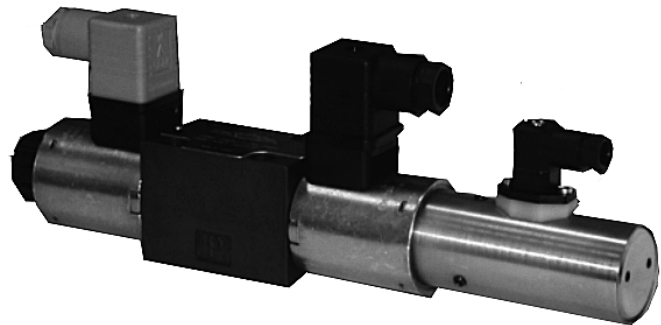
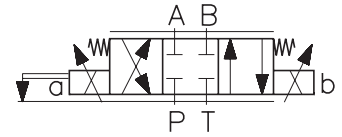


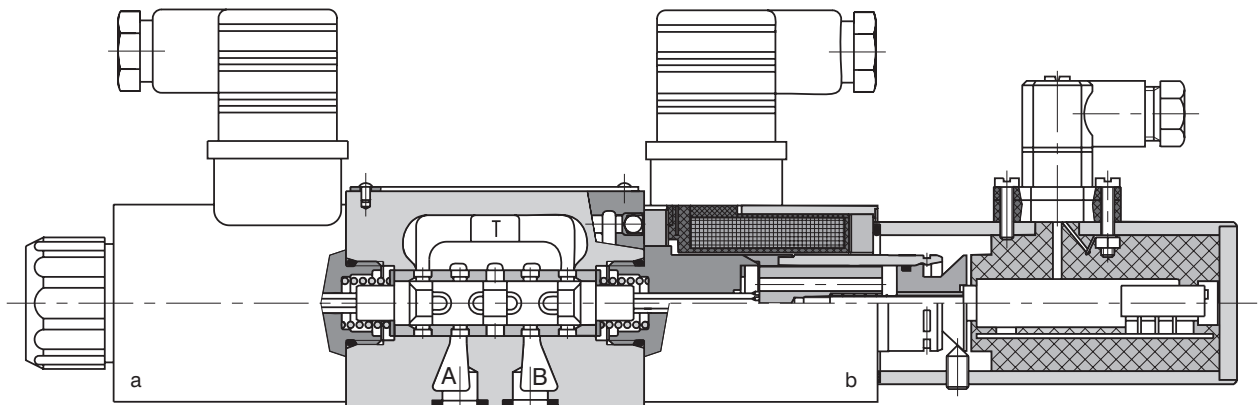
- High reliability
- Simple replacement of the exciting coils including electronics without opening the hydraulic circuits
- Continuous flow control in both directions
- Installation dimensions to DIN 24 340-A6 and ISO 4401-AB-03-4-A



Functional Description

The proportional directional valve PRM5 consists of a cast iron housing, a special control spool situated in a sleeve, two centering springs with supporting washers, one or two proportional solenoids or a position sensor. The measuring system of the position sensor consists of a differential transformer with core and from the evaluating electronic unit realized in hybrid technique.

The electric connection of the solenoids is realized by the connector plug to DIN 43 650, with the position sensor output being connected by the G4W1F connector plug. Bought connectors belong to delivery. With the basic surface treatment, the valve housing is phosphate coated, whereas the surfaces of the solenoids and position sensor are zinc coated.



Ordering Code

PRM5-06 / -

Proportional directional control valve with sleeve

Nominal size

06

Seals

without designation
V

NBR
FPM (Viton)

Model

without designation

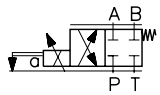
without position sensor

S01

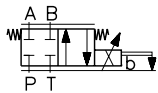
position sensor with voltage outlet

S02

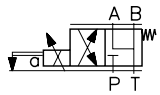
position sensor with current outlet



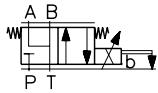
2Z51



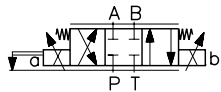
2Z11



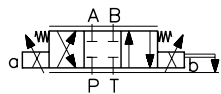
2Y51



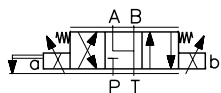
2Y11



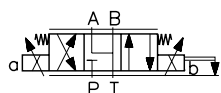
3Z11



3Z11B



3Y11



3Y11B

Nominal solenoid supply voltage

12

supply voltage 12V DC
(position sensor with voltage outlet)

24

supply voltage 24 V DC

Nominal flow rate at $\Delta p = 10$ bar

20

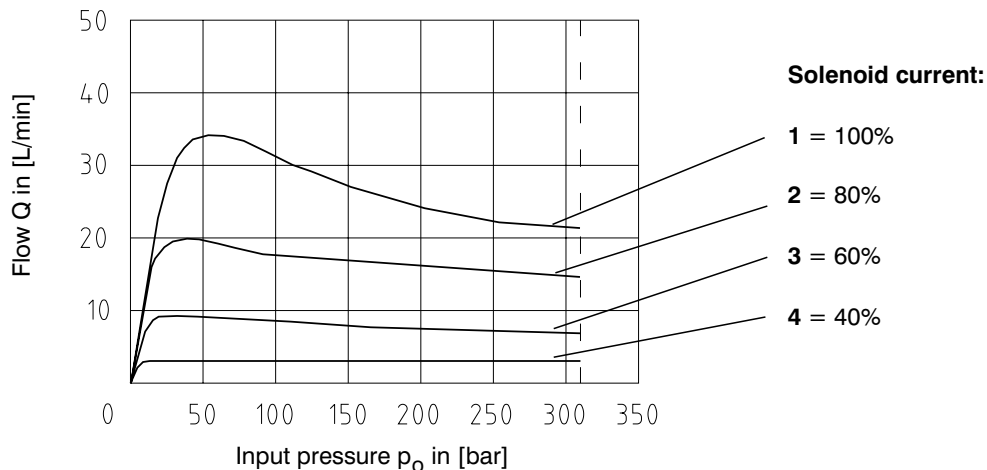
flow 20 L/min

Technical data of position sensor - voltage outlet (supply voltage 12V and 24V)		
Operating pressure	bar	max. 320, static
Electric connection		electrical connector G4W1F Hirschmann
Contact assignment		1 - operating voltage 2 - output signal 3 - ground 4 - not used
Enclosure type to DIN 40050		IP 65
Measured distance	mm	8
Operating voltage	V	9.6 ...30 DC
Linearity error	%	< 1
Current consumption at load current of 2 mA	mA	< 15
Output voltage	V	0 ... 5
Output signal range used:		
0 Position	V	2.5
1 solenoid - displacement 2.8 mm		0.75 - 2.5
2 solenoids - displacement ± 2.8 mm		0.75 - 4.25
Max. load current	mA	2
Noise voltage		
- at load current 0	mV _{p-p}	< 20
- at load current of 2 mA		< 15
Additional output signal error at:		
Temperature change between 0 ... 80 °C		typical < 0.2% / 10K max. 0.5% / 10K
Between 0 ... -25 °C		max. 0.5% / 10K
Load change from 0 to 2 mA	%	0.1
Input voltage change		
from 9.6 V to 14.4 V	%	< 0.1
from 14.4 V to 30 V		< 0.25
Long-term drift (30 days)	%	< 0.25
Cut-off frequency		
3 dB fall in amplitude	Hz	> 600
Frequency 90°		> 600

Technical data of position sensor - current outlet (supply voltage 24V)		
Linearity	%	< 1
Operating pressure	bar	to 320, static
Electrical connection		electrical connector G4W1F Hirschmann
Contact assignment		1 - operating voltage 2 - output signal 3 - ground 4 - not used
Enclosure type to DIN 40050		IP 65
Operatin voltage	V	20 ... 30 DC
Current	mA	< 35
Output signal range	mA	5 ... 19
Output signal range used:		
0 position	mA	12
1 solenoid - stroke (Hub 2.8 mm)		6.6 ... 12
2 solenoid - stroke (Hub ± 2.8 mm)		6.6 ... 17.6
Additional output signal error:		
- at temperature change from +10 ... 55 °C		0.2% / 10K
- at impedance change from 50%		$\leq 0.1\%$
- at input voltage change in the range of operating voltage		$\leq 0.05\%$
Impedance	Ω	≤ 500
Output signal ripple	mA R.M.S.	$\leq 0,02$
Limit frequency at 3 dB amplitude decrease	Hz	≥ 800

Limit power

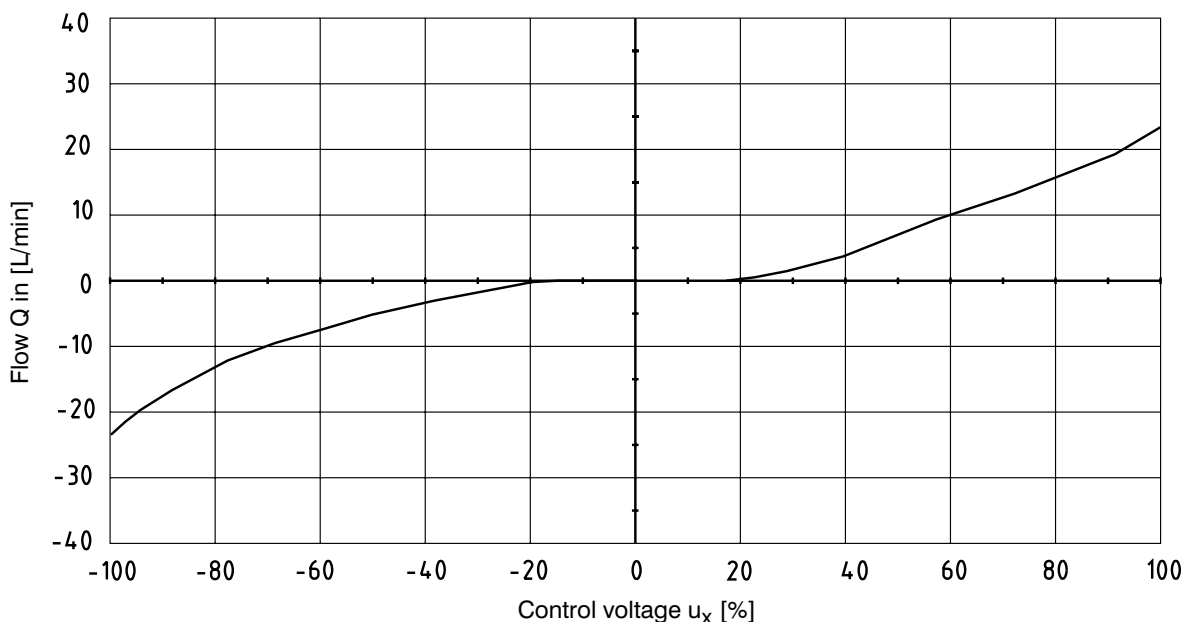
Measured at $v = 35 \text{ mm}^2/\text{s}$ $P \rightarrow A / B \rightarrow T$ or $P \rightarrow B / A \rightarrow T$



Flow Characteristics

Measured at $\Delta p = 10 \text{ bar}$, $v = 35 \text{ mm}^2/\text{s}$

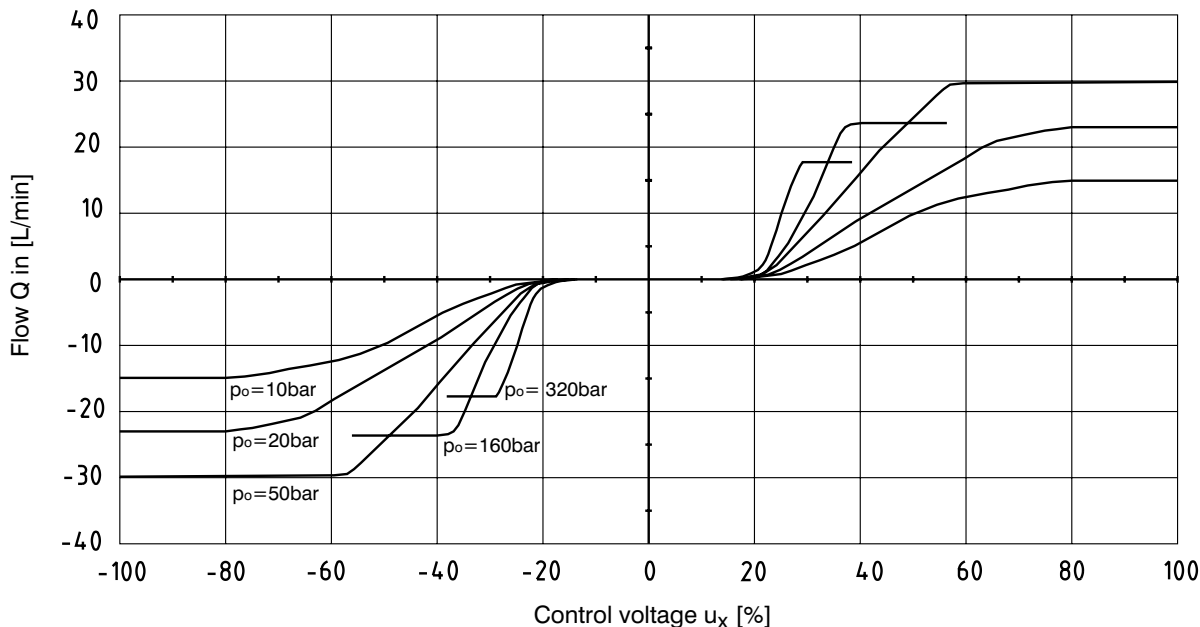
Only for valve without position feedback



Flow Characteristics

Measured at $v = 35 \text{ mm}^2/\text{s}$, p_o - input pressure

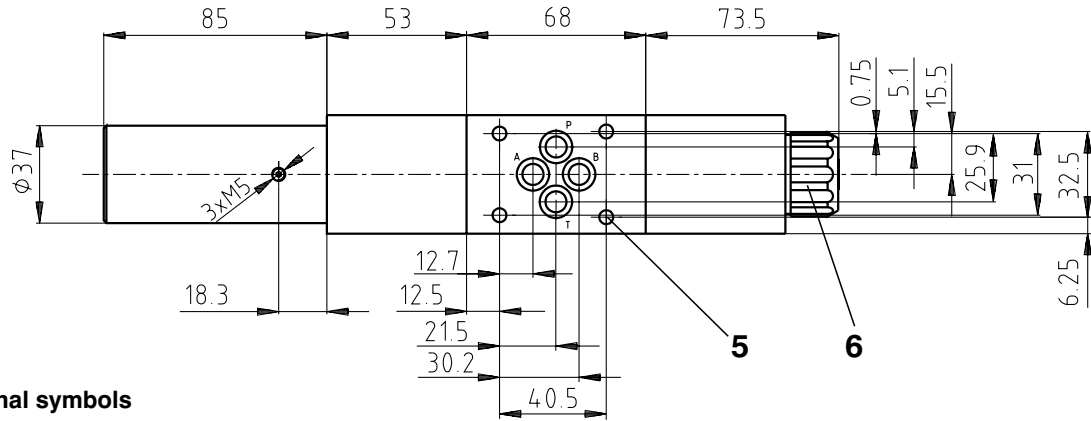
Only for valve with position feedback (S01, S02)



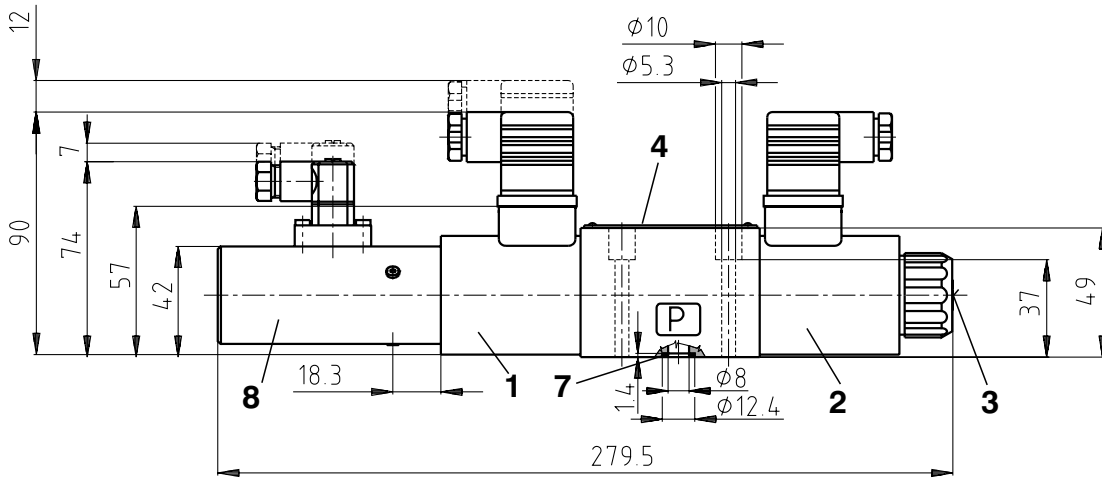
Valve Dimensions

Dimensions in millimetres

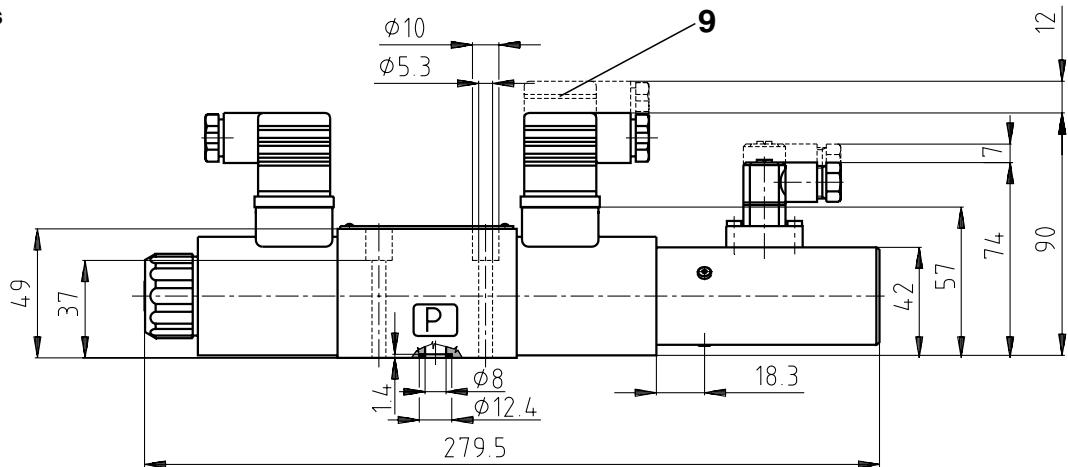
PRM5-063..../-..S01
PRM5-063..../-..S02



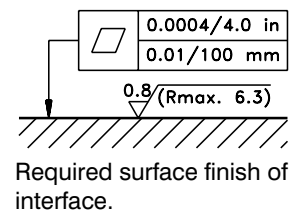
Functional symbols
 3Z11, 3Y11



Functional symbols
 3Z11B, 3Y11B



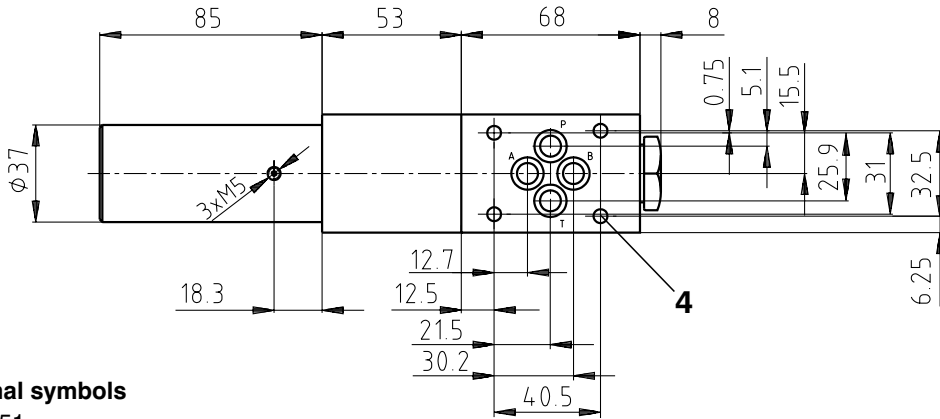
- 1 Solenoid a
- 2 Solenoid b
- 3 Manual override
- 4 Name plate
- 5 4 mounting holes
- 6 Solenoid fixing nut
- 7 Square ring 9.25 x 1.68 (4 pcs.), supplied in delivery packet
- 8 Position sensor
- 9 Space required to remove connector



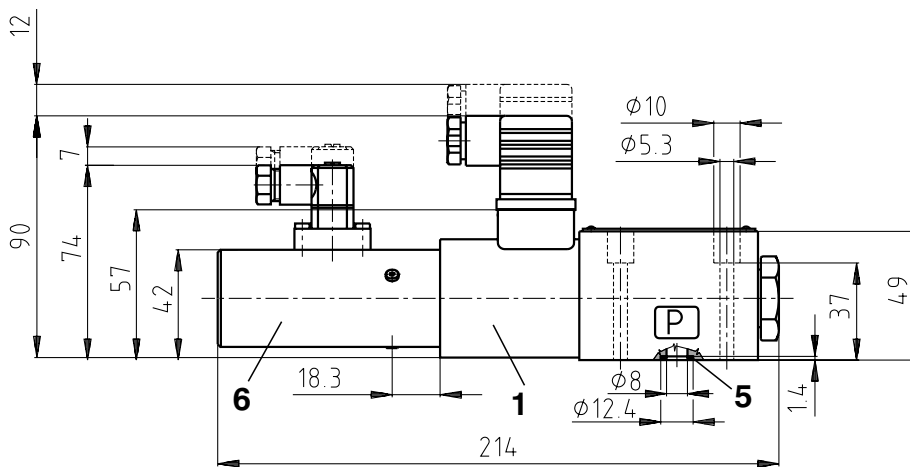
Valve Dimensions

Dimensions in millimetres

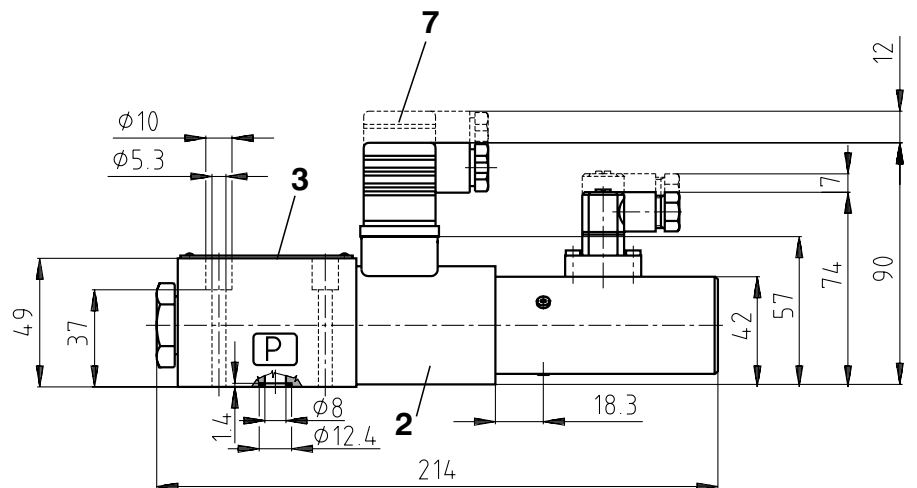
PRM5-062..../-...S01
PRM5-062..../-...S02



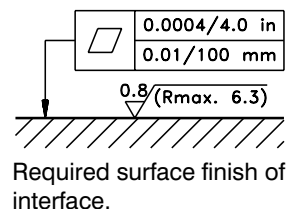
Functional symbols
2Z51, 2Y51



Functional symbols
2Z11, 2Y11



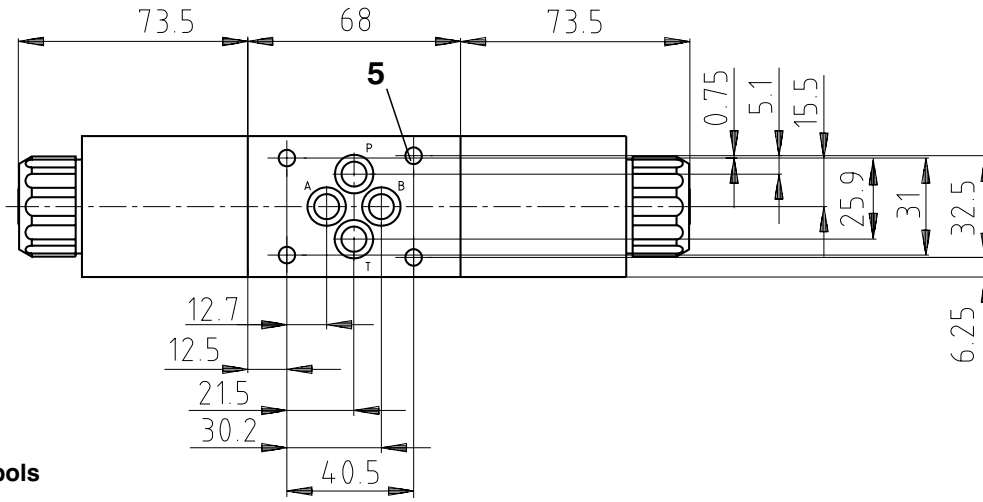
- 1 Solenoid a
- 2 Solenoid b
- 3 Name plate
- 4 4 mounting holes
- 5 Square ring 9.25 x 1.68 (4 pcs.), supplied in delivery packet
- 6 Position sensor
- 7 Space required to remove connector



Valve Dimensions

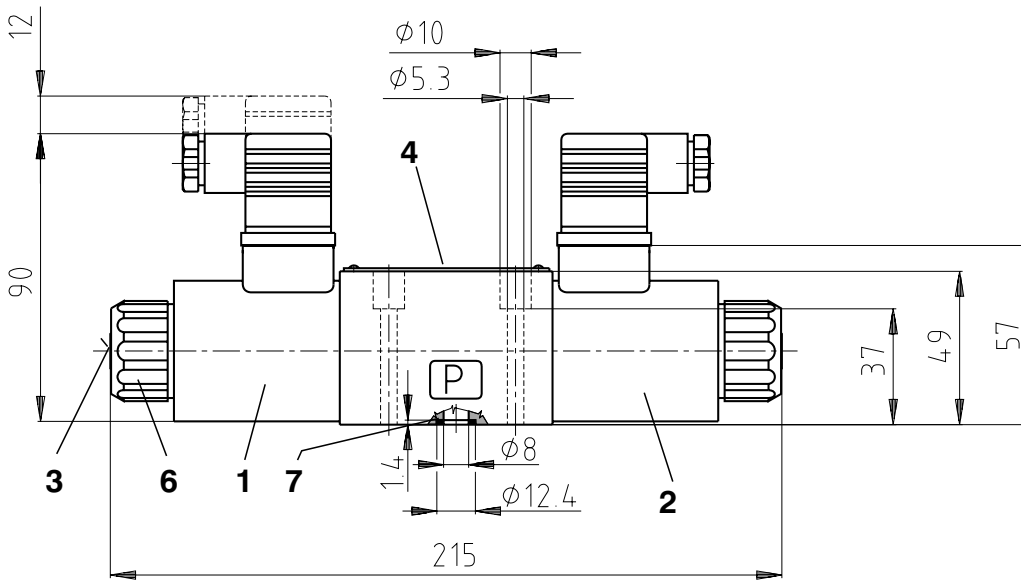
Dimensions in millimetres

PRM5-063..../-....

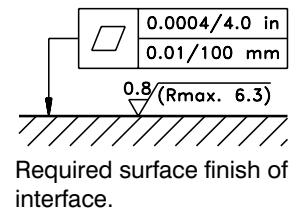


Functional symbols

3Z11, 3Y11



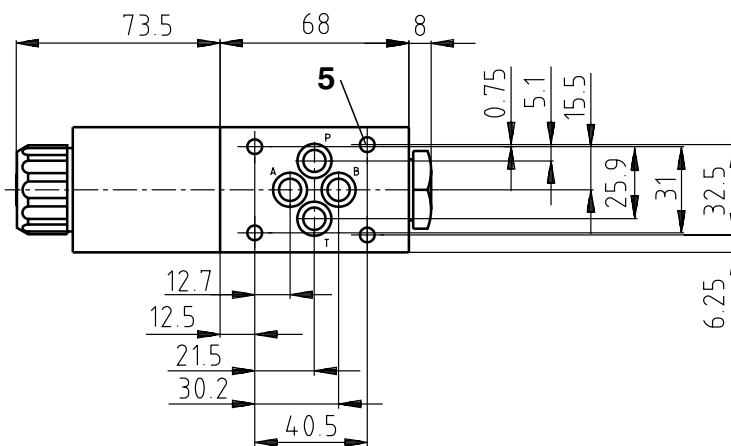
- 1 Solenoid a
- 2 Solenoid b
- 3 Manual override
- 4 Name plate
- 5 4 mounting holes
- 6 Solenoid fixing nut
- 7 Square ring 9.25 x 1.68 (4 pcs.), supplied in delivery packet



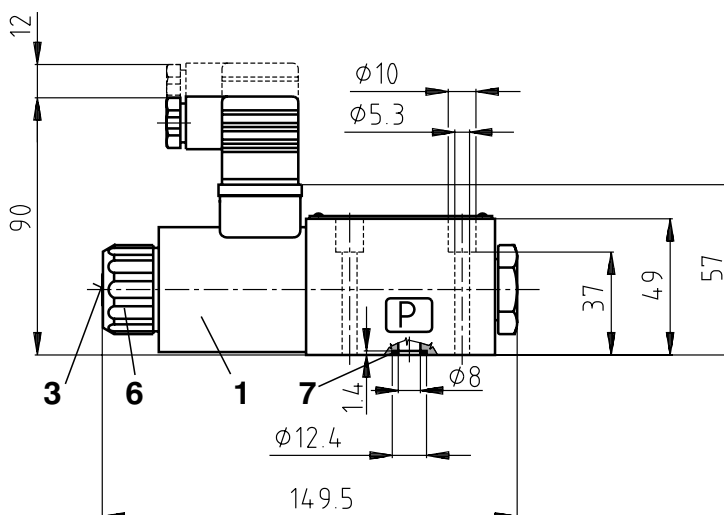
Valve Dimensions

Dimensions in millimetres

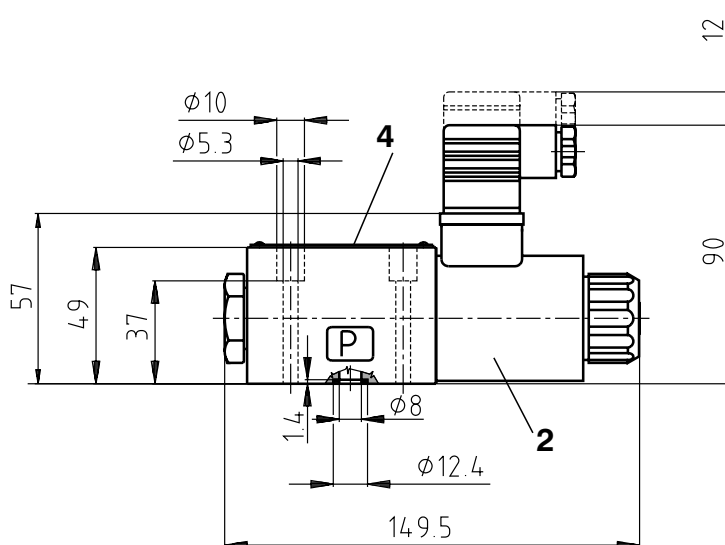
PRM5-062..../-.....



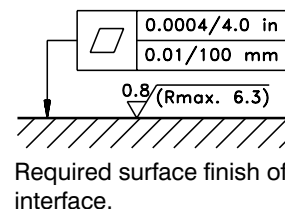
Functional symbols
2Z51, 2Y51



Functional symbols
2Z11, 2Y11

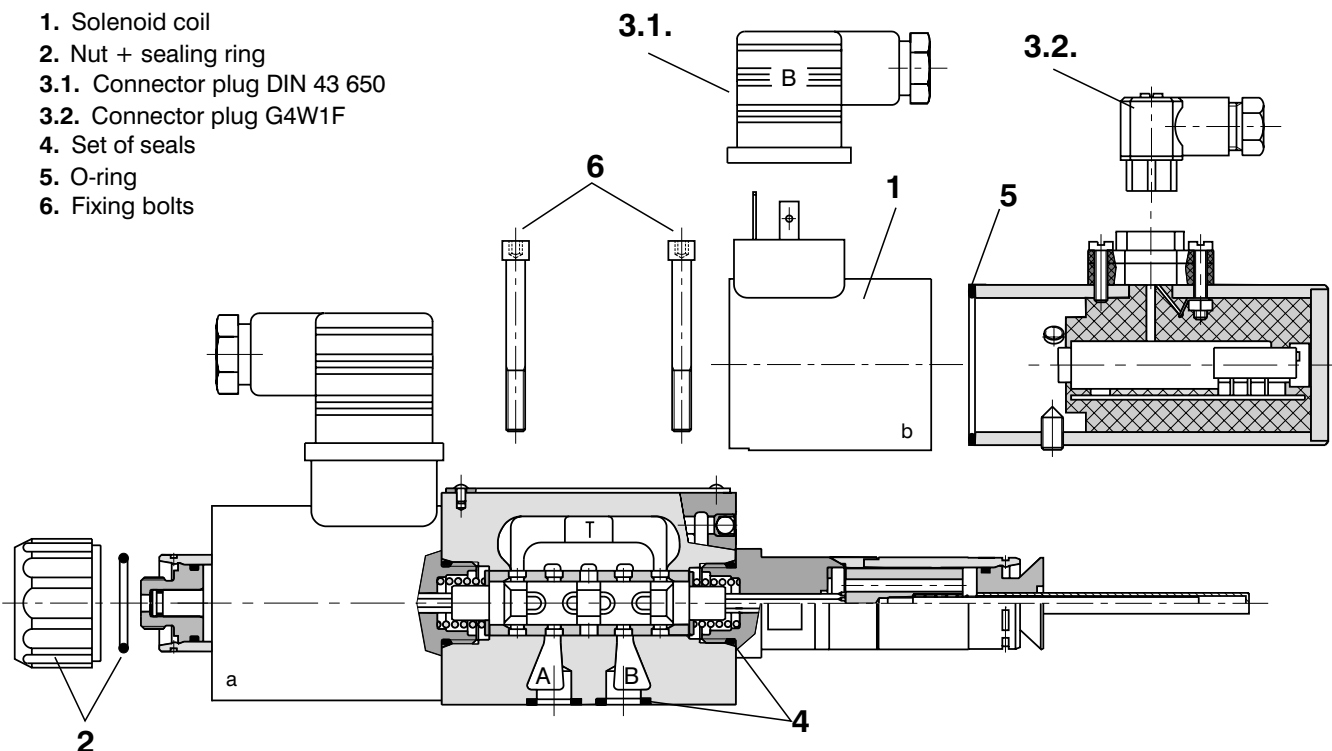


- 1 Solenoid a
- 2 Solenoid b
- 3 Manual override
- 4 Name plate
- 5 4 mounting holes
- 6 Solenoid fixing nut
- 7 Square ring 9.25 x 1.68 (4 pcs.), supplied in delivery packet



Spare Parts

1. Solenoid coil
2. Nut + sealing ring
- 3.1. Connector plug DIN 43 650
- 3.2. Connector plug G4W1F
4. Set of seals
5. O-ring
6. Fixing bolts



1. Solenoid coil

Type designation of the solenoid coil	Ordering number
01200	936-0061 (2.4 A)
02400	936-0067

2. Solenoid fixing nut + sealing ring

Model of the nut	Sealing ring	Ordering number
Standard nut	22 x 2	484-9951

3.1. Connector plug to DIN 43 650

Type designation	Type	Maximum input voltage	Connector plug A gray	Connector plug B black
			Ordering number	
K5	without rectifier - M16x1.5 (bushing bore \varnothing 4-6 mm)	230 V DC	936-9906	936-9905

3.2. Connector plug G4W1F

Ordering number	358358932157
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4. Set of seals

Type	Dimensions, number		Ordering number
Standard - NBR 70	9.25 x 1.68 x 1.68 (4 pcs.)	17 x 1.8 (2 pcs.)	484-9961
Viton	9.25 x 1.78 (4 pcs.)	17.17 x 1.78 (2 pcs.)	484-9971

5. O-ring

Standard - NBR70	32 x 2 (1 pc.)	273111014140
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6. Fixing bolts - set

Dimensions, number	Tightening torque	Ordering number
M5 x 45 DIN 912-10.9 (4 pcs.)	8.9 Nm	484-9958

Caution!

- The packing foil is recyclable.
- The protective plate can be returned to manufacturer.
- Mounting bolts M5 x 45 DIN 912-10.9 or studs must be ordered separately. Tightening torque of the bolts is 8.9 Nm.
- The technical information regarding the product presented in this catalogue is for descriptive purposes only. It should not be construed in any case as a guaranteed representation of the product properties in the sense of law.

ARGO-HYTOS a. s. CZ - 543 15 Vrchlábí
 Tel.: +420-499-403111, Fax: +420-499-403421
 E-mail: sales.cz@argo-hytos.com
 www.argo-hytos.com