.00	3.53	984.75	0.00
18/9/2015 17:00:00	39.04	31.30	0.00	305.63	165.66	0.00	2.27	984.55	0.00
18/9/2015 18:00:00	33.52	48.90	0.00	26.88	101.08	1.01	3.78	984.75	0.00
18/9/2015 19:00:00	30.90	58.30	0.00	0.63	294.82	0.25	1.51	985.45	0.00
18/9/2015 20:00:00	29.92	61.90	0.00	0.63	273.77	0.00	0.00	985.85	0.00
18/9/2015 21:00:00	28.07	72.40	0.00	0.63	307.46	0.00	0.00	986.45	0.00
18/9/2015 22:00:00	26.97	79.50	0.00	0.63	29.48	0.00	0.00	987.45	0.00
18/9/2015 23:00:00	27.28	76.90	0.00	0.63	261.13	0.00	0.00	987.75	0.00
19/9/2015 0:00:00	25.89	83.20	0.00	0.63	102.49	0.00	0.00	988.05	0.00
19/9/2015 1:00:00	24.80	87.40	0.00	0.63	140.39	0.00	0.25	987.45	0.00
19/9/2015 2:00:00	24.20	89.20	0.00	0.63	1.40	0.00	0.00	986.55	0.00
19/9/2015 3:00:00	23.76	90.60	0.00	0.63	320.09	0.00	0.00	986.75	0.00
19/9/2015 4:00:00	22.80	93.50	0.00	0.63	242.88	0.00	2.27	986.65	0.00
19/9/2015 5:00:00	22.61	94.10	0.00	0.63	146.01	0.00	0.25	986.75	0.00
19/9/2015 6:00:00	22.75	93.20	0.00	0.63	332.73	0.00	3.27	987.15	0.00
19/9/2015 7:00:00	21.99	95.00	0.00	21.88	102.49	0.00	1.76	987.95	0.00
19/9/2015 8:00:00	23.93	90.10	0.00	181.88	335.54	0.00	1.01	988.95	0.00
19/9/2015 9:00:00	26.55	83.80	0.00	374.38	42.12	0.50	3.78	990.25	0.00
19/9/2015 10:00:00	29.77	71.80	0.00	573.13	96.87	0.25	2.27	990.15	0.00
19/9/2015 11:00:00	32.64	61.00	0.00	788.13	299.04	0.50	3.53	989.55	0.00
19/9/2015 12:00:00	35.08	51.80	0.00	926.88	0.00	1.01	3.78	988.95	0.00

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
19/9/2015 13:00:00	37.15	46.80	0.00	938.13	9.83	0.76	4.03	987.65	0.00
19/9/2015 14:00:00	38.45	43.40	0.00	875.63	345.37	0.50	4.03	986.05	0.00
19/9/2015 15:00:00	38.64	43.20	0.00	703.13	311.67	1.26	4.78	984.95	0.00
19/9/2015 16:00:00	38.48	40.60	0.00	553.13	294.82	1.76	4.28	984.15	0.00
19/9/2015 17:00:00	38.78	38.50	0.40	333.13	12.64	0.25	6.55	984.25	0.00
19/9/2015 18:00:00	27.95	67.90	1.00	16.88	12.64	1.26	6.30	985.05	0.00
19/9/2015 19:00:00	27.28	62.00	0.00	0.63	277.98	1.01	2.52	985.05	0.00
19/9/2015 20:00:00	26.09	77.50	0.00	0.63	292.02	0.00	0.76	985.45	0.00
19/9/2015 21:00:00	26.13	77.60	0.00	0.63	256.92	0.00	1.01	986.45	0.00
19/9/2015 22:00:00	25.91	84.90	0.00	0.63	95.47	0.00	0.00	986.95	0.00
19/9/2015 23:00:00	25.79	87.40	0.00	0.63	92.66	0.00	0.76	987.45	0.00
20/9/2015 0:00:00	24.56	90.00	0.00	0.63	2.81	0.00	1.01	987.15	0.00
20/9/2015 1:00:00	23.57	93.80	0.00	0.63	108.10	0.00	1.26	987.25	0.00
20/9/2015 2:00:00	24.05	91.70	0.00	0.63	197.95	0.00	0.00	986.85	0.00
20/9/2015 3:00:00	23.52	93.90	0.00	0.63	197.95	0.00	0.00	986.65	0.00
20/9/2015 4:00:00	23.18	92.00	0.00	0.63	207.78	0.00	0.00	986.75	0.00
20/9/2015 5:00:00	22.49	93.30	0.00	0.63	178.30	0.00	0.00	986.95	0.00
20/9/2015 6:00:00	22.01	95.90	0.00	0.63	174.09	0.00	0.00	987.95	0.00
20/9/2015 7:00:00	21.41	96.80	0.00	24.38	78.62	0.00	0.00	988.95	0.00
20/9/2015 8:00:00	24.05	90.90	0.00	183.13	70.20	0.00	0.00	989.65	0.00
20/9/2015 9:00:00	26.62	84.60	0.00	410.63	91.26	0.00	2.27	990.35	0.00
20/9/2015 10:00:00	30.70	72.20	0.00	586.88	109.51	0.00	2.52	990.85	0.00
20/9/2015 11:00:00	34.18	55.30	0.00	789.38	61.77	0.50	4.78	990.45	0.00
20/9/2015 12:00:00	35.53	52.70	0.00	885.63	2.81	0.76	5.29	989.55	0.00
20/9/2015 13:00:00	37.02	46.20	0.00	933.13	332.73	1.01	3.78	988.35	0.00
20/9/2015 14:00:00	37.98	42.40	0.00	855.63	26.68	0.76	4.03	987.15	0.00
20/9/2015 15:00:00	38.81	40.80	0.00	713.13	348.17	1.01	4.28	985.85	0.00
20/9/2015 16:00:00	38.28	40.60	0.00	515.63	321.50	1.01	4.03	985.35	0.00
20/9/2015 17:00:00	37.29	41.40	0.00	295.63	306.06	1.01	4.28	985.25	0.00

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
20/9/2015 18:00:00	35.34	46.30	0.00	94.38	303.25	0.50	2.27	985.55	0.00
20/9/2015 19:00:00	32.67	55.90	0.00	0.63	256.92	0.50	1.51	986.25	0.00
20/9/2015 20:00:00	31.05	63.40	0.00	0.63	247.09	0.00	0.00	986.75	0.00
20/9/2015 21:00:00	29.04	77.60	0.00	0.63	248.49	0.00	0.00	987.15	0.00
20/9/2015 22:00:00	28.87	70.40	0.00	0.63	147.41	0.00	0.00	987.85	0.00
20/9/2015 23:00:00	27.28	82.20	0.00	0.63	221.82	0.00	0.00	987.75	0.00
21/9/2015 0:00:00	27.80	74.10	0.00	0.63	237.26	0.00	2.52	987.85	0.00
21/9/2015 1:00:00	25.99	86.20	0.00	0.63	116.53	0.25	2.02	987.35	0.00
21/9/2015 2:00:00	25.55	88.10	0.00	0.63	4.21	0.00	0.50	986.75	0.00
21/9/2015 3:00:00	25.79	87.70	0.00	0.63	265.34	0.00	1.01	986.45	0.00
21/9/2015 4:00:00	25.45	88.90	0.00	0.63	263.94	0.00	0.00	986.15	0.00
21/9/2015 5:00:00	24.07	94.60	0.00	0.63	134.78	0.00	0.50	986.65	0.00
21/9/2015 6:00:00	24.03	95.00	0.00	0.63	112.31	0.00	0.00	987.15	0.00
21/9/2015 7:00:00	24.53	92.30	0.00	16.88	112.31	0.00	0.00	987.95	0.00
21/9/2015 8:00:00	26.74	85.60	0.00	200.63	112.31	0.00	0.76	988.65	0.00
21/9/2015 9:00:00	30.50	72.10	0.00	406.88	35.10	0.00	1.51	989.15	0.00
21/9/2015 10:00:00	33.57	59.80	0.00	611.88	338.35	0.00	1.76	989.35	0.00
21/9/2015 11:00:00	35.50	52.10	0.00	798.13	325.71	0.25	4.53	989.25	0.00
21/9/2015 12:00:00	36.31	49.20	0.00	920.63	15.44	1.51	5.04	988.05	0.00
21/9/2015 13:00:00	37.56	45.70	0.00	975.63	352.38	0.50	5.29	987.25	0.00
21/9/2015 14:00:00	38.45	41.40	0.00	891.88	318.69	1.26	4.03	985.75	0.00
21/9/2015 15:00:00	39.07	39.70	0.00	743.13	46.33	0.76	4.78	985.15	0.00
21/9/2015 16:00:00	38.00	42.20	0.00	516.88	338.35	1.01	4.28	984.75	0.00
21/9/2015 17:00:00	37.29	41.80	0.00	296.88	0.00	0.76	3.53	984.55	0.00
21/9/2015 18:00:00	35.56	47.50	0.00	96.88	349.58	0.00	1.51	984.95	0.00
21/9/2015 19:00:00	33.44	54.20	0.00	0.63	314.48	0.00	0.00	985.25	0.00
21/9/2015 20:00:00	31.31	64.30	0.00	0.63	14.04	0.00	0.50	986.05	0.00
21/9/2015 21:00:00	30.57	70.50	0.00	0.63	293.42	0.00	0.50	986.65	0.00
21/9/2015 22:00:00	28.92	78.20	0.00	0.63	11.23	0.00	0.00	987.15	0.00



**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
21/9/2015 23:00:00	27.75	84.50	0.00	0.63	29.48	0.00	1.51	987.45	0.00
22/9/2015 0:00:00	27.90	78.10	0.00	0.63	94.06	0.00	0.00	986.65	0.00
22/9/2015 1:00:00	26.97	86.30	0.00	0.63	315.88	0.00	0.00	986.05	0.00
22/9/2015 2:00:00	26.13	86.30	0.00	0.63	310.27	0.00	0.00	985.95	0.00
22/9/2015 3:00:00	26.16	88.80	0.00	0.63	286.40	0.00	0.00	985.35	0.00
22/9/2015 4:00:00	25.72	87.90	0.00	0.63	195.15	0.00	0.00	985.75	0.00
22/9/2015 5:00:00	25.23	92.10	0.00	0.63	138.99	0.00	0.00	986.35	0.00
22/9/2015 6:00:00	24.87	92.40	0.00	0.63	137.58	0.00	0.00	986.75	0.00
22/9/2015 7:00:00	24.97	91.30	0.00	26.88	131.97	0.00	0.00	987.95	0.00
22/9/2015 8:00:00	26.13	88.90	0.00	73.13	106.70	0.00	1.51	988.45	0.00
22/9/2015 9:00:00	28.32	81.00	0.00	413.13	101.08	0.50	5.04	989.05	0.00
22/9/2015 10:00:00	30.65	74.10	0.00	704.38	95.47	2.52	4.78	989.55	0.00
22/9/2015 11:00:00	32.20	65.50	0.00	465.63	88.45	1.26	4.78	989.75	0.00
22/9/2015 12:00:00	33.47	58.00	0.00	335.63	85.64	1.76	4.28	988.85	0.00
22/9/2015 13:00:00	34.05	54.60	0.00	435.63	84.24	2.27	5.79	988.25	0.00
22/9/2015 14:00:00	35.34	55.10	0.00	866.88	94.06	3.02	8.06	987.05	0.00
22/9/2015 15:00:00	31.08	66.00	0.00	296.88	113.72	3.53	7.30	986.75	0.00
22/9/2015 16:00:00	29.41	69.40	0.00	89.38	109.51	2.52	4.53	986.25	0.00
22/9/2015 17:00:00	30.32	66.30	0.00	109.38	120.74	0.50	4.03	985.55	0.00
22/9/2015 18:00:00	30.19	68.60	0.00	54.38	280.78	1.26	3.02	984.95	0.00
22/9/2015 19:00:00	27.92	80.50	0.00	0.63	65.98	0.00	1.76	985.35	0.00
22/9/2015 20:00:00	27.31	83.90	0.00	0.63	113.72	0.00	1.51	986.55	0.00
22/9/2015 21:00:00	27.01	84.90	0.00	0.63	138.99	0.00	1.51	987.45	0.00
22/9/2015 22:00:00	26.23	86.50	0.00	0.63	94.06	0.25	1.51	988.15	0.00
22/9/2015 23:00:00	25.99	87.80	0.00	0.63	11.23	0.00	1.26	988.35	0.00
23/9/2015 0:00:00	25.45	90.70	0.00	0.63	109.51	0.00	1.51	987.45	0.00
23/9/2015 1:00:00	25.33	91.10	0.00	0.63	94.06	0.00	1.01	988.05	0.00
23/9/2015 2:00:00	25.31	91.70	0.00	0.63	303.25	0.00	0.76	987.35	0.00
23/9/2015 3:00:00	24.53	94.60	0.00	0.63	112.31	0.00	0.76	986.55	0.00



**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
23/9/2015 4:00:00	23.91	96.60	0.00	0.63	98.28	0.00	1.26	986.45	0.00
23/9/2015 5:00:00	24.24	94.80	0.00	0.63	161.45	0.00	1.26	986.55	0.00
23/9/2015 6:00:00	24.68	93.20	0.00	0.63	261.13	0.00	0.25	986.45	0.00
23/9/2015 7:00:00	23.40	97.70	0.00	24.38	85.64	0.00	1.26	987.85	0.00
23/9/2015 8:00:00	27.19	85.60	0.00	213.13	270.96	0.00	2.27	988.45	0.00
23/9/2015 9:00:00	29.49	74.00	0.00	433.13	91.26	1.01	3.27	989.25	0.00
23/9/2015 10:00:00	31.97	65.80	0.00	399.38	103.89	0.50	3.53	989.45	0.00
23/9/2015 11:00:00	33.94	57.70	0.00	868.13	82.83	1.76	4.53	989.15	0.00
23/9/2015 12:00:00	35.16	53.10	0.00	934.38	87.04	1.76	4.53	988.45	0.00
23/9/2015 13:00:00	36.63	48.10	0.00	980.63	77.22	1.51	6.80	987.05	0.00
23/9/2015 14:00:00	38.12	38.60	0.00	885.63	26.68	1.01	4.78	985.45	0.00
23/9/2015 15:00:00	38.53	39.90	0.00	721.88	338.35	0.50	3.78	984.45	0.00
23/9/2015 16:00:00	38.53	38.00	0.00	576.88	0.00	0.50	3.27	983.85	0.00
23/9/2015 17:00:00	37.95	39.80	0.00	146.88	338.35	0.50	6.55	983.65	0.00
23/9/2015 18:00:00	31.82	51.00	0.00	11.88	178.30	0.50	3.27	983.85	0.00
23/9/2015 19:00:00	31.46	51.30	0.00	0.63	148.82	0.76	4.78	984.25	0.00
23/9/2015 20:00:00	29.87	63.60	0.00	0.63	315.88	0.00	0.76	984.95	0.00
23/9/2015 21:00:00	28.35	72.40	0.00	0.63	325.71	0.00	1.26	985.65	0.00
23/9/2015 22:00:00	26.87	78.60	0.00	0.63	129.16	0.00	0.76	986.45	0.00
23/9/2015 23:00:00	26.65	79.50	0.00	0.63	343.96	0.00	0.00	986.85	0.00
24/9/2015 0:00:00	26.26	81.90	0.00	0.63	272.36	0.00	0.00	986.95	0.00
24/9/2015 1:00:00	25.21	87.80	0.00	0.63	151.62	0.00	0.50	986.45	0.00
24/9/2015 2:00:00	25.04	88.00	0.00	0.63	89.85	0.00	0.76	986.05	0.00
24/9/2015 3:00:00	24.36	90.80	0.00	0.63	131.97	0.00	1.01	985.75	0.00
24/9/2015 4:00:00	25.04	85.50	0.00	0.63	162.86	0.00	0.25	985.75	0.00
24/9/2015 5:00:00	24.58	89.00	0.00	0.63	164.26	0.00	0.00	986.25	0.00
24/9/2015 6:00:00	24.39	90.20	0.00	0.63	162.86	0.00	0.00	986.75	0.00
24/9/2015 7:00:00	24.05	91.00	0.00	31.88	85.64	0.00	1.76	987.75	0.00
24/9/2015 8:00:00	27.21	79.80	0.00	214.38	138.99	0.00	2.52	989.15	0.00

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
24/9/2015 9:00:00	29.77	69.40	0.00	431.88	116.53	0.76	3.53	989.45	0.00
24/9/2015 10:00:00	33.50	58.80	0.00	651.88	67.39	0.25	3.78	989.95	0.00
24/9/2015 11:00:00	35.88	51.30	0.00	851.88	16.85	0.50	4.03	989.95	0.00
24/9/2015 12:00:00	36.55	49.00	0.00	934.38	9.83	0.76	4.28	989.35	0.00
24/9/2015 13:00:00	37.78	43.00	0.00	970.63	322.90	0.76	4.28	988.25	0.00
24/9/2015 14:00:00	39.89	37.20	0.00	818.13	339.75	0.76	4.28	986.65	0.00
24/9/2015 15:00:00	37.92	38.30	0.00	543.13	299.04	1.26	4.53	984.95	0.00
24/9/2015 16:00:00	39.09	35.00	0.00	560.63	299.04	1.51	4.78	984.45	0.00
24/9/2015 17:00:00	38.64	34.80	0.00	181.88	317.29	0.25	2.77	984.15	0.00
24/9/2015 18:00:00	35.88	42.10	0.00	93.13	322.90	0.50	2.27	984.55	0.00
24/9/2015 19:00:00	33.31	51.70	0.00	0.63	289.21	0.00	1.26	985.25	0.00
24/9/2015 20:00:00	30.85	64.30	0.00	0.63	283.59	0.00	0.00	985.85	0.00
24/9/2015 21:00:00	29.92	66.80	0.00	0.63	290.61	0.00	0.00	986.35	0.00
24/9/2015 22:00:00	29.62	71.00	0.00	0.63	341.15	0.00	0.00	987.35	0.00
24/9/2015 23:00:00	28.87	72.50	0.00	0.63	0.00	0.00	0.00	987.35	0.00
25/9/2015 0:00:00	28.25	71.90	0.00	0.63	0.00	0.00	0.00	987.25	0.00
25/9/2015 1:00:00	27.21	81.80	0.00	0.63	137.58	0.00	1.01	987.15	0.00
25/9/2015 2:00:00	26.40	86.30	0.00	0.63	98.28	0.00	1.01	986.55	0.00
25/9/2015 3:00:00	26.35	85.60	0.00	0.63	98.28	0.00	0.76	986.35	0.00
25/9/2015 4:00:00	25.31	90.50	0.00	0.63	138.99	0.00	1.01	986.85	0.00
25/9/2015 5:00:00	25.19	89.70	0.00	0.63	89.85	0.00	0.50	987.05	0.00
25/9/2015 6:00:00	25.16	89.50	0.00	0.63	92.66	0.00	2.02	988.25	0.00
25/9/2015 7:00:00	25.62	86.20	0.00	30.63	105.29	0.00	0.50	989.05	0.00
25/9/2015 8:00:00	27.68	81.10	0.00	188.13	35.10	0.00	1.51	990.15	0.00
25/9/2015 9:00:00	30.65	66.40	0.00	391.88	109.51	0.00	1.51	990.45	0.00
25/9/2015 10:00:00	34.02	54.40	0.00	618.13	338.35	0.25	2.77	990.65	0.00
25/9/2015 11:00:00	35.99	49.00	0.00	809.38	4.21	0.50	4.03	990.15	0.00
25/9/2015 12:00:00	36.99	44.10	0.00	884.38	335.54	1.26	4.53	989.55	0.00
25/9/2015 13:00:00	37.89	40.60	0.00	948.13	317.29	1.26	8.06	988.65	0.00

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
25/9/2015 14:00:00	39.04	39.40	0.00	848.13	308.86	0.50	3.78	987.25	0.00
25/9/2015 15:00:00	39.74	35.80	0.00	693.13	328.52	0.76	3.53	986.15	0.00
25/9/2015 16:00:00	39.38	34.60	0.00	325.63	356.60	0.50	3.02	985.55	0.00
25/9/2015 17:00:00	39.21	33.20	0.00	308.13	4.21	0.25	3.53	984.75	0.00
25/9/2015 18:00:00	35.74	44.70	0.00	76.88	2.81	0.00	1.76	984.75	0.00
25/9/2015 19:00:00	30.75	50.00	0.00	0.63	68.79	2.02	9.07	986.15	0.00
25/9/2015 20:00:00	29.49	59.50	0.00	0.63	92.66	0.00	2.02	985.25	0.00
25/9/2015 21:00:00	27.36	69.30	0.00	0.63	117.93	0.50	2.02	986.15	0.00
25/9/2015 22:00:00	27.68	65.70	0.00	0.63	137.58	0.00	0.00	987.05	0.00
25/9/2015 23:00:00	26.57	74.80	0.00	0.63	70.20	0.00	0.50	987.75	0.00
26/9/2015 0:00:00	26.45	76.50	0.00	0.63	350.98	0.00	0.00	987.95	0.00
26/9/2015 1:00:00	25.23	80.80	0.00	0.63	350.98	0.00	1.26	987.35	0.00
26/9/2015 2:00:00	24.61	85.00	0.00	0.63	95.47	0.00	1.01	987.15	0.00
26/9/2015 3:00:00	24.70	85.60	0.00	0.63	106.70	0.00	2.52	986.75	0.00
26/9/2015 4:00:00	25.19	80.90	0.00	0.63	134.78	0.00	2.02	986.95	0.00
26/9/2015 5:00:00	25.09	84.60	0.00	0.63	182.51	0.00	2.52	987.65	0.00
26/9/2015 6:00:00	26.40	74.00	0.00	0.63	252.71	2.02	5.79	988.15	0.00
26/9/2015 7:00:00	25.79	79.40	0.00	23.13	285.00	1.76	4.28	989.45	0.00
26/9/2015 8:00:00	26.23	78.60	0.00	129.38	275.17	1.26	3.27	990.05	0.00
26/9/2015 9:00:00	29.54	70.00	0.00	405.63	276.57	0.25	2.27	990.65	0.00
26/9/2015 10:00:00	32.48	60.30	0.00	590.63	311.67	0.25	3.02	990.95	0.00
26/9/2015 11:00:00	33.86	56.30	0.00	734.38	307.46	0.50	5.29	991.05	0.00
26/9/2015 12:00:00	35.50	50.70	0.00	1000.63	345.37	1.26	4.28	990.25	0.00
26/9/2015 13:00:00	36.88	47.80	0.00	834.38	355.19	0.76	4.78	988.75	0.00
26/9/2015 14:00:00	36.53	47.10	0.00	555.63	328.52	1.26	4.53	987.75	0.00
26/9/2015 15:00:00	37.29	44.60	0.00	749.38	325.71	1.01	4.53	986.45	0.00
26/9/2015 16:00:00	37.18	43.80	0.00	490.63	308.86	0.76	4.28	985.15	0.00
26/9/2015 17:00:00	35.85	46.10	0.00	278.13	301.84	1.26	3.27	984.95	0.00
26/9/2015 18:00:00	34.20	51.50	0.00	88.13	311.67	0.76	3.02	985.35	0.00

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
26/9/2015 19:00:00	32.10	59.00	0.00	0.63	294.82	0.50	2.77	985.95	0.00
26/9/2015 20:00:00	30.85	63.10	0.00	0.63	263.94	0.50	2.27	986.75	0.00
26/9/2015 21:00:00	30.27	66.20	0.00	0.63	263.94	0.76	2.02	987.65	0.00
26/9/2015 22:00:00	28.47	76.10	0.00	0.63	325.71	0.00	1.76	988.55	0.00
26/9/2015 23:00:00	29.27	72.20	0.00	0.63	254.11	0.00	1.51	988.35	0.00
27/9/2015 0:00:00	28.92	71.70	0.00	0.63	261.13	0.25	1.51	987.85	0.00
27/9/2015 1:00:00	26.89	85.20	0.00	0.63	303.25	0.00	0.00	987.45	0.00
27/9/2015 2:00:00	26.11	87.00	0.00	0.63	46.33	0.00	1.51	986.85	0.00
27/9/2015 3:00:00	26.60	86.10	0.00	0.63	178.30	0.00	1.51	987.25	0.00
27/9/2015 4:00:00	26.62	85.10	0.00	0.63	270.96	0.00	1.26	986.95	0.00
27/9/2015 5:00:00	26.18	85.20	0.00	0.63	247.09	0.25	1.26	987.15	0.00
27/9/2015 6:00:00	24.70	90.90	0.00	0.63	109.51	0.00	0.76	987.75	0.00
27/9/2015 7:00:00	25.53	88.90	0.00	18.13	120.74	0.00	0.76	988.95	0.00
27/9/2015 8:00:00	26.26	86.60	0.00	81.88	96.87	0.00	2.02	989.85	0.00
27/9/2015 9:00:00	28.10	82.60	0.00	269.38	91.26	1.01	3.02	990.75	0.00
27/9/2015 10:00:00	30.17	66.20	0.00	311.88	74.41	0.00	1.51	990.85	0.00
27/9/2015 11:00:00	34.52	55.80	0.00	813.13	259.73	0.00	2.02	990.65	0.00
27/9/2015 12:00:00	33.84	57.10	0.00	501.88	350.98	0.76	3.78	989.85	0.00
27/9/2015 13:00:00	36.09	50.10	0.00	970.63	315.88	0.76	3.02	988.75	0.00
27/9/2015 14:00:00	38.03	43.20	0.00	881.88	14.04	0.50	3.78	987.55	0.00
27/9/2015 15:00:00	38.48	40.60	0.00	683.13	345.37	0.50	3.53	986.55	0.00
27/9/2015 16:00:00	36.88	43.00	0.00	380.63	307.46	1.01	4.03	985.55	0.00
27/9/2015 17:00:00	36.93	43.40	0.00	269.38	355.19	0.00	2.52	985.15	0.00
27/9/2015 18:00:00	34.44	51.10	0.00	69.38	0.00	0.00	1.01	985.25	0.00
27/9/2015 19:00:00	32.02	58.00	0.00	0.63	53.35	0.00	0.00	985.75	0.00
27/9/2015 20:00:00	30.60	67.10	0.00	0.63	53.35	0.00	0.00	986.45	0.00
27/9/2015 21:00:00	29.52	72.80	0.00	0.63	43.52	0.00	0.00	987.45	0.00
27/9/2015 22:00:00	28.97	74.80	0.00	0.63	33.69	0.00	0.25	988.05	0.00
27/9/2015 23:00:00	28.27	78.10	0.00	0.63	296.23	0.00	0.00	988.45	0.00

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
28/9/2015 0:00:00	27.55	84.50	0.00	0.63	356.60	0.00	1.01	988.45	0.00
28/9/2015 1:00:00	27.90	80.50	0.00	0.63	270.96	0.00	0.00	988.05	0.00
28/9/2015 2:00:00	27.33	82.50	0.00	0.63	270.96	0.00	0.25	987.35	0.00
28/9/2015 3:00:00	26.79	86.00	0.00	0.63	270.96	0.00	0.00	986.75	0.00
28/9/2015 4:00:00	26.43	87.70	0.00	0.63	270.96	0.00	2.77	986.35	0.00
28/9/2015 5:00:00	25.45	90.30	0.00	0.63	268.15	0.00	0.76	986.45	0.00
28/9/2015 6:00:00	25.38	90.50	0.00	0.63	36.50	0.00	1.01	986.95	0.00
28/9/2015 7:00:00	25.36	93.40	5.00	4.38	169.88	0.00	1.51	988.55	0.00
28/9/2015 8:00:00	25.60	95.10	0.20	86.88	299.04	0.25	3.02	989.65	0.00
28/9/2015 9:00:00	28.12	86.40	0.00	279.38	285.00	0.25	2.02	989.75	0.00
28/9/2015 10:00:00	29.37	76.30	0.00	301.88	307.46	0.25	3.53	990.25	0.00
28/9/2015 11:00:00	28.87	78.50	0.00	158.13	358.00	0.25	3.53	990.45	0.00
28/9/2015 12:00:00	30.50	72.00	0.00	865.63	25.27	1.01	4.53	989.65	0.00
28/9/2015 13:00:00	31.05	65.60	0.00	541.88	47.73	1.26	3.53	988.95	0.00
28/9/2015 14:00:00	31.79	60.40	0.00	421.88	77.22	0.50	4.28	987.25	0.00
28/9/2015 15:00:00	34.97	53.00	0.00	701.88	95.47	0.25	3.78	985.05	0.00
28/9/2015 16:00:00	35.24	54.60	0.00	511.88	30.89	0.25	3.53	984.85	0.00
28/9/2015 17:00:00	33.34	57.10	0.00	294.38	299.04	1.51	3.53	984.15	0.00
28/9/2015 18:00:00	31.54	60.50	0.00	55.63	346.77	0.25	2.52	984.55	0.00
28/9/2015 19:00:00	29.72	70.10	0.00	0.63	301.84	0.25	2.02	984.95	0.00
28/9/2015 20:00:00	28.20	77.90	0.00	0.63	91.26	0.25	2.77	985.05	0.00
28/9/2015 21:00:00	26.92	83.10	0.00	0.63	120.74	0.25	2.52	986.05	0.00
28/9/2015 22:00:00	25.96	86.40	0.00	0.63	110.91	0.50	2.52	987.35	0.00
28/9/2015 23:00:00	24.61	86.30	0.00	0.63	96.87	0.00	1.26	988.05	0.00
29/9/2015 0:00:00	24.53	84.20	0.00	0.63	126.35	0.00	0.50	987.75	0.00
29/9/2015 1:00:00	24.32	87.80	0.00	0.63	219.01	0.00	1.51	987.05	0.00
29/9/2015 2:00:00	23.35	92.00	0.00	0.63	113.72	0.00	1.51	986.05	0.00
29/9/2015 3:00:00	23.23	91.10	0.00	0.63	120.74	0.00	1.51	985.75	0.00
29/9/2015 4:00:00	23.02	92.50	0.00	0.63	61.77	0.00	0.50	985.75	0.00

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
29/9/2015 5:00:00	22.87	92.80	0.00	0.63	258.32	0.00	0.50	986.05	0.00
29/9/2015 6:00:00	22.18	95.90	0.00	0.63	136.18	0.00	0.76	986.45	0.00
29/9/2015 7:00:00	22.39	95.40	0.00	24.38	106.70	0.00	0.50	986.55	0.00
29/9/2015 8:00:00	24.27	91.00	0.00	205.63	80.02	0.00	2.77	987.75	0.00
29/9/2015 9:00:00	27.24	81.60	0.00	419.38	89.85	0.00	3.27	988.65	0.00
29/9/2015 10:00:00	29.67	72.30	0.00	631.88	95.47	1.26	4.53	988.95	0.00
29/9/2015 11:00:00	32.20	58.60	0.00	800.63	109.51	1.26	4.53	988.85	0.00
29/9/2015 12:00:00	33.89	54.30	0.00	919.38	106.70	0.50	4.28	987.85	0.00
29/9/2015 13:00:00	35.42	50.30	0.00	968.13	88.45	1.51	4.03	986.75	0.00
29/9/2015 14:00:00	37.51	43.80	0.00	885.63	116.53	0.50	3.53	985.35	0.00
29/9/2015 15:00:00	36.25	42.90	0.00	219.38	356.60	0.25	3.02	984.15	0.00
29/9/2015 16:00:00	34.84	45.40	0.00	160.63	87.04	0.76	3.78	983.85	0.00
29/9/2015 17:00:00	26.72	73.20	17.80	41.88	109.51	3.27	9.32	984.15	0.00
29/9/2015 18:00:00	24.75	85.00	0.00	129.38	297.63	0.00	2.02	983.45	0.00
29/9/2015 19:00:00	25.04	91.90	0.00	0.63	95.47	1.01	2.52	983.85	0.00
29/9/2015 20:00:00	25.36	91.80	0.00	0.63	119.33	0.25	2.02	985.45	0.00
29/9/2015 21:00:00	25.21	89.80	0.00	0.63	131.97	0.00	2.02	986.25	0.00
29/9/2015 22:00:00	25.07	91.00	0.00	0.63	113.72	0.00	0.25	986.55	0.00
29/9/2015 23:00:00	24.58	94.30	0.00	0.63	115.12	0.00	0.00	987.35	0.00
30/9/2015 0:00:00	24.56	95.80	0.00	0.63	258.32	0.00	0.00	986.95	0.00
30/9/2015 1:00:00	24.12	95.40	0.00	0.63	133.37	0.00	1.01	986.45	0.00
30/9/2015 2:00:00	24.73	91.80	0.00	0.63	190.93	0.00	0.50	986.15	0.00
30/9/2015 3:00:00	24.68	92.40	0.00	0.63	148.82	0.00	0.25	985.65	0.00
30/9/2015 4:00:00	24.41	91.90	0.00	0.63	63.18	0.00	0.50	986.15	0.00
30/9/2015 5:00:00	24.39	91.40	0.00	0.63	252.71	0.00	1.76	986.05	0.00
30/9/2015 6:00:00	24.34	89.90	0.00	0.63	2.81	0.00	2.52	986.25	0.00
30/9/2015 7:00:00	24.27	91.40	0.00	45.63	259.73	0.76	2.27	986.45	0.00
30/9/2015 8:00:00	25.65	88.90	0.00	219.38	94.06	0.00	1.26	987.15	0.00
30/9/2015 9:00:00	29.12	75.00	0.00	436.88	80.02	0.25	3.27	987.35	0.00

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
30/9/2015 10:00:00	30.72	71.90	0.00	624.38	96.87	1.26	4.78	987.95	0.00
30/9/2015 11:00:00	32.00	66.70	0.00	826.88	95.47	1.76	5.04	987.85	0.00
30/9/2015 12:00:00	34.36	60.80	0.00	944.38	67.39	0.76	4.53	987.15	0.00
30/9/2015 13:00:00	35.77	55.50	0.00	961.88	117.93	0.50	3.53	985.65	0.00
30/9/2015 14:00:00	38.34	44.20	0.00	915.63	141.80	0.25	3.53	984.15	0.00
30/9/2015 15:00:00	38.17	39.60	0.00	733.13	103.89	0.25	3.27	983.05	0.00
30/9/2015 16:00:00	37.40	41.60	0.00	516.88	120.74	0.25	4.03	981.95	0.00
30/9/2015 17:00:00	31.97	53.60	0.00	264.38	71.60	4.53	10.07	981.55	0.00
30/9/2015 18:00:00	31.38	57.60	0.00	88.13	96.87	2.02	4.53	982.35	0.00
30/9/2015 19:00:00	29.64	61.30	0.00	0.63	123.55	0.50	8.56	983.45	0.00
30/9/2015 20:00:00	26.01	80.70	0.60	0.63	117.93	1.76	4.78	984.45	0.00
30/9/2015 21:00:00	26.09	82.90	0.00	0.63	134.78	0.00	2.27	984.85	0.00
30/9/2015 22:00:00	26.62	79.80	0.00	0.63	162.86	0.00	4.03	985.65	0.00
30/9/2015 23:00:00	26.18	83.00	0.00	0.63	315.88	0.00	2.02	987.05	0.00
1/10/2015 0:00:00	25.72	86.70	0.20	0.63	196.55	0.00	1.26	987.05	0.00
1/10/2015 1:00:00	26.09	82.90	0.00	0.63	240.07	0.00	4.28	986.45	0.00
1/10/2015 2:00:00	25.72	81.70	0.00	0.63	259.73	0.00	2.52	985.45	0.00
1/10/2015 3:00:00	24.46	88.70	0.00	0.63	78.62	2.02	5.29	986.45	0.00
1/10/2015 4:00:00	24.53	89.20	0.00	0.63	171.28	0.00	1.76	986.45	0.00
1/10/2015 5:00:00	24.15	90.60	0.00	0.63	150.22	0.00	0.50	985.85	0.00
1/10/2015 6:00:00	24.29	91.30	0.00	0.63	277.98	0.00	1.01	985.85	0.00
1/10/2015 7:00:00	24.70	89.90	0.00	38.13	238.67	0.25	2.02	986.25	0.00
1/10/2015 8:00:00	26.26	86.50	0.00	184.38	356.60	0.00	0.25	986.75	0.00
1/10/2015 9:00:00	27.90	80.30	0.00	419.38	94.06	0.25	2.02	987.25	0.00
1/10/2015 10:00:00	30.47	71.90	0.00	666.88	286.40	0.25	2.02	987.35	0.00
1/10/2015 11:00:00	33.57	62.30	0.00	849.38	223.22	0.25	2.02	987.15	0.00
1/10/2015 12:00:00	34.60	57.40	0.00	931.88	113.72	0.50	4.03	986.75	0.00
1/10/2015 13:00:00	37.40	47.80	0.00	935.63	99.68	1.01	4.78	985.65	0.00
1/10/2015 14:00:00	36.34	48.70	0.00	286.88	75.81	1.26	3.78	984.75	0.00



**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
1/10/2015 15:00:00	31.20	55.60	0.00	86.88	33.69	3.02	10.83	984.15	0.00
1/10/2015 16:00:00	29.77	71.90	0.00	189.38	70.20	0.50	2.77	983.15	0.00
1/10/2015 17:00:00	27.06	78.10	0.00	25.63	303.25	0.25	2.52	983.65	0.00
1/10/2015 18:00:00	26.97	77.80	0.00	5.63	283.59	0.50	2.27	984.35	0.00
1/10/2015 19:00:00	26.13	84.00	0.00	0.63	99.68	0.00	1.76	984.45	0.00
1/10/2015 20:00:00	26.55	83.80	0.00	0.63	95.47	0.00	2.77	985.15	0.00
1/10/2015 21:00:00	26.70	80.90	0.00	0.63	273.77	1.26	3.02	985.75	0.00
1/10/2015 22:00:00	25.74	87.70	0.00	0.63	140.39	0.00	0.00	987.05	0.00
1/10/2015 23:00:00	25.57	89.70	0.00	0.63	294.82	0.00	0.00	986.75	0.00
2/10/2015 0:00:00	24.99	92.60	0.00	0.63	296.23	0.00	0.00	986.05	0.00
2/10/2015 1:00:00	24.68	93.10	0.00	0.63	331.33	0.00	0.00	986.15	0.00
2/10/2015 2:00:00	23.98	95.60	0.00	0.63	105.29	0.00	0.00	985.95	0.00
2/10/2015 3:00:00	24.51	94.20	0.00	0.63	206.38	0.00	0.00	985.65	0.00
2/10/2015 4:00:00	24.56	93.70	0.00	0.63	40.71	0.00	0.00	985.65	0.00
2/10/2015 5:00:00	23.81	96.20	0.00	0.63	0.00	0.00	0.00	985.45	0.00
2/10/2015 6:00:00	23.47	97.00	0.00	0.63	89.85	1.51	4.28	986.75	0.00
2/10/2015 7:00:00	24.20	93.90	0.00	18.13	273.77	1.26	2.52	986.95	0.00
2/10/2015 8:00:00	24.61	94.30	0.00	65.63	113.72	0.00	1.76	988.35	0.00
2/10/2015 9:00:00	25.16	91.90	0.00	55.63	146.01	0.00	1.76	989.25	0.00
2/10/2015 10:00:00	25.02	91.90	0.00	83.13	259.73	0.25	4.53	989.45	0.00
2/10/2015 11:00:00	24.70	92.00	0.00	35.63	254.11	1.51	5.54	989.35	0.00
2/10/2015 12:00:00	28.25	78.70	0.00	533.13	294.82	0.76	3.27	988.75	0.00
2/10/2015 13:00:00	31.69	66.70	0.00	901.88	270.96	0.50	3.78	987.65	0.00
2/10/2015 14:00:00	32.30	64.50	0.00	879.38	245.69	1.51	4.03	986.05	0.00
2/10/2015 15:00:00	34.73	53.80	0.00	698.13	292.02	0.76	4.28	985.15	0.00
2/10/2015 16:00:00	33.70	55.20	0.00	319.38	350.98	0.76	3.78	985.05	0.00
2/10/2015 17:00:00	33.55	57.10	0.00	213.13	313.08	0.76	3.02	984.75	0.00
2/10/2015 18:00:00	32.18	61.40	0.00	79.38	331.33	0.00	1.26	985.15	0.00
2/10/2015 19:00:00	29.97	69.70	0.00	0.63	279.38	0.00	0.50	985.25	0.00

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
2/10/2015 20:00:00	29.52	72.40	0.00	0.63	252.71	0.00	0.00	986.25	0.00
2/10/2015 21:00:00	27.48	83.40	0.00	0.63	199.36	0.00	0.00	987.15	0.00
2/10/2015 22:00:00	26.52	87.40	0.00	0.63	254.11	0.00	0.00	987.85	0.00
2/10/2015 23:00:00	26.11	89.10	0.00	0.63	256.92	0.00	0.00	988.15	0.00
3/10/2015 0:00:00	26.26	88.20	0.00	0.63	248.49	0.00	0.76	987.95	0.00
3/10/2015 1:00:00	25.99	88.90	0.00	0.63	143.20	0.00	0.00	987.85	0.00
3/10/2015 2:00:00	24.85	93.40	0.00	0.63	169.88	0.00	2.02	987.35	0.00
3/10/2015 3:00:00	24.70	93.70	0.00	0.63	179.70	0.00	0.76	986.35	0.00
3/10/2015 4:00:00	24.15	96.40	0.00	0.63	112.31	0.00	0.00	986.45	0.00
3/10/2015 5:00:00	24.00	96.60	0.00	0.63	113.72	0.00	0.00	986.55	0.00
3/10/2015 6:00:00	23.40	97.80	0.00	0.63	113.72	0.00	0.76	987.15	0.00
3/10/2015 7:00:00	23.71	96.30	0.00	46.88	29.48	0.00	0.25	988.55	0.00
3/10/2015 8:00:00	26.16	92.00	0.00	224.38	105.29	0.00	2.02	989.35	0.00
3/10/2015 9:00:00	28.15	86.00	0.00	320.63	94.06	0.00	2.02	989.75	0.00
3/10/2015 10:00:00	31.05	75.20	0.00	638.13	94.06	0.00	1.76	989.95	0.00
3/10/2015 11:00:00	34.68	61.60	0.00	776.88	255.51	0.00	2.52	989.65	0.00
3/10/2015 12:00:00	34.92	58.00	0.00	943.13	304.65	0.76	4.53	989.35	0.00
3/10/2015 13:00:00	35.16	52.60	0.00	366.88	339.75	0.50	3.53	988.25	0.00
3/10/2015 14:00:00	37.21	46.20	0.00	314.38	310.27	1.26	3.27	986.65	0.00
3/10/2015 15:00:00	36.80	48.60	0.00	349.38	64.58	0.50	4.03	985.35	0.00
3/10/2015 16:00:00	36.88	45.50	0.00	360.63	22.46	0.50	3.02	984.75	0.00
3/10/2015 17:00:00	37.18	43.90	0.00	204.38	332.73	0.50	3.27	984.15	0.00
3/10/2015 18:00:00	35.24	49.00	0.00	81.88	349.58	0.25	2.27	984.65	0.00
3/10/2015 19:00:00	32.67	58.00	0.00	0.63	266.75	0.00	3.02	985.35	0.00
3/10/2015 20:00:00	31.13	64.70	0.00	0.63	131.97	0.00	1.51	985.95	0.00
3/10/2015 21:00:00	30.22	66.20	0.00	0.63	221.82	1.51	3.53	986.95	0.00
3/10/2015 22:00:00	29.49	68.00	0.00	0.63	294.82	0.00	1.51	987.45	0.00
3/10/2015 23:00:00	28.99	71.20	0.00	0.63	127.76	0.00	0.50	988.45	0.00
4/10/2015 0:00:00	27.48	77.20	0.00	0.63	148.82	0.00	0.76	988.35	0.00

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
4/10/2015 1:00:00	27.26	76.60	0.00	0.63	161.45	0.00	0.76	987.95	0.00
4/10/2015 2:00:00	26.97	74.50	0.00	0.63	258.32	0.00	0.50	987.45	0.00
4/10/2015 3:00:00	27.01	72.70	0.00	0.63	258.32	0.00	0.00	987.25	0.00
4/10/2015 4:00:00	25.55	86.20	0.00	0.63	136.18	0.00	0.76	987.65	0.00
4/10/2015 5:00:00	25.23	85.40	0.00	0.63	112.31	0.00	0.00	987.75	0.00
4/10/2015 6:00:00	24.75	88.70	0.00	0.63	112.31	0.00	0.00	988.45	0.00
4/10/2015 7:00:00	24.63	90.50	0.00	36.88	110.91	0.00	0.50	989.65	0.00
4/10/2015 8:00:00	26.94	84.40	0.00	209.38	106.70	0.00	1.76	990.45	0.00
4/10/2015 9:00:00	30.67	67.70	0.00	455.63	244.28	0.25	3.02	990.75	0.00
4/10/2015 10:00:00	31.43	66.40	0.00	581.88	235.86	1.01	4.03	990.55	0.00
4/10/2015 11:00:00	33.31	59.40	0.00	620.63	241.48	2.02	5.29	990.05	0.00
4/10/2015 12:00:00	34.60	58.30	0.00	966.88	247.09	2.02	4.78	989.35	0.00
4/10/2015 13:00:00	36.04	51.10	0.00	958.13	238.67	1.01	5.04	988.35	0.00
4/10/2015 14:00:00	36.88	46.80	0.00	803.13	252.71	2.27	4.53	987.15	0.00
4/10/2015 15:00:00	40.69	40.70	0.00	809.38	64.58	0.25	3.78	985.95	0.00
4/10/2015 16:00:00	37.62	43.60	0.00	485.63	249.90	1.26	4.03	985.65	0.00
4/10/2015 17:00:00	31.15	68.70	16.20	21.88	356.60	1.26	7.55	986.45	0.00
4/10/2015 18:00:00	27.06	83.90	0.00	46.88	275.17	1.01	2.77	985.85	0.00
4/10/2015 19:00:00	27.85	83.90	0.00	0.63	289.21	0.76	2.27	986.25	0.00
4/10/2015 20:00:00	27.31	88.90	0.00	0.63	306.06	0.00	1.51	987.05	0.00
4/10/2015 21:00:00	27.41	87.40	0.00	0.63	199.36	0.00	0.25	988.55	0.00
4/10/2015 22:00:00	26.72	90.20	0.00	0.63	95.47	0.00	0.00	988.65	0.00
4/10/2015 23:00:00	26.28	89.90	0.00	0.63	332.73	0.00	0.25	989.05	0.00
5/10/2015 0:00:00	25.89	94.10	0.00	0.63	339.75	0.00	0.00	988.85	0.00
5/10/2015 1:00:00	25.74	94.30	0.00	0.63	254.11	0.00	0.00	988.05	0.00
5/10/2015 2:00:00	25.70	93.30	0.00	0.63	254.11	0.00	1.01	987.35	0.00
5/10/2015 3:00:00	25.62	93.60	0.00	0.63	292.02	0.00	0.76	987.05	0.00
5/10/2015 4:00:00	24.68	98.10	0.00	0.63	124.95	0.00	0.50	986.75	0.00
5/10/2015 5:00:00	24.85	96.90	0.00	0.63	110.91	0.00	0.76	987.05	0.00

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
5/10/2015 6:00:00	24.17	98.10	0.00	0.63	120.74	0.00	0.25	987.55	0.00
5/10/2015 7:00:00	24.46	97.00	0.00	36.88	133.37	0.00	0.00	988.55	0.00
5/10/2015 8:00:00	26.43	91.50	0.00	229.38	115.12	0.00	0.76	989.45	0.00
5/10/2015 9:00:00	29.84	82.40	0.00	436.88	85.64	0.00	1.01	989.95	0.00
5/10/2015 10:00:00	32.56	72.30	0.00	635.63	289.21	0.00	4.03	990.05	0.00
5/10/2015 11:00:00	34.92	59.20	0.00	823.13	249.90	1.01	3.27	989.75	0.00
5/10/2015 12:00:00	36.66	50.30	0.00	911.88	268.15	0.76	3.53	989.25	6.66
5/10/2015 13:00:00	38.06	44.30	0.00	873.13	242.88	0.76	3.53	987.65	21.80
5/10/2015 14:00:00	40.80	37.00	0.40	349.38	92.66	0.25	5.54	986.25	52.62
5/10/2015 15:00:00	34.84	61.40	0.20	686.88	353.79	0.00	1.51	984.95	30.87
5/10/2015 16:00:00	35.50	55.50	0.00	385.63	307.46	0.00	7.81	984.95	23.88
5/10/2015 17:00:00	27.43	77.80	6.00	154.38	91.26	4.28	8.81	986.65	3.04
5/10/2015 18:00:00	25.28	85.50	0.00	124.38	96.87	0.00	5.04	986.45	0.00
5/10/2015 19:00:00	27.09	85.00	0.00	0.63	35.10	0.00	2.77	987.15	0.00
5/10/2015 20:00:00	27.33	80.30	0.00	0.63	242.88	1.51	3.53	987.35	0.00
5/10/2015 21:00:00	25.79	89.80	0.00	0.63	37.91	0.00	1.51	988.25	0.00
5/10/2015 22:00:00	26.06	87.90	0.00	0.63	223.22	0.00	1.51	988.55	0.00
5/10/2015 23:00:00	25.45	92.90	0.00	0.63	94.06	0.00	0.76	988.75	0.00
6/10/2015 0:00:00	24.68	93.80	0.00	0.63	98.28	0.00	0.50	988.35	0.00
6/10/2015 1:00:00	24.99	94.50	0.00	0.63	61.77	0.00	0.00	988.05	0.00
6/10/2015 2:00:00	24.39	96.50	0.00	0.63	47.73	0.00	0.00	987.35	0.00
6/10/2015 3:00:00	24.41	96.30	0.00	0.63	270.96	0.00	0.00	986.85	0.00
6/10/2015 4:00:00	23.98	98.10	0.00	0.63	113.72	0.00	0.00	986.95	0.00
6/10/2015 5:00:00	23.69	97.90	0.00	0.63	98.28	0.00	0.00	986.85	0.00
6/10/2015 6:00:00	23.52	98.60	0.00	0.63	98.28	0.00	0.00	987.85	0.00
6/10/2015 7:00:00	23.45	98.30	0.00	36.88	98.28	0.00	0.00	988.75	0.00
6/10/2015 8:00:00	25.55	94.10	0.00	203.13	98.28	0.00	0.00	989.05	0.00
6/10/2015 9:00:00	28.74	83.20	0.00	423.13	82.83	0.00	0.00	989.15	0.00
6/10/2015 10:00:00	30.80	72.20	0.00	386.88	300.44	0.00	0.25	989.05	0.00

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
6/10/2015 11:00:00	32.20	66.60	0.60	173.13	358.00	0.00	2.27	989.15	0.04
6/10/2015 12:00:00	32.30	72.80	0.00	381.88	15.44	0.00	1.51	988.35	0.96
6/10/2015 13:00:00	35.29	59.20	0.00	386.88	47.73	0.50	7.81	987.55	0.00
6/10/2015 14:00:00	24.15	85.10	7.40	53.13	32.29	2.52	6.55	987.65	0.00
6/10/2015 15:00:00	25.94	84.70	0.00	200.63	80.02	0.25	2.27	986.15	0.00
6/10/2015 16:00:00	27.26	76.20	0.00	211.88	261.13	0.25	2.02	985.85	0.00
6/10/2015 17:00:00	28.00	74.00	0.00	128.13	355.19	0.00	0.76	984.35	0.00
6/10/2015 18:00:00	26.99	83.90	0.00	46.88	103.89	0.00	1.76	985.45	0.00
6/10/2015 19:00:00	26.89	85.20	0.00	0.63	244.28	0.50	2.02	987.45	0.00
6/10/2015 20:00:00	26.45	87.10	0.00	0.63	231.65	0.00	1.01	986.95	0.00
6/10/2015 21:00:00	26.74	85.90	0.00	0.63	167.07	0.00	2.02	988.75	0.00
6/10/2015 22:00:00	26.35	88.00	0.60	0.63	183.91	0.50	2.52	989.85	0.00
6/10/2015 23:00:00	25.43	93.50	15.00	0.63	108.10	0.76	7.30	989.95	5.49
7/10/2015 0:00:00	22.66	98.40	9.20	0.63	115.12	3.27	7.81	990.75	14.56
7/10/2015 1:00:00	22.13	98.10	7.40	0.63	103.89	2.52	6.30	991.45	19.34
7/10/2015 2:00:00	22.49	97.60	0.40	0.63	2.81	0.00	1.26	988.85	19.34
7/10/2015 3:00:00	22.49	97.00	0.00	0.63	269.55	0.76	2.27	988.45	19.10
7/10/2015 4:00:00	22.37	97.10	0.20	0.63	275.17	0.00	1.51	988.25	20.57
7/10/2015 5:00:00	22.63	96.30	0.00	0.63	296.23	0.76	2.77	988.15	20.26
7/10/2015 6:00:00	22.85	95.20	0.00	0.63	301.84	0.76	4.28	988.25	19.34
7/10/2015 7:00:00	22.68	96.30	0.00	11.88	308.86	1.26	3.78	988.15	19.96
7/10/2015 8:00:00	23.26	94.30	0.00	83.13	350.98	0.00	2.52	989.35	19.65
7/10/2015 9:00:00	23.88	93.80	0.00	73.13	116.53	0.50	3.53	991.25	19.10
7/10/2015 10:00:00	24.87	90.60	0.00	156.88	74.41	0.25	2.02	992.85	19.96
7/10/2015 11:00:00	27.26	81.50	0.00	524.38	113.72	0.00	1.76	992.05	20.57
7/10/2015 12:00:00	29.37	73.80	0.00	718.13	339.75	0.00	2.27	991.15	23.33
7/10/2015 13:00:00	29.87	69.60	0.00	829.38	265.34	0.25	3.02	990.25	26.33
7/10/2015 14:00:00	31.00	63.80	0.00	814.38	262.53	1.01	3.02	989.15	28.11
7/10/2015 15:00:00	31.28	65.50	0.00	513.13	339.75	0.50	3.27	988.25	31.17

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
7/10/2015 16:00:00	29.99	67.30	0.00	349.38	308.86	0.76	3.78	987.75	31.17
7/10/2015 17:00:00	30.47	65.60	0.00	209.38	292.02	0.76	2.77	987.45	26.64
7/10/2015 18:00:00	28.74	70.50	0.00	46.88	249.90	1.26	3.27	987.45	21.49
7/10/2015 19:00:00	27.36	77.60	0.00	0.63	258.32	1.51	3.27	987.45	19.65
7/10/2015 20:00:00	26.65	79.20	0.00	0.63	259.73	1.01	3.27	987.85	18.18
7/10/2015 21:00:00	26.45	79.60	0.00	0.63	106.70	0.00	0.25	988.65	17.57
7/10/2015 22:00:00	26.28	80.60	0.00	0.63	209.18	0.00	0.00	989.05	17.57
7/10/2015 23:00:00	24.97	89.80	0.00	0.63	251.30	0.00	0.00	988.95	17.26
8/10/2015 0:00:00	24.63	90.10	0.00	0.63	154.43	0.00	0.00	989.05	17.57
8/10/2015 1:00:00	24.53	90.90	0.00	0.63	249.90	0.00	0.00	988.45	17.57
8/10/2015 2:00:00	23.67	95.30	0.00	0.63	112.31	0.00	0.00	988.05	16.03
8/10/2015 3:00:00	24.10	92.20	0.00	0.63	248.49	0.00	0.25	987.35	16.95
8/10/2015 4:00:00	23.86	93.30	0.00	0.63	234.46	0.00	0.00	987.45	17.87
8/10/2015 5:00:00	22.78	97.60	0.00	0.63	255.51	0.00	0.00	988.35	16.34
8/10/2015 6:00:00	22.47	98.00	0.00	0.63	164.26	0.00	0.00	988.45	17.26
8/10/2015 7:00:00	22.82	98.00	0.00	39.38	130.57	0.00	1.51	989.15	16.95
8/10/2015 8:00:00	24.10	95.70	0.00	176.88	92.66	0.00	1.01	989.35	16.95
8/10/2015 9:00:00	27.33	88.30	0.00	515.63	117.93	0.00	2.02	989.65	16.65
8/10/2015 10:00:00	31.13	76.00	0.00	688.13	71.60	0.00	2.52	989.85	17.26
8/10/2015 11:00:00	33.57	63.00	0.00	869.38	117.93	0.50	3.02	989.65	19.34
8/10/2015 12:00:00	35.34	57.30	0.00	911.88	256.92	0.50	4.78	988.95	29.03
8/10/2015 13:00:00	35.93	50.40	0.00	956.88	81.43	0.76	3.53	987.65	38.40
8/10/2015 14:00:00	38.00	42.90	0.00	909.38	54.75	0.50	3.27	986.35	61.08
8/10/2015 15:00:00	36.91	43.60	0.00	713.13	296.23	1.01	3.78	984.85	65.61
8/10/2015 16:00:00	37.02	45.90	0.00	540.63	306.06	1.26	3.53	983.85	33.87
8/10/2015 17:00:00	31.59	61.90	0.00	71.88	87.04	3.02	7.05	985.45	20.26
8/10/2015 18:00:00	28.37	76.90	0.00	79.38	89.85	1.01	3.02	985.15	33.87
8/10/2015 19:00:00	27.46	78.40	0.00	0.63	119.33	1.01	2.77	986.15	33.56
8/10/2015 20:00:00	26.82	80.00	0.00	0.63	155.84	0.25	2.52	986.85	33.87

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
8/10/2015 21:00:00	26.23	85.90	0.00	0.63	131.97	0.00	1.51	987.15	33.26
8/10/2015 22:00:00	25.96	87.00	0.00	0.63	143.20	0.00	1.76	984.95	34.17
8/10/2015 23:00:00	26.06	87.90	0.00	0.63	98.28	0.50	3.02	989.25	33.26
9/10/2015 0:00:00	25.16	92.70	0.00	0.63	108.10	0.25	3.02	989.45	33.87
9/10/2015 1:00:00	24.85	93.30	0.00	0.63	96.87	0.50	2.27	988.15	32.64
9/10/2015 2:00:00	24.68	93.20	0.00	0.63	117.93	0.00	0.00	986.55	32.09
9/10/2015 3:00:00	24.36	92.60	0.00	0.63	14.04	0.00	0.50	985.55	32.64
9/10/2015 4:00:00	23.86	95.80	0.00	0.63	95.47	0.00	1.26	986.35	33.26
9/10/2015 5:00:00	23.28	93.60	0.00	0.63	73.00	0.00	0.76	985.95	31.78
9/10/2015 6:00:00	23.79	92.40	0.00	0.63	286.40	0.00	0.50	986.55	32.09
9/10/2015 7:00:00	23.40	96.10	0.00	19.38	300.44	0.00	1.01	987.45	32.34
9/10/2015 8:00:00	27.11	83.10	0.00	260.63	251.30	0.00	1.01	988.65	32.09
9/10/2015 9:00:00	29.41	71.70	0.00	499.38	115.12	0.25	2.27	989.55	32.64
9/10/2015 10:00:00	32.20	60.90	0.00	685.63	75.81	0.25	2.27	989.15	34.79
9/10/2015 11:00:00	34.15	59.20	0.00	869.38	103.89	0.25	2.77	989.35	37.18
9/10/2015 12:00:00	35.64	51.20	0.00	943.13	46.33	0.76	3.02	989.15	39.63
9/10/2015 13:00:00	37.76	46.90	0.00	958.13	1.40	0.76	3.53	987.45	42.02
9/10/2015 14:00:00	38.31	42.00	0.00	896.88	277.98	1.01	4.28	986.15	55.62
9/10/2015 15:00:00	37.70	42.80	0.00	729.38	299.04	1.01	8.31	984.45	58.93
9/10/2015 16:00:00	24.75	88.00	18.21	34.38	73.00	5.04	10.83	985.25	37.48
9/10/2015 17:00:00	24.46	84.60	0.40	110.63	197.95	0.25	2.77	984.45	30.56
9/10/2015 18:00:00	26.11	86.30	0.00	120.63	349.58	0.00	2.02	984.35	30.56
9/10/2015 19:00:00	25.40	91.90	0.00	0.63	280.78	1.01	2.27	986.05	30.25
9/10/2015 20:00:00	26.18	88.10	0.00	0.63	280.78	0.00	0.76	985.95	28.72
9/10/2015 21:00:00	25.72	92.90	0.00	0.63	42.12	0.00	1.01	987.55	29.95
9/10/2015 22:00:00	25.07	95.50	0.00	0.63	117.93	0.00	3.53	987.75	29.64
9/10/2015 23:00:00	24.39	94.60	0.00	0.63	103.89	2.77	5.79	988.65	29.03
10/10/2015 0:00:00	24.24	94.00	0.00	0.63	103.89	0.50	2.27	989.35	28.41
10/10/2015 1:00:00	24.24	92.20	0.00	0.63	197.95	0.00	2.52	989.25	28.11



**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
10/10/2015 2:00:00	24.22	92.20	0.00	0.63	162.86	0.00	1.26	987.55	28.41
10/10/2015 3:00:00	24.05	95.30	0.00	0.63	119.33	0.00	0.50	986.95	27.86
10/10/2015 4:00:00	23.86	95.20	0.00	0.63	297.63	0.00	1.01	986.55	28.41
10/10/2015 5:00:00	23.26	98.20	0.00	0.63	102.49	0.25	1.51	987.95	28.72
10/10/2015 6:00:00	23.69	95.70	0.00	0.63	182.51	0.00	0.00	988.15	28.11
10/10/2015 7:00:00	23.57	96.10	0.00	43.13	75.81	0.00	0.50	988.75	27.56
10/10/2015 8:00:00	25.23	92.00	0.00	178.13	293.42	0.00	1.76	989.55	27.25
10/10/2015 9:00:00	26.62	86.00	0.00	236.88	285.00	0.00	2.02	990.65	29.03
10/10/2015 10:00:00	27.68	81.10	0.00	368.13	82.83	0.50	2.27	990.75	29.33
10/10/2015 11:00:00	30.39	71.70	0.00	499.38	56.16	0.25	2.02	990.35	28.72
10/10/2015 12:00:00	29.07	75.50	0.00	183.13	343.96	0.00	2.52	989.85	29.33
10/10/2015 13:00:00	29.62	75.90	0.00	305.63	2.81	0.00	2.27	989.15	29.95
10/10/2015 14:00:00	30.75	71.70	0.00	450.63	21.06	0.25	2.27	987.75	31.48
10/10/2015 15:00:00	31.74	70.80	0.00	498.13	58.97	0.25	2.02	986.45	31.17
10/10/2015 16:00:00	32.28	68.50	0.00	410.63	0.00	0.25	2.02	985.55	32.64
10/10/2015 17:00:00	31.03	72.10	0.00	263.13	310.27	0.25	2.27	984.85	29.64
10/10/2015 18:00:00	29.62	75.40	0.00	48.13	314.48	0.00	1.01	985.65	29.64
10/10/2015 19:00:00	28.27	82.70	0.00	0.63	270.96	0.00	0.76	986.45	27.86
10/10/2015 20:00:00	27.53	86.90	0.00	0.63	234.46	0.00	1.01	987.65	27.25
10/10/2015 21:00:00	27.11	85.50	0.00	0.63	169.88	0.00	2.02	988.65	25.41
10/10/2015 22:00:00	27.60	84.50	0.00	0.63	280.78	0.00	6.80	989.55	26.02
10/10/2015 23:00:00	24.61	86.00	19.00	0.63	96.87	4.53	9.82	990.95	28.72
11/10/2015 0:00:00	23.09	98.20	1.00	0.63	204.97	0.00	5.79	990.25	29.64
11/10/2015 1:00:00	22.73	95.50	0.00	0.63	255.51	3.02	5.54	988.75	29.95
11/10/2015 2:00:00	23.50	90.70	0.00	0.63	204.97	0.00	1.51	988.15	30.25
11/10/2015 3:00:00	22.99	96.30	0.00	0.63	92.66	1.01	3.27	987.95	29.95
11/10/2015 4:00:00	22.68	97.80	0.00	0.63	92.66	0.00	2.02	988.35	28.72
11/10/2015 5:00:00	23.23	96.10	0.00	0.63	105.29	1.26	4.03	988.55	28.41
11/10/2015 6:00:00	23.16	95.80	0.00	0.63	102.49	0.00	4.53	988.65	29.64

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
11/10/2015 7:00:00	24.36	87.90	0.00	3.13	168.47	0.76	4.28	988.45	28.72
11/10/2015 8:00:00	24.15	92.00	0.00	54.38	92.66	0.00	2.77	989.65	29.95
11/10/2015 9:00:00	24.46	90.60	0.00	203.13	60.37	0.25	2.27	990.75	30.56
11/10/2015 10:00:00	27.36	81.80	0.00	481.88	12.64	0.00	4.53	990.45	29.95
11/10/2015 11:00:00	28.47	79.70	0.00	1184.38	116.53	1.01	4.28	989.75	32.09
11/10/2015 12:00:00	29.27	75.20	0.00	559.38	102.49	1.01	3.53	989.15	33.87
11/10/2015 13:00:00	32.10	67.10	0.00	998.13	21.06	0.00	2.77	987.95	34.79
11/10/2015 14:00:00	32.15	64.40	0.00	371.88	273.77	0.76	3.02	986.95	36.87
11/10/2015 15:00:00	34.65	58.00	0.00	771.88	44.93	0.25	3.02	985.65	36.87
11/10/2015 16:00:00	35.26	54.20	0.00	560.63	109.51	0.25	3.27	984.95	38.10
11/10/2015 17:00:00	33.63	56.60	0.00	319.38	254.11	0.76	2.77	984.45	32.64
11/10/2015 18:00:00	32.79	60.00	0.00	149.38	263.94	0.50	2.27	984.85	31.17
11/10/2015 19:00:00	30.65	69.90	0.00	0.63	165.66	0.00	0.50	985.35	28.41
11/10/2015 20:00:00	28.89	82.10	0.00	0.63	209.18	0.00	1.01	986.45	27.25
11/10/2015 21:00:00	27.65	87.90	0.00	0.63	317.29	0.00	0.25	987.35	26.64
11/10/2015 22:00:00	27.60	88.90	0.00	0.63	99.68	0.00	0.76	988.25	26.94
11/10/2015 23:00:00	27.58	88.00	0.00	0.63	252.71	0.00	0.76	988.95	26.64
12/10/2015 0:00:00	26.70	92.40	0.00	0.63	289.21	0.00	0.00	988.75	26.02
12/10/2015 1:00:00	27.01	85.20	0.00	0.63	307.46	0.00	0.00	987.75	25.72
12/10/2015 2:00:00	26.04	91.50	0.00	0.63	273.77	0.25	2.52	987.55	26.02
12/10/2015 3:00:00	26.21	90.80	0.00	0.63	355.19	0.00	2.27	987.15	25.72
12/10/2015 4:00:00	26.23	86.00	0.00	0.63	262.53	0.00	2.27	987.45	25.41
12/10/2015 5:00:00	25.65	86.50	0.00	0.63	213.40	0.00	1.26	987.75	25.72
12/10/2015 6:00:00	25.19	86.90	0.00	0.63	16.85	0.00	4.78	988.25	25.41
12/10/2015 7:00:00	24.73	87.90	0.00	26.88	217.61	1.51	5.04	988.55	24.80
12/10/2015 8:00:00	25.77	83.20	0.00	151.88	185.32	0.25	3.53	989.75	25.10
12/10/2015 9:00:00	26.28	79.50	0.00	215.63	200.76	0.76	4.28	990.75	25.72
12/10/2015 10:00:00	26.89	76.20	0.00	206.88	196.55	0.25	2.77	991.05	25.72
12/10/2015 11:00:00	28.64	74.30	0.00	540.63	259.73	0.50	3.78	990.95	25.41

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
12/10/2015 12:00:00	29.64	69.90	0.00	265.63	254.11	1.01	3.02	990.35	27.25
12/10/2015 13:00:00	31.84	63.90	0.00	1021.88	226.03	1.26	3.27	989.05	26.94
12/10/2015 14:00:00	33.70	59.50	0.00	524.38	165.66	0.25	2.77	988.25	26.94
12/10/2015 15:00:00	32.28	63.60	0.00	290.63	336.94	0.50	5.79	986.95	27.25
12/10/2015 16:00:00	27.65	79.70	0.00	78.13	29.48	1.51	5.79	986.55	28.41
12/10/2015 17:00:00	27.28	83.90	0.00	198.13	285.00	1.51	3.27	986.05	27.86
12/10/2015 18:00:00	27.65	84.30	0.00	65.63	303.25	0.25	2.02	986.35	26.02
12/10/2015 19:00:00	26.52	88.90	0.00	0.63	277.98	0.25	1.51	986.75	24.49
12/10/2015 20:00:00	26.23	90.30	0.00	0.63	290.61	0.00	0.76	987.55	22.71
12/10/2015 21:00:00	25.94	92.80	0.00	0.63	259.73	0.00	1.51	988.65	23.57
12/10/2015 22:00:00	25.82	92.70	0.00	0.63	279.38	0.00	1.76	989.55	22.10
12/10/2015 23:00:00	25.28	93.10	0.00	0.63	341.15	0.00	1.01	990.35	21.49
13/10/2015 0:00:00	25.28	93.00	0.00	0.63	286.40	0.00	0.00	989.75	21.49
13/10/2015 1:00:00	25.36	93.10	0.00	0.63	286.40	0.00	0.00	989.55	21.80
13/10/2015 2:00:00	25.45	88.80	0.00	0.63	168.47	0.00	3.78	989.15	24.19
13/10/2015 3:00:00	24.85	86.50	0.00	0.63	254.11	3.27	8.06	987.45	23.88
13/10/2015 4:00:00	24.56	85.10	0.00	0.63	40.71	0.00	3.53	986.75	24.80
13/10/2015 5:00:00	24.07	87.60	0.00	0.63	204.97	0.00	1.76	987.35	24.80
13/10/2015 6:00:00	22.92	94.70	0.00	0.63	259.73	0.00	0.76	988.05	23.02
13/10/2015 7:00:00	23.21	93.50	0.00	56.88	136.18	0.00	2.27	988.55	23.02
13/10/2015 8:00:00	24.82	88.20	0.00	144.38	110.91	0.50	3.02	989.15	24.80
13/10/2015 9:00:00	27.24	81.90	0.00	429.38	99.68	0.50	2.52	990.05	25.10
13/10/2015 10:00:00	30.50	72.80	0.00	695.63	95.47	0.00	4.78	990.05	26.33
13/10/2015 11:00:00	31.74	67.40	0.00	871.88	109.51	2.52	7.55	990.55	29.64
13/10/2015 12:00:00	31.84	63.10	0.00	336.88	99.68	4.03	7.55	990.15	28.72
13/10/2015 13:00:00	33.73	56.50	0.00	1063.13	117.93	1.76	5.79	989.25	29.95
13/10/2015 14:00:00	34.10	56.50	0.00	899.38	87.04	2.02	4.78	987.95	31.48
13/10/2015 15:00:00	35.99	50.40	0.00	749.38	109.51	1.51	4.28	986.75	36.32
13/10/2015 16:00:00	36.15	49.50	0.00	433.13	16.85	0.25	3.27	985.75	39.63

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
13/10/2015 17:00:00	35.85	49.80	0.00	291.88	345.37	0.50	3.27	985.15	32.09
13/10/2015 18:00:00	33.55	56.50	0.00	59.38	349.58	0.00	1.51	985.75	24.49
13/10/2015 19:00:00	30.93	65.90	0.00	0.63	342.56	0.00	0.25	986.15	22.41
13/10/2015 20:00:00	28.99	78.60	0.00	0.63	346.77	0.00	2.02	986.95	20.57
13/10/2015 21:00:00	28.25	82.80	0.00	0.63	84.24	0.00	0.76	988.25	20.26
13/10/2015 22:00:00	27.80	85.50	0.00	0.63	85.64	0.00	0.00	988.95	20.26
13/10/2015 23:00:00	27.43	87.40	0.00	0.63	35.10	0.00	0.50	989.25	20.26
14/10/2015 0:00:00	27.06	86.70	0.00	0.63	300.44	0.00	0.25	988.65	20.88
14/10/2015 1:00:00	25.55	93.10	0.00	0.63	103.89	0.00	1.01	988.05	19.34
14/10/2015 2:00:00	24.87	96.00	0.00	0.63	119.33	0.00	0.00	987.65	19.10
14/10/2015 3:00:00	25.09	93.80	0.00	0.63	119.33	0.00	0.50	987.75	19.10
14/10/2015 4:00:00	24.51	94.90	0.00	0.63	353.79	0.00	0.00	987.45	17.57
14/10/2015 5:00:00	24.22	98.20	0.00	0.63	353.79	0.00	0.00	987.75	18.79
14/10/2015 6:00:00	24.05	97.40	0.00	0.63	8.42	0.00	0.50	988.15	18.18
14/10/2015 7:00:00	23.71	97.60	0.00	40.63	106.70	0.00	0.76	988.65	17.87
14/10/2015 8:00:00	25.87	93.80	0.00	264.38	102.49	0.00	1.01	989.15	17.87
14/10/2015 9:00:00	30.27	80.70	0.00	486.88	60.37	0.00	1.26	990.25	19.10
14/10/2015 10:00:00	32.18	65.70	0.00	689.38	304.65	0.25	2.27	989.95	20.57
14/10/2015 11:00:00	35.42	54.30	0.00	874.38	2.81	0.50	3.78	989.95	22.10
14/10/2015 12:00:00	35.58	53.30	0.00	253.13	342.56	0.76	4.28	989.65	23.57
14/10/2015 13:00:00	36.66	51.80	0.00	344.38	331.33	0.50	4.53	988.45	26.02
14/10/2015 14:00:00	38.59	47.20	0.00	941.88	7.02	0.50	4.53	987.65	32.34
14/10/2015 15:00:00	38.70	43.00	0.00	764.38	311.67	1.26	4.28	985.65	54.70
14/10/2015 16:00:00	28.84	65.60	0.60	100.63	60.37	3.27	9.07	987.15	26.33
14/10/2015 17:00:00	27.36	80.40	0.00	149.38	301.84	0.50	4.53	986.15	19.65
14/10/2015 18:00:00	26.40	86.70	0.00	55.63	336.94	0.00	1.76	986.05	15.42
14/10/2015 19:00:00	25.33	91.20	0.00	0.63	346.77	0.00	1.01	986.05	15.73
14/10/2015 20:00:00	25.19	93.90	0.00	0.63	157.24	0.00	0.76	986.95	15.12
14/10/2015 21:00:00	25.11	91.40	0.00	0.63	108.10	0.00	0.50	988.05	14.56

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
14/10/2015 22:00:00	24.53	95.00	0.00	0.63	147.41	0.00	0.50	988.35	13.64
14/10/2015 23:00:00	24.24	93.90	0.00	0.63	119.33	0.00	0.76	988.75	13.95
15/10/2015 0:00:00	23.79	97.00	0.00	0.63	57.56	0.00	0.76	988.45	13.64
15/10/2015 1:00:00	23.69	98.30	0.00	0.63	124.95	0.00	1.76	988.05	12.73
15/10/2015 2:00:00	23.45	99.60	0.00	0.63	102.49	0.00	0.76	987.35	14.87
15/10/2015 3:00:00	23.14	99.90	0.00	0.63	99.68	0.00	0.25	986.95	13.95
15/10/2015 4:00:00	23.02	100.00	0.00	0.63	99.68	0.00	0.76	982.65	13.03
15/10/2015 5:00:00	22.61	100.00	0.00	0.63	105.29	0.00	1.01	987.45	14.26
15/10/2015 6:00:00	22.49	100.00	0.00	0.63	112.31	0.00	0.00	988.15	13.34
15/10/2015 7:00:00	22.78	100.00	0.00	49.38	301.84	0.00	0.00	988.95	13.64
15/10/2015 8:00:00	24.53	98.90	0.00	244.38	297.63	0.00	0.00	989.55	13.03
15/10/2015 9:00:00	28.62	78.10	0.00	468.13	310.27	0.00	2.02	989.65	13.34
15/10/2015 10:00:00	30.98	70.20	0.00	678.13	303.25	0.50	2.77	989.95	16.03
15/10/2015 11:00:00	33.47	64.60	0.00	866.88	332.73	0.25	2.77	989.25	17.57
15/10/2015 12:00:00	35.56	54.70	0.00	949.38	339.75	0.25	3.78	988.85	19.96
15/10/2015 13:00:00	36.39	50.80	0.00	978.13	338.35	0.76	3.27	987.65	23.57
15/10/2015 14:00:00	37.59	49.50	0.00	900.63	9.83	1.01	3.78	986.85	28.72
15/10/2015 15:00:00	36.55	49.30	0.00	711.88	299.04	1.26	5.04	985.85	31.48
15/10/2015 16:00:00	37.59	43.90	0.00	526.88	341.15	0.50	3.53	984.95	31.78
15/10/2015 17:00:00	37.21	44.20	0.00	330.63	318.69	0.50	8.31	985.15	17.26
15/10/2015 18:00:00	29.24	70.60	0.00	91.88	286.40	1.26	3.53	985.15	13.95
15/10/2015 19:00:00	28.30	76.50	0.00	0.63	84.24	0.25	1.51	985.65	11.81
15/10/2015 20:00:00	26.67	85.60	0.00	0.63	68.79	0.00	2.52	986.35	10.34
15/10/2015 21:00:00	26.30	85.20	0.20	0.63	80.02	0.00	3.53	987.25	9.42
15/10/2015 22:00:00	26.09	85.60	0.00	0.63	70.20	0.00	2.52	988.25	8.50
15/10/2015 23:00:00	26.21	82.70	0.00	0.63	241.48	0.50	1.76	988.75	9.42
16/10/2015 0:00:00	26.16	83.20	0.00	0.63	185.32	0.00	0.76	988.65	9.72
16/10/2015 1:00:00	25.72	87.60	0.00	0.63	306.06	0.00	1.26	987.95	8.80
16/10/2015 2:00:00	24.92	93.00	0.00	0.63	108.10	0.00	0.76	987.35	9.42

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
16/10/2015 3:00:00	24.90	90.80	0.00	0.63	106.70	0.00	0.00	987.25	9.11
16/10/2015 4:00:00	24.73	88.90	0.00	0.63	106.70	0.00	0.25	987.35	9.42
16/10/2015 5:00:00	24.22	93.00	0.00	0.63	120.74	0.00	0.00	987.65	8.19
16/10/2015 6:00:00	24.10	94.50	0.00	0.63	61.77	0.00	0.50	988.35	8.50
16/10/2015 7:00:00	24.44	93.10	0.00	49.38	327.11	0.00	0.25	988.65	7.58
16/10/2015 8:00:00	26.97	87.50	0.00	264.38	36.50	0.00	1.76	989.55	8.80
16/10/2015 9:00:00	30.42	74.30	0.00	486.88	102.49	0.00	1.26	990.05	9.11
16/10/2015 10:00:00	33.81	59.70	0.00	681.88	33.69	0.00	2.02	989.75	10.34
16/10/2015 11:00:00	34.86	57.40	0.00	863.13	89.85	0.50	2.27	989.55	14.26
16/10/2015 12:00:00	37.26	49.80	0.00	959.38	26.68	0.25	3.27	988.75	15.12
16/10/2015 13:00:00	36.82	46.60	0.00	955.63	108.10	0.76	3.02	987.65	23.02
16/10/2015 14:00:00	38.34	41.60	0.00	879.38	300.44	0.76	3.27	986.35	47.47
16/10/2015 15:00:00	38.34	40.80	0.00	706.88	277.98	1.01	3.78	984.55	69.53
16/10/2015 16:00:00	40.03	37.80	0.00	518.13	356.60	0.25	3.02	983.15	24.19
16/10/2015 17:00:00	37.04	47.40	0.00	295.63	18.25	0.25	2.52	983.55	12.73
16/10/2015 18:00:00	26.26	63.50	10.20	115.63	113.72	4.78	13.35	985.65	8.80
16/10/2015 19:00:00	24.29	90.10	0.00	0.63	122.14	0.25	1.51	986.45	11.19
16/10/2015 20:00:00	24.80	87.20	3.20	0.63	140.39	1.01	6.04	989.25	11.19
16/10/2015 21:00:00	23.95	92.30	0.20	0.63	339.75	0.00	1.76	989.35	10.64
16/10/2015 22:00:00	24.22	94.80	0.00	0.63	266.75	0.50	2.27	987.05	9.72
16/10/2015 23:00:00	24.53	92.10	0.00	0.63	254.11	0.00	1.76	988.05	8.80
17/10/2015 0:00:00	24.00	96.50	0.00	0.63	98.28	1.01	3.02	988.65	10.34
17/10/2015 1:00:00	23.62	95.80	0.00	0.63	137.58	0.00	2.02	988.65	10.64
17/10/2015 2:00:00	23.64	94.20	0.00	0.63	131.97	0.00	1.01	988.55	8.80
17/10/2015 3:00:00	23.04	96.90	0.00	0.63	120.74	0.00	0.50	988.05	9.11
17/10/2015 4:00:00	23.28	96.50	0.00	0.63	70.20	0.00	0.76	988.05	9.11
17/10/2015 5:00:00	23.38	95.40	0.00	0.63	63.18	0.00	0.00	988.65	10.03
17/10/2015 6:00:00	23.62	95.00	0.00	0.63	58.97	0.00	1.01	989.45	10.03
17/10/2015 7:00:00	23.30	96.20	0.00	55.63	317.29	0.00	0.25	989.65	9.72

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
17/10/2015 8:00:00	24.92	92.80	0.00	260.63	301.84	0.00	1.26	990.45	8.80
17/10/2015 9:00:00	27.58	84.00	0.00	450.63	25.27	0.00	1.26	990.95	10.64
17/10/2015 10:00:00	29.02	77.70	0.00	675.63	304.65	0.50	2.27	991.05	11.50
17/10/2015 11:00:00	31.87	67.30	0.00	858.13	280.78	0.00	2.52	990.65	13.95
17/10/2015 12:00:00	33.99	61.50	0.00	943.13	352.38	0.25	4.03	990.15	16.03
17/10/2015 13:00:00	35.99	54.40	0.00	945.63	0.00	0.50	3.27	989.15	23.33
17/10/2015 14:00:00	36.85	50.70	0.00	865.63	350.98	0.76	3.78	988.35	27.86
17/10/2015 15:00:00	36.39	51.90	0.00	679.38	353.79	1.01	4.03	987.35	49.25
17/10/2015 16:00:00	36.63	49.50	0.00	499.38	318.69	0.76	5.54	986.65	52.93
17/10/2015 17:00:00	33.26	54.10	0.00	281.88	53.35	1.51	5.04	986.65	22.10
17/10/2015 18:00:00	29.41	67.40	0.00	118.13	314.48	0.50	2.77	987.15	11.50
17/10/2015 19:00:00	27.36	73.20	0.00	0.63	310.27	0.00	2.02	987.75	7.27
17/10/2015 20:00:00	25.57	77.40	0.00	0.63	0.00	0.00	0.50	988.55	6.66
17/10/2015 21:00:00	25.87	76.70	0.00	0.63	44.93	0.00	1.01	988.95	6.66
17/10/2015 22:00:00	25.23	82.30	0.00	0.63	102.49	0.00	0.25	990.15	4.88
17/10/2015 23:00:00	24.82	86.10	0.00	0.63	101.08	0.00	0.00	989.95	5.80
18/10/2015 0:00:00	24.22	90.40	0.00	0.63	26.68	0.00	0.76	990.35	5.19
18/10/2015 1:00:00	23.21	95.60	0.00	0.63	99.68	0.00	0.76	989.85	4.57
18/10/2015 2:00:00	23.21	94.60	0.00	0.63	233.05	0.00	1.01	989.15	4.27
18/10/2015 3:00:00	22.87	96.20	0.00	0.63	272.36	0.00	0.50	988.95	4.27
18/10/2015 4:00:00	22.87	96.10	0.00	0.63	109.51	0.00	0.00	989.05	3.35
18/10/2015 5:00:00	23.26	94.50	0.00	0.63	106.70	0.00	0.00	988.75	4.27
18/10/2015 6:00:00	23.04	94.10	0.00	0.63	210.59	0.00	0.00	988.95	3.96
18/10/2015 7:00:00	23.06	97.20	0.00	39.38	268.15	0.00	0.00	989.95	3.96
18/10/2015 8:00:00	25.45	91.50	0.00	254.38	280.78	0.00	0.76	991.05	3.66
18/10/2015 9:00:00	28.69	79.40	0.00	488.13	304.65	0.00	1.51	991.05	6.11
18/10/2015 10:00:00	31.41	68.00	0.00	679.38	292.02	0.00	2.27	991.85	7.58
18/10/2015 11:00:00	33.24	65.40	0.00	861.88	269.55	0.25	3.02	991.25	9.11
18/10/2015 12:00:00	35.72	55.70	0.00	966.88	0.00	0.50	3.53	990.55	13.34



**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
18/10/2015 13:00:00	37.40	46.90	0.00	848.13	303.25	1.26	4.78	989.25	31.17
18/10/2015 14:00:00	37.59	46.10	0.00	851.88	313.08	1.01	3.27	988.05	65.92
18/10/2015 15:00:00	38.06	43.80	0.00	683.13	341.15	0.76	3.27	986.85	36.32
18/10/2015 16:00:00	38.56	43.70	0.00	503.13	338.35	0.25	3.27	986.55	29.03
18/10/2015 17:00:00	36.61	49.10	0.00	284.38	21.06	0.50	2.52	986.45	7.88
18/10/2015 18:00:00	34.70	55.30	0.00	71.88	58.97	0.00	2.02	986.85	5.49
18/10/2015 19:00:00	31.82	66.30	0.00	0.63	322.90	0.00	2.27	987.45	4.27
18/10/2015 20:00:00	30.22	68.80	0.00	0.63	339.75	0.00	2.02	988.65	2.18
18/10/2015 21:00:00	29.22	72.70	0.00	0.63	318.69	0.00	0.76	989.05	2.18
18/10/2015 22:00:00	28.74	72.70	0.00	0.63	220.42	0.00	1.01	989.75	8.50
18/10/2015 23:00:00	28.05	79.60	0.00	0.63	120.74	0.00	1.01	990.25	8.80
19/10/2015 0:00:00	26.77	87.90	0.00	0.63	80.02	0.00	0.00	989.65	8.19
19/10/2015 1:00:00	26.43	88.30	0.00	0.63	80.02	0.00	0.00	989.35	7.88
19/10/2015 2:00:00	26.52	86.50	0.00	0.63	80.02	0.00	0.00	988.75	8.50
19/10/2015 3:00:00	25.21	92.60	0.00	0.63	338.35	0.00	0.00	988.15	7.27
19/10/2015 4:00:00	25.09	92.90	0.00	0.63	338.35	0.00	0.00	988.15	7.58
19/10/2015 5:00:00	24.29	94.20	0.00	0.63	40.71	0.00	0.00	988.55	7.58
19/10/2015 6:00:00	24.85	92.80	0.00	0.63	94.06	0.00	0.00	988.95	7.58
19/10/2015 7:00:00	24.48	93.70	0.00	51.88	299.04	0.00	0.25	989.65	7.27
19/10/2015 8:00:00	26.48	87.60	0.00	224.38	315.88	0.00	0.50	990.35	7.27
19/10/2015 9:00:00	29.57	77.30	0.00	443.13	335.54	0.00	0.76	990.65	7.88
19/10/2015 10:00:00	33.05	64.10	0.00	644.38	61.77	0.00	2.77	990.85	10.03
19/10/2015 11:00:00	35.08	59.20	0.00	813.13	324.31	0.50	3.53	990.45	11.81
19/10/2015 12:00:00	35.96	56.00	0.00	904.38	317.29	0.76	3.02	989.95	13.64
19/10/2015 13:00:00	38.42	50.10	0.00	926.88	1.40	0.76	3.53	988.45	17.87
19/10/2015 14:00:00	38.67	45.20	0.00	868.13	353.79	0.76	3.27	987.15	26.64
19/10/2015 15:00:00	38.59	44.60	0.00	679.38	314.48	0.50	3.53	985.85	62.00
19/10/2015 16:00:00	38.37	43.40	0.00	473.13	7.02	0.76	3.02	985.35	25.41
19/10/2015 17:00:00	37.18	45.50	0.00	318.13	345.37	0.25	6.80	985.45	13.03

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
19/10/2015 18:00:00	30.65	63.00	0.00	25.63	88.45	2.52	5.54	986.55	7.27
19/10/2015 19:00:00	29.27	67.20	0.00	0.63	15.44	0.00	1.01	986.15	4.88
19/10/2015 20:00:00	28.12	75.00	0.00	0.63	113.72	0.00	2.52	986.85	3.96
19/10/2015 21:00:00	26.65	78.60	0.00	0.63	109.51	1.76	4.28	988.15	3.96
19/10/2015 22:00:00	26.30	80.10	0.00	0.63	94.06	0.50	2.02	989.55	3.35
19/10/2015 23:00:00	25.94	81.90	0.00	0.63	115.12	0.00	0.50	989.15	3.04
20/10/2015 0:00:00	26.09	84.20	0.00	0.63	89.85	0.00	2.77	988.55	2.74
20/10/2015 1:00:00	24.80	88.90	0.00	0.63	335.54	0.00	0.76	988.85	2.74
20/10/2015 2:00:00	24.73	90.50	0.00	0.63	174.09	0.00	0.50	988.55	2.18
20/10/2015 3:00:00	25.50	84.70	0.00	0.63	245.69	0.00	2.77	988.55	1.27
20/10/2015 4:00:00	24.73	89.40	0.00	0.63	120.74	0.00	1.26	988.15	1.57
20/10/2015 5:00:00	24.29	91.80	0.00	0.63	92.66	0.00	1.01	987.85	1.88
20/10/2015 6:00:00	24.80	89.60	0.00	0.63	101.08	0.00	2.27	988.05	1.88
20/10/2015 7:00:00	23.95	93.90	0.00	66.88	113.72	0.00	2.77	989.05	2.43
20/10/2015 8:00:00	26.28	87.10	0.00	279.38	109.51	0.25	2.77	990.75	1.57
20/10/2015 9:00:00	27.36	82.20	0.00	221.88	95.47	1.76	3.53	991.15	1.57
20/10/2015 10:00:00	28.05	79.10	0.00	170.63	82.83	1.51	7.05	991.65	5.19
20/10/2015 11:00:00	23.91	94.00	4.80	9.38	89.85	2.52	6.80	993.65	4.27
20/10/2015 12:00:00	24.29	94.50	0.00	100.63	317.29	0.25	2.02	992.05	4.57
20/10/2015 13:00:00	26.50	89.30	0.00	395.63	313.08	0.00	2.02	991.55	7.27
20/10/2015 14:00:00	29.37	78.90	0.00	488.13	321.50	0.25	3.02	990.25	7.58
20/10/2015 15:00:00	29.32	79.60	0.00	399.38	317.29	0.50	2.52	989.25	6.96
20/10/2015 16:00:00	30.57	76.00	0.00	314.38	18.25	0.00	2.27	988.65	6.66
20/10/2015 17:00:00	30.29	73.80	0.00	236.88	342.56	0.00	2.27	988.25	3.96
20/10/2015 18:00:00	28.07	83.00	0.00	65.63	303.25	1.01	3.27	988.05	1.88
20/10/2015 19:00:00	26.55	88.20	0.00	0.63	286.40	0.50	1.76	988.65	2.43
20/10/2015 20:00:00	26.33	88.20	0.00	0.63	241.48	0.00	0.76	989.05	3.04
20/10/2015 21:00:00	25.62	92.20	0.00	0.63	258.32	0.00	0.00	989.85	0.35
20/10/2015 22:00:00	25.62	92.30	0.00	0.63	258.32	0.00	0.00	989.95	0.96

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
20/10/2015 23:00:00	24.48	97.00	0.00	0.63	235.86	0.00	0.00	989.85	1.57
21/10/2015 0:00:00	24.17	97.50	0.00	0.63	242.88	0.00	0.00	989.05	1.27
21/10/2015 1:00:00	23.95	98.20	0.00	0.63	244.28	0.00	0.00	988.25	1.57
21/10/2015 2:00:00	23.83	99.40	0.00	0.63	185.32	0.00	0.00	988.15	0.65
21/10/2015 3:00:00	23.55	99.90	0.00	0.63	138.99	0.00	0.00	988.15	0.04
21/10/2015 4:00:00	23.52	100.00	0.00	0.63	231.65	0.00	3.27	988.65	0.35
21/10/2015 5:00:00	23.76	100.00	0.00	0.63	252.71	0.00	0.76	988.75	0.65
21/10/2015 6:00:00	23.06	100.00	0.00	0.63	126.35	0.00	0.76	989.25	0.35
21/10/2015 7:00:00	23.04	100.00	0.00	14.38	116.53	0.00	0.50	990.15	0.35
21/10/2015 8:00:00	23.62	100.00	0.20	170.63	113.72	0.00	0.76	990.95	0.00
21/10/2015 9:00:00	26.45	96.00	0.00	289.38	94.06	0.00	2.02	991.45	1.27
21/10/2015 10:00:00	29.22	86.50	0.00	666.88	88.45	0.25	2.27	991.55	3.66
21/10/2015 11:00:00	33.55	69.50	0.00	838.13	70.20	0.00	2.02	990.85	4.27
21/10/2015 12:00:00	35.90	59.70	0.00	925.63	67.39	0.00	2.02	990.35	9.42
21/10/2015 13:00:00	37.54	47.30	0.00	949.38	43.52	0.50	7.81	988.75	24.49
21/10/2015 14:00:00	37.40	44.80	0.00	868.13	73.00	0.76	3.53	987.35	37.18
21/10/2015 15:00:00	36.82	47.10	0.00	690.63	196.55	0.76	5.54	986.25	57.16
21/10/2015 16:00:00	38.34	41.80	0.00	499.38	339.75	0.50	3.27	985.75	26.94
21/10/2015 17:00:00	36.31	46.70	0.00	309.38	353.79	0.25	6.30	984.75	7.58
21/10/2015 18:00:00	29.17	75.90	0.20	56.88	57.56	1.51	5.04	985.95	0.00
21/10/2015 19:00:00	29.69	71.90	0.00	0.63	356.60	0.00	1.51	986.85	0.00
21/10/2015 20:00:00	28.12	81.50	0.00	0.63	65.98	0.00	0.50	986.95	0.00
21/10/2015 21:00:00	26.99	87.20	0.00	0.63	26.68	0.00	0.25	987.65	0.00
21/10/2015 22:00:00	27.58	82.80	0.00	0.63	0.00	0.00	0.00	987.65	0.00
21/10/2015 23:00:00	25.89	90.10	0.00	0.63	53.35	0.00	0.00	988.15	0.00
22/10/2015 0:00:00	25.94	88.30	0.00	0.63	53.35	0.00	0.50	988.05	0.00
22/10/2015 1:00:00	24.77	92.70	0.00	0.63	119.33	0.00	0.50	986.95	0.00
22/10/2015 2:00:00	24.61	93.50	0.00	0.63	106.70	0.00	0.00	986.35	0.00
22/10/2015 3:00:00	24.41	93.80	0.00	0.63	102.49	0.00	0.00	986.05	0.00

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
22/10/2015 4:00:00	24.15	95.00	0.00	0.63	92.66	0.00	0.00	986.15	0.00
22/10/2015 5:00:00	24.15	94.50	0.00	0.63	91.26	0.00	0.50	986.65	0.00
22/10/2015 6:00:00	24.03	97.00	0.00	0.63	310.27	0.00	0.00	987.05	0.00
22/10/2015 7:00:00	23.83	97.60	0.00	65.63	19.66	0.00	1.01	987.55	0.00
22/10/2015 8:00:00	25.28	94.60	0.00	301.88	113.72	0.00	1.26	988.75	0.00
22/10/2015 9:00:00	29.07	79.70	0.00	504.38	88.45	0.00	1.26	989.45	0.00
22/10/2015 10:00:00	32.79	65.40	0.00	701.88	325.71	0.25	3.02	989.45	0.00
22/10/2015 11:00:00	35.50	59.90	0.00	880.63	334.13	0.25	2.77	989.25	0.00
22/10/2015 12:00:00	37.10	50.70	0.00	978.13	343.96	0.50	3.27	988.15	3.96
22/10/2015 13:00:00	38.64	46.30	0.00	968.13	14.04	0.25	3.02	986.95	102.75
22/10/2015 14:00:00	39.52	36.50	0.00	914.38	19.66	1.26	4.78	985.75	110.90
22/10/2015 15:00:00	39.89	38.90	0.00	726.88	14.04	0.25	4.28	984.75	113.05
22/10/2015 16:00:00	38.95	40.00	0.00	538.13	320.09	1.01	3.27	983.75	113.05
22/10/2015 17:00:00	39.21	37.20	0.00	318.13	5.62	0.25	1.76	983.75	106.98
22/10/2015 18:00:00	37.37	40.10	0.00	96.88	16.85	0.00	1.26	984.25	89.76
22/10/2015 19:00:00	33.57	55.00	0.00	0.63	270.96	0.00	1.01	984.65	87.06
22/10/2015 20:00:00	30.62	71.50	0.00	0.63	308.86	0.00	0.00	985.55	87.37
22/10/2015 21:00:00	29.29	79.10	0.00	0.63	0.00	0.00	2.52	986.05	83.69
22/10/2015 22:00:00	29.94	75.60	0.00	0.63	241.48	0.00	1.01	986.85	83.69
22/10/2015 23:00:00	29.39	76.80	0.00	0.63	275.17	0.00	0.00	986.95	82.53
23/10/2015 0:00:00	28.54	81.70	0.00	0.63	287.80	0.00	0.00	986.55	81.91
23/10/2015 1:00:00	27.31	87.00	0.00	0.63	294.82	0.00	0.00	985.95	80.99
23/10/2015 2:00:00	27.11	88.70	0.00	0.63	294.82	0.00	0.00	985.25	80.69
23/10/2015 3:00:00	26.57	89.10	0.00	0.63	294.82	0.00	0.00	984.95	80.99
23/10/2015 4:00:00	25.79	92.00	0.00	0.63	308.86	0.00	0.00	985.25	80.38
23/10/2015 5:00:00	26.11	89.60	0.00	0.63	308.86	0.00	0.00	985.95	80.99
23/10/2015 6:00:00	25.50	92.20	0.00	0.63	308.86	0.00	0.00	986.45	79.22
23/10/2015 7:00:00	25.62	92.40	0.00	79.38	310.27	0.00	0.50	987.55	79.22
23/10/2015 8:00:00	28.79	84.50	0.00	286.88	87.04	0.00	0.76	988.45	80.38

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
23/10/2015 9:00:00	32.54	72.70	0.00	514.38	325.71	0.00	1.76	988.85	88.84
23/10/2015 10:00:00	35.82	56.60	0.00	710.63	339.75	0.00	2.27	988.95	96.99
23/10/2015 11:00:00	37.43	53.00	0.00	894.38	11.23	0.25	3.78	988.55	98.83
23/10/2015 12:00:00	39.35	42.40	0.00	989.38	332.73	0.50	3.27	988.35	99.75
23/10/2015 13:00:00	39.74	40.60	0.00	981.88	22.46	0.50	3.27	986.75	98.22
23/10/2015 14:00:00	40.52	34.30	0.00	930.63	339.75	0.50	3.53	984.95	97.91
23/10/2015 15:00:00	40.54	36.00	0.00	694.38	44.93	0.25	2.77	983.85	96.99
23/10/2015 16:00:00	37.26	47.00	0.00	238.13	26.68	0.25	2.52	983.65	86.45
23/10/2015 17:00:00	34.18	57.80	0.00	55.63	57.56	0.00	1.26	984.65	81.30
23/10/2015 18:00:00	32.72	63.80	0.00	26.88	112.31	0.50	2.77	984.45	77.99
23/10/2015 19:00:00	31.71	46.10	0.00	0.63	245.69	2.77	9.82	986.65	80.08
23/10/2015 20:00:00	25.36	75.90	0.00	0.63	129.16	4.03	11.84	990.35	120.89
23/10/2015 21:00:00	24.99	83.30	0.20	0.63	138.99	1.26	3.78	992.25	121.20
23/10/2015 22:00:00	24.29	89.50	0.00	0.63	136.18	0.25	3.02	992.55	121.20
23/10/2015 23:00:00	24.22	90.40	0.00	0.63	98.28	2.52	4.03	990.05	121.50
24/10/2015 0:00:00	23.67	93.40	0.00	0.63	103.89	1.01	2.52	987.95	122.36
24/10/2015 1:00:00	24.20	88.60	0.00	0.63	220.42	1.26	3.02	986.45	122.05
24/10/2015 2:00:00	24.07	90.40	0.00	0.63	224.63	0.25	2.77	986.15	122.67
24/10/2015 3:00:00	23.71	92.40	0.00	0.63	296.23	1.01	3.02	986.25	122.05
24/10/2015 4:00:00	23.45	93.10	0.00	0.63	294.82	0.00	1.26	985.85	122.36
24/10/2015 5:00:00	22.73	96.30	0.00	0.63	108.10	0.00	2.02	986.15	120.58
24/10/2015 6:00:00	22.85	96.20	0.00	0.63	131.97	0.25	2.27	987.45	120.58
24/10/2015 7:00:00	23.79	93.10	0.00	88.13	8.42	0.00	1.26	987.85	119.97
24/10/2015 8:00:00	26.74	85.20	0.00	319.38	30.89	0.00	1.76	989.75	119.05
24/10/2015 9:00:00	28.30	77.20	0.00	648.13	186.72	0.50	3.27	990.45	120.89
24/10/2015 10:00:00	29.09	70.80	0.00	850.63	220.42	0.50	2.77	990.75	123.59
24/10/2015 11:00:00	29.57	68.00	0.00	453.13	175.49	0.50	3.27	990.45	128.73
24/10/2015 12:00:00	31.00	64.20	0.00	673.13	167.07	0.76	3.53	989.95	133.88
24/10/2015 13:00:00	32.77	60.10	0.00	976.88	131.97	1.26	4.78	988.35	139.58

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
24/10/2015 14:00:00	34.97	51.50	0.00	884.38	122.14	1.01	4.53	985.85	141.73
24/10/2015 15:00:00	34.31	52.20	0.00	708.13	144.60	1.26	4.28	985.45	142.34
24/10/2015 16:00:00	34.44	51.60	0.00	494.38	179.70	0.50	3.27	984.55	141.42
24/10/2015 17:00:00	33.37	51.10	0.00	270.63	213.40	1.01	2.77	984.55	139.27
24/10/2015 18:00:00	32.38	55.90	0.00	78.13	178.30	0.00	2.27	985.25	134.80
24/10/2015 19:00:00	30.39	63.70	0.00	0.63	168.47	0.00	1.51	985.45	130.82
24/10/2015 20:00:00	29.46	66.80	0.00	0.63	158.64	0.00	0.00	985.85	127.81
24/10/2015 21:00:00	28.84	71.30	0.00	0.63	124.95	0.00	0.00	986.45	124.51
24/10/2015 22:00:00	27.78	77.10	0.00	0.63	299.04	0.00	0.00	987.45	121.50
24/10/2015 23:00:00	27.88	80.40	0.00	0.63	273.77	0.00	0.00	987.85	118.13
25/10/2015 0:00:00	26.57	84.50	0.00	0.63	283.59	0.00	0.00	987.75	117.58
25/10/2015 1:00:00	26.28	86.60	0.00	0.63	285.00	0.00	0.00	986.95	116.97
25/10/2015 2:00:00	25.62	88.10	0.00	0.63	127.76	0.00	0.00	986.45	118.13
25/10/2015 3:00:00	25.65	88.50	0.00	0.63	117.93	0.00	0.00	986.25	117.83
25/10/2015 4:00:00	25.38	89.20	0.00	0.63	102.49	0.00	0.00	985.95	117.83
25/10/2015 5:00:00	24.90	91.50	0.00	0.63	103.89	0.00	0.00	986.95	116.05
25/10/2015 6:00:00	24.75	91.30	0.00	0.63	248.49	0.00	0.00	988.05	114.52
25/10/2015 7:00:00	25.38	88.10	0.00	68.13	155.84	0.00	0.50	989.15	116.05
25/10/2015 8:00:00	26.33	88.90	0.00	150.63	110.91	0.00	1.26	990.05	116.35
25/10/2015 9:00:00	29.41	73.80	0.00	216.88	102.49	0.00	2.52	990.75	120.89
25/10/2015 10:00:00	32.82	66.30	0.00	741.88	30.89	0.50	3.53	991.55	130.82
25/10/2015 11:00:00	34.28	60.20	0.00	505.63	14.04	0.25	3.53	991.05	136.88
25/10/2015 12:00:00	35.82	57.00	0.00	964.38	53.35	0.25	4.03	990.45	137.19
25/10/2015 13:00:00	35.85	50.40	0.00	183.13	345.37	0.50	4.28	989.45	140.19
25/10/2015 14:00:00	37.15	47.40	0.00	1044.38	296.23	1.26	5.04	988.25	139.03
25/10/2015 15:00:00	36.82	47.10	0.00	739.38	40.71	0.50	2.77	986.95	138.11
25/10/2015 16:00:00	39.04	39.70	0.00	661.88	7.02	0.50	2.77	985.45	137.50
25/10/2015 17:00:00	32.02	59.50	0.00	109.38	101.08	1.26	4.03	985.65	132.66
25/10/2015 18:00:00	32.67	59.90	0.00	50.63	19.66	0.00	2.27	985.65	128.73



**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
25/10/2015 19:00:00	29.62	74.80	0.00	0.63	91.26	0.00	1.01	986.45	123.28
25/10/2015 20:00:00	29.04	75.90	0.00	0.63	113.72	0.00	1.26	988.45	122.05
25/10/2015 21:00:00	28.99	79.70	5.80	0.63	275.17	0.00	13.85	988.65	119.05
25/10/2015 22:00:00	21.92	96.50	7.40	0.63	126.35	3.53	9.57	990.95	116.97
25/10/2015 23:00:00	22.63	93.20	0.00	0.63	292.02	0.50	2.27	990.05	115.13
26/10/2015 0:00:00	23.30	90.60	0.00	0.63	277.98	0.00	1.76	990.25	112.13
26/10/2015 1:00:00	23.21	94.40	0.00	0.63	315.88	0.00	0.76	989.85	111.51
26/10/2015 2:00:00	23.52	94.70	0.00	0.63	4.21	0.00	1.01	989.15	109.98
26/10/2015 3:00:00	23.40	95.20	0.00	0.63	112.31	0.00	0.76	988.45	109.98
26/10/2015 4:00:00	22.85	97.60	0.00	0.63	103.89	0.25	1.01	988.85	109.98
26/10/2015 5:00:00	23.50	95.50	0.00	0.63	99.68	0.00	0.50	989.05	109.68
26/10/2015 6:00:00	23.62	95.40	0.00	0.63	124.95	0.00	1.26	989.45	110.29
26/10/2015 7:00:00	23.64	97.10	0.00	75.63	122.14	0.00	0.50	989.85	108.51
26/10/2015 8:00:00	26.60	86.60	0.00	305.63	33.69	0.00	1.76	990.55	109.98
26/10/2015 9:00:00	28.00	84.50	0.00	396.88	88.45	0.50	2.02	991.35	113.05
26/10/2015 10:00:00	29.69	80.60	0.00	566.88	95.47	0.50	2.52	991.15	122.97
26/10/2015 11:00:00	32.72	72.30	0.00	865.63	80.02	0.25	2.02	990.55	128.73
26/10/2015 12:00:00	35.50	57.80	0.00	970.63	82.83	0.25	3.53	989.65	131.12
26/10/2015 13:00:00	37.10	53.80	0.00	999.38	39.31	0.50	3.78	988.85	130.82
26/10/2015 14:00:00	37.51	49.90	0.00	959.38	81.43	0.50	3.27	987.55	131.12
26/10/2015 15:00:00	36.72	49.70	0.00	500.63	269.55	0.50	3.27	986.35	131.43
26/10/2015 16:00:00	34.60	55.80	0.00	214.38	63.18	1.26	4.28	985.65	130.27
26/10/2015 17:00:00	32.72	66.00	0.00	89.38	40.71	0.50	4.78	986.05	126.59
26/10/2015 18:00:00	30.02	66.60	0.00	34.38	318.69	0.00	1.26	985.95	121.50
26/10/2015 19:00:00	28.12	78.60	0.00	0.63	73.00	0.25	1.26	986.35	117.27
26/10/2015 20:00:00	28.20	82.00	0.00	0.63	71.60	0.00	1.26	987.25	113.60
26/10/2015 21:00:00	26.70	87.50	0.00	0.63	87.04	0.00	0.76	988.45	109.12
26/10/2015 22:00:00	27.11	86.00	0.00	0.63	96.87	0.00	2.02	989.05	107.28
26/10/2015 23:00:00	26.18	88.40	0.00	0.63	269.55	0.50	1.76	989.35	105.14



**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
27/10/2015 0:00:00	25.19	94.00	0.00	0.63	117.93	0.00	1.26	989.25	104.59
27/10/2015 1:00:00	25.09	95.00	0.00	0.63	112.31	0.76	3.02	988.75	104.28
27/10/2015 2:00:00	25.38	94.20	0.00	0.63	313.08	0.25	2.02	987.75	104.59
27/10/2015 3:00:00	24.53	96.40	0.00	0.63	96.87	1.01	2.27	987.85	103.67
27/10/2015 4:00:00	25.02	94.20	11.80	0.63	106.70	0.76	4.28	988.35	112.43
27/10/2015 5:00:00	22.63	98.80	33.61	0.63	176.89	2.02	5.79	989.75	113.35
27/10/2015 6:00:00	22.75	99.80	0.60	0.63	299.04	1.01	2.77	989.05	113.05
27/10/2015 7:00:00	22.39	99.30	1.00	1.88	343.96	0.00	3.27	989.75	113.60
27/10/2015 8:00:00	22.39	98.80	0.40	25.63	287.80	0.00	2.77	991.45	112.13
27/10/2015 9:00:00	22.63	97.40	12.60	8.13	136.18	0.00	2.27	993.15	110.59
27/10/2015 10:00:00	23.14	99.00	1.20	70.63	261.13	0.00	1.01	993.25	113.35
27/10/2015 11:00:00	23.79	96.20	0.20	209.38	254.11	0.50	2.77	992.65	116.66
27/10/2015 12:00:00	24.53	94.90	0.20	243.13	91.26	0.00	2.27	991.65	116.97
27/10/2015 13:00:00	25.28	91.30	0.00	304.38	301.84	0.50	2.52	991.45	121.50
27/10/2015 14:00:00	27.33	86.50	0.00	346.88	47.73	0.25	3.02	990.05	124.51
27/10/2015 15:00:00	28.35	82.00	0.00	349.38	64.58	0.50	3.02	988.85	129.35
27/10/2015 16:00:00	30.93	71.90	0.00	851.88	30.89	0.25	2.27	987.45	135.05
27/10/2015 17:00:00	30.67	70.40	0.00	346.88	63.18	0.50	2.27	986.45	134.49
27/10/2015 18:00:00	29.17	74.80	0.00	131.88	345.37	0.00	1.01	986.95	132.35
27/10/2015 19:00:00	27.63	82.30	0.00	0.63	14.04	0.00	0.00	987.15	129.35
27/10/2015 20:00:00	26.30	87.20	0.00	0.63	58.97	0.00	0.00	987.85	122.05
27/10/2015 21:00:00	25.72	91.50	0.00	0.63	211.99	0.00	0.25	988.95	116.35
27/10/2015 22:00:00	25.33	92.50	0.00	0.63	172.68	0.00	0.50	989.45	114.21
27/10/2015 23:00:00	24.70	96.40	0.00	0.63	108.10	0.00	0.25	990.05	113.60
28/10/2015 0:00:00	24.65	96.10	0.00	0.63	168.47	0.00	0.00	989.45	115.74
28/10/2015 1:00:00	24.36	97.40	0.00	0.63	206.38	0.00	0.50	988.65	114.21
28/10/2015 2:00:00	24.07	96.90	0.00	0.63	244.28	0.00	0.00	988.25	113.35
28/10/2015 3:00:00	23.59	99.10	0.00	0.63	336.94	0.00	1.51	987.65	114.52
28/10/2015 4:00:00	23.64	100.00	0.00	0.63	117.93	0.00	0.00	987.95	115.13

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
28/10/2015 5:00:00	23.86	100.00	0.00	0.63	60.37	0.00	1.26	988.45	112.74
28/10/2015 6:00:00	23.71	100.00	0.00	0.63	289.21	0.00	0.76	988.65	114.21
28/10/2015 7:00:00	23.91	100.00	0.00	19.38	321.50	0.00	1.01	989.05	114.21
28/10/2015 8:00:00	24.85	99.70	0.00	98.13	307.46	0.00	0.50	990.25	113.35
28/10/2015 9:00:00	25.11	97.10	0.00	93.13	91.26	0.00	2.27	990.95	114.21
28/10/2015 10:00:00	27.51	91.10	0.00	494.38	91.26	0.76	2.52	991.45	119.66
28/10/2015 11:00:00	30.24	80.60	0.00	533.13	102.49	0.50	2.52	991.55	130.27
28/10/2015 12:00:00	32.23	73.20	0.00	470.63	71.60	0.25	3.02	990.75	132.66
28/10/2015 13:00:00	30.93	74.10	0.00	325.63	61.77	0.25	2.02	989.65	133.88
28/10/2015 14:00:00	33.00	69.30	0.00	921.88	356.60	0.00	2.02	987.85	135.05
28/10/2015 15:00:00	34.70	62.20	0.00	694.38	0.00	0.25	3.02	986.05	136.58
28/10/2015 16:00:00	33.47	65.30	0.00	179.38	341.15	0.25	3.53	985.75	134.19
28/10/2015 17:00:00	27.53	77.20	0.40	63.13	237.26	5.04	9.82	985.85	129.04
28/10/2015 18:00:00	23.74	96.90	26.61	0.63	129.16	1.51	5.04	988.45	147.73
28/10/2015 19:00:00	23.33	98.80	6.80	0.63	60.37	0.00	1.51	989.35	152.88
28/10/2015 20:00:00	23.52	98.20	2.40	0.63	279.38	0.00	1.26	989.25	154.72
28/10/2015 21:00:00	23.67	97.50	0.00	0.63	249.90	0.00	0.25	989.45	152.57
28/10/2015 22:00:00	23.83	98.10	0.00	0.63	211.99	0.00	0.50	989.85	152.88
28/10/2015 23:00:00	23.64	99.20	0.00	0.63	65.98	0.00	1.26	990.15	150.18
29/10/2015 0:00:00	23.64	99.20	0.00	0.63	84.24	0.00	1.01	990.35	151.96
29/10/2015 1:00:00	23.55	98.50	0.00	0.63	103.89	0.00	0.25	988.85	150.80
29/10/2015 2:00:00	23.50	99.10	0.00	0.63	103.89	0.00	0.00	988.75	151.96
29/10/2015 3:00:00	23.74	98.10	0.00	0.63	1.40	0.00	0.25	988.05	154.41
29/10/2015 4:00:00	23.86	97.40	0.00	0.63	46.33	0.00	0.50	988.15	153.80
29/10/2015 5:00:00	23.50	97.80	0.00	0.63	73.00	0.00	0.25	988.15	152.57
29/10/2015 6:00:00	23.26	98.80	0.00	0.63	77.22	0.00	0.76	988.75	152.27
29/10/2015 7:00:00	23.74	97.60	0.00	55.63	64.58	0.00	0.50	989.25	154.41
29/10/2015 8:00:00	24.48	94.20	0.00	166.88	265.34	0.00	2.02	990.15	151.10
29/10/2015 9:00:00	26.82	86.80	0.00	280.63	313.08	0.00	1.76	990.45	151.72

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
29/10/2015 10:00:00	30.12	76.80	0.00	860.63	23.87	0.00	2.52	990.85	151.41
29/10/2015 11:00:00	31.54	69.70	0.00	1088.13	346.77	0.25	2.77	991.05	161.34
29/10/2015 12:00:00	32.85	65.60	0.00	998.13	322.90	0.76	3.53	990.35	170.41
29/10/2015 13:00:00	33.26	65.50	0.00	434.38	332.73	0.50	4.78	989.55	172.86
29/10/2015 14:00:00	33.57	62.70	0.00	939.38	318.69	1.26	5.54	988.85	172.55
29/10/2015 15:00:00	29.27	69.20	0.00	45.63	21.06	1.51	9.07	988.55	172.86
29/10/2015 16:00:00	25.09	88.20	0.20	144.38	106.70	1.26	3.53	987.55	162.87
29/10/2015 17:00:00	24.87	90.50	0.20	100.63	115.12	0.50	2.52	987.25	160.17
29/10/2015 18:00:00	25.23	89.40	0.00	34.38	29.48	0.00	0.00	987.85	156.50
29/10/2015 19:00:00	25.19	90.00	0.00	0.63	12.64	0.00	1.01	988.35	152.57
29/10/2015 20:00:00	24.80	93.50	0.00	0.63	206.38	0.00	2.27	989.05	151.41
29/10/2015 21:00:00	24.80	90.70	0.00	0.63	283.59	0.25	1.76	990.15	148.96
29/10/2015 22:00:00	24.56	92.80	0.00	0.63	300.44	0.00	1.51	991.05	148.34
29/10/2015 23:00:00	24.27	92.00	0.00	0.63	258.32	0.00	1.01	991.05	149.57
30/10/2015 0:00:00	23.52	93.80	0.00	0.63	289.21	0.00	0.76	990.85	148.04
30/10/2015 1:00:00	23.71	92.40	0.00	0.63	292.02	0.00	0.00	990.15	146.87
30/10/2015 2:00:00	22.90	97.40	0.00	0.63	95.47	0.00	0.00	989.35	146.26
30/10/2015 3:00:00	23.38	95.00	0.00	0.63	95.47	0.00	0.00	988.95	143.50
30/10/2015 4:00:00	22.87	98.40	0.00	0.63	95.47	0.00	0.00	988.75	150.18
30/10/2015 5:00:00	22.82	98.90	0.00	0.63	95.47	0.00	1.26	988.75	143.81
30/10/2015 6:00:00	22.49	99.50	0.00	0.63	106.70	0.25	2.27	988.95	142.34
30/10/2015 7:00:00	22.37	100.00	0.00	31.88	91.26	0.25	1.51	989.75	141.11
30/10/2015 8:00:00	23.11	99.90	0.00	129.38	122.14	0.00	1.76	990.55	145.95
30/10/2015 9:00:00	25.53	91.10	0.00	295.63	105.29	0.25	2.52	991.25	147.49
30/10/2015 10:00:00	27.21	85.00	0.00	466.88	2.81	0.00	2.77	990.95	158.64
30/10/2015 11:00:00	29.87	74.90	0.00	995.63	71.60	0.25	3.02	990.85	167.40
30/10/2015 12:00:00	32.36	64.80	0.00	1001.88	329.92	0.25	2.52	989.45	169.49
30/10/2015 13:00:00	33.94	56.60	0.00	1003.13	308.86	0.76	2.77	988.25	170.71
30/10/2015 14:00:00	35.16	53.00	0.00	901.88	293.42	0.76	4.53	987.15	169.49

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
30/10/2015 15:00:00	36.63	47.00	0.00	731.88	335.54	0.50	3.27	985.95	169.79
30/10/2015 16:00:00	36.09	46.80	0.00	558.13	307.46	0.25	2.77	984.95	166.48
30/10/2015 17:00:00	35.16	51.00	0.00	190.63	14.04	0.25	2.52	984.55	163.48
30/10/2015 18:00:00	33.05	55.20	0.00	59.38	0.00	0.00	0.76	984.65	157.72
30/10/2015 19:00:00	30.93	64.80	0.00	0.63	279.38	0.00	0.76	985.15	152.88
30/10/2015 20:00:00	29.32	75.60	0.00	0.63	275.17	0.00	1.01	986.05	151.96
30/10/2015 21:00:00	28.25	76.40	0.00	0.63	124.95	0.00	1.01	987.35	149.88
30/10/2015 22:00:00	26.52	89.50	0.00	0.63	299.04	0.00	1.51	988.05	143.50
30/10/2015 23:00:00	26.23	88.60	0.00	0.63	196.55	0.00	0.50	988.15	143.81
31/10/2015 0:00:00	25.84	86.80	0.00	0.63	131.97	0.00	1.26	988.05	139.58
31/10/2015 1:00:00	25.62	90.70	0.00	0.63	251.30	0.00	0.00	987.65	139.03
31/10/2015 2:00:00	25.36	89.20	0.00	0.63	248.49	0.00	0.00	987.35	136.88
31/10/2015 3:00:00	24.77	92.70	0.00	0.63	259.73	0.00	0.50	986.95	139.89
31/10/2015 4:00:00	24.77	93.40	0.00	0.63	112.31	0.00	0.00	987.05	140.50
31/10/2015 5:00:00	23.79	94.90	0.00	0.63	186.72	0.00	0.00	987.25	142.03
31/10/2015 6:00:00	23.35	97.00	0.00	0.63	144.60	0.00	0.00	987.55	140.81
31/10/2015 7:00:00	24.07	95.70	0.00	90.63	207.78	0.00	1.26	988.35	142.65
31/10/2015 8:00:00	27.83	85.00	0.00	299.38	77.22	0.00	1.51	989.35	143.26
31/10/2015 9:00:00	29.99	79.10	0.00	516.88	88.45	0.25	1.76	989.45	144.12
31/10/2015 10:00:00	33.81	63.50	0.00	700.63	314.48	0.25	1.76	989.65	149.57
31/10/2015 11:00:00	35.53	53.30	0.00	820.63	325.71	0.50	2.27	989.65	155.94
31/10/2015 12:00:00	35.13	51.10	0.00	984.38	297.63	1.01	3.53	988.25	162.56
31/10/2015 13:00:00	37.59	47.00	0.00	891.88	315.88	0.50	4.28	987.05	168.02
31/10/2015 14:00:00	37.48	43.60	0.00	874.38	300.44	0.76	3.53	985.95	170.41
31/10/2015 15:00:00	38.56	41.60	0.00	776.88	342.56	0.50	3.02	984.25	170.41
31/10/2015 16:00:00	37.67	43.40	0.00	518.13	46.33	0.76	8.81	983.95	163.79
31/10/2015 17:00:00	30.77	64.90	0.00	279.38	73.00	2.77	5.54	984.25	155.94
31/10/2015 18:00:00	29.79	68.30	0.00	75.63	95.47	1.51	3.02	985.05	150.18
31/10/2015 19:00:00	28.49	76.90	0.00	0.63	91.26	1.01	1.76	985.65	147.49

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
31/10/2015 20:00:00	27.48	78.00	0.00	0.63	116.53	0.25	2.02	986.95	143.81
31/10/2015 21:00:00	26.82	84.50	0.00	0.63	106.70	0.25	2.02	988.15	141.11
31/10/2015 22:00:00	25.87	88.60	0.00	0.63	98.28	0.25	1.76	988.25	142.65
31/10/2015 23:00:00	25.84	87.50	0.00	0.63	154.43	0.00	0.50	988.65	142.03
1/11/2015 0:00:00	25.77	89.60	0.00	0.63	206.38	0.00	1.01	988.45	140.81
1/11/2015 1:00:00	25.31	90.60	0.00	0.63	275.17	0.00	1.26	987.95	139.03
1/11/2015 2:00:00	25.67	86.20	0.00	0.63	213.40	0.76	4.78	987.45	139.58
1/11/2015 3:00:00	25.48	86.20	0.00	0.63	247.09	1.76	4.28	987.35	139.58
1/11/2015 4:00:00	25.16	85.60	0.00	0.63	137.58	0.50	2.27	986.85	140.19
1/11/2015 5:00:00	24.51	89.60	0.00	0.63	84.24	0.00	1.01	986.95	139.27
1/11/2015 6:00:00	23.91	92.40	0.00	0.63	78.62	0.00	1.01	987.05	141.42
1/11/2015 7:00:00	23.88	94.10	0.00	41.88	94.06	0.00	0.00	987.85	140.81
1/11/2015 8:00:00	25.84	87.90	0.00	169.38	94.06	0.00	0.25	988.25	140.50
1/11/2015 9:00:00	29.14	77.60	0.00	428.13	99.68	0.00	2.27	988.85	142.34
1/11/2015 10:00:00	30.75	70.10	0.00	590.63	102.49	1.01	3.53	989.15	145.65
1/11/2015 11:00:00	32.72	64.70	0.00	811.88	91.26	0.76	4.28	988.85	148.34
1/11/2015 12:00:00	33.11	60.00	0.00	1016.88	80.02	1.01	3.53	988.45	152.27
1/11/2015 13:00:00	34.41	56.80	0.00	1109.38	95.47	1.51	3.78	987.45	150.18
1/11/2015 14:00:00	35.88	53.70	0.00	931.88	26.68	0.25	3.02	985.55	151.41
1/11/2015 15:00:00	36.72	49.30	0.60	999.38	56.16	0.50	7.05	984.35	147.18
1/11/2015 16:00:00	24.97	89.90	3.40	41.88	126.35	2.27	6.55	984.85	144.42
1/11/2015 17:00:00	27.28	81.50	0.00	19.38	103.89	0.00	1.76	984.25	142.95
1/11/2015 18:00:00	26.38	88.70	0.00	29.38	299.04	0.00	1.26	984.25	141.42
1/11/2015 19:00:00	26.30	89.10	0.00	0.63	127.76	0.00	1.51	984.55	139.27
1/11/2015 20:00:00	25.65	92.50	0.00	0.63	99.68	0.50	2.77	985.95	139.27
1/11/2015 21:00:00	25.26	92.60	0.00	0.63	224.63	0.00	1.26	986.55	136.58
1/11/2015 22:00:00	25.79	89.00	0.00	0.63	219.01	0.00	0.76	987.35	135.35
1/11/2015 23:00:00	25.87	88.80	0.00	0.63	0.00	0.00	1.01	987.55	137.19
2/11/2015 0:00:00	24.48	95.70	0.00	0.63	137.58	0.00	0.50	987.25	135.97

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
2/11/2015 1:00:00	24.92	93.20	0.00	0.63	216.20	0.00	1.51	986.95	133.58
2/11/2015 2:00:00	25.16	93.50	0.00	0.63	167.07	0.00	1.26	986.05	132.96
2/11/2015 3:00:00	24.15	97.70	0.00	0.63	88.45	0.00	1.26	985.95	132.04
2/11/2015 4:00:00	24.41	97.00	0.00	0.63	266.75	0.50	2.27	986.05	130.57
2/11/2015 5:00:00	24.48	95.70	0.00	0.63	249.90	0.76	2.27	986.15	130.27
2/11/2015 6:00:00	23.57	98.50	0.00	0.63	95.47	0.00	1.01	986.95	130.27
2/11/2015 7:00:00	24.15	96.90	0.00	61.88	134.78	0.00	1.51	987.55	129.04
2/11/2015 8:00:00	25.33	93.50	0.00	149.38	106.70	0.00	1.26	988.55	128.73
2/11/2015 9:00:00	26.92	89.30	0.00	275.63	109.51	0.25	2.27	988.75	129.65
2/11/2015 10:00:00	30.67	76.70	0.00	729.38	220.42	0.00	1.76	988.85	130.82
2/11/2015 11:00:00	31.56	68.70	0.00	516.88	197.95	0.00	2.02	989.05	132.35
2/11/2015 12:00:00	34.12	63.00	0.00	584.38	126.35	0.00	3.27	987.55	136.27
2/11/2015 13:00:00	35.80	57.30	0.20	1073.13	12.64	0.50	5.54	986.05	139.03
2/11/2015 14:00:00	30.09	71.80	1.00	268.13	58.97	1.01	5.79	984.55	138.42
2/11/2015 15:00:00	30.80	69.60	0.00	270.63	39.31	1.01	3.27	983.55	138.72
2/11/2015 16:00:00	28.54	81.30	0.00	189.38	256.92	2.02	4.78	983.45	134.49
2/11/2015 17:00:00	26.28	87.20	0.20	46.88	197.95	1.01	3.02	983.85	150.49
2/11/2015 18:00:00	25.45	90.60	0.80	4.38	115.12	0.00	0.76	984.65	152.88
2/11/2015 19:00:00	25.21	92.90	2.00	0.63	133.37	0.00	1.51	985.85	152.27
2/11/2015 20:00:00	25.16	92.50	0.00	0.63	144.60	0.00	3.02	986.15	150.18
2/11/2015 21:00:00	25.31	92.70	0.00	0.63	227.44	1.51	4.28	987.15	148.96
2/11/2015 22:00:00	24.92	96.30	0.00	0.63	95.47	0.25	1.51	987.85	151.72
2/11/2015 23:00:00	25.53	93.30	0.00	0.63	28.08	0.00	0.00	988.05	151.10
3/11/2015 0:00:00	25.02	96.40	0.00	0.63	315.88	0.00	1.51	988.05	149.57
3/11/2015 1:00:00	25.04	96.00	0.20	0.63	84.24	0.00	2.77	987.65	148.65
3/11/2015 2:00:00	24.34	98.70	0.40	0.63	109.51	0.25	1.76	987.75	148.96
3/11/2015 3:00:00	24.65	95.40	1.40	0.63	329.92	0.00	2.27	987.55	160.48
3/11/2015 4:00:00	23.59	97.10	0.00	0.63	276.57	0.50	1.26	986.65	161.34
3/11/2015 5:00:00	23.79	97.60	0.00	0.63	310.27	0.00	0.76	987.35	161.34



**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
3/11/2015 6:00:00	23.50	98.00	0.00	0.63	299.04	0.00	1.01	987.85	160.72
3/11/2015 7:00:00	24.15	96.90	0.00	33.13	258.32	0.00	2.52	988.45	160.48
3/11/2015 8:00:00	24.90	95.50	0.00	190.63	265.34	1.01	2.77	989.45	160.72
3/11/2015 9:00:00	25.91	91.30	0.00	184.38	231.65	0.00	1.51	990.05	161.34
3/11/2015 10:00:00	26.48	88.90	0.00	220.63	283.59	0.50	2.27	990.85	161.95
3/11/2015 11:00:00	27.36	86.80	0.00	348.13	279.38	0.25	2.02	990.85	162.56
3/11/2015 12:00:00	30.22	76.20	0.00	921.88	211.99	0.25	3.78	989.65	162.87
3/11/2015 13:00:00	32.41	66.30	0.00	928.13	251.30	0.25	2.77	988.95	164.71
3/11/2015 14:00:00	32.30	67.30	0.00	411.88	64.58	0.50	3.53	987.95	164.71
3/11/2015 15:00:00	28.82	81.30	0.00	60.63	91.26	2.27	5.79	987.45	167.40
3/11/2015 16:00:00	26.40	86.40	0.00	28.13	188.13	0.00	4.28	986.55	169.79
3/11/2015 17:00:00	25.48	88.10	0.00	30.63	223.22	0.00	2.52	984.85	169.49
3/11/2015 18:00:00	24.99	93.80	0.00	24.38	88.45	0.50	2.77	984.65	172.55
3/11/2015 19:00:00	23.88	95.50	0.00	0.63	106.70	1.26	3.02	986.35	172.24
3/11/2015 20:00:00	23.88	94.60	0.00	0.63	113.72	0.25	2.27	987.65	170.41
3/11/2015 21:00:00	23.38	96.80	0.00	0.63	94.06	0.50	1.76	988.35	171.33
3/11/2015 22:00:00	23.16	97.10	0.00	0.63	89.85	0.00	0.76	989.15	171.94
3/11/2015 23:00:00	23.23	97.40	0.00	0.63	286.40	0.00	0.50	989.25	171.33
4/11/2015 0:00:00	23.11	97.60	0.00	0.63	21.06	0.00	0.25	989.45	169.79
4/11/2015 1:00:00	23.16	98.50	0.00	0.63	185.32	0.00	0.00	989.05	171.33
4/11/2015 2:00:00	23.30	98.60	0.00	0.63	301.84	0.00	0.00	987.95	170.41
4/11/2015 3:00:00	23.06	99.10	0.00	0.63	122.14	0.00	0.00	987.45	169.79
4/11/2015 4:00:00	23.40	98.30	0.00	0.63	213.40	0.00	0.50	986.85	170.41
4/11/2015 5:00:00	23.45	97.80	0.00	0.63	272.36	0.00	0.50	987.05	169.18
4/11/2015 6:00:00	23.02	99.20	0.00	0.63	112.31	0.00	1.51	988.05	169.79
4/11/2015 7:00:00	23.28	98.60	0.00	45.63	137.58	0.00	0.25	989.25	169.49
4/11/2015 8:00:00	24.12	96.90	0.00	93.13	116.53	0.00	1.26	990.15	169.49
4/11/2015 9:00:00	24.90	95.30	0.00	174.38	256.92	0.50	2.52	990.85	169.18
4/11/2015 10:00:00	26.67	88.90	0.00	280.63	248.49	0.00	1.51	991.35	169.49



**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
4/11/2015 11:00:00	26.45	89.40	0.00	184.38	269.55	0.25	1.76	991.25	168.94
4/11/2015 12:00:00	27.85	85.30	0.00	394.38	266.75	0.25	2.27	990.35	171.02
4/11/2015 13:00:00	30.70	76.00	0.00	915.63	265.34	0.25	2.27	989.15	171.02
4/11/2015 14:00:00	33.97	60.50	0.00	895.63	300.44	0.25	2.52	987.25	171.94
4/11/2015 15:00:00	33.50	60.80	0.00	728.13	241.48	1.01	3.02	985.75	173.41
4/11/2015 16:00:00	35.48	57.20	0.00	535.63	228.84	0.00	3.02	984.15	171.63
4/11/2015 17:00:00	33.70	55.00	0.00	313.13	270.96	0.76	2.77	984.05	170.71
4/11/2015 18:00:00	32.77	58.90	0.00	108.13	276.57	0.25	1.51	984.05	170.10
4/11/2015 19:00:00	30.07	74.50	0.00	0.63	287.80	0.00	1.01	985.45	168.63
4/11/2015 20:00:00	29.32	77.90	16.00	0.63	221.82	0.00	7.81	986.75	167.40
4/11/2015 21:00:00	23.40	91.90	0.00	0.63	290.61	1.01	2.77	987.55	167.10
4/11/2015 22:00:00	24.20	94.00	0.00	0.63	276.57	0.00	1.26	988.25	165.26
4/11/2015 23:00:00	24.90	90.40	0.00	0.63	282.19	0.00	0.50	988.05	165.57
5/11/2015 0:00:00	25.21	93.10	0.00	0.63	84.24	0.00	1.26	988.45	163.79
5/11/2015 1:00:00	24.63	93.00	0.00	0.63	19.66	0.00	0.76	988.85	164.40
5/11/2015 2:00:00	24.07	93.50	0.00	0.63	304.65	0.00	1.26	987.95	164.40
5/11/2015 3:00:00	24.61	91.10	0.00	0.63	242.88	0.00	1.01	987.95	163.18
5/11/2015 4:00:00	24.68	93.50	0.00	0.63	101.08	0.00	4.28	987.45	163.18
5/11/2015 5:00:00	23.83	95.90	0.80	0.63	108.10	2.27	6.30	988.65	164.95
5/11/2015 6:00:00	22.06	98.70	3.00	0.63	99.68	1.76	4.28	988.55	167.10
5/11/2015 7:00:00	22.66	95.50	3.20	4.38	153.03	0.00	1.51	988.95	167.40
5/11/2015 8:00:00	22.97	96.60	0.20	124.38	255.51	0.76	2.77	990.15	167.40
5/11/2015 9:00:00	23.91	94.40	0.00	159.38	287.80	0.50	3.53	990.35	167.10
5/11/2015 10:00:00	25.09	90.40	0.00	244.38	290.61	0.76	2.02	990.75	167.71
5/11/2015 11:00:00	25.53	89.30	0.00	190.63	87.04	0.00	1.26	991.35	168.02
5/11/2015 12:00:00	26.26	85.40	0.00	340.63	290.61	0.50	3.53	990.05	169.18
5/11/2015 13:00:00	28.99	75.90	0.00	773.13	245.69	0.50	4.03	988.95	169.49
5/11/2015 14:00:00	32.46	66.30	0.00	965.63	339.75	0.00	2.27	986.95	170.71
5/11/2015 15:00:00	33.42	63.80	0.00	863.13	4.21	0.25	2.52	986.15	171.94

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
5/11/2015 16:00:00	33.16	63.10	0.00	566.88	336.94	0.00	2.52	985.15	171.02
5/11/2015 17:00:00	32.46	64.60	0.00	349.38	311.67	0.00	1.01	984.65	171.02
5/11/2015 18:00:00	30.80	70.50	0.00	100.63	332.73	0.00	1.76	985.15	170.10
5/11/2015 19:00:00	27.92	84.30	0.00	0.63	307.46	0.00	1.76	985.65	168.94
5/11/2015 20:00:00	28.27	83.60	0.00	0.63	292.02	0.00	0.00	986.45	168.02
5/11/2015 21:00:00	26.72	90.00	0.00	0.63	310.27	0.00	1.01	988.25	167.40
5/11/2015 22:00:00	26.43	90.30	0.00	0.63	263.94	0.00	1.01	988.55	166.48
5/11/2015 23:00:00	25.65	94.80	0.00	0.63	290.61	0.00	0.50	989.15	164.95
6/11/2015 0:00:00	25.23	95.50	0.00	0.63	113.72	0.00	5.54	989.45	164.09
6/11/2015 1:00:00	25.28	86.00	0.00	0.63	119.33	0.76	2.77	988.75	164.40
6/11/2015 2:00:00	24.56	87.00	0.00	0.63	160.05	0.00	0.76	988.35	164.40
6/11/2015 3:00:00	23.62	92.70	0.00	0.63	276.57	0.00	0.76	988.05	163.18
6/11/2015 4:00:00	23.69	92.90	0.00	0.63	270.96	0.00	1.26	987.55	163.79
6/11/2015 5:00:00	24.07	89.90	0.00	0.63	261.13	0.00	1.01	988.25	163.18
6/11/2015 6:00:00	23.67	92.10	0.00	0.63	120.74	0.00	2.27	989.05	163.48
6/11/2015 7:00:00	23.98	91.80	0.00	53.13	182.51	0.00	2.02	989.65	162.56
6/11/2015 8:00:00	25.11	88.20	0.00	83.13	137.58	0.00	1.01	990.85	163.18
6/11/2015 9:00:00	27.06	83.30	0.00	318.13	129.16	0.00	2.77	991.55	162.26
6/11/2015 10:00:00	28.30	79.60	0.00	569.38	262.53	1.51	3.53	991.95	162.26
6/11/2015 11:00:00	29.29	75.50	0.00	504.38	255.51	1.26	3.02	991.65	164.09
6/11/2015 12:00:00	31.84	66.50	0.00	733.13	251.30	0.50	3.02	990.75	164.71
6/11/2015 13:00:00	33.63	63.00	0.00	1129.38	268.15	0.00	3.27	989.95	165.57
6/11/2015 14:00:00	33.70	59.40	0.00	466.88	14.04	0.00	3.27	988.65	166.79
6/11/2015 15:00:00	33.86	58.50	0.00	783.13	268.15	0.76	3.78	987.75	166.48
6/11/2015 16:00:00	33.76	59.90	0.00	520.63	282.19	1.51	3.53	986.65	166.18
6/11/2015 17:00:00	33.24	58.40	4.40	388.13	300.44	1.01	13.35	986.45	164.09
6/11/2015 18:00:00	21.34	96.90	20.41	11.88	99.68	5.54	9.57	989.45	174.02
6/11/2015 19:00:00	21.53	94.00	1.00	0.63	220.42	1.01	3.53	989.55	177.64
6/11/2015 20:00:00	21.99	95.80	1.80	0.63	234.46	0.25	4.03	990.55	176.47

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
6/11/2015 21:00:00	22.13	95.20	0.60	0.63	175.49	0.00	3.27	990.95	177.39
6/11/2015 22:00:00	22.13	96.40	0.00	0.63	276.57	1.76	3.27	990.95	176.47
6/11/2015 23:00:00	22.35	96.90	0.00	0.63	294.82	0.25	2.52	990.75	176.47
7/11/2015 0:00:00	22.18	97.30	0.00	0.63	277.98	0.00	0.50	990.45	177.09
7/11/2015 1:00:00	22.20	98.30	0.00	0.63	325.71	0.00	1.26	989.95	176.78
7/11/2015 2:00:00	22.25	98.00	0.00	0.63	256.92	0.00	0.76	989.25	176.78
7/11/2015 3:00:00	21.99	98.70	0.00	0.63	110.91	0.00	2.27	988.95	176.78
7/11/2015 4:00:00	21.84	97.80	0.00	0.63	226.03	0.50	2.27	988.75	175.86
7/11/2015 5:00:00	22.11	96.90	0.00	0.63	224.63	0.00	4.03	988.95	175.55
7/11/2015 6:00:00	21.96	97.40	0.00	0.63	247.09	1.51	4.53	989.25	176.47
7/11/2015 7:00:00	22.39	95.30	0.00	108.13	224.63	0.00	1.51	990.35	175.86
7/11/2015 8:00:00	23.30	93.30	0.00	139.38	300.44	0.00	1.76	991.85	175.25
7/11/2015 9:00:00	24.58	89.10	0.00	433.13	265.34	0.50	2.02	992.05	177.09
7/11/2015 10:00:00	28.02	79.40	0.00	490.63	346.77	0.00	1.76	992.05	177.64
7/11/2015 11:00:00	31.31	70.20	0.00	874.38	332.73	0.00	2.27	991.45	178.25
7/11/2015 12:00:00	32.51	69.20	0.00	954.38	314.48	0.00	3.27	990.95	178.25
7/11/2015 13:00:00	33.81	63.10	0.00	1024.38	289.21	0.76	2.52	989.65	180.09
7/11/2015 14:00:00	34.52	58.00	0.00	953.13	99.68	0.25	2.52	988.25	181.01
7/11/2015 15:00:00	36.58	51.20	0.00	555.63	32.29	0.00	3.27	987.45	180.09
7/11/2015 16:00:00	33.91	55.70	0.00	306.88	244.28	0.76	3.27	986.55	179.17
7/11/2015 17:00:00	34.05	55.60	0.00	279.38	317.29	0.00	1.51	986.05	178.56
7/11/2015 18:00:00	32.90	55.90	0.00	131.88	262.53	0.00	0.76	986.05	176.78
7/11/2015 19:00:00	28.32	63.50	0.00	0.63	113.72	2.77	6.04	988.15	175.55
7/11/2015 20:00:00	25.60	79.20	0.00	0.63	117.93	0.50	2.52	987.25	173.72
7/11/2015 21:00:00	25.19	84.10	0.00	0.63	335.54	0.00	2.27	988.15	173.41
7/11/2015 22:00:00	24.17	89.20	0.00	0.63	129.16	0.00	1.26	988.75	172.86
7/11/2015 23:00:00	24.48	87.40	0.00	0.63	91.26	0.00	0.76	988.95	171.94
8/11/2015 0:00:00	23.81	90.00	0.00	0.63	92.66	0.00	0.50	988.65	171.33
8/11/2015 1:00:00	23.83	88.90	0.00	0.63	108.10	0.00	0.00	987.85	170.71

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
8/11/2015 2:00:00	23.64	93.30	0.00	0.63	95.47	0.00	0.50	986.85	170.10
8/11/2015 3:00:00	23.26	94.00	0.00	0.63	75.81	0.00	0.00	986.25	171.02
8/11/2015 4:00:00	22.78	95.60	0.00	0.63	75.81	0.00	0.50	986.45	170.41
8/11/2015 5:00:00	23.38	93.80	0.00	0.63	51.95	0.00	0.00	986.65	170.10
8/11/2015 6:00:00	23.06	96.90	0.00	0.63	50.54	0.00	0.00	987.35	169.79
8/11/2015 7:00:00	23.76	95.00	0.00	41.88	53.35	0.00	0.00	988.35	170.41
8/11/2015 8:00:00	25.84	83.90	0.00	225.63	54.75	0.00	0.76	989.25	169.18
8/11/2015 9:00:00	27.41	82.70	0.00	405.63	51.95	0.00	2.27	989.65	170.41
8/11/2015 10:00:00	31.08	72.50	0.00	395.63	63.18	0.50	2.02	990.35	171.02
8/11/2015 11:00:00	33.08	64.90	0.00	855.63	61.77	0.76	4.28	989.85	172.24
8/11/2015 12:00:00	34.52	57.10	0.00	954.38	270.96	0.76	3.53	988.65	173.16
8/11/2015 13:00:00	36.63	51.70	0.00	1011.88	262.53	0.76	3.27	987.45	173.72
8/11/2015 14:00:00	36.72	50.60	0.00	891.88	248.49	1.01	3.02	986.25	174.64
8/11/2015 15:00:00	38.03	44.90	1.40	808.13	301.84	0.50	7.55	985.35	173.41
8/11/2015 16:00:00	26.23	89.00	3.00	168.13	335.54	0.76	4.78	986.05	171.33
8/11/2015 17:00:00	27.97	73.30	0.00	58.13	94.06	0.25	2.27	985.75	171.02
8/11/2015 18:00:00	25.79	82.30	0.00	19.38	169.88	0.00	2.27	986.45	169.79
8/11/2015 19:00:00	25.65	81.90	0.00	0.63	140.39	0.00	2.02	986.85	168.63
8/11/2015 20:00:00	24.80	84.40	0.00	0.63	255.51	0.25	2.27	986.45	168.63
8/11/2015 21:00:00	23.95	89.90	0.00	0.63	88.45	0.25	3.02	987.35	167.10
8/11/2015 22:00:00	24.17	91.60	0.00	0.63	89.85	0.00	0.76	988.55	166.48
8/11/2015 23:00:00	24.41	91.90	0.00	0.63	127.76	0.00	0.00	989.05	167.10
9/11/2015 0:00:00	23.93	93.80	0.00	0.63	1.40	0.00	0.25	989.05	166.18
9/11/2015 1:00:00	23.28	96.50	0.00	0.63	143.20	0.00	0.76	988.75	166.79
9/11/2015 2:00:00	23.14	95.00	0.00	0.63	95.47	0.00	0.00	988.55	166.18
9/11/2015 3:00:00	23.62	93.50	0.00	0.63	95.47	0.00	0.00	988.05	165.57
9/11/2015 4:00:00	23.30	95.40	0.00	0.63	169.88	1.26	5.79	989.15	165.57
9/11/2015 5:00:00	23.47	94.70	0.00	0.63	315.88	0.00	0.25	989.35	166.18
9/11/2015 6:00:00	23.59	94.90	0.00	0.63	108.10	0.00	2.27	989.65	165.26

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
9/11/2015 7:00:00	23.64	94.90	0.00	58.13	275.17	0.50	3.02	989.95	165.26
9/11/2015 8:00:00	24.94	90.00	0.00	189.38	268.15	0.00	3.53	990.85	165.87
9/11/2015 9:00:00	26.33	84.70	0.00	289.38	262.53	2.52	4.78	991.15	166.48
9/11/2015 10:00:00	29.92	73.60	0.00	721.88	268.15	0.50	3.78	991.25	167.10
9/11/2015 11:00:00	31.87	68.10	0.00	899.38	287.80	0.50	3.27	991.15	169.49
9/11/2015 12:00:00	34.76	54.00	0.00	1001.88	57.56	0.50	2.77	990.95	168.94
9/11/2015 13:00:00	35.85	52.10	0.00	990.63	49.14	0.76	3.27	990.15	169.79
9/11/2015 14:00:00	36.47	50.50	0.00	989.38	92.66	0.76	3.53	988.85	170.10
9/11/2015 15:00:00	36.15	49.70	0.00	761.88	101.08	0.76	3.27	987.65	170.10
9/11/2015 16:00:00	35.56	50.00	0.00	544.38	165.66	0.50	3.02	986.35	168.63
9/11/2015 17:00:00	35.90	49.00	0.00	333.13	331.33	0.25	2.52	985.35	167.71
9/11/2015 18:00:00	32.36	61.80	0.00	19.38	5.62	0.00	0.76	985.85	166.79
9/11/2015 19:00:00	30.82	65.30	0.00	0.63	296.23	0.00	0.25	986.85	166.18
9/11/2015 20:00:00	29.84	70.10	0.00	0.63	242.88	0.00	2.27	987.55	163.79
9/11/2015 21:00:00	28.77	75.70	0.00	0.63	196.55	0.00	1.01	988.65	163.79
9/11/2015 22:00:00	26.60	88.70	0.00	0.63	120.74	0.25	3.02	989.65	162.87
9/11/2015 23:00:00	25.50	88.40	0.00	0.63	102.49	1.01	2.77	990.55	162.26
10/11/2015 0:00:00	25.82	86.60	0.00	0.63	144.60	0.00	3.53	990.55	161.95
10/11/2015 1:00:00	25.36	87.10	0.00	0.63	106.70	0.50	2.52	990.35	161.34
10/11/2015 2:00:00	24.87	86.50	0.00	0.63	112.31	0.00	0.76	989.75	162.26
10/11/2015 3:00:00	24.17	90.20	0.00	0.63	322.90	0.00	0.50	989.85	160.48
10/11/2015 4:00:00	24.27	90.40	0.00	0.63	254.11	0.00	0.25	988.95	160.17
10/11/2015 5:00:00	23.35	94.30	0.00	0.63	268.15	0.00	0.50	988.85	159.56
10/11/2015 6:00:00	22.87	94.10	0.00	0.63	147.41	0.00	0.50	989.05	160.17
10/11/2015 7:00:00	23.45	94.50	0.00	76.88	285.00	0.00	2.52	989.65	160.17
10/11/2015 8:00:00	25.70	87.20	0.00	319.38	94.06	1.01	2.27	991.25	159.87
10/11/2015 9:00:00	29.64	68.20	0.00	616.88	126.35	0.25	2.52	991.05	161.34
10/11/2015 10:00:00	32.64	56.60	0.00	738.13	0.00	0.25	3.27	990.75	161.34
10/11/2015 11:00:00	34.18	55.20	0.00	904.38	103.89	0.76	3.78	990.65	161.95

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
10/11/2015 12:00:00	35.05	50.80	0.00	994.38	108.10	0.76	3.27	989.65	164.40
10/11/2015 13:00:00	35.37	48.70	0.00	981.88	94.06	1.01	7.05	988.75	164.09
10/11/2015 14:00:00	36.31	47.90	0.00	875.63	106.70	1.51	4.53	987.55	164.09
10/11/2015 15:00:00	36.58	47.30	0.00	724.38	98.28	1.51	4.03	986.55	163.48
10/11/2015 16:00:00	37.89	43.40	0.00	539.38	37.91	0.50	3.02	985.85	161.64
10/11/2015 17:00:00	36.23	46.40	0.00	318.13	94.06	0.50	2.02	985.45	160.72
10/11/2015 18:00:00	35.13	49.90	0.00	109.38	190.93	0.00	1.26	985.65	160.17
10/11/2015 19:00:00	32.59	57.70	0.00	0.63	209.18	0.00	1.26	985.55	159.56
10/11/2015 20:00:00	31.51	60.20	0.00	0.63	148.82	0.00	1.26	985.85	157.72
10/11/2015 21:00:00	28.89	77.80	0.00	0.63	350.98	0.00	1.01	987.65	155.33
10/11/2015 22:00:00	27.90	81.30	0.00	0.63	277.98	0.25	1.26	987.75	155.02
10/11/2015 23:00:00	27.58	79.10	0.00	0.63	283.59	0.00	0.76	988.05	154.72
11/11/2015 0:00:00	27.33	83.80	0.00	0.63	294.82	0.00	0.00	988.25	154.41
11/11/2015 1:00:00	25.94	89.40	0.00	0.63	304.65	0.00	0.00	987.55	155.02
11/11/2015 2:00:00	25.84	88.90	0.00	0.63	126.35	0.00	0.00	987.65	153.49
11/11/2015 3:00:00	25.21	91.80	0.00	0.63	44.93	0.00	0.00	987.15	152.88
11/11/2015 4:00:00	24.82	93.60	0.00	0.63	36.50	0.00	0.00	987.75	152.88
11/11/2015 5:00:00	24.36	95.30	0.00	0.63	36.50	0.00	0.25	987.65	152.88
11/11/2015 6:00:00	24.80	92.40	0.00	0.63	182.51	0.00	0.00	988.25	152.27
11/11/2015 7:00:00	25.60	90.00	0.00	89.38	112.31	0.00	0.25	988.95	152.88
11/11/2015 8:00:00	27.83	84.00	0.00	244.38	130.57	0.00	1.26	989.25	151.96
11/11/2015 9:00:00	32.23	70.60	0.00	671.88	261.13	0.00	2.27	989.65	152.88
11/11/2015 10:00:00	32.98	63.70	0.00	721.88	44.93	0.25	3.53	990.05	155.94
11/11/2015 11:00:00	34.36	62.00	0.00	896.88	32.29	1.01	4.28	989.75	155.33
11/11/2015 12:00:00	35.40	59.50	0.00	994.38	345.37	0.76	4.03	989.15	155.64
11/11/2015 13:00:00	36.99	52.50	0.00	960.63	327.11	0.25	3.78	988.35	156.80
11/11/2015 14:00:00	36.72	50.50	0.00	908.13	322.90	0.76	2.77	986.65	158.03
11/11/2015 15:00:00	37.95	47.80	0.00	721.88	5.62	0.25	4.03	985.35	157.41
11/11/2015 16:00:00	37.87	45.50	0.00	561.88	352.38	0.25	8.06	984.55	156.25

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
11/11/2015 17:00:00	30.07	57.60	0.00	270.63	67.39	3.27	7.05	984.85	155.02
11/11/2015 18:00:00	30.80	64.50	0.00	58.13	285.00	0.00	1.01	985.05	151.10
11/11/2015 19:00:00	28.84	72.80	0.00	0.63	89.85	0.00	3.27	985.45	151.41
11/11/2015 20:00:00	27.68	79.80	0.00	0.63	84.24	0.50	1.51	986.35	149.88
11/11/2015 21:00:00	27.38	81.90	0.00	0.63	341.15	0.00	0.00	987.55	148.96
11/11/2015 22:00:00	27.01	81.40	0.00	0.63	1.40	0.00	0.50	987.45	147.73
11/11/2015 23:00:00	26.11	88.80	0.00	0.63	325.71	0.00	0.76	988.35	148.04
12/11/2015 0:00:00	26.57	88.40	0.00	0.63	58.97	0.00	1.26	987.95	147.49
12/11/2015 1:00:00	25.33	93.90	0.00	0.63	92.66	0.00	1.01	987.45	147.73
12/11/2015 2:00:00	25.65	93.70	0.00	0.63	82.83	0.00	7.55	987.15	147.49
12/11/2015 3:00:00	25.09	93.30	0.00	0.63	103.89	3.27	5.79	987.65	145.34
12/11/2015 4:00:00	24.80	95.60	0.00	0.63	304.65	0.50	2.52	986.25	145.65
12/11/2015 5:00:00	25.16	93.70	0.00	0.63	317.29	0.00	0.00	987.05	145.95
12/11/2015 6:00:00	25.04	95.10	0.00	0.63	303.25	0.00	0.76	987.75	145.65
12/11/2015 7:00:00	25.43	93.50	0.00	53.13	268.15	0.00	0.76	988.45	144.73
12/11/2015 8:00:00	28.32	85.40	0.00	283.13	349.58	0.00	2.27	989.55	146.26
12/11/2015 9:00:00	30.12	76.60	0.00	455.63	317.29	0.25	3.27	989.45	146.57
12/11/2015 10:00:00	32.07	69.50	0.00	675.63	336.94	0.76	3.27	989.75	148.34
12/11/2015 11:00:00	33.44	65.20	0.00	836.88	345.37	0.50	3.53	989.35	148.96
12/11/2015 12:00:00	35.05	59.10	0.00	979.38	317.29	0.76	3.27	988.65	150.49
12/11/2015 13:00:00	37.56	49.60	0.00	994.38	25.27	0.50	4.28	987.65	151.41
12/11/2015 14:00:00	38.42	48.40	0.00	911.88	37.91	0.50	3.02	986.25	150.49
12/11/2015 15:00:00	38.17	48.20	0.00	816.88	341.15	0.76	3.53	985.25	149.88
12/11/2015 16:00:00	38.20	46.40	0.00	549.38	348.17	0.50	2.77	984.25	149.26
12/11/2015 17:00:00	37.29	48.00	0.00	324.38	12.64	0.50	2.52	983.85	148.34
12/11/2015 18:00:00	35.42	51.50	0.00	126.88	5.62	0.25	4.28	983.65	146.57
12/11/2015 19:00:00	30.75	65.60	0.00	0.63	346.77	0.00	1.76	985.05	145.34
12/11/2015 20:00:00	29.79	68.50	0.00	0.63	16.85	0.00	0.76	986.05	143.26
12/11/2015 21:00:00	28.57	74.90	0.00	0.63	287.80	0.50	1.76	986.65	142.34



**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
12/11/2015 22:00:00	27.41	81.00	0.00	0.63	262.53	0.25	1.01	987.35	142.34
12/11/2015 23:00:00	26.89	84.40	0.00	0.63	306.06	0.00	1.01	987.55	142.03
13/11/2015 0:00:00	26.97	85.40	0.00	0.63	144.60	0.00	1.01	987.95	139.89
13/11/2015 1:00:00	25.70	91.70	0.00	0.63	98.28	0.00	1.01	986.95	140.50
13/11/2015 2:00:00	25.82	90.40	0.00	0.63	150.22	0.00	0.00	986.45	141.11
13/11/2015 3:00:00	25.53	90.90	0.00	0.63	95.47	0.00	0.00	986.25	138.42
13/11/2015 4:00:00	25.02	93.80	0.00	0.63	95.47	0.00	0.76	986.25	139.03
13/11/2015 5:00:00	24.90	93.50	0.00	0.63	94.06	0.00	0.25	986.75	138.42
13/11/2015 6:00:00	24.53	95.00	0.00	0.63	92.66	0.00	0.76	987.35	138.72
13/11/2015 7:00:00	25.04	93.50	0.00	100.63	358.00	0.00	1.51	988.45	137.80
13/11/2015 8:00:00	27.97	85.60	0.00	270.63	322.90	0.00	1.76	989.25	137.80
13/11/2015 9:00:00	30.72	76.00	0.00	494.38	88.45	0.25	1.76	989.45	140.81
13/11/2015 10:00:00	32.98	66.20	0.00	686.88	220.42	0.50	3.53	989.55	140.81
13/11/2015 11:00:00	36.36	56.80	0.00	209.38	308.86	0.25	3.53	989.75	142.65
13/11/2015 12:00:00	36.12	53.80	0.00	1084.38	303.25	0.50	3.53	988.75	143.26
13/11/2015 13:00:00	37.95	47.10	0.00	1050.63	321.50	0.76	3.02	987.25	143.26
13/11/2015 14:00:00	38.90	43.10	0.00	981.88	332.73	0.76	3.53	986.65	143.50
13/11/2015 15:00:00	38.92	42.50	0.00	941.88	12.64	0.50	3.27	984.95	142.65
13/11/2015 16:00:00	33.16	63.20	0.00	239.38	33.69	1.26	4.28	984.95	143.26
13/11/2015 17:00:00	32.54	61.50	0.00	136.88	338.35	0.25	2.02	984.65	140.19
13/11/2015 18:00:00	33.70	60.60	0.00	155.63	30.89	0.00	1.26	984.85	138.11
13/11/2015 19:00:00	30.72	70.40	0.00	0.63	58.97	0.00	2.02	985.45	135.97
13/11/2015 20:00:00	29.82	76.70	0.00	0.63	247.09	1.01	2.27	985.45	134.80
13/11/2015 21:00:00	28.74	81.10	0.00	0.63	130.57	0.00	1.26	986.75	134.80
13/11/2015 22:00:00	28.72	83.20	0.00	0.63	109.51	0.00	0.76	986.75	134.19
13/11/2015 23:00:00	28.22	78.80	0.00	0.63	151.62	0.00	0.50	987.45	132.96
14/11/2015 0:00:00	26.65	90.20	0.00	0.63	348.17	0.00	0.00	987.45	133.27
14/11/2015 1:00:00	26.77	88.40	0.00	0.63	78.62	0.00	0.00	986.95	132.04
14/11/2015 2:00:00	26.16	90.70	0.00	0.63	96.87	0.00	0.25	986.95	132.35

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
14/11/2015 3:00:00	26.30	89.50	0.00	0.63	148.82	0.00	0.50	986.55	132.04
14/11/2015 4:00:00	25.50	93.10	0.00	0.63	262.53	0.00	0.00	986.95	132.35
14/11/2015 5:00:00	25.57	92.60	0.00	0.63	270.96	0.00	0.76	987.45	132.66
14/11/2015 6:00:00	24.94	93.90	0.00	0.63	182.51	0.00	0.00	987.75	130.82
14/11/2015 7:00:00	25.55	93.50	0.00	56.88	174.09	0.00	0.25	988.15	130.82
14/11/2015 8:00:00	28.15	86.60	0.00	279.38	80.02	0.00	1.51	989.05	130.82
14/11/2015 9:00:00	31.36	75.60	0.00	503.13	89.85	0.25	1.76	989.55	132.96
14/11/2015 10:00:00	34.18	60.40	0.00	664.38	99.68	0.25	2.02	989.65	133.88
14/11/2015 11:00:00	36.07	57.60	0.00	715.63	329.92	0.25	2.77	989.55	135.35
14/11/2015 12:00:00	36.34	51.30	0.00	895.63	247.09	0.76	6.04	989.75	135.05
14/11/2015 13:00:00	38.23	46.30	0.00	770.63	282.19	1.01	3.53	988.25	136.27
14/11/2015 14:00:00	39.94	39.80	0.00	935.63	44.93	0.25	7.81	987.05	135.66
14/11/2015 15:00:00	32.54	51.90	0.00	723.13	61.77	3.78	7.81	986.05	136.27
14/11/2015 16:00:00	29.92	63.60	0.00	154.38	103.89	2.02	4.53	986.05	135.35
14/11/2015 17:00:00	28.39	69.40	0.00	129.38	96.87	2.27	3.78	986.85	133.88
14/11/2015 18:00:00	27.97	72.50	0.00	51.88	108.10	1.26	3.27	986.65	132.96
14/11/2015 19:00:00	27.04	77.30	0.00	0.63	320.09	0.25	1.76	986.85	131.12
14/11/2015 20:00:00	26.30	83.00	0.00	0.63	101.08	0.00	2.02	986.95	131.74
14/11/2015 21:00:00	26.60	77.00	0.00	0.63	254.11	0.76	2.02	987.15	131.12
14/11/2015 22:00:00	26.21	81.30	0.00	0.63	255.51	0.76	1.76	988.35	131.43
14/11/2015 23:00:00	26.09	81.30	0.00	0.63	143.20	0.00	1.51	988.85	129.96
15/11/2015 0:00:00	25.38	86.70	0.00	0.63	119.33	0.00	0.50	988.65	129.96
15/11/2015 1:00:00	24.00	92.80	0.00	0.63	120.74	0.00	1.01	988.15	129.04
15/11/2015 2:00:00	23.55	95.00	0.00	0.63	106.70	0.00	1.01	987.95	129.35
15/11/2015 3:00:00	23.30	95.70	0.00	0.63	113.72	0.00	0.50	987.35	129.35
15/11/2015 4:00:00	23.23	96.20	0.00	0.63	124.95	0.00	0.25	987.15	129.65
15/11/2015 5:00:00	23.14	96.50	0.00	0.63	155.84	0.00	0.76	987.15	128.43
15/11/2015 6:00:00	23.35	95.80	0.00	0.63	214.80	0.00	0.00	988.05	128.12
15/11/2015 7:00:00	23.67	94.90	0.00	80.63	157.24	0.00	0.00	989.05	130.27

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
15/11/2015 8:00:00	25.77	90.80	0.00	238.13	103.89	0.00	1.01	989.85	128.73
15/11/2015 9:00:00	28.99	77.00	0.00	446.88	74.41	0.00	2.77	990.05	129.96
15/11/2015 10:00:00	32.05	66.20	0.00	735.63	75.81	0.50	2.52	990.85	130.82
15/11/2015 11:00:00	33.42	61.70	0.00	838.13	106.70	0.76	3.53	990.75	132.04
15/11/2015 12:00:00	36.55	53.10	0.00	943.13	85.64	0.25	4.28	990.05	133.58
15/11/2015 13:00:00	36.61	53.20	0.00	313.13	167.07	0.25	3.02	988.95	134.19
15/11/2015 14:00:00	24.56	92.20	5.40	160.63	23.87	2.02	10.07	988.45	135.05
15/11/2015 15:00:00	32.69	59.30	0.00	216.88	294.82	0.25	2.02	987.15	134.19
15/11/2015 16:00:00	32.72	63.70	0.00	516.88	273.77	0.76	2.02	985.45	132.66
15/11/2015 17:00:00	35.16	54.20	0.00	344.38	317.29	0.25	2.52	984.55	132.35
15/11/2015 18:00:00	32.82	60.80	0.00	98.13	276.57	0.25	1.51	984.65	130.57
15/11/2015 19:00:00	30.85	73.10	0.00	0.63	252.71	0.00	1.01	985.45	129.96
15/11/2015 20:00:00	28.89	84.10	0.20	0.63	50.54	0.25	1.76	986.45	129.35
15/11/2015 21:00:00	29.02	79.80	0.00	0.63	167.07	0.00	1.01	987.05	127.51
15/11/2015 22:00:00	27.80	90.70	2.00	0.63	22.46	0.25	6.80	988.15	126.90
15/11/2015 23:00:00	26.16	91.00	0.00	0.63	297.63	0.25	2.02	988.15	126.59
16/11/2015 0:00:00	26.43	90.70	0.00	0.63	255.51	0.00	2.27	988.05	125.73
16/11/2015 1:00:00	25.94	91.70	0.00	0.63	252.71	1.01	2.77	987.85	125.73
16/11/2015 2:00:00	25.57	91.10	0.00	0.63	280.78	0.00	1.01	987.15	125.73
16/11/2015 3:00:00	25.31	92.80	0.00	0.63	272.36	0.00	1.01	986.95	126.04
16/11/2015 4:00:00	24.99	94.80	0.00	0.63	277.98	0.00	0.25	987.25	124.20
16/11/2015 5:00:00	24.80	96.00	0.00	0.63	131.97	0.00	0.00	987.35	123.89
16/11/2015 6:00:00	24.73	95.40	0.00	0.63	207.78	0.00	2.02	987.75	123.59
16/11/2015 7:00:00	24.85	95.80	0.00	93.13	249.90	0.76	2.02	988.35	124.20
16/11/2015 8:00:00	27.88	82.60	0.00	333.13	172.68	0.00	1.51	989.15	123.89
16/11/2015 9:00:00	31.20	72.80	0.00	554.38	42.12	0.00	1.51	989.05	125.42
16/11/2015 10:00:00	31.13	73.00	0.00	684.38	234.46	0.50	2.77	989.45	125.42
16/11/2015 11:00:00	33.84	64.00	0.00	925.63	325.71	0.00	2.52	989.35	127.51
16/11/2015 12:00:00	35.40	59.10	0.00	1071.88	150.22	0.50	3.27	988.45	128.43

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
16/11/2015 13:00:00	35.10	54.80	0.00	970.63	329.92	0.25	3.78	987.25	127.51
16/11/2015 14:00:00	36.66	52.30	0.00	919.38	311.67	0.00	4.03	985.95	127.51
16/11/2015 15:00:00	37.15	48.50	0.00	731.88	26.68	0.50	3.27	984.85	128.73
16/11/2015 16:00:00	36.88	47.60	0.00	585.63	16.85	0.76	3.02	984.05	129.65
16/11/2015 17:00:00	36.15	47.20	0.00	329.38	44.93	0.50	2.27	983.65	129.35
16/11/2015 18:00:00	34.78	53.50	0.00	90.63	0.00	0.00	1.26	983.95	126.90
16/11/2015 19:00:00	31.89	65.30	0.00	0.63	105.29	0.25	1.51	984.45	125.42
16/11/2015 20:00:00	30.07	73.70	0.00	0.63	263.94	0.25	2.27	985.15	124.51
16/11/2015 21:00:00	29.46	74.10	0.00	0.63	234.46	0.50	2.27	985.85	122.36
16/11/2015 22:00:00	28.49	83.60	0.00	0.63	136.18	0.00	1.26	986.65	122.67
16/11/2015 23:00:00	28.17	79.80	0.00	0.63	160.05	0.25	2.77	986.85	132.96
17/11/2015 0:00:00	27.80	83.20	0.00	0.63	101.08	0.00	1.76	986.75	133.27
17/11/2015 1:00:00	27.36	82.70	0.00	0.63	220.42	0.00	1.01	986.35	132.35
17/11/2015 2:00:00	26.60	86.30	0.00	0.63	112.31	0.00	0.76	985.75	131.74
17/11/2015 3:00:00	25.38	93.10	0.00	0.63	252.71	0.00	0.00	985.15	131.74
17/11/2015 4:00:00	25.33	92.20	0.00	0.63	227.44	0.00	0.25	985.15	132.35
17/11/2015 5:00:00	25.33	90.50	0.00	0.63	158.64	0.00	0.50	985.75	131.43
17/11/2015 6:00:00	24.68	95.40	0.00	0.63	228.84	0.00	1.01	986.15	132.04
17/11/2015 7:00:00	24.82	96.10	0.00	66.88	238.67	0.00	1.26	987.15	131.43
17/11/2015 8:00:00	27.28	88.00	0.00	260.63	70.20	0.00	2.77	988.05	132.04
17/11/2015 9:00:00	29.74	81.80	0.00	488.13	209.18	0.25	2.02	988.15	132.66
17/11/2015 10:00:00	33.39	69.00	0.00	680.63	46.33	0.25	3.02	988.55	132.66
17/11/2015 11:00:00	34.07	63.30	0.00	824.38	286.40	0.50	2.52	988.35	134.80
17/11/2015 12:00:00	36.96	48.10	0.00	978.13	8.42	0.25	2.77	987.55	135.97
17/11/2015 13:00:00	36.74	46.50	0.00	981.88	78.62	0.76	3.53	986.85	136.58
17/11/2015 14:00:00	36.20	47.40	0.00	805.63	341.15	0.50	3.78	985.55	136.58
17/11/2015 15:00:00	36.44	45.60	0.00	470.63	73.00	0.50	2.27	984.65	137.50
17/11/2015 16:00:00	36.01	45.90	0.00	328.13	68.79	0.50	2.02	983.75	136.88
17/11/2015 17:00:00	34.44	51.40	0.00	198.13	70.20	0.25	1.76	983.35	135.35

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
17/11/2015 18:00:00	34.02	56.30	0.00	116.88	64.58	0.00	1.26	983.15	132.96
17/11/2015 19:00:00	31.46	67.00	0.00	0.63	130.57	0.00	1.01	983.55	132.35
17/11/2015 20:00:00	30.93	67.00	0.00	0.63	200.76	0.00	0.76	984.25	132.04
17/11/2015 21:00:00	29.77	76.40	0.00	0.63	186.72	0.00	0.00	985.15	129.96
17/11/2015 22:00:00	28.15	77.80	0.00	0.63	174.09	0.00	0.50	985.85	129.04
17/11/2015 23:00:00	27.65	83.10	0.00	0.63	178.30	0.00	1.26	986.45	127.81
18/11/2015 0:00:00	27.55	82.80	0.00	0.63	158.64	0.00	0.50	986.15	127.51
18/11/2015 1:00:00	26.94	84.70	0.00	0.63	209.18	0.00	0.76	985.05	127.51
18/11/2015 2:00:00	26.77	86.60	0.00	0.63	155.84	0.00	0.00	984.65	126.59
18/11/2015 3:00:00	25.70	91.60	0.00	0.63	147.41	0.00	0.25	984.35	126.59
18/11/2015 4:00:00	25.09	94.40	0.00	0.63	203.57	0.00	0.50	984.15	126.28
18/11/2015 5:00:00	24.75	94.30	0.00	0.63	154.43	0.00	0.76	984.45	127.20
18/11/2015 6:00:00	25.33	92.10	0.00	0.63	137.58	0.00	0.50	985.45	126.59
18/11/2015 7:00:00	24.99	94.40	0.00	74.38	137.58	0.00	2.27	986.15	126.04
18/11/2015 8:00:00	26.65	89.10	0.00	211.88	109.51	1.01	2.52	986.55	125.73
18/11/2015 9:00:00	29.27	79.70	0.00	384.38	110.91	0.50	2.77	986.85	126.59
18/11/2015 10:00:00	31.54	72.60	0.00	625.63	89.85	1.01	2.52	987.15	126.59
18/11/2015 11:00:00	34.49	60.00	0.00	834.38	85.64	0.25	2.27	986.65	129.35
18/11/2015 12:00:00	36.74	51.80	0.00	976.88	25.27	0.50	4.03	986.05	131.43
18/11/2015 13:00:00	38.25	46.40	0.00	964.38	336.94	0.25	3.53	985.35	132.04
18/11/2015 14:00:00	37.73	41.30	0.00	861.88	311.67	0.25	4.28	983.75	133.27
18/11/2015 15:00:00	37.15	43.90	0.00	688.13	296.23	1.26	3.53	982.35	132.66
18/11/2015 16:00:00	35.88	46.70	0.00	213.13	12.64	0.50	2.77	981.85	128.43
18/11/2015 17:00:00	34.10	54.90	0.00	116.88	98.28	0.25	2.27	982.45	127.51
18/11/2015 18:00:00	31.71	69.20	0.00	41.88	117.93	1.26	3.53	982.85	125.42
18/11/2015 19:00:00	29.92	74.40	0.00	0.63	117.93	0.50	2.02	983.15	124.20
18/11/2015 20:00:00	29.67	70.90	0.00	0.63	217.61	1.01	4.78	984.65	123.59
18/11/2015 21:00:00	26.18	84.90	0.20	0.63	345.37	0.00	2.27	985.75	123.89
18/11/2015 22:00:00	26.33	87.80	0.00	0.63	70.20	0.00	1.26	985.65	122.05

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
18/11/2015 23:00:00	26.23	85.80	0.00	0.63	87.04	0.00	2.52	985.95	122.05
19/11/2015 0:00:00	25.36	89.90	0.00	0.63	95.47	1.76	2.77	986.05	122.05
19/11/2015 1:00:00	25.31	89.90	0.00	0.63	105.29	0.00	1.51	985.45	121.50
19/11/2015 2:00:00	25.04	93.30	0.00	0.63	307.46	0.50	2.27	985.35	121.20
19/11/2015 3:00:00	25.14	93.10	0.00	0.63	310.27	0.00	3.27	984.95	120.89
19/11/2015 4:00:00	25.02	91.50	0.00	0.63	311.67	0.76	3.02	984.75	120.89
19/11/2015 5:00:00	24.82	93.00	2.20	0.63	343.96	0.00	1.26	985.05	120.58
19/11/2015 6:00:00	24.22	95.70	2.00	0.63	102.49	0.00	1.51	985.15	119.97
19/11/2015 7:00:00	24.36	95.00	0.20	19.38	68.79	0.00	3.78	985.85	121.50
19/11/2015 8:00:00	24.32	95.60	0.20	39.38	120.74	1.26	3.78	987.55	123.89
19/11/2015 9:00:00	23.95	96.30	1.20	40.63	113.72	1.26	3.27	988.55	127.51
19/11/2015 10:00:00	25.04	93.30	0.20	116.88	133.37	0.25	3.27	988.85	129.04
19/11/2015 11:00:00	26.45	91.90	0.00	344.38	96.87	0.76	2.77	988.45	130.57
19/11/2015 12:00:00	28.39	81.50	0.00	384.38	67.39	0.25	2.52	987.65	131.74
19/11/2015 13:00:00	29.52	77.00	0.00	475.63	108.10	0.50	3.27	986.25	132.04
19/11/2015 14:00:00	31.13	75.80	0.00	771.88	96.87	0.50	3.53	985.05	133.58
19/11/2015 15:00:00	32.36	63.40	0.00	546.88	95.47	1.26	3.27	984.05	134.19
19/11/2015 16:00:00	30.98	72.50	0.00	271.88	80.02	0.76	3.02	984.05	134.19
19/11/2015 17:00:00	30.60	74.10	0.00	210.63	84.24	1.01	3.27	983.85	134.80
19/11/2015 18:00:00	29.27	77.30	0.00	63.13	98.28	1.01	3.27	984.05	132.96
19/11/2015 19:00:00	28.00	82.80	5.20	0.63	64.58	0.50	7.30	985.55	132.35
19/11/2015 20:00:00	23.47	98.10	36.01	0.63	299.04	3.53	8.31	987.85	130.57
19/11/2015 21:00:00	23.06	99.10	3.60	0.63	314.48	0.00	2.77	988.65	130.27
19/11/2015 22:00:00	23.14	99.10	0.80	0.63	324.31	0.00	2.52	988.45	130.27
19/11/2015 23:00:00	22.59	97.80	0.00	0.63	329.92	0.00	1.26	988.35	129.04
20/11/2015 0:00:00	22.47	98.10	0.00	0.63	320.09	0.00	1.26	987.75	128.12
20/11/2015 1:00:00	22.73	98.20	0.00	0.63	241.48	0.50	1.76	986.85	128.12
20/11/2015 2:00:00	22.56	97.30	0.00	0.63	272.36	0.00	1.51	986.05	128.43
20/11/2015 3:00:00	22.61	97.30	0.00	0.63	7.02	0.00	0.76	985.25	127.81

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
20/11/2015 4:00:00	23.06	96.80	0.00	0.63	14.04	0.00	0.00	985.15	127.81
20/11/2015 5:00:00	22.75	97.90	0.00	0.63	332.73	0.00	0.25	985.15	127.20
20/11/2015 6:00:00	23.04	97.30	0.00	0.63	44.93	0.00	1.01	985.95	128.43
20/11/2015 7:00:00	23.79	95.00	0.00	56.88	193.74	0.00	2.02	986.85	126.59
20/11/2015 8:00:00	24.32	95.50	0.00	205.63	94.06	0.76	2.27	987.85	127.81
20/11/2015 9:00:00	25.70	89.00	0.00	243.13	98.28	0.00	1.51	988.65	127.20
20/11/2015 10:00:00	26.40	87.60	0.00	276.88	82.83	0.00	1.76	989.35	126.90
20/11/2015 11:00:00	29.27	76.70	0.00	600.63	15.44	0.00	2.77	988.95	128.12
20/11/2015 12:00:00	31.41	71.00	0.00	650.63	22.46	0.25	2.52	988.25	129.96
20/11/2015 13:00:00	32.25	66.40	0.00	686.88	308.86	0.50	2.77	987.45	129.96
20/11/2015 14:00:00	33.44	64.30	0.00	906.88	33.69	0.25	2.77	986.15	131.12
20/11/2015 15:00:00	33.73	64.00	0.00	956.88	285.00	1.01	3.78	985.25	129.96
20/11/2015 16:00:00	35.74	56.50	0.00	570.63	35.10	0.00	3.78	983.45	129.96
20/11/2015 17:00:00	34.94	54.60	0.00	329.38	9.83	0.00	3.27	982.85	129.96
20/11/2015 18:00:00	31.41	71.70	0.00	105.63	213.40	0.76	3.78	983.35	129.04
20/11/2015 19:00:00	29.39	77.10	0.00	0.63	217.61	1.01	3.78	984.55	128.12
20/11/2015 20:00:00	28.84	80.50	0.00	0.63	240.07	0.76	3.53	985.65	127.20
20/11/2015 21:00:00	26.84	86.10	0.00	0.63	301.84	0.25	2.77	986.75	126.90
20/11/2015 22:00:00	26.30	88.40	0.00	0.63	290.61	0.00	1.51	987.65	126.04
20/11/2015 23:00:00	26.28	83.70	0.00	0.63	50.54	0.00	2.02	987.35	126.90
21/11/2015 0:00:00	25.14	89.00	0.00	0.63	313.08	0.00	1.51	986.45	126.04
21/11/2015 1:00:00	25.26	87.20	0.00	0.63	226.03	0.00	1.01	985.95	125.73
21/11/2015 2:00:00	23.95	95.20	0.00	0.63	95.47	0.00	1.01	985.05	124.81
21/11/2015 3:00:00	23.74	96.30	0.00	0.63	101.08	0.25	1.51	984.55	125.42
21/11/2015 4:00:00	24.07	94.20	0.00	0.63	231.65	0.50	1.76	985.25	124.51
21/11/2015 5:00:00	24.34	92.40	0.00	0.63	146.01	0.00	1.26	985.45	124.51
21/11/2015 6:00:00	23.74	96.60	0.00	0.63	105.29	0.00	1.01	986.05	124.51
21/11/2015 7:00:00	24.07	95.80	0.00	49.38	115.12	0.00	1.76	987.05	124.51
21/11/2015 8:00:00	24.70	94.30	0.00	120.63	96.87	0.25	1.51	987.45	124.51



**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
21/11/2015 9:00:00	26.26	89.50	0.00	253.13	116.53	0.00	1.51	988.05	124.20
21/11/2015 10:00:00	31.03	72.60	0.00	609.38	154.43	0.00	1.76	988.45	125.42
21/11/2015 11:00:00	32.69	68.50	0.00	855.63	50.54	0.25	2.27	988.15	126.28
21/11/2015 12:00:00	34.84	62.30	0.00	963.13	40.71	0.50	3.78	987.45	129.04
21/11/2015 13:00:00	37.87	53.60	0.00	994.38	8.42	0.50	10.32	986.25	129.35
21/11/2015 14:00:00	36.47	55.80	0.00	1035.63	268.15	1.01	3.78	986.95	129.65
21/11/2015 15:00:00	32.59	66.60	0.00	259.38	317.29	1.51	5.29	985.95	129.04
21/11/2015 16:00:00	29.69	70.90	0.00	234.38	263.94	2.27	5.04	985.35	127.51
21/11/2015 17:00:00	32.02	64.40	0.00	343.13	216.20	0.00	1.51	985.05	126.28
21/11/2015 18:00:00	31.08	69.60	0.00	85.63	300.44	0.00	0.50	984.65	125.42
21/11/2015 19:00:00	28.05	84.60	0.00	0.63	157.24	0.00	0.76	986.25	123.28
21/11/2015 20:00:00	27.43	90.70	0.00	0.63	162.86	0.00	3.27	986.65	122.36
21/11/2015 21:00:00	27.78	82.60	0.00	0.63	144.60	1.01	5.29	987.45	120.58
21/11/2015 22:00:00	26.57	85.30	0.40	0.63	327.11	1.76	5.29	989.15	121.50
21/11/2015 23:00:00	25.33	93.00	0.00	0.63	130.57	0.00	0.25	987.95	119.66
22/11/2015 0:00:00	24.99	93.30	0.00	0.63	146.01	0.00	0.25	988.15	119.66
22/11/2015 1:00:00	24.58	97.00	0.00	0.63	160.05	0.00	2.27	987.25	119.36
22/11/2015 2:00:00	24.99	93.80	0.00	0.63	171.28	0.00	0.50	986.55	119.36
22/11/2015 3:00:00	24.24	97.70	0.00	0.63	266.75	0.00	2.52	986.85	118.74
22/11/2015 4:00:00	24.15	96.60	0.00	0.63	244.28	0.00	0.25	987.15	119.05
22/11/2015 5:00:00	23.83	98.10	0.00	0.63	202.17	0.00	0.50	987.35	119.05
22/11/2015 6:00:00	23.45	98.90	0.00	0.63	42.12	0.00	0.00	988.15	118.13
22/11/2015 7:00:00	23.98	98.70	0.00	85.63	44.93	0.00	1.76	988.95	118.44
22/11/2015 8:00:00	27.09	90.20	0.00	279.38	182.51	0.00	1.26	989.95	118.13
22/11/2015 9:00:00	30.72	79.30	0.00	483.13	338.35	0.00	1.51	990.55	119.36
22/11/2015 10:00:00	32.36	75.40	0.00	641.88	345.37	0.25	2.27	990.85	121.20
22/11/2015 11:00:00	35.18	61.50	0.00	838.13	63.18	0.00	3.02	990.65	121.81
22/11/2015 12:00:00	35.53	61.60	0.00	906.88	322.90	0.50	3.27	990.15	122.36
22/11/2015 13:00:00	36.63	57.40	0.00	1040.63	230.24	0.50	3.53	989.05	124.81

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
22/11/2015 14:00:00	38.00	51.10	0.00	969.38	279.38	0.25	7.55	987.85	124.51
22/11/2015 15:00:00	29.19	72.50	0.20	75.63	270.96	0.00	2.27	987.45	122.05
22/11/2015 16:00:00	27.88	82.30	0.00	113.13	56.16	0.25	2.02	987.45	122.36
22/11/2015 17:00:00	29.37	79.70	0.00	230.63	174.09	0.25	1.76	986.35	121.81
22/11/2015 18:00:00	29.62	80.70	0.00	133.13	310.27	0.00	0.50	985.85	120.28
22/11/2015 19:00:00	27.68	89.70	0.00	0.63	176.89	0.00	0.76	986.45	119.97
22/11/2015 20:00:00	26.99	94.30	0.00	0.63	176.89	0.00	0.50	987.35	119.05
22/11/2015 21:00:00	26.89	94.00	0.00	0.63	136.18	0.00	1.51	988.35	118.74
22/11/2015 22:00:00	26.18	96.20	0.00	0.63	21.06	0.76	2.77	988.75	118.44
22/11/2015 23:00:00	25.57	95.50	0.00	0.63	2.81	0.00	1.51	989.35	117.27
23/11/2015 0:00:00	25.53	95.90	0.00	0.63	19.66	0.00	1.01	989.35	117.83
23/11/2015 1:00:00	25.19	97.70	0.00	0.63	4.21	0.00	0.00	989.25	117.58
23/11/2015 2:00:00	24.75	98.60	0.00	0.63	4.21	0.00	0.76	988.65	116.97
23/11/2015 3:00:00	24.44	98.80	0.00	0.63	9.83	0.00	0.00	987.75	116.97
23/11/2015 4:00:00	24.20	99.10	0.00	0.63	29.48	0.00	0.00	987.45	116.05
23/11/2015 5:00:00	23.74	99.40	0.00	0.63	54.75	0.00	0.25	987.55	116.97
23/11/2015 6:00:00	23.93	99.70	0.00	0.63	54.75	0.00	0.00	988.15	116.35
23/11/2015 7:00:00	24.51	99.30	0.00	63.13	68.79	0.00	0.00	988.45	116.97
23/11/2015 8:00:00	25.70	96.30	0.00	133.13	71.60	0.00	0.50	989.55	116.97
23/11/2015 9:00:00	29.12	87.10	0.00	354.38	346.77	0.00	1.01	990.15	117.83
23/11/2015 10:00:00	30.22	81.20	0.00	395.63	209.18	0.00	1.51	990.25	115.13
23/11/2015 11:00:00	31.15	76.60	0.00	471.88	273.77	0.25	2.52	990.25	116.05
23/11/2015 12:00:00	33.60	69.30	0.00	620.63	273.77	0.25	2.27	989.45	116.97
23/11/2015 13:00:00	35.29	63.70	0.00	530.63	245.69	0.76	3.27	988.45	118.13
23/11/2015 14:00:00	35.90	58.90	0.00	759.38	304.65	0.50	5.79	986.25	119.66
23/11/2015 15:00:00	28.47	75.30	0.00	223.13	282.19	3.02	6.80	985.75	119.05
23/11/2015 16:00:00	31.61	67.60	0.00	683.13	251.30	0.76	2.77	984.85	118.44
23/11/2015 17:00:00	29.79	75.50	0.00	145.63	35.10	0.25	2.77	984.95	116.66
23/11/2015 18:00:00	27.73	83.00	0.00	14.38	18.25	0.00	1.51	985.35	114.82

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
23/11/2015 19:00:00	27.19	87.80	0.00	0.63	199.36	0.00	0.00	986.45	113.90
23/11/2015 20:00:00	26.82	91.40	0.20	0.63	322.90	0.00	0.76	986.85	112.13
23/11/2015 21:00:00	25.79	95.40	0.00	0.63	219.01	0.00	0.50	986.25	110.90
23/11/2015 22:00:00	25.48	96.00	0.00	0.63	130.57	0.00	1.51	986.95	110.90
23/11/2015 23:00:00	25.23	96.90	0.00	0.63	23.87	0.00	0.25	987.25	109.37
24/11/2015 0:00:00	24.80	98.10	0.00	0.63	40.71	0.00	0.50	987.05	109.37
24/11/2015 1:00:00	24.61	98.30	0.00	0.63	28.08	0.00	0.25	986.15	109.98
24/11/2015 2:00:00	24.17	98.80	0.00	0.63	35.10	0.00	0.50	986.35	109.98
24/11/2015 3:00:00	24.15	99.50	0.00	0.63	16.85	0.00	1.01	986.55	109.12
24/11/2015 4:00:00	24.15	100.00	0.00	0.63	4.21	0.00	0.00	986.65	109.12
24/11/2015 5:00:00	24.24	100.00	0.00	0.63	4.21	0.00	0.00	986.95	109.98
24/11/2015 6:00:00	24.22	100.00	0.00	0.63	172.68	0.00	0.76	987.45	108.51
24/11/2015 7:00:00	24.65	99.60	0.00	88.13	50.54	0.00	0.50	988.55	109.12
24/11/2015 8:00:00	25.96	96.10	0.00	206.88	8.42	0.00	0.76	989.15	107.59
24/11/2015 9:00:00	29.97	84.30	0.00	475.63	336.94	0.00	1.51	990.05	111.21
24/11/2015 10:00:00	33.31	73.60	0.00	664.38	343.96	0.00	1.51	989.55	113.05
24/11/2015 11:00:00	34.05	70.40	0.00	856.88	314.48	0.25	3.27	989.25	115.13
24/11/2015 12:00:00	34.94	64.60	0.00	993.13	304.65	0.76	3.02	988.35	115.44
24/11/2015 13:00:00	35.80	57.90	0.00	966.88	276.57	1.01	4.78	987.55	116.66
24/11/2015 14:00:00	36.58	57.10	0.00	891.88	266.75	1.01	4.28	985.95	116.66
24/11/2015 15:00:00	36.61	50.20	0.00	734.38	255.51	1.51	4.03	984.65	115.44
24/11/2015 16:00:00	34.10	56.80	0.00	204.38	290.61	0.25	2.02	984.35	114.21
24/11/2015 17:00:00	33.34	61.10	0.00	51.88	320.09	0.00	1.26	984.85	113.60
24/11/2015 18:00:00	30.90	74.20	0.00	43.13	158.64	0.00	1.26	984.85	111.21
24/11/2015 19:00:00	29.32	78.60	0.00	0.63	160.05	0.00	2.27	985.55	109.68
24/11/2015 20:00:00	28.77	80.10	0.00	0.63	140.39	0.00	1.01	986.95	107.59
24/11/2015 21:00:00	27.53	89.50	0.00	0.63	147.41	0.00	1.26	987.75	107.59
24/11/2015 22:00:00	27.53	89.90	0.00	0.63	123.55	0.00	0.76	988.55	106.98
24/11/2015 23:00:00	26.92	92.50	0.00	0.63	230.24	0.00	1.26	988.85	106.67

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
25/11/2015 0:00:00	26.50	93.10	0.00	0.63	196.55	0.00	0.76	988.85	106.37
25/11/2015 1:00:00	25.74	96.40	0.00	0.63	349.58	0.00	0.00	988.25	106.37
25/11/2015 2:00:00	25.26	97.80	0.00	0.63	339.75	0.00	0.00	987.45	106.67
25/11/2015 3:00:00	25.36	97.40	0.00	0.63	345.37	0.00	0.25	987.45	105.75
25/11/2015 4:00:00	25.36	98.30	0.00	0.63	345.37	0.00	0.50	987.55	106.67
25/11/2015 5:00:00	25.02	98.70	0.00	0.63	345.37	0.00	0.76	987.75	104.89
25/11/2015 6:00:00	24.61	98.60	0.00	0.63	4.21	0.00	2.02	988.55	106.06
25/11/2015 7:00:00	24.90	97.80	0.00	59.38	11.23	0.00	2.77	989.65	105.45
25/11/2015 8:00:00	26.84	91.00	0.00	209.38	33.69	0.76	2.77	991.15	105.75
25/11/2015 9:00:00	28.05	85.00	0.00	259.38	25.27	1.01	3.53	992.15	106.67
25/11/2015 10:00:00	30.07	79.00	0.00	571.88	23.87	0.76	4.78	992.45	106.37
25/11/2015 11:00:00	28.77	77.50	0.00	373.13	7.02	2.27	5.04	992.65	105.75
25/11/2015 12:00:00	27.65	78.30	0.00	191.88	4.21	1.76	4.28	991.85	107.59
25/11/2015 13:00:00	30.93	71.20	0.00	413.13	331.33	0.25	5.29	989.85	106.06
25/11/2015 14:00:00	29.79	73.10	0.00	496.88	256.92	0.25	3.27	987.55	107.59
25/11/2015 15:00:00	31.20	73.10	0.00	614.38	313.08	0.50	2.52	987.75	108.51
25/11/2015 16:00:00	30.80	69.50	0.00	241.88	343.96	0.76	2.27	987.95	107.59
25/11/2015 17:00:00	30.47	70.00	0.00	203.13	9.83	0.50	2.52	987.25	106.98
25/11/2015 18:00:00	28.77	81.00	0.00	58.13	350.98	0.00	1.26	987.15	105.75
25/11/2015 19:00:00	27.33	88.00	0.00	0.63	43.52	0.00	0.50	987.85	105.45
25/11/2015 20:00:00	26.18	91.90	0.00	0.63	144.60	0.00	0.00	988.45	104.28
25/11/2015 21:00:00	25.48	94.20	0.00	0.63	144.60	0.00	0.00	988.95	103.36
25/11/2015 22:00:00	24.92	96.50	0.00	0.63	146.01	0.00	0.00	989.85	102.44
25/11/2015 23:00:00	24.56	97.40	0.00	0.63	213.40	0.00	0.00	990.35	103.06
26/11/2015 0:00:00	24.48	97.90	0.00	0.63	211.99	0.00	0.00	990.25	103.36
26/11/2015 1:00:00	24.44	98.30	0.00	0.63	277.98	0.00	0.00	990.05	102.14
26/11/2015 2:00:00	23.98	98.70	0.00	0.63	233.05	0.00	0.00	989.15	102.14
26/11/2015 3:00:00	24.68	98.80	0.00	0.63	233.05	0.00	0.00	988.75	101.83
26/11/2015 4:00:00	24.10	99.20	0.00	0.63	233.05	0.00	0.00	988.75	102.14

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
26/11/2015 5:00:00	23.95	99.70	0.00	0.63	233.05	0.00	0.00	988.65	102.75
26/11/2015 6:00:00	23.95	99.90	0.00	0.63	233.05	0.00	0.00	988.95	101.83
26/11/2015 7:00:00	24.65	99.50	0.00	105.63	248.49	0.00	0.00	989.65	102.14
26/11/2015 8:00:00	27.26	92.50	0.00	158.13	248.49	0.00	0.00	990.65	102.44
26/11/2015 9:00:00	29.87	79.90	0.00	228.13	233.05	0.00	0.76	991.15	102.14
26/11/2015 10:00:00	32.51	70.30	0.00	814.38	74.41	0.00	3.02	991.45	103.36
26/11/2015 11:00:00	33.57	67.50	0.00	1071.88	4.21	1.01	3.53	991.35	106.06
26/11/2015 12:00:00	35.56	62.60	0.00	1035.63	22.46	0.25	3.02	990.45	106.98
26/11/2015 13:00:00	37.26	54.50	0.00	1044.38	352.38	0.50	4.53	989.45	107.90
26/11/2015 14:00:00	36.66	54.40	0.00	958.13	273.77	1.51	4.78	988.35	106.37
26/11/2015 15:00:00	32.72	66.00	0.20	699.38	320.09	0.76	7.05	986.95	107.28
26/11/2015 16:00:00	28.57	71.20	0.00	153.13	285.00	2.77	6.80	986.95	106.98
26/11/2015 17:00:00	31.43	63.20	0.00	89.38	162.86	0.00	1.01	986.55	105.14
26/11/2015 18:00:00	28.99	75.40	0.00	43.13	168.47	0.25	2.27	986.75	102.14
26/11/2015 19:00:00	27.95	81.30	0.00	0.63	148.82	0.25	4.28	987.15	100.05
26/11/2015 20:00:00	27.58	81.70	0.00	0.63	138.99	1.26	4.28	988.15	100.05
26/11/2015 21:00:00	27.31	81.30	0.00	0.63	127.76	0.25	2.27	988.75	98.22
26/11/2015 22:00:00	26.01	89.60	0.00	0.63	64.58	0.00	2.77	989.45	98.22
26/11/2015 23:00:00	26.43	86.40	0.00	0.63	49.14	0.00	1.26	989.65	97.91
27/11/2015 0:00:00	25.23	92.90	0.00	0.63	134.78	0.00	0.25	989.55	97.30
27/11/2015 1:00:00	24.90	94.60	0.00	0.63	137.58	0.00	0.00	988.85	97.30
27/11/2015 2:00:00	24.53	96.30	0.00	0.63	178.30	0.00	0.00	988.05	96.13
27/11/2015 3:00:00	24.07	97.70	0.00	0.63	178.30	0.00	0.00	987.25	96.13
27/11/2015 4:00:00	23.95	97.10	0.00	0.63	53.35	0.00	0.76	987.75	96.13
27/11/2015 5:00:00	23.23	98.70	0.00	0.63	21.06	0.00	1.01	988.35	96.13
27/11/2015 6:00:00	23.86	98.90	0.00	0.63	133.37	0.00	0.50	988.55	95.83
27/11/2015 7:00:00	23.79	98.20	0.00	84.38	16.85	0.00	0.00	989.05	96.13
27/11/2015 8:00:00	26.65	92.20	0.00	274.38	328.52	0.00	1.51	990.05	96.68
27/11/2015 9:00:00	28.22	87.10	0.00	323.13	25.27	0.00	1.76	989.95	96.99

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
27/11/2015 10:00:00	31.41	77.50	0.00	581.88	329.92	0.00	1.51	989.95	98.22
27/11/2015 11:00:00	32.10	71.80	0.00	530.63	280.78	0.25	2.52	990.35	99.13
27/11/2015 12:00:00	33.47	68.70	0.00	419.38	321.50	0.00	2.52	989.95	100.36
27/11/2015 13:00:00	34.07	64.50	0.00	413.13	242.88	0.76	2.77	989.15	101.22
27/11/2015 14:00:00	32.46	68.80	8.80	150.63	332.73	0.25	7.30	988.35	103.06
27/11/2015 15:00:00	24.92	93.30	1.40	139.38	29.48	0.00	2.02	988.05	106.98
27/11/2015 16:00:00	26.55	92.30	0.00	124.38	23.87	0.00	1.51	987.35	104.89
27/11/2015 17:00:00	25.96	93.30	0.00	26.88	313.08	0.00	2.02	986.85	103.67
27/11/2015 18:00:00	25.79	94.00	0.00	14.38	258.32	0.00	0.50	986.45	102.14
27/11/2015 19:00:00	26.01	93.80	0.00	0.63	355.19	0.00	1.01	987.05	103.06
27/11/2015 20:00:00	25.50	97.00	0.00	0.63	78.62	0.00	0.50	987.55	103.36
27/11/2015 21:00:00	25.28	98.00	0.00	0.63	141.80	0.00	0.00	988.45	100.91
27/11/2015 22:00:00	25.16	97.20	0.00	0.63	115.12	0.00	0.00	989.55	101.83
27/11/2015 23:00:00	24.51	99.00	0.00	0.63	174.09	0.00	0.25	989.65	101.22
28/11/2015 0:00:00	24.24	99.60	0.00	0.63	101.08	0.00	0.50	989.65	101.22
28/11/2015 1:00:00	23.74	99.70	0.00	0.63	84.24	0.00	0.00	988.95	100.36
28/11/2015 2:00:00	24.29	100.00	0.00	0.63	84.24	0.00	0.50	988.15	100.05
28/11/2015 3:00:00	24.36	100.00	0.00	0.63	88.45	0.00	0.50	988.05	100.91
28/11/2015 4:00:00	24.17	100.00	0.00	0.63	25.27	0.00	0.50	988.15	99.75
28/11/2015 5:00:00	24.12	100.00	0.00	0.63	84.24	0.00	0.76	988.45	100.61
28/11/2015 6:00:00	23.98	100.00	0.00	0.63	96.87	0.00	1.26	989.25	99.75
28/11/2015 7:00:00	23.86	100.00	0.00	46.88	25.27	0.00	0.50	989.95	100.05
28/11/2015 8:00:00	24.56	100.00	0.00	164.38	0.00	0.00	1.76	990.75	100.05
28/11/2015 9:00:00	27.63	91.20	0.00	434.38	26.68	0.25	2.02	991.45	101.22
28/11/2015 10:00:00	29.67	84.60	0.00	525.63	313.08	0.25	2.27	991.65	103.36
28/11/2015 11:00:00	32.38	74.10	0.00	864.38	355.19	0.25	2.52	990.95	103.98
28/11/2015 12:00:00	32.33	71.90	0.00	498.13	242.88	0.50	2.52	990.95	105.75
28/11/2015 13:00:00	35.85	61.60	0.00	1048.13	352.38	0.25	3.27	989.75	106.67
28/11/2015 14:00:00	37.67	54.20	0.00	950.63	339.75	0.25	2.77	988.45	105.75



**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
28/11/2015 15:00:00	35.29	58.80	0.00	326.88	345.37	0.50	2.27	987.25	106.06
28/11/2015 16:00:00	35.85	55.40	0.00	519.38	307.46	0.00	2.77	985.75	103.67
28/11/2015 17:00:00	34.70	55.40	0.00	311.88	353.79	0.50	1.76	985.45	103.98
28/11/2015 18:00:00	33.99	56.00	0.00	108.13	58.97	0.00	0.76	985.95	102.75
28/11/2015 19:00:00	29.54	79.00	0.00	0.63	95.47	0.00	2.77	986.85	100.05
28/11/2015 20:00:00	28.57	78.80	0.00	0.63	12.64	0.25	1.76	987.15	99.44
28/11/2015 21:00:00	27.19	88.40	0.00	0.63	16.85	0.00	0.50	988.25	96.99
28/11/2015 22:00:00	26.57	90.40	0.00	0.63	67.39	0.00	0.00	989.25	97.60
28/11/2015 23:00:00	25.40	95.60	0.00	0.63	67.39	0.00	1.51	989.65	96.38
29/11/2015 0:00:00	24.97	94.50	0.00	0.63	16.85	0.00	1.51	989.95	95.83
29/11/2015 1:00:00	24.34	96.90	0.00	0.63	40.71	0.00	0.00	989.85	95.52
29/11/2015 2:00:00	24.07	97.70	0.00	0.63	42.12	0.00	0.00	989.35	95.52
29/11/2015 3:00:00	23.42	98.00	0.00	0.63	54.75	0.00	0.76	988.75	95.83
29/11/2015 4:00:00	23.28	98.00	0.00	0.63	91.26	0.00	0.25	988.75	94.60
29/11/2015 5:00:00	23.18	99.00	0.00	0.63	91.26	0.00	0.00	989.05	94.60
29/11/2015 6:00:00	23.11	99.10	0.00	0.63	91.26	0.00	1.51	989.75	94.91
29/11/2015 7:00:00	23.93	98.10	0.00	23.13	35.10	0.00	0.50	990.85	93.68
29/11/2015 8:00:00	25.09	96.90	0.00	99.38	29.48	0.00	0.76	991.55	94.60
29/11/2015 9:00:00	27.26	91.70	0.00	266.88	28.08	0.00	1.26	992.15	94.91
29/11/2015 10:00:00	29.64	84.20	0.00	414.38	21.06	0.00	1.51	991.85	95.83
29/11/2015 11:00:00	31.92	74.70	0.00	478.13	0.00	0.50	2.27	991.55	96.38
29/11/2015 12:00:00	33.86	68.10	0.00	786.88	318.69	0.25	2.02	990.65	99.13
29/11/2015 13:00:00	35.37	63.70	0.00	933.13	313.08	0.50	2.77	990.05	100.61
29/11/2015 14:00:00	37.29	55.90	0.00	865.63	80.02	0.50	2.27	988.85	100.61
29/11/2015 15:00:00	35.58	57.40	0.00	245.63	322.90	0.25	3.78	988.35	99.13
29/11/2015 16:00:00	35.72	57.90	0.00	516.88	304.65	0.76	4.78	986.95	99.44
29/11/2015 17:00:00	30.27	69.80	6.00	23.13	317.29	0.76	6.55	987.45	97.91
29/11/2015 18:00:00	25.04	93.50	0.00	26.88	147.41	0.25	4.53	986.95	96.38
29/11/2015 19:00:00	25.89	93.50	0.00	0.63	30.89	0.00	1.51	987.65	95.52



**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
29/11/2015 20:00:00	25.77	95.20	0.00	0.63	50.54	0.00	0.76	988.15	94.91
29/11/2015 21:00:00	25.28	96.80	0.00	0.63	43.52	0.00	0.00	989.05	94.60
29/11/2015 22:00:00	24.99	98.00	0.00	0.63	43.52	0.00	0.76	989.85	94.29
29/11/2015 23:00:00	24.70	96.60	0.00	0.63	89.85	0.00	0.25	990.45	93.07
30/11/2015 0:00:00	24.46	97.90	0.00	0.63	51.95	0.00	1.01	990.25	92.76
30/11/2015 1:00:00	24.75	96.00	0.00	0.63	81.43	0.00	0.25	989.85	92.45
30/11/2015 2:00:00	24.63	98.40	0.00	0.63	124.95	0.00	0.76	989.45	92.45
30/11/2015 3:00:00	24.46	98.50	0.00	0.63	165.66	0.00	0.76	988.75	92.45
30/11/2015 4:00:00	24.41	98.90	0.00	0.63	234.46	0.00	0.00	988.95	93.07
30/11/2015 5:00:00	23.95	99.30	0.00	0.63	234.46	0.00	1.01	989.35	93.07
30/11/2015 6:00:00	24.07	98.70	0.00	0.63	131.97	0.00	1.01	989.85	91.90
30/11/2015 7:00:00	24.90	97.80	0.00	78.13	137.58	0.00	3.02	990.25	91.90
30/11/2015 8:00:00	25.84	93.30	0.00	171.88	137.58	0.50	2.02	991.35	91.90
30/11/2015 9:00:00	27.70	87.40	0.00	220.63	153.03	0.25	1.51	992.15	93.37
30/11/2015 10:00:00	29.64	84.30	0.00	486.88	349.58	0.00	1.76	992.55	94.29
30/11/2015 11:00:00	33.37	71.40	0.00	848.13	30.89	0.25	2.52	992.05	95.52
30/11/2015 12:00:00	34.23	67.10	0.00	334.38	307.46	0.00	2.52	991.75	97.60
30/11/2015 13:00:00	34.39	65.20	0.00	360.63	160.05	0.25	2.77	990.65	96.38
30/11/2015 14:00:00	36.09	56.00	0.00	936.88	174.09	0.50	2.52	989.15	96.99
30/11/2015 15:00:00	33.76	65.50	0.00	178.13	203.57	0.00	4.53	988.05	96.13
30/11/2015 16:00:00	35.64	56.40	3.80	418.13	87.04	1.51	5.54	987.05	93.37
30/11/2015 17:00:00	28.10	80.30	0.00	105.63	353.79	0.50	2.52	987.55	91.60
30/11/2015 18:00:00	28.37	72.00	0.00	56.88	110.91	0.00	1.01	987.35	90.98
30/11/2015 19:00:00	26.50	86.20	0.00	0.63	116.53	0.00	0.00	987.65	90.98
30/11/2015 20:00:00	25.72	91.40	0.00	0.63	136.18	0.00	1.51	988.85	89.15
30/11/2015 21:00:00	25.48	84.50	0.00	0.63	57.56	0.00	1.26	990.45	89.45
30/11/2015 22:00:00	24.56	89.70	0.00	0.63	141.80	0.00	1.76	990.45	87.92
30/11/2015 23:00:00	24.92	87.90	0.00	0.63	134.78	0.00	2.77	990.95	87.67
1/12/2015 0:00:00	24.17	91.30	0.00	0.63	92.66	0.00	0.00	990.55	87.37

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
1/12/2015 1:00:00	24.10	91.90	0.00	0.63	88.45	0.00	0.76	989.95	87.67
1/12/2015 2:00:00	23.04	97.20	0.00	0.63	39.31	0.00	1.01	989.55	87.67
1/12/2015 3:00:00	23.11	97.40	0.00	0.63	113.72	0.00	0.00	989.15	86.45
1/12/2015 4:00:00	22.92	98.10	0.00	0.63	113.72	0.00	0.00	989.05	85.84
1/12/2015 5:00:00	22.82	98.90	0.00	0.63	113.72	0.00	0.00	989.55	86.76
1/12/2015 6:00:00	22.80	98.60	0.00	0.63	113.72	0.00	2.02	990.15	87.06
1/12/2015 7:00:00	24.32	91.20	0.00	59.38	108.10	0.25	2.02	990.85	87.06
1/12/2015 8:00:00	25.67	88.00	0.00	223.13	143.20	0.25	2.77	991.15	86.76
1/12/2015 9:00:00	27.83	81.20	0.00	496.88	148.82	0.76	2.27	992.25	87.37
1/12/2015 10:00:00	31.94	67.10	0.00	665.63	160.05	0.00	2.27	992.25	89.15
1/12/2015 11:00:00	32.23	66.90	0.00	841.88	282.19	0.25	2.02	992.15	90.06
1/12/2015 12:00:00	34.39	61.40	0.00	935.63	197.95	0.00	2.52	991.55	92.45
1/12/2015 13:00:00	35.40	59.60	0.00	941.88	292.02	0.25	3.27	990.25	93.07
1/12/2015 14:00:00	36.04	53.40	0.00	835.63	230.24	0.50	3.53	988.95	93.37
1/12/2015 15:00:00	36.58	52.40	0.00	693.13	327.11	1.01	3.02	987.55	91.90
1/12/2015 16:00:00	36.42	52.90	0.00	520.63	258.32	0.50	4.53	987.25	91.60
1/12/2015 17:00:00	32.07	65.50	0.00	308.13	277.98	2.52	5.54	986.95	90.68
1/12/2015 18:00:00	30.98	69.60	0.00	148.13	254.11	1.01	3.02	987.35	87.67
1/12/2015 19:00:00	29.12	78.80	0.00	0.63	190.93	0.00	2.77	988.55	84.92
1/12/2015 20:00:00	28.37	72.00	0.00	0.63	144.60	0.50	2.52	989.55	82.83
1/12/2015 21:00:00	27.63	76.80	0.00	0.63	110.91	0.00	2.27	990.45	82.53
1/12/2015 22:00:00	27.51	76.10	0.00	0.63	124.95	0.00	1.26	991.15	82.83
1/12/2015 23:00:00	26.18	86.10	0.00	0.63	101.08	0.00	0.00	991.55	81.91
2/12/2015 0:00:00	25.62	89.40	0.00	0.63	124.95	0.00	2.52	991.45	82.83
2/12/2015 1:00:00	25.26	90.50	0.00	0.63	122.14	0.00	0.25	991.05	81.30
2/12/2015 2:00:00	25.28	92.30	0.00	0.63	122.14	0.00	1.01	990.85	81.61
2/12/2015 3:00:00	25.16	93.00	0.00	0.63	130.57	0.00	0.00	990.35	80.69
2/12/2015 4:00:00	24.94	94.90	0.00	0.63	133.37	0.00	0.00	990.35	81.91
2/12/2015 5:00:00	24.85	96.30	0.00	0.63	133.37	0.00	0.00	990.65	81.61

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
2/12/2015 6:00:00	24.82	97.30	0.00	0.63	133.37	0.00	0.50	990.85	81.30
2/12/2015 7:00:00	24.61	97.20	0.00	45.63	249.90	0.00	1.76	991.45	80.99
2/12/2015 8:00:00	27.24	89.50	0.00	265.63	144.60	0.00	1.51	992.45	80.69
2/12/2015 9:00:00	30.60	75.60	0.00	473.13	195.15	0.00	2.02	992.25	81.91
2/12/2015 10:00:00	31.89	74.70	0.00	674.38	276.57	0.25	2.77	992.35	82.53
2/12/2015 11:00:00	33.11	70.70	0.00	844.38	261.13	1.01	3.27	991.95	84.00
2/12/2015 12:00:00	35.99	60.80	0.00	928.13	242.88	0.25	3.78	991.25	86.45
2/12/2015 13:00:00	35.42	60.40	0.00	988.13	255.51	0.50	2.77	990.25	87.06
2/12/2015 14:00:00	36.53	53.50	0.00	311.88	123.55	0.25	3.27	989.25	86.45
2/12/2015 15:00:00	38.00	51.20	0.00	260.63	223.22	0.00	1.76	987.65	85.53
2/12/2015 16:00:00	36.58	50.70	0.60	353.13	223.22	0.00	1.01	986.65	85.22
2/12/2015 17:00:00	34.65	72.80	0.20	335.63	254.11	0.00	11.08	986.95	84.00
2/12/2015 18:00:00	26.11	81.10	0.00	29.38	40.71	0.25	4.53	988.55	82.83
2/12/2015 19:00:00	26.50	79.20	0.00	0.63	136.18	1.01	3.02	988.35	82.22
2/12/2015 20:00:00	26.43	81.20	0.00	0.63	171.28	0.00	2.27	988.45	81.30
2/12/2015 21:00:00	25.84	85.90	0.00	0.63	183.91	0.00	2.02	989.65	81.30
2/12/2015 22:00:00	25.91	83.20	0.00	0.63	151.62	0.00	1.01	990.45	79.77
2/12/2015 23:00:00	25.67	87.30	0.00	0.63	112.31	0.00	2.27	990.35	80.38
3/12/2015 0:00:00	24.63	90.00	0.00	0.63	167.07	0.00	2.02	990.05	79.46
3/12/2015 1:00:00	24.97	85.10	0.00	0.63	155.84	0.50	2.52	989.25	79.22
3/12/2015 2:00:00	25.09	82.20	1.00	0.63	94.06	0.00	1.76	988.75	79.77
3/12/2015 3:00:00	23.45	95.10	0.00	0.63	259.73	0.00	1.51	988.45	78.30
3/12/2015 4:00:00	23.18	96.10	0.00	0.63	197.95	0.00	2.27	989.05	77.99
3/12/2015 5:00:00	23.26	97.00	0.00	0.63	248.49	0.00	1.26	989.55	77.69
3/12/2015 6:00:00	23.14	97.50	0.00	0.63	0.00	0.00	0.76	990.25	78.60
3/12/2015 7:00:00	23.64	97.20	0.00	61.88	224.63	0.00	0.76	990.95	78.30
3/12/2015 8:00:00	26.06	90.20	0.00	269.38	237.26	0.00	0.76	991.95	77.99
3/12/2015 9:00:00	27.11	85.10	0.00	234.38	235.86	0.25	1.76	993.35	80.08
3/12/2015 10:00:00	29.62	79.30	0.00	659.38	258.32	0.50	2.27	992.95	81.61

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
3/12/2015 11:00:00	32.28	71.50	0.00	554.38	282.19	0.76	2.52	992.65	83.45
3/12/2015 12:00:00	33.34	68.80	0.00	1001.88	294.82	1.01	3.27	992.05	84.00
3/12/2015 13:00:00	31.89	72.20	5.20	276.88	296.23	1.26	9.82	991.45	84.30
3/12/2015 14:00:00	22.47	97.50	6.40	23.13	308.86	1.76	5.04	991.55	85.53
3/12/2015 15:00:00	22.92	96.60	0.00	28.13	179.70	0.76	3.02	990.65	84.00
3/12/2015 16:00:00	23.69	94.60	0.00	79.38	200.76	0.00	1.51	989.45	82.53
3/12/2015 17:00:00	24.46	91.50	0.00	59.38	175.49	0.00	1.26	988.95	82.22
3/12/2015 18:00:00	23.74	94.70	0.00	53.13	299.04	0.00	1.51	988.75	82.53
3/12/2015 19:00:00	23.45	96.30	0.00	0.63	324.31	0.00	1.26	988.65	80.69
3/12/2015 20:00:00	23.38	97.10	0.00	0.63	25.27	0.25	2.02	989.55	80.99
3/12/2015 21:00:00	23.26	97.60	0.00	0.63	7.02	0.00	1.26	990.75	80.08
3/12/2015 22:00:00	22.90	98.40	0.00	0.63	303.25	0.00	0.76	992.35	80.08
3/12/2015 23:00:00	23.06	98.50	0.00	0.63	167.07	0.00	2.02	992.45	79.77
4/12/2015 0:00:00	23.23	97.10	0.00	0.63	133.37	0.50	2.52	992.15	79.77
4/12/2015 1:00:00	23.18	97.50	0.00	0.63	178.30	0.00	0.00	991.15	79.46
4/12/2015 2:00:00	22.54	99.50	0.00	0.63	175.49	0.00	0.00	990.75	78.60
4/12/2015 3:00:00	22.42	100.00	0.00	0.63	175.49	0.00	0.00	990.25	78.60
4/12/2015 4:00:00	22.54	100.00	0.00	0.63	175.49	0.00	0.25	990.75	79.22
4/12/2015 5:00:00	22.59	100.00	0.00	0.63	203.57	0.00	0.76	990.95	79.22
4/12/2015 6:00:00	22.25	100.00	0.00	0.63	197.95	0.00	0.76	991.35	78.60
4/12/2015 7:00:00	22.49	100.00	0.00	40.63	358.00	0.00	2.02	992.75	79.22
4/12/2015 8:00:00	23.69	100.00	0.00	236.88	4.21	0.00	2.02	993.55	79.22
4/12/2015 9:00:00	26.65	88.20	0.00	434.38	167.07	0.00	1.51	993.65	79.77
4/12/2015 10:00:00	28.74	82.60	0.00	633.13	226.03	0.25	3.02	993.45	82.53
4/12/2015 11:00:00	30.44	78.10	0.00	766.88	249.90	0.50	2.52	993.25	82.53
4/12/2015 12:00:00	30.95	77.60	0.00	495.63	296.23	0.76	4.53	992.95	84.61
4/12/2015 13:00:00	32.38	74.80	0.00	946.88	286.40	0.76	3.27	991.75	84.00
4/12/2015 14:00:00	33.50	70.50	0.00	831.88	283.59	0.50	3.53	990.45	85.84
4/12/2015 15:00:00	34.36	65.00	0.00	643.13	252.71	0.76	3.27	989.35	86.14

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
4/12/2015 16:00:00	34.70	65.00	0.00	514.38	270.96	0.25	2.52	987.45	84.61
4/12/2015 17:00:00	29.92	69.60	0.00	134.38	237.26	1.51	4.78	987.45	81.91
4/12/2015 18:00:00	27.83	82.00	0.00	48.13	259.73	0.25	2.02	987.95	81.91
4/12/2015 19:00:00	26.52	82.50	0.00	0.63	282.19	0.00	0.25	988.65	80.69
4/12/2015 20:00:00	25.60	91.90	0.00	0.63	226.03	0.00	0.00	989.95	79.22
4/12/2015 21:00:00	25.19	93.60	0.00	0.63	226.03	0.00	2.02	990.85	77.99
4/12/2015 22:00:00	25.72	84.90	0.00	0.63	172.68	0.00	1.26	991.75	77.38
4/12/2015 23:00:00	24.53	95.20	0.00	0.63	140.39	0.00	0.00	992.35	77.69
5/12/2015 0:00:00	24.07	95.90	0.00	0.63	140.39	0.00	0.00	992.35	77.69
5/12/2015 1:00:00	23.88	96.60	0.00	0.63	124.95	0.00	1.01	991.65	76.46
5/12/2015 2:00:00	23.55	98.10	0.00	0.63	162.86	0.00	0.00	990.45	75.23
5/12/2015 3:00:00	23.33	98.70	0.00	0.63	162.86	0.00	0.00	989.95	75.85
5/12/2015 4:00:00	23.28	99.00	0.00	0.63	47.73	0.00	0.25	990.35	75.54
5/12/2015 5:00:00	23.02	99.50	0.00	0.63	94.06	0.00	1.01	990.75	75.85
5/12/2015 6:00:00	22.94	100.00	0.00	0.63	356.60	0.00	1.01	991.55	75.23
5/12/2015 7:00:00	23.35	100.00	0.00	20.63	42.12	0.00	2.27	992.65	74.68
5/12/2015 8:00:00	23.91	98.60	0.00	26.88	19.66	0.50	4.78	993.95	84.92
5/12/2015 9:00:00	23.57	92.60	0.00	18.13	44.93	2.02	6.04	995.05	99.44
5/12/2015 10:00:00	22.66	95.40	17.60	8.13	18.25	1.01	4.78	995.35	104.59
5/12/2015 11:00:00	21.84	100.00	19.81	31.88	33.69	1.51	3.53	995.05	108.51
5/12/2015 12:00:00	22.54	100.00	3.20	46.88	143.20	0.50	2.77	994.65	108.51
5/12/2015 13:00:00	22.56	100.00	6.00	23.13	183.91	0.00	0.00	994.05	109.98
5/12/2015 14:00:00	22.75	100.00	1.80	50.63	21.06	0.00	0.50	993.55	109.98
5/12/2015 15:00:00	23.28	99.80	0.20	200.63	310.27	0.00	1.51	992.35	110.59
5/12/2015 16:00:00	25.14	94.40	0.00	371.88	356.60	0.25	2.27	990.95	110.29
5/12/2015 17:00:00	27.14	88.00	0.00	228.13	342.56	0.00	1.01	989.85	110.59
5/12/2015 18:00:00	25.82	91.00	0.00	66.88	293.42	0.00	1.01	990.05	111.21
5/12/2015 19:00:00	24.51	96.80	0.00	0.63	22.46	0.00	0.00	989.85	109.98
5/12/2015 20:00:00	23.86	98.80	0.00	0.63	113.72	0.00	0.00	989.95	110.59

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
5/12/2015 21:00:00	23.50	99.60	0.00	0.63	190.93	0.00	0.00	990.95	109.98
5/12/2015 22:00:00	23.33	100.00	0.00	0.63	130.57	0.00	0.00	992.05	109.68
5/12/2015 23:00:00	23.42	100.00	0.00	0.63	130.57	0.00	0.00	992.05	109.68
6/12/2015 0:00:00	23.14	100.00	0.00	0.63	131.97	0.00	0.00	992.25	109.37
6/12/2015 1:00:00	23.42	99.30	0.00	0.63	138.99	0.00	1.76	992.05	109.98
6/12/2015 2:00:00	23.42	99.20	0.00	0.63	81.43	0.00	1.01	991.65	109.37
6/12/2015 3:00:00	23.09	100.00	0.00	0.63	341.15	0.00	0.00	991.85	108.82
6/12/2015 4:00:00	22.94	100.00	0.00	0.63	341.15	0.00	0.00	991.55	108.82
6/12/2015 5:00:00	23.02	100.00	0.00	0.63	341.15	0.00	0.00	991.65	109.68
6/12/2015 6:00:00	23.09	100.00	0.00	0.63	341.15	0.00	0.00	991.85	107.59
6/12/2015 7:00:00	23.30	100.00	0.00	18.13	26.68	0.00	0.76	992.55	109.68
6/12/2015 8:00:00	23.98	99.20	0.00	58.13	193.74	0.00	1.76	993.45	108.82
6/12/2015 9:00:00	24.70	95.40	0.00	175.63	137.58	0.00	1.51	993.65	109.68
6/12/2015 10:00:00	26.65	86.70	0.00	339.38	167.07	0.25	2.02	994.55	110.59
6/12/2015 11:00:00	27.60	86.20	0.00	483.13	158.64	0.76	2.52	994.15	110.90
6/12/2015 12:00:00	29.79	77.50	0.00	515.63	150.22	0.00	2.52	993.15	110.90
6/12/2015 13:00:00	31.26	74.40	0.00	970.63	162.86	0.50	2.77	992.15	112.74
6/12/2015 14:00:00	32.82	69.00	0.00	579.38	178.30	0.00	2.27	990.65	113.90
6/12/2015 15:00:00	32.95	66.00	0.00	364.38	144.60	0.00	2.02	989.35	115.13
6/12/2015 16:00:00	33.97	60.70	0.00	479.38	117.93	0.00	2.02	988.65	113.60
6/12/2015 17:00:00	33.18	70.60	0.00	321.88	318.69	0.00	2.27	988.05	112.43
6/12/2015 18:00:00	31.03	74.90	0.00	145.63	300.44	0.50	4.78	988.55	112.13
6/12/2015 19:00:00	26.97	79.60	0.00	0.63	320.09	0.50	2.77	989.65	127.51
6/12/2015 20:00:00	25.62	87.30	0.00	0.63	294.82	0.00	0.50	990.65	126.59
6/12/2015 21:00:00	25.07	90.40	0.00	0.63	165.66	0.00	0.50	991.85	127.20
6/12/2015 22:00:00	25.02	94.10	0.00	0.63	140.39	0.00	0.50	991.85	126.04
6/12/2015 23:00:00	24.63	95.70	0.00	0.63	71.60	0.00	0.00	991.85	125.73
7/12/2015 0:00:00	24.27	96.10	0.00	0.63	108.10	0.00	0.76	991.45	125.73
7/12/2015 1:00:00	24.12	97.60	0.00	0.63	133.37	0.00	0.00	990.65	125.73

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
7/12/2015 2:00:00	24.24	97.70	0.00	0.63	113.72	0.00	0.00	990.15	125.12
7/12/2015 3:00:00	24.17	98.30	0.00	0.63	87.04	0.00	0.00	989.85	125.42
7/12/2015 4:00:00	23.88	99.20	0.00	0.63	94.06	0.00	0.00	989.65	125.42
7/12/2015 5:00:00	23.93	99.30	0.00	0.63	94.06	0.00	0.00	989.15	124.81
7/12/2015 6:00:00	23.88	99.70	0.00	0.63	123.55	0.00	0.76	989.65	124.51
7/12/2015 7:00:00	24.20	99.80	0.00	61.88	87.04	0.00	0.25	990.75	123.89
7/12/2015 8:00:00	26.09	94.90	0.00	273.13	85.64	0.00	1.01	991.65	124.20
7/12/2015 9:00:00	27.80	88.00	0.00	373.13	67.39	0.00	1.51	992.25	125.42
7/12/2015 10:00:00	30.52	80.40	0.00	583.13	16.85	0.00	3.02	992.55	126.90
7/12/2015 11:00:00	32.15	73.00	0.00	780.63	276.57	0.25	2.52	992.65	128.43
7/12/2015 12:00:00	33.55	67.40	0.00	1000.63	258.32	0.50	3.02	991.65	129.04
7/12/2015 13:00:00	35.34	61.80	0.00	1046.88	206.38	0.25	2.52	990.35	130.82
7/12/2015 14:00:00	35.45	58.40	0.00	920.63	277.98	0.50	3.78	989.05	129.96
7/12/2015 15:00:00	27.92	79.60	6.40	99.38	308.86	3.78	7.55	989.15	130.57
7/12/2015 16:00:00	25.53	91.80	0.00	113.13	165.66	0.00	1.51	988.45	129.04
7/12/2015 17:00:00	26.43	88.60	0.00	54.38	254.11	0.00	1.51	988.25	126.28
7/12/2015 18:00:00	25.89	91.70	0.00	29.38	270.96	0.00	1.01	988.05	124.51
7/12/2015 19:00:00	25.38	92.30	0.00	0.63	248.49	0.00	0.76	988.55	123.59
7/12/2015 20:00:00	25.07	95.20	0.00	0.63	223.22	0.00	0.50	989.55	122.05
7/12/2015 21:00:00	24.82	96.40	0.00	0.63	345.37	0.00	1.26	990.85	121.20
7/12/2015 22:00:00	24.85	96.50	0.20	0.63	220.42	0.00	1.01	991.45	121.50
7/12/2015 23:00:00	24.77	97.60	0.00	0.63	240.07	0.00	0.00	992.05	119.66
8/12/2015 0:00:00	24.77	97.70	0.00	0.63	244.28	0.00	0.50	991.85	120.89
8/12/2015 1:00:00	24.77	97.20	0.00	0.63	221.82	0.00	1.01	990.55	120.58
8/12/2015 2:00:00	24.58	96.80	0.00	0.63	141.80	0.00	1.26	990.55	119.66
8/12/2015 3:00:00	24.20	97.70	0.00	0.63	167.07	0.00	1.51	989.85	119.36
8/12/2015 4:00:00	23.69	98.50	0.00	0.63	245.69	0.00	0.00	989.75	119.36
8/12/2015 5:00:00	23.52	99.30	0.00	0.63	227.44	0.00	0.50	989.95	119.05
8/12/2015 6:00:00	23.35	99.80	0.00	0.63	150.22	0.00	1.26	990.65	118.44



**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
8/12/2015 7:00:00	23.79	99.40	0.00	61.88	130.57	0.00	0.25	991.35	118.74
8/12/2015 8:00:00	25.67	93.70	0.00	280.63	138.99	0.00	2.77	991.75	119.36
8/12/2015 9:00:00	28.20	88.20	0.00	380.63	185.32	0.00	1.51	992.45	119.36
8/12/2015 10:00:00	31.18	78.50	0.00	574.38	37.91	0.00	1.76	992.85	121.20
8/12/2015 11:00:00	32.59	71.30	0.00	884.38	335.54	0.00	2.02	992.55	122.97
8/12/2015 12:00:00	33.03	70.10	0.00	601.88	155.84	0.25	2.27	991.55	122.36
8/12/2015 13:00:00	32.85	66.20	0.00	691.88	196.55	0.25	2.52	990.15	124.81
8/12/2015 14:00:00	34.86	61.50	0.00	880.63	293.42	0.50	2.27	988.65	124.20
8/12/2015 15:00:00	35.56	60.80	0.00	780.63	293.42	0.25	2.52	988.05	125.12
8/12/2015 16:00:00	35.69	57.70	0.00	534.38	321.50	0.25	2.52	987.45	123.89
8/12/2015 17:00:00	35.61	58.60	0.00	349.38	332.73	0.25	2.27	986.85	123.89
8/12/2015 18:00:00	33.44	66.60	0.00	150.63	341.15	0.00	3.02	986.45	120.89
8/12/2015 19:00:00	29.67	80.50	0.00	5.63	0.00	0.50	3.02	987.95	118.44
8/12/2015 20:00:00	27.60	83.60	0.00	0.63	1.40	0.00	1.51	989.45	117.27
8/12/2015 21:00:00	27.06	81.90	0.00	0.63	47.73	0.25	2.27	990.15	116.66
8/12/2015 22:00:00	25.67	91.10	0.00	0.63	1.40	0.00	0.76	991.45	115.13
8/12/2015 23:00:00	25.04	95.30	0.00	0.63	346.77	0.00	0.00	991.65	114.52
9/12/2015 0:00:00	24.77	96.20	0.00	0.63	345.37	0.00	0.00	991.45	115.44
9/12/2015 1:00:00	24.51	97.30	0.00	0.63	345.37	0.00	0.00	991.15	114.82
9/12/2015 2:00:00	24.27	97.90	0.00	0.63	345.37	0.00	0.00	990.55	114.21
9/12/2015 3:00:00	24.20	98.80	0.00	0.63	339.75	0.00	0.00	990.25	113.90
9/12/2015 4:00:00	23.79	99.10	0.00	0.63	331.33	0.00	0.50	989.95	113.35
9/12/2015 5:00:00	23.64	99.40	0.00	0.63	331.33	0.00	0.76	990.05	112.74
9/12/2015 6:00:00	23.38	99.50	0.00	0.63	331.33	0.00	0.00	990.25	112.43
9/12/2015 7:00:00	23.71	99.00	0.00	53.13	331.33	0.00	0.76	991.25	112.43
9/12/2015 8:00:00	25.50	94.50	0.00	193.13	343.96	0.00	1.01	992.85	112.43
9/12/2015 9:00:00	27.36	90.50	0.00	325.63	339.75	0.00	2.27	993.45	113.90
9/12/2015 10:00:00	29.69	83.70	0.00	573.13	303.25	0.00	1.51	993.55	114.82
9/12/2015 11:00:00	32.90	74.80	0.00	763.13	331.33	0.00	2.52	993.65	115.44

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
9/12/2015 12:00:00	34.41	66.60	0.00	581.88	293.42	0.50	3.02	992.95	117.58
9/12/2015 13:00:00	35.13	64.50	0.00	1048.13	259.73	0.25	3.27	991.75	118.44
9/12/2015 14:00:00	37.45	55.90	5.00	1055.63	286.40	0.50	11.58	990.25	119.05
9/12/2015 15:00:00	23.64	91.20	0.00	231.88	245.69	0.76	2.52	990.95	119.66
9/12/2015 16:00:00	25.04	83.90	0.00	185.63	165.66	0.00	1.01	989.95	116.66
9/12/2015 17:00:00	26.79	84.50	0.00	149.38	268.15	0.00	0.76	988.95	114.52
9/12/2015 18:00:00	26.60	87.50	0.00	96.88	254.11	0.00	0.76	989.05	113.90
9/12/2015 19:00:00	25.53	93.70	0.00	0.63	158.64	0.00	0.00	989.35	112.74
9/12/2015 20:00:00	25.07	94.40	0.00	0.63	158.64	0.00	0.00	989.65	111.51
9/12/2015 21:00:00	24.90	97.40	0.00	0.63	158.64	0.00	0.50	990.85	110.59
9/12/2015 22:00:00	24.48	98.10	0.00	0.63	160.05	0.00	0.00	991.45	110.29
9/12/2015 23:00:00	24.32	98.30	0.00	0.63	160.05	0.00	0.00	991.85	109.68
10/12/2015 0:00:00	24.51	97.80	0.00	0.63	158.64	0.00	0.00	992.15	109.37
10/12/2015 1:00:00	23.64	99.20	0.00	0.63	158.64	0.00	0.25	991.55	109.12
10/12/2015 2:00:00	23.47	99.60	0.00	0.63	158.64	0.00	0.00	991.25	109.12
10/12/2015 3:00:00	23.30	99.80	0.00	0.63	158.64	0.00	0.00	990.65	108.20
10/12/2015 4:00:00	23.21	100.00	0.00	0.63	158.64	0.00	0.00	989.95	108.51
10/12/2015 5:00:00	23.11	100.00	0.00	0.63	150.22	0.00	0.50	990.55	107.59
10/12/2015 6:00:00	23.06	100.00	0.00	0.63	98.28	0.00	1.51	991.25	107.59
10/12/2015 7:00:00	23.81	100.00	0.00	60.63	175.49	0.00	1.01	992.25	107.28
10/12/2015 8:00:00	26.35	93.50	0.00	229.38	137.58	0.00	1.26	992.45	107.90
10/12/2015 9:00:00	28.77	85.90	0.00	410.63	136.18	0.25	1.51	992.95	108.51
10/12/2015 10:00:00	32.51	73.50	0.00	621.88	345.37	0.00	2.02	993.55	109.37
10/12/2015 11:00:00	32.79	74.10	0.00	810.63	256.92	0.25	2.27	994.25	110.29
10/12/2015 12:00:00	32.72	72.30	0.00	383.13	293.42	0.25	2.27	993.35	112.43
10/12/2015 13:00:00	34.60	66.00	0.00	1009.38	248.49	0.50	2.52	992.45	111.21
10/12/2015 14:00:00	33.16	67.40	0.00	281.88	282.19	0.00	3.02	990.65	112.13
10/12/2015 15:00:00	33.42	66.80	0.00	679.38	160.05	0.76	2.77	989.25	112.13
10/12/2015 16:00:00	34.55	61.10	0.00	525.63	160.05	0.76	3.02	988.35	111.82

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
10/12/2015 17:00:00	35.29	58.40	0.00	176.88	179.70	0.00	7.55	989.05	111.82
10/12/2015 18:00:00	26.84	76.80	0.00	60.63	12.64	0.25	3.53	989.85	109.12
10/12/2015 19:00:00	26.57	82.50	0.00	0.63	223.22	0.00	1.51	990.15	106.67
10/12/2015 20:00:00	25.45	90.70	0.00	0.63	256.92	0.25	1.76	990.95	106.67
10/12/2015 21:00:00	25.31	90.70	0.00	0.63	352.38	0.00	1.01	991.65	106.06
10/12/2015 22:00:00	25.16	93.10	0.00	0.63	308.86	0.00	2.02	991.95	104.89
10/12/2015 23:00:00	24.46	94.20	0.00	0.63	335.54	0.00	1.26	992.35	103.98
11/12/2015 0:00:00	24.34	96.10	0.00	0.63	346.77	0.00	1.26	992.55	104.28
11/12/2015 1:00:00	24.24	97.10	0.00	0.63	1.40	0.00	1.51	991.65	102.14
11/12/2015 2:00:00	24.00	97.90	0.00	0.63	286.40	0.00	0.00	991.15	103.06
11/12/2015 3:00:00	23.91	98.40	0.00	0.63	286.40	0.00	0.50	990.45	103.36
11/12/2015 4:00:00	23.71	99.30	0.00	0.63	286.40	0.00	0.50	990.05	103.06
11/12/2015 5:00:00	23.67	99.50	0.00	0.63	341.15	0.00	0.76	990.35	102.75
11/12/2015 6:00:00	23.64	99.80	0.00	0.63	346.77	0.00	0.50	991.25	102.14
11/12/2015 7:00:00	24.07	99.80	0.00	56.88	248.49	0.00	0.50	991.95	103.06
11/12/2015 8:00:00	25.04	97.00	0.00	110.63	299.04	0.00	0.50	992.95	103.06
11/12/2015 9:00:00	27.78	90.20	0.00	516.88	297.63	0.00	1.76	993.55	102.75
11/12/2015 10:00:00	27.78	83.70	0.00	165.63	129.16	1.01	2.52	993.55	104.89
11/12/2015 11:00:00	29.74	80.20	0.00	834.38	175.49	0.76	2.52	993.05	103.98
11/12/2015 12:00:00	32.61	70.50	0.00	948.13	165.66	1.01	3.27	992.45	105.45
11/12/2015 13:00:00	33.00	66.90	0.00	960.63	140.39	1.26	4.03	991.75	108.20
11/12/2015 14:00:00	34.55	63.60	0.00	870.63	181.11	1.01	3.27	989.75	108.51
11/12/2015 15:00:00	36.36	57.50	0.00	341.88	144.60	0.50	2.27	989.15	108.20
11/12/2015 16:00:00	30.52	78.60	1.60	116.88	321.50	0.25	6.80	988.75	107.59
11/12/2015 17:00:00	26.48	86.60	0.00	61.88	158.64	0.00	1.26	989.05	107.28
11/12/2015 18:00:00	26.28	89.20	0.00	60.63	161.45	0.00	0.76	988.55	106.67
11/12/2015 19:00:00	25.79	94.30	0.00	0.63	124.95	0.00	0.00	988.65	103.98
11/12/2015 20:00:00	25.09	95.70	0.00	0.63	188.13	0.00	0.25	988.95	102.75
11/12/2015 21:00:00	24.80	97.00	0.00	0.63	146.01	0.00	0.00	990.05	103.36

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
11/12/2015 22:00:00	24.34	98.50	0.00	0.63	204.97	0.00	0.00	990.25	102.44
11/12/2015 23:00:00	23.88	98.80	0.00	0.63	204.97	0.00	0.00	991.25	101.22
12/12/2015 0:00:00	23.55	98.80	0.00	0.63	202.17	0.00	1.26	990.45	101.22
12/12/2015 1:00:00	23.40	99.60	0.00	0.63	279.38	0.00	0.00	990.45	101.52
12/12/2015 2:00:00	23.38	100.00	0.00	0.63	279.38	0.00	0.00	989.35	100.61
12/12/2015 3:00:00	23.18	100.00	0.00	0.63	279.38	0.00	0.00	989.25	101.52
12/12/2015 4:00:00	22.97	100.00	0.00	0.63	279.38	0.00	0.00	989.25	99.75
12/12/2015 5:00:00	22.80	100.00	0.00	0.63	279.38	0.00	0.00	989.35	100.61
12/12/2015 6:00:00	22.68	100.00	0.00	0.63	279.38	0.00	0.00	990.15	99.44
12/12/2015 7:00:00	22.94	100.00	0.00	58.13	279.38	0.00	0.25	991.05	99.44
12/12/2015 8:00:00	25.65	96.20	0.00	283.13	259.73	0.00	2.27	991.95	100.05
12/12/2015 9:00:00	28.35	84.90	0.00	450.63	160.05	0.25	2.02	992.45	101.83
12/12/2015 10:00:00	30.72	73.70	0.00	674.38	147.41	0.50	2.27	992.75	103.06
12/12/2015 11:00:00	33.31	68.40	0.00	798.13	196.55	0.00	2.02	992.65	102.44
12/12/2015 12:00:00	34.52	66.20	0.00	926.88	287.80	0.25	2.27	991.85	105.45
12/12/2015 13:00:00	32.61	74.00	0.20	599.38	304.65	0.76	11.08	991.15	105.45
12/12/2015 14:00:00	24.65	88.40	0.00	165.63	317.29	0.76	2.77	991.55	123.89
12/12/2015 15:00:00	25.02	86.00	0.00	40.63	18.25	0.00	1.51	991.65	123.28
12/12/2015 16:00:00	24.10	92.90	0.40	26.88	255.51	0.00	1.01	990.55	122.67
12/12/2015 17:00:00	24.32	93.90	0.00	68.13	227.44	0.00	1.01	989.35	122.67
12/12/2015 18:00:00	24.15	93.40	0.00	65.63	11.23	0.00	1.51	988.75	122.67
12/12/2015 19:00:00	23.47	96.30	0.00	0.63	14.04	0.00	0.76	989.45	122.36
12/12/2015 20:00:00	23.02	98.10	0.00	0.63	331.33	0.00	0.50	989.75	122.05
12/12/2015 21:00:00	23.06	97.20	0.00	0.63	92.66	0.00	0.00	990.75	121.50
12/12/2015 22:00:00	22.56	99.10	0.00	0.63	75.81	0.00	0.25	991.05	121.81
12/12/2015 23:00:00	22.51	99.50	0.00	0.63	40.71	0.00	0.76	991.95	120.89
13/12/2015 0:00:00	22.85	99.30	0.00	0.63	28.08	0.00	0.00	991.55	120.89
13/12/2015 1:00:00	22.59	99.80	0.00	0.63	35.10	0.00	0.00	990.95	121.81
13/12/2015 2:00:00	22.56	100.00	0.00	0.63	9.83	0.00	0.50	991.15	121.81

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
13/12/2015 3:00:00	22.25	100.00	0.00	0.63	348.17	0.00	0.76	991.05	120.28
13/12/2015 4:00:00	22.20	100.00	0.00	0.63	346.77	0.00	0.25	990.55	121.50
13/12/2015 5:00:00	22.25	100.00	0.00	0.63	342.56	0.00	0.00	990.85	119.66
13/12/2015 6:00:00	22.20	100.00	0.00	0.63	342.56	0.00	0.00	990.85	120.89
13/12/2015 7:00:00	22.47	100.00	0.00	31.88	356.60	0.00	0.50	991.55	119.97
13/12/2015 8:00:00	23.21	100.00	0.00	144.38	19.66	0.00	0.76	992.05	121.20
13/12/2015 9:00:00	25.38	98.10	0.00	346.88	310.27	0.00	1.76	992.05	120.89
13/12/2015 10:00:00	27.19	91.00	0.20	434.38	324.31	0.00	1.76	992.25	122.97
13/12/2015 11:00:00	29.99	83.10	0.00	606.88	286.40	0.25	2.27	991.65	124.51
13/12/2015 12:00:00	32.54	73.10	0.00	983.13	313.08	0.25	2.52	991.95	126.04
13/12/2015 13:00:00	33.81	68.70	0.00	441.88	276.57	0.76	2.27	991.35	125.73
13/12/2015 14:00:00	37.04	59.10	0.00	994.38	249.90	0.25	2.52	989.65	126.04
13/12/2015 15:00:00	35.69	57.40	0.00	644.38	244.28	0.25	2.52	988.75	126.90
13/12/2015 16:00:00	25.84	79.90	5.40	70.63	0.00	3.27	8.81	988.75	128.12
13/12/2015 17:00:00	24.03	91.20	0.00	38.13	214.80	0.25	3.02	988.85	134.49
13/12/2015 18:00:00	24.73	91.80	0.00	28.13	140.39	0.25	3.78	988.45	133.58
13/12/2015 19:00:00	24.82	85.60	0.00	1.88	129.16	0.25	2.27	987.95	131.43
13/12/2015 20:00:00	24.29	90.70	0.00	0.63	150.22	0.00	1.76	988.45	130.82
13/12/2015 21:00:00	24.03	96.10	0.00	0.63	89.85	0.00	0.50	988.95	131.12
13/12/2015 22:00:00	23.71	95.20	0.00	0.63	39.31	0.00	0.00	989.65	130.57
13/12/2015 23:00:00	23.57	97.80	0.00	0.63	2.81	0.00	0.76	990.05	130.57
14/12/2015 0:00:00	23.45	97.70	0.00	0.63	49.14	0.00	1.01	990.05	129.35
14/12/2015 1:00:00	23.23	98.90	0.00	0.63	0.00	0.00	1.76	989.95	129.65
14/12/2015 2:00:00	23.40	98.30	2.20	0.63	23.87	0.25	6.04	990.45	129.96
14/12/2015 3:00:00	23.28	96.30	1.80	0.63	99.68	0.25	2.27	989.85	131.74
14/12/2015 4:00:00	22.87	97.90	1.20	0.63	29.48	0.00	3.53	989.55	132.35
14/12/2015 5:00:00	22.68	96.30	0.20	0.63	169.88	0.50	2.52	989.55	132.66
14/12/2015 6:00:00	22.78	95.70	0.00	0.63	143.20	0.25	2.02	990.15	132.35
14/12/2015 7:00:00	23.21	95.20	0.00	43.13	119.33	0.25	1.76	990.55	130.82

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
14/12/2015 8:00:00	24.41	93.00	0.00	139.38	73.00	0.00	0.76	990.75	131.12
14/12/2015 9:00:00	27.41	85.40	0.00	333.13	231.65	0.00	2.02	990.85	129.96
14/12/2015 10:00:00	29.62	82.10	0.00	853.13	1.40	1.01	3.02	991.65	130.82
14/12/2015 11:00:00	32.10	72.10	0.00	889.38	16.85	0.50	2.52	991.75	132.35
14/12/2015 12:00:00	33.52	70.90	0.00	940.63	352.38	0.25	2.27	991.55	134.80
14/12/2015 13:00:00	34.44	64.70	0.00	1136.88	238.67	0.00	2.52	990.75	135.66
14/12/2015 14:00:00	35.85	62.70	0.00	991.88	28.08	0.00	1.51	988.95	135.35
14/12/2015 15:00:00	30.14	62.00	1.40	64.38	304.65	2.02	8.31	989.45	135.66
14/12/2015 16:00:00	25.33	85.10	0.00	216.88	169.88	0.25	1.76	988.05	132.35
14/12/2015 17:00:00	30.22	71.80	0.00	415.63	315.88	0.00	1.51	986.45	132.96
14/12/2015 18:00:00	26.67	86.10	0.00	69.38	297.63	0.00	1.01	986.65	131.12
14/12/2015 19:00:00	26.16	87.60	0.00	8.13	245.69	0.00	0.76	986.85	130.82
14/12/2015 20:00:00	25.72	92.90	0.00	0.63	160.05	0.00	0.76	988.35	129.04
14/12/2015 21:00:00	25.21	96.10	0.00	0.63	175.49	0.00	0.76	989.05	128.12
14/12/2015 22:00:00	24.68	92.10	0.00	0.63	67.39	0.00	2.02	989.65	127.51
14/12/2015 23:00:00	24.29	92.50	0.00	0.63	68.79	0.00	2.52	989.85	128.12
15/12/2015 0:00:00	23.83	93.40	0.00	0.63	21.06	0.50	2.02	990.25	127.20
15/12/2015 1:00:00	23.88	93.00	0.00	0.63	40.71	0.00	0.50	989.45	127.51
15/12/2015 2:00:00	23.42	96.70	0.00	0.63	0.00	0.00	1.01	988.75	126.59
15/12/2015 3:00:00	23.11	96.60	0.00	0.63	35.10	0.00	0.00	988.25	125.73
15/12/2015 4:00:00	22.61	98.90	0.00	0.63	32.29	0.00	0.25	988.15	125.73
15/12/2015 5:00:00	22.85	98.90	0.00	0.63	40.71	0.00	0.00	988.65	126.04
15/12/2015 6:00:00	22.51	99.50	0.00	0.63	40.71	0.00	0.50	988.85	125.12
15/12/2015 7:00:00	22.75	99.40	0.00	26.88	0.00	0.00	1.01	989.85	125.12
15/12/2015 8:00:00	24.12	95.50	0.00	108.13	53.35	0.00	0.76	990.65	125.73
15/12/2015 9:00:00	25.33	93.90	0.00	199.38	7.02	0.00	1.01	991.55	125.42
15/12/2015 10:00:00	26.79	88.90	0.00	206.88	299.04	0.00	1.01	992.15	125.73
15/12/2015 11:00:00	27.06	88.80	0.00	149.38	261.13	0.00	1.01	992.65	127.20
15/12/2015 12:00:00	27.28	88.00	0.00	205.63	273.77	0.00	0.76	992.45	126.59

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
15/12/2015 13:00:00	28.00	85.20	0.00	276.88	294.82	0.00	1.51	992.15	127.51
15/12/2015 14:00:00	30.27	80.60	0.00	498.13	270.96	0.00	2.52	990.45	129.96
15/12/2015 15:00:00	34.10	64.20	0.00	718.13	171.28	0.25	2.27	988.35	130.82
15/12/2015 16:00:00	34.31	61.60	0.00	530.63	294.82	0.00	2.02	986.85	130.57
15/12/2015 17:00:00	32.64	64.30	0.00	334.38	300.44	0.50	2.27	986.55	129.96
15/12/2015 18:00:00	31.64	71.00	0.00	131.88	294.82	0.00	2.02	985.95	129.35
15/12/2015 19:00:00	28.07	86.40	0.00	6.88	249.90	0.00	1.01	987.55	127.81
15/12/2015 20:00:00	26.79	92.50	0.00	0.63	141.80	0.00	1.26	988.45	126.28
15/12/2015 21:00:00	26.92	93.90	0.00	0.63	35.10	0.00	0.00	990.05	126.28
15/12/2015 22:00:00	26.43	91.30	0.00	0.63	35.10	0.00	1.01	990.35	124.81
15/12/2015 23:00:00	26.38	87.40	0.00	0.63	58.97	0.00	0.76	991.15	124.20
16/12/2015 0:00:00	25.19	95.80	0.00	0.63	50.54	0.00	0.00	991.45	123.59
16/12/2015 1:00:00	24.58	97.50	0.00	0.63	46.33	0.00	4.53	991.35	123.89
16/12/2015 2:00:00	23.95	91.50	5.00	0.63	49.14	2.02	5.29	991.35	126.90
16/12/2015 3:00:00	22.80	98.30	1.20	0.63	43.52	0.00	2.02	990.85	127.81
16/12/2015 4:00:00	22.87	98.90	0.00	0.63	214.80	0.00	0.50	990.55	128.73
16/12/2015 5:00:00	22.82	99.00	0.00	0.63	134.78	0.00	3.27	990.35	128.12
16/12/2015 6:00:00	22.92	97.20	0.20	0.63	193.74	0.00	1.01	990.15	127.81
16/12/2015 7:00:00	23.26	96.10	0.00	46.88	150.22	0.00	0.76	991.05	126.90
16/12/2015 8:00:00	24.39	94.00	0.00	179.38	155.84	0.00	1.51	992.05	128.12
16/12/2015 9:00:00	25.38	91.50	0.00	314.38	140.39	0.50	2.27	993.55	127.81
16/12/2015 10:00:00	27.85	82.60	0.00	566.88	162.86	0.50	3.27	993.65	129.35
16/12/2015 11:00:00	29.57	78.60	0.00	858.13	150.22	0.76	3.02	993.45	131.12
16/12/2015 12:00:00	30.50	71.00	0.00	769.38	188.13	0.25	2.52	992.55	132.04
16/12/2015 13:00:00	33.11	68.00	0.00	969.38	158.64	0.25	2.52	990.95	134.19
16/12/2015 14:00:00	33.50	64.30	0.00	1020.63	270.96	1.01	2.77	990.35	132.66
16/12/2015 15:00:00	34.12	61.70	0.00	828.13	329.92	0.76	2.27	988.75	135.05
16/12/2015 16:00:00	35.29	59.90	0.00	294.38	237.26	0.00	1.51	987.55	134.19
16/12/2015 17:00:00	36.80	53.70	7.40	566.88	228.84	0.00	8.56	986.75	132.96



**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
16/12/2015 18:00:00	23.69	90.50	0.00	40.63	150.22	1.01	2.77	987.65	131.12
16/12/2015 19:00:00	24.05	96.50	0.00	3.13	123.55	0.00	1.76	987.75	129.96
16/12/2015 20:00:00	23.33	97.70	0.00	0.63	213.40	0.00	0.50	988.25	127.51
16/12/2015 21:00:00	23.09	98.20	0.00	0.63	329.92	0.00	0.25	988.85	126.90
16/12/2015 22:00:00	23.57	98.50	0.00	0.63	190.93	0.00	0.00	989.85	126.59
16/12/2015 23:00:00	23.71	98.40	0.00	0.63	190.93	0.00	0.00	990.65	125.12
17/12/2015 0:00:00	23.47	99.10	0.00	0.63	219.01	0.00	0.00	990.55	125.12
17/12/2015 1:00:00	22.99	99.30	0.00	0.63	247.09	0.00	0.00	989.95	124.51
17/12/2015 2:00:00	22.87	99.90	0.00	0.63	252.71	0.00	0.00	989.85	124.20
17/12/2015 3:00:00	22.56	100.00	0.00	0.63	252.71	0.00	0.00	989.45	124.51
17/12/2015 4:00:00	22.56	100.00	0.00	0.63	223.22	0.00	0.00	989.45	122.97
17/12/2015 5:00:00	22.51	100.00	0.00	0.63	223.22	0.00	0.00	989.35	123.59
17/12/2015 6:00:00	22.49	100.00	0.00	0.63	223.22	0.00	1.26	989.65	123.28
17/12/2015 7:00:00	22.39	100.00	0.00	39.38	140.39	0.00	0.00	990.65	123.89
17/12/2015 8:00:00	24.24	98.70	0.00	163.13	141.80	0.00	0.76	991.15	123.28
17/12/2015 9:00:00	26.97	90.60	0.00	484.38	325.71	0.00	1.51	991.95	123.28
17/12/2015 10:00:00	29.87	80.50	0.00	676.88	289.21	0.00	1.76	992.15	126.28
17/12/2015 11:00:00	31.43	72.00	0.00	854.38	350.98	0.25	2.27	991.45	126.90
17/12/2015 12:00:00	32.95	70.30	0.00	970.63	350.98	0.50	2.52	990.85	128.73
17/12/2015 13:00:00	33.91	64.20	0.00	1028.13	33.69	0.76	2.77	989.75	129.04
17/12/2015 14:00:00	35.82	58.20	0.00	936.88	249.90	0.25	2.77	988.45	130.27
17/12/2015 15:00:00	36.07	55.80	0.00	799.38	314.48	0.25	2.02	987.55	129.04
17/12/2015 16:00:00	32.92	61.80	12.60	135.63	37.91	1.26	9.32	987.55	128.43
17/12/2015 17:00:00	23.74	98.30	0.20	13.13	237.26	0.25	4.53	989.35	126.59
17/12/2015 18:00:00	23.57	97.20	0.20	38.13	237.26	0.25	1.76	988.45	123.89
17/12/2015 19:00:00	23.69	96.80	0.00	1.88	183.91	0.00	0.25	988.15	122.36
17/12/2015 20:00:00	23.67	98.20	0.00	0.63	235.86	0.00	0.25	988.75	122.36
17/12/2015 21:00:00	23.59	99.00	0.00	0.63	235.86	0.00	0.25	989.85	120.89
17/12/2015 22:00:00	23.04	99.30	0.00	0.63	235.86	0.00	0.76	990.45	121.50

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
17/12/2015 23:00:00	22.75	99.60	0.00	0.63	22.46	0.00	0.76	990.45	119.66
18/12/2015 0:00:00	22.61	99.90	0.00	0.63	40.71	0.00	0.00	990.55	119.05
18/12/2015 1:00:00	22.44	100.00	0.00	0.63	40.71	0.00	0.00	989.75	119.05
18/12/2015 2:00:00	22.39	100.00	0.00	0.63	40.71	0.00	0.00	989.45	119.05
18/12/2015 3:00:00	22.13	100.00	0.00	0.63	40.71	0.00	0.00	988.95	118.44
18/12/2015 4:00:00	21.92	100.00	0.00	0.63	40.71	0.00	0.25	989.05	119.05
18/12/2015 5:00:00	22.15	100.00	0.00	0.63	40.71	0.00	0.00	989.15	117.58
18/12/2015 6:00:00	22.37	100.00	0.00	0.63	40.71	0.00	0.00	989.85	118.44
18/12/2015 7:00:00	22.54	100.00	0.00	18.13	40.71	0.00	0.00	990.45	118.13
18/12/2015 8:00:00	23.16	100.00	0.00	85.63	40.71	0.00	0.25	991.35	117.83
18/12/2015 9:00:00	25.02	97.10	0.00	229.38	40.71	0.00	1.01	991.85	118.74
18/12/2015 10:00:00	27.53	89.80	0.00	414.38	341.15	0.00	1.76	991.95	121.20
18/12/2015 11:00:00	30.42	82.40	0.00	669.38	320.09	0.50	2.77	991.55	122.36
18/12/2015 12:00:00	31.74	74.60	0.00	1020.63	346.77	1.01	3.02	990.65	123.59
18/12/2015 13:00:00	33.18	69.70	0.00	253.13	294.82	0.25	3.02	990.25	124.51
18/12/2015 14:00:00	34.20	62.10	0.00	419.38	317.29	1.26	3.53	989.25	124.51
18/12/2015 15:00:00	34.07	62.60	0.00	915.63	320.09	0.76	4.53	988.45	123.59
18/12/2015 16:00:00	35.64	60.90	0.00	634.38	251.30	0.00	2.02	987.35	125.12
18/12/2015 17:00:00	32.28	65.60	0.00	99.38	259.73	0.25	4.03	986.65	122.36
18/12/2015 18:00:00	28.94	73.50	0.00	24.38	228.84	0.00	0.76	986.95	120.58
18/12/2015 19:00:00	27.24	90.60	0.00	5.63	204.97	0.00	0.50	986.95	119.97
18/12/2015 20:00:00	26.55	75.50	1.00	0.63	23.87	1.26	4.53	988.65	118.44
18/12/2015 21:00:00	24.05	92.60	0.00	0.63	148.82	0.25	6.30	988.75	117.58
18/12/2015 22:00:00	24.41	88.30	0.00	0.63	64.58	1.51	3.78	990.85	141.42
18/12/2015 23:00:00	23.71	90.00	0.20	0.63	148.82	0.00	2.52	991.15	143.81
19/12/2015 0:00:00	23.11	95.20	0.60	0.63	223.22	0.00	1.76	990.75	144.12
19/12/2015 1:00:00	23.04	94.00	0.00	0.63	134.78	0.50	2.27	990.75	142.95
19/12/2015 2:00:00	22.68	97.30	0.00	0.63	181.11	0.00	0.00	990.35	142.95
19/12/2015 3:00:00	22.87	97.60	0.00	0.63	71.60	0.00	1.51	990.15	143.50

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
19/12/2015 4:00:00	22.68	96.80	0.00	0.63	146.01	0.00	2.52	990.15	142.95
19/12/2015 5:00:00	22.71	96.30	0.00	0.63	127.76	0.25	2.27	990.65	142.65
19/12/2015 6:00:00	22.92	96.20	0.00	0.63	133.37	0.50	2.27	991.05	142.95
19/12/2015 7:00:00	23.14	98.50	0.00	16.88	81.43	0.00	0.76	991.55	142.65
19/12/2015 8:00:00	24.46	95.30	0.00	118.13	151.62	0.00	0.50	992.15	143.26
19/12/2015 9:00:00	26.35	89.00	0.00	320.63	157.24	0.00	1.51	993.25	142.34
19/12/2015 10:00:00	27.80	86.20	0.00	380.63	276.57	0.25	1.76	993.15	143.81
19/12/2015 11:00:00	29.64	83.70	0.00	374.38	329.92	0.25	2.02	993.05	145.95
19/12/2015 12:00:00	32.05	78.50	0.00	1058.13	320.09	0.25	2.02	992.15	147.49
19/12/2015 13:00:00	34.86	65.80	0.00	1044.38	158.64	0.00	3.27	990.95	147.73
19/12/2015 14:00:00	36.17	62.30	0.00	941.88	292.02	0.25	2.27	989.85	148.65
19/12/2015 15:00:00	36.53	57.50	0.00	818.13	286.40	0.76	6.30	988.55	148.96
19/12/2015 16:00:00	32.20	62.80	0.00	619.38	265.34	0.50	3.02	987.85	149.26
19/12/2015 17:00:00	32.30	62.50	0.00	375.63	286.40	0.50	3.02	986.85	145.95
19/12/2015 18:00:00	30.44	69.70	0.00	206.88	2.81	0.76	3.53	987.45	145.04
19/12/2015 19:00:00	28.17	78.90	0.00	3.13	314.48	0.00	1.26	988.45	143.26
19/12/2015 20:00:00	26.55	84.50	0.00	0.63	15.44	0.25	3.78	990.35	141.42
19/12/2015 21:00:00	25.40	89.60	0.00	0.63	2.81	0.00	2.27	990.85	140.50
19/12/2015 22:00:00	25.21	90.10	0.00	0.63	42.12	0.25	2.27	991.85	139.89
19/12/2015 23:00:00	25.09	92.10	0.00	0.63	44.93	0.00	2.27	992.35	139.89
20/12/2015 0:00:00	24.53	95.40	0.00	0.63	321.50	0.00	1.01	992.65	138.72
20/12/2015 1:00:00	24.24	96.10	0.00	0.63	338.35	0.00	1.51	992.35	139.03
20/12/2015 2:00:00	24.34	95.30	0.00	0.63	348.17	0.00	0.00	991.75	141.11
20/12/2015 3:00:00	24.27	94.70	0.00	0.63	28.08	0.00	0.76	991.15	141.11
20/12/2015 4:00:00	24.10	97.30	0.00	0.63	57.56	0.00	0.00	991.25	141.73
20/12/2015 5:00:00	24.12	95.80	0.00	0.63	129.16	0.00	1.51	990.95	139.58
20/12/2015 6:00:00	24.27	93.60	0.20	0.63	148.82	0.00	3.02	991.35	139.58
20/12/2015 7:00:00	24.15	95.00	0.00	8.13	155.84	0.25	2.77	992.25	140.19
20/12/2015 8:00:00	24.48	94.80	0.20	88.13	153.03	0.00	3.02	992.95	139.89

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
20/12/2015 9:00:00	25.96	91.20	0.00	235.63	126.35	0.76	2.27	993.15	140.19
20/12/2015 10:00:00	28.25	83.50	0.00	386.88	349.58	0.00	1.51	993.65	141.42
20/12/2015 11:00:00	29.57	75.00	0.00	379.38	29.48	0.25	1.76	993.25	143.26
20/12/2015 12:00:00	31.51	71.70	0.00	530.63	338.35	0.00	1.76	992.95	144.73
20/12/2015 13:00:00	33.70	67.30	0.00	1201.88	280.78	0.25	2.27	991.85	145.34
20/12/2015 14:00:00	35.32	57.70	0.00	914.38	332.73	0.25	2.27	990.45	145.65
20/12/2015 15:00:00	36.66	53.70	0.00	793.13	230.24	0.25	6.55	989.45	145.65
20/12/2015 16:00:00	27.21	79.20	1.40	80.63	254.11	2.77	7.05	989.65	145.95
20/12/2015 17:00:00	25.26	90.70	0.80	48.13	148.82	0.00	1.76	988.95	145.65
20/12/2015 18:00:00	25.16	93.80	0.00	15.63	171.28	0.00	1.26	988.85	154.72
20/12/2015 19:00:00	24.85	96.30	0.00	0.63	192.34	0.00	1.01	989.35	154.11
20/12/2015 20:00:00	24.70	95.70	0.00	0.63	227.44	0.00	1.01	990.15	152.57
20/12/2015 21:00:00	24.10	97.80	0.00	0.63	8.42	0.00	1.26	991.15	152.27
20/12/2015 22:00:00	24.32	97.70	0.00	0.63	7.02	0.00	0.00	991.75	152.27
20/12/2015 23:00:00	24.32	97.60	0.00	0.63	5.62	0.00	0.50	991.55	151.96
21/12/2015 0:00:00	24.20	98.30	0.00	0.63	217.61	0.00	0.25	991.95	151.10
21/12/2015 1:00:00	24.12	98.00	0.00	0.63	148.82	0.00	0.76	991.35	151.41
21/12/2015 2:00:00	24.24	96.40	0.00	0.63	63.18	0.00	3.53	990.95	151.10
21/12/2015 3:00:00	23.88	98.10	0.80	0.63	21.06	1.01	3.27	991.25	153.80
21/12/2015 4:00:00	23.47	98.60	2.40	0.63	5.62	0.50	2.27	991.25	154.72
21/12/2015 5:00:00	23.21	98.80	0.20	0.63	138.99	0.00	0.25	990.65	155.33
21/12/2015 6:00:00	23.21	98.20	0.00	0.63	138.99	0.00	0.76	990.55	156.25
21/12/2015 7:00:00	23.40	98.30	0.20	19.38	133.37	0.00	1.26	991.45	155.33
21/12/2015 8:00:00	24.87	95.10	0.00	164.38	36.50	0.00	2.27	992.05	155.02
21/12/2015 9:00:00	25.55	92.20	0.00	259.38	147.41	1.01	3.02	992.55	156.25
21/12/2015 10:00:00	29.34	81.10	0.00	449.38	70.20	0.25	2.27	992.95	157.41
21/12/2015 11:00:00	32.38	70.90	0.00	540.63	36.50	0.25	3.02	992.45	158.03
21/12/2015 12:00:00	32.10	71.20	0.00	299.38	0.00	0.50	2.27	991.45	159.87
21/12/2015 13:00:00	33.68	63.60	0.00	1075.63	269.55	0.50	3.02	990.45	159.87

**UHE São Manoel no rio Teles Pires**  
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Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
21/12/2015 14:00:00	34.97	61.10	0.00	974.38	244.28	0.76	2.52	989.25	159.87
21/12/2015 15:00:00	35.08	58.50	0.00	788.13	270.96	0.50	2.52	987.65	160.72
21/12/2015 16:00:00	37.18	51.30	0.00	614.38	109.51	0.00	2.27	986.55	161.34
21/12/2015 17:00:00	35.37	52.70	0.00	426.88	259.73	0.50	4.78	985.95	160.17
21/12/2015 18:00:00	28.84	80.00	0.00	265.63	353.79	1.26	3.53	986.55	159.25
21/12/2015 19:00:00	27.33	85.20	0.00	4.38	39.31	0.25	2.27	987.15	157.41
21/12/2015 20:00:00	25.84	93.80	0.00	0.63	346.77	0.00	1.26	988.05	156.80
21/12/2015 21:00:00	25.82	93.80	0.00	0.63	21.06	0.00	1.26	989.45	154.11
21/12/2015 22:00:00	25.70	93.20	0.00	0.63	4.21	0.00	1.01	990.25	153.80
21/12/2015 23:00:00	25.57	95.60	0.00	0.63	1.40	0.00	1.51	991.25	153.80
22/12/2015 0:00:00	25.23	95.20	0.00	0.63	22.46	0.00	1.76	991.15	154.72
22/12/2015 1:00:00	24.82	96.70	0.00	0.63	0.00	0.00	0.50	990.05	154.72
22/12/2015 2:00:00	23.93	97.90	1.20	0.63	286.40	0.50	2.27	989.95	156.25
22/12/2015 3:00:00	24.29	98.10	0.20	0.63	227.44	0.00	3.53	988.85	155.02
22/12/2015 4:00:00	24.15	98.70	1.00	0.63	356.60	0.00	2.02	989.55	166.79
22/12/2015 5:00:00	24.03	99.00	7.80	0.63	50.54	0.00	1.26	989.95	167.71
22/12/2015 6:00:00	23.64	98.50	2.00	0.63	310.27	0.00	1.01	989.75	169.49
22/12/2015 7:00:00	23.86	99.10	0.60	4.38	155.84	0.00	1.01	990.85	169.49
22/12/2015 8:00:00	24.75	97.60	0.00	111.88	151.62	0.00	0.76	991.55	169.49
22/12/2015 9:00:00	26.09	94.50	0.00	145.63	248.49	0.00	3.02	993.05	169.79
22/12/2015 10:00:00	26.01	93.20	0.60	183.13	150.22	0.76	3.53	993.75	170.10
22/12/2015 11:00:00	25.43	95.90	0.60	171.88	140.39	0.50	3.53	994.05	171.33
22/12/2015 12:00:00	25.72	94.00	5.80	84.38	157.24	0.50	3.27	993.85	171.33
22/12/2015 13:00:00	24.99	96.60	1.20	289.38	161.45	0.76	3.02	992.95	172.86
22/12/2015 14:00:00	26.01	93.30	0.80	248.13	151.62	0.76	2.77	991.55	174.64
22/12/2015 15:00:00	29.34	84.20	0.00	818.13	161.45	0.76	3.27	988.45	178.56
22/12/2015 16:00:00	30.32	78.40	0.00	631.88	124.95	0.00	2.02	987.35	179.78
22/12/2015 17:00:00	30.04	76.40	0.00	209.38	338.35	0.76	2.52	987.45	180.09
22/12/2015 18:00:00	30.24	80.30	0.00	133.13	341.15	0.00	0.76	987.45	178.86

**UHE São Manoel no rio Teles Pires**  
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Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
22/12/2015 19:00:00	27.09	91.90	0.00	8.13	322.90	0.00	0.25	987.95	178.25
22/12/2015 20:00:00	26.04	95.50	0.00	0.63	221.82	0.00	1.01	988.75	177.09
22/12/2015 21:00:00	25.50	97.80	0.00	0.63	146.01	0.00	0.76	989.45	176.47
22/12/2015 22:00:00	25.19	98.90	0.00	0.63	87.04	0.00	0.50	990.35	176.47
22/12/2015 23:00:00	25.65	99.10	0.00	0.63	353.79	0.00	0.25	990.95	175.25
23/12/2015 0:00:00	25.31	97.60	0.00	0.63	68.79	0.00	0.00	991.05	174.94
23/12/2015 1:00:00	24.56	99.40	0.00	0.63	68.79	0.00	0.00	990.35	174.64
23/12/2015 2:00:00	24.15	99.80	0.00	0.63	68.79	0.00	0.00	989.55	174.33
23/12/2015 3:00:00	23.86	100.00	0.00	0.63	82.83	0.00	0.00	988.95	174.64
23/12/2015 4:00:00	24.05	100.00	0.00	0.63	115.12	0.00	0.00	989.45	174.33
23/12/2015 5:00:00	24.22	100.00	0.00	0.63	210.59	0.00	1.01	989.15	173.72
23/12/2015 6:00:00	24.34	100.00	0.00	0.63	254.11	0.00	0.00	989.85	174.33
23/12/2015 7:00:00	24.20	100.00	0.00	19.38	254.11	0.00	0.25	990.45	173.41
23/12/2015 8:00:00	25.31	98.40	0.00	133.13	254.11	0.00	1.26	991.05	174.02
23/12/2015 9:00:00	27.68	91.30	0.00	623.13	270.96	0.00	1.26	991.95	173.72
23/12/2015 10:00:00	31.46	78.30	0.00	779.38	127.76	0.00	2.02	992.45	175.25
23/12/2015 11:00:00	30.17	77.20	0.00	305.63	209.18	0.00	1.51	992.25	175.55
23/12/2015 12:00:00	30.19	76.20	0.00	364.38	131.97	0.25	1.76	991.55	176.47
23/12/2015 13:00:00	32.02	73.50	0.00	429.38	301.84	0.00	2.02	990.75	177.39
23/12/2015 14:00:00	32.30	74.10	0.00	1026.88	301.84	0.25	2.52	988.45	177.64
23/12/2015 15:00:00	34.28	63.00	0.00	831.88	332.73	0.50	2.52	987.35	178.56
23/12/2015 16:00:00	33.81	63.50	0.00	356.88	228.84	0.25	2.27	986.55	179.17
23/12/2015 17:00:00	33.42	68.50	0.00	363.13	293.42	0.00	1.51	985.75	177.39
23/12/2015 18:00:00	30.42	74.90	0.00	74.38	342.56	0.00	0.76	986.65	176.17
23/12/2015 19:00:00	28.35	86.80	0.00	6.88	245.69	0.00	0.76	987.15	174.64
23/12/2015 20:00:00	26.79	90.70	0.00	0.63	137.58	0.00	1.51	987.95	174.02
23/12/2015 21:00:00	26.70	91.00	0.00	0.63	190.93	0.00	2.27	989.15	172.86
23/12/2015 22:00:00	26.18	89.30	0.40	0.63	136.18	0.00	1.51	990.55	171.63
23/12/2015 23:00:00	25.36	91.40	0.00	0.63	91.26	0.00	2.02	990.85	172.24

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
24/12/2015 0:00:00	24.56	94.40	0.00	0.63	129.16	0.00	2.02	991.25	172.86
24/12/2015 1:00:00	24.20	95.10	0.00	0.63	154.43	0.00	1.51	991.05	171.63
24/12/2015 2:00:00	24.07	96.40	0.00	0.63	214.80	0.00	1.26	990.25	171.63
24/12/2015 3:00:00	24.05	97.10	0.00	0.63	138.99	0.00	0.00	989.45	170.41
24/12/2015 4:00:00	23.93	97.80	0.00	0.63	138.99	0.00	1.26	990.25	171.02
24/12/2015 5:00:00	24.00	96.80	0.00	0.63	102.49	0.00	0.76	990.05	170.71
24/12/2015 6:00:00	23.71	98.60	0.00	0.63	15.44	0.00	0.25	990.05	170.71
24/12/2015 7:00:00	23.93	99.00	0.00	23.13	78.62	0.00	0.76	990.85	169.79
24/12/2015 8:00:00	25.31	95.30	0.00	135.63	214.80	0.00	1.01	991.65	170.41
24/12/2015 9:00:00	29.39	82.80	0.00	419.38	345.37	0.00	1.26	991.45	171.02
24/12/2015 10:00:00	30.29	78.10	0.00	518.13	297.63	0.00	1.76	991.95	165.26
24/12/2015 11:00:00	32.77	74.00	0.00	856.88	292.02	0.50	2.52	991.95	166.18
24/12/2015 12:00:00	32.87	66.40	0.00	876.88	317.29	0.50	2.77	991.55	166.79
24/12/2015 13:00:00	34.18	63.70	0.00	543.13	283.59	0.25	2.52	991.15	168.32
24/12/2015 14:00:00	35.40	58.30	0.00	918.13	263.94	0.50	3.02	989.85	168.63
24/12/2015 15:00:00	28.77	73.10	2.60	134.38	336.94	2.02	6.30	989.45	169.79
24/12/2015 16:00:00	30.09	76.50	0.00	763.13	317.29	0.50	4.28	988.25	167.71
24/12/2015 17:00:00	26.92	86.40	0.00	153.13	290.61	0.00	2.02	988.45	171.63
24/12/2015 18:00:00	25.87	86.80	0.00	26.88	217.61	0.00	0.76	988.05	170.10
24/12/2015 19:00:00	25.53	92.20	0.00	5.63	126.35	0.00	1.51	988.55	169.49
24/12/2015 20:00:00	24.63	96.30	0.00	0.63	356.60	0.00	0.25	989.55	169.79
24/12/2015 21:00:00	24.70	95.20	0.00	0.63	23.87	0.00	1.76	990.75	168.32
24/12/2015 22:00:00	24.73	96.20	0.00	0.63	60.37	0.00	0.76	991.65	168.32
24/12/2015 23:00:00	24.63	95.40	0.00	0.63	8.42	0.00	2.02	991.85	167.71
25/12/2015 0:00:00	24.51	94.70	0.00	0.63	133.37	1.01	2.77	991.95	167.71
25/12/2015 1:00:00	24.24	95.30	0.40	0.63	16.85	0.00	1.01	992.65	167.71
25/12/2015 2:00:00	23.81	97.10	0.00	0.63	129.16	0.00	1.51	991.45	166.79
25/12/2015 3:00:00	23.64	98.70	0.00	0.63	74.41	0.00	0.25	991.45	166.18
25/12/2015 4:00:00	24.05	97.40	0.00	0.63	74.41	0.00	0.00	991.15	167.40



**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
25/12/2015 5:00:00	23.95	97.80	0.00	0.63	102.49	0.00	1.26	991.15	166.48
25/12/2015 6:00:00	23.64	98.30	0.00	0.63	150.22	0.25	1.51	991.35	167.40
25/12/2015 7:00:00	23.88	96.90	0.00	35.63	113.72	0.00	2.77	992.25	166.79
25/12/2015 8:00:00	26.13	92.40	0.00	329.38	53.35	0.00	1.51	992.95	166.48
25/12/2015 9:00:00	27.36	87.80	0.00	274.38	237.26	0.00	2.77	993.05	167.40
25/12/2015 10:00:00	28.39	84.20	0.00	399.38	161.45	0.25	2.02	993.45	169.49
25/12/2015 11:00:00	30.14	72.90	0.00	471.88	356.60	0.25	2.02	993.85	169.49
25/12/2015 12:00:00	31.18	76.40	0.00	416.88	299.04	0.00	1.76	993.85	170.10
25/12/2015 13:00:00	32.95	67.50	0.00	985.63	277.98	0.50	2.27	992.45	172.24
25/12/2015 14:00:00	35.42	58.70	0.00	913.13	327.11	0.25	2.52	991.45	172.24
25/12/2015 15:00:00	35.34	54.70	0.00	753.13	268.15	0.25	2.77	989.05	173.16
25/12/2015 16:00:00	35.72	53.50	0.80	581.88	282.19	0.50	5.54	988.95	173.41
25/12/2015 17:00:00	28.20	82.20	0.00	236.88	70.20	0.76	3.02	989.25	171.63
25/12/2015 18:00:00	28.17	85.10	0.00	96.88	227.44	0.00	1.26	988.45	170.10
25/12/2015 19:00:00	27.24	88.40	0.00	14.38	140.39	0.00	1.76	988.45	167.40
25/12/2015 20:00:00	26.35	91.80	0.00	0.63	138.99	0.00	0.50	989.45	166.79
25/12/2015 21:00:00	25.45	95.80	0.00	0.63	137.58	0.00	0.50	990.35	166.79
25/12/2015 22:00:00	25.23	97.40	0.00	0.63	137.58	0.00	0.25	991.15	164.71
25/12/2015 23:00:00	25.07	98.10	0.00	0.63	137.58	0.00	0.50	991.45	164.09
26/12/2015 0:00:00	24.51	98.60	0.00	0.63	137.58	0.00	0.50	991.05	163.79
26/12/2015 1:00:00	24.29	99.00	0.00	0.63	148.82	0.00	0.00	990.75	164.09
26/12/2015 2:00:00	24.00	99.50	0.00	0.63	148.82	0.00	0.50	990.05	163.48
26/12/2015 3:00:00	23.74	100.00	0.00	0.63	50.54	0.00	0.50	990.65	162.87
26/12/2015 4:00:00	24.03	100.00	0.00	0.63	51.95	0.00	1.01	990.45	163.48
26/12/2015 5:00:00	24.15	99.60	0.00	0.63	105.29	0.00	0.76	990.15	161.95
26/12/2015 6:00:00	23.71	99.70	0.00	0.63	120.74	0.00	0.00	990.15	162.26
26/12/2015 7:00:00	23.79	100.00	0.00	39.38	71.60	0.00	2.02	990.65	162.56
26/12/2015 8:00:00	25.09	95.50	0.00	186.88	151.62	0.25	2.02	991.45	161.95
26/12/2015 9:00:00	29.77	80.10	0.00	546.88	71.60	0.00	1.51	991.75	162.87

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
26/12/2015 10:00:00	31.77	72.50	0.00	655.63	127.76	0.25	2.27	991.75	163.48
26/12/2015 11:00:00	32.38	67.20	0.00	899.38	313.08	0.76	3.02	991.55	163.79
26/12/2015 12:00:00	33.34	67.70	0.00	994.38	307.46	0.50	3.02	990.45	165.57
26/12/2015 13:00:00	34.20	63.10	0.00	1031.88	311.67	0.76	2.77	989.85	165.26
26/12/2015 14:00:00	35.99	57.30	0.00	986.88	280.78	0.25	2.77	988.95	165.57
26/12/2015 15:00:00	36.23	54.80	0.00	899.38	279.38	1.01	3.53	988.15	166.79
26/12/2015 16:00:00	36.17	51.00	0.00	620.63	242.88	0.76	2.77	986.75	167.40
26/12/2015 17:00:00	36.66	50.20	0.00	395.63	275.17	0.25	7.55	985.85	164.95
26/12/2015 18:00:00	27.46	67.90	0.00	74.38	310.27	2.27	6.30	987.15	165.26
26/12/2015 19:00:00	25.99	81.10	0.00	5.63	254.11	1.01	3.02	987.15	163.79
26/12/2015 20:00:00	24.85	91.00	0.00	0.63	237.26	0.00	1.01	987.85	161.64
26/12/2015 21:00:00	24.32	94.70	0.00	0.63	213.40	0.00	0.25	988.35	161.03
26/12/2015 22:00:00	24.24	95.50	0.00	0.63	210.59	0.00	2.27	989.45	159.87
26/12/2015 23:00:00	23.88	96.10	0.00	0.63	42.12	0.00	0.76	990.05	159.25
27/12/2015 0:00:00	23.95	96.20	0.00	0.63	85.64	0.00	1.01	990.05	159.56
27/12/2015 1:00:00	23.67	98.00	0.00	0.63	171.28	0.00	0.25	989.75	158.03
27/12/2015 2:00:00	23.21	98.70	0.00	0.63	171.28	0.00	1.01	989.45	158.03
27/12/2015 3:00:00	23.33	98.70	0.00	0.63	42.12	0.00	1.01	989.05	157.41
27/12/2015 4:00:00	23.09	99.30	0.00	0.63	148.82	0.00	1.51	989.05	157.11
27/12/2015 5:00:00	22.90	98.80	0.00	0.63	131.97	0.00	0.50	989.15	157.11
27/12/2015 6:00:00	22.61	99.60	0.00	0.63	32.29	0.00	0.76	990.85	156.50
27/12/2015 7:00:00	22.78	100.00	0.00	34.38	352.38	0.00	0.00	990.95	156.50
27/12/2015 8:00:00	25.28	94.70	0.00	241.88	352.38	0.00	0.76	991.35	156.50
27/12/2015 9:00:00	30.12	80.40	0.00	481.88	342.56	0.00	2.27	991.45	156.80
27/12/2015 10:00:00	31.54	72.70	0.00	671.88	277.98	0.25	2.27	989.95	158.95
27/12/2015 11:00:00	33.47	67.30	0.00	850.63	247.09	0.25	2.52	991.65	159.25
27/12/2015 12:00:00	35.21	63.00	0.00	1003.13	8.42	0.25	2.77	990.85	161.03
27/12/2015 13:00:00	34.15	62.30	0.00	305.63	308.86	0.50	3.02	989.75	160.48
27/12/2015 14:00:00	37.48	56.00	0.00	1005.63	297.63	0.25	6.80	989.15	161.64

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
27/12/2015 15:00:00	28.22	76.90	0.00	348.13	219.01	1.01	3.78	988.15	161.34
27/12/2015 16:00:00	32.12	70.00	0.00	494.38	221.82	0.00	1.51	986.85	159.87
27/12/2015 17:00:00	33.29	59.70	0.00	386.88	248.49	0.25	1.51	985.85	160.72
27/12/2015 18:00:00	32.85	61.50	0.00	188.13	266.75	0.00	1.01	985.45	159.56
27/12/2015 19:00:00	29.39	75.30	0.00	15.63	183.91	0.00	0.76	986.35	158.03
27/12/2015 20:00:00	26.67	90.50	0.00	0.63	172.68	0.00	2.02	986.85	155.94
27/12/2015 21:00:00	26.26	82.00	0.00	0.63	35.10	0.00	1.26	987.55	153.80
27/12/2015 22:00:00	25.89	84.50	0.00	0.63	46.33	0.00	1.51	988.25	153.80
27/12/2015 23:00:00	24.99	91.50	0.00	0.63	49.14	0.00	0.76	989.05	152.57
28/12/2015 0:00:00	24.03	95.80	0.00	0.63	47.73	0.00	0.00	989.05	152.88
28/12/2015 1:00:00	23.76	96.50	0.00	0.63	71.60	0.00	0.25	989.05	151.41
28/12/2015 2:00:00	23.67	97.50	0.00	0.63	77.22	0.00	0.00	988.75	151.72
28/12/2015 3:00:00	23.57	97.30	0.00	0.63	77.22	0.00	0.25	988.45	152.27
28/12/2015 4:00:00	23.11	98.10	0.00	0.63	73.00	0.00	0.00	988.85	150.49
28/12/2015 5:00:00	22.97	98.70	0.00	0.63	73.00	0.00	0.00	988.85	150.49
28/12/2015 6:00:00	23.16	98.90	0.00	0.63	73.00	0.00	0.00	989.55	150.80
28/12/2015 7:00:00	23.35	98.80	0.00	55.63	73.00	0.00	0.25	990.15	149.88
28/12/2015 8:00:00	25.55	92.40	0.00	228.13	39.31	0.00	1.01	990.85	149.88
28/12/2015 9:00:00	29.02	82.40	0.00	449.38	355.19	0.00	2.52	991.75	150.18
28/12/2015 10:00:00	32.41	69.00	0.00	640.63	16.85	0.25	3.02	991.45	152.88
28/12/2015 11:00:00	33.13	68.40	0.00	906.88	2.81	0.50	3.27	991.25	152.57
28/12/2015 12:00:00	33.99	65.80	0.00	945.63	322.90	0.76	3.53	990.45	155.02
28/12/2015 13:00:00	33.65	59.90	10.00	353.13	318.69	1.01	9.82	989.85	155.64
28/12/2015 14:00:00	25.09	93.30	0.00	123.13	165.66	1.26	3.53	989.35	155.02
28/12/2015 15:00:00	26.94	85.30	0.00	505.63	186.72	0.50	2.52	987.95	156.25
28/12/2015 16:00:00	31.82	77.10	0.00	538.13	249.90	0.25	2.27	986.45	156.25
28/12/2015 17:00:00	32.46	72.60	0.00	393.13	238.67	0.50	2.27	985.65	154.72
28/12/2015 18:00:00	31.13	74.90	0.00	186.88	248.49	0.76	2.27	986.15	152.88
28/12/2015 19:00:00	28.94	88.20	0.00	19.38	245.69	0.00	0.25	986.75	152.57

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
28/12/2015 20:00:00	27.24	92.90	0.00	0.63	167.07	0.00	2.02	987.45	152.27
28/12/2015 21:00:00	27.55	81.80	0.00	0.63	46.33	1.01	4.28	989.75	150.80
28/12/2015 22:00:00	26.38	80.30	0.00	0.63	47.73	0.00	1.01	989.85	150.49
28/12/2015 23:00:00	25.40	91.30	0.00	0.63	1.40	0.00	0.00	990.55	149.88
29/12/2015 0:00:00	24.77	95.30	0.00	0.63	19.66	0.00	0.76	991.15	149.57
29/12/2015 1:00:00	24.27	96.90	0.00	0.63	311.67	0.00	1.01	990.75	148.34
29/12/2015 2:00:00	24.07	97.10	0.00	0.63	88.45	0.00	0.00	990.35	147.49
29/12/2015 3:00:00	24.22	98.30	0.00	0.63	88.45	0.00	0.25	990.45	148.04
29/12/2015 4:00:00	23.81	99.10	0.00	0.63	74.41	0.00	0.00	990.25	146.57
29/12/2015 5:00:00	23.59	99.10	0.00	0.63	74.41	0.00	0.76	990.65	147.49
29/12/2015 6:00:00	23.93	99.40	0.00	0.63	138.99	0.00	1.26	991.45	146.87
29/12/2015 7:00:00	24.27	98.40	0.00	19.38	174.09	0.00	0.76	992.55	146.87
29/12/2015 8:00:00	26.06	92.40	0.00	150.63	113.72	0.00	1.51	993.25	146.87
29/12/2015 9:00:00	28.12	81.90	0.00	414.38	240.07	0.25	1.76	993.85	147.49
29/12/2015 10:00:00	30.90	73.10	0.00	611.88	211.99	0.00	1.76	994.15	148.65
29/12/2015 11:00:00	33.08	67.30	0.00	880.63	186.72	0.00	1.76	993.95	148.65
29/12/2015 12:00:00	33.57	67.90	0.00	430.63	348.17	0.25	4.28	993.95	150.18
29/12/2015 13:00:00	35.50	61.80	0.00	1051.88	193.74	0.00	8.31	992.35	150.49
29/12/2015 14:00:00	26.40	83.50	0.40	205.63	266.75	2.52	6.04	992.25	151.96
29/12/2015 15:00:00	31.74	72.30	0.00	600.63	266.75	0.00	3.78	990.95	152.27
29/12/2015 16:00:00	32.59	70.20	0.00	570.63	242.88	0.50	3.02	989.75	151.10
29/12/2015 17:00:00	32.87	68.90	0.00	395.63	272.36	0.25	1.76	988.55	151.10
29/12/2015 18:00:00	30.95	75.00	0.00	88.13	223.22	0.00	0.50	988.25	148.34
29/12/2015 19:00:00	28.39	87.20	0.00	5.63	193.74	0.00	0.50	989.45	147.73
29/12/2015 20:00:00	27.41	91.20	0.00	0.63	146.01	0.00	0.25	990.55	146.26
29/12/2015 21:00:00	26.72	93.60	0.00	0.63	141.80	0.00	0.00	991.05	146.57
29/12/2015 22:00:00	26.45	95.00	0.00	0.63	141.80	0.00	0.76	992.05	145.04
29/12/2015 23:00:00	26.21	96.00	0.00	0.63	133.37	0.00	3.53	992.75	137.50
30/12/2015 0:00:00	26.82	90.40	0.00	0.63	129.16	1.51	4.53	992.85	137.50

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
30/12/2015 1:00:00	26.30	90.70	0.00	0.63	133.37	1.01	4.28	992.35	136.27
30/12/2015 2:00:00	25.77	92.60	0.00	0.63	137.58	0.76	3.27	992.65	135.35
30/12/2015 3:00:00	25.53	92.90	0.00	0.63	157.24	0.50	3.53	992.45	135.35
30/12/2015 4:00:00	25.19	93.90	0.00	0.63	203.57	0.00	4.53	992.25	135.05
30/12/2015 5:00:00	25.04	92.70	0.00	0.63	131.97	1.26	4.28	992.25	134.80
30/12/2015 6:00:00	24.82	93.20	0.00	0.63	99.68	0.00	3.02	992.75	133.88
30/12/2015 7:00:00	25.11	92.70	0.00	49.38	155.84	0.25	2.52	993.45	133.88
30/12/2015 8:00:00	25.55	89.30	0.00	120.63	106.70	0.25	3.78	994.15	134.80
30/12/2015 9:00:00	27.73	81.20	0.00	440.63	150.22	0.25	3.53	995.25	134.19
30/12/2015 10:00:00	29.37	74.40	0.00	490.63	122.14	0.25	4.28	995.25	133.88
30/12/2015 11:00:00	30.37	70.60	0.00	864.38	112.31	1.26	5.54	994.55	137.50
30/12/2015 12:00:00	31.36	71.30	0.00	586.88	98.28	0.76	3.53	994.25	139.58
30/12/2015 13:00:00	33.16	64.30	0.00	423.13	77.22	0.25	2.77	993.45	139.89
30/12/2015 14:00:00	34.84	62.70	0.00	1133.13	148.82	0.50	3.02	991.65	139.89
30/12/2015 15:00:00	33.47	66.10	0.80	548.13	328.52	0.00	3.53	991.45	140.19
30/12/2015 16:00:00	29.17	85.50	0.40	303.13	217.61	0.00	7.30	990.55	139.89
30/12/2015 17:00:00	25.04	90.60	1.40	26.88	286.40	1.76	5.54	990.75	139.89
30/12/2015 18:00:00	24.53	92.70	0.00	15.63	19.66	0.00	1.01	990.35	138.72
30/12/2015 19:00:00	24.53	96.00	0.00	0.63	241.48	0.00	1.26	990.85	138.42
30/12/2015 20:00:00	24.46	95.60	0.20	0.63	44.93	0.00	0.76	991.05	137.80
30/12/2015 21:00:00	24.32	97.10	0.00	0.63	119.33	0.00	0.00	991.65	138.11
30/12/2015 22:00:00	24.32	98.20	0.00	0.63	169.88	0.00	0.50	992.95	135.97
30/12/2015 23:00:00	24.34	97.40	0.00	0.63	110.91	0.00	0.50	993.15	136.27
31/12/2015 0:00:00	24.22	98.80	0.00	0.63	33.69	0.00	0.76	993.15	136.88
31/12/2015 1:00:00	24.12	99.20	0.00	0.63	1.40	0.00	0.00	992.05	135.66
31/12/2015 2:00:00	24.20	99.30	0.00	0.63	0.00	0.00	0.50	991.95	135.97
31/12/2015 3:00:00	24.05	98.70	0.00	0.63	172.68	0.00	1.51	991.25	135.97
31/12/2015 4:00:00	23.76	99.30	0.20	0.63	343.96	1.01	3.02	991.75	134.80
31/12/2015 5:00:00	23.42	99.10	1.40	0.63	39.31	0.00	2.27	991.75	136.27

**UHE São Manoel no rio Teles Pires**  
**Programa de Monitoramento Climatológico**

Data - hora (Horário oficial de Brasília)	Tempera- tura (°C)	UR (%)	Precipitação (mm)	Radiação Solar (W/m <sup>2</sup> )	Direção do Vento (Graus)	Velocidade do Vento (m/s)	Velocidade de Rajada (m/s)	Pressão (mbar)	Nível do Tanque classe A (mm)
31/12/2015 6:00:00	23.47	97.80	2.00	0.63	89.85	0.00	1.01	991.55	139.89
31/12/2015 7:00:00	23.50	99.10	0.00	8.13	174.09	0.00	0.76	991.95	140.81
31/12/2015 8:00:00	23.86	98.90	0.20	96.88	345.37	0.00	1.76	993.45	139.58
31/12/2015 9:00:00	24.92	95.90	0.00	159.38	21.06	0.00	2.77	993.85	139.03
31/12/2015 10:00:00	28.62	82.90	0.00	385.63	67.39	0.25	2.52	993.25	141.11
31/12/2015 11:00:00	30.67	72.60	0.00	711.88	78.62	0.00	2.52	993.45	141.42
31/12/2015 12:00:00	30.72	74.60	0.00	609.38	7.02	0.76	3.02	992.65	141.11
31/12/2015 13:00:00	31.15	72.40	0.00	604.38	37.91	0.25	2.77	991.25	142.65
31/12/2015 14:00:00	30.67	70.90	0.00	365.63	26.68	0.00	1.76	989.95	141.42
31/12/2015 15:00:00	30.39	73.20	0.00	306.88	68.79	0.25	2.02	989.05	141.73
31/12/2015 16:00:00	29.89	76.60	0.00	268.13	148.82	0.00	2.02	988.05	142.03
31/12/2015 17:00:00	29.19	77.40	0.00	176.88	140.39	0.25	2.02	987.55	141.42
31/12/2015 18:00:00	28.12	80.90	0.00	50.63	123.55	0.00	0.76	987.45	141.42
31/12/2015 19:00:00	26.62	89.30	0.00	5.63	103.89	0.00	0.50	987.45	141.11
31/12/2015 20:00:00	25.21	90.70	0.00	0.63	103.89	0.00	0.00	987.95	139.89
31/12/2015 21:00:00	25.14	92.80	0.00	0.63	130.57	0.00	0.50	989.05	140.50
31/12/2015 22:00:00	24.17	97.00	0.00	0.63	134.78	0.00	0.00	990.25	140.19
31/12/2015 23:00:00	24.68	97.20	0.00	0.63	134.78	0.00	0.00	990.95	138.42