Description

The proportional valves are used to control direction and flow in hydraulic systems. The applications of these valves ensure any motion sequences at low cost.

Examples are acceleration and deceleration movements which are difficult to realize with common hydraulic components. The flow rate is proportional to the solenoid current and partly load-compensated.

When large control range is requested the AROFLEX-proportional directional control valve PVS is especially suitable. The PVS valve is recommended for feed control and volume flow, off from 0.02 l/min.

Technical Data

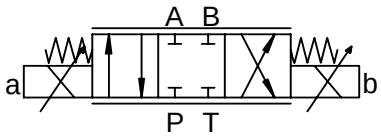
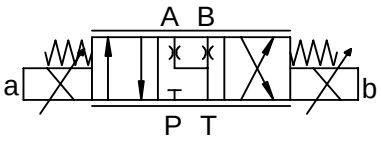
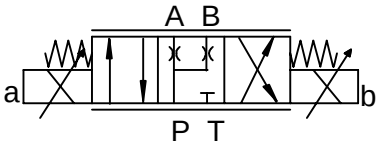
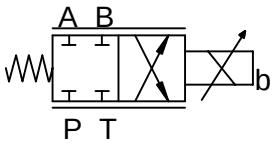
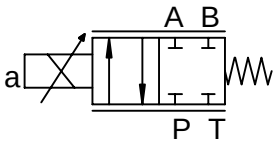
General Specifications	**PVD 6-…- 14-…**	**PVD 6-.- 14-.EExemII T4**	**PVD 6-…- 24-...**
Description:	Proportional directional control valve		
Mounting position:	Any		
Ambient temperature:	- 20 ... + 50° C	- 20 ... + 40° C	- 20 ... + 50° C
Nominal Size:	NG6, DIN 24340 A 06 to ISO 4401-03, Cetop 3		
Weight:	1.8 kg	2.6 kg	2.7 kg

Electrical Specifications			
Nominal voltage:	24 VDC, 12 VDC	24 VDC EEx	24 VDC, 12 VDC
Current range:	0.2 - 0.75 A (24 V) 0.4 - 1.5 A (12 V)	0 – 0.61 A	0.2 - 0.85 A (24 V) 0.4 - 1.7 A (12 V)
Rated resistance R_{20}:	24.6 Ω (24 V) 6.2 Ω (12 V)	32 Ω	19.6 Ω (24 V) 5.4 Ω (12 V)
Power rating:	max. 17.5 W	max. 17 W	max. 20.7 W
Relative duty factor:	100%		
Protection class:	IP54 acc. to DIN 40050	IP67acc.to DIN 40050	IP54 acc. to DIN 40050
Connection:	Plug connection ISO 4400/DIN 43650 (2P+E)	Terminal box	Plug connection ISO 4400/DIN 43650 (2P+E)
Temperature class:		T4 acc. to EN50014	
Safety, Start up: only for EEx em II T4: 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 motor circuit breaker with electromagnetic and thermal interruption must be installed. The fuse may be located in the power supply unit for the solenoid or between power supply and solenoid. The voltage rating for the fuse must be equal or higher than the one for the solenoid.			

Hydraulic Specifications			
Max. flow rate* at Δp 15 bar:	1.4-14 l/min	1.4-14 l/min	2.4-24 l/min
Pressure range:	P, A and B 315 bar, T 160 bar		
Fluid:	Mineral oil, HFC fluid 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	- 20 ... + 70° C
Hysteresis:	appr. 3% at optimal dither signal		

*can be reduced to any flow rate with a control range 1:10 (see type code and characteristics)

Overview

Symbols	Description	Design
	PVD 6-2-...-N	4/3 way function spool type N
	PVD 6-2-...-D	4/3 way function spool type D
	PVD 6-2-...-T	4/3 way function spool type T
	PVD 6-1-...-BZ	4/2 way function proportional solenoid b-side spool type N, D and T
	PVD 6-1-...-AZ	4/2 way function proportional solenoid a-side spool type N, D and T

➔ other functions on request

Type Code

PVD 6	-...	-...	-...	-...

-... (last):
omit = 24 VDC standard
12 VDC = 12 VDC
EEx em II T4 = explosion proof execution 24 VDC

-... (3rd): Type and design acc. table overview

-... (2nd): Flow range
14* 1.4 - 14 l/min
24* 2.4 - 24 l/min
*or added with desired reduced flow rate i.e. **14/5** for 0.5 – 5 l/min

-... (1st): **1** = 4/2 way function
2 = 4/3 way function

PVD 6: Proportional valve NG 6

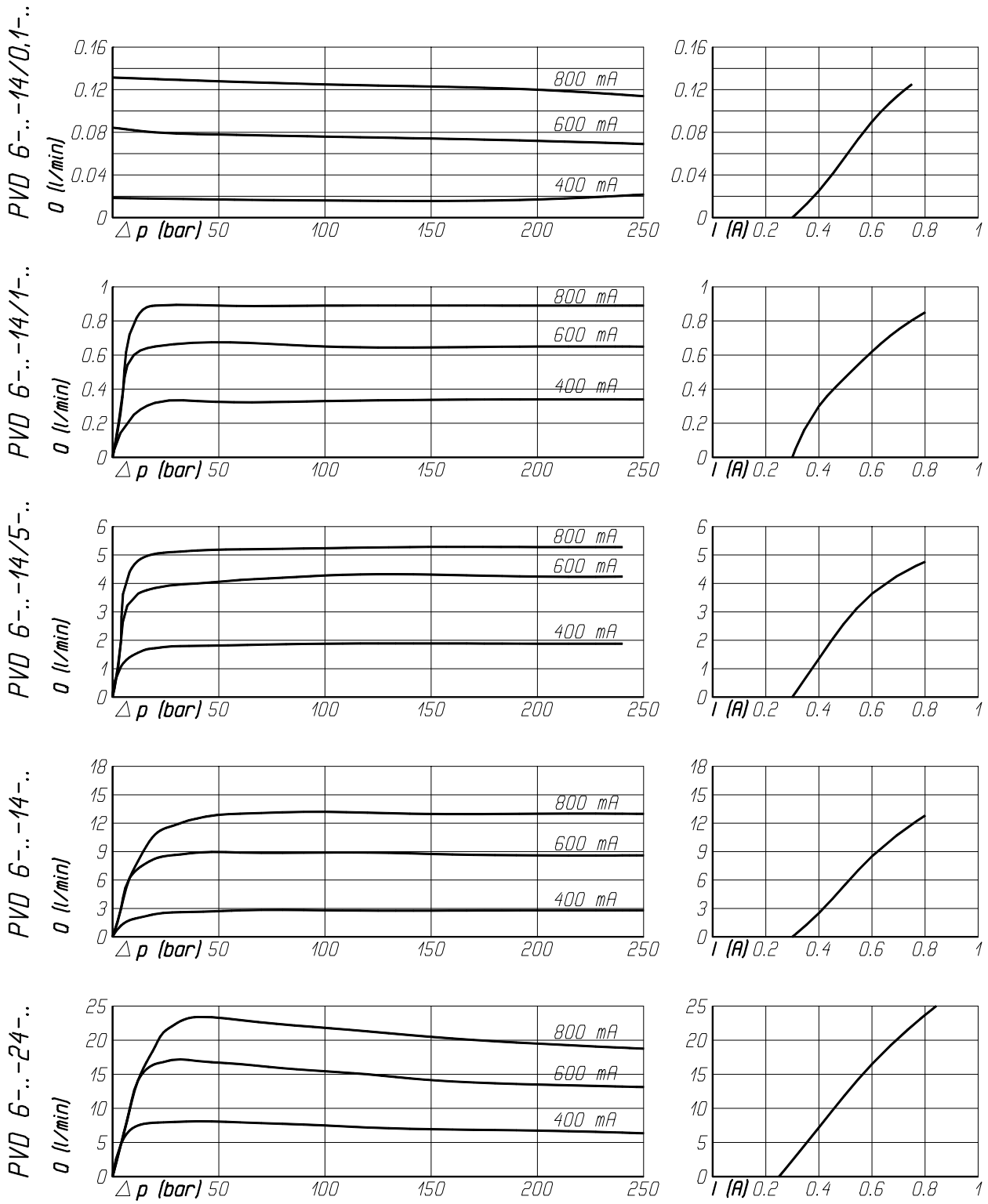
Ordering specification (Example):

- proportional valve NG 6
- flow range 0.5 -5 l/min
- spool type N
- 4/3 way function

Type code:

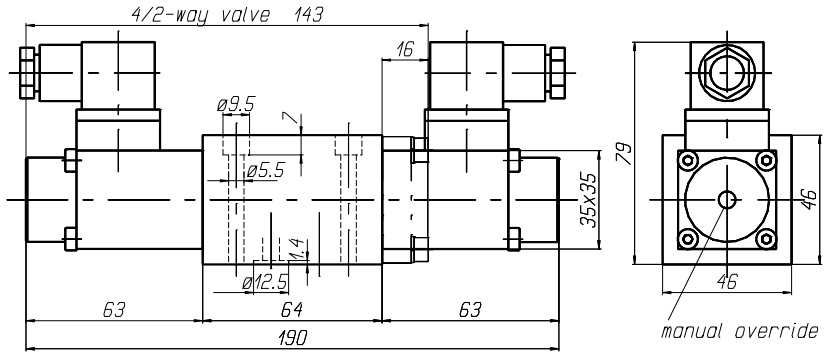
PVD 6-2-14/5-N

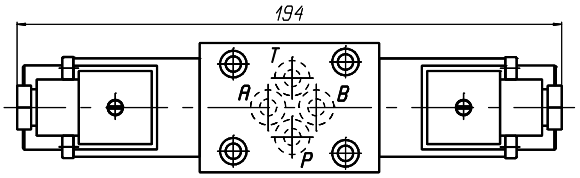
Characteristics



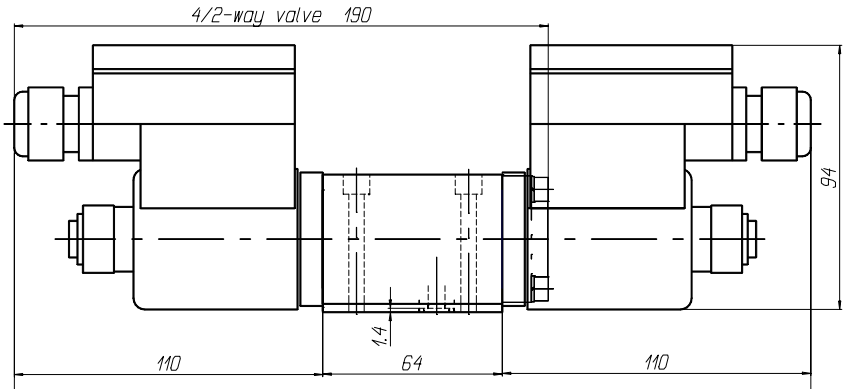
Characteristics of **PVD 6-..-14-..-EEx em II T4** are similar to **PVD 6-..-14-..**

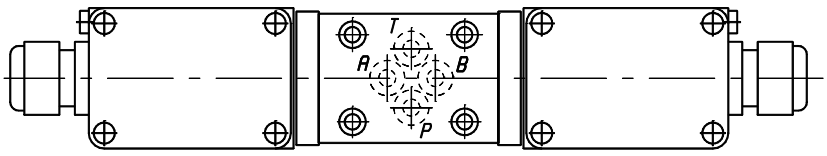
PVD 6-..-14-..-..





PVD 6-..-14-..-EEx emII T4





PVD 6-..-24-..-..