Base Load Power Hub (BLPH)

TECHNICAL DATASHEET for Fire & Gas Field Equipment

Document Number: 123A90-DDL-IN-DS-40057

Document Class: 2

01	29/08/2024	Accepted for Construction (AFC)	VBA	LCA	DLO
00	05/02/2024	Issue for Review (IFR)	VBA	LCA	DLO
Rev.	Date	Description	Prepared	Reviewed	Approved

This document undergoes an issuance cycle within EDMS "Fusionlive".
Its distribution is electronically controlled. Once printed shall be considered as "NOT CONTROLLED" copy

Table of Contents

SH.	DESCRIPTION	REVISIONS							
		00	01						
1	Cover	X	X						
2	Table of Contents	X	X						
3	Revision / Change Log	X	X						
4	General Requirements / Notes	X	X						
5	Flame Detectors Data Sheet	X	X						
6	Flame Detectors List	X	X						
7	Hydrogen Point Detectors Data Sheet	X	X						
8	Hydrogen Point Detectors List	X	X						
9	Hydrogen Ultrasonic Leak Detectors Data Sheet	X	X						
10	Hydrogen Ultrasonic Leak Detectors List	X	X						
11	Oxygen Point Detectors Data Sheet	X	X						
12	Oxygen Point Detectors List	X	X						
13	Smoke Detectors Data Sheet	X	X						
14	Smoke Detectors List	X	X						
15	Manual Fire Alarm Data Sheet	X	X						
16	Manual Fire Alarm List	X	X						
17	Push Button to SIS Data Sheet	X	X						
18	Push Button to SIS List	X	X						
19	Beacons Data Sheet	X	X						
20	Beacons List	X	X						
21	Sounders Data Sheet	X	X						
22	Sounders List	X	X						
23									
24									
25									
26									
27									
28									
29									
30									
31									
32									
33									
34									
35									
36									
37									
38									
39									
40									
41									
42									
43									
44									
45									
46									
47									
48									
49									
50									
51									
52									
53									
54									
55									
56									
57									
58									
59									
60									

This document undergoes an issuance cycle within EDMS "Fusionlive".
Its distribution is electronically controlled. Once printed shall be considered as "NOT CONTROLLED" copy

Revision / Change Log

Rev.	Description
00	ISSUE FOR REVIEW (IFR)
01	ACCEPTED FOR CONSTRUCTION (AFC)

HOLDS LIST

No.	Description
1	
2	
3	
4	

This document undergoes an issuance cycle within EDMS "Fusionlive".
Its distribution is electronically controlled. Once printed shall be considered as "NOT CONTROLLED" copy

GENERAL REQUIREMENTS / NOTES

1) This datasheet is to be read in conjunction with the Material Requisition (123A90-DDL-IN-MR-40058); "FIRE, GAS AND SMOKE DETECTION SYSTEMS" DEP 32.30.20.11-Gen.

2) All materials and electronic items shall be suitable for use in marine environment.

3) All material of outodoor F&G shall be Stainless steel material.

4) Ambient Temperature Min: -8.4 °C, Norm: 10.5 °C, Max: +25.0 °C.

5) All Fire & Gas equipment shall be Atex certified Exd IIC (or IIB+H2) T1, with ingression protection IP66. Smoke Detector can be Atex certified Exi IIC (or IIB+H2) T1.

6) All Fire Devices (Manual Call Point, Flame Detectors, Smoke Detectors) shall be compliant to DEP 32.30.20.11-Gen "FIRE, GAS AND SMOKE DETECTION SYSTEMS .

7) Manual Call Points equipped with EOL resistor for Line Monitoring purpose.

8) Mounting Accesories will be supplied.

9) All instruments shall be supplied with the corresponding plugs for all entries. Plugs shall be certified for hazardous areas.

10) VTA (VENDOR TO ADVISE).

11) Oxigen gas detectors will be installed in open area, Vendors can propose an alternative technology that can be evaluated.

12) Duct Kit shall be supplied.

13) Provided with UV/IR test lamp suitable for use in a zone 1 hazardous (quoted as option).

14) Field devices that detect on/off state, including Manual Alarm Call (MAC) devices, shall have their contact open in healthy plant condition (close on event detection) and be fitted with end of line monitoring

15) The device's Highway Addressable Remote Transducer (HART®) communication shall remain active at < 4 mA when the device output goes to the 1 mA - 4 mA output range due to signalling a fault.

16) A default detection performance requirement is a minimum leak rate of 0.1 kg/s (0.22 lb/s).

17) As per DEP 32.30.20.11 par. 4.2.3 HART® and DTM capabilities.

18) The default flame detection performance, used to assess, orientate and position flame detectors shall be based on the detectors' response to a n-heptane pool fire with 100 kW radiant heat output.

19) Gas Calibration Kit (Option): Included Gas Bottle for at least two years of normal operation, calibration cup, sample flow housing.

20) The alarm levels for H2 acoustic gas detectors shall take into account background ultrasonic noise and be set at a minimum of 6 dB above this noise.

This document undergoes an issuance cycle within EDMS "Fusionlive".
Its distribution is electronically controlled. Once printed shall be considered as "NOT CONTROLLED" copy

GENERAL	1	Tag Number		See next Sheet	
	2	Service		See next Sheet	
	3	P&ID Number		/	
	4	Plant		/	
	5	Plant Area		See next Sheet	
	6	Layout Number		See next Sheet	
	7	Detector Location		See next Sheet	
	8	Area Classification		Zone 2, Gas Group IIC (or IIB+H2), Class T1	
ENVIROMENTAL CONDITIONS	9	Enviromental Conditions		1013.7 mBar	
	10	Enviromental Temperature (Min - Max)		-8.4 °C ÷ 25 °C	
	11	Specific Humidity (min/norm/max)		$4.2 10^{-3}$ / $6.5 10^{-3}$ / 9.5 x 10^{-3}	
	12	Hazardous Area Certification		certified for use in hazardous area Zone 2	
	13	Fire Type		HYDROGEN	
DETECTOR	14	Type		Ultraviolet/Infrared (UV/IR) Flame Detectors	
	15	Principle of Detection		UV/IR Type	
	16	Certification	Ingress Protection	Atex II 2G D Ex db IIC T5 Gb	IP 66
	17	Detector Performance Target		as per DEP 32.30.20.11 (par. 5.3.2 Flammable gas) (18)	
	18	Response Time	Cone of View	6.4 s @ 20m for H2	90° Horiz. / 80° Vertical
	19	Measurement Range		N. 4 sensitivity Range: Extreme, High, Medium, Low	
	20	Accuracy	Operating Distance	-	~20m
	21	System Interface		HART 7 (15)	
	22	Colour Finish	Duty Label	Vendor Standard	Stainless Steel
	23				
	24	Fault Diagnostics		< 4mA	
	25	Calibration/Diagnostics		Required	
	26				
	27	False Alarm Immunities		Required	
	28	Anti Condensation		Required	
	29	SIL Certification		SIL2 - IEC61508	
ELECTRICAL	30	Operating Voltage	Power Consumption	24 Vdc	180mA, 120 mA (Standby)
	31	Output Signal		4 ÷ 20 mA + Hart 7	
	32	Alarm Contacts	Fault Contacts	N. 2 NO SPST	N.1 NC SPST
	33	Electrical Connections	Electrical Class	N. 2 M25 x 1,5 mm (1)	III
	34	Alarm Contacts Configuration		Required	
	35	Alarm Contacts Rating		2A @ 30Vdc	
	36	Terminals	Cable Entries	Screwed Type	N. 2 M20 x 1,5 mm
COMMUNICATION AND SOFTWARE	37	Communication Type	Signal Type	Smart HART revision 7 protocol (17)	-
	38	DD Revision	CFF Revision	-	-
	39	Hart Descriptor	Hart Tag	To be confirmed.	To be confirmed.
	40	Internal Diagnostics	Capacitance	-	-
	41	Segment	Device Address	-	-
	42	Device Class	Simulate	-	-
	43	Nominal Current	Operating Voltage	-	-
MATERIALS	44	Detector		-	
	45	Mounting Bracket		Stainless steel	
	46	Sunshade		SS 316	
	47	Label		Stainless steel	
	48	Body		Stainless Steel	
ACCESSORIES	49	Sun Shade		Required	
	50	Mounting		Required	
	51	Label		Required	
	52	Test Lamp		(13)	
PURCHASE	53	Manufacturer		Fire and Gas Detection Technologies INC.	
	54	Model		FLS-UV-IR	
	55	Purchase Order Number		Fores 1724000821	

Notes:
(1) Complete with adapter M25 x M20

No.	Date	By	Chkd	Appr	Description
01	29/08/2024	VBA	LCA	DLO	Accepted for Construction (AFC)
00	05/02/2024	VBA	LCA	DLO	Issue for Review (IFR)

INSTRUMENT DATA SHEET

Flame Detectors

CROSSWIND

ROSETTI MARINO

Sheet 5 of 22

Code: 405 | Dwg. No.: | Rev 01

FLAME DETECTORS LIST

POS.	TAG NUMBER	SERVICE	F&G LAYOUT 123A090-DDL-SAF-DL-…	FIRE ZONE	ELEVATION
1	950-FDZ-01101	FZ-01 FUEL CELL PK AREA	30027	FZ-01	32310
2	950-FDZ-01102	FZ-01 FUEL CELL PK AREA	30027	FZ-01	32310
3	950-FDZ-01103	FZ-01 FUEL CELL PK AREA	30027	FZ-01	32310
4	950-FDZ-01104	FZ-01 FUEL CELL PK AREA	30027	FZ-01	32310
5	950-FDZ-02101	FZ-02 H2 STORAGE VESSELS AREA	30027	FZ-02	32310
6	950-FDZ-02102	FZ-02 H2 STORAGE VESSELS AREA	30027	FZ-02	32310
7	950-FDZ-02103	FZ-02 H2 STORAGE VESSELS AREA	30027	FZ-02	32310
8	950-FDZ-02104	FZ-02 H2 STORAGE VESSELS AREA	30027	FZ-02	32310
9	950-FDZ-03101	FZ-03 ELECTROLYZER PK AREA	30027	FZ-03	32310
10	950-FDZ-03102	FZ-03 ELECTROLYZER PK AREA	30027	FZ-03	32310
11	950-FDZ-03103	FZ-03 ELECTROLYZER PK AREA	30027	FZ-03	32310
12	950-FDZ-03104	FZ-03 ELECTROLYZER PK AREA	30027	FZ-03	32310
13	950-FDZ-04101	FZ-04 B-400/B-300/B-200 AREA	30027	FZ-04	25310
14	950-FDZ-04102	FZ-04 B-400/B-300/B-200 AREA	30027	FZ-04	25310
15	950-FDZ-04103	FZ-04 B-400/B-300/B-200 AREA	30027	FZ-04	25310
16	950-FDZ-04104	FZ-04 B-400/B-300/B-200 AREA	30027	FZ-04	25310
17	950-FDZ-05101	FZ-05 BESS AREA	30027	FZ-05	25310
18	950-FDZ-05102	FZ-05 BESS AREA	30027	FZ-05	25310
19	950-FDZ-05103	FZ-05 BESS AREA	30027	FZ-05	25310
20	950-FDZ-05104	FZ-05 BESS AREA	30027	FZ-05	25310
21	950-FDZ-06101	FZ-06 B-100 AREA	30027	FZ-06	25310
22	950-FDZ-06102	FZ-06 B-100 AREA	30027	FZ-06	25310
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					
33					
34					
35					
36					
37					
38					
39					
40					
41					
42					
43					
44					
45					

Notes:

GENERAL	1	Tag Number		See next Sheet	
	2	Service		See next Sheet	
	3	P&ID Number		/	
	4	Plant		/	
	5	Plant Area		See next Sheet	
	6	Layout Number		See next Sheet	
	7	Detector Location		See next Sheet	
	8	Area Classification		Zone 2, Gas Group IIC (or IIB+H2), Class T1	
ENVIROMENTAL CONDITIONS	9	Enviromental Conditions		1013.7 mBar	
	10	Enviromental Temperature (Min - Max)		-8.4 °C ÷ 25 °C	
	11	Specific Humidity (min/norm/max)		$4.2 10^{-3}$ / $6.5 10^{-3}$ / 9.5×10^{-3}	
	12	Hazardous Area Certification		certified for use in hazardous area Zone 2	
	13				
DETECTOR	14	Type		Hydrogen Detector	
	15	Principle of Detection		Electrochemical	
	16	Certification	Ingress Protection	Atex II 2G Ex db IIC T6/T4 Gb	IP 66
	17	Detector Performance Target		7 m (23 ft) diameter sphere (as per DEP 32.30.20.11 par. 5.3.3.1 Flammable gas)	
	18	Response Time	Cone of View	T50 < 7s (methane) T90 < 13s (methane)	N.A.
	19	Measurement Range		0 ÷ 100% LEL (alarms 5% and 10% LFL)	
	20	Accuracy	Operating Distance	≤ 1% LEL	-
	21	System Interface		Hart 7 (15)	
	22	Colour Finish	Duty Label	Vendor Standard	Stainless Steel
	23				
	24	Fault Diagnostics		< 1.2mA	
	25	Calibration/Diagnostics		By Field Calibrator (19)	
	26	System Interface		Hart 7	
	27	False Alarm Immunities		Required	
	28	Anti Condensation		Required	
	29	SIL Certification		SIL2 - IEC61508	
ELECTRICAL	30	Operating Voltage	Power Consumption	24 Vdc	105mA @24Vdc
	31	Output Signal		4 ÷ 20 mA	
	32	Alarm Contacts	Fault Contacts	Not Required	Not Required
	33	Electrical Connections	Electrical Class	M20 x 1,5 mm	III
	34	Alarm Contacts Configuration		Not Required	
	35	Alarm Contacts Rating		Not Required	
	36	Terminals	Cable Entries	Screwed Type	N. 2 M20 x 1,5 mm
COMMUNICATION AND SOFTWARE	37	Communication Type	Signal Type	Smart HART revision 7 protocol (17)	-
	38	DD Revision	CFF Revision	-	-
	39	Hart Descriptor	Hart Tag	To be confirmed.	To be confirmed.
	40	Internal Diagnostics	Capacitance	-	-
	41	Segment	Device Address	-	-
	42	Device Class	Simulate	-	-
	43	Nominal Current	Operating Voltage	-	-
MATERIALS	44	Detector		N.A.	
	45	Mounting Bracket		Stainless steel	
	46	Sunshade		Stainless steel	
	47	Label		Stainless steel	
	48	Body		Stainless Steel	
ACCESSORIES	49	Sun Shade		Required (See next Sheet) (12)	
	50	Mounting		Required (See next Sheet) (12)	
	51	Label		Required	
	52				
PURCHASE	53	Manufacturer		Drager	
	54	Model		Polytron 8200 CAT	
	55	Purchase Order Number		Fores 1724000821	

Notes:

No.	Date	By	Chkd	Appr	Description
00	29/08/2024	VBA	LCA	DLO	Accepted for Construction (AFC)
00	05/02/2024	VBA	LCA	DLO	Issue for Review (IFR)

INSTRUMENT DATA SHEET

H2 Gas Detectors

CROSSWIND

ROSETTI MARINO

Sheet 7 of 20

Code: 405 | Dwg. No.: | Rev 01

HYDROGEN POINT DETECTORS LIST

POS.	TAG NUMBER	SERVICE	F&G LAYOUT 123A090-DDL-SAF-DL-…	FIRE ZONE	ELEVATION
1	950-GDZ-02101 (*)	H2 GD FZ-02 H2 STORAGE VESSELS AREA	30027	FZ-02	32810
2	950-GDZ-02102 (*)	H2 GD FZ-02 H2 STORAGE VESSELS AREA	30027	FZ-02	32810
3	950-GDZ-02103 (*)	H2 GD FZ-02 H2 STORAGE VESSELS AREA	30027	FZ-02	32810
4	950-GDZ-02104 (*)	H2 GD FZ-02 H2 STORAGE VESSELS AREA	30027	FZ-02	32810
5	950-GDZ-02105 (*)	H2 GD FZ-02 H2 STORAGE VESSELS AREA	30027	FZ-02	32810
6	950-GDZ-02106 (*)	H2 GD FZ-02 H2 STORAGE VESSELS AREA	30027	FZ-02	32810
7	950-GDZ-02107 (*)	H2 GD FZ-02 H2 STORAGE VESSELS AREA	30027	FZ-02	32810
8	950-GDZ-02108 (*)	H2 GD FZ-02 H2 STORAGE VESSELS AREA	30027	FZ-02	32810
9	950-GDZ-02109 (*)	H2 GD FZ-02 H2 STORAGE VESSELS AREA	30027	FZ-02	32810
10	950-GDZ-02110 (*)	H2 GD FZ-02 H2 STORAGE VESSELS AREA	30027	FZ-02	32810
11	950-GDZ-02111 (*)	H2 GD FZ-02 H2 STORAGE VESSELS AREA	30027	FZ-02	32810
12	950-GDZ-02112 (*)	H2 GD FZ-02 H2 STORAGE VESSELS AREA	30027	FZ-02	32810
13	950-GDZ-02113 (*)	H2 GD FZ-02 H2 STORAGE VESSELS AREA	30027	FZ-02	32810
14	950-GDZ-02114 (*)	H2 GD FZ-02 H2 STORAGE VESSELS AREA	30027	FZ-02	32810
15	950-GDZ-02115 (*)	H2 GD FZ-02 H2 STORAGE VESSELS AREA	30027	FZ-02	32810
16	950-GDZ-02116 (*)	H2 GD FZ-02 H2 STORAGE VESSELS AREA	30027	FZ-02	32810
17	950-GDZ-04201	H2 GD FZ-04 B-400 HVAC AIR INTAKE	30027	FZ-04	30310
18	950-GDZ-04202	H2 GD FZ-04 B-400 HVAC AIR INTAKE	30027	FZ-04	30310
19	950-GDZ-04203	H2 GD FZ-04 B-400 HVAC AIR INTAKE	30027	FZ-04	30310
20	950-GDZ-04204	H2 GD FZ-04 B-400 AMBIENT	30027	FZ-04	30310
21	950-GDZ-04205	H2 GD FZ-04 B-400 AMBIENT	30027	FZ-04	30310
22	950-GDZ-04206	H2 GD FZ-04 B-400 AMBIENT	30027	FZ-04	30310
23	950-GDZ-04207	H2 GD FZ-04 B-300 HVAC AIR INTAKE	30027	FZ-04	30310
24	950-GDZ-04208	H2 GD FZ-04 B-300 HVAC AIR INTAKE	30027	FZ-04	30310
25	950-GDZ-04209	H2 GD FZ-04 B-300 HVAC AIR INTAKE	30027	FZ-04	30310
26	950-GDZ-04210	H2 GD FZ-04 B-300 AMBIENT	30027	FZ-04	30310
27	950-GDZ-04211	H2 GD FZ-04 B-300 AMBIENT	30027	FZ-04	30310
28	950-GDZ-04212	H2 GD FZ-04 B-300 AMBIENT	30027	FZ-04	30310
29	950-GDZ-04213	H2 GD FZ-04 B-200 HVAC AIR INTAKE	30027	FZ-04	30310
30	950-GDZ-04214	H2 GD FZ-04 B-200 HVAC AIR INTAKE	30027	FZ-04	30310
31	950-GDZ-04215	H2 GD FZ-04 B-200 HVAC AIR INTAKE	30027	FZ-04	30310
32	950-GDZ-04216	H2 GD FZ-04 B-200 AMBIENT	30027	FZ-04	30310
33	950-GDZ-04217	H2 GD FZ-04 B-200 AMBIENT	30027	FZ-04	30310
34	950-GDZ-04218	H2 GD FZ-04 B-200 AMBIENT	30027	FZ-04	30310
35	950-GDZ-05101	H2 GD FZ-05 BESS AREA	30027	FZ-05	28700
36	950-GDZ-05102	H2 GD FZ-05 BESS AREA	30027	FZ-05	28700
37	950-GDZ-05103	H2 GD FZ-05 BESS AREA	30027	FZ-05	28700
38	950-GDZ-05104	H2 GD FZ-05 BESS AREA	30027	FZ-06	28700
39	950-GDZ-05105	H2 GD FZ-05 BESS AREA	30027	FZ-06	28700
40	950-GDZ-05106	H2 GD FZ-05 BESS AREA	30027	FZ-06	28700
41	950-GDZ-06201	H2 GD FZ-06 B-100 HVAC AIR INTAKE	30027	FZ-06	30310
42	950-GDZ-06202	H2 GD FZ-06 B-100 HVAC AIR INTAKE	30027	FZ-06	30310
43	950-GDZ-06203	H2 GD FZ-06 B-100 HVAC AIR INTAKE	30027	FZ-06	30310
44	950-GDZ-06204	H2 GD FZ-06 B-100 AMBIENT	30027	FZ-06	30310
45	950-GDZ-06205	H2 GD FZ-06 B-100 AMBIENT	30027	FZ-06	30310
46	950-GDZ-06206	H2 GD FZ-06 B-100 AMBIENT	30027	FZ-06	30310
47	950-GDZ-03104 (*)	H2 GD FZ-03 ELECTROLYZER	30027	FZ-06	30310
48	950-GDZ-03105 (*)	H2 GD FZ-03 ELECTROLYZER	30027	FZ-06	30310
49	950-GDZ-01103 (*)	H2 GD FZ-03 ELECTROLYZER	30027	FZ-06	30310

Notes: (*) Complete with mounting bracket for 2" Pole and Sunshade

						INSTRUMENT DATASHEET	CROSSWIND	
						H2 Gas Detectors	ROSETTI MARINO	
01	29/08/2024	VBA	LCA	DLO	Accepted for Construction (AFC)		Sheet 8 of 22	
00	05/02/2024	VBA	LCA	DLO	Issue for Review (IFR)			
No.	Date	By	Chkd	Appr	Description	Code: 405	Dwg. No.:	Rev 01

GENERAL	1	Tag Number		See next Sheet	
	2	Service		See next Sheet	
	3	P&ID Number		/	
	4	Plant		/	
	5	Plant Area		See next Sheet	
	6	Layout Number		See next Sheet	
	7	Detector Location		See next Sheet	
	8	Area Classification		Zone 2, Gas Group IIC (or IIB+H2), Class T1	
ENVIROMENTAL CONDITIONS	9	Enviromental Conditions		1013,7 mBar	
	10	Enviromental Temperature (Min - Max)		-8.4 °C ÷ 25 °C	
	11	Specific Humidity (min/norm/max)		4.210^{-3} / 6.510^{-3} / 9.5 x 10^{-3}	
	12	Area Classification		Zone 2, Gas Group IIC (or IIB+H2), Class T1	
	13	Hazardous Area Certification		certified for use in hazardous area Zone 2	
DETECTOR	14	Type		Ultrasonic (Acustic) Hydrogen leak Detector	
	15	Principle of Detection		ultra-sensitive acoustic sensors	
	16	Certification	Ingress Protection	Atex II 2G Ex db [ia] IIC T4 Gb	IP 66
	17	Detector Performance Target		0.1 kg/s (16)	
	18	Response Time	Cone of View	< 3 s	N.A.
	19	Measurement Range		55-100 dB (20)	
	20	Accuracy	Operating Distance		20m
	21	System Interface		HART	
	22	Colour Finish	Duty Label	Vendor Standard	Stainless Steel
	23				
	24	Fault Diagnostics		< 1.2mA	
	25	Calibration/Diagnostics		By Field Calibrator	
	26	System Interface		Hart (15)	
	27	False Alarm Immunities		Required	
	28	Anti Condensation		Required	
	29	SIL Certification		SIL2 - IEC61508	
ELECTRICAL	30	Operating Voltage	Power Consumption	24 Vdc	100mA @24Vdc
	31	Output Signal	Power Supply	4 ÷ 20 mA	24 Vdc
	32	Alarm Contacts	Fault Contacts	Included	Included
	33	Electrical Connections	Electrical Class	M20 x 1,5 mm	III
	34	Alarm Contacts Configuration		Not Required	
	35	Alarm Contacts Rating		N. 3 SPDT 5A@30Vdc	
	36	Terminals	Cable Entries	Screwed Type	N. 2 M20 x 1,5 mm
COMMUNICATION AND SOFTWARE	37	Communication Type	Signal Type	HART(17)	-
	38	DD Revision	CFF Revision	-	-
	39	Hart Descriptor	Hart Tag	To be confirmed.	To be confirmed.
	40	Internal Diagnostics	Capacitance	-	-
	41	Segment	Device Address	-	-
	42	Device Class	Simulate	-	-
	43	Nominal Current	Operating Voltage	-	-
MATERIALS	44	Detector		N.A.	
	45	Mounting Bracket		Stainless steel	
	46	Sunshade		Stainless steel	
	47	Label		Stainless steel	
	48	Body		Stainless Steel	
ACCESSORIES	49	Sun Shade		Stainless steel	
	50	Mounting		Required	
	51	Label		Required	
	52				
PURCHASE	53	Manufacturer		Drager	
	54	Model		Polytron 8900 UGLD	
	55	Purchase Order Number		Fores 1724000821	

Notes:

No.	Date	By	Chkd	Appr	Description
01	29/08/2024	VBA	LCA	DLO	Accepted for Construction (AFC)
00	05/02/2024	VBA	LCA	DLO	Issue for Review (IFR)

INSTRUMENT DATA SHEET

H2 Ultrasonic Detectors

CROSSWIND

ROSETTI MARINO

Sheet 9 of 20

Code: 405 Dwg. No.: Rev 01

HYDROGEN ULTRASONIC LEAK DETECTORS LIST

POS.	TAG NUMBER	SERVICE	F&G LAYOUT 123A090-DDL-SAF-DL-…	FIRE ZONE	ELEVATION
1	950-GDZ-01101	H2 GD FZ-01 FUEL CELL PK AREA	30027	FZ-01	32810
2	950-GDZ-01102	H2 GD FZ-01 FUEL CELL PK AREA	30027	FZ-01	32810
3	950-GDZ-02117	H2 GD FZ-02 H2 STORAGE VESSELS AREA	30027	FZ-02	32810
4	950-GDZ-02118	H2 GD FZ-02 H2 STORAGE VESSELS AREA	30027	FZ-02	32810
5	950-GDZ-02119	H2 GD FZ-02 H2 STORAGE VESSELS AREA	30027	FZ-02	32810
6	950-GDZ-02120	H2 GD FZ-02 H2 STORAGE VESSELS AREA	30027	FZ-02	32810
7	950-GDZ-03101	H2 GD FZ-03 ELECTROLYZER PK AREA	30027	FZ-03	32810
8	950-GDZ-03102	H2 GD FZ-03 ELECTROLYZER PK AREA	30027	FZ-03	32810
9	950-GDZ-03103	H2 GD FZ-03 ELECTROLYZER PK AREA	30027	FZ-03	32810
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					
33					
34					
35					
36					
37					
38					
39					
40					
41					
42					
43					
44					
45					

Notes:

GENERAL	1	Tag Number		See next Sheet	
	2	Service		See next Sheet	
	3	P&ID Number		/	
	4	Plant		/	
	5	Plant Area		See next Sheet	
	6	Layout Number		See next Sheet	
	7	Detector Location		See next Sheet	
	8	Area Classification		Zone 2, Gas Group IIC (or IIB+H2), Class T1	
ENVIROMENTAL CONDITIONS	9	Enviromental Conditions		1013,7 mBar	
	10	Enviromental Temperature (Min - Max)		-8.4 °C ÷ 25 °C	
	11	Specific Humidity (min/norm/max)		4.210^{-3} / 6.510^{-3} / 9.5 x 10^{-3}	
	12	Hazardous Area Certification		certified for use in hazardous area Zone 2	
	13				
DETECTOR	14	Type		Oxygen Detector	
	15	Principle of Detection		Electrochemical (11)	
	16	Certification	Ingress Protection	Atex II 2G Ex db [ia] IIC T6/T4 Gb	IP 66
	17	Detector Performance Target		as per DEP 32.30.20.11	
	18	Response Time	Cone of View	VTA	N.A.
	19	Measurement Range		0 ÷ 100% Vol (alarm: 23% Vol)	
	20	Accuracy	Operating Distance	-	-
	21	System Interface		Hart 7	
	22	Colour Finish	Duty Label	Vendor Standard	Stainless Steel
	23				
	24	Fault Diagnostics		< 1.2mA	
	25	Calibration/Diagnostics		By Field Calibrator (19)	
	26	System Interface		Hart (15)	
	27	False Alarm Immunities		Required	
	28	Anti Condensation		Required	
	29	SIL Certification		SIL2 - IEC61508	
ELECTRICAL	30	Operating Voltage	Power Consumption	24 Vdc	80mA @ 24Vdc
	31	Output Signal		4 ÷ 20 mA	
	32	Alarm Contacts	Fault Contacts	Not Required	Not Required
	33	Electrical Connections	Electrical Class	M20 x 1,5 mm	III
	34	Alarm Contacts Configuration		Not Required	
	35	Alarm Contacts Rating		Not Required	
	36	Terminals	Cable Entries	Screwed Type	N. 2 M20 x 1,5 mm
COMMUNICATION AND SOFTWARE	37	Communication Type	Signal Type	HART	-
	38	DD Revision	CFF Revision	-	-
	39	Hart Descriptor	Hart Tag	To be confirmed.	To be confirmed.
	40	Internal Diagnostics	Capacitance	-	-
	41	Segment	Device Address	-	-
	42	Device Class	Simulate	-	-
	43	Nominal Current	Operating Voltage	-	-
MATERIALS	44	Detector		N.A.	
	45	Mounting Bracket		Stainless steel	
	46	Sunshade		Stainless steel	
	47	Label		Stainless steel	
	48	Body		Stainless Steel	
ACCESSORIES	49	Sun Shade		Required	
	50	Mounting		Required	
	51	Label		Required	
	52				
PURCHASE	53	Manufacturer		Drager	
	54	Model		Polytron 8100 EC	
	55	Purchase Order Number		Fores 1724000821	

No.	Date	By	Chkd	Appr	Description
01	29/08/2024	VBA	LCA	DLO	Accepted for Construction (AFC)
00	05/02/2024	VBA	LCA	DLO	Issue for Review (IFR)

INSTRUMENT DATA SHEET

O2 Gas Detectors

CROSSWIND

ROSETTI MARINO

Sheet 11 of 20

Code: 405 Dwg. No.: Rev 01

OXYGEN POINT DETECTORS LIST

POS.	TAG NUMBER	SERVICE	F&G LAYOUT 123A090-DDL-SAF-DL-…	FIRE ZONE	ELEVATION
1	950-GDZ-03107	O2 DET. FZ-03 ELECTROLYZER PK AREA	30027	FZ-03	32810
2	950-GDZ-03108	O2 DET. FZ-03 ELECTROLYZER PK AREA	30027	FZ-03	32810
3	950-GDZ-03109	O2 DET. FZ-03 ELECTROLYZER PK AREA	30027	FZ-03	32810
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					
33					
34					
35					
36					
37					
38					
39					
40					
41					
42					
43					
44					
45					

Notes:

						INSTRUMENT DATASHEET	CROSSWIND	
						O2 Gas Detectors	ROSETTI MARINO	
01	29/08/2024	VBA	LCA	DLO	Accepted for Construction (AFC)			
00	05/02/2024	VBA	LCA	DLO	Issue for Review (IFR)		Sheet 12 of 22	
No.	Date	By	Chkd	Appr	Description	Code: 405	Dwg. No.:	Rev 01

GENERAL	1	Tag Number		See Next Sheet	
	2	Fire Gas Layout		See Next Sheet	
	3	Area / Facility		See Next Sheet	
	4	Elevation	mm	See Next Sheet	
	5	Hazardous Area		Zone 2, Gas Group IIC (or IIB+H2), Class T1	
	6	Color / Duty Label		Red (RAL 3001) / Fire	
	7	Certification Code	Atex Certified		Ex-d IIC (or IIB + H2) T1
OPERATING CONDITIONS	8	Service		See Next Sheet	
	9	Specific Humidity (min/norm/max)		4,210-3 / 6,510-3 / 9,5 x 10-3	
	10	Enviromental Temperature (Min - Max)		-8,4 °C ÷ 25 °C	
	11	Corrosive Component		Marine Environment	
	12	Ambient Temperature at Sensor Location		-8,4 °C ÷ 25 °C	
	13	Hazardous Area Certification		certified for use in hazardous area Zone 2	
	14	SIL Certification		SIL2 - IEC61508	
	15				
	16				
SMOKE DETECTOR	17	Type		OPTICAL (OSD)	
	18	Design Environment		Outdoor (duct mounted) / 5 to 45 ºC - 10 to 93% RH (humidity) Indoor	
	19	Housing Material (Enclosure)		FR110 "Bayblend" Fire Resistant	
	20	Ingress Protection		-	
	21	Operating Voltage		16-28Vdc	
	22	Operating Current (quiescent)		100µA	
	23	Ex Classification		Cenelec: Ex ia IIC T5	
	24	Mounting (Installation Method)		Container Ceiling / Outdoor (12) (See Next Sheet)	
	25	Detector base 2WB/4WRB		-	
	26	Detector base cable entry		M20 x 1,5 mm (VTA)	
	27	End of Line EOL		Required (14)	
	28	Operating Method		Microprocessor	
	29	Switch Alarm (Maximum Current Alarm)		48mA	
	30	Normal LED indicator		A red high intensity LED short blink	
	31	Led Indicator for ON ALARM		A red high intensity LED, steady on for alarm	
	32	Threshold temperature	Output	-	-
ELECTRONICS	33	Power Supply From		24Vdc / FGS system	
	34	Electrical Connection Type		Screwed	
	35				
	36				
OPTIONS	37	Ext. Alarm Connectable (or remote lights)		On Sensor	
	38	Loop Test		Yes	
	39	Accesories		Designation Plate	
	40	Action Indication		On Alarm	
	41	Mounting		Container Ceiling / Outdoor (12) (See Next Sheet)	
SPECIAL REQUIREMENTS	42	Material Cert.		-	
	43	Paint Finish			
	44	Weight		0.2 Kg	
PURCHASE DATA	45	Supplier	Manufacturer	FORES	ZETTLER
	46	Model	Base Plate Model	MR601TEx	4B-DHM
	47	Duct Smoke Detector	Isolator model	Not Required	
	48	Purchase Order Number		Fores 1724000821	
	49	Serial Number	Item Number		

Notes:

No.	Date	By	Chkd	Appr	Description
01	29/08/2024	VBA	LCA	DLO	Accepted for Construction (AFC)
00	05/02/2024	VBA	LCA	DLO	Issue for Review (IFR)

INSTRUMENT DATA SHEET

Smoke Detectors

CROSSWIND

ROSETTI MARINO

Sheet 13 of 22

Code: 405 | Dwg. No.: | Rev 01

SMOKE DETECTOR LIST

POS.	TAG NUMBER	SERVICE	F&G LAYOUT 123A090-DDL-SAF-DL-…	FIRE ZONE	ELEVATION
1	950-SDZ-04201	FZ-04 B-400 HVAC AIR INTAKE	30027	FZ-04	25310
2	950-SDZ-04202	FZ-04 B-400 HVAC AIR INTAKE	30027	FZ-04	25310
3	950-SDZ-04203	FZ-04 B-400 HVAC AIR INTAKE	30027	FZ-04	25310
4	950-SDZ-04207	FZ-04 B-300 HVAC AIR INTAKE	30027	FZ-04	25310
5	950-SDZ-04208	FZ-04 B-300 HVAC AIR INTAKE	30027	FZ-04	25310
6	950-SDZ-04209	FZ-04 B-300 HVAC AIR INTAKE	30027	FZ-04	25310
7	950-SDZ-04213	FZ-04 B-200 HVAC AIR INTAKE	30027	FZ-04	25310
8	950-SDZ-04214	FZ-04 B-200 HVAC AIR INTAKE	30027	FZ-04	25310
9	950-SDZ-04215	FZ-04 B-200 HVAC AIR INTAKE	30027	FZ-04	25310
10	950-SDZ-06201	FZ-06 B-100 HVAC AIR INTAKE	30027	FZ-06	25310
11	950-SDZ-06202	FZ-06 B-100 HVAC AIR INTAKE	30027	FZ-06	25310
12	950-SDZ-06203	FZ-06 B-100 HVAC AIR INTAKE	30027	FZ-06	25310
13	950-SDZ-04204	FZ-04 B-400 AMBIENT	30027	FZ-04	25310
14	950-SDZ-04205	FZ-04 B-400 AMBIENT	30027	FZ-04	25310
15	950-SDZ-04206	FZ-04 B-400 AMBIENT	30027	FZ-04	25310
16	950-SDZ-04210	FZ-04 B-300 AMBIENT	30027	FZ-04	25310
17	950-SDZ-04211	FZ-04 B-300 AMBIENT	30027	FZ-04	25310
18	950-SDZ-04212	FZ-04 B-300 AMBIENT	30027	FZ-04	25310
19	950-SDZ-04216	FZ-04 B-200 AMBIENT	30027	FZ-04	25310
20	950-SDZ-04217	FZ-04 B-200 AMBIENT	30027	FZ-04	25310
21	950-SDZ-04218	FZ-04 B-200 AMBIENT	30027	FZ-04	25310
22	950-SDZ-06204	FZ-06 B-100 AMBIENT	30027	FZ-06	25310
23	950-SDZ-06205	FZ-06 B-100 AMBIENT	30027	FZ-06	25310
24	950-SDZ-06206	FZ-06 B-100 AMBIENT	30027	FZ-06	25310
25					
26					
27					
28					
29					
30					
31					
32					
33					
34					
35					
36					
37					
38					
39					
40					
41					
42					
43					
44					
45					

Notes:

GENERAL	1	Tag Number			See Next Sheet
	2	Fire Gas Layout			See Next Sheet
	3	Area / Facility			See Next Sheet
	4	Elevation		mm	See Next Sheet
	5	Hazardous Area			Zone 2, Gas Group IIC (or IIB+H2), Class T1
	6	Color / Duty Label			Red / Fire
	7	Certification Code	Atex Certified		Ex-d IIC T5/T6 Gb
OPERATING CONDITIONS	8	Service			See Next Sheet
	9	Specific Humidity (min/norm/max)			4.210-3 / 6.510-3 / 9.5 x 10-3
	10	Enviromental Temperature (Min - Max)			-8.4 °C ÷ 25 °C
	11	Corrosive Component			Marine Environment
	12	Relative Humidity (Max)			
	13	Hazardous Area Certification			certified for use in hazardous area Zone 2
	14	SIL Certification			SIL2 - IEC61508
	15				
	16				
MANUAL CALL POINT	17	Duty and Tag TYPE			Stainless Steel
	18	Range of use			Outdoor
	19	Housing Material (Enclosure)			Stainless steel
	20	Protection Category			IP66/IP67
	21	Current Consumption			
	22	Operating Voltage			24 Vdc (VTA)
	23	Permissible Operating Temperature			-8.4 °C ÷ 25 °C
	24	Ex Classification			ATEX Ex-d IIC T5/T6 Gb
	25	Mounting (Installation Method)			Surface - mounted
	26	Cable entry	Blind plug:		M20 x 1,5 / M20 x 1,5
	27	Operating Method			Pushbutton with lift-flap (double action + Key Reset)
	28	Standard			
	29	End of Line EOL			Resistor EOL + Diode (14)
	30	Switch Rating			2A@ 24Vdc
	31	Led Indicator for ON ALARM			N/A
	32	Output signal			DPDT(14)
ELECTRONICS	33	Power Supply From			24 Vdc
	34	Electrical Connection Type			Screwed Terminals
	35	Certification - Electronics			N/A
	36	Certification - Power Supply			N/A
OPTIONS	37	Intrinsically Safe Design			None
	38	Calibration Range	Zero Adjustment		N/A / N/A
	39	Special Vendor Cable			N/A
	40	Special Cable Length			N/A
	41	Contact type			Dry contact
SPECIAL REQUIREMENTS	42	Material Cert.			-
	43	Paint Finish			STD Vendor
	44	Weight			3.8 Kg
	45	Safety Integrity Level			SIL-2 rated as per IEC61508
	46	Color			Red
	47				
	48				
	49				
PURCHASE DATA	50	Supplier	Manufacturer		FORES / MEDC
	51	Model			SM87PB
	52	Purchase Order Number			1724000821
	53	Item Number			
	54	Serial Number			

Notes:

No.	Date	By	Chkd	Appr	Description
01	29/08/2024	VBA	LCA	DLO	Accepted for Construction (AFC)
00	05/02/2024	VBA	LCA	DLO	Issue for Review (IFR)

INSTRUMENT DATA SHEET

Manual Call Points

CROSSWIND

ROSETTI MARINO

Sheet 15 of 22

Code: 405 | Dwg. No.: | Rev 01

MANUAL FIRE ALARM LIST

POS.	TAG NUMBER	SERVICE	F&G LAYOUT 123A090-DDL-SAF-DL-…	FIRE ZONE	ELEVATION
1	950-MFA-01101	FZ-01 MFA ACTIVATION	30027	FZ-01	31810
2	950-MFA-01102	FZ-01 MFA ACTIVATION	30027	FZ-01	31810
3	950-MFA-01103	FZ-01 MFA ACTIVATION	30027	FZ-01	31810
4	950-MFA-02101	FZ-02 MFA ACTIVATION	30027	FZ-02	31810
5	950-MFA-03101	FZ-03 MFA ACTIVATION	30027	FZ-03	31810
6	950-MFA-03102	FZ-03 MFA ACTIVATION	30027	FZ-03	31810
7	950-MFA-03103	FZ-03 MFA ACTIVATION	30027	FZ-03	31810
8	950-MFA-03104	FZ-03 MFA ACTIVATION	30027	FZ-03	31810
9	950-MFA-04101	FZ-04 MFA ACTIVATION	30027	FZ-04	24810
10	950-MFA-04102	FZ-04 MFA ACTIVATION	30027	FZ-04	24810
11	950-MFA-04201	FZ-04 MFA ACTIVATION - B-400 INDOOR	30027	FZ-04	24810
12	950-MFA-04202	FZ-04 MFA ACTIVATION - B-300 INDOOR	30027	FZ-04	24810
13	950-MFA-04203	FZ-04 MFA ACTIVATION - B-200 INDOOR	30027	FZ-04	24810
14	950-MFA-05101	FZ-05 MFA ACTIVATION	30027	FZ-05	24810
15	950-MFA-05102	FZ-05 MFA ACTIVATION	30027	FZ-05	24810
16	950-MFA-05103	FZ-05 MFA ACTIVATION	30027	FZ-05	24810
17	950-MFA-05104	FZ-05 MFA ACTIVATION	30027	FZ-05	24810
18	950-MFA-06101	FZ-06 MFA ACTIVATION	30027	FZ-06	31810
19	950-MFA-06102	FZ-06 MFA ACTIVATION	30027	FZ-06	31810
20	950-MFA-06201	FZ-06 MFA ACTIVATION - B-100 INDOOR	30027	FZ-06	24810
21	950-MFA-07101	FZ-07 MFA ACTIVATION	30027	FZ-07	18360
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					
33					
34					
35					
36					
37					
38					
39					
40					
41					
42					
43					
44					
45					

Notes:

GENERAL	1	Tag Number		See Next Sheet	
	2	Fire Gas Layout		See Next Sheet	
	3	Area / Facility		See Next Sheet	
	4	Elevation	mm	See Next Sheet	
	5	Hazardous Area		Zone 2, Gas Group IIC (or IIB+H2), Class T1	
	6	Color / Duty Label		Yellow / See Next Sheet	
	7	Certification Code	Atex Certified		Ex-d IIC T5/T6 Gb
OPERATING CONDITIONS	8	Service		See Next Sheet	
	9	Specific Humidity (min/norm/max)		4.210-3 / 6.510-3 / 9.5 x 10-3	
	10	Enviromental Temperature (Min - Max)		-8.4 °C ÷ 25 °C	
	11	Corrosive Component		Marine Environment	
	12	Relative Humidity (Max)			
	13	Hazardous Area Certification		certified for use in hazardous area Zone 2	
	14	SIL Certification		SIL2 - IEC61508	
	15				
	16				
MANUAL CALL POINT	17	Duty and Tag TYPE		Stainless Steel	
	18	Range of use		Outdoor	
	19	Housing Material (Enclosure)		Stainless steel	
	20	Protection Category		IP66/IP67	
	21	Current Consumption			
	22	Operating Voltage		24 Vdc (VTA)	
	23	Permissible Operating Temperature		-8.4 °C ÷ 25 °C	
	24	Ex Classification		ATEX Ex-d IIC T5/T6 Gb	
	25	Mounting (Installation Method)		Surface - mounted	
	26	Cable entry	Blind plug:	M20 x 1,5	M20 x 1,5
	27	Operating Method		Pushbutton with lift-flap (double action + Key Reset)	
	28	Standard			
	29	End of Line EOL		Resistor EOL + Diode (14)	
	30	Switch Rating		2A@ 24Vdc	
	31	Led Indicator for ON ALARM		N/A	
	32	Output signal		DPDT(14)	
ELECTRONICS	33	Power Supply From		24 Vdc	
	34	Electrical Connection Type		Screwed Terminals	
	35	Certification - Electronics		N/A	
	36	Certification - Power Supply		N/A	
OPTIONS	37	Intrinsically Safe Design		None	
	38	Calibration Range	Zero Adjustment	N/A	N/A
	39	Special Vendor Cable		N/A	
	40	Special Cable Length		N/A	
	41	Contact type		Dry contact	
SPECIAL REQUIREMENTS	42	Material Cert.		-	
	43	Paint Finish		STD Vendor	
	44	Weight		3.8 Kg	
	45	Safety Integrity Level		SIL-2 rated as per IEC61508	
	46	Color		Red	
	47				
	48				
	49				
PURCHASE DATA	50	Supplier	Manufacturer	FORES	MEDC
	51	Model		SM87PB	
	52	Purchase Order Number		1724000821	
	53	Item Number			
	54	Serial Number			

Notes:

No.	Date	By	Chkd	Appr	Description
01	29/08/2024	VBA	LCA	DLO	Accepted for Construction (AFC)
00	05/02/2024	VBA	LCA	DLO	Issue for Review (IFR)

INSTRUMENT DATA SHEET

Manual Call Points

CROSSWIND

ROSETTI MARINO

Sheet 17 of 22

Code: 405 | Dwg. No.: | Rev 01

PUSH BUTTON TO SIS LIST

POS.	TAG NUMBER	SERVICE	F&G LAYOUT 123A090-DDL-SAF-DL-…	FIRE ZONE	ELEVATION
1	950-ASD-01101	FZ-01 ABANDON SHUTDOWN ACTIVATION	30027	FZ-01	31810
2	950-ASD-03101	FZ-03 ABANDON SHUTDOWN ACTIVATION	30027	FZ-03	31810
3	950-ASD-04101	FZ-04 ABANDON SHUTDOWN ACTIVATION	30027	FZ-04	24810
4	950-ASD-06101	FZ-06 ABANDON SHUTDOWN ACTIVATION	30027	FZ-06	31810
5	950-ASD-07101	FZ-07 ABANDON SHUTDOWN ACTIVATION	30027	FZ-07	18360
6	950-MOB-01101	FZ-01 MAN OVER BOARD ACTIVATION	30027	FZ-01	31810
7	950-MOB-03101	FZ-03 MAN OVER BOARD ACTIVATION	30027	FZ-03	31810
8	950-MOB-04101	FZ-04 MAN OVER BOARD ACTIVATION	30027	FZ-04	24810
9	950-MOB-06101	FZ-06 MAN OVER BOARD ACTIVATION	30027	FZ-06	31810
10	950-MOB-07101	FZ-07 MAN OVER BOARD ACTIVATION	30027	FZ-07	18360
11	950-ESD-01101	FZ-01 ESD-1 PUSH BUTTON ACTIVATION	30027	FZ-01	31810
12	950-ESD-03101	FZ-03 ESD-1 PUSH BUTTON ACTIVATION	30027	FZ-03	31810
13	950-ESD-04101	FZ-04 ESD-1 PUSH BUTTON ACTIVATION	30027	FZ-04	24810
14	950-ESD-06101	FZ-06 ESD-1 PUSH BUTTON ACTIVATION	30027	FZ-06	31810
15	950-ESD-07101	FZ-07 ESD-1 PUSH BUTTON ACTIVATION	30027	FZ-07	18360
16	950-ESDD-01101	FZ-01 ESD-1D PUSH BUTTON ACTIVATION	30027	FZ-01	31810
17	950-ESDD-03101	FZ-03 ESD-1D PUSH BUTTON ACTIVATION	30027	FZ-03	31810
18	950-ESDD-04101	FZ-04 ESD-1D PUSH BUTTON ACTIVATION	30027	FZ-04	24810
19	950-ESDD-06101	FZ-06 ESD-1D PUSH BUTTON ACTIVATION	30027	FZ-06	31810
20	950-ESDD-07101	FZ-07 ESD-1D PUSH BUTTON ACTIVATION	30027	FZ-07	18360
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					
33					
34					
35					
36					
37					
38					
39					
40					
41					
42					
43					
44					
45					

Notes:

						INSTRUMENT DATASHEET	CROSSWIND	
						Manual Call Points	ROSETTI MARINO	
01	29/08/2024	VBA	LCA	DLO	Accepted for Construction (AFC)			
00	05/02/2024	VBA	LCA	DLO	Issue for Review (IFR)		Sheet 18 of 22	
No.	Date	By	Chkd	Appr	Description	Code: 405	Dwg. No.:	Rev 01

GENERAL	1	Tag Number			See Next Sheet			
	2	Fire Gas Layout			See Next Sheet			
	3	Area / Facility			See Next Sheet			
	4	Elevation		mm	See Next Sheet			
	5	Hazardous Area			Zone 2, Gas Group IIC (or IIB+H2), Class T1			
	6	Color / Duty Label			RED / AMBER See Next Sheet			
	7	Certification Code	Atex Certified			Ex-db IIC T6 Gb		
OPERATING CONDITIONS	8	Service			See Next Sheet			
	9	Specific Humidity (min/norm/max)			4.210-3 / 6.510-3 / 9.5 x 10-3			
	10	Enviromental Temperature (Min - Max)			-8.4 °C ÷ 25 °C			
	11	Corrosive Component			Marine Environment			
	12							
	13							
	14	SIL Certification			SIL2 - IEC61508			
	15							
	16							
BEACON	17	Duty and Tag TYPE			316SS			
	18	Design Temperature/ Rel. humidity at Sensor Location			5 to 45 ºC / 10 to 93% RH (for indoor beacons)			
	19	Housing Material (Enclosure)			Stainless steel			
	20	Ingress Protection			IP66			
	21	Sound Level Range (Sounder)			N/A			
	22	Operating Voltage			24Vdc			
	23	Permissible Operating Temperature			-8.4 °C ÷ 25 °C			
	24	Ex Classification			Atex Ex-db IIC T6 Gb			
	25	Mounting (Installation Method)			Direct Mounting			
	26	Cable entry	Blind plug:		M20 x 1,5	M20 x 1,5		
	27	Volumen Level Regulation (Sounder)			N/A			
	28	Currents (Sounder)			N/A			
	29	Tones Selectable (Sounder)			N/A			
	30	Type (Beacon)			High Intensity Led Beacon			
	31	Flash Rate (Beacon)			60 fpm (VTA)			
	32	Lens Material (Beacon)	Lens guard	Lens Colour	Borosilicate	Wire	Red / Amber	
ELECTRONICS	33							
	34	Power Supply From			24 Vdc from FGS			
	35	Electrical Connection Type			Screw			
	36							
OPTIONS	37							
	38	Intrinsically Safe Design			N/A			
	39	Calibration Range			N/A			
	40	Special Vendor Cable			N/A			
	41	Special Cable Length			N/A			
SPECIAL REQUIREMENTS	42	Material Cert.						
	43	Paint Finish			STD Vendor			
	44	Weight			3.8 Kg			
	45							
	46	Supplier			FORES			
	47	Manufacturer			MEDC			
	48	Model (beacon)			SM87LED			
	49							
PURCHASE DATA	50	Purchase Order Number			1724000821			
	51	Serial Number						
	52							
	53							
	54							

Notes:

No.	Date	By	Chkd	Appr	Description
01	29/08/2024	VBA	LCA	DLO	Accepted for Construction (AFC)
00	05/02/2024	VBA	LCA	DLO	Issue for Review (IFR)

INSTRUMENT DATA SHEET

Beacons

CROSSWIND

ROSETTI MARINO

Sheet 19 of 22

Code: 405 | Dwg. No.: | Rev 01

FLASH BEACON (AMBER) LIST

POS.	TAG NUMBER	SERVICE	F&G LAYOUT 123A090-DDL-SAF-DL-…	FIRE ZONE	ELEVATION
1	950-XL-01101	FZ-01 GAS BEACON ACTIVATION	30027	FZ-01	32710
2	950-XL-02101	FZ-02 GAS BEACON ACTIVATION	30027	FZ-02	32710
3	950-XL-03101	FZ-03 GAS BEACON ACTIVATION	30027	FZ-03	32710
4	950-XL-03103	FZ-03 GAS BEACON ACTIVATION	30027	FZ-03	32710
5	950-XL-04101	FZ-04 GAS BEACON ACTIVATION	30027	FZ-04	25710
6	950-XL-04103	FZ-04 GAS BEACON ACTIVATION	30027	FZ-04	25710
7	950-XL-04201	FZ-04 GAS BEACON ACT. - B-400 INDOOR	30027	FZ-04	25710
8	950-XL-04203	FZ-04 GAS BEACON ACT. - B-300 INDOOR	30027	FZ-04	25710
9	950-XL-04205	FZ-04 GAS BEACON ACT. - B-200 INDOOR	30027	FZ-04	25710
10	950-XL-06101	FZ-06 GAS BEACON ACTIVATION	30027	FZ-06	32710
11	950-XL-06103	FZ-06 GAS BEACON ACTIVATION	30027	FZ-06	32710
12	950-XL-06201	FZ-06 GAS BEACON ACT. - B-100 INDOOR	30027	FZ-06	25710
13	950-XL-07101	FZ-07 GAS BEACON ACTIVATION	30027	FZ-07	19260
14					
15					
16					
17					
18					
19					
20					

FLASH BEACON (RED) LIST

POS.	TAG NUMBER	SERVICE	F&G LAYOUT 123A090-DDL-SAF-DL-…	FIRE ZONE	ELEVATION
1	950-XL-01102	FZ-01 FIRE BEACON ACTIVATION	30027	FZ-01	32710
2	950-XL-02102	FZ-02 FIRE BEACON ACTIVATION	30027	FZ-02	32710
3	950-XL-03102	FZ-03 FIRE BEACON ACTIVATION	30027	FZ-03	32710
4	950-XL-03104	FZ-03 FIRE BEACON ACTIVATION	30027	FZ-03	32710
5	950-XL-04102	FZ-04 FIRE BEACON ACTIVATION	30027	FZ-04	25710
6	950-XL-04104	FZ-04 FIRE BEACON ACTIVATION	30027	FZ-04	25710
7	950-XL-04202	FZ-04 FIRE BEACON ACT. - B-400 INDOOR	30027	FZ-04	25710
8	950-XL-04204	FZ-04 FIRE BEACON ACT. - B-300 INDOOR	30027	FZ-04	25710
9	950-XL-04206	FZ-04 FIRE BEACON ACT. - B-200 INDOOR	30027	FZ-04	25710
10	950-XL-06102	FZ-06 FIRE BEACON ACTIVATION	30027	FZ-06	32710
11	950-XL-06104	FZ-06 FIRE BEACON ACTIVATION	30027	FZ-06	32710
12	950-XL-06202	FZ-06 FIRE BEACON ACT. - B-100 INDOOR	30027	FZ-06	25710
13	950-XL-07102	FZ-07 FIRE BEACON ACTIVATION	30027	FZ-07	19260
14					
15					
16					
17					
18					
19					
20					

Notes:

GENERAL	1	Tag Number			See Next Sheet
	2	Fire Gas Layout			See Next Sheet
	3	Area / Facility			See Next Sheet
	4	Elevation		mm	See Next Sheet
	5	Hazardous Area			Zone 2, Gas Group IIC (or IIB+H2), Class T1
	6	Color / Duty Label			Red (RAL 3001) / Hold 4
	7	Certification Code	Atex Certified		Ex-d IIC (or IIB + H2) T1
OPERATING CONDITIONS	8	Service			See Next Sheet
	9	Specific Humidity (min/norm/max)			4.210-3 / 6.510-3 / 9.5 x 10-3
	10	Enviromental Temperature (Min - Max)			-8.4 °C ÷ 25 °C
	11	Corrosive Component			Marine Environment
	12				
	13				
	14	SIL Certification			SIL2 - IEC61508
	15				
	16				
SOUNDER	17	Duty and Tag TYPE			316SS
	18	Design Temperature/ Rel. humidity at Sensor Location			5 to 45 ºC / 10 to 93% RH (for indoor sounders)
	19	Housing Material (Enclosure)			Stainless steel
	20	Ingress Protection			IP66
	21	Sound Level Range (Sounder)			up to 110 dB as per DEP 32.30.20.11 par. 5.12.3 Audible coverage
	22	Operating Voltage			12-48Vdc
	23	Permissible Operating Temperature			-8.4 °C ÷ 25 °C
	24	Ex Classification			Atex II 2G Ex-db IIC Gb T5/T6
	25	Mounting (Installation Method)			Mounting Bracket
	26	Cable entry			N.3 M20 x 1.5mm
	27	Volume Level Regulation (Sounder)			Full Range
	28	Currents (Sounder)			Nominal: 185mA; Max: 221mA; In-rush: 815mA < 4ms
	29	Tones Selectable (Sounder)			Yes
	30				
	31				
	32				
ELECTRONICS	33	Power Supply From			24 Vdc from FGS
	34	Electrical Connection Type			Screw
	35				
	36				
OPTIONS	37	Intrinsically Safe Design			N/A
	38	Calibration Range	Zero Adjustment		N/A N/A
	39	Special Vendor Cable			N/A
	40	Special Cable Length			N/A
	41				
SPECIAL REQUIREMENTS	42	Material Cert.			
	43	Paint Finish			Red
	44	Weight			6.25 Kg
	45				
	46	Supplier			FORES
	47	Manufacturer			E2S
	48	Model (Sounder)			STExS1F
	49				
PURCHASE DATA	50	Purchase Order Number			1724000821
	51	Serial Number			
	52				
	53				
	54				

Notes:

No.	Date	By	Chkd	Appr	Description
01	29/08/2024	VBA	LCA	DLO	Accepted for Construction (AFC)
00	05/02/2024	VBA	LCA	DLO	Issue for Review (IFR)

INSTRUMENT DATA SHEET

Sounders

CROSSWIND

ROSETTI MARINO

Code: 405 | Dwg. No.: | Rev 00

SOUNDERS

POS.	TAG NUMBER	SERVICE	F&G LAYOUT 123A090-DDL-SAF-DL-…	FIRE ZONE	ELEVATION
1	950-XZ-01101	FZ-01 SOUNDER ACTIVATION	30027	FZ-01	32710
2	950-XZ-01102	FZ-01 SOUNDER ACTIVATION	30027	FZ-01	32710
3	950-XZ-02101	FZ-02 SOUNDER ACTIVATION	30027	FZ-02	32710
4	950-XZ-03101	FZ-03 SOUNDER ACTIVATION	30027	FZ-03	32710
5	950-XZ-03102	FZ-03 SOUNDER ACTIVATION	30027	FZ-03	32710
6	950-XZ-04101	FZ-04 SOUNDER ACTIVATION	30027	FZ-04	25710
7	950-XZ-04102	FZ-04 SOUNDER ACTIVATION	30027	FZ-04	25710
8	950-XZ-04201	FZ-04 SOUNDER ACT. - B-400 INDOOR	30027	FZ-04	25710
9	950-XZ-04202	FZ-04 SOUNDER ACT. - B-300 INDOOR	30027	FZ-04	25710
10	950-XZ-04203	FZ-04 SOUNDER ACT. - B-200 INDOOR	30027	FZ-04	25710
11	950-XZ-05101	FZ-05 SOUNDER ACTIVATION	30027	FZ-05	25710
12	950-XZ-05102	FZ-05 SOUNDER ACTIVATION	30027	FZ-05	25710
13	950-XZ-05103	FZ-05 SOUNDER ACTIVATION	30027	FZ-05	25710
14	950-XZ-05104	FZ-05 SOUNDER ACTIVATION	30027	FZ-05	25710
15	950-XZ-06101	FZ-06 SOUNDER ACTIVATION	30027	FZ-06	32710
16	950-XZ-06201	FZ-06 SOUNDER ACT. - B-100 INDOOR	30027	FZ-06	25710
17	950-XZ-07101	FZ-07 SOUNDER ACTIVATION	30027	FZ-07	19260
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					
33					
34					
35					
36					
37					
38					
39					
40					
41					
42					
43					
44					
45					

Notes: