







DOC NUMBER:

569-DB7A-AIC-714-002

CLIENT NUMBER:

PRD-AIC-DSH-013

CLIENT:

TAKEDA/BAXALTA

PROJECT:

BURITI EPCVM PROJECT

DATA SHEET LEVEL SWITCH

2	26JAN2022	ISSUED FOR CONSTRUCTION UPDATED AS PER NOTES	MAB	MAF	RSP
1	17NOV2021	ISSUED FOR CONSTRUCTION UPDATED AS PER NOTES	MAB	MAF	RSP
0	13SEP2021	ISSUED FOR CONSTRUCTION	MAB	MAF	RSP
Α	31MAR2021	60% DD ISSUE	MAB	MAF	RSP
REV	DATE	DESCRIPTION	EXEC	CHECK	APPROV



LEVEL SWITCH







CLIENT NR: PRD-AIC-DSH-013 NUMBER: 569-DB7A-AIC-714-002

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REV.:

2

DOCUMENT REVIEW CONTROL

Revision	Α	0	1	2	3	4	Revision	Α	В	0	1	2	3	Revision	Α	В	0	1	2	3
Page							Page							Page						
1	\times	\boxtimes	\boxtimes	\boxtimes			26							51						
2	\times	\boxtimes	\boxtimes	\boxtimes			27							52						
3	\times	\boxtimes	\boxtimes	X			28							53						
4	\times	\boxtimes	\boxtimes	\times			29							54						
5	\times	\boxtimes	\boxtimes	X			30							55						
6	\times	\boxtimes		\times			31							56						
7				\times			32							57						
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NUMBER: 569-DB7A-AIC-714-002 CLIENT NR: PRD-AIC-DSH-013

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LEVEL SWITCH

REV.:

REFERENCE DOCUMENTS

7A-Z-0-2-20 7A-Z-0-2-21 7A-Z-0-2-31 PRD-AIC-LIS-046 DRUG PRODUCT - CIP CLEANING CHEMICAL STORAGE (TOTES) & DIST.

DRUG PRODUCT - CIP SYSTEM - CIP-7701

DRUG PRODUCT - PROC. WASTE - COLLECT & TEMP. / LIFT STATION - SK-8001 INTEGRATED PROJECT SERVICES - INSTRUMENT SUGGESTED SUPPLIER LIST

GENERAL NOTES

- 1 Each key must be appropriate for the classified area as indicated on the data sheet. the instrument must comply with the ordinance inmetro 83, dated
- 2 The nameplate must be in aisi 316, contain the tag, the serial number and the model of the level switch and be permanently attached to the respective instrument.
- 3 All electronic and electrical components subject to the attack of fungi and moisture must be tropicalized, that is, treated with a polyurethane cover or equivalent
- 4 The manufacture / construction can only be started after the drawings and other documents related to the part considered have been returned approved without any comments received.
- 5 Technical documents in general (drawings, technical specifications, data sheets and material requests, lists, manuals, etc.), must be identified.
- 6 The project documents must be prepared electronically.
- 7 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.

REVISION 0 - NOTES

1- REVISED AS PER INSTRUMENT LIST NUMBER PRD-AIC-LIS-010_B_PCS_INSTRUMENT_INDEX AND BACKLOG NUMBER 99000-184.0 2021.03.30 - A&IC DOCUMENTS - COMMENTS REV.01

REVISION 1 - NOTES

1 - ACCORDING NEW ARQUITECTURE UPDATED

REVISION 2 - NOTES

1 - ADDED INSTRUMENTS: LSH-430101 / LSH-430102 / LSL-430001 / LSL-430002



27 CALIBRATED RANGE

29 METER CASING

45 INCRUSTATION

MANUFACTURER

MODEL

47

48

49 50 SUSPENDED SOLIDS (%)

MAXIMUM LOSS OF LOAD ALLOWED

28 KEYBOARD FOR LOCAL CONFIGURATION







CONTACT DETECTION

ALUMINIO (COPPER FREE)

bar

Endress + Hauser (E+H) or Similar

569-DB7A-AIC-714-002 CLIENT NR: NUMBER: PRD-AIC-DSH-013

TITLE

⊦ VEI	_ SWITCH			SHEET: 4 de 7 REV.:			
1	INSTRUMENT TAG NUMBER		LSH	H-430101			
2	SERVIÇE		LEAK DETEC CONTA	AINMENT PALLET CN-4301			
3	P&ID		7A-	-Z-0-2-20			
4	PIPE LINE	EQUIPMENT NUMBER	-	CN-4301			
5	EQUIPMENT MATERIAL / PIPE		POLY	ETHYLENE			
6	AREA CLASSIFICATION		NOT C	CLASSIFIED			
7	ENCLOSURE CLASSIFICATION		IP 65 (MÍN.) CO	ONF. NBR IEC 60529			
8	CERTIFICATES		(SEE GENERA	AL NOTE 7, PAGE 3)			
9							
9	TYPE		CAF	PACITIVE			
10	TUBE MATERIAL		STAINL	LESS STEEL			
11	COATING MATERIAL		PFA				
12	ELECTRODE MATERIAL		316SS				
13	GROUNDING RING MATERIAL		YES (SEE GENERAL NOTES 7)				
14	CONNECTIONS		FLANGE				
15	CLASS AND FACE		#150 SMOOTH FACE				
16	FLANGE FACE FINISH		SMOOTH FACE				
17	SENSOR LENGTH		250mm				
18	MOUNTING		INTEGRA	L TO SENSOR			
19	POWER SUPPLY		24 Vo	cc - 2 FIOS			
20	OUTPUT SIGNAL		SPDT /	5A / 250 Vac			
21	COMMUNICATION PROTOCOL		-				
22	PRECISION			-			
23	REPEATABILITY		BY MANUFACTURER				
24	ELECTRICAL CONNECTION		1/2" NPT (F)				
25	LOCAL INDICATION			-			
26	CALIBRATION RANGE		-				
	1 2 3 4 5 6 7 8 9 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25	PRINCE SWITCH 1 INSTRUMENT TAG NUMBER 2 SERVIÇE 3 P&ID 4 PIPE LINE 5 EQUIPMENT MATERIAL / PIPE 6 AREA CLASSIFICATION 7 ENCLOSURE CLASSIFICATION 8 CERTIFICATES 9 9 TYPE 10 TUBE MATERIAL 11 COATING MATERIAL 12 ELECTRODE MATERIAL 13 GROUNDING RING MATERIAL 14 CONNECTIONS 15 CLASS AND FACE 16 FLANGE FACE FINISH 17 SENSOR LENGTH 18 MOUNTING 19 POWER SUPPLY 20 OUTPUT SIGNAL 21 COMMUNICATION PROTOCOL 22 PRECISION 23 REPEATABILITY 24 ELECTRICAL CONNECTION 25 LOCAL INDICATION	INSTRUMENT TAG NUMBER SERVIÇE PAID PIPE LINE EQUIPMENT NUMBER EQUIPMENT NUMBER EQUIPMENT NUMBER EQUIPMENT NUMBER EQUIPMENT NUMBER FUNCTION FUNCLOSURE CLASSIFICATION CERTIFICATES TYPE TUBE MATERIAL COATING MATERIAL ELECTRODE MATERIAL GROUNDING RING MATERIAL GROUNDING RING MATERIAL CONNECTIONS CLASS AND FACE FLANGE FACE FINISH SENSOR LENGTH MOUNTING POWER SUPPLY OUTPUT SIGNAL COMMUNICATION PROTOCOL PRECISION REPEATABILITY ELECTRICAL CONNECTION SERVICE AND	VEL SWITCH 1 INSTRUMENT TAG NUMBER 2 SERVIÇE LEAK DETEC CONTA 3 P&ID 7A 4 PIPE LINE EQUIPMENT NUMBER 5 EQUIPMENT MATERIAL / PIPE POLY 6 AREA CLASSIFICATION NOT C 7 ENCLOSURE CLASSIFICATION IP 65 (MÍN.) CO 8 CERTIFICATES (SEE GENERA 9 9 TYPE CAI 10 TUBE MATERIAL STAINI 11 COATING MATERIAL 12 ELECTRODE MATERIAL 13 GROUNDING RING MATERIAL 14 CONNECTIONS FOLASSIFICATION FOR SMO 15 CLASS AND FACE #150 SM 16 FLANGE FACE FINISH SMO 17 SENSOR LENGTH 18 MOUNTING INTEGRA 19 POWER SUPPLY 24 V. 20 OUTPUT SIGNAL SPDT / 21 COMMUNICATION PROTOCOL 22 PRECISION 24 REPEATABILITY BY MAN 24 ELECTRICAL CONNECTION 1/2 25 LOCAL INDICATION			

	30	PULSE OUTPUT	•
	31	TAGGING	YES (SEE GENERAL NOTES 2, PAGE 3)
!	32	SURGE PROTECTOR	_

S	31	TAGGING			ì	YES (SEE GENE	RAL NOTES 2, PAG	E 3)
	32	SURGE PROTECTOR					-	
SSC	33							
ACCESSORIES	34							
Įĕ	35							
	36	FLUID	PHYSICAL ST	ATUS	CAU	STIC	LIQ	UID
	37	MINIMUM FLOW	NORMAL	MAXIMUM	-	-	-	m³/h
	38	MINIMUM PRESSURE	NORMAL	MAXIMUM	-	-	ATM	bar-g
SNS	39	MINIMUM TEMPERATURE	NORMAL	MAXIMUM	-	-	30°	°C
E	40	PROJECT FLOW				-	m³/h	
CONDITIONS	41	DESIGN PRESSURE	DESIGN 1	EMPERATURE	-	bar-g		°C
	42	DENSITY @ OPERATING C	ONDITION			-	kg/m³	
ERATING	43	VISCOSITY @ OPERATING	CONDITION			-	Ср	
[₩	44	FLUID CONDUCTIVITY					μS/cm²	









569-DB7A-AIC-714-002 CLIENT NR: PRD-AIC-DSH-013 NUMBER:

TITLE

LEVEL SWITCH

SHEET: 5 de 7

LE	VEI	L SWITCH						REV.:		
	1	INSTRUMENT TAG NUMBE	 R			LSI	H-430102			
	2	SERVIÇE			LEAK DETEC CONTAINMENT PALLET CN-4301					
		P&ID			7A-Z-0-2-20					
ــِــا		PIPE LINE	EQUIPMENT NUM	MBER	- CN-4302					
GENERAL	-	EQUIPMENT MATERIAL / PI		··	POLYETHYLENE					
3EN		AREA CLASSIFICATION	· <u> </u>				CLASSIFIED			
		ENCLOSURE CLASSIFICAT	ION							
	8	CERTIFICATES	1011		IP 65 (MIN.) CONF. NBR IEC 60529 (SEE GENERAL NOTE 7, PAGE 3)					
	9	OLIVIII IO/VIEO				(OLL OLIVEIO	(ENOTE 1,171OE 0)			
	_	TYPE				CAF	PACITIVE			
		TUBE MATERIAL					LESS STEEL			
	-	COATING MATERIAL					PFA			
_		ELECTRODE MATERIAL					316SS			
VEN.		GROUNDING RING MATERI	ΙΔΙ				ENERAL NOTES 7)			
ELEMENT		CONNECTIONS				· · · · · · · · · · · · · · · · · · ·	LANGE			
ш	-	CLASS AND FACE					MOOTH FACE			
		FLANGE FACE FINISH					OTH FACE			
	-	SENSOR LENGTH					250mm			
	<u> </u>	MOUNTING					L TO SENSOR			
		POWER SUPPLY					cc - 2 FIOS			
		OUTPUT SIGNAL								
H			201		SPDT / 5A / 250 Vac					
Ħ		COMMUNICATION PROTOC	JOL							
NSN		PRECISION			BY MANUFACTURER					
CONVERTER / TRANSMITTER		REPEATABILITY	1		1/2" NPT (F)					
		ELECTRICAL CONNECTION	1			1/2	NPI (F)			
RTE		LOCAL INDICATION			-					
IVE	-	CALIBRATION RANGE			CONTACT DETECTION					
Ó		CALIBRATED RANGE			CONTACT DETECTION					
		KEYBOARD FOR LOCAL CO	ONFIGURATION		ALLIMINIO (COPPED EDEE)					
		METER CASING			ALUMINIO (COPPER FREE)					
	H	PULSE OUTPUT			YES (SEE GENERAL NOTES 2, PAGE 3)					
ES		TAGGING			YE	S (SEE GENER	RAL NOTES 2, PAGE	. 3)		
R	-	SURGE PROTECTOR			-					
ACCESSORIES	33									
YCC	34									
_	35	ELLUD	DUNGIONI OTATUO		0.41107	510		up.		
		FLUID	PHYSICAL STATUS	In an a vinal in a	CAUST	ı	LIQU			
		MINIMUM FLOW	NORMAL	MAXIMUM	-	-	- ATM	m³/h		
Ś		MINIMUM PRESSURE	NORMAL	MAXIMUM	-	-	ATM	bar-g		
ŇO		MINIMUM TEMPERATURE	NORMAL	MAXIMUM	-	-	30°	°C		
IDIT		PROJECT FLOW	DESIGN TEMPER	ATUDE	-		m³/h	OC		
OPERATING CONDITIONS		DESIGN PRESSURE DENSITY @ OPERATING C	DESIGN TEMPER	AIUKE	- bar-g °C					
9					- kg/m³					
₹ ZATI		VISCOSITY @ OPERATING	CONDITION		- Cp					
PER		FLUID CONDUCTIVITY					µS/cm²			
0		INCRUSTATION					-			
		SUSPENDED SOLIDS (%)	NI OWED		-					
	-	MAXIMUM LOSS OF LOAD A	ALLOWED		-	bar				
	48				Fades Harres (F.H.) - O					
		MANUFACTURER			Endress + Hauser (E+H) or Similar					
	50	MODEL								









NUMBER: 569-DB7A-AIC-714-002 CLIENT NR: PRD-AIC-DSH-013

TITLE

LEVEL SWITCH

SHEET: 6 de 7

REV.:

	- • -	L OWITOIT						2		
	1	INSTRUMENT TAG NUMBE	R			LS	SL-430001			
	2	SERVIÇE			CAUSTIC TOTE					
	3	P&ID			7A-Z-0-2-20					
ا بِ ا	4	PIPE LINE	EQUIPMENT NUM	/BER	- CN-4301					
ER/		EQUIPMENT MATERIAL / P		·· ·		POLY				
GENERAL		AREA CLASSIFICATION				POLYETHYLENE NOT CLASSIFIED				
اااا		ENCLOSURE CLASSIFICAT	ION		 		ONF. NBR IEC 60529			
			ION							
		CERTIFICATES			<u> </u>	SEE GENER	AL NOTE 7, PAGE 3)			
	9	T)/DE					DA OITI) /F			
		TYPE			PACITIVE					
		TUBE MATERIAL				STAIN	LESS STEEL			
l. I	_	COATING MATERIAL					PFA			
ELEMENT	_	ELECTRODE MATERIAL					316SS			
EM		GROUNDING RING MATER	IAL				ENERAL NOTES 7)			
=	14	CONNECTIONS				F	FLANGE			
	15	CLASS AND FACE				#150 S	MOOTH FACE			
	16	FLANGE FACE FINISH				SMC	OOTH FACE			
	17	SENSOR LENGTH					-			
	18	MOUNTING				INTEGRA	AL TO SENSOR			
	19	POWER SUPPLY				24 V	cc - 2 FIOS			
_K	20	OUTPUT SIGNAL				SPDT	/ 5A / 250 Vac			
ᄩ	21	COMMUNICATION PROTOC	COL		-					
SMI	22	PRECISION			-					
Ž ≾	23	REPEATABILITY			BY MANUFACTURER					
H	24	ELECTRICAL CONNECTION	N		1/2" NPT (F)					
CONVERTER / TRANSMITTER	25	LOCAL INDICATION			-					
ĒR.	26	CALIBRATION RANGE			-					
S S	27	CALIBRATED RANGE			CONTACT DETECTION					
ŭ	28	KEYBOARD FOR LOCAL CO	ONFIGURATION		-					
	29	METER CASING			ALUMINIO (COPPER FREE)					
	30	PULSE OUTPUT			-					
S	31	TAGGING			YES (SEE GENERAL NOTES 2, PAGE 3)					
SORIES	32	SURGE PROTECTOR			- '					
SSO	33									
ACCES	34									
8	35									
	36	FLUID	PHYSICAL STATUS		CAUST	IC	LIQI	JID		
	37	MINIMUM FLOW	NORMAL	MAXIMUM	-	-	-	m³/h		
	38	MINIMUM PRESSURE	NORMAL	MAXIMUM	-	-	ATM	bar-g		
မွ	39	MINIMUM TEMPERATURE	NORMAL	MAXIMUM	-	-	30°C	°C		
OPERATING CONDITIONS		PROJECT FLOW	1	1	-		l m³/h			
ΙĠ		DESIGN PRESSURE	DESIGN TEMPER	RATURE	-	bar-g		°C		
8		DENSITY @ OPERATING C			-	-	kg/m³			
9 <u>N</u>		VISCOSITY @ OPERATING			-		Ср			
RA		FLUID CONDUCTIVITY			1		μS/cm²			
)PE		INCRUSTATION					· -			
		SUSPENDED SOLIDS (%)								
		MAXIMUM LOSS OF LOAD	ALLOWED		_	bar				
	48	Tamen 2000 or 20AD /			1	Dui				
		MANUFACTURER				Endress + Ha	user (E+H) or Similar			
		MODEL					assi (E-11) oi oiiillai			
ш	50	I								









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TITLE

SHEET: 7 de 7

	7 de 7
LEVEL SWITCH	REV.:
	2

								2		
	1	INSTRUMENT TAG NUMBI	ER			L	SL-430002			
	2	SERVIÇE			CAUSTIC TOTE					
	3	P&ID			7A-Z-0-2-20					
AL.	4	PIPE LINE	EQUIPMENT	NUMBER	- CN-4302					
GENERAL	5	EQUIPMENT MATERIAL / F	PIPE		POLYETHYLENE					
GE	6	AREA CLASSIFICATION			NOT CLASSIFIED					
	7	ENCLOSURE CLASSIFICA	TION			IP 65 (MÍN.)	CONF. NBR IEC 60529			
	8	CERTIFICATES				(SEE GENEI	RAL NOTE 7, PAGE 3)			
	9					<u>·</u>				
	9	TYPE				С	APACITIVE			
	10	TUBE MATERIAL				STAI	NLESS STEEL			
	11	COATING MATERIAL					PFA			
ا چا		ELECTRODE MATERIAL					316SS			
ELEMENT		GROUNDING RING MATER	RIAL			YES (SEE	GENERAL NOTES 7)			
		CONNECTIONS					FLANGE			
_		CLASS AND FACE				#150 \$	SMOOTH FACE			
	_	FLANGE FACE FINISH					OOTH FACE			
		SENSOR LENGTH					-			
\dashv		MOUNTING				INTEGR	RAL TO SENSOR			
		POWER SUPPLY				24	Vcc - 2 FIOS			
		OUTPUT SIGNAL					Γ / 5A / 250 Vac			
ER		COMMUNICATION PROTO	ICOI		SPD175A7250 Vac					
F		PRECISION			_					
NS.		REPEATABILITY			BY MANUFACTURER					
Ţ₽		ELECTRICAL CONNECTIO	N.		1/2" NPT (F)					
씸		LOCAL INDICATION			-					
CONVERTER / TRANSMITTER		CALIBRATION RANGE			-					
N N		CALIBRATED RANGE				CONTA	ACT DETECTION			
8		KEYBOARD FOR LOCAL C	CONFIGURATION				-			
		METER CASING			ALUMINIO (COPPER FREE)					
		PULSE OUTPUT								
_		TAGGING			YES (SEE GENERAL NOTES 2, PAGE 3)					
ESSORIES		SURGE PROTECTOR			TES (SEE GENERAL NOTES 2, PAGE 3)					
SOF	33									
SES	34									
ACCE	35									
\dashv		FLUID	PHYSICAL STATU	IS .	CAUST	TIC	LIQU	JID		
		MINIMUM FLOW	NORMAL	IMAXIMUM	-		-	m³/h		
		MINIMUM PRESSURE	NORMAL	MAXIMUM	-	_	ATM	bar-g		
ပ္ခ		MINIMUM TEMPERATURE		MAXIMUM	_	_	30°C	°C		
<u> </u>		PROJECT FLOW			_	<u> </u>	II I			
		DESIGN PRESSURE	DESIGN TEM	PERATURE	-	bar-g		°C		
응		DENSITY @ OPERATING (- bar-g kg/m³					
9NI		VISCOSITY @ OPERATING			- kg/III-					
RAI		FLUID CONDUCTIVITY					μS/cm²			
OPERATING CONDITIONS		INCRUSTATION					· -			
٦		SUSPENDED SOLIDS (%)					-			
		MAXIMUM LOSS OF LOAD	ALLOWED		-	bar				
	48	1 1 2 2 2 3 . 2 3 / 13	- · 							
-		MANUFACTURER			 	Endress + H	auser (E+H) or Similar			