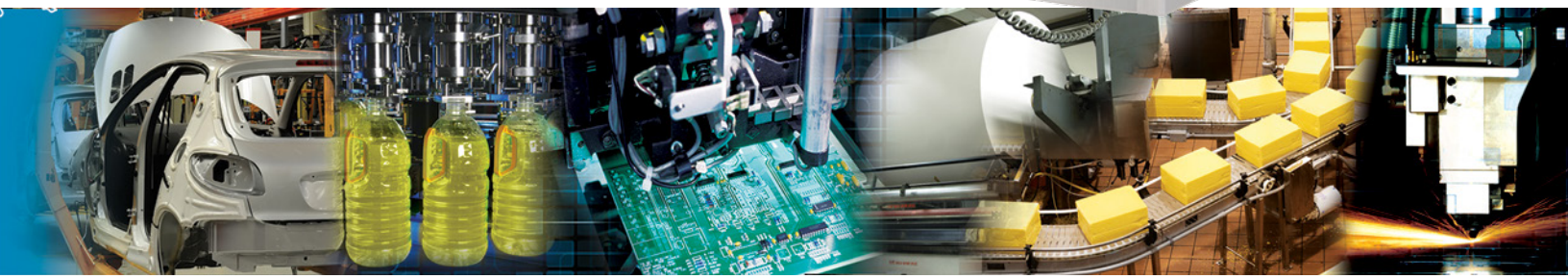
Sentronic^{HD} | 616 Series

Proportional Technology



PRESSURE CONTROL: 616 SERIES SENTRONIC^{HD}

Sentronic^{HD}

Sentronic^{HD} is a highly accurate three-way proportional valve with digital control and a broad range of diagnostic functions. It is supplied with DaS HD software which can be used with a PC for optimal calibration of the valve.

- Control which is stable under pressure
- Comprehensive diagnostic functions
- Industry 4.0 ready
- Minimal power consumption (< 5 Watt)
- Control deviation < 0.25%
- Minimal heating of device
- Integrated web server

M12 Connection:
Power Supply
Target/Actual Value/Input/Output
Frequency Input

Digital Display

Adjustment Buttons

Ethernet TCP/IP:
Programming Interface

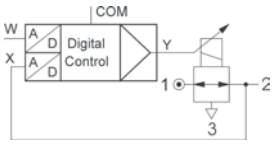
Proportional Pilot Valve

Exhaust:
G1/4 Connection

Output:
G1/4 Connection

Sentronic^{HD} Electronic Pressure Regulator

Sentronic^{HD} is a 3-way proportional valve with digital control. The Data Acquisition Software (DaS) that comes with Sentronic^{HD} can be used to adjust the valve's control parameters to a specific application. Command signal, feedback signal and control parameters can be viewed in real time and adjusted as required for an application. Sentronic^{HD} can be configured for dual loop control of process variables such as flow, force, speed, RPM, and temperature.



Fluids	Ambient Temperature	Body	Internal Parts	Seals
Air or neutral gas, condensate-free, lubricated or unlubricated, Class 5 to ISO 8573-1	0 °C to 50 °C (32 °F to 122 °F)	Aluminum	Stainless stel, brass, aluminum & POM	FPM (fluoroelastomer)

General Valve Information	
Maximum allowable pressure (MAP)	174 psi (12 bar)
Fluid Temperature	0 °C to 50 °C (32 °F to 122 °F)
Ports	G1/4
Construction	Pilot-operated Valve
Hysteresis	± 0.25% of span
Linearity	± 0.25% of span
Repeatability	± 0.25% of span

Electrical Characteristics

Nominal Diameter DN (mm)	Voltage *	Max. Power (W)	Max. Current (mA)	Insulation Class	Degree of Protection	Electrical Connection
6	24 VDC = ± 10%	5	240	F	IP65	8-pin M12 connector, A coded (not supplied)

* Max. ripple: 10%

Specifications

Ø Ports	Ø Orifice DN (mm)	Flow	
		C_v Flow Factor (K_v Nm³/h)	at 6 Bar (l/min - ANR)
G 1/4	6	1.30 (1.12)	1200

How to Order

G 616 A 4 0 0 0 0 A00 06

Thread Connection
G = ISO 228

Product Series
616

Revision
A = Initial Release

Size
4 = G1/4 + pressure hold
5 = G1/4 + pressure release

Setpoint
0 = 0 - 10 V
1 = 0 - 20 mA
2 = 4 - 20 mA
3 = PWM - Frequency*

Feedback
0 = 0 – 10 V
1 = 0 – 20 mA
2 = 4 – 20 mA

Pressure Range
03 = 0 – 3 bar
06 = 0 – 6 bar
10 = 0 – 10 bar
V1 = -1 – 3bar

Options
A00 = Standard

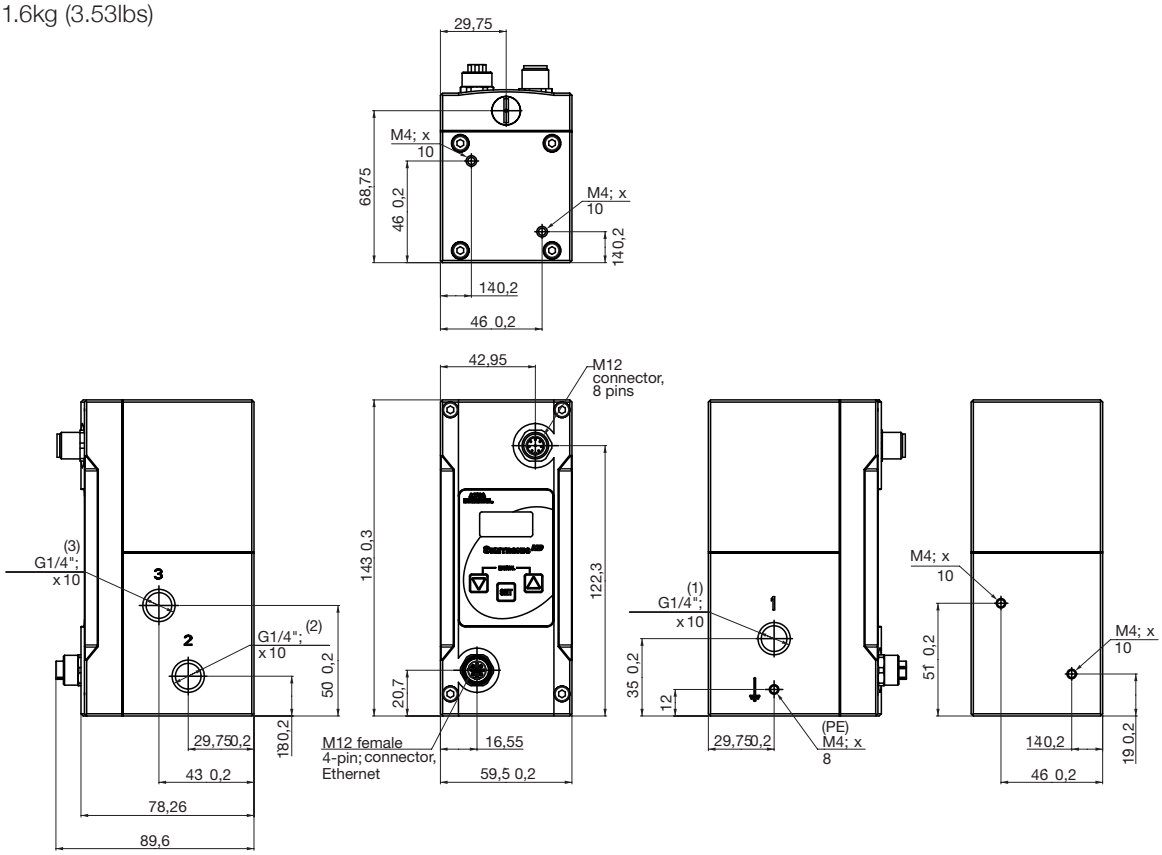
Input 2/Display w/ Buttons
0 = Standard NC + Display
2 = Analog IN 2 + Display
4 = Digital IN 2 + Display
6 = Frequency IN + Display*

Output 2
0 = NC
1 = Digital OUT
2 = Analog OUT 2

* If Setpoint PMW-Frequency is selected, frequency input is not avaliable at IN 2

Dimensions: mm (inches)

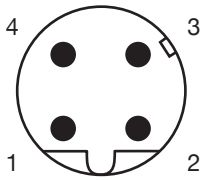
Weight: 1.6kg (3.53lbs)



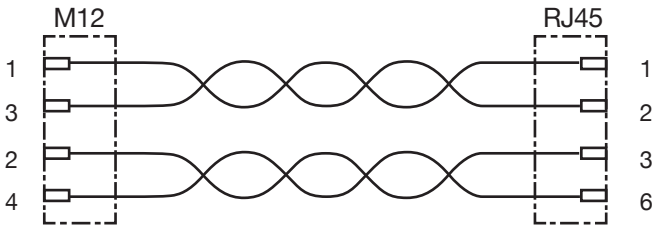
Connector Pinning/Cable Wiring

Ethernet IP programming interface

M12 male connector,
4-pin, D coded

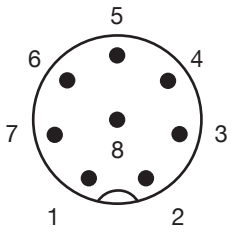


View on male connector (the device is equipped with a female connector)



The use of a shielded cable is recommended.

M12 male connector,
8-pin, A coded



View on valve

Pin	Description	8-wire cable (5m, 10m)
1	Digital Input	white
2	24 VDC voltage supply	brown
3	Setpoint ground SET-	green
4	Setpoint SET+ (PWM)	yellow
5	Analog input 2/Digital input 2/Frequency input	gray
6	Analog output	pink
7	Ground 24 VDC	blue
8	Digital output/Analg output 2	red
Body	EMC screen	shield

Accessories

Description	Catalog Number
Supply cable 5m; 8 x 0.50mm²; straight connector	TC0805MQX0000000
Supply cable 10m; 8 x 0.50mm²; straight connector	TC0810MQX0000000
Supply cable 10m; 8 x 0.50mm²; right-angle connector	TD0810MQX0000000
Programming cable 5m; M12 Straight 4 Pin Male D-Coded to Male RJ45	QA0405MK0VA04000