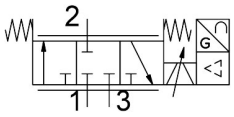
Proportional directional control valve
VPWI-5-L-3-G18-B2-V1-D

Part number: 8167809





Data sheet

Feature	Value
Type of actuation	Electrical
Sealing principle	Soft
Mounting position	Any
Design	Poppet valve with spring return
Type of reset	Mechanical spring
Dimensions (W x L x H)	42.2 mm x 95.3 mm x 94.3 mm
Safety instructions	Fail-safe position VPWI, normally closed
Type of piloting	Direct
Flow direction	Non-reversible
Nominal size, supply	5 mm
Nominal size, exhaust	5 mm
Total leakage	5 l/h
Display type	TFT colour
Display size	1.77"
Display resolution	128x160 pixels
Valve function	3-way proportional directional control valve
Reverse polarity protection	For all electrical connections
Short circuit current rating	For all electrical connections
Max. cable length	30 M
Setpoint value input	0 - 10 V
Input resistance	100 kOhm
Switching output	Push-pull
Max. output current	25 mA
Signal range analogue output	0 - 10 V
Min. load resistance voltage output	2 kOhm
Accuracy analogue output in ± %FS	1 %FS
Operating pressure	0 MPa...0.2 MPa 0 bar...2 bar
Inlet pressure 1	0 MPa...0.6 MPa 0 bar...6 bar 0 psi...87 psi
Input pressure 3	-0.1 MPa...0 MPa -1 bar...0 bar

Feature	Value
	-14.5 psi...0 psi
Burst pressure	4 MPa 40 bar 580 psi
C value	2.1 l/sbar
Standard nominal flow rate (standardised to DIN 1343)	490 l/min
Standard nominal flow rate 2-3	340 l/min
Limit frequency	125 Hz
Switching time on	8 ms
Switching time off	8 ms
Hysteresis	0.3 %FS
Temperature cooefficient	0.02 %/K
Nominal operating voltage DC	24 V
Operational voltage range DC	21.6 V...27.6 V
Nominal current	0.17 A
Max. current consumption	525 mA
Max. electrical power consumption	14.5 W
Approval	RCM c UL us - Listed (Oil)
CE mark (see declaration of conformity)	To EU EMC Directive In accordance with EU RoHS Directive
UKCA marking (see declaration of conformity)	To UK instructions for EMC To UK RoHS instructions
Certificate issuing authority	UL E322346
Operating medium	Compressed air to ISO 8573-1:2010 [7:4:4] Inert gas
Note on operating and pilot medium	Lubricated operation not possible
Vibration resistance	Transport application test with severity level 2 to FN 942017-4 and EN 60068-2-6
Shock resistance	Shock test with severity level 2 to FN 942017-5 and EN 60068-2-27
Corrosion resistance class CRC	2 - Moderate corrosion stress
LABS (PWIS) conformity	VDMA24364-B1/B2-L
Media temperature	0 °C...50 °C
Degree of protection	IP65
Pollution degree	2
Ambient temperature	0 °C...50 °C
Storage temperature	-20 °C...70 °C
Climatic category	3K3 according to EN 60721
Relative air humidity	0 - 85% Non-condensing
Nominal altitude of use	< 3000 m NHN
Sound power level	62.5 dB(A)
Sound power level at a distance of 1 m	51.9 dB(A)
Instructions on use	The product is suitable for industrial purposes only. Measures to eliminate radio interference may be required in residential areas.
Product weight	370 g
Repetition accuracy FS	0.3 %
Electrical connection 1, function	Actual value output Setpoint input Power supply
Electrical connection 1, connection type	Plug
Electrical connection 1, connector system	M12x1, A-coded to EN 61076-2-101
Electrical connection 1, number of connections/cores	5
Electrical connection 1, tightening torque	1.5 Nm
Type of mounting	Via through-hole for M4 screw via DIN rail

Feature	Value
Pneumatic connection, port 1	G1/8
Pneumatic connection, port 2	G1/8
Pneumatic connection, port 3	G1/8
Max. tightening torque for fitting	8.5 Nm
Suitable for use with food	See supplementary material information
Note on materials	RoHS compliant
Material cover	Reinforced PA
Material seals	HNBR PTFE
Material housing	Reinforced PA