Base Load Power Hub (BLPH)

TECHNICAL DATASHEET for Ultrasonic Flow Transmitters

Document Number: 123A90-DDL-IN-DS-40048

Document Class: 2

01	06/09/2024	Accepted for Construction (AFC)	VBA	LCA	DLO
00	13/03/2024	Issue for Review (IFR)	VBA	LCA	DLO
Rev.	Date	Description	Prepared	Reviewed	Approved

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Revision / Change Log

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

HOLDS LIST

No.	Description
1.	
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GENERAL REQUIREMENTS / NOTES

1) This datasheet is to be read in conjunction with following documents:
   a) Instrumentation for Package Unit Specification (123A90-DDL-IN-SP-40094);
   b) Material Requisition (123A90-DDL-IN-MR-40049);
   c) Specification for Piping Material Classes (123A90-DDL-PP-SP-70000).

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

3) All materials including transmitters casing/housing shall be suitable for use in marine environment and made in AISI 316. Aluminium is not acceptable.

4) Transmitter shall be supplied with external span and zero adjustments.

5) In general, all hazardous area equipment shall be certified Exd IIC (or IIB+H2) T1 for Zone 2, IP66 as per ATEX directive.

6) All flanges in ASME B31.3 and ASME B31.12 shall be Raised Face type.

7) Material test certificates MTCs shall be provided by Manufacturer for all valves, tubing & fittings. MTCs shall include EN 10204 3.1 certification for all metallic materials.

8) PED 2014/68/EU Pressure Equipment Directive 2014/68/EU shall apply.

9) The SS nameplate shall indicate the tag number, manufacture name, model number, serial number, size, rating and other items as required.

10) Information with asterisk (*) shall be confirmed or provided by manufacturer according to the service condition.

11) HART revision 7 protocol is required for all electronic device 4-20mA Smart type. Transmitter shall be NAMUR NE43 compliant for defining and differentiating when the process variable is within normal range, out of range but fault-free or when fault detection has occurred.

12) All Instrument used in Safety Application (ESD) shall be minimum SIL 2 Certified according to Int, Std. IEC61508.

13) The transmitter accuracy shall be 1 % of calibrated span including the effects of linearity, hysteresis, and repeatability (better then 0,25% of span).

14) Ultrasonic flow meters shall be the Transit Time / time of flight type. Single or multiple beam designs shall be considered depending on the application. The greater the number of beams, the less the sensitivity to velocity profile effects

15) Flow direction shall be clearly and permanently stamped on the meter body.

16) Vendor shall quote as option Ultrasonic Flow metering system with wetted but not intrusive tranducers (sensors). It is specified as a pre-fabricated spool piece. Flow meter single path with ultrasonic runtime difference measurement technology.

17) Mass flow rates are the following:
Run case1: "Relief from 25-PSV-001A, fire case": 1067 kg/hr;
Run case2: "Relief from 80-PSV-001, CV fail": 3095 kg/hr;
Run case3: "Relief from 64-PSV-001, Bloc.disch": 690 kg/hr,
as per 123A90-DDL-PR-RE-80030_01 "Relief, Vent and Blowdown Report"

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GENERAL	1	Tag Number				43-FT-001		
	2	Service				HDROGEN FROM KO DRUM TO HYDROGEN VENT (Q-43004)		
	3	P&ID Number		Special Regulation		123A901-DDL-PR-PID-80029	-	
	4	Line Size		Line No.		10"	10"-VL-117-01HSS-N	
	5	Line Schedule		Area Classification		Thk (mm) = 4.19	ATEX Zone2 - IIC (IIB+H2) T1	
PROCESS CONDITIONS	6	Fluid	Phase		State	HYDROGEN	SINGLE	GAS
	7	Spec Cond.		Sour Serv.				
	8	Flow		Min. / Norm. / Max. / Units			note 17	
	9	Oper. Pressure		Oper. Temperature		0 / 0.5 barg	AMB	
	10	Des. Pressure		Des. Temp. Max. / Min.		3.5 barg	80 °C	
	11	Density @ Fl. Norm.		Viscosity @ Fl. Norm.		0.11 kg/m^3 (@25°C, 0.4 barg)	0.01	
	12	Max. Allowable DP across Meter				N/A		
	13	Molecul. Wt. @ Fl. Nor.		Entrained Gas		2		
	14	Vapour Pressure		Critical Pressure		N/A	N/A	
METER	15	Meter Type				Spool Piece		
	16	Size	Rating	Facing		10" #150	RF	
	17	Range From	To	Eng. Units				
	18	Housing				ASTM A312 Gr.TP316/316L (ASME B31.12)		
	19	Electrical Connections				M20		
	20	Accuracy		Tracing		See Vendor Calculation Sheet	-	
	21	Trace Size	Rating	Facing		-	-	-
	22							
METER MATERIALS	23	Process Flanges				10" FLANGED #150		
	24	Tube Material				ASTM A312 Gr.TP316/316L		
	25	Sensor Housing Material				AISI 316/316L		
TRANSMITTER	26	Measurement Type		Beam / PATH No.		TRANSIT TIME	SINGLE / SINGLE	
	27	Mounting		Housing Material		Remote	AISI 316	
	28	Calibration Range				See Vendor Calculation Sheet		
	29	Electrical Connection		Electrical Class		M20x1,5MM	-	
	30	Output Signal		Load		4-20mA	600Ω	
	31	Other Output Signal				-		
	32	Power Supply		Consumption		24Vdc	20W	
	33	Ingress Protection		ATEX Certification		IP66	Ex-d IIC T6 Gb	
COMMUNICATION AND SOFTWARE	34	Communication Type		Signal Type		Conventional + HART Rev.7	4-20mA	
	35	DD Revision		CFF Revision		-	-	
	36	Hart Desciptor		Hart Tag		-	-	
	37	Internal Diagnostics		Capacitance		-	-	
	38	Segment		Device Address		-	-	
	39	Device Class		Simulate		-	-	
	40	Nominal Current		Operating Voltage		-	-	
ACCESSORIES	41	Environ. Protection				-		
	42	Measuring Cable Length		Special Cable Length		-	10m (Sensor - Transmitter)	
	43	Mounting Kit		Cable Glands		Mounting Bracket for 2" pole	Required	
	44	Isolating Ball Valve				Required according to piping class 01HSS		
PURCHASE	45	Manufacturer				Panametrics		
	46	Model Sensor		Transmitter		Flowcell	XGF868I	
	47	Purchase Order Number				1724001317		
	48	Weight				See Sheet 9		

No.	Date	By	Chkd	Appr	Description
01	06/09/2024	VBA	LCA	DLO	Accepted for Construction (AFC)
00	13/03/2024	VBA	LCA	DLO	Issued for Review (IFR)

INSTRUMENT DATASHEET

Ultrasonic Flowmeter

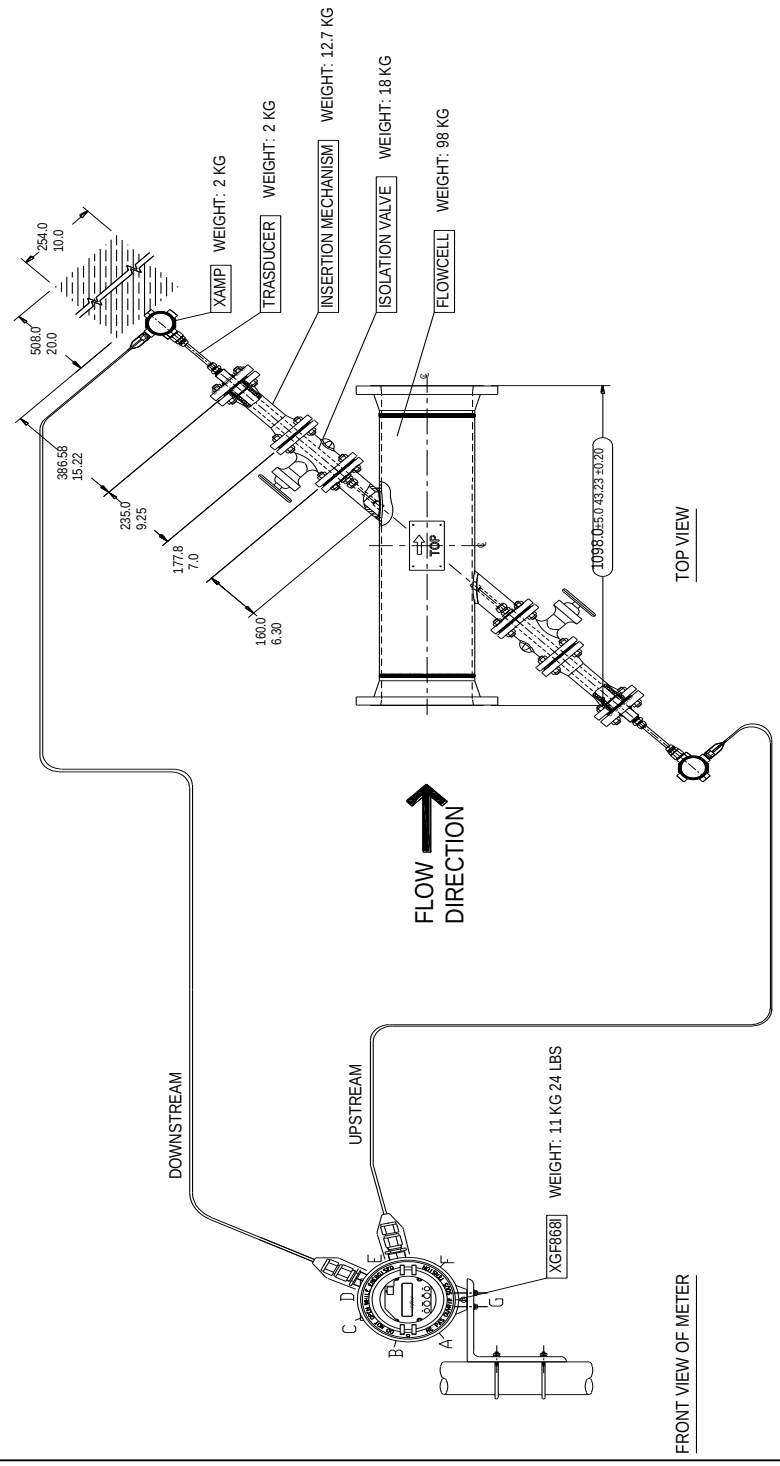
CROSSWIND

ROSETTI MARINO

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Code : Dwg. No.: 123A90-DDL-IN-DS-40048 Rev 01

43-FT-001 GENERAL ARRANGEMENT DRAWING



						INSTRUMENT DATASHEET	CROSSWIND
						Ultrasonic Flowmeter	ROSETTI MARINO
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