

Description

The direct operated proportional pressure relief valve is built as a slip-in cartridge. 6 standard pressure ranges are available: 20, 63, 100, 200, 250 and 315 bar. Pressure is adjusted by a proportional solenoid.

When the operating pressure set by the proportional solenoid is reached, the poppet spool opens and connects the protected line to the tank. These pressure relief valves are built according to the differential spool principle and are therefore very sensitive adjustable over the whole pressure range and also suitable for systems with extremely low minimum pressures.

The valve limits the set pressure in port P and reliefs the flow to tank in port T.

Technical Data

General Specifications	EPDB 06 - ... - SD - ...			
Description:	Proportional pressure relief valve, direct operated, NG 6 to ISO 4401			
Actuator:	Proportional solenoid			
Mounting position:	any			
Ambient temperature:	- 20 ... + 50° C		- 20 ... + 40° C	
Weight:	1.45 kg	1.45 kg	1.9 kg	3.0 kg

Electrical Specifications				
Nominal voltage:	24 VDC	12 VDC	24 VDC EEx emII T4	24 VDC EEx dII C T4
Current range:	0 - 0.68 A	0 - 1.25 A	0 - 0.61 A	0 - 0.58A
Rated resistance R ₂₀ :	24.0 Ω	6.2 Ω	32 Ω	41.5 Ω
Power rating:	max. 17.5 W	max. 17.5 W	17 W	max. 15 W
Relative duty factor:	100%	100%	100%	100 %
Protection class:	IP54 to DIN 40050	IP54 to DIN 40050	IP67 to DIN 40050	IP65 to DIN 40050
Connection:	plug connection ISO 4400/DIN 43650		terminal box	terminal box

Safety, Start up: for EEx only The solenoid coils must only be mounted on those valves assigned to. In the power supply for each solenoid a fuse of an appropriate rating (max. 3 times I_B of solenoid, DIN 41571 or IEC 127) respectively a circuit breaker with electromagnetic and thermal interruption must be installed.

Hydraulic Specifications				
Max. volume flow:	Q _{max} = 20 l/min for p _N = 20 / 63 / 100 bar Q _{max} = 15 l/min for p _N = 200 bar Q _{max} = 12.5 l/min for p _N = 250 bar Q _{max} = 10 l/min for p _N = 315 bar			
Max. pressure:	p _{max} = 315 bar			
Fluid:	Mineral oil or other fluids on request			
Viscosity range:	12-320 mm ² /s (cSt)			
Filtration:	25 μm minimum, recommended: 10μm or better			
Fluid temperature:	- 20 ... + 70° C		- 20 ... + 40° C	
Resolution:	1 mA			
Repeatability:	≤ 1 % at optimal dither signal			
Hysteresis:	≤ 2 % at optimal dither signal			

Type Code

EPDB	06	-...	-SD	-...
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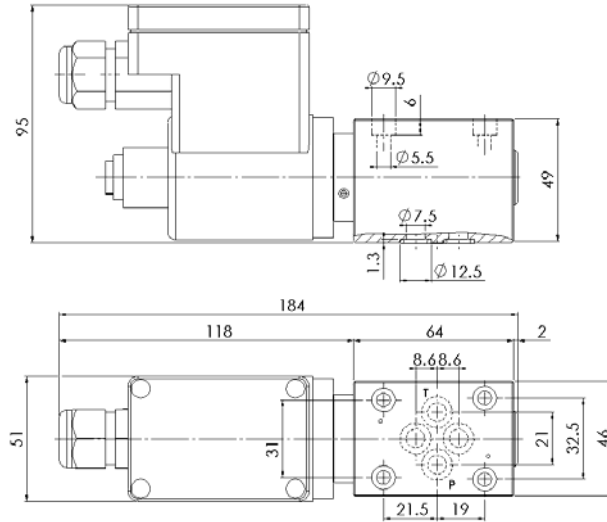
omit = 24 VDC standard
12 VDC = 12 VDC
EEx em II T4 = explosion proof execution 24 VDC (+40°C)
EEx dII C T4 = explosion proof execution 24 VDC (+60°C)

flange construction (also in sandwich construction [SW] available)
 standard nominal pressure range
20 = 20 bar **200** = 200 bar
63 = 63 bar **250** = 250 bar
100 = 100 bar **315** = 315 bar

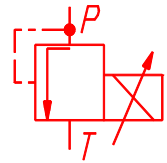
mounting interface NG 6
 proportional pressure relief valve, direct operated

Dimensions

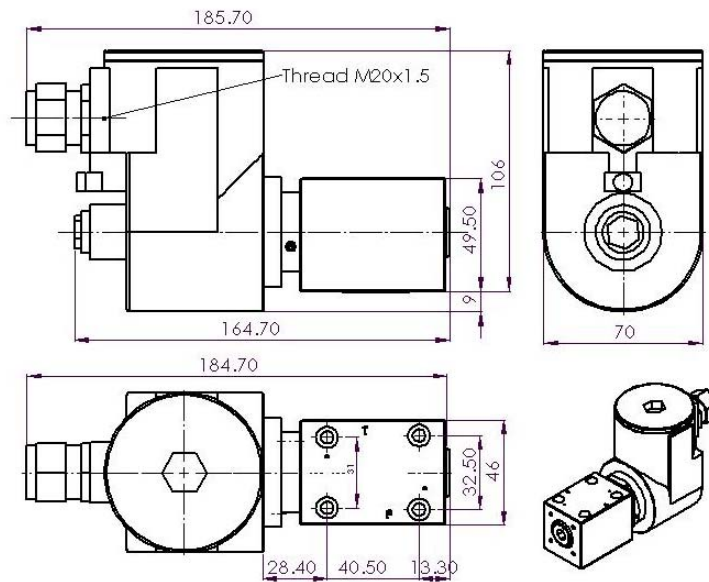
EEx em II T4 solenoid



Symbol

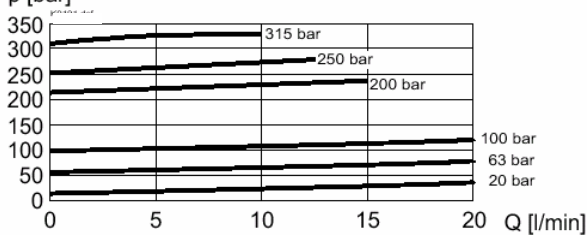


EEx dIIC T4 solenoid

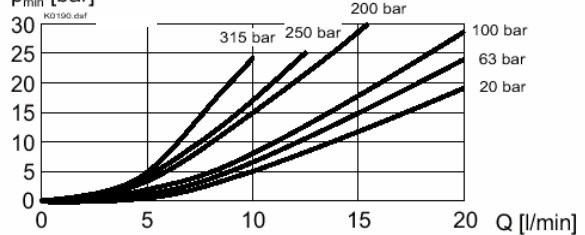


Characteristics (oil viscosity $\nu=30\text{mm}^2/\text{s}$)

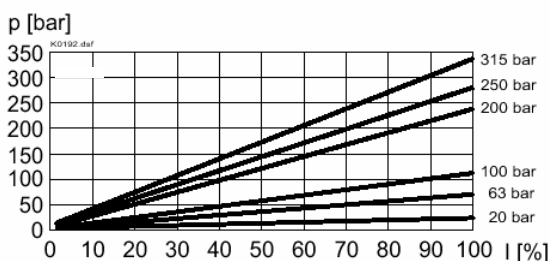
$p = f(Q)$ Pressure volume flow characteristics
(Maximum adjustable pressure)



$p = f(Q)$ Pressure volume flow characteristics
(Minimum adjustable pressure)



$p = f(I)$ Pressure adjustment characteristics



$Q_L = f(p)$ Leakage volume flow characteristics

