FOCUS-1 Specification Sheet : 2" inch ANSI 150# and ANSI 300#

PROCESS MEDIA		Single phase liquid with <5% solid content, <2% gas content and max. Viscosity up to 100 cSt				
APPLICATIONS		Direct Flow control applications replacing either just a valve or combination of valve with other equipment (e.g. flowmeter)				
DESCRIPTIONS		**CONTROL ELEMENT**		**MEASUREMENT SENSOR ELEMENTS**		
ELEMENT NAME		**Valve**		**Flow**	**Pressure**	**Temperature**
TECHNOLOGY		Valve position % or Flow control		Double acoustic reflection path	Thin film technology	Thin film technology
MEASURED & CALCULATED PARAMETERS		% Opening at real time dynamic flowrate conditions		Flow velocity	Inlet pressure	Temperature
		Cavitation, Flashing and Estimated Sound Pressure level		Volumetric flowrate	Outlet pressure	
		Cv	Total Weight = TBA		Pressure drop	
TECHNICAL PARAMETERS	Overall Control Accuracy	With an inbuilt PID controller, control accuracy is typically ± 1%	Measurement accuracy	Uncertainty, typically better than 0,5% of setpoint value and stability better than + 0,2%.		
	Max flow velocity	Typically upto 22.96 ft/s	Pressure measurement range	N/A	0 Psig - 580 Psig	N/A
	Rangeability	30:1	Burst pressure	N/A	1740.45 Psig	N/A
	Face to Face	As per ANSI / ISA-75.08.01	Temperature measurement range	N/A	N/A	-40 °F to 356 °F
MATERIAL OF CONSTRUCTION	Body / Bonnet	ASTM A351 Gr.CF8M	Body	316L	N/A	
	Stem	316L	Process Connection	316L	316L	
	Plug	316L (stellited version optional)	Housing	N/A	316L	
	Seat	316L (stellited version optional)	Sensor Diaphragm	N/A	17-4PH	
	Packing Gasket	PTFE/PTFE with Carbon PTFE/graphite with metal core	O-Ring	N/A	Silicone (-40 °F to 356 °F)	
DEVICE PARAMETERS	Seat leakage	ANSI Class IV & ANSI Class V	DEVICE PARAMETERS	Electronics Version	Version 4.0	
	Size, Seat bore, and Kv	NPS 2 with SB 24 mm & Cv 12 NPS 2 with SB 38 mm & Cv 30 NPS 2 with SB 48 mm & Cv 47		Electrical connection	Spring clamp connections according to VDE 0100	
	Pressure class	Class 150 Class 300		Air Filter Regulator	Manufacturer Standard	
				Pneumatic conn.	1/2" NPT	
	End connection	Flanged connections according to ASME 16.5 <Ra 3,2 ....6,3µm>		Air supply min/max	43.6 Psig / 87 Psig	
				Power supply	85V AC up to 250V AC 18V DC up to 32V DC	
	Trim type	Standard V - Port plug with Metal seal		Power Consumption	typically 15 watt	
	Flow characteristics	Linear / Eq % as standard Linear when flow used as setpoint		Cable entry	M20X1.5	

FOCUS-1 DEVICE PARAMETERS	
Design pressure (min. / max.)	**Class 150** 0 Psig - 217 Psig **Class 300** 0 Psig - 522 Psig
Design temperature (min. / max.)	-40 °F to 356 °F
Ambient conditions (min. / max.)	-4 °F to 131 °F

PRE-REQUISITES FOR INSTALLATION	
Inlet run	Min. 4 DN (straight inlet)
Outlet run	0 DN (straight outlet)
Face to Face Dimension (ANSI / ISA 75.08.01)	NPS 2 – Class 150 11.81 inch NPS 2 – Class 300 11.81 inch

DEVICE MANAGEMENT & VALUE-ADDED FEATURES	
General	All inputs and outputs are galvanically separated from main power supply and each other. Through a browser user interface all operating settings can be reviewed and adjusted
Input & Output Signal	**Input Signal for Set Point** : 4-20 mA **Output Signal to DCS/PLC** : 4-20 mA (active & passive), HART7® Protocol
Digital Twin Technology	Sensor redundancy owing to the diagnostic algorithms on-board that use correlation of dynamic process data to generate model values for key process parameters such as flow, pressure, etc.
Diagnostics	Product & Process Monitoring & Alarming
Remote operations	Wi-Fi and wired connection with access control & dual password protection to the internal web server for full functionality & configuration
Remote access & control	Hardware security authorization via single button on device further granting remote access for configuration & verification
Single button control & Bluetooth	Single button for easy and secure installation & maintenance access via smartphone, tablet or laptop
WiFi / Ethernet	Either Wi-Fi or 4 wire ethernet can be used for remote access and configuration
Communication protocols	4-20mA & HART7® Protocol
Health status communication	Communication via LED Ring in colors as per NAMUR NE107 & NE43 standards and via HART
Languages	English, German, French
On board data storage	Timestamped log of process & diagnostic data with 32 GB capacity sufficient for 18 months of data storage
Webserver	Integrated for installation, service, and monitoring

APPROVALS & CERTIFICATES		
NAMUR	NE21, 43, 53, 80,107	
Low Voltage Directive	Over-voltage category	II
	Material group (CTI:175..250)	III
	Pollution deg.	3
	Humidity	30%-100%
	Altitude	6,561.68 ft
Hazardous Area Classification	For use in non- hazardous areas	
Ingress Protection (IP) as per IEC 529/EN60529	IP66	
Shock Resistance	IEC 65-2-2730g for 18ms	
Vibration Resistance	IEC 68-2-6; 0,5g 1800Hz up to 1800 Hz IEC 60721; 15g	
IT Security	According to IEC 62443	