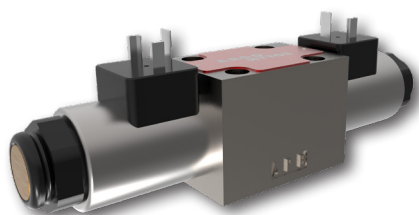


4/2 and 4/3 Directional Control Valve, Solenoid Operated, Lightline

RPEL2-06

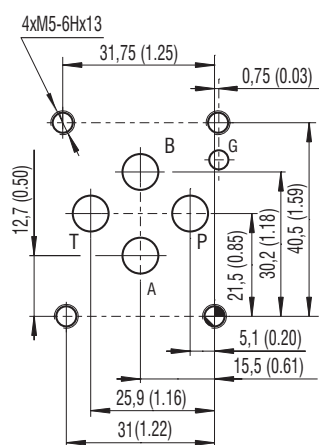
Size 06 (D03) • Q_{max} 60 l/min (16 GPM) • p_{max} 320 bar (4600 PSI)



Technical Features

- › Direct acting directional control valve with subplate mounting interface acc. to ISO 4401, DIN 24340 (CETOP 03)
- › Cost-effective Lightline design with reduced solenoid dimensions
- › Five chamber valve design for high transmitted hydraulic power
- › Decreased dependence of function on fluid viscosity
- › Wide range of solenoid electrical terminas and supply voltage types for electromagnets
- › The coil, fastened to the core tube with a retaining nut, can be rotated by 360° to suit the available space
- › Wide range of interchangeable spools
- › In the standard version, the valve housing is phosphated for basic surface corrosion protection and as preparation for painting. Steel parts are zinc-coated for 240 h salt spray protection acc. to ISO 9227
- › Enhanced surface protection for mobile sector available for the valve housing and steel parts (ISO 9227, 520 h salt spray)

ISO 4401-03-02-0-05



Ports P, A, B, T - max $\varnothing 7.5$ mm (0.29 in)

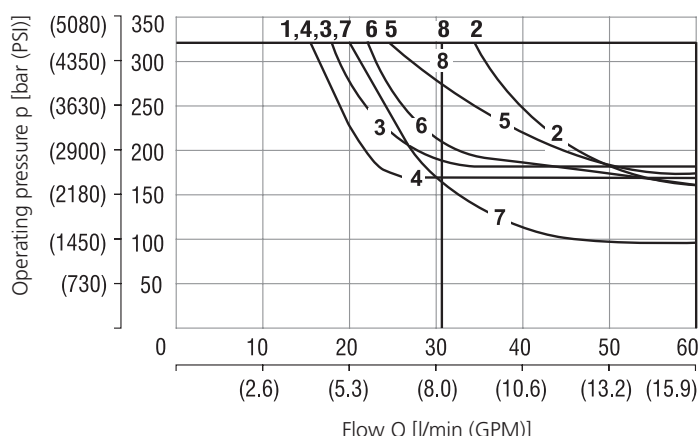
Technical Data

Valve size	06 (D03)	
Max. flow	l/min (GPM)	60 (15.8)
Max. operating pressure at ports P, A, B	bar (PSI)	320 (4640)
Max. operating pressure at port T	bar (PSI)	210 (3045)
Fluid temperature range (NBR)	°C (°F)	-30 ... +80 (-22 ... +176)
Fluid temperature range (FPM)	°C (°F)	-20 ... +80 (-4 ... +176)
Ambient temperature range	°C (°F)	-30 ... +50 (-22 ... +122)
Supply voltage tolerance	%	DC, AC ± 10
Max. switching frequency	1/h	10 000
Switching time at $v=32$ mm ² /s (156 SUS)	ON	ms
	OFF	ms
Enclosure type acc. to EN 60529	IP65 / IP67 (see Dimensions, page 3)	
Weight	- valve with 1 solenoid	kg (lbs)
	- valve with 2 solenoids	1.3 (2.9) 1.6 (3.5)
	Datasheet	Type
General information	HA 0060	Products and operating conditions
Coil types / connectors	HA 8007 / HA 8008	C 19B*/K*
Mounting interface	HA 0019	Size 06
Spare parts	HA 8010	
Subplates	HA 0002	DP*-06

Characteristics measured at $v = 32$ mm²/s (156 SUS)

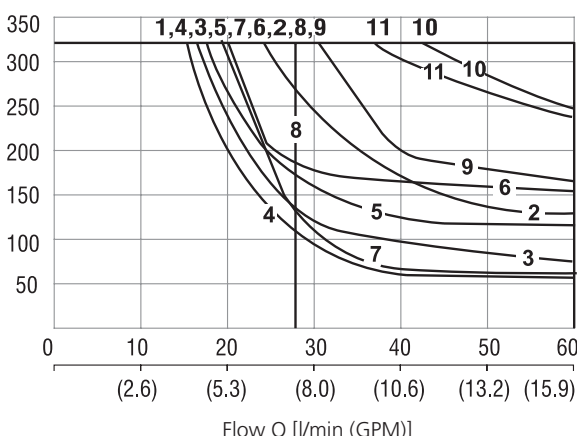
Operating limits - Power limit characteristics valid for 80% of nominal current.

DC



Spool symbol - DC				
1	Z11, Z21, Z51, R11, X11, R30, R31, R32, X32, Z71, Z81, Y91	5	R21, X21	
		6	Z91	
2	Y11, Y51	7	A51	
3	C11, C51	8	Y41, Y82	
4	H11, H51			

AC

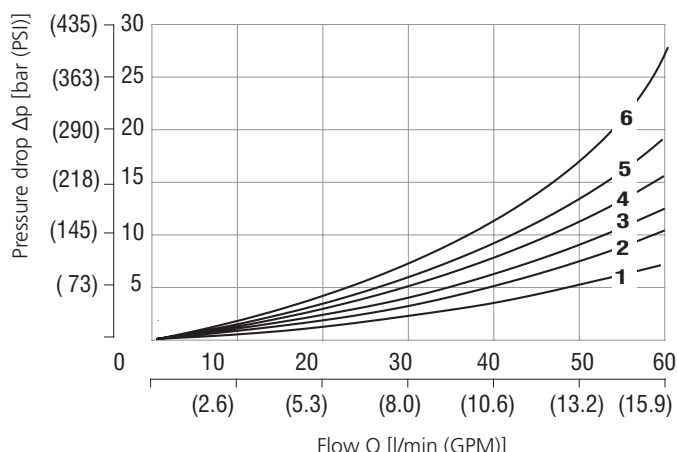


Spool symbol - AC				
1	Z11, Z21, Z51, R11, R30, X11, Z71, Z81	5	R21, X21	10 R31
		6	Z91	11 Y91
2	Y11, Y51	7	A51	
3	C11, C51	8	Y41, Y82	
4	H11, H51	9	R32, X32	

For operating limits under conditions and flow directions other than shown contact our technical support.

Characteristics measured at $v = 32 \text{ mm}^2/\text{s}$ (156 SUS)

Pressure drop related to flow rate



Spool symbol	P-A	P-B	A-T	B-T	P-T
Z11,Z21,R11,X21, X11,R32,X32	2	2	3	3	
C11	5	5	5	6	3
H11	2	2	2	3	3
A51	2	2			
Y11,Y51	2	2	2	2	
Y41,	3	3	3	3	
Z51,H51		2	3		
R30	5	4	4	5	
C51	2			3	4
Z71	3	3			
Z81			3	3	
Z91	3			3	3
R31	2			3	
Y91		3	3		

Ordering Code

RPEL2-06 / -

4/2 and 4/3 directional control valve, solenoid operated, Lightline

Valve size

Number of valve positions
two positions
three positions

Spool symbols
see the table "Spool Symbols"

Rated supply voltage of solenoids (at the coil terminal)

12 V DC / 2.45 A	01200
14 V DC / 1.70 A	01400
24 V DC / 1.15 A	02400
27 V DC / 0.89 A	02700
48 V DC / 0.55 A	04800
230 V AC / 0.12 A / 50 (60) Hz	23050

No designation

Surface treatment
standard
A zinc-coated (ZnCr-3), ISO 9227 (240 h)
B zinc-coated (ZnNi), ISO 9227 (520 h)

No designation

Seals
NBR
V FPM (Viton)

No designation

Manual override
standard
M2 rubber boot protected

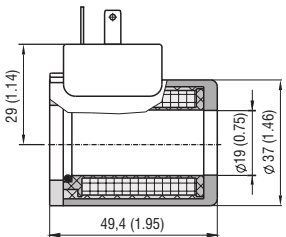
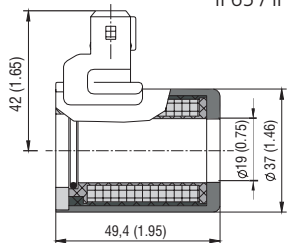
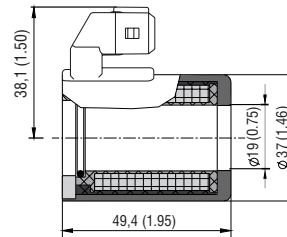
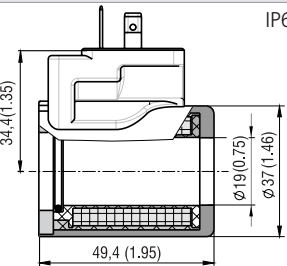
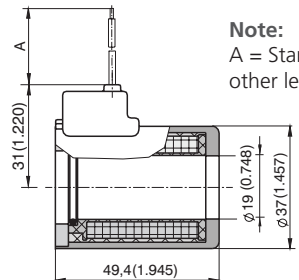
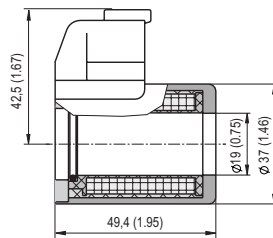
Connector
EN 175301-803-A
E1 with quenching diode
E2 with quenching diode
E3 AMP Junior Timer - radial direction
E4 with quenching diode
E3A AMP Junior Timer - axial direction (2 pins; male)
E4A with quenching diode
E5 EN 175301-803-A with integrated rectifier
E8 loose conductors (two insulated wires)
E9 with quenching diode
E12A Deutsch DT04-2P - axial direction (2 pins; male)
E13A with quenching diode

- For directional valves with two solenoids, one solenoid must be de-energized before the other solenoid can be charged.
- For AC voltage supply use coils with connector type E5.
- For other solenoid voltage supply options see datasheet HD 8007.
- The solenoid operated valves are delivered without connectors. For available connectors see datasheet HD 8008.
- The orifice to the P port can be ordered separately, see datasheet HD 8010.
- Mounting bolts M5 x 45 DIN 912-10.9 or studs must be ordered separately. Tightening torque is 8.9+1 Nm (6.56+0.7 lbf.ft).
- Besides the commonly used valve versions shown other special models are available. Contact our technical support for their identification, feasibility and operating limits.

Spool Symbols

Type	Symbol	Interposition	Type	Symbol	Interposition	Type	Symbol	Interposition
3Z11			2R11			2Y91		
3C11			2R21			2Z11		
3H11			2R32			2C11		
3Y11			2A51			2H11		
3Y41			2C51			2Y11		
3Z21			2H51			2Y41		
2Y51			2Z81			2X11		
2Z51			2Z91			2X21		
2Z71			2R31			2X32		
2R30			2Y82					

Solenoid Coil in millimeters (inches)

E1 - EN 175301-803-A E2 - E1 with quenching diode	E3 - AMP Junior Timer - radial direction E4 - E3 with quenching diode	E3A - AMP Junior Timer - axil direction E4A - E3A with quenching diode	E5 - Connector EN 175301-803-A + integrated rectifier
IP65 	IP65 / IP67 	IP65 / IP67 	IP65 
E8 - Loose conductors (two insulated wires) E9 - (E8 with quenching diode)	E12A - Deutsch DT04-2P - axil direction E13A - E12A with quenching diode		
Note: A = Standard 300 mm (11.8 inch), other lengths on demand 	IP67 / IP69 		

The specified IP rating applies only in the case of correctly connected connectors (male + female) with the corresponding IP rating.

Manual Override in millimeters (inches)

No designation - standard	Designation M2 - rubber boot protected
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In case of solenoid malfunction or power failure, the spool of the valve can be shifted by manual override as long as the pressure in port T does not exceed 25 bar (363 PSI).
For alternative manual overrides contact our technical support.

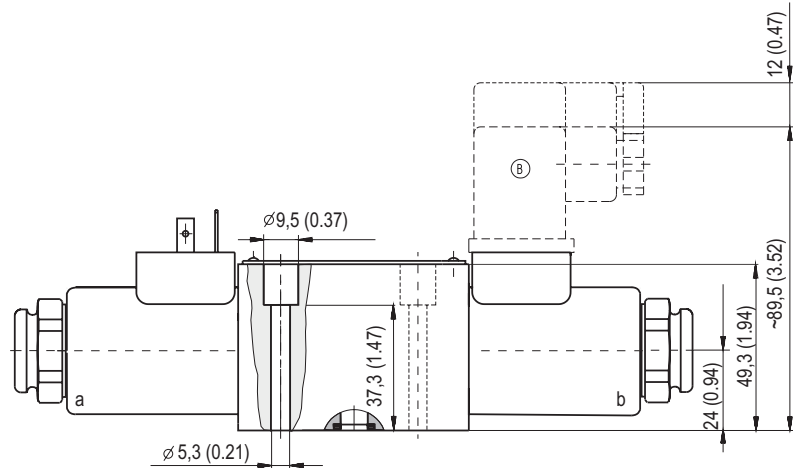
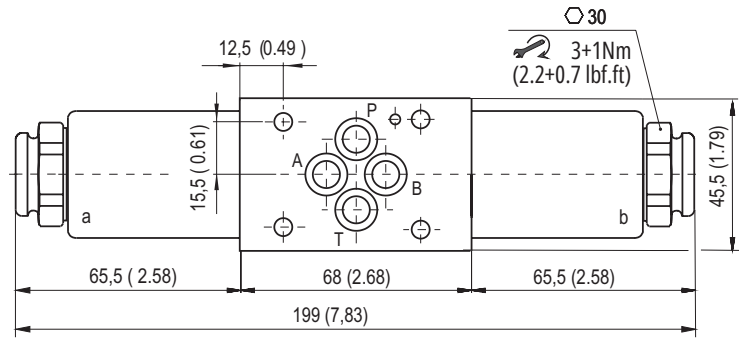
Valve Dimension in millimeters (inches)

RPEL2-063x/xE1*

Valve with two solenoids

Spool symbols

Z11, C11, H11, Y11, Y41

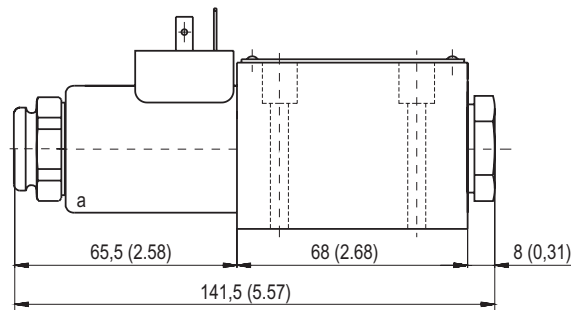


RPEL2-062x/xE1*

Valve with one solenoid „a“

Spool symbols

Y51, Z51, Z71, R11, R21, R32, A51, C51, H51, Z81, Z91, Y82

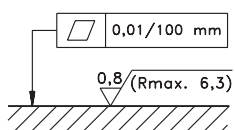
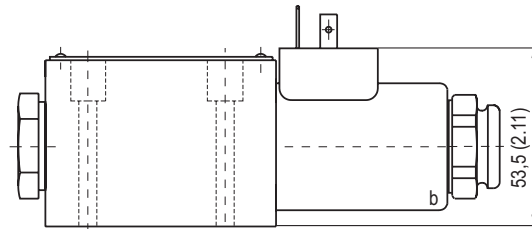


RPEL2-062x/xE1*

Valve with one solenoid „b“

Spool symbols

Z11, C11, H11, Y11, Y41, X11, R21



Required surface quality of the counterpart

Mounting screws 8.9+1 Nm (6.56+0.7 lbf.ft)
M5x45 DIN 912-10.9