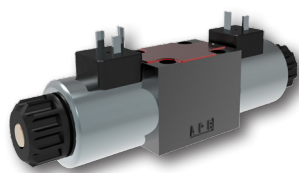


## Proportional Directional Control Valve, Pilot Operated

# PRM8-06

Size 06 (D03) •  $Q_{max}$  140 l/min (37 GPM) •  $p_{max}$  350 bar (5100 PSI)



### Technical Features

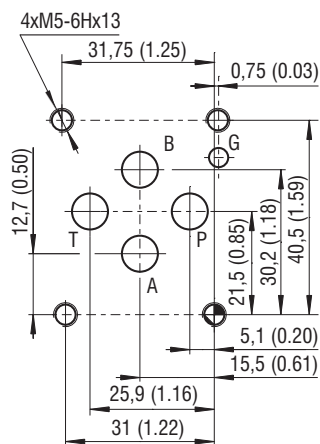
- › Pilot operated proportional control valve with exceptional hydraulic power limits
- › Subplate mounting surface acc. to ISO 4401, DIN 24340 (CETOP 03) standards
- › The valve opening and resulting flow rate can be modulated continuously in proportion to the reference signal
- › The valve can be controlled directly by a current control supply unit or by an electronic control unit to exploit the valve performance to the fullest
- › Analog converter card EL3E allows fine position control of the valve spool, reducing hysteresis and response time and optimizing the performance of the valve
- › Five chamber housing design with reduced hydraulic power dependence on fluid viscosity
- › Wide range of electrical terminal versions for the solenoids available
- › Wide range of interchangeable spools and manual overrides available
- › The coil is fastened to the core tube with a retaining nut and can be rotated by 360° to suit the available space
- › In the standard version, the valve housing is phosphated and steel parts zinc-coated for 240 h salt spray protection acc. to ISO 9227
- › Enhanced surface protection for mobile sector available (ISO 9227, 520 h salt spray)

### Functional Description

The pilot operated main spool valve follows the control spool position, which is given by the control current to the solenoid. The solenoids are supplied from an external source, which should be provided with a current feedback. In order to achieve optimum operating parameters the external electronics should be able to generate a dither signal. The proportional valve can be used within the whole range of input pressure where the required continuity of the flow rate characteristics and minimum hysteresis is achieved.

The selected concept increases the achieved output parameters of the proportional valve in comparison to direct controlled proportional valve. The valve can be controlled directly by a current control supply unit or by means of the external electronic card directly mounted to the electrical terminal (see Catalogue of EL3E card 9145 and EL6 card 9150). This control card, depending on the number of the controlled solenoids, can be mounted onto either solenoid.

### ISO 4401-03-02-0-05



Ports P, A, B, T - max.  $\varnothing$ 7.5 mm (0.29 in)

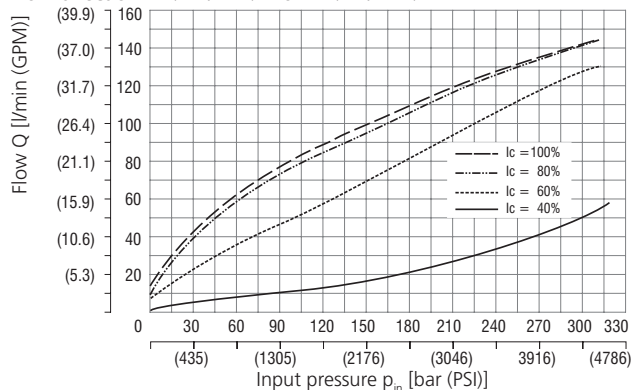
### Technical Data

Valve size		06 (D03)	
Max. operating pressure at ports P, A, B	bar (PSI)	350 (5080)	
Maximal flow at pressure 320 bar (4640 PSI)	l/min (GPM)	140 (37)	
Maximum operating pressure at port T	bar (PSI)	210 (3050)	
Fluid temperature range (NBR / (FPM))	°C (°F)	-30 .. +80 (-22 ... +176) / -20 .. +80 (-4 .. +176)	
Ambient temperature max.	°C (°F)	-30 ... +50 (-22 ... +122)	
Nominal flow rate $Q_n$ at $\Delta p=10$ bar (145 PSI)	l/min (GPM)	25 (6.6)	
Hysteresis	%	< 6	
Mass	kg (lbs)	2.4 (5.3)	
Technical data of the proportional solenoid			
Nominal supply voltage	V	12 DC	24 DC
Limit current	A	2.5	1.0
Mean resistance value at 20 °C (68 °F)	$\Omega$	2.3	13.4
	Data Sheet	Type	
General information	GI_0060	Products and operating conditions	
Coil types / Connectors	C_8007	C22B* / K*	
Mounting interface	SMT_0019	Size 06	
Spare parts	SP_8010		

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

#### Operating limits:

Flow direction P → A / B → T or P → B / A → T



The coil current initializing the flow through the proportional directional valve can differ due to the production tolerances in a range of  $\pm 6\%$  of the limit current.

#### Regulated flow related to control signal

$\Delta p=10$  bar (145 PSI)

