

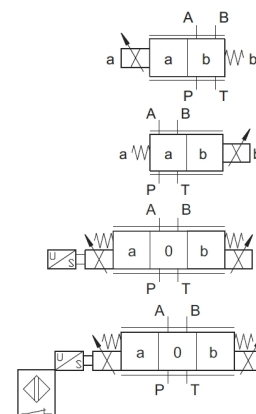
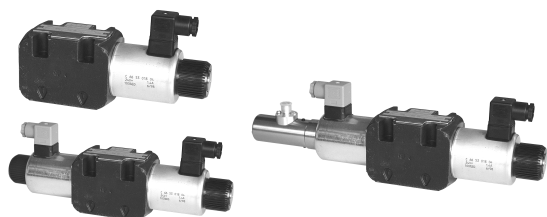
Proportional directional spool valve type POL, PRL, PIL (size 10)

operating pressure p_{\max}

350 bar

volume flow V_{\max}

100 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

Table of Contents

Technical data.....	2
Characteristic lines.....	4
Dimensions and connections.....	5
Order information.....	7
Contact details.....	9

Technical data

General

weight	POL_1_PC10_:	4,6 kg
	POL_0_PC10_:	6,1 kg
	PRL_/PIL_0_PC10_:	6,6 kg
ambient temperature	-20 to +50 °C	
mounting position	arbitrary, preferably horizontal	

Hydraulic parameters

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

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

Actuation

actuation	electromagnetic with proportional solenoid
voltage	DC
nominal voltage	24 V, others on request
control current	24 V solenoid: 0-1400 mA

rated output	26 W
coil resistance (at 20 °C)	13.4 Ω
duty cycle	continuous operation
protection class according DIN 40050	IP65 with plug
connection type	connector DIN43650-AF2-PG9

Inductive displacement transducer

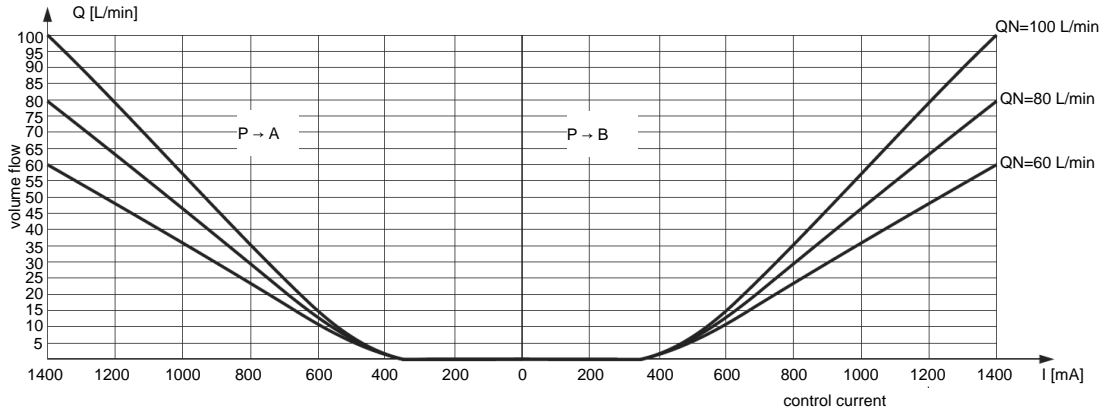
nominal voltage	$U_B = 24 \text{ V DC } (\pm 20 \%)$
residual ripple of nominal voltage	$\leq 5 \%$
current consumption	$< 40 \text{ mA}$
output voltage (linear range)	P→A: 7.5 to $\geq 3 \text{ V}$ P→B: 7.5 to $\leq 12 \text{ V}$
load on output voltage	$\geq 10 \text{ kW}$
responsivity	1.125 V/mm ($\pm 3 \%$)
linearity	$\leq \pm 1.5 \%$
temperature drift (gain)	$\leq \pm 0.02 \text{ } \%/^{\circ}\text{C}$
temperature drift (offset)	$\leq \pm 0.015 \text{ } \%/^{\circ}\text{C}$
residual ripple of output voltage	$\leq 20 \text{ mV}$
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: $U_A \leq U_B - 2\text{V}$
load resistance	$\geq 220 \text{ } \Omega$
switching section	upper threshold: $7.7 \text{ V } \pm 20 \text{ mV}$ lower threshold: $7.3 \text{ V } \pm 20 \text{ mV}$

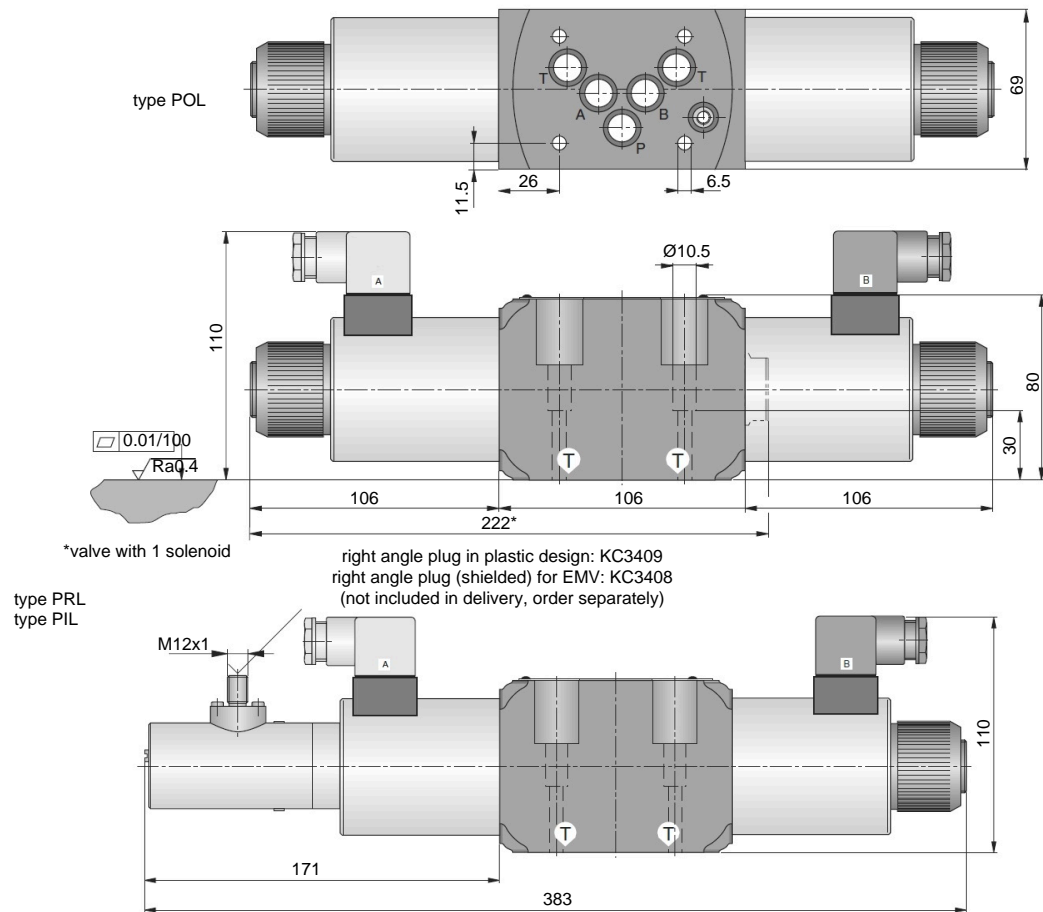
Characteristic lines

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 mm²/s

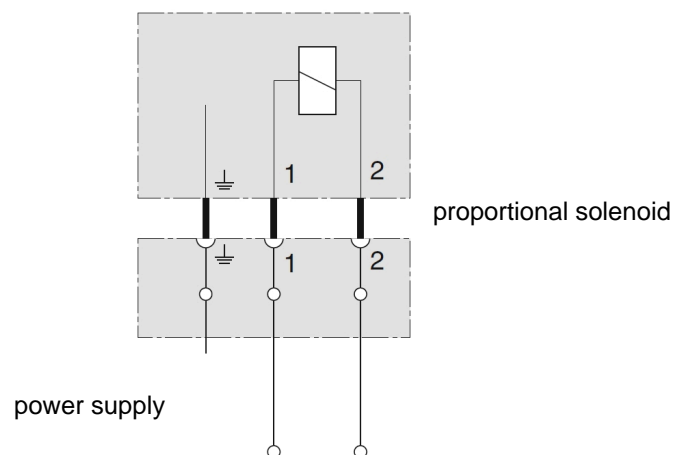


Dimensions and connections

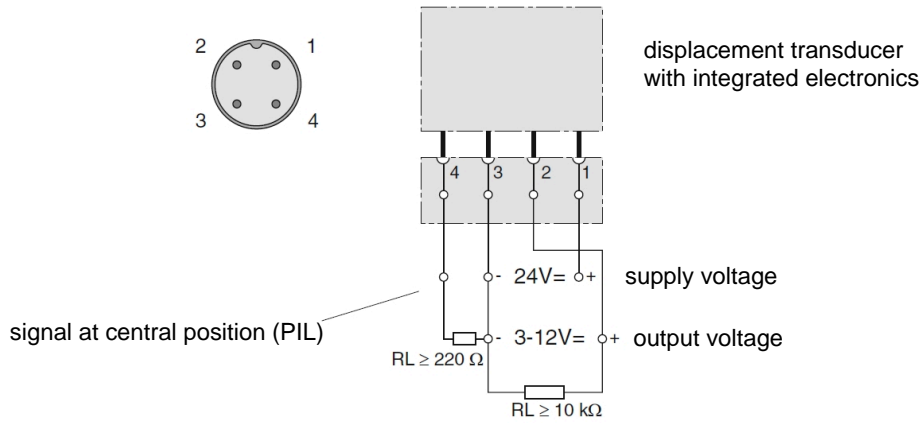
Dimensions are given in mm.



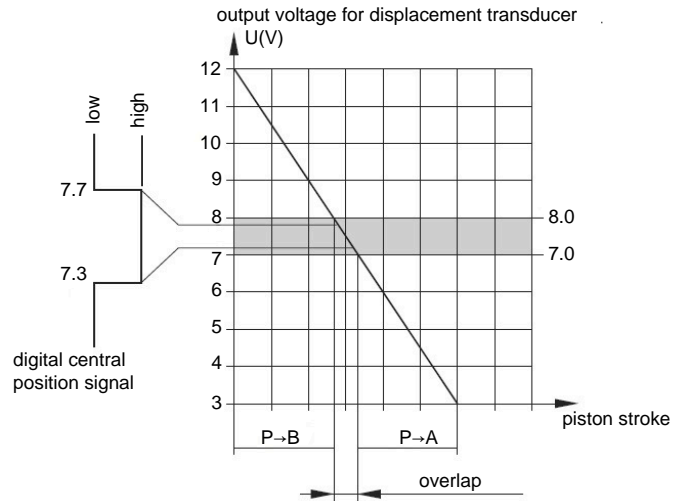
Proportional solenoid



Inductive displacement transducer

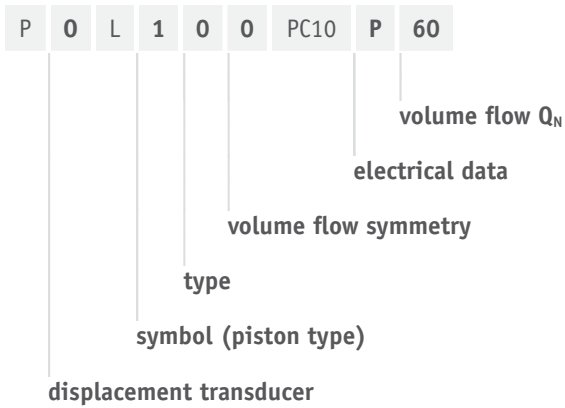


Output variable displacement transducer



Order information

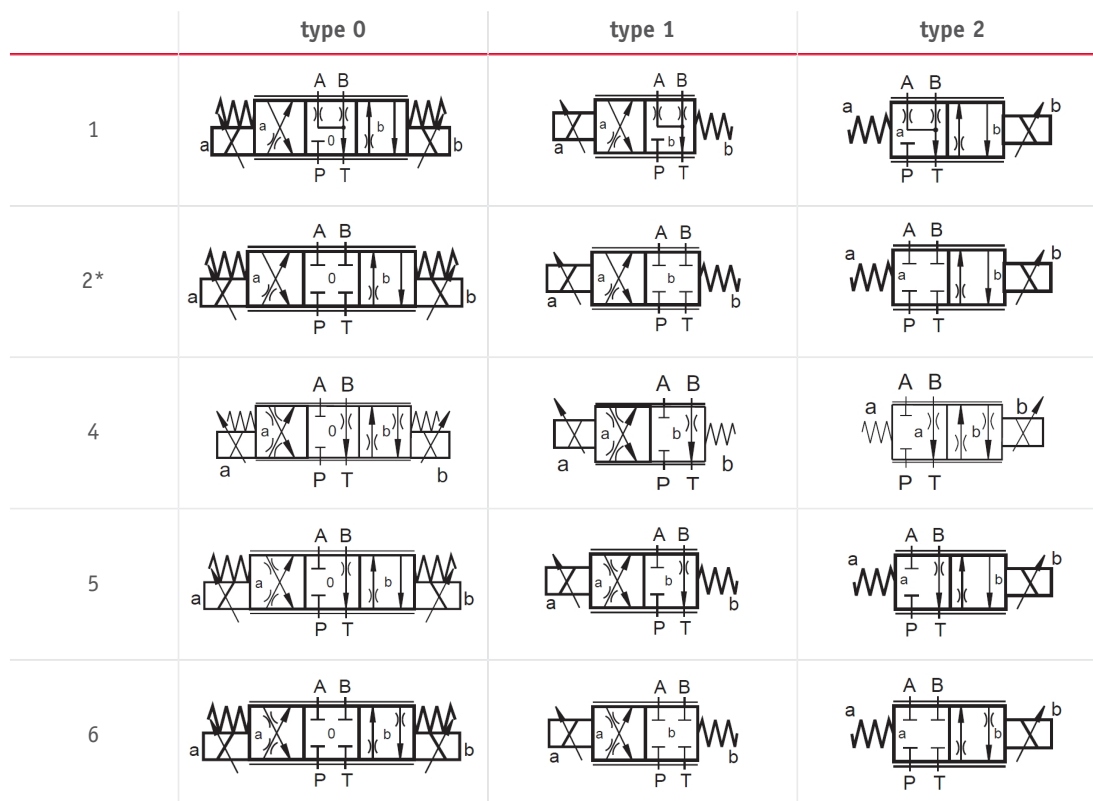
Type code

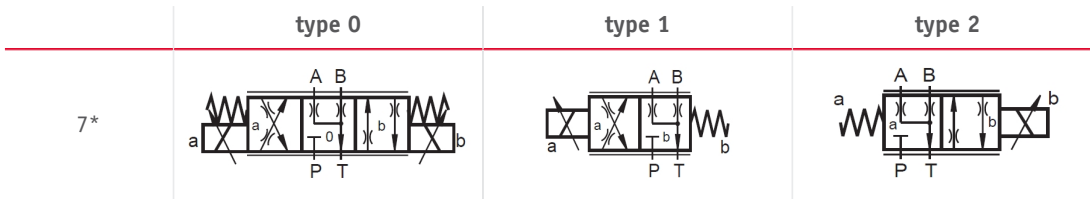


displacement transducer

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

symbol (piston type)





*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

electrical data

P	24 VDC
---	--------

volume flow Q_N

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

$$Q_{N\ P\rightarrow B} = Q_{N\ P\rightarrow A}$$

60	60 L/min
80	80 L/min
100	100 L/min

Contact details

Headquarters

HAWE Hydraulik SE
Einsteinring 17
85605 Aschheim
Germany

e-mail: info@hawe.de
www.hawe.com

Telefon: +49 (0) 89 / 37 91 00 - 1000

Contact to the Customer Service

Phone (Head office)	+ 49 (0) 89 / 37 91 00 - 1000
Phone (Spare parts service)	+ 49 (0) 89 / 37 91 00 - 1302
Phone (Customer Service)	+ 49 (0) 89 / 37 91 00 - 1491
Fax (Customer Service)	+ 49 (0) 89 / 37 91 00 - 91491
e-Mail	spareparts@hawe.de service@hawe.de