

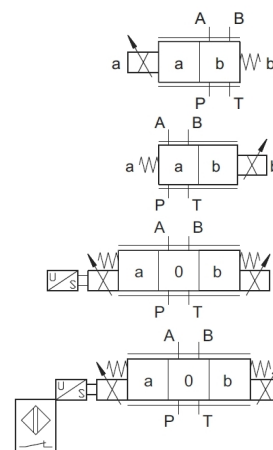
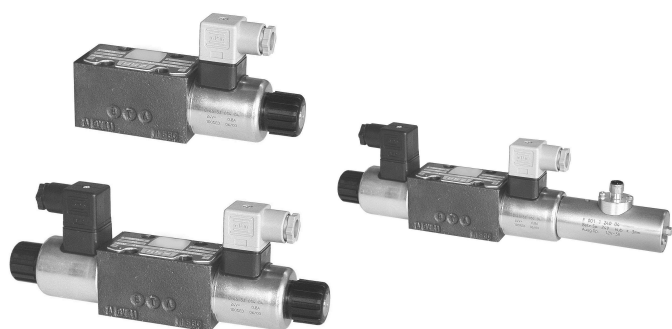
# Proportional directional spool valve type POL, PRL, PIL (size 6)

operating pressure  $p_{max}$

350 bar

volume flow  $V_{max}$

36 L/min



## Product characteristics

The positioning controlled slider ensures that the output signal can be changed proportionally to the input valve. The continuous control of the volume flow leads to smoother switching processes and exact positioning.

- high repeatability
- very good resolution
- low noise level
- use of transducer helps to decrease hysteresis and increase valve dynamics
- 4/2- and 4/3-way design

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## Technical data

### General

<b>type</b>	piston valve
<b>design</b>	subbase mounting valve
<b>weight</b>	POL_1_PC06_: 1.7 kg POL_0_PC06_: 2.1 kg PRL_/PIL_0_PC06_: 2.5 kg
<b>ambient temperature</b>	-20 to +50 °C
<b>mounting position</b>	arbitrary, preferably horizontal
<b>connection size</b>	ISO4401-03-02-0-05 (NG06)

### Hydraulic parameters

Hydraulic fluid: mineral oil according to DIN 51524, other media on request

<b>operating pressure</b>	P, A, B: 350 bar T: 180 bar  Max. pressure difference between two connections = 100 bar; Use load balancing for higher pressure differences.
<b>volume flow</b>	max. 36 L/min
<b>temperature of hydraulic fluid</b>	-20 to +70 °C
<b>viscosity</b>	10-600 mm <sup>2</sup> /s
<b>permissible degree of pollution</b>	max. class 19/17/14 according ISO 4406
<b>filter recommendation</b>	filter retention rate $\beta_{10} > 75$
<b>hysteresis</b>	≤ 1 % for regulated operation ≤ 8 % for controlled regulation
<b>repeatability</b>	≤ 1 %

## Actuation

actuation	electromagnetic with proportional solenoid
voltage	DC
nominal voltage	12 V; 24 V
control current	24 V solenoid: 0-800 mA 12 V solenoid: 0-1600 mA
rated output	14 W
connection type	connector DIN43650-AF2-PG9
protection class according DIN 40050	IP65 with plug
duty cycle	continuous operation
coil resistance (at 20 °C)	24 V solenoid: 21.3 Ω 12 V solenoid: 5.5 Ω

## Inductive displacement transducer

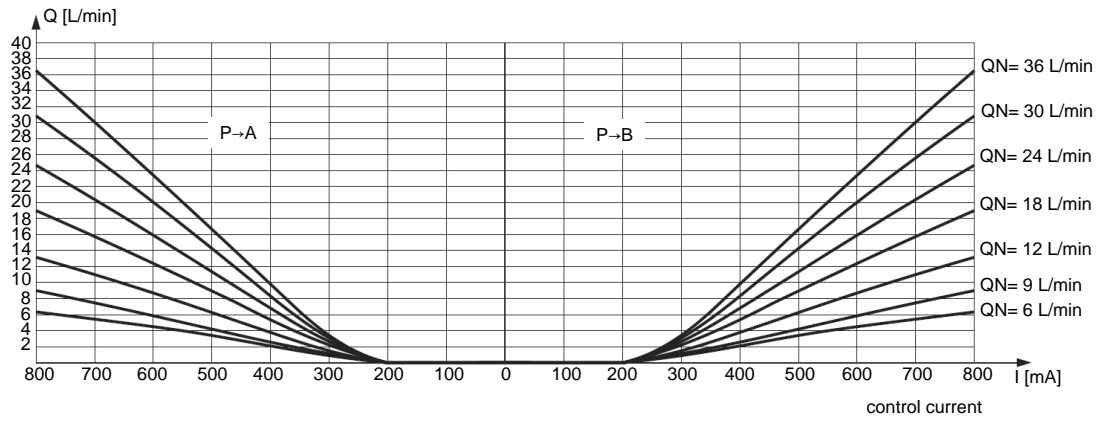
nominal voltage	UB = 24 V DC ( $\pm 20\%$ )
residual ripple of nominal voltage	$\leq 5\%$
current consumption	< 40 mA
output voltage (linear range)	P→A: 7.5 to $\geq 3$ V P→B: 7.5 to $\leq 12$ V
load on output voltage	$\geq 10$ kW
responsivity	1.5 V/mm ( $\pm 3\%$ )
linearity	$\leq \pm 1.5\%$
temperature drift	$\leq \pm 0.03\%$ /°C
residual ripple of output voltage	$\leq 20$ mV
protection class according DIN 40050	IP65 with plug
connection type	M12x1

**Digital central position signal (PIN4)**

	Low signal: $U_A = 0 \text{ V}$
	High signal: $U_A \leq U_B - 2 \text{ V}$
<b>load resistance</b>	$\geq 220 \ \Omega$
<b>switching section</b>	upper threshold: $7.7 \text{ V} \pm 20 \text{ mV}$
	lower threshold: $7.3 \text{ V} \pm 20 \text{ mV}$

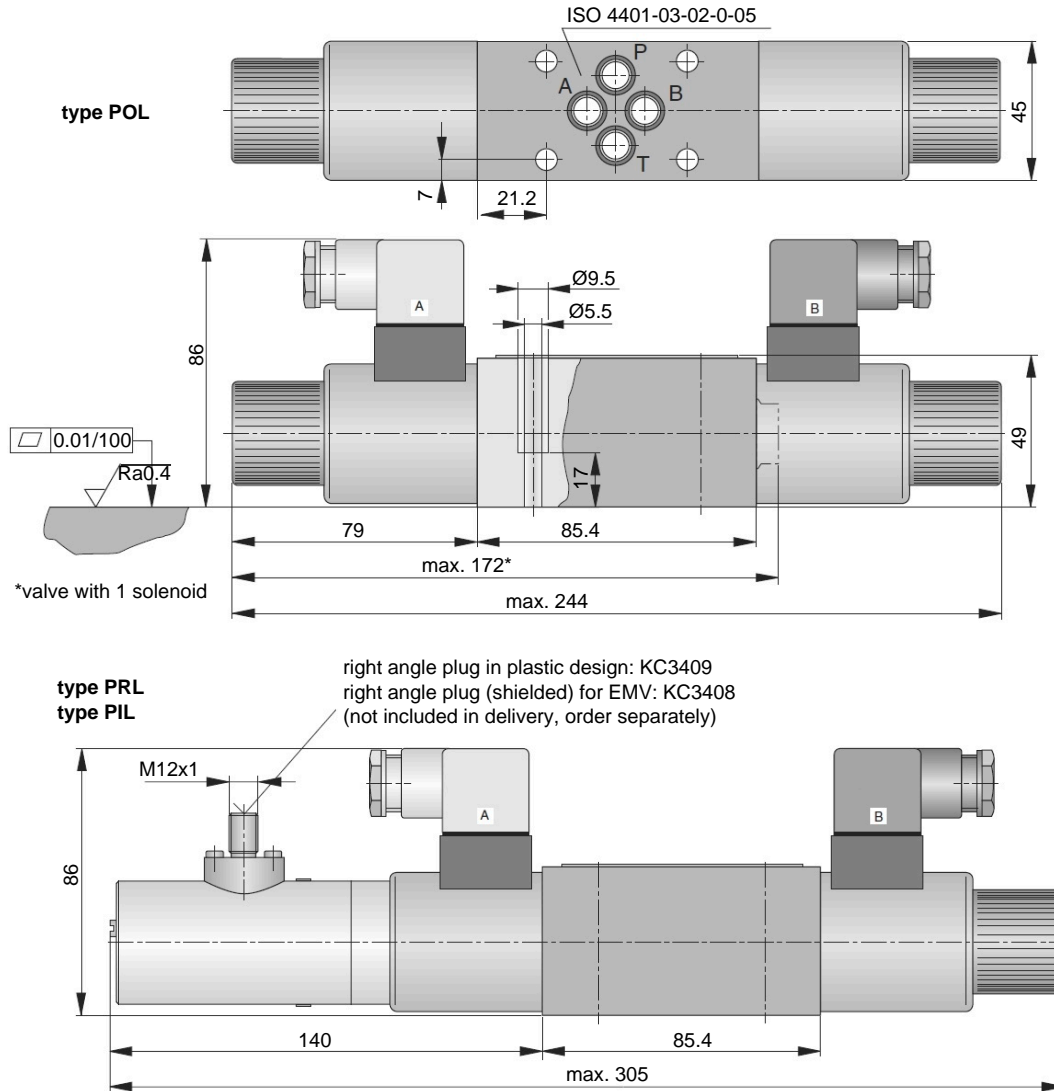
## Characteristic lines

deviation  $\pm 5\%$ ,  $\Delta p = 5$  bar/control edge, measured at  $+50$  °C temperature of hydraulic fluid and with 24 V coil (DC), viscosity  $35$  mm<sup>2</sup>/s

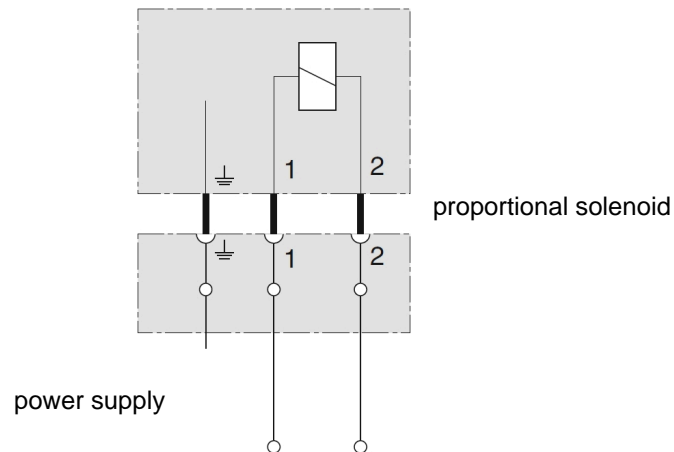


## Dimensions and connections

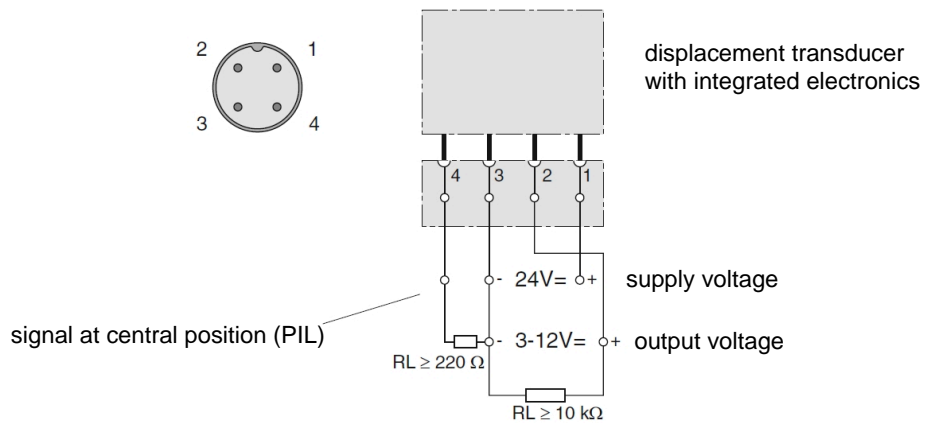
Dimensions are given in mm.



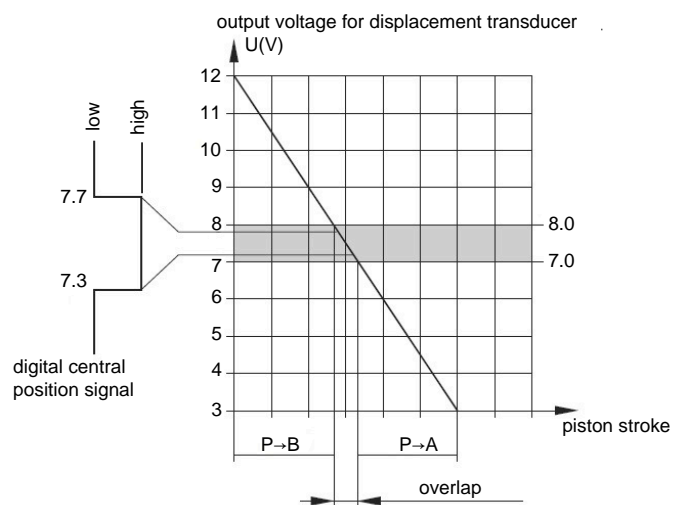
**Proportional solenoid**



**Inductive displacement transducer**



**Output variable displacement transducer**



## Order information

### Type code

P	0	L	1	0	0	PC06	P	36
design	displacement transducer	symbol (piston type)	type	volume flow symmetry	size	electrical data	volume flow $Q_N$	

### design

P | proportional directional spool valve

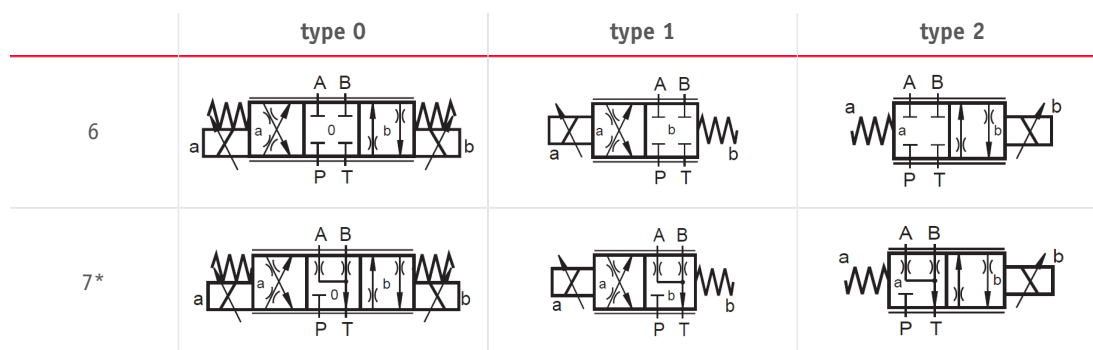
### displacement transducer

- 0 | without displacement transducer
- R | with displacement transducer
- I | with displacement transducer and center position signal

### symbol (piston type)

	type 0	type 1	type 2
1			
2*			
4			
5			





\*on request

further symbols possible upon specifications

### type

0	two proportional solenoids
1	proportional solenoid on side A
2	proportional solenoid on side B

### volume flow symmetry

0	symmetrical $Q_N P \rightarrow B = Q_N P \rightarrow A$
1*	asymmetrical $Q_N P \rightarrow B \neq Q_N P \rightarrow A$

\*on request

### size

PC06 | size 6

### electrical data

P	24 VDC
N	12 VDC

### volume flow $Q_N$

for a valve pressure difference according to Q-I characteristic curve

$$Q_N P \rightarrow B = Q_N P \rightarrow A$$

06	6 L/min
09	9 L/min
12	12 L/min
18	18 L/min
24	24 L/min
30	30 L/min
36	36 L/min

## Contact details

### Headquarters

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