

AVENTICS™ Proportional Valve SENTRONIC

Highly Dynamic Proportional Pressure Control

Series
625

Features

- Highly dynamic pressure control "thanks to direct control"
- Pressure range vacuum up to 50 bar
- Flow capability from 55 l/min up to 700 l/min
- Exhausting without power supply
- DaS-Software allows easy diagnostics, parameter adjustment and control feedback.



General Valve Information	
Fluids	Compressed air or inert gases, according to ISO 8573-1:2010 [7:4:4]
Ports	G/NPT 1/8 - 1/4
Max. allowable pressure	see "How to Order"
Pressure range	see "How to Order"
Fluid temperature	0...60 C°
Ambient temperature	0...60 C°
Setpoint - analog	0 - 10 V (impedance 100 KΩ) 0 - 20 mA/4 - 20 mA (impedance 250 Ω)
Hysteresis	0.5 % of span *
Linearity / pressure measurement	± 0.5 % of span *
Repeatability	± 0.5 % of span *

* above 30bar / 1%

Construction	
Body	see "How to Order"
Internal parts	Stainless steel and brass
Seals	FKM and NBR
Note on materials	RoHS compliant

Electrical Characteristics						
Nominal Diameter DN	Voltage *	Max. Power (W)	Max. Current (mA)	Insulation Class	Degree of Protection	Electrical Connection
1	24VDC +/-10%	12	500	F	IP65	7-pin M16 connector (included) 5-pin or 8-pin connector M12 (to be ordered separately)
3		12	500			
6		23 (1) / 44 (2)	850 (1) / 1700 (2)			

* Max. ripple: 10 %

(1) < 30 bar max. pressure range

(2) > 30 bar max. pressure range

Specifications				
Pipe Size	Orifice Size	Flow at 6 bar		
		mm (inches)	Coefficient	
	Kv (m ³ /h)		Cv	
G/NPT 1/8	1	0.05	0.06	55
G/NPT 1/8	3	0.13	0.15	150
G/NPT 1/4	6	0.60	0.69	700

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How To Order

Catalog Number

G: Thread Connection	G	XXX: Product Series	XXX	R: Revision Letter	R	C: Connector	C	S: Size	S	F: Feedback	F	V: Version	V	A00: Option	A00	PP: Pressure Ranges ⁴	PP
R = Pad Mount G = G-Thread 8 = NPT-Thread		625 = Sentronic 625		A = Initial Release		A = M12x5 C = M16x7 H = M12x8		0 = DN1 / 1/8" / BRASS 1 = DN1 / 1/8" / SS 2 = DN3 / 1/8" / BRASS 3 = DN3 / 1/8" / SS 4 = DN3 / 1/8" / ALU / Fine 5 = DN6 / 1/4" / ALU 6 = DN6 / 1/4" / SS 7 = DN6 / 1/4" / BRASS 8 = DN6 / 1/4" / BRASS HP		0 = 0 - 10V / OUT 1 = 0 - 20mA / OUT 2 = 4 - 20mA / OUT 3 = 0 - 10V / IN 4 = 0 - 20mA / IN 5 = 4 - 20mA / IN		0 = Digital Out (PNP) 1 = Digital IN 2 = No Documentation / Digital Out (PNP) 3 = No Documentation / Digital IN		A00 = Standard A01 = Oxygen Suitable		01 0-1 bar P1 0-50 psi. 02 0-2 bar P2 0-100 psi. 03 0-3 bar P3 0-150 psi. 04 0-4 bar P4 0-200 psi. 05 0-5 bar P5 0-250 psi. ¹ 06 0-6 bar P6 0-300 psi. ¹ 07 0-7 bar P7 0-350psi. ³ 08 0-8 bar M1 0-100 mbar 09 0-9 bar M2 0-200 mbar 10 0-10 bar M3 0-300 mbar 11 0-11 bar M4 0-400 mbar 12 0-12 bar M5 0-500 mbar 13 0-13 bar M6 0-600 mbar 14 0-14 bar M7 0-700 mbar 15 0-15 bar M8 0-800 mbar 16 0-16 bar ¹ M9 0-900 mbar 17 0-17 bar ¹ XX No Internal Sensor 18 0-18 bar ¹ 19 0-19 bar ¹ 20 0-20 bar ¹ 21 0-21 bar ³ 22 0-22 bar ³ 23 0-23 bar ³ 24 0-24 bar ³ 25 0-25 bar ³ 26 0-26 bar ³ 27 0-27 bar ³ 28 0-28 bar ³ 29 0-29 bar ³ 30 0-30 bar ³ 31 0-31 bar ² 32 0-32 bar ² 33 0-33 bar ² 34 0-34 bar ² 35 0-35 bar ² 36 0-36 bar ² 37 0-37 bar ² 38 0-38 bar ² 39 0-39 bar ² 40 0-40 bar ² 41 0-41 bar ² 42 0-42 bar ² 43 0-43 bar ² 44 0-44 bar ² 45 0-45 bar ² 46 0-46 bar ² 47 0-47 bar ² 48 0-48 bar ² 49 0-49 bar ² 50 0-50 bar ²	

Notes:

- 1) Size 0,1,2,3,5,6,7 needed
- 2) Size 8 needed
- 3) Size 7,8 needed
- 4) Other on request

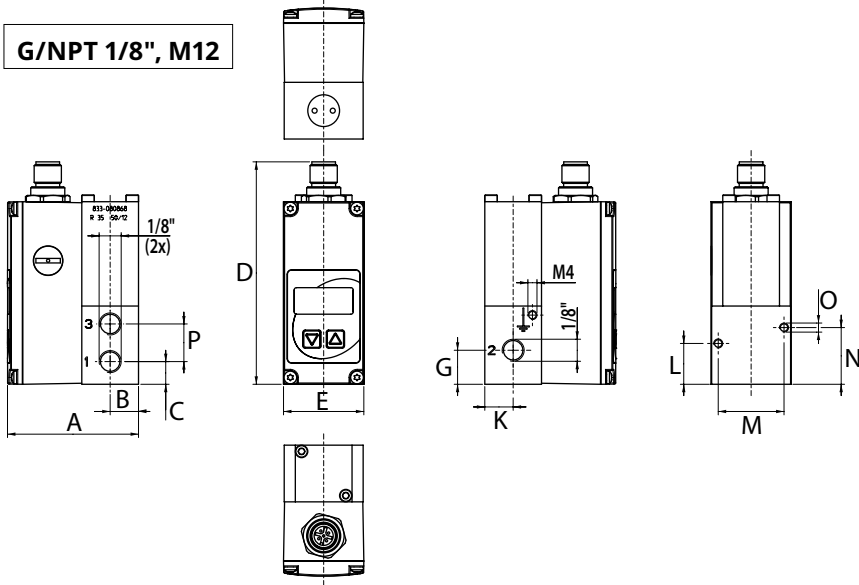
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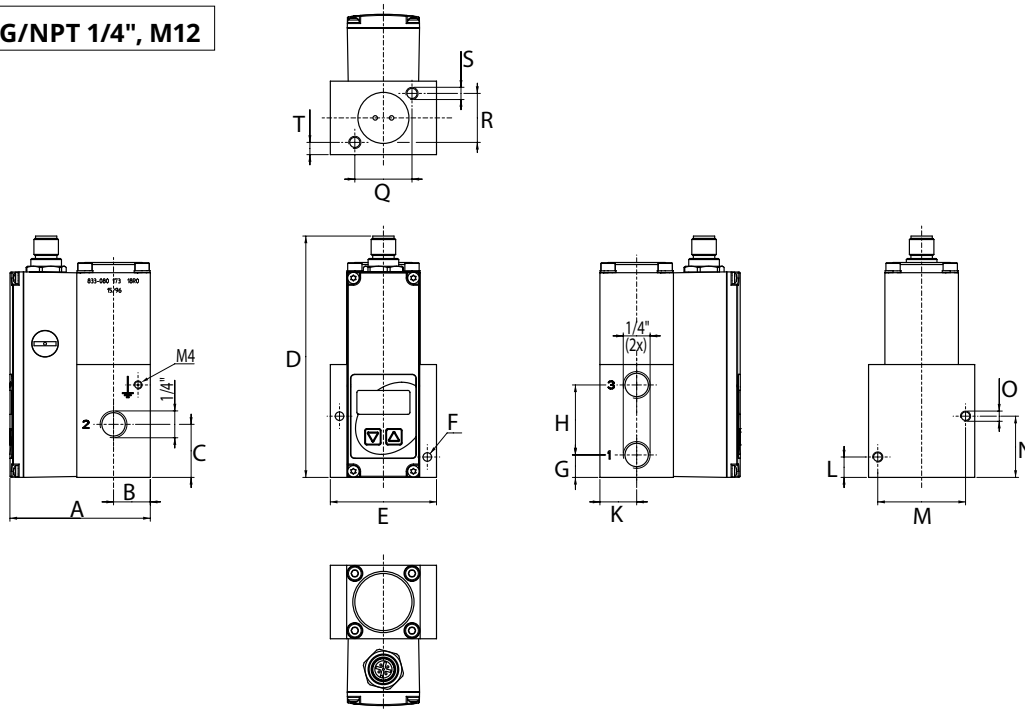
Dimensions: mm (inches)

G/NPT 1/8", M12



A	B	C	D	E	G	K	L	M	N	O	P	Weight kg
57.75 (2.274)	12.5 (0.492)	10 (0.394)	98.1 (3.862)	35.4 (1.394)	15 (0.591)	12.5 (0.492)	18 (0.709)	29 (1.142)	25 (0.984)	M4x10 (0.394) (2x)	16.6 (0.654)	0.600

G/NPT 1/4", M12



A	B	C	D	E	F	G	H	K	L	M	N	O	Q	R	S	T	Weight kg
68.75 (2.707)	18 (0.709)	26 (1.024)	118.25 (4.656)	52 (2.047)	∅ 4.2 (0.165) (2x)	11 (0.433)	34.3 (1.35)	18 (0.709)	10 (0.394)	43 (1.693)	30 (1.181)	M5x10 (0.394) (2x)	28 (1.102)	24 (0.945)	M6x8 (0.315) (2x)	6 (0.236)	0.900

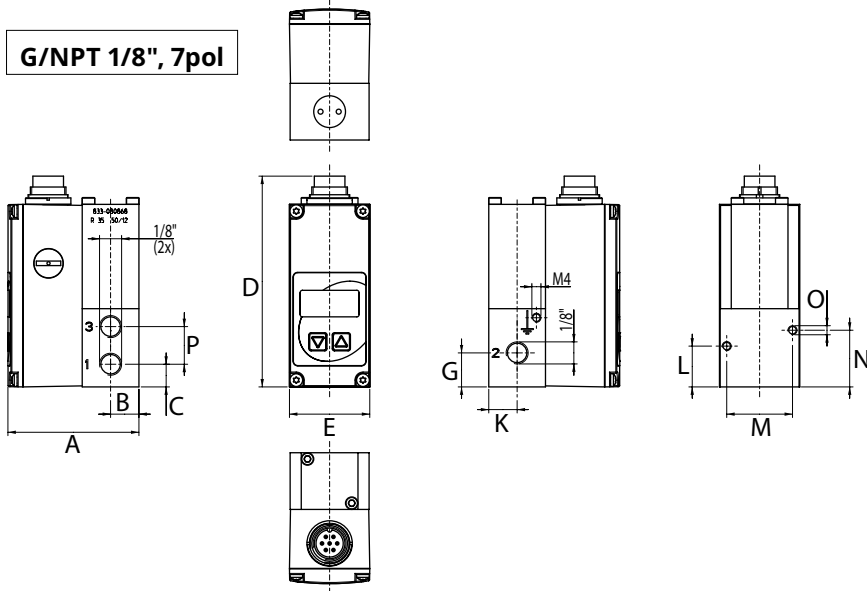
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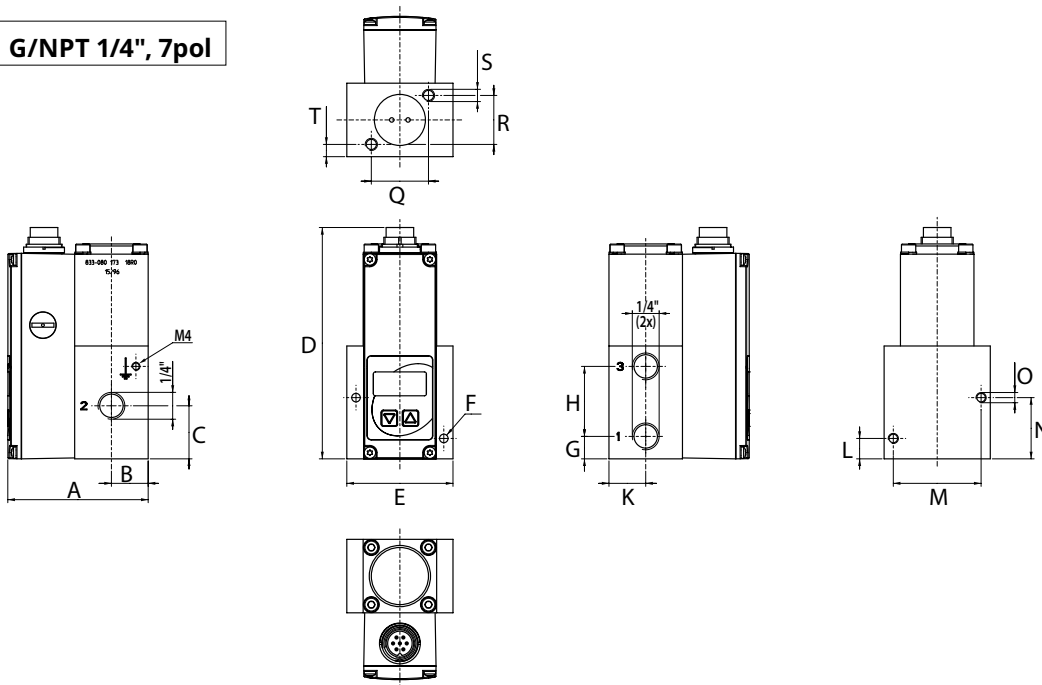
Dimensions: mm (inches)

G/NPT 1/8", 7pol



A	B	C	D	E	G	K	L	M	N	O	P	Weight kg
57.75 (2.274)	12.5 (0.492)	10 (0.394)	92.95 (3.659)	35.4 (1.394)	15 (0.591)	12.5 (0.492)	18 (0.709)	29 (1.142)	25 (0.984)	M4x10 (0.394) (2x)	16.6 (0.654)	0.600

G/NPT 1/4", 7pol



A	B	C	D	E	F	G	H	K	L	M	N	O	Q	R	S	T	Weight kg
68.75 (2.707)	18 (0.709)	26 (1.024)	113.35 (4.463)	52 (2.047)	∅ 4.2 (0.165) (2x)	11 (0.433)	34.3 (1.35)	18 (0.709)	10 (0.394)	43 (1.693)	30 (1.181)	M5x10 (0.394) (2x)	28 (1.102)	24 (0.945)	M6x8 (0.315) (2x)	6 (0.236)	0.900

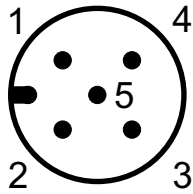
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Connector Pinning / Cable Wiring

VERSION: 5 Pin M12

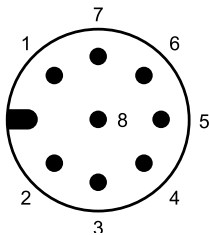


Pin	Description	5-wire cable (2 m)	6-wire cable (5 m, 10 m)
1	24 V voltage supply	brown	brown
2	Analog setpoint input	white	white
3	Supply ground	blue	green
	Analog ground *	-	yellow
4	Analog output (Feedback)	black	pink
5	Digital output (Pressure switch)	grey	grey
Body	EMC screen	shield	shield

* A 6-wire cable with separate analog ground is used for cable lengths over 2 m to set off the voltage drop for the setpoint.

Connector Pinning / Cable Wiring

VERSION: 8 Pin M12

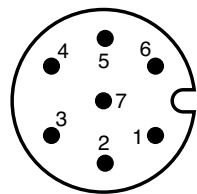


Pin	Description	8-wire cable (5 m, 10 m)
1	Digital IN	white
2 *	24 V voltage supply	brown
3	Analog ground (Setpoint)	green
4	Analog setpoint input	yellow
5	Analog output 2	grey
6	Analog output (Feedback)	pink
7	Supply ground	blue
8	Digital output (Pressure switch)	red
Body	EMC screen	shield

* Pin 2 must be connected with supply ground!

Connector Pinning / Cable Wiring

VERSION: 7 Pin M16



Pin	Description
1	+24 V
2 *	Supply ground
3	Analog setpoint input
4	Supply ground (Setpoint)
5	
6	Analog output (Feedback)
7	Digital output (Pressure Switch Optional)

* Pin 2 must be connected with supply ground!

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Accessories

Description	Catalog Number
Straight M12 female connector, 5 pins, with screw terminals	88100256
Right-angle M12 female connector, 5 pins, with screw terminals	88100725
Supply cable 2 m; M12 5x0,25 mm ² ; straight connector	88100726
Supply cable 2 m; M12 5x0,25 mm ² ; right-angle connector	88100727
Supply cable 5 m; M12 6x0,50 mm ² ; straight connector	88100728
Supply cable 5 m; M12 6x0,50 mm ² ; right-angle connector	88100729
Supply cable 10 m; M12 6x0,50 mm ² ; straight connector	88100730
Supply cable 10 m; M12 6x0,50 mm ² ; right-angle connector	88100731
Supply cable 5 m; 8x0,50 mm ² ; straight connector	N43802302700000
Supply cable 10 m; 8x0,50 mm ² ; straight connector	N43802302800000
Supply cable 10 m; 8x0,50 mm ² ; right-angle connector	N43802302900000
Communication Mod. RJ45. Ethernet TCP/IP 0.4 m cable	N52480010000000

Accessories Americas

Description	Catalog Number
M12 , straight, 5-pin, 12 mm Cable fitting PG9	TC05F20000000000
M12 , angled, 5-pin, 90°, 12 mm Cable fitting PG9	TC05F20000000000
supply cable, 6-wire, straight electrical connector, 5-pin M12, 24 AWG, 3 m	TC0503MMS000671Y
supply cable, 6-wire, straight electrical connector, 5-pin M12, 24 AWG, 5m	TC0505MMS000671Y
supply cable, 6-wire, angled electrical connector, 5-pin M12, 24 AWG, 3 m	TD0503MMS000671Y
supply cable, 6-wire, angled electrical connector, 5-pin M12, 24 AWG, 5 m	TD0505MMS000671Y
Supply cable 5 m; 8x0,50 mm ² ; straight connector	N43802302700000
Supply cable 10 m; 8x0,50 mm ² ; straight connector	N43802302800000
Supply cable 10 m; 8x0,50 mm ² ; right-angle connector	N43802302900000
Communication Mod. RJ45. Ethernet TCP/IP 0.4 m cable	N52480010000000

Availability, design and specifications are subject to change without notice.
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