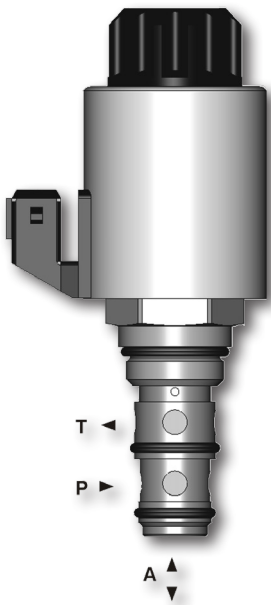


Proportional Pressure Control Valve, Reducing - Relieving, Direct-Acting

PVRM3-103

M24 x 1.5 • Q_{max} 40 l/min (11 GPM) • p_{max} 90 bar (1300 PSI)



Technical Features

- › Excellent stability throughout flow range with rapid response to proportional current input change
- › Low hysteresis, accurate pressure control and low pressure drop through CFD optimized flow paths
- › Precise pressure control vs current and excellent repeatability
- › Integrated relief function for protection against pressure peaks
- › Solenoid electrical terminal AMP Junior Timer, or Deutsch D04-2P
- › 12 or 24 V DC coils
- › In the standard version, the valve is zinc-coated for 240 h protection acc. to ISO 9227

Functional Description

A direct-operated, spool-type hydraulic pressure reducing-relieving valve in the form of a screw-in cartridge. Reduced pressure output is proportional to DC current input. This valve is intended for use as a pressure limiting device. Note: Consult factory for special OEM versions of this product.

Model Code	no mesh screen
Symbol	

Technical Data

Valve size / Cartridge cavity		M24 x 1.5 / QJ3			
Max. operating pressure (port P)	bar (PSI)	50 (730)		90 (1305)	
Max. reduced pressure (port A)	bar (PSI)	18 (260)	20 (290)	30 (435)	80 (1160)
Max. flow rate P-A	l/min (GPM)	40 (11)			
Fluid temperature range (NBR)	°C (°F)	-30 ... +90 (-22 ... +194), +100 (212) short-time			
Fluid temperature range (FPM)	°C (°F)	-20 ... +90 (-4 ... +194), +100 (212) short-time			
Ambient temperature range	°C (°F)	-30 ... +90 (-22 ... +194), +100 (212) short-time			
Response time at 100 % signal	ms	< 50			
Solenoid data					
Supply voltage	V	12 DC		24 DC	
Max. current	A	1.5		1	
Rated resistance at 20 °C (68 °F)	Ω	5 ± 6.5 %		13.4 ± 6.5 %	
Duty cycle	%	100			
Optimal PWM frequency	Hz	150			
Quenching diode		BZW06-28B		BZW06-33B	
Enclosure type acc. to EN 60529**		(acc.to terminal type) IP67 / IP69K			
Weight with solenoid	kg (lbs)	0.4 (0.88)			

	Data Sheet	Type
General information	GI_0060	Products and operating conditions
Cavity details	SMT_0019	SMT-QJ3*
Spare parts	SP_8010	

**The indicated IP protection level is only reached with a properly mounted connector.

Dimensions in millimeters (inches)

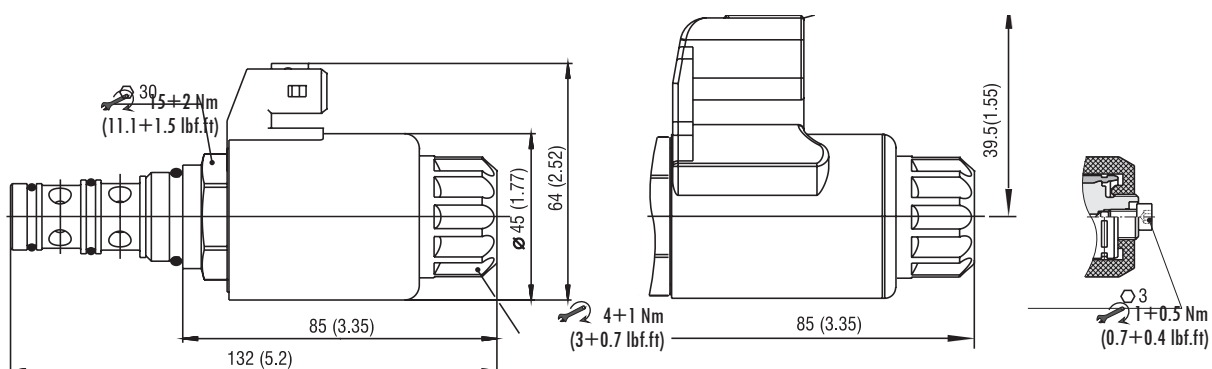
Connector type

E3, E4 - IP67
AMP Junior Timer

E12A, E13A - IP67 / IP69K
Deutsch DT04-2P

Ventilating screw

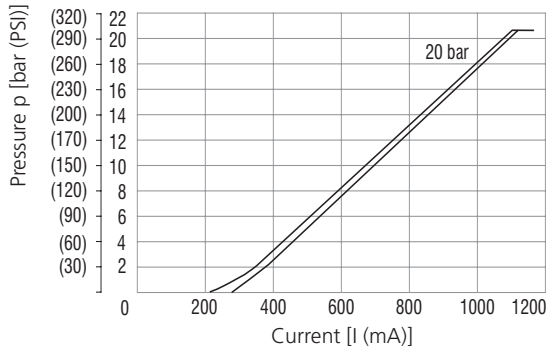
only for version with reduced pressure **80 bar**



Characteristics measured at $v = 32 \text{ mm}^2/\text{s}$ (156 SUS)

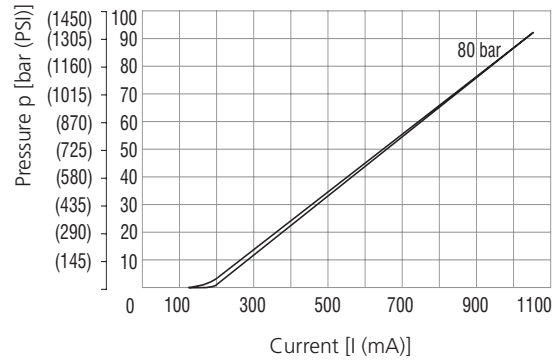
Reduced pressure related to control signal

Port A, range 0 - 20 bar (290 PSI), $Q = 0 \text{ lpm}$ (GPM)
 Port P, inlet pressure 50 bar (730 PSI)



Reduced pressure related to control signal

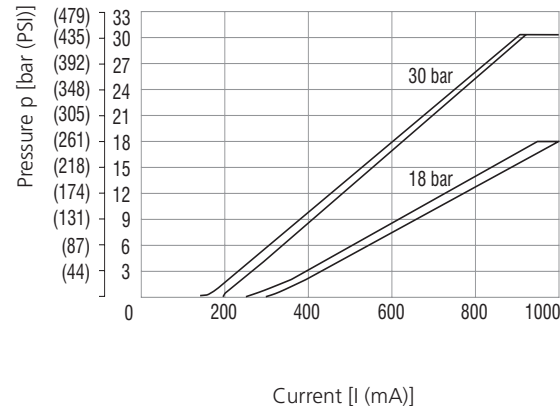
Port A, range 0 - 80 bar (1160 PSI), $Q = 0 \text{ lpm}$ (GPM)
 Port P, inlet pressure 90 bar (1305 PSI)



Reduced pressure related to control signal

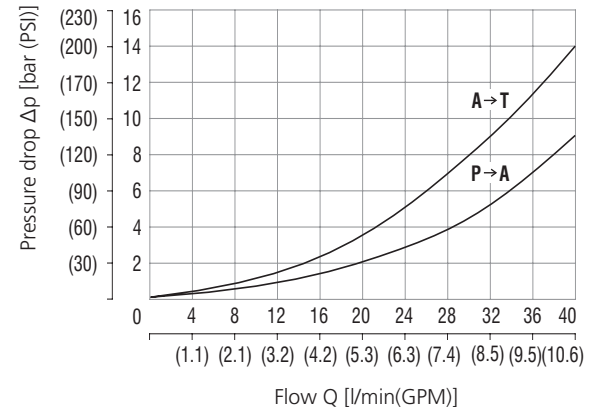
Port A, range 0 - 18 bar (260 PSI), $Q = 0 \text{ lpm}$ (GPM)
 Port P, inlet pressure 50 bar (730 PSI)

Port A, range 0 - 30 bar (435 PSI), $Q = 0 \text{ lpm}$ (GPM)
 Port P, inlet pressure 50 bar (730 PSI)



Pressure drop related to flow rate

A-T, Valve coil de-energized (relieving function)
 P-A, Valve coil energized (reducing function)



Ordering Code

PVRM3 - 103 / S - - -

Proportional pressure control valve, reducing - relieving, direct-acting

Valve cavity
 M24 x 1.5 / QJ3

Model
 screw-in cartridge

Max. reduced pressure

18 bar (260 PSI)	18
20 bar (290 PSI)	20
30 bar (435 PSI)	30
80 bar (1160 PSI)	80

Supply voltage / max. current

12 V DC / 1.5 A	12
24 V DC / 1 A	24

Surface treatment

A	zinc-coated (ZnCr-3), ISO 9227 (240 h)
B	zinc-coated (ZnNi), ISO 9227 (520 h)

No designation
V

Seals
 NBR
 FPM (Viton)

Connector type

E3A	AMP Junior Timer - axial direction (2 pins; male)
E4A	E3A with quenching diode
E12A	Deutsch DT04-2P - axial direction
E13A	E12A with quenching diode