	
DOC NUMBER: <b>569-DB7A-AIC-714-002</b>		CLIENT NUMBER: <b>PRD-AIC-DSH-013</b>	
CLIENT: <b>TAKEDA/BAXALTA</b>			
PROJECT: <b>BURITI EPCVM PROJECT</b>			

## 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
A	31MAR2021	60% DD ISSUE	MAB	MAF	RSP
REV	DATE	DESCRIPTION	EXEC	CHECK	APPROV

NUMBER: 569-DB7A-AIC-714-002

CLIENT NR: PRD-AIC-DSH-013

TITLE





SHEET: 2 de 7

LEVEL SWITCH

REV.: 2

### DOCUMENT REVIEW CONTROL





Revision	A	0	1	2	3	4	Revision	A	B	0	1	2	3	Revision	A	B	0	1	2	3
Page							Page							Page						
1	X	X	X	X	X		26							51						
2	X	X	X	X	X		27							52						
3	X	X	X	X	X		28							53						
4	X	X	X	X	X		29							54						
5	X	X	X	X	X		30							55						
6	X	X	X	X	X		31							56						
7				X	X		32							57						
8							33							58						
9							34							59						
10							35							60						
11							36							61						
12							37							62						
13							38							63						
14							39							64						
15							40							65						
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21							46							71						
22							47							72						
23							48							73						
24							49							74						
25							50							75						





 		 	
NUMBER: <b>569-DB7A-AIC-714-002</b>		CLIENT NR: <b>PRD-AIC-DSH-013</b>	
TITLE <b>LEVEL SWITCH</b>			SHEET: 3 de 7  REV.: <b>2</b>
<b>REFERENCE DOCUMENTS</b>			

7A-Z-0-2-20	DRUG PRODUCT - CIP CLEANING CHEMICAL STORAGE (TOTES) & DIST.
7A-Z-0-2-21	DRUG PRODUCT - CIP SYSTEM - CIP-7701
7A-Z-0-2-31	DRUG PRODUCT - PROC. WASTE - COLLECT & TEMP. / LIFT STATION - SK-8001
PRD-AIC-LIS-046	INTEGRATED PROJECT SERVICES - INSTRUMENT SUGGESTED SUPPLIER LIST

GENERAL NOTES
<p>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</p> <p>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.</p> <p>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</p> <p>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.</p> <p>5 - Technical documents in general (drawings, technical specifications, data sheets and material requests, lists, manuals, etc.), must be identified.</p> <p>6 - The project documents must be prepared electronically.</p> <p>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.</p>

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

 				 				
NUMBER: 569-DB7A-AIC-714-002				CLIENT NR: PRD-AIC-DSH-013				
TITLE						SHEET: 4 de 7		
LEVEL SWITCH						REV.: 2		
GENERAL	1	INSTRUMENT TAG NUMBER			LSH-430101			
	2	SERVICE			LEAK DETEC CONTAINMENT PALLET CN-4301			
	3	P&ID			7A-Z-0-2-20			
	4	PIPE LINE	EQUIPMENT NUMBER		-	CN-4301		
	5	EQUIPMENT MATERIAL / PIPE			POLYETHYLENE			
	6	AREA CLASSIFICATION			NOT CLASSIFIED			
	7	ENCLOSURE CLASSIFICATION			IP 65 (MÍN.) CONF. NBR IEC 60529			
	8	CERTIFICATES			(SEE GENERAL NOTE 7, PAGE 3)			
	9							
ELEMENT	9	TYPE			CAPACITIVE			
	10	TUBE MATERIAL			STAINLESS 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			
CONVERTER / TRANSMITTER	18	MOUNTING			INTEGRAL TO SENSOR			
	19	POWER SUPPLY			24 Vcc - 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			-			
	27	CALIBRATED RANGE			CONTACT DETECTION			
	28	KEYBOARD FOR LOCAL CONFIGURATION			-			
	29	METER CASING			ALUMINIO (COPPER FREE)			
30	PULSE OUTPUT			-				
ACCESSORIES	31	TAGGING			YES (SEE GENERAL NOTES 2, PAGE 3)			
	32	SURGE PROTECTOR			-			
	33							
	34							
	35							
OPERATING CONDITIONS	36	FLUID	PHYSICAL STATUS		CAUSTIC		LIQUID	
	37	MINIMUM FLOW	NORMAL	MAXIMUM	-	-	-	m³/h
	38	MINIMUM PRESSURE	NORMAL	MAXIMUM	-	-	ATM	bar-g
	39	MINIMUM TEMPERATURE	NORMAL	MAXIMUM	-	-	30°	°C
	40	PROJECT FLOW			- m³/h			
	41	DESIGN PRESSURE	DESIGN TEMPERATURE		- bar-g		°C	
	42	DENSITY @ OPERATING CONDITION			- kg/m³			
	43	VISCOSITY @ OPERATING CONDITION			- Cp			
	44	FLUID CONDUCTIVITY			μS/cm²			
	45	INCRUSTATION			-			
	46	SUSPENDED SOLIDS (%)			-			
	47	MAXIMUM LOSS OF LOAD ALLOWED			- bar			
	48							
	49	MANUFACTURER			Endress + Hauser (E+H) or Similar			
	50	MODEL						

 				 				
NUMBER: 569-DB7A-AIC-714-002				CLIENT NR: PRD-AIC-DSH-013				
TITLE						SHEET: 5 de 7		
LEVEL SWITCH						REV.: 2		
GENERAL	1	INSTRUMENT TAG NUMBER			LSH-430102			
	2	SERVICE			LEAK DETEC CONTAINMENT PALLET CN-4301			
	3	P&ID			7A-Z-0-2-20			
	4	PIPE LINE	EQUIPMENT NUMBER		-	CN-4302		
	5	EQUIPMENT MATERIAL / PIPE			POLYETHYLENE			
	6	AREA CLASSIFICATION			NOT CLASSIFIED			
	7	ENCLOSURE CLASSIFICATION			IP 65 (MÍN.) CONF. NBR IEC 60529			
	8	CERTIFICATES			(SEE GENERAL NOTE 7, PAGE 3)			
	9							
ELEMENT	9	TYPE			CAPACITIVE			
	10	TUBE MATERIAL			STAINLESS 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			
CONVERTER / TRANSMITTER	18	MOUNTING			INTEGRAL TO SENSOR			
	19	POWER SUPPLY			24 Vcc - 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			-			
	27	CALIBRATED RANGE			CONTACT DETECTION			
	28	KEYBOARD FOR LOCAL CONFIGURATION			-			
	29	METER CASING			ALUMINIO (COPPER FREE)			
30	PULSE OUTPUT			-				
ACCESSORIES	31	TAGGING			YES (SEE GENERAL NOTES 2, PAGE 3)			
	32	SURGE PROTECTOR			-			
	33							
	34							
	35							
OPERATING CONDITIONS	36	FLUID	PHYSICAL STATUS		CAUSTIC		LIQUID	
	37	MINIMUM FLOW	NORMAL	MAXIMUM	-	-	-	m³/h
	38	MINIMUM PRESSURE	NORMAL	MAXIMUM	-	-	ATM	bar-g
	39	MINIMUM TEMPERATURE	NORMAL	MAXIMUM	-	-	30°	°C
	40	PROJECT FLOW			- m³/h			
	41	DESIGN PRESSURE	DESIGN TEMPERATURE		- bar-g		°C	
	42	DENSITY @ OPERATING CONDITION			- kg/m³			
	43	VISCOSITY @ OPERATING CONDITION			- Cp			
	44	FLUID CONDUCTIVITY			μS/cm²			
	45	INCRUSTATION			-			
	46	SUSPENDED SOLIDS (%)			-			
	47	MAXIMUM LOSS OF LOAD ALLOWED			- bar			
	48							
	49	MANUFACTURER			Endress + Hauser (E+H) or Similar			
	50	MODEL						

NUMBER: 569-DB7A-AIC-714-002

CLIENT NR: PRD-AIC-DSH-013

TITLE

SHEET: 6 de 7

LEVEL SWITCH

REV.: 2

GENERAL	1	INSTRUMENT TAG NUMBER		LSL-430001					
	2	SERVICE		CAUSTIC TOTE					
	3	P&ID		7A-Z-0-2-20					
	4	PIPE LINE	EQUIPMENT NUMBER	-		CN-4301			
	5	EQUIPMENT MATERIAL / PIPE		POLYETHYLENE					
	6	AREA CLASSIFICATION		NOT CLASSIFIED					
	7	ENCLOSURE CLASSIFICATION		IP 65 (MÍN.) CONF. NBR IEC 60529					
	8	CERTIFICATES		(SEE GENERAL NOTE 7, PAGE 3)					
	9								
ELEMENT	9	TYPE		CAPACITIVE					
	10	TUBE MATERIAL		STAINLESS 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		-					
CONVERTER / TRANSMITTER	18	MOUNTING		INTEGRAL TO SENSOR					
	19	POWER SUPPLY		24 Vcc - 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		-					
	27	CALIBRATED RANGE		CONTACT DETECTION					
	28	KEYBOARD FOR LOCAL CONFIGURATION		-					
	29	METER CASING		ALUMINIO (COPPER FREE)					
	30	PULSE OUTPUT		-					
ACCESSORIES	31	TAGGING		YES (SEE GENERAL NOTES 2, PAGE 3)					
	32	SURGE PROTECTOR		-					
	33								
	34								
	35								
OPERATING CONDITIONS	36	FLUID	PHYSICAL STATUS		CAUSTIC		LIQUID		
	37	MINIMUM FLOW	NORMAL	MAXIMUM	-	-	-	m³/h	
	38	MINIMUM PRESSURE	NORMAL	MAXIMUM	-	-	ATM	bar-g	
	39	MINIMUM TEMPERATURE	NORMAL	MAXIMUM	-	-	30°C	°C	
	40	PROJECT FLOW			-	m³/h			
	41	DESIGN PRESSURE	DESIGN TEMPERATURE		-	bar-g	°C		
	42	DENSITY @ OPERATING CONDITION			-	kg/m³			
	43	VISCOSITY @ OPERATING CONDITION			-	Cp			
	44	FLUID CONDUCTIVITY				µS/cm²			
	45	INCRUSTATION				-			
	46	SUSPENDED SOLIDS (%)				-			
	47	MAXIMUM LOSS OF LOAD ALLOWED			-	bar			
	48								
		49	MANUFACTURER		Endress + Hauser (E+H) or Similar				
		50	MODEL						

NUMBER: 569-DB7A-AIC-714-002

CLIENT NR: PRD-AIC-DSH-013

TITLE

SHEET:  
7 de 7

LEVEL SWITCH

REV.:  
2

GENERAL	1	INSTRUMENT TAG NUMBER		LSL-430002				
	2	SERVICE		CAUSTIC TOTE				
	3	P&ID		7A-Z-0-2-20				
	4	PIPE LINE	EQUIPMENT NUMBER	-		CN-4302		
	5	EQUIPMENT MATERIAL / PIPE		POLYETHYLENE				
	6	AREA CLASSIFICATION		NOT CLASSIFIED				
	7	ENCLOSURE CLASSIFICATION		IP 65 (MÍN.) CONF. NBR IEC 60529				
	8	CERTIFICATES		(SEE GENERAL NOTE 7, PAGE 3)				
	9							
ELEMENT	9	TYPE		CAPACITIVE				
	10	TUBE MATERIAL		STAINLESS 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		-				
CONVERTER / TRANSMITTER	18	MOUNTING		INTEGRAL TO SENSOR				
	19	POWER SUPPLY		24 Vcc - 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		-				
	27	CALIBRATED RANGE		CONTACT DETECTION				
	28	KEYBOARD FOR LOCAL CONFIGURATION		-				
	29	METER CASING		ALUMINIO (COPPER FREE)				
	30	PULSE OUTPUT		-				
ACCESSORIES	31	TAGGING		YES (SEE GENERAL NOTES 2, PAGE 3)				
	32	SURGE PROTECTOR		-				
	33							
	34							
	35							
OPERATING CONDITIONS	36	FLUID	PHYSICAL STATUS		CAUSTIC		LIQUID	
	37	MINIMUM FLOW	NORMAL	MAXIMUM	-	-	-	m³/h
	38	MINIMUM PRESSURE	NORMAL	MAXIMUM	-	-	ATM	bar-g
	39	MINIMUM TEMPERATURE	NORMAL	MAXIMUM	-	-	30°C	°C
	40	PROJECT FLOW			-		m³/h	
	41	DESIGN PRESSURE	DESIGN TEMPERATURE		-	bar-g		°C
	42	DENSITY @ OPERATING CONDITION			-		kg/m³	
	43	VISCOSITY @ OPERATING CONDITION			-		Cp	
	44	FLUID CONDUCTIVITY					µS/cm²	
	45	INCRUSTATION					-	
	46	SUSPENDED SOLIDS (%)					-	
	47	MAXIMUM LOSS OF LOAD ALLOWED			-	bar		
	48							
		49	MANUFACTURER		Endress + Hauser (E+H) or Similar			
50		MODEL						