

4/3, 4/2 and 3/2 directional valve with wet-pin AC or DC solenoid

Type WE 6...L7X

Size (NG) 6 Up to 315 bar Up to 60 L/min



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Features

- Direct operated directional solenoid valve, standard version
- Porting pattern according to DIN 24 340 form A, ISO 4401 and CETOP-RP 121 H
- Wet pin DC solenoids with detachable coil
- Pressure-tight chamber needs not to be opened for a coil change

Function and configurations

Directional valves of type WE are solenoid operated directional spool valves. They control the start, stop and direction of a flow.

The directional control valves consist of housing (1), one or two solenoids (2), the control spool (3), and one or two return springs (4).

In the de-energized condition the control spool (3) is held in the neutral or initial position by means of return springs (4) (except for impulse spools). The control spool (3) is actuated via wet pin solenoids (2).

To ensure proper operation, care must be taken that the pressure chamber of the solenoid is filled with oil.

The control spool(3) is moved to the expected position by solenoid(2) and pushing rod(5). This

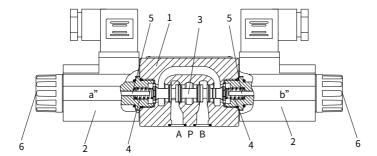
gives free-flow from P to A and B to T or P to B and

When solenoid (2) is de-energized, the control spool (3) is returned to its initial position by means of the return springs (4).

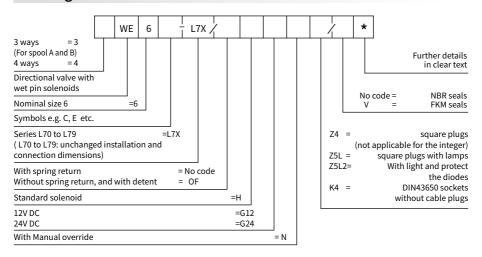
The solenoids may also control the control spool (3) by an optional override button(6) under the de-energized condition.

Type 4WE 6.. L7X/OF... (impulse spool, possible only for symbol D)

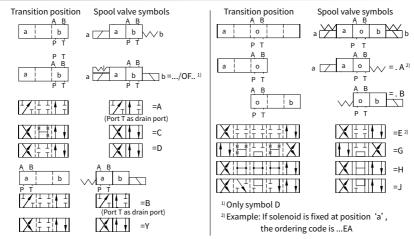
This version has 2 switched positions, 2 solenoids and a detent. Both switched positions are thus fixed alternately and so it is unnecessary to continually energize the solenoid.



Ordering code



Symbols



Technical data

Fixing position			Optional	
Environment temperature range °C		°C	-30 to +50 (NBR seal)	
		C	-20 to +50 (FKM seal)	
Weight	Single solenoid	kg	1.25	
	Double solenoids	kg	1.6	
	Port A, B, P	bar	315	
Max.operating pressure	Port T	bar	160, when the operating pressure exceed the permission value, port T must be used as drain port for spool symbol A and B	
Max. flow-rate L/min		L/min	60	
Fluid			Mineral oil suitable for NBR and FKM seal	
			Phosphate ester for FKM seal	
Fluid temperature range °C		°C	-30 to +80 (NBR seal)	
		C	-20 to +80 (FKM seal)	
Viscosity range mm ² /s		mm²/s	2.8 to 500	
Degree of contamination			Maximum permissible degree of fluid contamination: Class 9. NAS 1638 or 20/18/15, ISO4406	

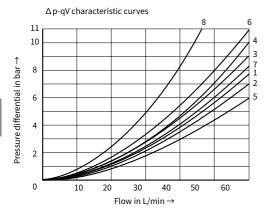
Electric data

Type of voltage		DC	
Available voltages V		12,24	
Voltage tolerance (nominal voltage) %		+10~ -10	
Input power W		26	
Duty		Continuous working	
Switched time to ISO 6403	ON	ms	25 to 45
	OFF	ms	10 to 25
Maximum switching frequency		times/h	to 15000
Type of protection to DIN 40050		IP65	
Max. coils temperature °C		+150	

Caution: When connecting wires, properly connect the PE conductor (PE_{\pm}).

Characteristic curves

(Measured at ϑ_{oil} =40°C \pm 5°C, using HLP46)



Cumbal	Direction of flow			
Symbol	P to A	P to B	A to T	B to T
A, B	3	3	-	-
С	1	1	3	1
D,Y	4	4	3	3
E	3	3	1	1
J	1	1	2	1
G	6	6	7	7
Н	2	5	2	2

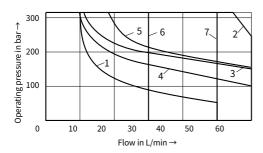
7 Symbol "H" in central position $P \rightarrow T$ 8 Symbol "G" in central position $P \rightarrow T$

Performance limits (Measured at ϑ_{oil} =40°C \pm 5°C, using HLP46)

The specified switching performance limits are valid with two directions of flow (e.g. from P to A and simultaneous return flow from B to T).

Due to the fl ow forces acting within the valve, the permissible switching performance limit can be significantly lower with only one direction of flow (e.g. from P to A, with port B being closed)!

The switching performance limit was determined with the solenoid at operating temperature, at 10 % under-voltage and without tank pre-loading.



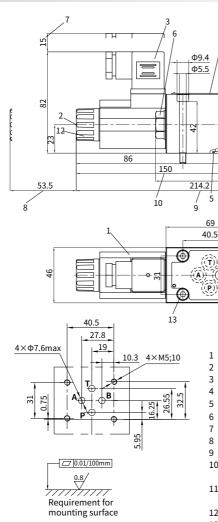
DC solenoid		
Characteristic curve	Symbol	
1	A,B	
2	C,Y	
3	E	
4	J	
5	D	
6	G,H	
7	D/OF	

53.5

8

Unit dimensions

(Dimensions in mm)



It must be ordered separately, if connection plate is needed.

Type: G341/01(G1/4), G341/02 (M14×1.5) G342/01(G3/8), G342/02(M18×1.5) G502/01(G1/2), G502/02(M22×1.5)

Solenoid

69

2 Manual override button

128

150

14.8

11

- 3 Plug-in connector to DIN 43650
- 4 Nameplate
- 5 O-ring: 9.25×1.78
- 6 Plug screw for valves with one solenoid
- 7 Space required to remove connector
- Space required to remove coil
- Dimension of 3-position valves, standard version
- 10 Dimension of 2-position valves with solenoid at 'A', standard version
- 11 Dimension of 2-position valves with solenoid at 'B', standard version
- 12 Securing nut, tightening torque M_A=4Nm
- 13 Valve fixing screws. Hexagon socket head cap screw, M5×50 GB/T 70.1-10.9, Tightening torque, MA=8.9Nm

Notes: 4 hexagon socket head cap screws UNC 10-24 UNC×2"ASTM-A574 (separate order) (Friction coefficient μ_{total} =0.19 to 0.24) ; Tightening torque M_A=11Nm [8.2ft-lbs] ±15% (Friction coefficient μ_{total} =0.12 to 0.17); Tightening torque M_A=8Nm [5.9ft-lbs] ±10%

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