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 Document title : Instrument Data Sheet Argus LR Turbidity / TSS Monitor
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INSTRUMENT DATASHEET

-Argus LR Turbidity / TSS Monitor-

The following data sheet is valid for all standard Argus systems. Please note that if any options have been custom ordered, this will be noted in the Project specifications 00-G0-KA-045-PA. It is therefore necessary that these two documents are read in conjunction.

Description	Specification	Comments
Equipment	Turbidity / TSS Monitor	
Model	Argus LR Turbidity / TSS	
Manufacturer	ProAnalysis AS	
Country of origin	Norway	

Instrument information

Description	Specification	Units	Comments
Monitor type	Online		Continuous data output
Measurement principle	90° scattered light		acc. to DIN ISO 7027
Measurement range	0 - 10	FNU / mg/l	Configurable
Repeatability	≤ +/- 1 % of reading or 0.01 FNU		Whichever is greater
Data sampling interval	~1	s	Configurable on customer request
Resolution	0,01	FNU / mg/l	Require stable turbidity solution
Output signal	4-20 mA (Active), Modbus TCP (slave)		Options: HART, Wi-Fi, Modbus RS-485
Configuration and diagnostics	Ethernet		Argus Control software (GUI)
Cleaning technology	NA		
Supply voltage	230V, 50/60 Hz	VAC	+/- 10 % (110 VAC available as an option)
Consumption	< 200	W	12A fuse required
Warm-up time	<5	min	

Process specifications

Description	Specification	Units	Comments
Design temperature	-29 - 50	°C	Min/max process temperature
Design pressure	See section on Retraction tools for specific data	barg	
Max fluid velocity	10	m/s	For higher values contact ProAnalysis
Process line size	≥3"	Inch	For smaller dimensions contact ProAnalysis
Conn. size/type	Flanged 2"	Inch	For other dimensions contact ProAnalysis
Bore dimension	≥ 50	mm	Internal bore on connecting flange

Probe specifications

Description	Specification	Units	Comments
Probe positioning	Inline		Note 1

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Probe dimension	Ø48.3	mm	
Probe weight	10	kg	
Probe material	Duplex S31803/S32205 / Titanium Gr. 5 / Sapphire		Note 2
Sour service spec.	NACE MR 0175/ISO 15156		
Ex. classification	II 2G Ex d IIC T5 Gb		
IP grade	IP 68		
Ambient temp.	-20-50	°C	Note 5

Retraction Tool Variations

RT-H

Description	Specification	Units	Comments
Design pressure	0-20	barg	
Maximum operating pressure	20	barg	During insertion and retraction of the probe
Rating	150 RF	#	RTJ or FF available upon request
Conn. size/type	Flanged 2"	Inch	Size and dimensions according to ANSI B16.5
Weight	38	kg	Note 3
Material flange	Duplex S31803/S32205		Note 2

Electronics enclosures variations

Ex de Enclosure

Description	Specification	Units	Comments
Type	Ex de enclosure		
Dimension	490x785x355	mm	
Material	316 SS		
Hazardous area	Zone 1/2		
Ex. Classification	II 2 G Ex d e [ia] II B T5 IP66		[ia] only if barrier is installed
IP grade	IP66		
Signal gland type/size	M20/ M25/ M32		Note 8
Power gland type/size	M25		Note 8
Weight	120	kg	
Ambient Temp.	-10-40	°C	Note 5
Max. distance to probe	≤ 200	m	Note 6
Number of probes per control unit	1-4		

19" Rack module

Description	Specification	Units	Comments
Type	19" Rack module		
Dimension	6 U		(19" x 10.5" x 19.5")
Material	Aluminium		
Enclosure protection	Safe Area Cabinet		Can be supplied by ProAnalysis

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Hazardous area	NA		
IP grade	IP30		
Weight	21	kg	Not including cabinet
Ambient Temp.	-5-40	°C	
Max. distance to probe	≤ 200	m	Note 6
Number of probes per control unit	1-4		
Number of control units per cabinet	1-4		Up to 12 probes connected to one cabinet

Safe Area Wall Cabinet

Description	Specification	Units	Comments
Type	Wall mounted cabinet		
Dimensions	600/600/350	mm	
Material	Sheet steel		
Hazardous area	NA		
IP grade	IP54		
Signal gland type/size	Customer specifications		Note 8
Power gland type/size	Customer specifications		Note 8
Weight	40	kg	
Ambient Temp.	-5-40	°C	
Max. distance to probe	≤ 200	m	Note 6
Number of probes per control unit	1-4		

Optional equipment

Field junction box

Description	Specification	Units	Comments
Type	Ex e junction box		Note 7
Dimension	315x260x155	mm	
Material	316 SS		
Hazardous area	Zone 1/2		
Ex. Classification	II 2 G Ex e IIC T6 / II 2 D Ex tD A21 T 80°C		
IP grade	IP66		
Glands	M20, M25, M32		Note 8
Weight	6	kg	

Note 1: The probe is mounted inline but can be retracted during normal operation and valves closed. It is therefore considered "offline" in terms of instrumentation (ref: NORSOK I-001).

Note 2: Other materials are available as an option.

Note 3: The RT-H retraction tool consists of a permanently mounted flange adapter(6-10 kg), and a moveable hydraulic pump & Retraction tool(28 kg) used for insertion and retraction of the probe. The RT-H retraction tool is detachable and can be used for multiple measurement probes.

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Note 5: For temperatures above 40-45 degrees, vortex cooling, AC cooling and sun screening is available as an option.

Note 6: Distance from control unit to measurement point.

Note 7: All variations of Argus Monitor can be delivered with an Ex e junction box.

Note 8: The standard glands delivered by ProAnalysis are Hawke Brass 501/421.

Note 9: Fan / filter will affect IP grade if added