Base Load Power Hub (BLPH)

TECHNICAL DATASHEET for Ultrasonic Flow Transmitters

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03	23/09/2025	Accepted for Construction (AFC)	CD	LCA	CGI
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Revision / Change Log

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

No.	Description
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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			±0.5%		-	
	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						0 - 3095 kg/h			
	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						-			

No.	Date	By	Chkd	Appr	Description
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INSTRUMENT DATASHEET

Ultrasonic Flowmeter

CROSSWIND

ROSETTI MARINO

Sheet 5 of 6

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