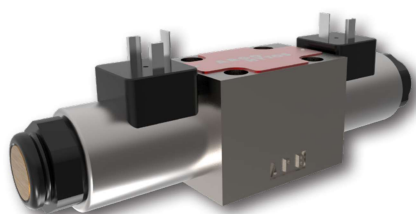


4/2 and 4/3 Directional Control Valve, Solenoid Operated, Lightline

**RPEL2-06**

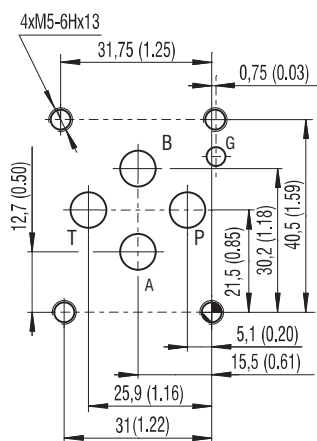
Size 06 (D03) •  $Q_{max}$  60 l/min (16 GPM) •  $p_{max}$  320 bar (4600 PSI)



**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)

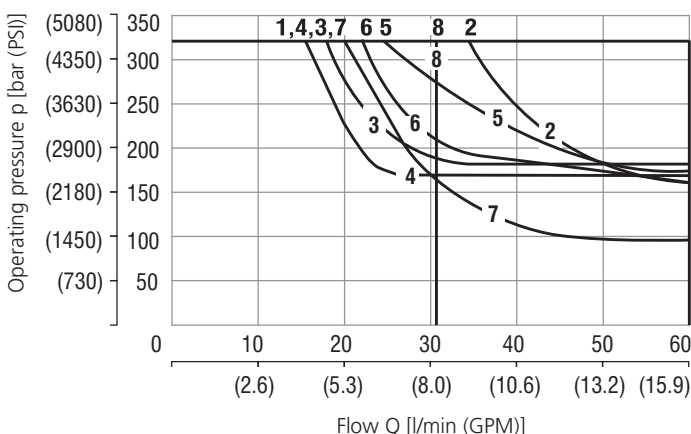
**Technical Data**

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 $\pm$ 10	
Max. switching frequency	1/h	10 000	
Switching time at $v=32$ mm <sup>2</sup> /s (156 SUS)	ON	ms	DC: 30 ... 50
	OFF	ms	DC: 30 ... 50
Weight	- valve with 1 solenoid	kg (lbs)	1.3 (2.9)
	- valve with 2 solenoids	kg (lbs)	1.6 (3.5)
		Datasheet	Type
General information		GI_0060	Products and operating conditions
Coil types / connectors		C_8007 / K_8008	C19B*/K*
Mounting interface		SMT_0019	Size 06
Spare parts		SP_8010	
Subplates		DP_0002	DP*-06

**Characteristics** measured at  $v = 32$  mm<sup>2</sup>/s (156 SUS)

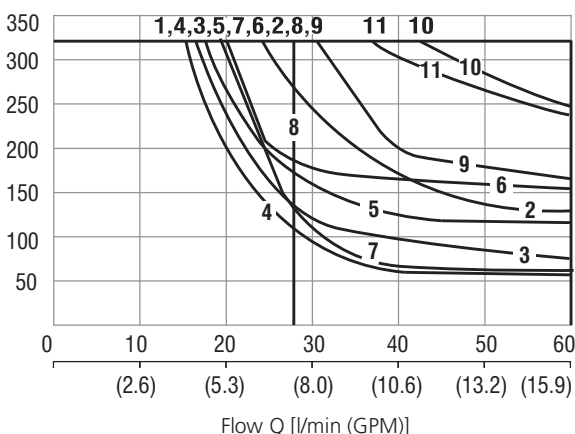
**Operating limits** - Power limit characteristics valid for 80% of nominal current.

**DC**



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

**AC**

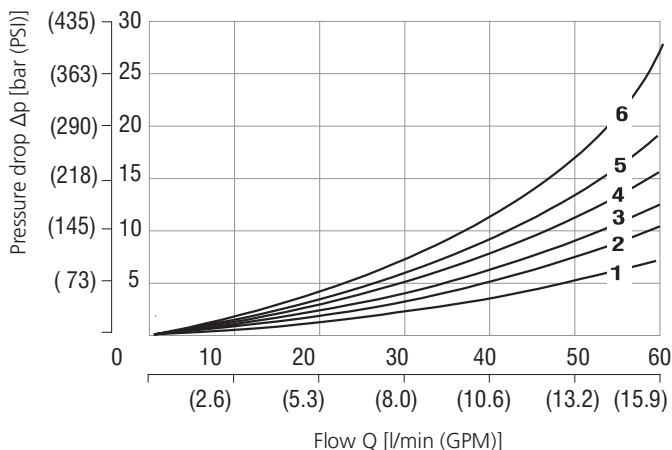


1	Z11, Z51, R11, R30, X11, Z71, Z81	5	R21, X21	10	R31
2	Y11, Y51	6	Z91	11	Y91
3	C11, C51	7	A51		
4	H11, H51	8	Y41, Y82		
		9	R32, X32		

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,R21, 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 2  
three positions 3

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  
V

Seals

NBR  
FPM (Viton)

No designation  
M2

Manual override

standard  
rubber boot protected

Connector

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 - axial direction (2 pins; male)  
E4A E3A with quenching diode  
E5 EN 175301-803-A with integrated rectifier  
E8 loose conductors (two insulated wires)  
E9 E8 with quenching diode  
E12A Deutsch DT04-2P - axial direction (2 pins; male)  
E13A E12A 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 data sheet C\_8007.
- The solenoid operated valves are delivered without connectors. For available connectors see data sheet K\_8008.
- The orifice to the P port can be ordered separately, see data sheet SP\_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
Z11			R11			Y82		
C11			R21			Z11		
H11			R32			C11		
Y11			A51			H11		
Y41			C51			Y11		
Y51			H51			Y41		
Z51			Z81			X11		
Z71			Z91			R21		

**Solenoid Coil in millimeters (inches)**

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

The indicated IP protection level is only achieved if the connector is properly mounted.

**Manual Override in millimeters (inches)**

<p>No designation - standard</p>	<p>Designation M2 - rubber boot protected</p>
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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.

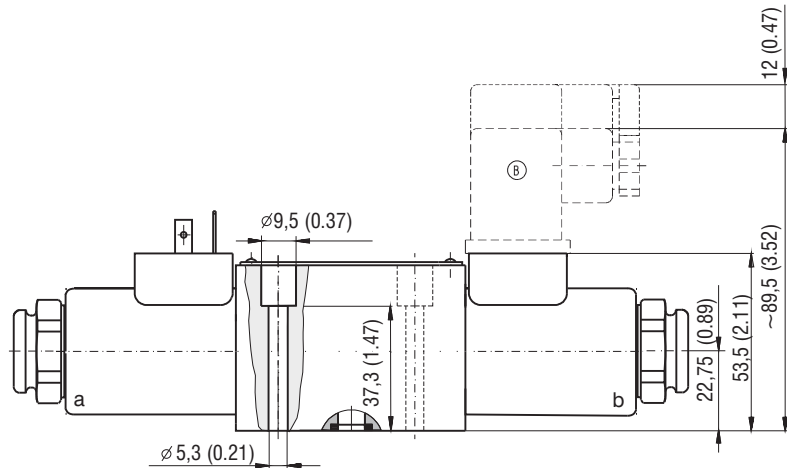
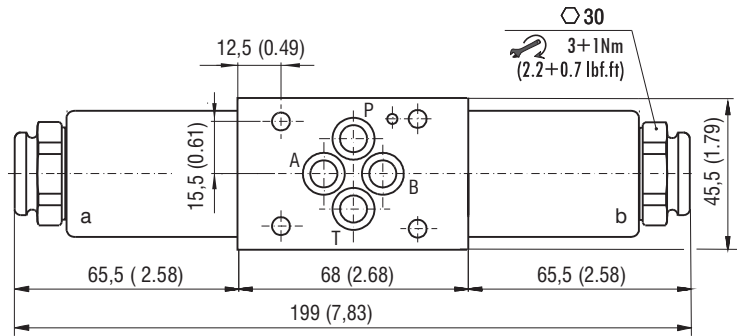
Valve Dimension in millimeters (inches)

**RPEL2-063x/xE1\***

Valve with two solenoids

Spool symbols

Z11, C11, H11, Y11, H11, Y41

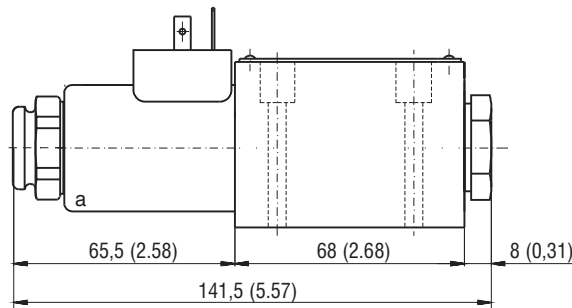


**RPEL2-062x/xE1\***

Valve with one solenoid „a”

Spool symbols

Z51, Y51, C51, H51, Y82, X11, X21, X32

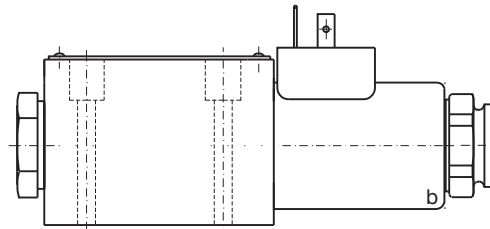



**RPEL2-062x/xE1\***

Valve with one solenoid „b”

Spool symbols

Z11, Y11, C11, H11, Y41, R11, R21, R32, A51, Z71, Z81, Z91



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