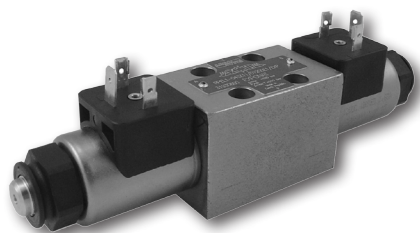


# RPEL1-04

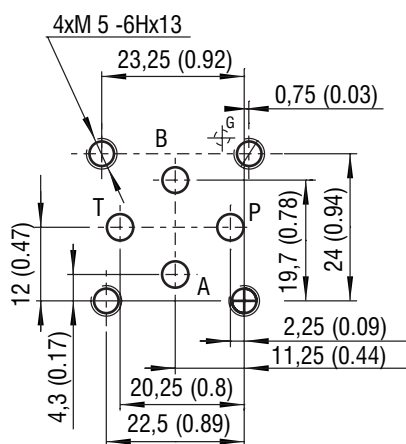
Size 04 (D02) •  $Q_{max}$  30 l/min (8 GPM) •  $p_{max}$  250 bar (3600 PSI)



## Technical Features

- > Direct acting, directional control valve with subplate mounting surface acc. to ISO 4401, DIN 24340 (CETOP 02)
- > Compact design with reduced solenoid dimensions
- > Three chamber housing design for production cost saving
- > The valve is available with DC solenoids and a wide range of electrical terminals
- > Solenoid electrical terminal options acc. to EN 175301-803-A, AMP Junior Timer and Deutsch DT04-2P
- > Wide range of interchangeable spools and manual overrides available
- > The coil is fastened to the core tube by a retaining nut, and can be rotated by 360° to suit the available space.
- > In the standard version, the valve housing is phosphated and steel parts zinc-coated for 240 h salt spray protection acc. to ISO 9227
- > Enhanced surface protection for mobile sector available (ISO 9227, 520 h salt spray)

## ISO 4401-02-01-0-05



Ports P, A, B, T - max  $\varnothing$ 4.5 mm (0.18 in)

## Technical Data

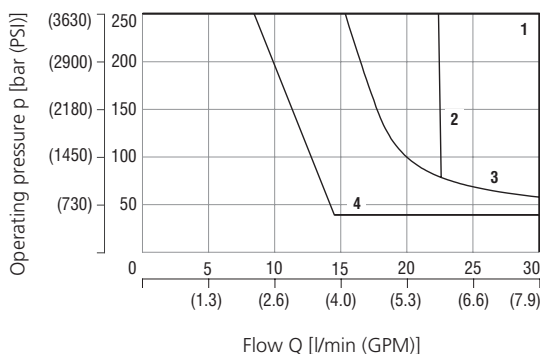
Valve size	04 (D02)		
Max. flow	l/min (GPM)	30 (8)	
Max. operating pressure at ports P, A, B	bar (PSI)	250 (3630)	
Max. operating pressure at port T	bar (PSI)	100 (1450)	
Fluid temperature range (NBR)	°C (°F)	-30 ... +80 (-22 ... +176)	
Fluid temperature range (FPM)	°C (°F)	-20 ... +80 (-4 ... +176)	
Ambient temperature range	°C (°F)	-30 ... +50 (-22 ... +122)	
Supply voltage tolerance	%	DC: $\pm$ 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
Mass	- valve with 1 solenoid	kg (lbs)	0.75 (1.65)
	- valve with 2 solenoids		0.9 (1.98)

	Datasheet	Type
General information	GI_0060	Products and operating conditions
Coil types / connectors	C_8007 / K_8008	C 14B*/K*
Mounting interface / tolerances	SMT_0019	Size 04
Spare parts	SP_8010	

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

### Operating limits

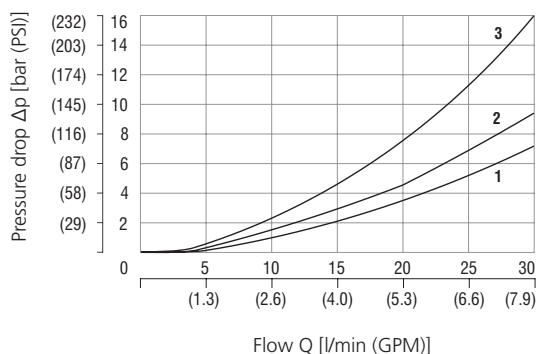
Operating limits for maximum hydraulic power at rated temperature and supply voltage equal to 90% nominal.



Spool symbol	
Z11, Z51, H11, H51	1
R11, X11	2
Y11, Y51	3
C11, C51	4

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

### Pressure drop related to flow rate



Spool symbol	P-A	P-B	A-T	B-T	P-T
Z11, Y11	1	1	1	1	
R11, X11	2	2	2	2	
Z51, H51, Y51		1	1		
C11	3	3	3	3	2
C51	3			3	2
H11	1	1	1	1	2

### Ordering Code

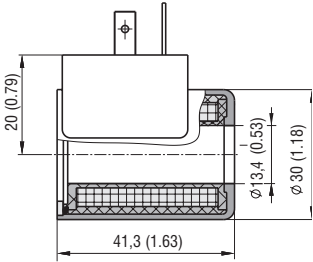
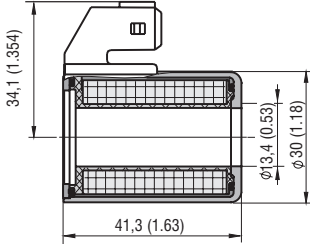
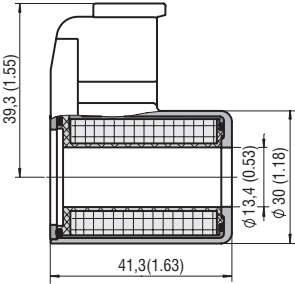
<b>RPEL1-04</b> <input type="text"/> <input type="text"/> / <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> - <input type="text"/>			
<b>4/2 and 4/3 directional control valve, solenoid operated, Lightline</b>		<b>No designation</b>	<b>Surface treatment</b> housing phosphated, steel parts zinc-coated (ZnCr-3), ISO 9227 (240 h) <b>A</b> zinc-coated (ZnCr-3), ISO 9227 (240 h) <b>B</b> zinc-coated (ZnNi), ISO 9227 (520 h)
<b>Valve size</b>		<b>No designation</b> <b>V</b>	<b>Seals</b> NBR FPM (Viton)
<b>Number of valve positions</b> two positions <b>2</b> three positions <b>3</b>		<b>No designation</b> <b>N2</b> <b>N5</b>	<b>Manual override</b> standard rubber boot protected socket head screw
<b>Spool symbols</b> see the table "Spool Symbols"			
<b>Rated supply voltage of solenoids (at the coil terminal)</b> 12 V DC / 1.83 A 24 V DC / 0.92 A	<b>01200</b> <b>02400</b>	<b>E1</b> <b>E2</b> <b>E3A</b> <b>E4A</b> <b>E12A</b> <b>E13A</b>	<b>Connector</b> EN 175301-803-A E1 with quenching diode AMP Junior Timer - axial direction (2 pins; male) E3A with quenching diode Deutsch DT04-2P - axial direction (2 pins; male) E12A with quenching diode

- For directional valves with two solenoids, one solenoid must be de-energized before the other solenoid can be charged.
- 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 35 DIN 912-10.9 or studs must be ordered separately. Tightening torque is 5 Nm (3.7 lbf.ft).
- Besides the shown, commonly used valve versions other special models are available. Contact our technical support for their identification, feasibility and operating limits.

### Spool Symbols

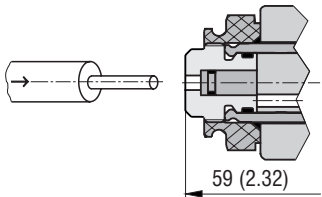
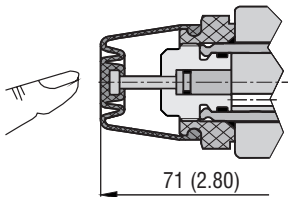
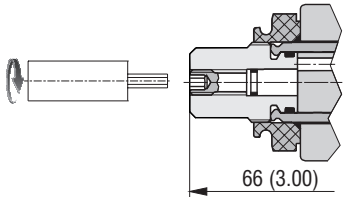
Type	Symbol	Interposition	Type	Symbol	Interposition
Z11			Z51		
C11			H51		
H11			Z11		
Y11			X11		
R11			C11		
Y51			H11		
C51			Y11		

### Solenoid Coil in millimeters (inches)

<p>E1 - connector EN 175301-803-A E2 - E1 with quenching diode Protection degree IP65</p>	<p>E3A - AMP Junior Timer (2-pins; male) E4A - E3A with quenching diode Protection degree IP67</p>	<p>E12A - connector Deutsch DT04-2P (2-pins; male) E13A - E12A with quenching diode Protection degree IP67 / IP69K</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 N2 - protected with rubber boot</p>	<p>Designation N5 - socket head screw 3</p>
		

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.

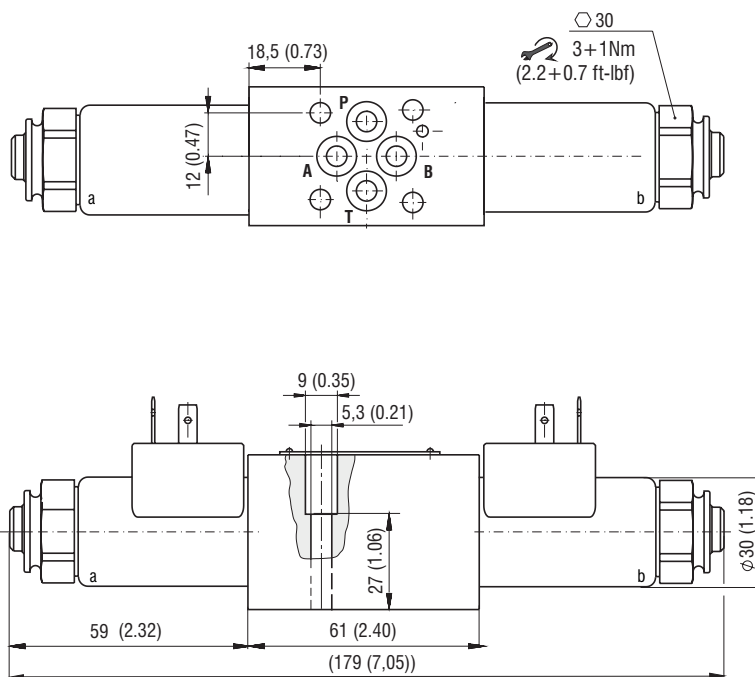
Valve Dimension in millimeters (inches)

**RPEL1-043x/xE1\***

Valve with two solenoids

Spool symbols

Z11, C11, H11, Y11

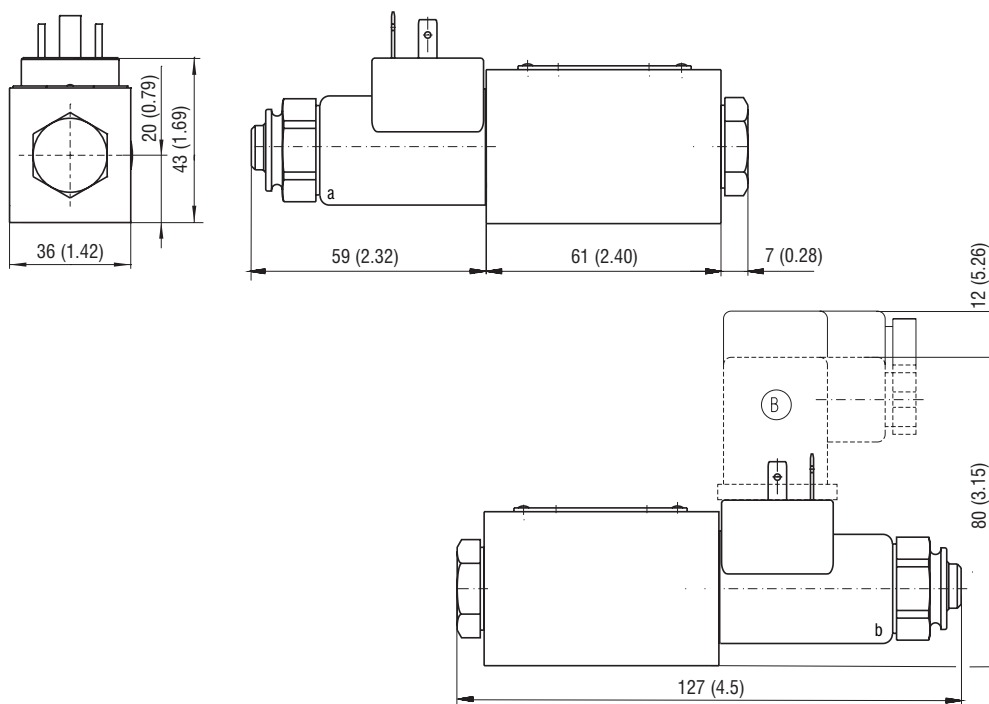


**RPEL1-042x/xE1\***

Valve with one solenoid „a“

Spool symbols

R11, Y51, C51, Z51, H51



**RPEL1-062x/xE1\***

Valve with one solenoid „b“

Spool symbols

Z11, X11, C11, H11, Y11