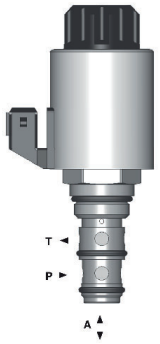
DIRECT OPERATED PRESSURE REDUCING VALVE
PRO-M24.*
40 l/min 9 MPa (90 bar)

1 DESCRIPTION

Proportional pressure reducing valve direct operated in cavity M24 x 1,5. The valve is available in different pressure ranges and its robust design permits a stable and reliable functioning.
Valves are normally supplied with coils with integrated quenching diode in order to protect the electronics connected with the valve.



2 ORDERING CODE

(1)		(2)		(3)		(4)	(5)
PRO	-	M24	/		-		

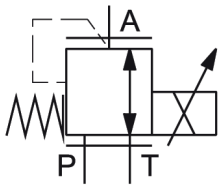
(1) PRO:Proportional pressure reducing valve direct operated

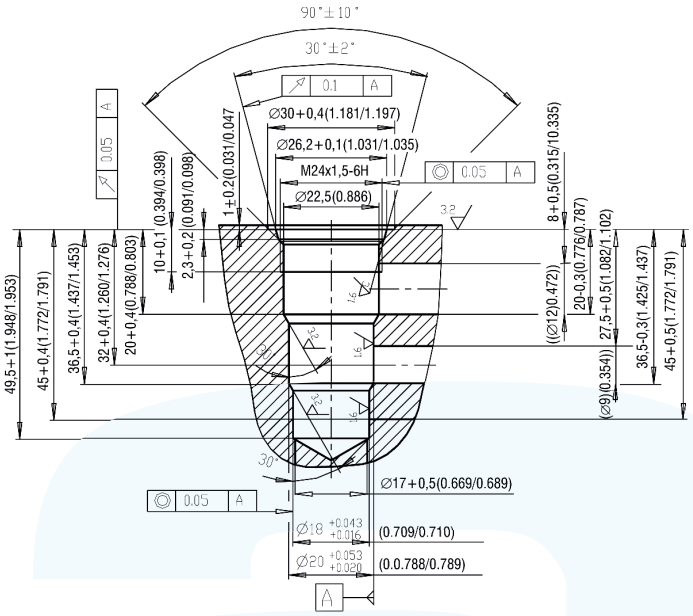
(2) M24:metric cavity M24x1,5 (see drawing)

(3) Max. reducing pressure
- 18 bar
- 20 bar
- 30 bar
- 80 bar

(4) Electric voltage and solenoid coils
- 012C: coil(s) for V12DC with quenching diode
- 024C: coil(s) for V24DC with quenching diode

(5) Coil connection:
- AMP: Amp Junior Timer
- D: Deutsch DT04-2P





The valve is designed for continuos regulation of pressure in the circuit. It is direct operated. The increase/decrease of the pressure P in the system is proportional to the energizing current at solenoid. The reduced pressure is defined by coil current as shownon the static pressure characteristic.

3 TECHNICAL DATA

Nominal flow	40 l/min
Maximum nominal pressure	9 MPa (90 bar)
Optimal PWM freq.	150 Hz
Protection	IP 67 or IP69K (Deutsch)
Duty cycle	100%
Installation and dimension	(see 5)
Valve Body	Steel
Mass	0,4 kg

Electric characters:

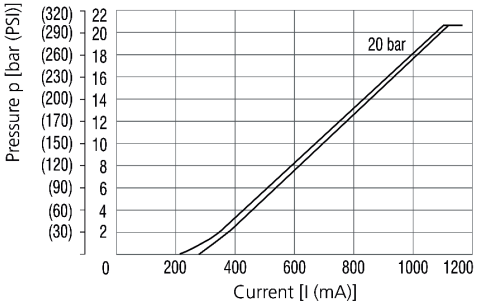
Valve type PRO-M24 are operated by solenoid that are energized from a D.C. voltage supply
V 12 DC = 012C
V 24 DC = 024C
with an appropriate electrical driver in order to control the input current at the valve

Coils have an integrated quenching diode and their characteristics are:
V 12 DC - limit current 1,5 A - 5,0 Ohm
V 24 DC - limit current 1,0 A - 13,4 Ohm

4 TYPICAL DIAGRAMS

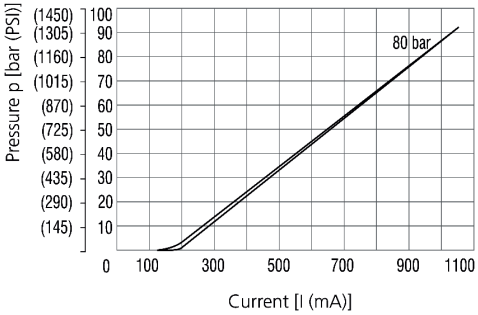
Reduced pressure related to control signal

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



Reduced pressure related to control signal

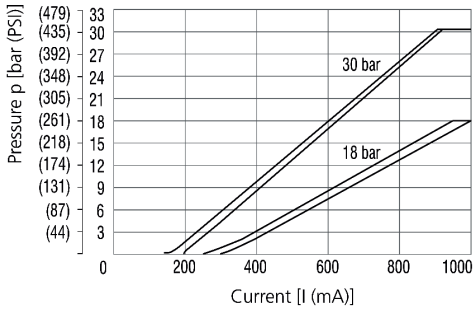
Port A, range 0 - 80 bar (1160 PSI), Q = 0 lpm (GPM)
Port P, inlet pressure 90 bar (1305 PSI)



Reduced pressure related to control signal

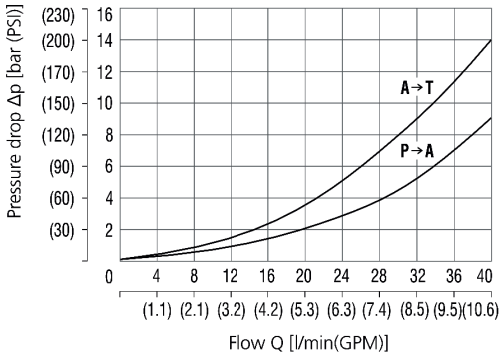
Port A, range 0 - 18 bar (260 PSI), Q = 0 lpm (GPM)
Port P, inlet pressure 50 bar (730 PSI)

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



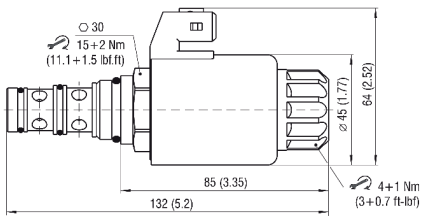
Pressure drop related to flow rate

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

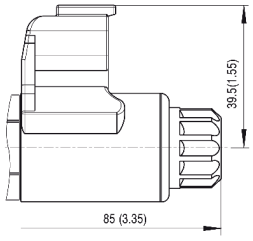


5 INSTALLATION DIMENSIONS (mm)

AMP Junior Timer - IP67



Deutsch DT04-2P - IP69K



6 HYDRAULIC FLUIDS

Seals and materials used on standard valves PRO-78 are fully compatible with hydraulics fluids of mineral base, upgraded with antifoaming and anti oxidizing agents. The hydraulic fluid must be kept clean and filtered to ISO 4406 class 19/17/14, or better, and used in a recommended viscosity range from 10 cST to 60 cSt.