







DOC NUMBER:

569-DB7B-AIC-712-002

CLIENT NUMBER:

PRD-AIC-DSH-037

CLIENT:

TAKEDA/BAXALTA

PROJECT:

BURITI EPCVM PROJECT

DATA SHEET PRESSURE 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









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PRESSURE SWITCH

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

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PRESSURE SWITCH

REV.:

REFERENCE DOCUMENTS

PRD-AIC-LIS-046

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- 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-LIS010_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 - ACCORDING NEW ARQUITECTURE UPDATED 2 - ADDED INSTRUMENTS: PSH-230002 / PSH-240002 3 - CANCELED INSTRUMENT: PSL-430001









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PRESSURE SWITCH

PRD-AIC-DSH-037 SHEET:

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REV.:

								2			
	1	INSTRUMENT TAG NUMBE	ĒR			P	SL-230003				
	2	SERVICE			CO2 GAS TO SYSTEM						
4L	3	P&ID			7B-Z-0-2-70						
IER.	4	PIPE LINE	EQUIPMENT I	NUMBER	1/2"-GCO2-230002-SS10-NI -						
GENERAL	5	EQUIPMENT LINE	I		,	ASTM A270 G	r.TP316L, SEAMLESS	 S			
		AREA CLASSIFICATION					-				
	7	CLASSIFICATION OF THE	CASE				IP-65				
	_	ASSEMBLY	OAGE			DIAPI					
		TYPE			DIAPHRAGM SEAL HIGIENIC CLAMP Ø1/2"NPT						
		CONNECTION TO THE PR	OCE 88				CLAMP Ø1/2"NPT				
			OCL33				TURE STANDARD				
7		FACE FLANGE FINISH) - 10barG				
ELEMENT		SCALE					r - TubarG				
LEN		PERFORMANCE POINT 1					<u>-</u>				
E		PERFORMANCE POINT 2					-				
		FIXED / ADJUSTABLE DIFF	FERENTIAL				-				
		DIFFERENTIAL					-				
		STATIC PRESSURE					-				
	_	MATERIAL					A270 Gr.TP316L				
	19	TYPE				HERMET	TICALLY SEALED				
	20	AMOUNT					2				
	21	NUMBER OF CONTACTS			2 SPDT						
KEYS	22	LOAD TYPE			RESISTIVE						
ΚE	23	CONTACTS CAPACITY			5A						
	24	CONT / PRESS ACTION UN	NDER		-						
	25	CONT / PRESS ACTION DO	OWN			OPEN					
	26	ELECTRICAL CONNECTIO	N		1/2" CABLE PRESS						
	27	IDENTIFICATION PLATE			NOTE 2, PAGE 3						
	28	DIAPHRAGM SEAL				ASTM A270 Gr.TP316L					
	29	FILLING FLUID			MANUFATURE STANDARD						
ES	30	CAPILLARY LENGTH			-						
4CCESSORIES	31	CAPILLARY MATERIAL					-				
ESS	32	REGULATING FILTER					-				
CC	33	PULSATION SHOCK ABSO	DRBER				-				
٩	34	PIG RABBIT SIPHON			-						
	35	OVERPRESSURE PROTEC	CTOR		-						
	36										
	-	FLUID	PHYSICAL STATU	S	PRODU	ICT	LIQI	JID			
		MINIMUM FLOW	NORMAL	MAXIMUM	-	l -	-	-			
		MINIMUM PRESSURE	NORMAL	MAXIMUM	-	-	8,2barG	-			
SI		MINIMUM TEMPERATURE		MAXIMUM	-	-10°C	-	140°C			
OPERATING CONDITIONS		PROJECT FLOW	1	V	1	L		,,,,,,			
TIQ!		DESIGN PRESSURE	DESIGN TEM	PERATI IRE	- barG °C						
CO		DENSITY @ OPERATING (
NG		VISCOSITY @ OPERATING			ing/iii						
3ATI		FLUID CONDUCTIVITY	JONDINON		- Cp						
PEF		INCRUSTATION			- μS/cm²						
Ō							-				
		SUSPENDED SOLIDS (%)	ALLOWED		-						
		MAXIMUM LOSS OF LOAD	ALLUWED				-				
	49	AAANU IFA CTU IDED			1		00.00.00				
		MANUFACTURER			-	WIKA	OR SIMILAR				
	51	MODEL									









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PRESSURE SWTCH	REV.:
- NEOGONE OTHER OTHER	
	2

								2			
	1	INSTRUMENT TAG NUMBI	ER			PS	SL-230003				
	2	SERVICE			O2						
ΑF	3	P&ID			7B-Z-0-2-70						
GENERAL	4	PIPE LINE	EQUIPMEN	NT NUMBER	1/2"-GCO2-230002-SS10-NI -						
<i>GEI</i>	5	EQUIPMENT LINE				ASTM A270 Gr.TP316L, SEAMLESS					
	6	AREA CLASSIFICATION					-				
	7	CLASSIFICATION OF THE	CASE				IP-65				
	8	ASSEMBLY				DIAPH	HRAGM SEAL				
	9	TYPE				HIGIENIC	CLAMP Ø1/2"NPT				
	10	CONNECTION TO THE PR	OCESS		HIGIENIC CLAMP Ø1/2"NPT						
	11	FACE FLANGE FINISH				MANUFAT	URE STANDARD				
5	12	SCALE				0	- 10barG				
ELEMENT	13	PERFORMANCE POINT 1					-				
37E	14	PERFORMANCE POINT 2					-				
_		FIXED / ADJUSTABLE DIFF	FERENTIAL				-				
	16	DIFFERENTIAL					-				
		STATIC PRESSURE					-				
		MATERIAL				ASTM A	270 Gr.TP316L				
	-	TYPE				HERMET	ICALLY SEALED				
		AMOUNT					2				
		NUMBER OF CONTACTS				2 2 SPDT					
S		LOAD TYPE			RESISTIVE						
KEYS		CONTACTS CAPACITY			5A						
_		CONT / PRESS ACTION UI	NDFR		-						
		CONT / PRESS ACTION DO			OPEN						
		ELECTRICAL CONNECTIO			1/2" CABLE PRESS						
	-	IDENTIFICATION PLATE				NOTE 2, PAGE 3					
		DIAPHRAGM SEAL			ASTM A270 Gr.TP316L						
		FILLING FLUID			MANUFATURE STANDARD						
လ္		CAPILLARY LENGTH			-						
ACCESSORIES		CAPILLARY MATERIAL				-					
SS		REGULATING FILTER				-					
CE		PULSATION SHOCK ABSO	ORRER			-					
Ă		PIG RABBIT SIPHON	NBEN		-						
		OVERPRESSURE PROTEC	CTOR								
	36	OVERT REGOORET ROTE	575K								
	-	FLUID	PHYSICAL STA	TUS	PROL	UCT	LIQI	IID			
		MINIMUM FLOW	NORMAL	MAXIMUM				_			
		MINIMUM PRESSURE	NORMAL	MAXIMUM		_	8,2barG	_			
S		MINIMUM TEMPERATURE		MAXIMUM	_	-10°C	-	140°C			
Õ		PROJECT FLOW	1	5 (111)		1 ,,,,	_				
LIQ.		DESIGN PRESSURE	DESIGN T	EMPERATURE		- barG	l°C				
OPERATING CONDITIONS		DENSITY @ OPERATING (LIVITORE							
NG		VISCOSITY @ OPERATING			- kg/m³						
RATI		FLUID CONDUCTIVITY	2 33,10111011			- Cp					
PEF		INCRUSTATION				- μS/cm²					
0		SUSPENDED SOLIDS (%)			+						
	47	MAXIMUM LOSS OF LOAD	ALLOWED		+	-					
l	48	INIAAIIVIOIVI LOSS OF LOAD	ALLOWED								
 		MANUFACTURER			WIKA OR SIMILAR						
l					-	VVINA	ON SIIVIILAR				
	57	MODEL									









CLIENT NR: PRD-AIC-DSH-037 NUMBER: 569-DB7B-AC-712-002

TITLE

PRESSURE SWITCH

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REV.:

2 INSTRUMENT TAG NUMBER PSH-230002 SERVICE BIOREACTOR, BRE-5401 O2 GAS TO 40L P&ID 3 7B-Z-0-2-70 GENERAL 4 PIPE LINE **EQUIPMENT NUMBER** 1/2"-GOP-240002-SS10-NI ASTM A270 Gr.TP316L, SEAMLESS **EQUIPMENT LINE** 6 AREA CLASSIFICATION IP-65 CLASSIFICATION OF THE CASE DIAPHRAGM SEAL 8 ASSEMBLY TYPE HIGIENIC CLAMP Ø1/2"NPT HIGIENIC CLAMP Ø1/2"NPT 10 CONNECTION TO THE PROCESS 11 MANUFATURE STANDARD FACE FLANGE FINISH 12 SCALE 0 - 10barG ELEMENT 13 PERFORMANCE POINT 1 14 PERFORMANCE POINT 2 15 FIXED / ADJUSTABLE DIFFERENTIAL DIFFERENTIAL 16 17 STATIC PRESSURE 18 MATERIAL ASTM A270 Gr.TP316L TYPE HERMETICALLY SEALED 19 AMOUNT 2 20 21 NUMBER OF CONTACTS 2 SPDT 22 LOAD TYPE RESISTIVE δ Ű 23 CONTACTS CAPACITY 24 CONT / PRESS ACTION UNDER CONT / PRESS ACTION DOWN OPEN 25 ELECTRICAL CONNECTION 1/2" CABLE PRESS IDENTIFICATION PLATE NOTE 2, PAGE 3 27 28 DIAPHRAGM SEAL ASTM A270 Gr.TP316L 29 MANUFATURE STANDARD FILLING FLUID CAPILLARY LENGTH **ACCESSORIES** 30 31 CAPILLARY MATERIAL 32 REGULATING FILTER PULSATION SHOCK ABSORBER PIG RABBIT SIPHON 34 OVERPRESSURE PROTECTOR 35 36 FLUID PHYSICAL STATUS GAS 37 GAS MINIMUM FLOW NORMAL 38 MAXIMUM NORMAL MAXIMUM 39 MINIMUM PRESSURE 2barG MINIMUM TEMPERATURE NORMAL **OPERATING CONDITIONS** MAXIMUM 30°C PROJECT FLOW 41 - barG 42 DESIGN PRESSURE DESIGN TEMPERATURE °C DENSITY @ OPERATING CONDITION 43 kg/m³ 44 VISCOSITY @ OPERATING CONDITION Ср FLUID CONDUCTIVITY 45 µS/cm² 46 INCRUSTATION SUSPENDED SOLIDS (%) MAXIMUM LOSS OF LOAD ALLOWED 48 49 MANUFACTURER WIKA OR SIMILAR 50 51 MODEL









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PRESSURE SWITCH

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REV.: 2

	1	INSTRUMENT TAG NUMBE	:R		1	P:	 SH-240002				
		SERVICE			BIOREACTOR, BRE-5401 O2 GAS TO 40L						
. ⊢		P&ID			7B-Z-0-2-70						
& ⊢	-	PIPE LINE	EQUIPMENT NUM	MBFR	1/2"-GOP-240002-SS10-NI -						
3EN		EQUIPMENT LINE	Egon ment non				r.TP316L, SEAMLESS				
		AREA CLASSIFICATION				7.0710712700	-				
	_		2405				IP-65				
-		CLASSIFICATION OF THE C ASSEMBLY	JASE			DIAP	HRAGM SEAL				
		TYPE					CLAMP Ø1/2"NPT				
-	-	CONNECTION TO THE PRO	OCESS				CLAMP Ø1/2"NPT				
		FACE FLANGE FINISH	70200				TURE STANDARD				
		SCALE) - 10barG				
ட்⊢ெ		PERFORMANCE POINT 1					-				
		PERFORMANCE POINT 2									
_ ⊢		FIXED / ADJUSTABLE DIFF	EDENITIAI								
-		DIFFERENTIAL	LNLNTIAL								
-		STATIC PRESSURE									
-		MATERIAL				ASTM A	A270 Gr.TP316L				
_	_	TYPE			+		ICALLY SEALED				
- 1-		AMOUNT					2				
		NUMBER OF CONTACTS			2 SPDT						
		LOAD TYPE			RESISTIVE						
∴⊢		CONTACTS CAPACITY				5A					
		CONT / PRESS ACTION UN	IDER		-						
-		CONT / PRESS ACTION DC			OPEN						
		ELECTRICAL CONNECTIO			1/2" CABLE PRESS						
_	_	IDENTIFICATION PLATE			NOTE 2, PAGE 3						
2	28	DIAPHRAGM SEAL			ASTM A270 Gr.TP316L						
2	29	FILLING FLUID			MANUFATURE STANDARD						
S G	30	CAPILLARY LENGTH			-						
4CCESSORIES	31	CAPILLARY MATERIAL				-					
SSE	32	REGULATING FILTER					-				
) 3	33	PULSATION SHOCK ABSO	RBER			-					
` I	34	PIG RABBIT SIPHON			-						
3	35	OVERPRESSURE PROTEC	TOR				-				
3	36										
3	37	FLUID	PHYSICAL STATUS		GA.	S	GAS				
3	38	MINIMUM FLOW	NORMAL	MAXIMUM	-	-	-	-			
3	39	MINIMUM PRESSURE	NORMAL	MAXIMUM	-	-	2barG	-			
SN 4	40	MINIMUM TEMPERATURE	NORMAL	MAXIMUM	-	-	-	30°C			
<u> </u>	41	PROJECT FLOW	•	•		•	-				
2 4	42	DESIGN PRESSURE	DESIGN TEMPER	RATURE	- barG ℃						
S 4	43	DENSITY @ OPERATING C	ONDITION		- kg/m³						
Ĕ 4	44	VISCOSITY @ OPERATING	CONDITION		- Cp						
OPERATING CONDITIONS	45	FLUID CONDUCTIVITY			- μS/cm²						
d 4	46	INCRUSTATION					-				
4	47	SUSPENDED SOLIDS (%)					-				
4	48	MAXIMUM LOSS OF LOAD	ALLOWED				-				
4	49										
5	50	MANUFACTURER				WIKA	OR SIMILAR				
5	51	MODEL									