



Up to 10 l/min Up to 350 bar

FUNCTION



The PDBM06020 is a direct-acting, poppet type proportional pressure relief valve.

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If the pressure at port 1 exceeds the setting defined by the electrical signal, the valve opens and allows flow from port 1 to tank port 2. As a function of the electrical signal, the relief pressure at port 1 can be changed steplessly.

Proportional Pressure Relief Valve Poppet Type, Direct-Acting, Metric Cartridge – 350 bar

PDBM06020

FEATURES

- Excellent stability throughout the entire flow range
- Excellent dynamic performance
- External surfaces zinc-plated and corrosion-proof
- Hardened and ground valve components to ensure minimal wear and extended service life
- Low pressure drop due to CFD optimized flow path
- Patented design for guided poppet
- Excellent dynamic performance
- Screen-protected metering orifice enhances safety

SPECIFICATIONS

Operating pressure:	max. 350 bar			
Nominal flow:	Pressure range 070 barmax.10 l/min			
	Pressure range	210 barmax. 6 l/min		
	Pressure range	350 barmax. 4 l/min		
Internal leakage:	< 0.1 cm ³ /min at	80% nominal pressure		
Media operating temperature range:	min20 °C to m	min20 °C to max. +100 °C		
Ambient temperature range:	min20 °C to max. +60 °C			
Operating fluid:	Hydraulic oil to E	Hydraulic oil to DIN 51524 Part 1 and 2		
Viscosity range:	min. 7.4 mm ² /s to max. 420 mm ² /s			
Filtration:	Class19/17/14 according to ISO 4406 or cleaner			
Installation:	No orientation restrictions			
MTTF _d :	150 years (see "Conditions and instructions for valves" in brochure 5.300)			
Material:	Valve body:	free-cutting steel		
	Poppet:	hardened and		
		ground steel		
	Seals:	NBR (standard)		
		FKM (optional, media		
		temperature range		
		-20 °C to +120 °C)		
	Back-up rings:	PTFE		
	Coil:	steel / polyamide		
Cavity:	06020 metric			
Weight:	Valve complete	0.44 kg		
	Coil only:	0.22 kg		
Electronic data:				
Control currents:	850 mA; 18 Ohm (24V)			
	1750 mA; 4.1 Ohm (12V)			
PWM frequency:	160 - 250 Hz			
Hysteresis with dither:	2-4% of I _{max}			
Repeatability:	≤ 1.5% of max. pressure range			
Hysteresis:	≤ 2-4 % of I _{max}			
Response sensitivity:	\leq 1% of I _{max}			
Coil type:	Coil50-1836			
Note:				

The PDBM06020 can also be supplied with an emergency pressure adjustment (version -02M). This allows a manual pressure adjustment of the valve if the electrical signal is interrupted. This adjustment should be used only in the case of electrical failure since the manual setting would be additive to the electrical setting and the system could be damaged when power is restored. In order to achieve optimal function, any trapped air should be vented using the venting screw on the face of the pole tube (not fitted to version -02M).





MO	DEL CODE
	<u>PDBM06020</u> - <u>01</u> - C - N - <u>350</u> - <u>24</u> PG - <u>18.</u>
Basi	c model
Prop	ortional
press	sure relief valve
Type	
01	= standard
Body	(and ports*
C	= cartridge only
•	
Seale	s
N	= NBR (standard)
V	= FKM
Pres	sure range
070	= up to 70 bar
210	= up to 210 bar
350	= up to 350 bar
Coil	voltage
12	= 12 V (4.1 Ohm)
24	= 24 V (18 Ohm)
Coil	connectors (type 50-1836)
PG	= DIN connector to EN175301-803
PL	= 2 flying leads, 457 mm long; 0.75 mm ²
PN	= Deutsch connector, 2-pole, axial
PU	= AMP Junior Timer, 2-pole, axial
Othe	r connectors on request

Coil resistance

Т

4.1 = 4.1 Ohm (12 V) 18.0 = 18.0 Ohm (24 V)

Standard models

Model code	Part No.
PDBM06020-01-C-N-070-12PG-4.1	3362793
PDBM06020-01-C-N-070-24PG-18.0	3362790
PDBM06020-01-C-N-210-12PG-4.1	3362794
PDBM06020-01-C-N-210-24PG-18.0	3362791
PDBM06020-01-C-N-350-12PG-4.1	3362825
PDBM06020-01-C-N-350-24PG-18.0	3258051

*Standard in-line bodies

Code	Part No.	Material	Ports	Pressure
R06020-01X-01	275266	Steel, zinc-plated	G3/8	max. 420 bar
Other bodies on r	request			

Seal kits

Code	Material	Part No.
SEAL KIT 06020-NBR	NBR	3119017
SEAL KIT 06020-FKM	FKM	3262477

PERFORMANCE

Δp -Q curve



p-I curve, Pressure range 70 bar Measured at v = 34 mm²/s, T_{oil} = 46 °C



Q curve, Pressure range 70 bar Measured at $v = 34 \text{ mm}^2/\text{s}$, T_{oil} = 46 °C







p-Q curve, Pressure range 210 bar Measured at v = 34 mm²/s, T_{oil} = 46 °C



p-I curve, Pressure range 350 bar Measured at v = 34 mm²/s, T_{oil} = 46 °C



p-Q curve, Pressure range 350 bar Measured at v = 34 mm²/s, T_{ol} = 46 °C



NOTE The information in this brochure relates to the operating conditions and applications described. For applications or operating conditions not described abases centerat the schemet teaching. described, please contact the relevant technical department. Subject to technical modifications.

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