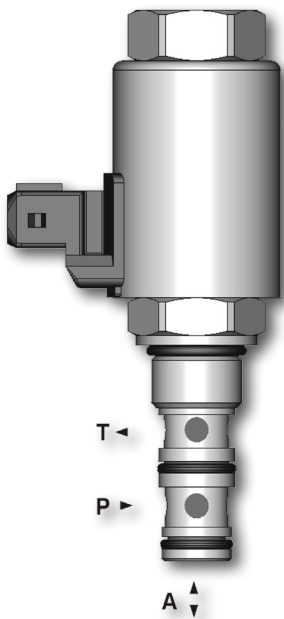


Proportional Pressure Control Valve, Reducing - Relieving, Direct-Acting

PVRM1-063

M20 x 1.5 • Q_{max} 20 l/min (5 GPM) • p_{max} 50 bar (700 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
- › Precise pressure control vs current and excellent repeatability
- › Integrated relief function for protection against pressure peaks
- › Solenoid electrical terminal acc. to EN 175301-803-A, AMP Junior Timer, or Deutsch DT04-2P
- › 12 or 24 V DC coils
- › Optional mesh screen
- › In the standard version, the valve is zinc-coated for 240 h protection acc. to ISO 9227. Enhanced surface protection for mobile sector available for the steel parts (ISO 9227, 520 h salt spray)

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	with mesh screen
Symbol		

Technical Data

Valve size / Cartridge cavity		M20 x 1.5 / QE3	
Max. operating pressure (port P)	bar (PSI)	50 (730)	
Max. reduced pressure (port A)	bar (PSI)	20 (290)	32 (464)
Max. flow rate P-A	l/min (GPM)	20 (5.3)	
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
Limit current	A	1	0,75
Rated resistance at 20 °C (68 °F)	Ω	7.1±6.5%	20.6±6.5%
Duty cycle	%	100	
Optimal PWM frequency	Hz	100	
Quenching diode		BZW06-28B	BZW06-33B
Enclosure type acc. to EN 60529**		(acc.to terminal type) IP65 / 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-QE3*
Spare parts	SP_8010	
Compatible control unit		EL7-E*

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

Dimensions in millimeters (inches)

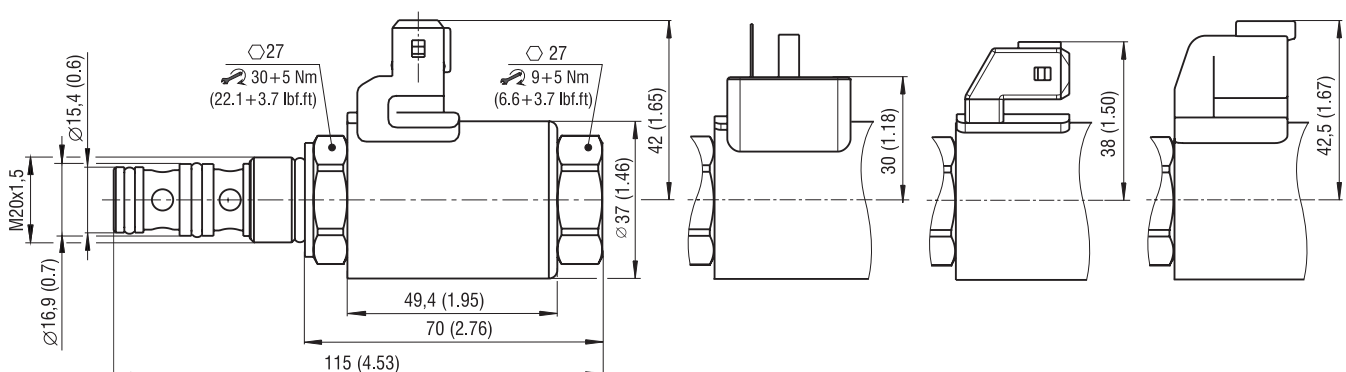
Connector type

E3, E4 - IP67
AMP Junior Timer
- radial

E1, E2 - IP65
EN 175301-803-A

E3A, E4A - IP67
AMP Junior Timer
- axial

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



Elektronic control unit EL7

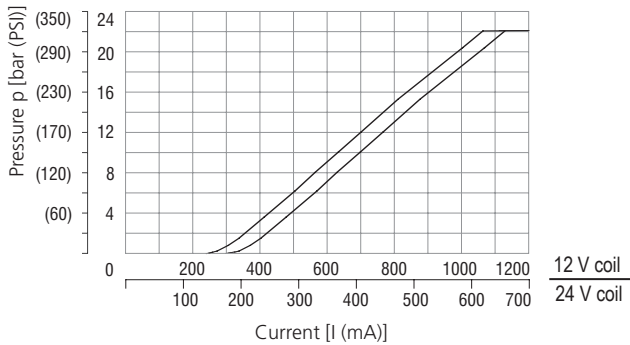
An electronic control unit (ECU) EL7 is used for the valve control. The ECU converts the input command signal into an output current control PWM signal for solenoid coils. The ECU EL7 is available as external for connection to the DIN rail (EL7-E, see datasheet HA 9152) or integrated on the valve in the form of connector plug (EL7-I, see datasheet HA 9151).

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)

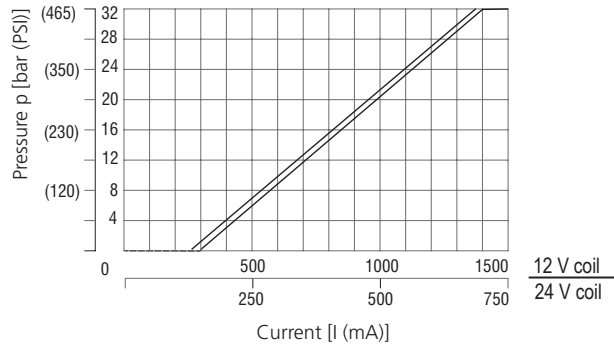
PVRM1-063/S*20



Reduced pressure related to control signal

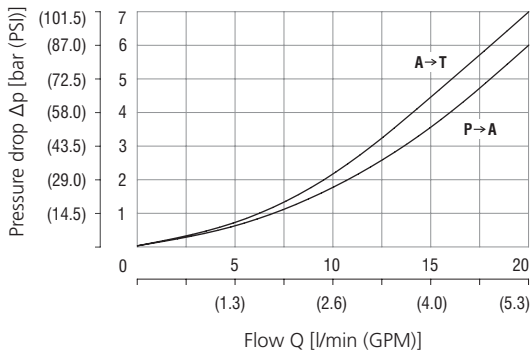
Port A, range 0 - 32 bar (464 PSI), $Q = 0 \text{ lpm}$ (GPM)
 Port P, inlet pressure 50 bar (730 PSI)

PVRM1-063/S*32



Pressure drop related to flow rate

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



Ordering Code

PVRM1 - 063 / S - [] - [] [] [] - [] []

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

Valve cavity
 M20 x 1.5 / QE3

Model
 screw-in cartridge

Max. reduced pressure
 20 bar (290 PSI) **20**
 32 bar (464 PSI) **32**

Supply voltage / limit current
 12 V DC / max. 1 A **12**
 24 V DC / max. 0.75 A **24**

No designation SP-125

Mesh screen
 without mesh screen
 port P, 125 microns

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

Surface treatment

No designation V

Seals
 NBR
 FPM (Viton)

Connector
 EN 175301-803-A
E1 E1 with quenching diode
E2 AMP Junior Timer - radial direction (2 pins; male)
E3 E3 with quenching diode
E4 AMP Junior Timer - axial direction (2 pins; male)
E3A E3A with quenching diode
E4A E4A with quenching diode
E12A Deutsch DT04-2P - axial direction
E13A E12A with quenching diode