







DOC NUMBER:

569-DB7B-AIC-711-006

CLIENT NUMBER:

PRD-AIC-DSH-079

CLIENT:

TAKEDA/BAXALTA

PROJECT:

**BURITI EPCVM PROJECT** 

# DRUG SUBSTANCE - BMS - DATA SHEET TEMPERATURE AND HUMIDITY TRANSMITTER

1	27JAN2022	ISSUE FOR CONSTRUCTION CONSIDERING COMMENTS	MAV	MAF	RSP
0	31AUG2021	ISSUE FOR CONSTRUCTION	JHA	MAF	RSP
Α	24MAR2021	60% DD ISSUE	JHA	MAF	RSP
REV	DATE	DESCRIPTION	EXEC	CHECK	APPROV









PRD-AIC-DSH-079 569-DB7B-AIC-711-006 CLIENT NR: NUMBER:

TITLE

SHEET: 2 de 24

TEMPERATURE AND HUMIDITY TRANSMITTER

REV.:

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Revision	Α	0	1	2	3	4	Revision	Α	0	1	2	3	4	Revision	Α	0	1	2	3	L
Page							Page							Page						I
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2	Χ	Χ	Χ				27							52						
3	Χ	Χ	Χ				28							53						
4	Х	Χ	Χ				29							54						
5	Х	Χ	Χ				30							55						
6	Χ	Χ	Χ				31							56						
7	Χ	Χ	Χ				32							57						
8	Х	Χ	Χ				33							58						
9	Х	Χ	Χ				34							59						
10	Χ	Χ	Χ				35							60						
11	Х	Χ	Χ				36							61						
12	Х	Χ	Χ				37							62						
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#### **REVISION 0 NOTES:**

- 1- UPDATE ACCORDING TO P&ID (HVAC AND PROCESS).
- 2- INSERTION OF PROCESS DATA.
- 3- INSERTION OF INSTRUMENT REFERENCE MODELS.

# **REVISION 1 NOTES:**

1- CANCELLED TT/MT-AHU-7B-6-002

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TITLE SHEET:

#### TEMPERATURE AND HUMIDITY TRANSMITTER

3 de 24 REV.:

#### REFERENCE DOCUMENTS

7A-M-0-5-21	DRUG PRODUCT - AFD - AHU-7B-1
7A-M-0-5-22	DRUG PRODUCT - AFD - AHU-7B-2
7A-M-0-5-23	DRUG PRODUCT - AFD - AHU-7B-3
7A-M-0-5-24	DRUG PRODUCT - AFD - AHU-7B-4
7A-M-0-5-25	DRUG PRODUCT - AFD - AHU-7B-5
7A-M-0-5-26	DRUG PRODUCT - AFD - AHU-7B-6
7A-M-0-5-27	DRUG PRODUCT - AFD - AHU-7B-7
7A-M-0-5-28	DRUG PRODUCT - AFD - AHU-7B-8
7A-M-0-5-29	DRUG PRODUCT - AFD - AHU-7B-9
7A-M-0-5-31	DRUG PRODUCT - AFD - DOAS-7A-1
7A-M-0-5-42	P&I DIAGRAM - DRUG PRODUCT - COOLING WATER SYSTEM
7A-M-0-5-43	P&I DIAGRAM - DRUG PRODUCT - CHILLED WATER GENERATION SYSTEM (HVAC)
7A-M-0-5-45	P&I DIAGRAM - DRUG PRODUCT - CHILLED GLYCOL GENERATION SYSTEM
7A-M-0-5-47	P&I DIAGRAM - DRUG PRODUCT - HEATING HOT WATER SYSTEM (HVAC)
7A-M-0-5-61	P&I DIAGRAM - DRUG PRODUCT - PLANT STEAM DISTRIBUTION SYSTEM (PROCESS + HVAC)
PRD-AIC-LIS-014	DRUG PRODUCT - BMS - INSTRUMENT INDEX
PRD-PIP-TSP-501	PIPE CLASS AND SPECIFICATION - TECHNICAL SPECIFICATION

### **GENERAL NOTES**

- 1- The transmitters must have the following characteristics:
  - a) They must be electronic, intelligent and programmable, with the transmission of the signal in the same physical medium as the power supply;
  - b) Support the respective maximum static design pressures:
  - c) They must be capable of identifying internal failures;
  - d) Be capable of setting the value of the output signal, programmable in 0% or 100% of the range, in case of sensor element failure;
- 2- All transmitters must have enclosures, whose parts exposed to the atmosphere are resistant to environmental conditions, including those generated by the process condition.
- 3- All electronic or electrical components that are subject to fungal and moisture attacks must be tropicalized, i.e., treated with polyurethane coating or equivalent to inhibit this attack.
- 4- All transmitters must be provided with protection type certificates compatible with the respective area classification. If the enclosure requires certificates regarding type and degree of protection, both proofs must be explicit in the same certificate. The certificates must be issued by INMETRO or an accredited body.
- 5- All transmitters must have a calibration certificate with traceability according to ISO 9000.
- 6- The identification plates must be made of AISI 304 stainless steel permanently attached to the instruments with a tag and serial number. The serial number of the instrument, when possible, can be recorded on the body itself.
- 7- All electronic instruments must be provided with software asset management feature, with zero adjustment function, span adjustment and other remote settings via digital data communication. The software must be supplied with the instruments and when necessary the connecting cables must also be provided.
- 8- The instrument display must be at least 2 lines with 5 characters on each line.









TITLE

SHEET:

# TEMPERATURE AND HUMIDITY TRANSMITTER

4 de 24 REV.:

								1	
	1	INSTRUMENT TAG NUMBER	7			TT/MT-/	AHU-7B-1-001		
	2	SERVIÇE			RETURN HUI	MIDITY AND T	EMPERATURE AIR	IN THE DUCT	
L	3	P&ID				7B:	-M-0-5-21		
SAL	4	PIPE LINE	EQUIPMENT NUN	MBER	RETURN I	DUCT	AHU-	-7B-1	
GENERAL	5	EQUIPMENT MATERIAL / PI	PE				-		
GE	6	AREA CLASSIFICATION				NOT	CLASSIFIED		
	7	ENCLOSURE CLASSIFICAT	ION		IP 65 (MÍN.) CONF. NBR IEC 60529				
	8	CERTIFICATES			(SEE GENERAL NOTES 4)				
	9								
1	10	TYPE				MICRO	PROCESSED		
1	11	MOUNTING				INTEGR	RAL ELEMENT		
1	13	BODY PRESSURE CLASS				BY MAN	NUFACTURER		
1	14	HOUSING MATERIAL				POLYCAF	RBONATE / ABS		
<u>x</u> 1	15	POWER SUPPLY				24 Vo	cc - 2 WIRE		
1	16	OUTPUT SIGNAL	QUANTITY		4 - 20 mA (500 d	ohms @ 24 Vcc	c) (2x) CON	NFIGURABLE	
	17	COMMUNICATION PROTOC	COL				HART		
I KANSMITTEK	18	PRECISION				±0	,25% F.E		
÷ [	19	REPEATABILITY				BY MAN	NUFACTURER		
2	20	CALIBRATION RANGE		BY MAN	NUFACTURER				
2	21	CALIBRATED RANGE	0 @ 22 ℃						
2	22	ELECTRICAL CONNECTION	1			1/2	" NPT (F)		
2	23	DJUSTABLE RANGE / AJ. LO	OCAL ZERO AND SPAN	J		YE	ES / YES		
2	24	TYPE		TEMPERATU	IRE AND HUMIDITY				
3	33	MOUNTING			DUCT				
	25	ELEMENT TYPE	ELEMENT MATER	RIAL	BY MANUF	ACTURER	S	S316L	
		LENGTH (L)	DIAMETER		300	mm	BY MAN	UFACTURER	
Ž [2	27	HUMIDITY	·		0~100%				
" 2	27	SENSOR CONNECTION TO	WELL		BY MANUFACTURER				
3	31	CONNECTION TO THE PRO	CESS		FLANGES FOR DUCT				
3	35								
_ 2	29	CONFIGURATOR CABLE					YES		
5 3	30	DISPLAY					NO		
	32	FIXING FLANGE IN DUCT					YES		
ACCESSORY	34	CABLE GLAND					YES		
3	35								
	42	FLUID	PHYSICAL STATUS		AIR		Al	IR	
8	43	MINIMUM TEMPERATURE	NORMAL	MAXIMUM	18	20	22	°C	
	44	MINIMUM PRESSURE	NORMAL	MAXIMUM		12.5		Pa	
		MINIMUM HUMIDITY	MAXIMUM HUMID	DITY	30	%RH	65	%RH	
ე [ <u>-</u>	46	VISCOSITY @ OPERATING	CONDITION				Ср		
Ž 4	47	DENSITY @ OPERATING CO	ONDITION				kg/m³		
OPERATING CONDITIONS	48	SUSPENDED SOLIDS (%)					NO		
7 (4	49	M.M. / Z / Cp/Cv					.//		
_	50								
£	51	MANUFACTURER		V	'AISALA				
	52	MODEL				F	HTM330		









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# TEMPERATURE AND HUMIDITY TRANSMITTER

5 de 24 REV.:

								1		
	1	INSTRUMENT TAG NUMBEI	R			TT/MT-/	AHU-7B-1-002			
	2	SERVIÇE			RETURN HUI	MIDITY AND T	EMPERATURE AIR	IN THE DUCT		
	3	P&ID				7B:	-M-0-5-21			
SAL	4	PIPE LINE	EQUIPMENT NUI	MBER	SUPPLY I	DUCT	AHU-	7B-1		
GENERAL	5	EQUIPMENT MATERIAL / PI	PE				-			
GE	6	AREA CLASSIFICATION				NOT	CLASSIFIED			
	7	ENCLOSURE CLASSIFICAT	ION			IP 65 (MÍN.) CONF. NBR IEC 60529				
	8	CERTIFICATES				(SEE GENERAL NOTES 4)				
	9									
	10	TYPE				MICRO	PROCESSED			
	11	MOUNTING				INTEGR	RAL ELEMENT			
Ī	13	BODY PRESSURE CLASS				BY MAN	IUFACTURER			
Ī	14	HOUSING MATERIAL				POLYCAR	RBONATE / ABS			
ω	15	POWER SUPPLY				24 Vo	cc - 2 WIRE			
17E	16	OUTPUT SIGNAL	QUANTITY		4 - 20 mA (500 d	ohms @ 24 Vcc	c) (2x) CON	IFIGURABLE		
TRANSMITTER	17	COMMUNICATION PROTOC	COL				HART			
Ä	18	PRECISION				±0	.25% F.E			
1	19	REPEATABILITY				BY MAN	IUFACTURER			
Ì	20	CALIBRATION RANGE		BY MAN	IUFACTURER					
ľ	21	CALIBRATED RANGE			0 @ 22 ℃					
ľ	22	ELECTRICAL CONNECTION	ı			1/2	" NPT (F)			
ŀ	23	DJUSTABLE RANGE / AJ. LO	OCAL ZERO AND SPAI	N		YE	ES / YES			
	24	TYPE		TEMPERATU	RE AND HUMIDITY					
ı	33	MOUNTING			DUCT					
ŀ	25	ELEMENT TYPE	ELEMENT MATE	RIAL	BY MANUF	ACTURER	S	S316L		
SENSOR	26	LENGTH (L)	DIAMETER		300	mm	BY MAN	UFACTURER		
ENS		HUMIDITY			0~100%					
Ñ		SENSOR CONNECTION TO	WELL		BY MANUFACTURER					
ŀ	31	CONNECTION TO THE PRO	CESS		FLANGES FOR DUCT					
ľ	35									
	29	CONFIGURATOR CABLE					YES			
֝֝׆֟֝֟֝֟֝	30	DISPLAY					NO			
SS	32	FIXING FLANGE IN DUCT					YES			
ACCESSORY	34	CABLE GLAND					YES			
Ă	35									
	42	FLUID	PHYSICAL STATUS		AIR		Al	R		
SV	43	MINIMUM TEMPERATURE	NORMAL	MAXIMUM	18	20	22	°C		
0		MINIMUM PRESSURE	NORMAL	MAXIMUM		12.5		Pa		
3		MINIMUM HUMIDITY	MAXIMUM HUMIL	DITY	30	%RH	60	%RH		
კ	46	VISCOSITY @ OPERATING	CONDITION				Ср			
NG	47	DENSITY @ OPERATING C					kg/m³			
OPERATING CONDITIONS		SUSPENDED SOLIDS (%)					NO			
)PE	49	M.M. /Z/Cp/Cv					//			
٦	50	· · · · · · · · · · · · · · · · · · ·								
	_	MANUFACTURER				V	AISALA			
			HTM330							









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SHEET:

# TEMPERATURE AND HUMIDITY TRANSMITTER

6 de 24

					-			1			
	1	INSTRUMENT TAG NUMBEI	₹			TT/MT-/	AHU-7B-2-001				
	2	SERVIÇE			RETURN HUI	MIDITY AND T	EMPERATURE AIR	IN THE DUCT			
	3	P&ID				7B-	-M-0-5-22				
GENERAL	4	PIPE LINE	EQUIPMENT NUN	MBER	RETURN I	DUCT	AHU-	-7B-2			
NEF	5	EQUIPMENT MATERIAL / PI	PE				-				
GE	6	AREA CLASSIFICATION				NOT	CLASSIFIED				
	7	ENCLOSURE CLASSIFICAT	ION			IP 65 (MÍN.) C	ONF. NBR IEC 60529	9			
	8	CERTIFICATES				(SEE GEN	ERAL NOTES 4)				
	9										
	10	TYPE				MICRO	PROCESSED				
	11	MOUNTING				INTEGR	RAL ELEMENT				
ı	13	BODY PRESSURE CLASS				BY MAN	IUFACTURER				
	14	HOUSING MATERIAL				POLYCAR	RBONATE / ABS				
~	15	POWER SUPPLY				24 Vo	cc - 2 WIRE				
11E	16	OUTPUT SIGNAL	QUANTITY		4 - 20 mA (500 c	ohms @ 24 Vcc	c) (2x) CON	NFIGURABLE			
INS.	17	COMMUNICATION PROTOC	OL				HART				
TRANSMITTER	18	PRECISION				±0	.25% F.E				
۲ ا	19	REPEATABILITY				BY MAN	IUFACTURER				
	20	CALIBRATION RANGE		BY MAN	IUFACTURER						
ı	21	CALIBRATED RANGE	ALIBRATED RANGE				0 @ 22 ℃				
ı	22	ELECTRICAL CONNECTION	Ī			1/2	" NPT (F)				
ı	23	DJUSTABLE RANGE / AJ. LO	OCAL ZERO AND SPAI	V		YE	ES / YES				
	24	TYPE		TEMPERATU	RE AND HUMIDITY						
Ī	33	MOUNTING			DUCT						
	25	ELEMENT TYPE	ELEMENT MATER	RIAL	BY MANUF	ACTURER	S	S316L			
SENSOR	26	LENGTH (L)	DIAMETER		300	mm	BY MAN	UFACTURER			
Ë	27	HUMIDITY			0~100%						
S	27	SENSOR CONNECTION TO	WELL	-	BY MANUFACTURER						
ŀ	31	CONNECTION TO THE PRO	CESS		FLANGES FOR DUCT						
ŀ	35		-								
	29	CONFIGURATOR CABLE					YES				
8	30	DISPLAY					NO				
SS	32	FIXING FLANGE IN DUCT	-	-			YES				
ACCESSORY	34	CABLE GLAND					YES				
Ĭ	35										
	42	FLUID	PHYSICAL STATUS		AIR		Al	'R			
SNO	43	MINIMUM TEMPERATURE	NORMAL	MAXIMUM	18	20	22	°C			
2	44	MINIMUM PRESSURE	NORMAL	MAXIMUM		12.5		Pa			
3	45	MINIMUM HUMIDITY	MAXIMUM HUMIE	DITY	30	%RH	60	%RH			
<u>ა</u>	46	VISCOSITY @ OPERATING	CONDITION				Ср				
OPERATING CONDITIONS	47	DENSITY @ OPERATING C					kg/m³				
RA	48	SUSPENDED SOLIDS (%)					NO				
)PE	49	M.M. / Z / Cp/Cv				•••	//				
~	50										
7	51	MANUFACTURER				V	AISALA				
- 1			HTM330								









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7 de 24 REV.:

# TEMPERATURE AND HUMIDITY TRANSMITTER

					1		41#1 =D 0 000	] 1		
	1	INSTRUMENT TAG NUMBEI	K			-	AHU-7B-2-002			
	2	SERVIÇE			RETURN HUI		EMPERATURE AIR	IN THE DUCT		
	3	P&ID					-M-0-5-22			
3AL	4	PIPE LINE	EQUIPMENT NUM	IBER	SUPPLY I	DUCT	AHU	-7B-2		
GENERAL	5	EQUIPMENT MATERIAL / PI	PE				-			
GE	6	AREA CLASSIFICATION				NOT	CLASSIFIED			
	7	ENCLOSURE CLASSIFICAT	TION		IP 65 (MÍN.) CONF. NBR IEC 60529					
	8	CERTIFICATES			(SEE GENERAL NOTES 4)					
	9									
	10	TYPE				MICRO	PROCESSED			
	11	MOUNTING				INTEGR	RAL ELEMENT			
	13	BODY PRESSURE CLASS				BY MAN	NUFACTURER			
	14	HOUSING MATERIAL				POLYCAR	RBONATE / ABS			
R	15	POWER SUPPLY				24 V	cc - 2 WIRE			
TTE	16	OUTPUT SIGNAL	QUANTITY		4 - 20 mA (500 d	ohms @ 24 Vc	c) (2x) COI	NFIGURABLE		
IMS	17	COMMUNICATION PROTOC	COL				HART			
TRANSMITTER	18	PRECISION				±0	),25% F.E			
7.5	19	REPEATABILITY				BY MAN	NUFACTURER			
	20	CALIBRATION RANGE				BY MAN	NUFACTURER			
	21	CALIBRATED RANGE			0 @ 22 °C					
	22	ELECTRICAL CONNECTION	I			1/2	?" NPT (F)			
	23	DJUSTABLE RANGE / AJ. L	OCAL ZERO AND SPAN	1		YI	ES / YES			
	24	TYPE				TEMPERATU	IRE AND HUMIDITY			
	33	MOUNTING					DUCT			
۵.	25	ELEMENT TYPE	ELEMENT MATER	PIAL	BY MANUF	ACTURER	S	SS316L		
SENSOR	26	LENGTH (L)	DIAMETER		300	mm	BY MAN	IUFACTURER		
EN	27	HUMIDITY	•		0~100%					
S	27	SENSOR CONNECTION TO	WELL		BY MANUFACTURER					
	31	CONNECTION TO THE PRO	CESS			FLANGES FOR DUCT				
	35									
	29	CONFIGURATOR CABLE					YES			
OR)	30	DISPLAY					NO			
SSE	32	FIXING FLANGE IN DUCT					YES			
ACCESSORY	34	CABLE GLAND					YES			
A	35									
	42	FLUID	PHYSICAL STATUS		AIR		A	IR		
SNC	43	MINIMUM TEMPERATURE	NORMAL	MAXIMUM	18	20	22	°C		
JITIC	44	MINIMUM PRESSURE	NORMAL	MAXIMUM		12.5		Pa		
JNC	45	MINIMUM HUMIDITY	MAXIMUM HUMID	ITY	30	%RH	60	%RH		
3 C	46	VISCOSITY @ OPERATING	CONDITION				Ср			
OPERATING CONDITIONS	47	DENSITY @ OPERATING C	ONDITION				kg/m³			
FRA	48	SUSPENDED SOLIDS (%)					NO			
OPE	49	M.M. / Z / Cp/Cv					.//			
	50						-			
	51 MANUFACTURER					V	/AISALA			
	52	MODEL				ŀ	HTM330			
1107					_					









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SHEET:

8 de 24 REV.:

# TEMPERATURE AND HUMIDITY TRANSMITTER

								1		
	1	INSTRUMENT TAG NUMBE	R			TT/MT-/	AHU-7B-3-001			
	2	SERVIÇE			RETURN HU	JMIDITY AND T	EMPERATURE AIR	IN THE DUCT		
	3	P&ID				7B-	-M-0-5-23			
ΑΓ	4	PIPE LINE	EQUIPMENT N	IUMBER	RETURN	DUCT	AHU-	-7B-3		
IER.	5	EQUIPMENT MATERIAL / P.	IPE				-			
GENERAL	6	AREA CLASSIFICATION				NOT	CLASSIFIED			
Ĭ	7	ENCLOSURE CLASSIFICAT	TON		IP 65 (MÍN.) CONF. NBR IEC 60529					
	8	CERTIFICATES			(SEE GENERAL NOTES 4)					
	9					(SEE SEIVERNE NOTES 4)				
	,	TYPE				MICRO	PROCESSED			
	_	MOUNTING					RAL ELEMENT			
		BODY PRESSURE CLASS					IUFACTURER			
	_	HOUSING MATERIAL					RBONATE / ABS			
٠.		POWER SUPPLY					cc - 2 WIRE			
Ŧ		OUTPUT SIGNAL	QUANTITY		4 - 20 mA (500	ohms @ 24 Vcc		NFIGURABLE		
MI		COMMUNICATION PROTO			. 20 (000		HART			
TRANSMITTER		PRECISION	<del></del>				,25% F.E			
TR/		REPEATABILITY					IUFACTURER			
	_	CALIBRATION RANGE								
		CALIBRATED RANGE				BY MANUFACTURER 0 @ 22 ℃				
		ELECTRICAL CONNECTION	M.				" NPT (F)			
		DJUSTABLE RANGE / AJ. L		DAN			ES / YES			
_		TYPE	OCAL ZENO AND SI	-AIV	+		IRE AND HUMIDITY			
		MOUNTING			DUCT					
			ELEMENT MA	TEDIAL	DV MANU	IFACTURER		S316L		
N.		ELEMENT TYPE		IERIAL						
SENSOR		LENGTH (L) HUMIDITY	DIAMETER		300 mm BY MANUFACTURER 0~100%					
SE	_		14/5/							
		SENSOR CONNECTION TO			BY MANUFACTURER FLANGES FOR DUCT					
	31	CONNECTION TO THE PRO	CESS			FLANGE	ES FUR DUCT			
_	35	CONFIGURATOR CARLE					\/50			
۲ ۲		CONFIGURATOR CABLE					YES			
ACCESSORY		DISPLAY					NO			
Ä							YES			
ACC	34	CABLE GLAND					YES			
_	35	51.110	DUNGIONI OTATU		445			10		
S		FLUID	PHYSICAL STATUS		AIF	1	Al Al	I		
OPERATING CONDITIONS		MINIMUM TEMPERATURE		MAXIMUM	18	20	22	°C		
		MINIMUM PRESSURE	NORMAL	MAXIMUM		12.5	22	Pa		
<u> </u>		MINIMUM HUMIDITY	MAXIMUM HU	IVIIUI Y	30	%RH		%RH		
<u>5</u>	46	VISCOSITY @ OPERATING					Cp			
471	_	DENSITY @ OPERATING C	ONDITION				kg/m³			
T Z		SUSPENDED SOLIDS (%)					NO			
0F	_	M.M. / Z / Cp/Cv	M.M. /Z/Cp/Cv				//			
_	50									
		MANUFACTURER			AISALA					
	52	MODEL				HTM330				









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SHEET:

9 de 24 REV.:

# TEMPERATURE AND HUMIDITY TRANSMITTER

	1	INSTRUMENT TAG NUMBE	D.		1	ΤΤ/ΛΛΤ-Δ	HU-7B-3-002	!			
	2	SERVIÇE	N .		DETUDNI UU		EMPERATURE AIR	IN THE DUCT			
	_	P&ID			RETURN HU		M-0-5-23	IN THE DOCT			
	3		I FOLUDIA ENT N	UMBED	SUPPLY			70.0			
GENERAL	4	PIPE LINE	EQUIPMENT N	UNBER	SUPPLY	DUCT	AHU-	-7B-3			
ENE	5	EQUIPMENT MATERIAL / P	IPE			NOTO	-				
ß	6	AREA CLASSIFICATION					LASSIFIED				
	7	ENCLOSURE CLASSIFICAT	ION				NF. NBR IEC 60529	9			
	8	CERTIFICATES			(SEE GENERAL NOTES 4)						
	9										
	10	TYPE					PROCESSED				
	11	MOUNTING					AL ELEMENT				
	_	BODY PRESSURE CLASS					UFACTURER				
		HOUSING MATERIAL					BONATE / ABS				
F.	15	POWER SUPPLY					c - 2 WIRE				
Ë	16	OUTPUT SIGNAL	QUANTITY		4 - 20 mA (500	ohms @ 24 Vcc	) (2x) CON	NFIGURABLE			
ISM			COL			ŀ	HART				
TRANSMITTER	18	PRECISION				±0,2	25% F.E				
1	19	REPEATABILITY				BY MAN	UFACTURER				
	20	CALIBRATION RANGE				BY MAN	UFACTURER				
	21	CALIBRATED RANGE			0 @ 22 ℃						
	22	ELECTRICAL CONNECTION	V			1/2"	NPT (F)				
	23	DJUSTABLE RANGE / AJ. L	OCAL ZERO AND SP	PAN		YE	S/YES				
	24	TYPE				TEMPERATUR	RE AND HUMIDITY				
	33	MOUNTING		L	DUCT						
	25	ELEMENT TYPE	ELEMENT MAT	ERIAL	BY MANUI	BY MANUFACTURER SS316L					
SENSOR	26	LENGTH (L)	DIAMETER		300	300 mm BY MANUFACTURER					
EN	27	HUMIDITY			0~100%						
S	27	SENSOR CONNECTION TO	WELL		BY MANUFACTURER						
	31	CONNECTION TO THE PRO	CESS		FLANGES FOR DUCT						
	35										
Ţ	29	CONFIGURATOR CABLE					YES				
ACCESSORY	30	DISPLAY					NO				
SS	32	FIXING FLANGE IN DUCT					YES				
SC	34	CABLE GLAND					YES				
Ă	35										
	42	FLUID	PHYSICAL STATUS		AIR		Al	IR			
SN	43	MINIMUM TEMPERATURE	NORMAL	MAXIMUM	18	20	22	°C			
0/L/	44	MINIMUM PRESSURE	NORMAL	MAXIMUM		12.5		Pa			
ND	45	MINIMUM HUMIDITY	MAXIMUM HUN	<i>I</i> IDITY	30	%RH	60	%RH			
8	46	VISCOSITY @ OPERATING	CONDITION				Ср				
OPERATING CONDITIONS	47	DENSITY @ OPERATING CONDITION					kg/m³				
RA7	-				1		NO				
PE	49	M.M. / Z / Cp/Cv					//				
0	50	,									
H	_	MANUFACTURER	1	VA	AISALA						
	52	MODEL					TM330				
Щ	J2	MODEL			_l	- 11	, ,,,,,,,,,				









TITLE

# TEMPERATURE AND HUMIDITY TRANSMITTER

10 de 24 REV.:

					•			1		
L	1	INSTRUMENT TAG NUMBEI	₹			TT/MT-A	AHU-7B-4-001			
1	2	SERVIÇE			RETURN HUI	MIDITY AND T	EMPERATURE AIR	IN THE DUCT		
;	3	P&ID				7B-	-M-0-5-24			
SAL	4	PIPE LINE	EQUIPMENT NUM	BER	RETURN I	DUCT	AHU	-7B-4		
GENERAL	5	EQUIPMENT MATERIAL / PI	PE				-			
GE	6	AREA CLASSIFICATION				NOT	CLASSIFIED			
	7	ENCLOSURE CLASSIFICAT	ION		IP 65 (MÍN.) CONF. NBR IEC 60529					
- 6	8	CERTIFICATES				(SEE GENERAL NOTES 4)				
,	9									
1	10	TYPE				MICRO	PROCESSED			
1	11	MOUNTING				INTEGR	RAL ELEMENT			
1	13	BODY PRESSURE CLASS				BY MAN	IUFACTURER			
1	14	HOUSING MATERIAL				POLYCAF	RBONATE / ABS			
<sub>2</sub> 1	15	POWER SUPPLY				24 V	cc - 2 WIRE			
	16	OUTPUT SIGNAL	QUANTITY		4 - 20 mA (500 c	hms @ 24 Vcc	c) (2x) COI	NFIGURABLE		
TRANSMITTER 1 1 1 1 1	17	COMMUNICATION PROTOC	OL				HART			
Š 1	18	PRECISION				±0,	.25% F.E			
= 1	19	REPEATABILITY				BY MAN	IUFACTURER			
2	20	CALIBRATION RANGE				BY MAN	IUFACTURER			
2	21	CALIBRATED RANGE			0 @ 22 ℃					
2	22	ELECTRICAL CONNECTION	1			1/2	" NPT (F)			
2	23	DJUSTABLE RANGE / AJ. LO	OCAL ZERO AND SPAN	1		YE	ES / YES			
2	24	TYPE				TEMPERATU	RE AND HUMIDITY			
3	33	MOUNTING					DUCT			
	25	ELEMENT TYPE	ELEMENT MATER	IAL	BY MANUF	ACTURER	S	SS316L		
200012	26	LENGTH (L)	DIAMETER		300 mm BY MANUFACTURER					
<u> </u>	27	HUMIDITY			0~100%					
" 2	27	SENSOR CONNECTION TO	WELL		BY MANUFACTURER					
3	31	CONNECTION TO THE PRO	CESS		FLANGES FOR DUCT					
3	35				-					
_ 2	29	CONFIGURATOR CABLE			YES					
5 3	30	DISPLAY					NO			
	32	FIXING FLANGE IN DUCT					YES			
ACCESSORY	34	CABLE GLAND					YES			
3	35									
	42	FLUID	PHYSICAL STATUS		AIR		A	IR		
OPERATING CONDITIONS	43	MINIMUM TEMPERATURE	NORMAL	MAXIMUM	18	20	22	℃		
	_	MINIMUM PRESSURE	NORMAL	MAXIMUM		12.5		Pa		
\frac{1}{5}  \frac{1}{4}		MINIMUM HUMIDITY	MAXIMUM HUMID	ITY	30	%RH	60	%RH		
ن ا	46	VISCOSITY @ OPERATING	CONDITION				Ср			
₹ 4	_	DENSITY @ OPERATING C	ONDITION				kg/m³			
¥ 4	48	SUSPENDED SOLIDS (%)					NO			
40	49	M.M. / Z / Cp/Cv					.//			
5	50							·		
5	51	MANUFACTURER		V	AISALA					
5	52	MODEL			1	H	ITM330	·		





**EQUIPMENT NUMBER** 

**QUANTITY** 





PRD-AIC-DSH-079 NUMBER: 569-DB7B-AIC-711-006 CLIENT NR:

TITLE

INSTRUMENT TAG NUMBER

EQUIPMENT MATERIAL / PIPE

ENCLOSURE CLASSIFICATION

AREA CLASSIFICATION

BODY PRESSURE CLASS

COMMUNICATION PROTOCOL

HOUSING MATERIAL

POWER SUPPLY

**OUTPUT SIGNAL** 

REPEATABILITY

CALIBRATION RANGE

CALIBRATED RANGE

**ELECTRICAL CONNECTION** 

SENSOR CONNECTION TO WELL

DJUSTABLE RANGE / AJ. LOCAL ZERO AND SPAN

PRECISION

2

3

4

5

6

8 9

10

11

15

16

17

18

19

20

22

**TRANSMITTER** 

SENSOR

CCESSORY

GENERAL

SERVIÇE

PIPE LINE

CERTIFICATES

P&ID

TYPE

MOUNTING

11 de 24

### TEMPERATURE AND HUMIDITY TRANSMITTER

REV.: TT/MT-AHU-7B-4-002 RETURN HUMIDITY AND TEMPERATURE AIR IN THE DUCT 7B-M-0-5-24 SUPPLY DUCT AHU-7B-4 NOT CLASSIFIED IP 65 (MÍN.) CONF. NBR IEC 60529 (SEE GENERAL NOTES 4) MICROPROCESSED INTEGRAL ELEMENT BY MANUFACTURER POLYCARBONATE / ABS 24 Vcc - 2 WIRE (2x) CONFIGURABLE 4 - 20 mA (500 ohms @ 24 Vcc) HART ±0,25% F.E BY MANUFACTURER BY MANUFACTURER 0 @ 22 ℃

1/2" NPT (F)

YES / YES

BY MANUFACTURER

	24	TYPE		TEMPERATURE AND HUMIDITY				
	33	MOUNTING		DUCT				
	25	ELEMENT TYPE ELEMENT MATERIAL		BY MANUFACTURER	SS316L			
	26	LENGTH (L)	DIAMETER	300 mm	BY MANUFACTURER			
Š	27	HUMIDITY		0~100	%			

CONNECTION TO THE PROCESS FLANGES FOR DUCT 35 CONFIGURATOR CABLE YES DISPLAY NO

30 FIXING FLANGE IN DUCT YES 32 CABLE GLAND YES

	35							
	42	FLUID	PHYSICAL STATUS		AIR		Al	R
SNC	43	MINIMUM TEMPERATURE	NORMAL	MAXIMUM	18	20	22	°C
CONDITIONS	44	MINIMUM PRESSURE	NORMAL	MAXIMUM		12.5		Pa
]NC	45	MINIMUM HUMIDITY	MAXIMUM HUMI	DITY	30	%RH	60	%RH
	46	VISCOSITY @ OPERATING	CONDITION				Ср	
TING	47	DENSITY @ OPERATING C	CONDITION				kg/m³	
Σ	48	SUSPENDED SOLIDS (%)					NO	
OPE	49	M.M. / Z / Cp/Cv					.//	
	50							
	51	MANUFACTURER				V	AISALA	
	52	MODEL				H	HTM330	









TITLE

HTM330

12 de 24 REV.:

#### TEMPERATURE AND HUMIDITY TRANSMITTER

INSTRUMENT TAG NUMBER TT/MT-AHU-7B-5-001 SERVIÇE RETURN HUMIDITY AND TEMPERATURE AIR IN THE DUCT 2 P&ID 7B-M-0-5-25 3 **EQUIPMENT NUMBER** 4 PIPE LINE RETURN DUCT AHU-7B-5 EQUIPMENT MATERIAL / PIPE 5 AREA CLASSIFICATION NOT CLASSIFIED 6 ENCLOSURE CLASSIFICATION IP 65 (MÍN.) CONF. NBR IEC 60529 CERTIFICATES (SEE GENERAL NOTES 4) 8 TYPE MICROPROCESSED 10 MOUNTING INTEGRAL ELEMENT 11 BODY PRESSURE CLASS BY MANUFACTURER HOUSING MATERIAL POLYCARBONATE / ABS POWER SUPPLY 24 Vcc - 2 WIRE 15 **TRANSMITTER** QUANTITY (2x) CONFIGURABLE 16 **OUTPUT SIGNAL** 4 - 20 mA (500 ohms @ 24 Vcc) COMMUNICATION PROTOCOL 17 HART PRECISION ±0,25% F.E 18 REPEATABILITY BY MANUFACTURER 19 CALIBRATION RANGE BY MANUFACTURER 20 CALIBRATED RANGE 0 @ 22 ℃ **ELECTRICAL CONNECTION** 1/2" NPT (F) DJUSTABLE RANGE / AJ. LOCAL ZERO AND SPAN YES / YES 23 24 TYPE TEMPERATURE AND HUMIDITY MOUNTING 33 25 ELEMENT TYPE ELEMENT MATERIAL BY MANUFACTURER SS316I 26 LENGTH (L) DIAMETER 300 mm BY MANUFACTURER HUMIDITY 27 0~100% SENSOR CONNECTION TO WELL BY MANUFACTURER 27 CONNECTION TO THE PROCESS FLANGES FOR DUCT 35 CONFIGURATOR CABLE YES 29 30 DISPLAY NO FIXING FLANGE IN DUCT YES 32 CABLE GLAND 34 YES 35 PHYSICAL STATUS AIR 42 FLUID AIR OPERATING CONDITIONS 43 MINIMUM TEMPERATURE NORMAL MAXIMUM 20 °C MAXIMUM 44 MINIMUM PRESSURE NORMAL 12.5 Pa MAXIMUM HUMIDITY 30 %RH 60 %RH 45 MINIMUM HUMIDITY VISCOSITY @ OPERATING CONDITION Ср DENSITY @ OPERATING CONDITION kg/m³ 47 SUSPENDED SOLIDS (%) NO M.M. / Z / Cp/Cv 49 .../.../... MANUFACTURER VAISALA

NOTES:

MODEL









TITLE

HTM330

13 de 24

#### TEMPERATURE AND HUMIDITY TRANSMITTER

INSTRUMENT TAG NUMBER TT/MT-AHU-7B-5-002 SERVIÇE RETURN HUMIDITY AND TEMPERATURE AIR IN THE DUCT 2 P&ID 7B-M-0-5-25 3 **EQUIPMENT NUMBER** PIPE LINE SUPPLY DUCT AHU-7B-5 EQUIPMENT MATERIAL / PIPE 5 AREA CLASSIFICATION NOT CLASSIFIED 6 ENCLOSURE CLASSIFICATION IP 65 (MÍN.) CONF. NBR IEC 60529 CERTIFICATES (SEE GENERAL NOTES 4) 8 TYPE MICROPROCESSED 10 MOUNTING INTEGRAL ELEMENT 11 BODY PRESSURE CLASS BY MANUFACTURER HOUSING MATERIAL POLYCARBONATE / ABS POWER SUPPLY 24 Vcc - 2 WIRE 15 **TRANSMITTER** QUANTITY (2x) CONFIGURABLE 16 **OUTPUT SIGNAL** 4 - 20 mA (500 ohms @ 24 Vcc) COMMUNICATION PROTOCOL 17 HART PRECISION ±0,25% F.E 18 REPEATABILITY BY MANUFACTURER 19 CALIBRATION RANGE BY MANUFACTURER 20 CALIBRATED RANGE 0 @ 22 ℃ **ELECTRICAL CONNECTION** 1/2" NPT (F) DJUSTABLE RANGE / AJ. LOCAL ZERO AND SPAN YES / YES 23 24 TYPE TEMPERATURE AND HUMIDITY MOUNTING 33 25 ELEMENT TYPE ELEMENT MATERIAL BY MANUFACTURER SS316I 26 LENGTH (L) DIAMETER 300 mm BY MANUFACTURER HUMIDITY 27 0~100% SENSOR CONNECTION TO WELL BY MANUFACTURER 27 CONNECTION TO THE PROCESS FLANGES FOR DUCT 35 CONFIGURATOR CABLE YES 29 30 DISPLAY NO FIXING FLANGE IN DUCT YES 32 CABLE GLAND 34 YES 35 PHYSICAL STATUS AIR 42 FLUID AIR OPERATING CONDITIONS 43 MINIMUM TEMPERATURE NORMAL MAXIMUM 20 °C MAXIMUM 44 MINIMUM PRESSURE NORMAL 12.5 Pa MAXIMUM HUMIDITY 30 %RH 60 %RH 45 MINIMUM HUMIDITY VISCOSITY @ OPERATING CONDITION Ср DENSITY @ OPERATING CONDITION kg/m³ 47 SUSPENDED SOLIDS (%) NO M.M. / Z / Cp/Cv 49 .../.../... MANUFACTURER VAISALA MODEL









TITLE

SHEET: 14 de 2

# TEMPERATURE AND HUMIDITY TRANSMITTER

14 de 24 REV.:

								1
	1	INSTRUMENT TAG NUMBE	R			TT/MT-/	AHU-7B-6-001	
	2	SERVIÇE			RETURN HU	MIDITY AND T	EMPERATURE A	IR IN THE DUCT
	3	P&ID				7B-	-M-0-5-26	
! [ i i o	4	PIPE LINE	EQUIPMENT NUM	MBER	RETURN	DUCT	AF	HU-7B-6
	5	EQUIPMENT MATERIAL / P.	IPE				-	
ı	6	AREA CLASSIFICATION				NOT	CLASSIFIED	
ı	7	ENCLOSURE CLASSIFICAT	TON			IP 65 (MÍN.) C	ONF. NBR IEC 60	529
Ī	8	CERTIFICATES				(SEE GEN	ERAL NOTES 4)	
I	9							
	10	TYPE				MICRO	PROCESSED	
I	11	MOUNTING				INTEGR	RAL ELEMENT	
Ī	13	BODY PRESSURE CLASS				BY MAN	IUFACTURER	
I	14	HOUSING MATERIAL				POLYCAF	RBONATE / ABS	
I	15	POWER SUPPLY				24 Vo	cc - 2 WIRE	
İ	16	OUTPUT SIGNAL	QUANTITY		4 - 20 mA (500	ohms @ 24 Vc	c) (2x) C	ONFIGURABLE
İ	17	COMMUNICATION PROTOC	COL				HART	
İ	18	PRECISION				±0	,25% F.E	
Ì	19	REPEATABILITY				BY MAN	IUFACTURER	
Ì	20	CALIBRATION RANGE				BY MAN	IUFACTURER	
İ	21	CALIBRATED RANGE				0	@ 22 ℃	
İ	22	ELECTRICAL CONNECTION	V			1/2	" NPT (F)	
İ	23	DJUSTABLE RANGE / AJ. L	OCAL ZERO AND SPAN	٧		YE	ES / YES	
1	24	TYPE		TEMPERATU	RE AND HUMIDI	ΤΥ		
Ì	33	MOUNTING			DUCT			
ŀ	25	ELEMENT TYPE	ELEMENT MATER	RIAL	BY MANUI	ACTURER		SS316L
	26	LENGTH (L)	DIAMETER		300	mm	BY MA	ANUFACTURER
ŀ		HUMIDITY				C	)~100%	
ŀ	27	SENSOR CONNECTION TO	WELL			BY MAN	IUFACTURER	
ŀ	31	CONNECTION TO THE PRO	CESS			FLANGE	S FOR DUCT	
Ì	35							
1	29	CONFIGURATOR CABLE					YES	
ı	30	DISPLAY					NO	
	32	FIXING FLANGE IN DUCT					YES	
ľ		CABLE GLAND					YES	
Ì	35							
1	42	FLUID	PHYSICAL STATUS		AIR			AIR
1	43	MINIMUM TEMPERATURE	NORMAL	MAXIMUM	18	20	22	°C
ľ	44	MINIMUM PRESSURE	NORMAL	MAXIMUM		12.5		Pa
j	45	MINIMUM HUMIDITY	МАХІМИМ НИМІЕ	DITY	30	%RH		60 %RH
f	46	VISCOSITY @ OPERATING	CONDITION				Ср	
ľ	47	DENSITY @ OPERATING C	ONDITION				kg/m³	
	48	SUSPENDED SOLIDS (%)					NO	
ľ	49	M.M. / Z / Cp/Cv					. / /	
	50							
1	51	MANUFACTURER				V	AISALA	
ı	52	MODEL				H	HTM330	









TITLE

15 de 24 REV.:

SHEET:

# TEMPERATURE AND HUMIDITY TRANSMITTER

								•		
	1	INSTRUMENT TAG NUMBE	R			TT/MT-A	HU-7B-7-001			
	2	SERVIÇE			RETURN HU	MIDITY AND TE	MPERATURE AII	R IN THE DUCT		
	3	P&ID			7B-M-0-5-27					
4L	4	PIPE LINE	EQUIPMENT NUM	/BER	RETURN	DUCT	AH	U-7B-7		
ER.	5	EQUIPMENT MATERIAL / P.	IPE			-				
GENERAL	6	AREA CLASSIFICATION				NOTC	CLASSIFIED			
	7	ENCLOSURE CLASSIFICAT	TON				NF. NBR IEC 605	29		
	8	CERTIFICATES					ERAL NOTES 4)			
	9	OLIVINIONI LO				(022 0274	27012770720 1)			
	10	TYPE				MICROE	PROCESSED			
		MOUNTING					AL ELEMENT			
		BODY PRESSURE CLASS			+		UFACTURER			
	$\vdash$	HOUSING MATERIAL					BONATE / ABS			
			DWER SUPPLY				c - 2 WIRE			
ER	_		QUANTITY					ONICIO I DADI E		
11	16				4 - 20 MA (500			ONFIGURABLE		
NSV	17		JOL				HART			
TRANSMITTER	_	PRECISION					25% F.E			
'							UFACTURER			
		CALIBRATION RANGE		BY MANUFACT						
							@ 22 ℃			
						1/2" NPT (F)  YES / YES				
		DJUSTABLE RANGE / AJ. L								
		TYPE			RE AND HUMIDIT	Y				
		MOUNTING			DUCT					
œ	25	ELEMENT TYPE	ELEMENT MATER	ELEMENT MATERIAL		FACTURER		SS316L		
SENSOR		LENGTH (L)	DIAMETER		300	) mm	BY MA	NUFACTURER		
SEN	27	HUMIDITY				0-	~100%			
,	27	SENSOR CONNECTION TO	WELL			BY MAN	UFACTURER			
	31	CONNECTION TO THE PRO	OCESS			FLANGE	S FOR DUCT			
	35									
γ	29	CONFIGURATOR CABLE					YES			
OR	30	DISPLAY					NO			
SSE	32	FIXING FLANGE IN DUCT					YES			
ACCESSORY	34	CABLE GLAND					YES			
٨	35									
	42	FLUID	PHYSICAL STATUS		AIR			AIR		
SNO	43	MINIMUM TEMPERATURE	NORMAL	MAXIMUM	18	20	22	°C		
ITIC		MINIMUM PRESSURE	NORMAL	MAXIMUM		12.5		Pa		
DNC	45	MINIMUM HUMIDITY	МАХІМИМ НИМІЕ	DITY	30	%RH	6	0 %RH		
200	46	VISCOSITY @ OPERATING	CONDITION				Ср			
OPERATING CONDITION	47	DENSITY @ OPERATING C	ONDITION				kg/m³			
RA 7	48	SUSPENDED SOLIDS (%)					NO			
PE	49	M.M. /Z/Cp/Cv					//			
	50	,			1					
	51	MANUFACTURER			†	VA	AISALA			
							TM330			
ш	_~_									

52 MODEL
NOTES:









TITLE

SHEET:

16 de 24 REV::

# TEMPERATURE AND HUMIDITY TRANSMITTER

**1** 

								1		
_ 1	1	INSTRUMENT TAG NUMBEI	₹			TT/MT-A	AHU-7B-7-002			
2	2	SERVIÇE			RETURN HUI	RETURN HUMIDITY AND TEMPERATURE AIR IN THE DUCT				
3	3	P&ID				7B-	-M-0-5-27			
ZAL 4	4	PIPE LINE	EQUIPMENT NUM	BER	SUPPLY D	DUCT	AHU	-7B-7		
GENERAL	5	EQUIPMENT MATERIAL / PI	PE			-				
GE G	6	AREA CLASSIFICATION				NOT	CLASSIFIED			
7	7	ENCLOSURE CLASSIFICAT	ION		ı	IP 65 (MÍN.) CONF. NBR IEC 60529				
8	8	CERTIFICATES				(SEE GEN	ERAL NOTES 4)			
9	9									
1	10	TYPE				MICRO	PROCESSED			
1	11	MOUNTING				INTEGR	RAL ELEMENT			
1.	13	BODY PRESSURE CLASS				BY MAN	IUFACTURER			
1	14	HOUSING MATERIAL				POLYCAF	RBONATE / ABS			
α 1.	15	POWER SUPPLY				24 V	cc - 2 WIRE			
1 1	16	OUTPUT SIGNAL	QUANTITY		4 - 20 mA (500 c	ohms @ 24 Vcc	c) (2x) COI	NFIGURABLE		
TRANSMITTER 1	17	COMMUNICATION PROTOC	OL				HART			
Ž 1	18	PRECISION				±0,	.25% F.E			
1	19	REPEATABILITY				BY MAN	IUFACTURER			
2	20	CALIBRATION RANGE				BY MAN	IUFACTURER			
2	21	CALIBRATED RANGE		0 @ 22 ℃						
2.	22	ELECTRICAL CONNECTION		1/2	" NPT (F)					
2	23	DJUSTABLE RANGE / AJ. LO		YE	ES / YES					
2	24	TYPE		TEMPERATU	RE AND HUMIDITY					
3	33	MOUNTING			DUCT					
	?5	ELEMENT TYPE	ELEMENT MATER	IAL	BY MANUF	ACTURER	S	SS316L		
SENSOR 2	26	LENGTH (L)	DIAMETER		300	mm	BY MAN	IUFACTURER		
2	27	HUMIDITY				С	~100%			
2	27	SENSOR CONNECTION TO	WELL			BY MANUFACTURER				
3	31	CONNECTION TO THE PRO		FLANGES FOR DUCT						
3	35									
2	29	CONFIGURATOR CABLE					YES			
3	30	DISPLAY					NO			
3	32	FIXING FLANGE IN DUCT					YES			
ACCESSORY	34	CABLE GLAND					YES			
3	35									
	12	FLUID	PHYSICAL STATUS		AIR		A	IR		
OPERATING CONDITIONS  4	13	MINIMUM TEMPERATURE	NORMAL	MAXIMUM	18	20	22	℃		
$\frac{1}{2}$	14	MINIMUM PRESSURE	NORMAL	MAXIMUM		12.5		Pa		
\frac{1}{5}  \frac{1}{4}	_	MINIMUM HUMIDITY	MAXIMUM HUMID	ITY	30	%RH	60	%RH		
ن ن 4	16	VISCOSITY @ OPERATING	CONDITION				Ср			
<u> 4</u>	_	DENSITY @ OPERATING C	ONDITION				kg/m³			
¥ 4	18	SUSPENDED SOLIDS (%)					NO			
1d0	19	M.M. / Z / Cp/Cv					//			
5	50									
5	51	MANUFACTURER				V	AISALA			
5	52	MODEL				F	ITM330	·		









TITLE

SHEET: 17 de 24 REV.: 1

# TEMPERATURE AND HUMIDITY TRANSMITTER

	-	INICTEL IMENT TAC NUIVADE	D			TT/A /IT	14117D 0	001	1		
	1	INSTRUMENT TAG NUMBE	П		DETUCK		AHU-7B-8-		IN THE BUILT		
	2	SERVIÇE			RETURN HU	MIDITY AND T		URE AIR	IN THE DUCT		
	3	P&ID					-M-0-5-28				
RAL	4	PIPE LINE	EQUIPMENT NUN	//BER	RETURN	DUCT		AHU-	·7B-8		
GENERAL		EQUIPMENT MATERIAL / PA	IPE				-				
GE	6	AREA CLASSIFICATION					CLASSIFIE				
	7	ENCLOSURE CLASSIFICAT	TON			IP 65 (MÍN.) C	ONF. NBR	IEC 60529	9		
	8	CERTIFICATES				(SEE GEN	IERAL NO	TES 4)			
	9										
	10	TYPE				MICRO	PROCESS	SED			
	11	MOUNTING				INTEGF	RAL ELEM	ENT			
	13	BODY PRESSURE CLASS				BY MAN	IUFACTU	IFACTURER			
	14	HOUSING MATERIAL				POLYCA	RBONATE	NATE / ABS			
æ	15	POWER SUPPLY				24 V	cc - 2 WIR	2 WIRE			
1	16	OUTPUT SIGNAL	QUANTITY		4 - 20 mA (500	ohms @ 24 Vc	c)	(2x) CON	NFIGURABLE		
IMS	17	COMMUNICATION PROTOC	COL				HART				
TRANSMITTER	18	PRECISION				±0	,25% F.E				
7	19	REPEATABILITY				BY MAN	IUFACTU	RER			
	20	CALIBRATION RANGE				BY MAN	IUFACTU	RER			
	21	CALIBRATED RANGE				0	@ 22 °C				
	22	ELECTRICAL CONNECTION	V			1/2	" NPT (F)				
	23	DJUSTABLE RANGE / AJ. LOCAL ZERO AND SPAN				YI	ES / YES				
	24	TYPE		TEMPERATU	IRE AND F	HUMIDITY					
	33	MOUNTING			DUCT						
	25	ELEMENT TYPE	ELEMENT MATER	RIAL	BY MANUI	ACTURER		S	S316L		
SENSOR		LENGTH (L)	DIAMETER		300	mm			UFACTURER		
SVE		HUMIDITY					0~100%				
S		SENSOR CONNECTION TO	WELL			BY MAN	IUFACTU	RER			
		CONNECTION TO THE PRO					ES FOR D				
	35										
		CONFIGURATOR CABLE					YES				
ŘΥ		DISPLAY					NO				
ACCESSORY	_	FIXING FLANGE IN DUCT					YES				
Ğ	_	CABLE GLAND					YES				
AC	35	CABLE CEATIVE					720				
		FLUID	PHYSICAL STATUS		AIR			Al	'IR		
S		MINIMUM TEMPERATURE		MAXIMUM	18	20	-	22	°C		
OPERATING CONDITION		MINIMUM PRESSURE	NORMAL	MAXIMUM	10	12.5	<del>                                     </del>		Pa		
<u>א</u>		MINIMUM HUMIDITY	MAXIMUM HUMIE		30	%RH		60	%RH		
õ		VISCOSITY @ OPERATING			-	,,,,,,,,	Ср		, , , , , ,		
9		DENSITY @ OPERATING C					kg/m³				
ATI		SUSPENDED SOLIDS (%)	OINDITION				NO NO				
PER											
õ	49	M.M. / Z / Cp/Cv				••	. / /				
_	50	MANUEACTURER				1.	(A)CA! A				
		MANUFACTURER					AISALA				
	52	MODEL				F	HTM330				









TITLE

HTM330

18 de 24

# TEMPERATURE AND HUMIDITY TRANSMITTER

INSTRUMENT TAG NUMBER TT/MT-AHU-7B-8-002 SERVIÇE RETURN HUMIDITY AND TEMPERATURE AIR IN THE DUCT 2 P&ID 7B-M-0-5-28 3 **EQUIPMENT NUMBER** PIPE LINE SUPPLY DUCT AHU-7B-8 EQUIPMENT MATERIAL / PIPE 5 AREA CLASSIFICATION NOT CLASSIFIED 6 ENCLOSURE CLASSIFICATION IP 65 (MÍN.) CONF. NBR IEC 60529 CERTIFICATES (SEE GENERAL NOTES 4) 8 TYPE MICROPROCESSED 10 MOUNTING INTEGRAL ELEMENT 11 BODY PRESSURE CLASS BY MANUFACTURER HOUSING MATERIAL POLYCARBONATE / ABS POWER SUPPLY 24 Vcc - 2 WIRE 15 **TRANSMITTER** QUANTITY (2x) CONFIGURABLE 16 **OUTPUT SIGNAL** 4 - 20 mA (500 ohms @ 24 Vcc) COMMUNICATION PROTOCOL 17 HART PRECISION ±0,25% F.E 18 REPEATABILITY BY MANUFACTURER 19 CALIBRATION RANGE BY MANUFACTURER 20 CALIBRATED RANGE 0 @ 22 ℃ **ELECTRICAL CONNECTION** 1/2" NPT (F) DJUSTABLE RANGE / AJ. LOCAL ZERO AND SPAN YES / YES 23 24 TYPE TEMPERATURE AND HUMIDITY MOUNTING 33 25 ELEMENT TYPE ELEMENT MATERIAL BY MANUFACTURER SS316I 26 LENGTH (L) DIAMETER 300 mm BY MANUFACTURER HUMIDITY 27 0~100% SENSOR CONNECTION TO WELL BY MANUFACTURER 27 CONNECTION TO THE PROCESS FLANGES FOR DUCT 35 CONFIGURATOR CABLE YES 29 30 DISPLAY NO FIXING FLANGE IN DUCT YES 32 CABLE GLAND 34 YES 35 PHYSICAL STATUS AIR 42 FLUID AIR OPERATING CONDITIONS 43 MINIMUM TEMPERATURE NORMAL MAXIMUM 20 °C MAXIMUM 44 MINIMUM PRESSURE NORMAL 12.5 Pa MAXIMUM HUMIDITY 30 %RH 60 %RH 45 MINIMUM HUMIDITY VISCOSITY @ OPERATING CONDITION Ср DENSITY @ OPERATING CONDITION kg/m³ 47 SUSPENDED SOLIDS (%) NO 48 M.M. / Z / Cp/Cv 49 .../.../... MANUFACTURER VAISALA

NOTES:

MODEL









TITLE

SHEET: 19 de 24 REV.:

# TEMPERATURE AND HUMIDITY TRANSMITTER

	, 1	INISTRUMENT TAC NUMBER	D		1	TT/A/T A I	JI J 7 R 0 001	1	
ŀ		INSTRUMENT TAG NUMBEI	n		DETUDALL		HU-7B-9-001	IN THE DUCT	
-		SERVIÇE P&ID			KETUKN HUM		MPERATURE AIR I 1-0-5-29	IN THE DUCT	
Jŀ	_	PIPE LINE	EQUIPMENT NU	MDED	RETURN D		I-U-5-29 AHU-	7D 0	
GENERAL		EQUIPMENT MATERIAL / PI		WBER	RETURN D	001	Апи-	76-9	
EN EN			IPE			NOTO	- 400/E/ED		
Ö	_	AREA CLASSIFICATION	701				ASSIFIED		
ŀ	_	ENCLOSURE CLASSIFICAT	ION		IF-		NF. NBR IEC 60529	)	
ŀ	8	CERTIFICATES				(SEE GENE	RAL NOTES 4)		
$\dashv$	9	7.05				140000	20050050		
ŀ		TYPE					ROCESSED		
-		MOUNTING					L ELEMENT		
ŀ	_	BODY PRESSURE CLASS					IFACTURER		
ŀ		HOUSING MATERIAL					BONATE / ABS		
۲ <u>.</u>		POWER SUPPLY					- 2 WIRE		
:	_	OUTPUT SIGNAL	QUANTITY		4 - 20 mA (500 of			IFIGURABLE	
I KANSINII I EK		COMMUNICATION PROTOC	COL				ART		
Ĭ.		PRECISION					5% F.E		
`	_	REPEATABILITY					IFACTURER		
ļ		CALIBRATION RANGE					IFACTURER		
ļ		CALIBRATED RANGE			0 @ 22 °C				
		ELECTRICAL CONNECTION  DUISTABLE PANGE / A LLOCAL ZEDO AND SPAN					NPT (F)		
	_	DJUSTABLE RANGE / AJ. LOCAL ZERO AND SPAN					S / YES		
ļ		TYPE		TEMPERATUR	E AND HUMIDITY				
ı		MOUNTING		D	UCT				
r	25	ELEMENT TYPE	ELEMENT MATE	RIAL	BY MANUFA	ACTURER	S	S316L	
ROONES		LENGTH (L)	DIAMETER		300 r	nm	BY MAN	UFACTURER	
	27	HUMIDITY				0~	100%		
´ [	27	SENSOR CONNECTION TO	WELL			BY MANU	IFACTURER		
	31	CONNECTION TO THE PRO	CESS			FLANGES	FOR DUCT		
	35								
$\lfloor$	29	CONFIGURATOR CABLE				Υ.	/ES		
5	30	DISPLAY				1	NO		
20	32	FIXING FLANGE IN DUCT				<b>Y</b>	/ES		
ACCESSORY	34	CABLE GLAND				)	/ES		
٦	35								
Ī	42	FLUID	PHYSICAL STATUS		AIR		AI	R	
કુ [	43	MINIMUM TEMPERATURE	NORMAL	MAXIMUM	18	20	22	℃	
<u> </u>	44	MINIMUM PRESSURE	NORMAL	MAXIMUM		12.5		Pa	
{ [	45	MINIMUM HUMIDITY	MAXIMUM HUMII	DITY	30 9	%RH	60	%RH	
<u> </u>	46	VISCOSITY @ OPERATING	CONDITION			(	Cp .		
{	47	DENSITY @ OPERATING C	ONDITION			k	g/m³		
₹	48	SUSPENDED SOLIDS (%)					NO		
OPERATING CONDITIONS	49	M.M. / Z / Cp/Cv				/	/		
~	50								
_	E1	MANUFACTURER			VAISALA				
	51								









569-DB7B-AIC-711-006 TITLE

CLIENT NR:

PRD-AIC-DSH-079

SHEET:

# TEMPERATURE AND HUMIDITY TRANSMITTER

20 de 24 REV.: **1** 

								1		
	1	INSTRUMENT TAG NUMBEI	7			TT/MT-A	AHU-7B-9-002			
	2	SERVIÇE			RETURN HU	MIDITY AND T	EMPERATURE AIR	IN THE DUCT		
	3	P&ID				7B-	M-0-5 <b>-</b> 29			
7	4	PIPE LINE	EQUIPMENT NUM	1BER	SUPPLY	DUCT	AHU	-7B-9		
GENERAL	5	EQUIPMENT MATERIAL / PI	PE				-			
	6	AREA CLASSIFICATION				NOT	CLASSIFIED			
ı	7	ENCLOSURE CLASSIFICAT	ION			IP 65 (MÍN.) CO	ONF. NBR IEC 6052	9		
ľ	8	CERTIFICATES				(SEE GEN	ERAL NOTES 4)			
ľ	9									
T	10	TYPE				MICRO	PROCESSED			
ı	11	MOUNTING				INTEGR	AL ELEMENT			
ľ	13	BODY PRESSURE CLASS		BY MAN	IUFACTURER					
ı	14	HOUSING MATERIAL		POLYCAR	BONATE / ABS					
,	15	POWER SUPPLY		24 Vo	cc - 2 WIRE					
]	16	OUTPUT SIGNAL	QUANTITY		4 - 20 mA (500	ohms @ 24 Vcc	c) (2x) COI	NFIGURABLE		
	17	COMMUNICATION PROTOC	OL			ļ	HART			
	18	PRECISION				±0,	25% F.E			
:	19	REPEATABILITY				BY MAN	IUFACTURER			
t	20	CALIBRATION RANGE				BY MANUFACTURER  BY MANUFACTURER				
ı	21	CALIBRATED RANGE			0 @ 22 ℃					
t	22	ELECTRICAL CONNECTION				1/2	" NPT (F)			
ı	23	DJUSTABLE RANGE / AJ. LOCAL ZERO AND SPAN				YE	S/YES			
1	24	TYPE				TEMPERATU	RE AND HUMIDITY			
t	33	MOUNTING			DUCT					
	25	ELEMENT TYPE	ELEMENT MATER	RIAL	BY MANUI	FACTURER	s	SS316L		
	26	LENGTH (L)	DIAMETER		300	) mm	BY MAN	IUFACTURER		
?		HUMIDITY				0~100%				
5		SENSOR CONNECTION TO	WELL			BY MANUFACTURER				
ŀ	31	CONNECTION TO THE PRO	CESS			FLANGE	S FOR DUCT			
ŀ	35									
1		CONFIGURATOR CABLE					YES			
<u>:</u>		DISPLAY					NO			
βŀ		FIXING FLANGE IN DUCT					YES			
J F	_	CABLE GLAND					YES			
₹	35									
1	42	FLUID	PHYSICAL STATUS		AIR		Α	IR		
		MINIMUM TEMPERATURE	NORMAL	MAXIMUM	18	20	22	°C		
2		MINIMUM PRESSURE	NORMAL	MAXIMUM		12.5		Pa		
1	45	MINIMUM HUMIDITY	MAXIMUM HUMID	ITY	30	%RH	60	%RH		
3	46	VISCOSITY @ OPERATING	CONDITION				Ср			
	47	DENSITY @ OPERATING C	ONDITION				kg/m³			
<u> </u>		SUSPENDED SOLIDS (%)					NO			
<u> </u>		M.M. / Z / Cp/Cv					//			
	50									
1	51	MANUFACTURER				V	AISALA			
		MODEL	VAISALA  HTM330							









NUMBER: 569-DB7B-AIC-711-006 TITLE

CLIENT NR:

PRD-AIC-DSH-079

SHEET:

# TEMPERATURE AND HUMIDITY TRANSMITTER

21 de 24 REV.:

					•			1		
1	1 1	INSTRUMENT TAG NUMBER	?			TT/MT-L	DOAS-7B-001			
2	2 5	SERVIÇE			RETURN HUMIDITY AND TEMPERATURE AIR IN THE DUCT					
3	3 F	P&ID				7B-	-M-0-5-31			
¥ 4	4 F	PIPE LINE	EQUIPMENT NUM	IBER	RETURN I	DUCT	AHU	I-7B-9		
GENERAL G	5 E	EQUIPMENT MATERIAL / PI	PE			-				
B e	5 A	AREA CLASSIFICATION				NOT	CLASSIFIED			
7	7 E	ENCLOSURE CLASSIFICATI	ION		1	P 65 (MÍN.) CO	ONF. NBR IEC 6052	9		
٤	3 (	CERTIFICATES				(SEE GEN	ERAL NOTES 4)			
S	9									
1	0 7	TYPE				MICRO	PROCESSED			
1	1 /	MOUNTING				INTEGR	RAL ELEMENT			
1.	3 E	BODY PRESSURE CLASS				BY MAN	IUFACTURER			
1.	4 F	HOUSING MATERIAL		POLYCAR	RBONATE / ABS					
χ 1.	5 F	POWER SUPPLY				24 Vcc - 2 WIRE				
1 10	6	OUTPUT SIGNAL	QUANTITY		4 - 20 mA (500 d	ohms @ 24 Vcc	c) (2x) COI	NFIGURABLE		
TANSMIT EX	7 (	COMMUNICATION PROTOC	OL				HART			
ž 10	8 F	PRECISION				±0,	,25% F.E			
1	9 F	REPEATABILITY				BY MAN	IUFACTURER			
2	0	CALIBRATION RANGE				BY MAN	IUFACTURER			
2	1 (	CALIBRATED RANGE	0 @ 22 ℃							
2	2 E	ELECTRICAL CONNECTION				1/2	" NPT (F)			
2.	3 L	DJUSTABLE RANGE / AJ. LO		YE	ES / YES					
2	4 7	TYPE		TEMPERATU	RE AND HUMIDITY	•				
3.	3 1	MOUNTING			DUCT					
	5 E	ELEMENT TYPE	ELEMENT MATER	IAL	BY MANUF	ACTURER	S	SS316L		
2000	6 L	LENGTH (L)	DIAMETER		300	mm	BY MAN	IUFACTURER		
2	7 F	HUMIDITY				0	)~100%			
" 2	7 3	SENSOR CONNECTION TO	WELL			BY MAN	IUFACTURER			
3	31 (	CONNECTION TO THE PRO	CESS		FLANGES FOR DUCT					
3	5									
<u>_</u> 2	9 (	CONFIGURATOR CABLE			YES					
3		DISPLAY					NO			
) 2 1 3	2 F	FIXING FLANGE IN DUCT					YES			
3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	34 (	CABLE GLAND					YES			
3	5									
4	2 F	FLUID	PHYSICAL STATUS		AIR		Α	IR .		
OPERATING CONDITIONS	3 /	MINIMUM TEMPERATURE	NORMAL	MAXIMUM	18	20	22	℃		
5 4	_		NORMAL	MAXIMUM		12.5		Pa		
5 4		MINIMUM HUMIDITY	MAXIMUM HUMID	ITY	30	%RH	60	%RH		
2 [4	ا 6	VISCOSITY @ OPERATING	CONDITION				Ср			
4	_	DENSITY @ OPERATING CO	ONDITION				kg/m³			
4	_	SUSPENDED SOLIDS (%)					NO			
d 4	9 /	M.M. / Z / Cp/Cv					. / /			
5	_									
5	-	MANUFACTURER					AISALA			
5	2 /	MODEL				H	HTM330			









NUMBER: **569-DB7B-AIC-711-006**TITLE

CLIENT NR:

PRD-AIC-DSH-079

22 de 24

SHEET:

# TEMPERATURE AND HUMIDITY TRANSMITTER

22 ue REV.: **1** 

								1		
	1	INSTRUMENT TAG NUMBEI	R			TT/MT-	EF-7B-6A-001			
	2	SERVIÇE			FROM EF-7B-6A -	FROM EF-7B-6A - HUMIDITY AND TEMPERATURE AIR IN THE DU				
	3	P&ID				7B	-M-0-5-26			
SAL	4	PIPE LINE	EQUIPMENT NUN	<i>MBER</i>	RETURN	DUCT	EF-7	B-6A		
GENERAL	5	EQUIPMENT MATERIAL / PI	IPE				-			
GE	6	AREA CLASSIFICATION				NOT	CLASSIFIED			
	7	ENCLOSURE CLASSIFICAT	TON			IP 65 (MÍN.) C	ONF. NBR IEC 60529	)		
	8	CERTIFICATES				(SEE GEN	IERAL NOTES 4)			
	9									
	10	TYPE				MICRO	PROCESSED			
	11	MOUNTING				INTEGR	RAL ELEMENT			
	13	BODY PRESSURE CLASS		BY MAN	NUFACTURER					
	14	HOUSING MATERIAL		POLYCA	RBONATE / ABS					
۵	15	POWER SUPPLY		24 V	cc - 2 WIRE					
JE.	16	OUTPUT SIGNAL	QUANTITY		4 - 20 mA (500 c	ohms @ 24 Vc				
SMI	17	COMMUNICATION PROTOC	COL							
TRANSMITTER	18	PRECISION				±0	,25% F.E			
TR	19	REPEATABILITY				BY MAN	NUFACTURER			
	20	CALIBRATION RANGE				BY MAN	NUFACTURER			
	21	CALIBRATED RANGE				0	@ 22 °C			
	22	ELECTRICAL CONNECTION				1/2" NPT (F)				
	23	DJUSTABLE RANGE / AJ. LOCAL ZERO AND SPAN				YI	ES / YES			
	24	TYPE				TEMPERATU	IRE AND HUMIDITY			
	_	MOUNTING			DUCT					
	25	ELEMENT TYPE	ELEMENT MATER	RIAL	BY MANUF	ACTURER	S	S316L		
OR	26	LENGTH (L)	DIAMETER		300	mm	BY MAN	UFACTURER		
SENSOR		HUMIDITY				0~100%				
SI	-	SENSOR CONNECTION TO	WELL			BY MANUFACTURER				
	_	CONNECTION TO THE PRO			FLANGES FOR DUCT					
	35				†					
		CONFIGURATOR CABLE					YES			
ЯY		DISPLAY					NO			
SSC		FIXING FLANGE IN DUCT					YES			
ACCESSORY		CABLE GLAND					YES			
AC	35									
		FLUID	PHYSICAL STATUS		AIR		Al	R		
S	43		NORMAL	MAXIMUM	18	20	22	°C		
1017	44	MINIMUM PRESSURE	NORMAL	MAXIMUM	,,,	12.5		Pa		
NDI.	-	MINIMUM HUMIDITY	MAXIMUM HUMID		30	%RH	60	%RH		
CO	46	VISCOSITY @ OPERATING					Ср			
OPERATING CONDITIONS	47	DENSITY @ OPERATING C					kg/m³			
34 TI	-	SUSPENDED SOLIDS (%)	CIVETTON				NO			
PER	49	M.M. /Z/Cp/Cv			+		.//			
ō	50	Ινιινι. / Ζ / Ορ/Ον				••	. / /			
	-	MANUFACTURER			+	1/	'AISALA			
	_	MODEL					HTM330			
NOT		WODEL				r	1 1 IVI33U			









569-DB7B-AIC-711-006 TITLE

CLIENT NR:

PRD-AIC-DSH-079

SHEET:

# TEMPERATURE AND HUMIDITY TRANSMITTER

23 de 24 REV.:

					_			1		
	1	INSTRUMENT TAG NUMBEI	R			TT/MT-	EF-7B-9A-001			
	2	SERVIÇE			RETURN HUMIDITY AND TEMPERATURE AIR IN THE DUCT					
	3	P&ID				7B-	-M-0-5-29			
GENERAL	4	PIPE LINE	EQUIPMENT NUM	//BER	RETURN I	DUCT	EF-7	B-9A		
NE	5	EQUIPMENT MATERIAL / PI	PE				-			
GE	6	AREA CLASSIFICATION				NOT CLASSIFIED				
	7	ENCLOSURE CLASSIFICAT	TON			P 65 (MÍN.) C	ONF. NBR IEC 60529	9		
	8	CERTIFICATES				(SEE GEN	IERAL NOTES 4)			
	9									
	10	TYPE				MICRO	PROCESSED			
	11	MOUNTING				INTEGR	RAL ELEMENT			
	13	BODY PRESSURE CLASS		BY MAN	IUFACTURER					
		HOUSING MATERIAL		POLYCAF	RBONATE / ABS					
¥		POWER SUPPLY				24 Vo				
11		OUTPUT SIGNAL	QUANTITY		4 - 20 mA (500 d	ohms @ 24 Vcc	(2x) CON	IFIGURABLE		
SMI	17	COMMUNICATION PROTOC	COL				HART ±0,25% F.E			
IRANSMITIER	18	PRECISION				±0				
-	19	REPEATABILITY				BY MAN	IUFACTURER			
	20	CALIBRATION RANGE				BY MAN	IUFACTURER			
	21	CALIBRATED RANGE			0 @ 22 ℃					
	22	ELECTRICAL CONNECTION				1/2	" NPT (F)			
	23	DJUSTABLE RANGE / AJ. LOCAL ZERO AND SPAN				YE	ES / YES			
		TYPE		TEMPERATU	RE AND HUMIDITY					
	33	MOUNTING					DUCT			
٧	25	ELEMENT TYPE	ELEMENT MATER	RIAL	BY MANUF	ACTURER	S	S316L		
SENSOR		LENGTH (L)	DIAMETER		300	mm	BY MAN	UFACTURER		
Ä	27	HUMIDITY	·			C	~100%			
"	27	SENSOR CONNECTION TO	WELL		BY MANUFACTURER					
	31	CONNECTION TO THE PRO	CESS			FLANGE	ES FOR DUCT			
	35									
Y	29	CONFIGURATOR CABLE					YES			
5		DISPLAY					NO			
N V	32	FIXING FLANGE IN DUCT					YES			
ACCESSORY	34	CABLE GLAND					YES			
1	35									
_	42	FLUID	PHYSICAL STATUS		AIR		Al	R		
OPERATING CONDITIONS	43	MINIMUM TEMPERATURE	NORMAL	MAXIMUM	18	20	22	°C		
Ĭ.	44	MINIMUM PRESSURE	NORMAL	MAXIMUM		12.5		Pa		
5	45	MINIMUM HUMIDITY	MAXIMUM HUMID	DITY	30	%RH	60	%RH		
ا د	46	VISCOSITY @ OPERATING	CONDITION				Ср			
Ź	47	DENSITY @ OPERATING C	ONDITION				kg/m³			
¥ ¥	48	SUSPENDED SOLIDS (%)					NO			
OPE	49	M.M. / Z / Cp/Cv					.//			
	50									
	51	MANUFACTURER				V	AISALA			
	52	MODEL				H	HTM330			









569-DB7B-AIC-711-006 TITLE

CLIENT NR:

PRD-AIC-DSH-079

# TEMPERATURE AND HUMIDITY TRANSMITTER

SHEET: 24 de 24 REV.:

				-			1
1	INSTRUMENT TAG NUMBER				TT/MT-E	F-7B-9B-001	
2	SERVIÇE			RETURN HUM	IDITY AND TE	EMPERATURE AIR II	N THE DUCT
3	P&ID				7B-l	M-0-5-29	
₹ 4	PIPE LINE	EQUIPMENT NU	MBER	RETURN D	UCT	EF-7B	-9B
4 5 6	EQUIPMENT MATERIAL / PIPE					-	
6 GE	AREA CLASSIFICATION				NOT C	CLASSIFIED	
7	ENCLOSURE CLASSIFICATION			IF	<sup>2</sup> 65 (MÍN.) CO	NF. NBR IEC 60529	
8	CERTIFICATES				(SEE GENE	ERAL NOTES 4)	
9							
10	TYPE				MICROF	PROCESSED	
11	MOUNTING				INTEGRA	AL ELEMENT	
13	BODY PRESSURE CLASS				BY MAN	UFACTURER	
14	HOUSING MATERIAL		POLYCAR	BONATE / ABS			
r 15	POWER SUPPLY				24 Vc	c - 2 WIRE	
16	OUTPUT SIGNAL	QUANTITY		4 - 20 mA (500 of	nms @ 24 Vcc	) (2x) CONI	FIGURABLE
17	COMMUNICATION PROTOCOL				ŀ	HART	
16 17 18 18	PRECISION				±0,2	25% F.E	
19	REPEATABILITY				BY MAN	UFACTURER	
20	CALIBRATION RANGE				BY MAN	UFACTURER	
21	CALIBRATED RANGE				0 (	@ 22 ℃	
22	ELECTRICAL CONNECTION				1/2"	' NPT (F)	
23	DJUSTABLE RANGE / AJ. LOCAL ZERO AND SPAN				YE	S/YES	
24	TYPE		TEMPERATU	RE AND HUMIDITY			
33	MOUNTING				I	DUCT	
	ELEMENT TYPE	ELEMENT MATE	RIAL	BY MANUFA	ACTURER	SS	316L
26 27	LENGTH (L)	DIAMETER		300 r	nm	BY MANU	FACTURER
27	HUMIDITY			0~100%			
27	SENSOR CONNECTION TO WE	LL			BY MAN	UFACTURER	
31	CONNECTION TO THE PROCES	SS			FLANGE	S FOR DUCT	
35							
29	CONFIGURATOR CABLE					YES	
30	DISPLAY			NO			
32	FIXING FLANGE IN DUCT			YES			
30 32 34	CABLE GLAND					YES	
₹ 35							
	FLUID PH	YSICAL STATUS		AIR		AIF	?
43	MINIMUM TEMPERATURE NO	RMAL	MAXIMUM	18	20	22	℃
44	MINIMUM PRESSURE NO	RMAL	MAXIMUM		12.5		Pa
45	MINIMUM HUMIDITY	МАХІМИМ НИМІ	DITY	30 9	%RH	60	%RH
ک ط	VISCOSITY @ OPERATING COI	NDITION				Ср	
43 44 45 46 47 48 48 49	DENSITY @ OPERATING COND	DITION				kg/m³	
48	SUSPENDED SOLIDS (%)					NO	
49	M.M. / Z / Cp/Cv					//	
50							
51	MANUFACTURER				VA	AISALA	
52	MODEL				Н	TM330	