







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









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

CLIENT NR:

PRD-AIC-DSH-036

SHEET: 2 de 7

REV.:

LEVEL SWITCH

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	Х	Х	Х	Х			26							51						
2	Χ	Х	Х	Х			27							52						
3	Χ	Х	Х	Х			28							53						
4	Χ	Х		Χ			29							54						
5	Χ	Х		Х			30							55						
6	Χ	Х		Χ			31							56						
7	Χ	Χ		Χ			32							57						
8	Χ	Χ					33							58						
9	Χ	Х					34							59						
10	Χ	Х					35							60						
2	Χ	Х					36							61						
12	Χ	Х					37							62						
13	Χ	Х					38							63						
14	Χ	Х					39							64						
15	Χ	Х					40							65						
16	Χ	Х					41							66						
17	Χ	Х					42							67						

DOCUMENT REVIEW CONTROL

The information contained in this document is the property of TESSLER Engenharia and is provided to the customer under the condition that they are not used for other purposes other than those contractually established.









NUMBER: CLIENT NR: 569-DB7B-AIC-714-002

PRD-AIC-DSH-036 TITLE

3 de 7

LEVEL SWITCH

REV.: 2

REFERENCE DOCUMENTS

PRD-AIC-LIS-010 PRD-AIC-LIS-046 **INSTRUMENT INDEX-PCS 7B** 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
TITLE

CLIENT NR:

PRD-AIC-DSH-036

1011211

SHEET

LEVEL SWITCH

4 of 7

								2			
	1	INSTRUMENT TAG NUMBER	₹		LSH-430101						
	2	SERVICE			LEVEL1000L LIQUID CONTAINMENT PALLET CN-4301						
١, ١	3	P&ID			7B-Z-0-2-52						
R	4	PIPE LINE	EQUIPMENT NUM	MBER	- CN-4301						
GENERAL	5	EQUIPMENT MATERIAL / PI	PE		316L SS						
ō	6	AREA CLASSIFICATION			NOT CLASSIFIED						
	7	ENCLOSURE CLASSIFICAT	ION		IP 65 (MÍN.) CONF. NBR IEC 60529						
	8	CERTIFICATES			(SEE GENERAL NOTE 7, PAGE 3)						
	9	TYPE				•	PACITIVE	,			
	10	TUBE MATERIAL			STAINLESS STEEL						
		COATING MATERIAL					URER STANDARD				
_		ELECTRODE MATERIAL					316SS				
ELEMENT		GROUNDING RING MATERI	Al				ENERAL NOTES 7)				
I.E.		CONNECTIONS	712				ARY FLANGE				
ш		CLASS AND FACE					150 lbs				
	_	FLANGE FACE FINISH					OOTH FACE				
		LENGTH ELEMENT SENSOI	D								
\vdash		MOUNTING					500mm AL TO SENSOR				
		POWER SUPPLY					cc - 2 FIOS				
		OUTPUT SIGNAL					-				
ER			201		01 SPDT / 5A / 250 Vac						
<u> </u>		COMMUNICATION PROTOC	,OL		-						
NSN		PRECISION			- MANUFACTURER STANDARD						
IRA		REPEATABILITY									
CONVERTER / TRANSMITTER		ELECTRICAL CONNECTION				0	1/2"NPTF				
3TE		LOCAL INDICATION					-				
IVE		CALIBRATION RANGE									
8		CALIBRATED RANGE			CONTACT DETECTION						
		KEYBOARD FOR LOCAL CO	ONFIGURATION		-						
	_	METER CASING			ALUMINIO (COPPER FREE)						
		PULSE OUTPUT			-						
ES		TAGGING			YES (SEE GENERAL NOTES 2, PAGE 3)						
ORI		SURGE PROTECTOR			-						
SSE	33										
ACCESSORIES	34										
_	35										
		FLUID	PHYSICAL STATUS	_	PRODI	UCT	LIC	QUID			
	37	MINIMUM FLOW	NORMAL	MAXIMUM	-	-	-	m³/h			
			NORMAL	MAXIMUM	-	-	ATM	bar-g			
SNC			NORMAL	MAXIMUM	-	-	30	°C			
ĬĔ.		PROJECT FLOW			-		m³/h				
ONI	41	DESIGN PRESSURE	DESIGN TEMPER	ATURE	-	- bar-g - °C					
G C	42	DENSITY @ OPERATING CO	NOITION		- kg/m³						
N	43	VISCOSITY @ OPERATING	CONDITION		-		Ср				
OPERATING CONDITIONS	44	FLUID CONDUCTIVITY					-				
8	45	INCRUSTATION					-				
	46	SUSPENDED SOLIDS (%)					-				
	47	MAXIMUM LOSS OF LOAD A	ALLOWED		-	bar					
	48										
	49	MANUFACTURER			Endress + Hauser (E+H) or Similar						
	50	MODEL									









NUMBER: TITLE 569-DB7B-AIC-714-002 CLIENT NR:

PRD-AIC-DSH-036

LEVEL SWITCH

SHEET: 5 of 7

REV.:

								2			
	1	INSTRUMENT TAG NUMBER	₹		LSH-430102						
	2	SERVICE			LEVEL1000L LIQUID CONTAINMENT PALLET CN-4302						
١, ١	3	P&ID			7B-Z-0-2-52						
GENERAL	4	PIPE LINE	EQUIPMENT NUM	1BER	- CN-4302						
E	5	EQUIPMENT MATERIAL / PI	PE .		316L SS						
٥	6	AREA CLASSIFICATION			NOT CLASSIFIED						
	7	ENCLOSURE CLASSIFICAT	ION		IP 65 (MÍN.) CONF. NBR IEC 60529						
	8	CERTIFICATES			(SEE GENERAL NOTE 7, PAGE 3)						
	9	TYPE			CAPACITIVE						
	10	TUBE MATERIAL			STAINLESS STEEL						
	11	COATING MATERIAL				MANUFACT	URER STANDARD				
F	12	ELECTRODE MATERIAL					316SS				
ELEMENT	13	GROUNDING RING MATERI	AL			YES (SEE G	ENERAL NOTES 7)				
ELE	14	CONNECTIONS				SANITA	ARY FLANGE				
		CLASS AND FACE					150 lbs				
	16	FLANGE FACE FINISH				SMC	OTH FACE				
	17	LENGTH ELEMENT SENSOI	 R				500mm				
	18	MOUNTING				INTEGRA	AL TO SENSOR				
	19	POWER SUPPLY				24 V	cc - 2 FIOS				
	20	OUTPUT SIGNAL				01 SPDT	7 / 5A / 250 Vac				
TER		COMMUNICATION PROTOC	OL		-						
MIT		PRECISION			_						
۸NS		REPEATABILITY			MANUFACTURER STANDARD						
꿈		ELECTRICAL CONNECTION	<u> </u>		Ø1/2"NPTF						
CONVERTER / TRANSMITTER		LOCAL INDICATION			-						
ERT		CALIBRATION RANGE			-						
Š		CALIBRATED RANGE			CONTACT DETECTION						
ဗ		KEYBOARD FOR LOCAL CO	ONFIGURATION		-						
	_	METER CASING			ALUMINIO (COPPER FREE)						
	_	PULSE OUTPUT			-						
-	_	TAGGING			YES (SEE GENERAL NOTES 2, PAGE 3)						
ACCESSORIES		SURGE PROTECTOR			-						
SOF	33										
CES	34										
AC	35										
\vdash	_	FLUID	PHYSICAL STATUS		PRODU	CT	LIC	QUID			
			NORMAL	MAXIMUM	-	-	-	m³/h			
			NORMAL	MAXIMUM	-	-	ATM	bar-g			
စ္ခ			NORMAL	MAXIMUM	-	-	30	°C			
TIOI		PROJECT FLOW		1	-		l m³/h	1			
ΙQΨ		DESIGN PRESSURE	DESIGN TEMPER	ATURE	-	bar-g	-	°C			
8		DENSITY @ OPERATING CO	I ONDITION		-	-	kg/m³				
ING		VISCOSITY @ OPERATING			-		Ср				
OPERATING CONDITIONS		FLUID CONDUCTIVITY					-				
JPE		INCRUSTATION					-				
	_	SUSPENDED SOLIDS (%)					-				
		MAXIMUM LOSS OF LOAD A	ALLOWED		-	bar					
	48										
\vdash	—	MANUFACTURER			Endress + Hauser (E+H) or Similar						
		MODEL					, , ,				
ш	ٽٽ	L			·						









NUMBER: 569-DB7B-AIC-714-002 CLIENT NR: PRD-AIC-DSH-036

TITLE

LEVEL SWITCH

SHEET: 6 of 7

REV.:

LE	VE	L SWITCH						REV.: 2			
	1	INSTRUMENT TAG NUMBE	R		1	LS	L-430001				
		SERVICE	••		LEVEL1000L LIQUID CONTAINMENT PALLET CN-4301						
		P&ID			7B-Z-0-2-52						
₹		PIPE LINE	EQUIPMENT NUM	MRER	- CN-4301						
GENERAL		EQUIPMENT MATERIAL / PI		IDER			1 316L SS	1-4001			
ЭE		AREA CLASSIFICATION			NOT CLASSIFIED						
		ENCLOSURE CLASSIFICAT	ION					20			
	<u> </u>	CERTIFICATES	1014		IP 65 (MİN.) CONF. NBR IEC 60529 (SEE GENERAL NOTE 7, PAGE 3)						
		TYPE				-	PACITIVE	<u></u>			
		TUBE MATERIAL					LESS STEEL				
		COATING MATERIAL					URER STANDARD	1			
		ELECTRODE MATERIAL					316SS	•			
ELEMENT		GROUNDING RING MATER	ΙΔΙ				ENERAL NOTES 7)			
I.E.		CONNECTIONS	<i>I</i>			· · · · · · · · · · · · · · · · · · ·	ARY FLANGE	<i>)</i>			
"		CLASS AND FACE					150 lbs				
	_	FLANGE FACE FINISH					OTH FACE				
		LENGTH ELEMENT SENSO	R				500mm				
<u> </u>	_	MOUNTING	<u> </u>				AL TO SENSOR				
		POWER SUPPLY									
		OUTPUT SIGNAL			24 Vcc - 2 FIOS 01 SPDT / 5A / 250 Vac						
IER.		COMMUNICATION PROTOC	COI		-						
Ĭ₩		PRECISION	701		-						
NS		REPEATABILITY			MANUFACTURER STANDARD						
TR/		ELECTRICAL CONNECTION	J		Ø1/2"NPTF						
ER/		LOCAL INDICATION	<u> </u>				-				
ERT		CALIBRATION RANGE					_				
CONVERTER / TRANSMITTER	27	CALIBRATED RANGE			CONTACT DETECTION						
ပြ	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)						
CCESSORIES	32	SURGE PROTECTOR			-						
SSC	33										
CCE	34										
Ā	35										
	36	FLUID	PHYSICAL STATUS		PRODU	JCT	LI	QUID			
		MINIMUM FLOW	NORMAL	MAXIMUM	-	-	-	m³/h			
		MINIMUM PRESSURE	NORMAL	MAXIMUM	-	-	ATM	bar-g			
SNC			NORMAL	MAXIMUM	-	-	30	°C			
) III		PROJECT FLOW			-	1	m³/h				
OPERATING CONDITIONS		DESIGN PRESSURE	DESIGN TEMPER	ATURE	-	bar-g	-	°C			
βĎ		DENSITY @ OPERATING C			-		kg/m³				
ATI		VISCOSITY @ OPERATING	CONDITION		- Ср						
PER		FLUID CONDUCTIVITY			-						
Ō		INCRUSTATION			-						
		SUSPENDED SOLIDS (%)	ALLOWED		<u>.</u>						
		MAXIMUM LOSS OF LOAD	ALLOWED		- bar						
\vdash	48 49	MANUFACTURER			Endroce + Houser (E.t.H) as Similar						
		MODEL			Endress + Hauser (E+H) or Similar						
	30	MODEL									









NUMBER: TITLE 569-DB7B-AIC-714-002 CLIENT NR:

PRD-AIC-DSH-036

LEVEL SWITCH

SHEET: 7 of 7

REV.:

								2			
	1	INSTRUMENT TAG NUMBER	R		LSL-430002						
	2	SERVICE			LEVEL1000L LIQUID CONTAINMENT PALLET CN-4301						
١, ١	3	P&ID			7B-Z-0-2-52						
RAI	4	PIPE LINE	EQUIPMENT NUM	MBER	- CN-4301						
GENERAL	5	EQUIPMENT MATERIAL / PI	PE			316L SS					
Ō	6	AREA CLASSIFICATION				NOT CLASSIFIED					
	7	ENCLOSURE CLASSIFICAT	ION			IP 65 (MÍN.) C	ONF. NBR IEC 6052	29			
	8	CERTIFICATES			(SEE GENERAL NOTE 7, PAGE 3)						
	9	TYPE				-	PACITIVE	•			
		TUBE MATERIAL			STAINLESS STEEL						
		COATING MATERIAL					URER STANDARD				
_		ELECTRODE MATERIAL					316SS				
ELEMENT		GROUNDING RING MATERI	ΔΙ				ENERAL NOTES 7)				
ILE		CONNECTIONS	7 (2			· · · · · · · · · · · · · · · · · · ·	ARY FLANGE				
ш		CLASS AND FACE					150 lbs				
	_	FLANGE FACE FINISH					OOTH FACE				
		LENGTH ELEMENT SENSOI	D				500mm				
		MOUNTING	IX				AL TO SENSOR				
		POWER SUPPLY					cc - 2 FIOS				
		OUTPUT SIGNAL									
ER			201		01 SPDT / 5A / 250 Vac						
T		COMMUNICATION PROTOC	JOL		-						
NSN		PRECISION			- MANUFACTURER STANDARD						
IRA		REPEATABILITY									
CONVERTER / TRANSMITTER		ELECTRICAL CONNECTION				0	1/2"NPTF				
ZTE		LOCAL INDICATION					-				
IVE		CALIBRATION RANGE			-						
SO		CALIBRATED RANGE			CONTACT DETECTION						
		KEYBOARD FOR LOCAL CO	ONFIGURATION		-						
	_	METER CASING			ALUMINIO (COPPER FREE)						
		PULSE OUTPUT			-						
ES		TAGGING			YES (SEE GENERAL NOTES 2, PAGE 3)						
ORI		SURGE PROTECTOR			-						
≘SS	33										
ACCESSORIES	34										
۷.	35										
		FLUID	PHYSICAL STATUS	•	PROD	UCT	LIC	QUID			
			NORMAL	MAXIMUM	-	-	-	m³/h			
,			NORMAL	MAXIMUM	-	-	ATM	bar-g			
ONS			NORMAL	MAXIMUM	-	-	30	°C			
)Ti	40	PROJECT FLOW			-		m³/h				
NO	41	DESIGN PRESSURE	DESIGN TEMPER	ATURE	- bar-g - °C						
OPERATING CONDITIONS		DENSITY @ OPERATING CO			- kg/m³						
Ĭ.		VISCOSITY @ OPERATING	CONDITION		-		Ср				
ER/	44	FLUID CONDUCTIVITY					-				
Р		INCRUSTATION					-				
	46	SUSPENDED SOLIDS (%)					-				
	47	MAXIMUM LOSS OF LOAD A	ALLOWED		-	bar					
	48										
	49	MANUFACTURER			Endress + Hauser (E+H) or Similar						
	50	MODEL									