	
DOC NUMBER: 569-DB7B-AIC-714-002		CLIENT NUMBER: PRD-AIC-DSH-036	
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
A	31MAR2021	60% DD ISSUE	MAB	MAF	RSP
REV	DATE	DESCRIPTION	EXEC	CHECK	APPROV

NUMBER: **569-DB7B-AIC-714-002**

CLIENT NR: **PRD-AIC-DSH-036**

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			26							51						
2	X	X	X	X			27							52						
3	X	X	X	X			28							53						
4	X	X		X			29							54						
5	X	X		X			30							55						
6	X	X		X			31							56						
7	X	X		X			32							57						
8	X	X					33							58						
9	X	X					34							59						
10	X	X					35							60						
2	X	X					36							61						
12	X	X					37							62						
13	X	X					38							63						
14	X	X					39							64						
15	X	X					40							65						
16	X	X					41							66						
17	X	X					42							67						
18	X						43							68						
19							44							69						
20							45							70						
21							46							71						
22							47							72						
23							48							73						
24							49							74						
25							50							75						

 		 	
NUMBER: 569-DB7B-AIC-714-002		CLIENT NR: PRD-AIC-DSH-036	
TITLE LEVEL SWITCH			SHEET: 3 de 7 REV.: 2
REFERENCE DOCUMENTS			
PRD-AIC-LIS-010		INSTRUMENT INDEX-PCS 7B	
PRD-AIC-LIS-046		INTEGRATED PROJECT SERVICES - INSTRUMENT SUGGESTED SUPPLIER LIST	

GENERAL NOTES

1 - CANCELLED NOTE

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-430102 / LSH-430101 / LSL-430001 / LSL-430002

 				 				
NUMBER: 569-DB7B-AIC-714-002				CLIENT NR: PRD-AIC-DSH-036				
TITLE						SHEET: 4 of 7		
LEVEL SWITCH						REV.: 2		
GENERAL	1	INSTRUMENT TAG NUMBER			LSH-430101			
	2	SERVICE			LEVEL1000L LIQUID CONTAINMENT PALLET CN-4301			
	3	P&ID			7B-Z-0-2-52			
	4	PIPE LINE	EQUIPMENT NUMBER		-	CN-4301		
	5	EQUIPMENT MATERIAL / PIPE			316L SS			
	6	AREA CLASSIFICATION			NOT CLASSIFIED			
	7	ENCLOSURE CLASSIFICATION			IP 65 (MÍN.) CONF. NBR IEC 60529			
	8	CERTIFICATES			(SEE GENERAL NOTE 7, PAGE 3)			
ELEMENT	9	TYPE			CAPACITIVE			
	10	TUBE MATERIAL			STAINLESS STEEL			
	11	COATING MATERIAL			MANUFACTURER STANDARD			
	12	ELECTRODE MATERIAL			316SS			
	13	GROUNDING RING MATERIAL			YES (SEE GENERAL NOTES 7)			
	14	CONNECTIONS			SANITARY FLANGE			
	15	CLASS AND FACE			150 lbs			
	16	FLANGE FACE FINISH			SMOOTH FACE			
CONVERTER / TRANSMITTER	17	LENGTH ELEMENT SENSOR			500mm			
	18	MOUNTING			INTEGRAL TO SENSOR			
	19	POWER SUPPLY			24 Vcc - 2 FIOS			
	20	OUTPUT SIGNAL			01 SPDT / 5A / 250 Vac			
	21	COMMUNICATION PROTOCOL			-			
	22	PRECISION			-			
	23	REPEATABILITY			MANUFACTURER STANDARD			
	24	ELECTRICAL CONNECTION			Ø1/2"NPTF			
	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		PRODUCT		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			-			
	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-DB7B-AIC-714-002				CLIENT NR: PRD-AIC-DSH-036				
TITLE						SHEET: 5 of 7		
LEVEL SWITCH						REV.: 2		
GENERAL	1	INSTRUMENT TAG NUMBER			LSH-430102			
	2	SERVICE			LEVEL1000L LIQUID CONTAINMENT PALLET CN-4302			
	3	P&ID			7B-Z-0-2-52			
	4	PIPE LINE	EQUIPMENT NUMBER		-	CN-4302		
	5	EQUIPMENT MATERIAL / PIPE			316L SS			
	6	AREA CLASSIFICATION			NOT CLASSIFIED			
	7	ENCLOSURE CLASSIFICATION			IP 65 (MÍN.) CONF. NBR IEC 60529			
	8	CERTIFICATES			(SEE GENERAL NOTE 7, PAGE 3)			
ELEMENT	9	TYPE			CAPACITIVE			
	10	TUBE MATERIAL			STAINLESS STEEL			
	11	COATING MATERIAL			MANUFACTURER STANDARD			
	12	ELECTRODE MATERIAL			316SS			
	13	GROUNDING RING MATERIAL			YES (SEE GENERAL NOTES 7)			
	14	CONNECTIONS			SANITARY FLANGE			
	15	CLASS AND FACE			150 lbs			
	16	FLANGE FACE FINISH			SMOOTH FACE			
CONVERTER / TRANSMITTER	17	LENGTH ELEMENT SENSOR			500mm			
	18	MOUNTING			INTEGRAL TO SENSOR			
	19	POWER SUPPLY			24 Vcc - 2 FIOS			
	20	OUTPUT SIGNAL			01 SPDT / 5A / 250 Vac			
	21	COMMUNICATION PROTOCOL			-			
	22	PRECISION			-			
	23	REPEATABILITY			MANUFACTURER STANDARD			
	24	ELECTRICAL CONNECTION			Ø1/2"NPTF			
	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		PRODUCT		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			-			
	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-DB7B-AIC-714-002				CLIENT NR: PRD-AIC-DSH-036				
TITLE						SHEET: 6 of 7		
LEVEL SWITCH						REV.: 2		
GENERAL	1	INSTRUMENT TAG NUMBER			LSL-430001			
	2	SERVICE			LEVEL1000L LIQUID CONTAINMENT PALLET CN-4301			
	3	P&ID			7B-Z-0-2-52			
	4	PIPE LINE	EQUIPMENT NUMBER		-	CN-4301		
	5	EQUIPMENT MATERIAL / PIPE			316L SS			
	6	AREA CLASSIFICATION			NOT CLASSIFIED			
	7	ENCLOSURE CLASSIFICATION			IP 65 (MÍN.) CONF. NBR IEC 60529			
	8	CERTIFICATES			(SEE GENERAL NOTE 7, PAGE 3)			
ELEMENT	9	TYPE			CAPACITIVE			
	10	TUBE MATERIAL			STAINLESS STEEL			
	11	COATING MATERIAL			MANUFACTURER STANDARD			
	12	ELECTRODE MATERIAL			316SS			
	13	GROUNDING RING MATERIAL			YES (SEE GENERAL NOTES 7)			
	14	CONNECTIONS			SANITARY FLANGE			
	15	CLASS AND FACE			150 lbs			
	16	FLANGE FACE FINISH			SMOOTH FACE			
CONVERTER / TRANSMITTER	17	LENGTH ELEMENT SENSOR			500mm			
	18	MOUNTING			INTEGRAL TO SENSOR			
	19	POWER SUPPLY			24 Vcc - 2 FIOS			
	20	OUTPUT SIGNAL			01 SPDT / 5A / 250 Vac			
	21	COMMUNICATION PROTOCOL			-			
	22	PRECISION			-			
	23	REPEATABILITY			MANUFACTURER STANDARD			
	24	ELECTRICAL CONNECTION			Ø1/2"NPTF			
	25	LOCAL INDICATION			-			
	26	CALIBRATION RANGE			-			
	27	CALIBRATED RANGE			CONTACT DETECTION			
	28	KEYBOARD FOR LOCAL CONFIGURATION			-			
ACCESSORIES	29	METER CASING			ALUMINIO (COPPER FREE)			
	30	PULSE OUTPUT			-			
	31	TAGGING			YES (SEE GENERAL NOTES 2, PAGE 3)			
	32	SURGE PROTECTOR			-			
	33							
	34							
	35							
OPERATING CONDITIONS	36	FLUID	PHYSICAL STATUS		PRODUCT		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			-			
	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-DB7B-AIC-714-002				CLIENT NR: PRD-AIC-DSH-036				
TITLE						SHEET: 7 of 7		
LEVEL SWITCH						REV.: 2		
GENERAL	1	INSTRUMENT TAG NUMBER			LSL-430002			
	2	SERVICE			LEVEL1000L LIQUID CONTAINMENT PALLET CN-4301			
	3	P&ID			7B-Z-0-2-52			
	4	PIPE LINE	EQUIPMENT NUMBER		-	CN-4301		
	5	EQUIPMENT MATERIAL / PIPE			316L SS			
	6	AREA CLASSIFICATION			NOT CLASSIFIED			
	7	ENCLOSURE CLASSIFICATION			IP 65 (MÍN.) CONF. NBR IEC 60529			
	8	CERTIFICATES			(SEE GENERAL NOTE 7, PAGE 3)			
ELEMENT	9	TYPE			CAPACITIVE			
	10	TUBE MATERIAL			STAINLESS STEEL			
	11	COATING MATERIAL			MANUFACTURER STANDARD			
	12	ELECTRODE MATERIAL			316SS			
	13	GROUNDING RING MATERIAL			YES (SEE GENERAL NOTES 7)			
	14	CONNECTIONS			SANITARY FLANGE			
	15	CLASS AND FACE			150 lbs			
	16	FLANGE FACE FINISH			SMOOTH FACE			
CONVERTER / TRANSMITTER	17	LENGTH ELEMENT SENSOR			500mm			
	18	MOUNTING			INTEGRAL TO SENSOR			
	19	POWER SUPPLY			24 Vcc - 2 FIOS			
	20	OUTPUT SIGNAL			01 SPDT / 5A / 250 Vac			
	21	COMMUNICATION PROTOCOL			-			
	22	PRECISION			-			
	23	REPEATABILITY			MANUFACTURER STANDARD			
	24	ELECTRICAL CONNECTION			Ø1/2"NPTF			
	25	LOCAL INDICATION			-			
	26	CALIBRATION RANGE			-			
	27	CALIBRATED RANGE			CONTACT DETECTION			
	28	KEYBOARD FOR LOCAL CONFIGURATION			-			
ACCESSORIES	29	METER CASING			ALUMINIO (COPPER FREE)			
	30	PULSE OUTPUT			-			
	31	TAGGING			YES (SEE GENERAL NOTES 2, PAGE 3)			
	32	SURGE PROTECTOR			-			
	33							
	34							
	35							
OPERATING CONDITIONS	36	FLUID	PHYSICAL STATUS		PRODUCT		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			-			
	45	INCRUSTATION			-			
	46	SUSPENDED SOLIDS (%)			-			
	47	MAXIMUM LOSS OF LOAD ALLOWED			-		bar	
	48							
	49	MANUFACTURER			Endress + Hauser (E+H) or Similar			
	50	MODEL						