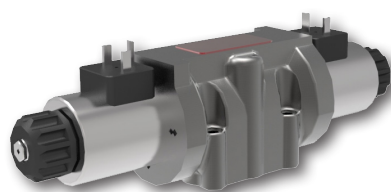


4/2 and 4/3 Directional Control Valve, Solenoid Operated, Lightline

RPEL1-10

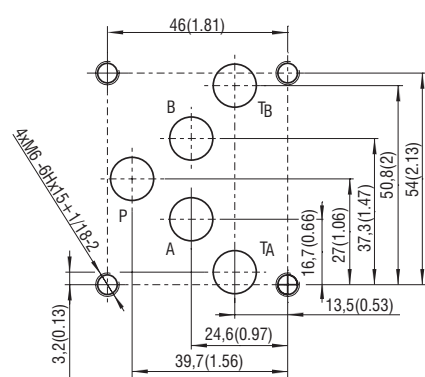
Size 10 (D05) • Q_{max} 100 l/min (26 GPM) • p_{max} 250 bar (3600 PSI)



Technical Features

- Direct acting directional control valve with subplate mounting interface acc. to ISO 4401, DIN 24340 (CETOP 05)
- Cost-effective Lightline design with reduced solenoid dimensions, suitable for applications with lower required power
- Three or five chamber design for high transmitted hydraulic power
- 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 body is phosphated. The steel parts are zinc coated (240 h corrosion protection in NSS acc. to ISO 9227)
- With optional increased surface corrosion protection of the whole valve 520 h in NSS, e.g. for mobile applications

ISO 4401-05-04-0-05



Ports P, A, B, T - max $\varnothing 11.2$ mm (0.44 in)

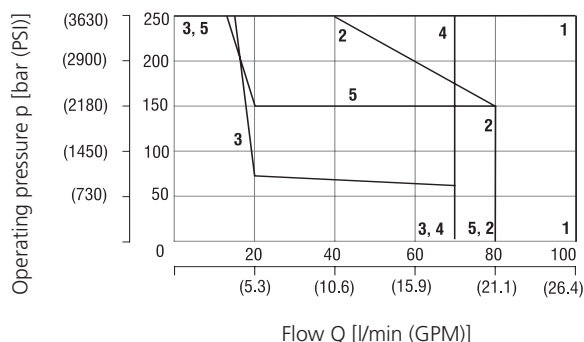
Technical Data

Valve size		10 (D05)
Max. flow	l/min (GPM)	100 (26.4)
Max. operating pressure at ports P, A, B	bar (PSI)	250 (3630)
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: ± 10
Max. switching frequency	1/h	10 000
Switching time at $v=32$ mm ² /s (156 SUS)	ON	ms
	OFF	ms
Weight	- valve with 1 solenoid	kg (lbs)
	- valve with 2 solenoids	kg (lbs)
		2.9 (6.4)
		3.4 (7.5)
		Type
General information	GI_0060	Products and operating conditions
Coil types / connectors	C_8007 / K_8008	C22B*/K*
Mounting interface	SMT_0019	Size 10
Subplates	Subplates_0002	DP1-10
Spare parts	SP_8010	

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

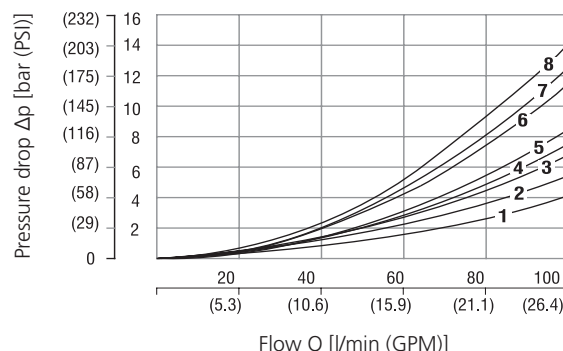
Operating limits (p-Q)

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



Spool symbol	
1	Z11, Z51
2	Y11 (3k)
1	H11
4	R11, X11 (3k)
3	C11
5	R21 (3k)

Pressure drop related to flow rate (Δp -Q)



	P-A	P-B	A-T	B-T	P-T
Z11	3	3	3	5	
Z51		3	3		
C11	6	6	7	8	6
H11	1	1	2	4	2
Y11	3	3	2	4	
R11, R21, X11	2	2	4	5	

Directional control valve Dn 10 has double T channel. If only one is directly connected to the tank, the pressure drop in the appliance channel on the closed side A/ B → T will be higher by 3 bars.

Ordering Code

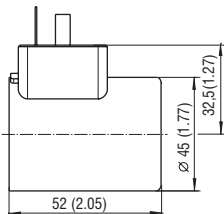
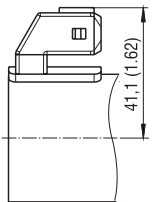
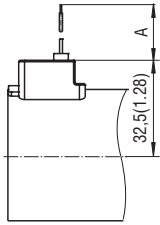
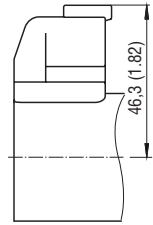
RPEL1-10			/				-	
4/2 and 4/3 directional control valve, solenoid operated, Lightline								No designation A zinc-coated (ZnCr-3), ISO 9227 (240 h) B zinc-coated (ZnNi), ISO 9227 (520 h)
Valve size								No designation V
Number of valve positions two positions three positions		2 3						Seals NBR FPM (Viton)
Spool symbols see the table "Spool Symbols"								Manual override standard (operated by pin) cap nut covered
Rated supply voltage of solenoids 12 V DC / 2,72 A 14 V DC / 2,14 A 24 V DC / 1,29 A 27 V DC / 1,07 A		01200 01400 02400 02700						Connector EN 175301-803-A E1 with quenching diode E3A AMP Junior Timer - axial direction (2 pins; male) E4A E3A with quenching diode 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 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 M6 x 40 DIN 912-10.9 or studs must be ordered separately. Tightening torque is 14+1 Nm (10.3+0.7 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

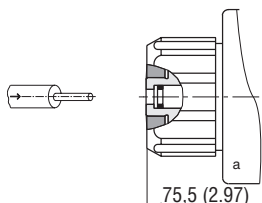
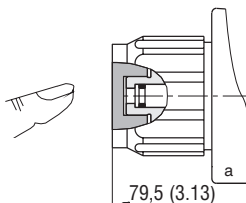
Type	Symbol	Interposition	Type	Symbol	Interposition
Z11			R11		
C11			R21		
H11			Z51		
Y11			X11		
P11					
C12					

Solenoid Coil in millimeters (inches)

E1 - EN 175301-803-A E2 - E1 with quenching diode	E3A - AMP Junior Timer - axial direction E4A - E3A with quenching diode	E8 - Loose conductors (two insulated wires) E9 - E8 with quenching diode	E12A - Deutsch DT04-2P - axial direction E13A - E12A with quenching diode
Protection degree IP65	Protection degree IP67		Protection degree IP67 / IP69K
		 Note: A = Standard 300 mm (11.81 in), other lengths on demand	

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

Manual Override in millimeters (inches)

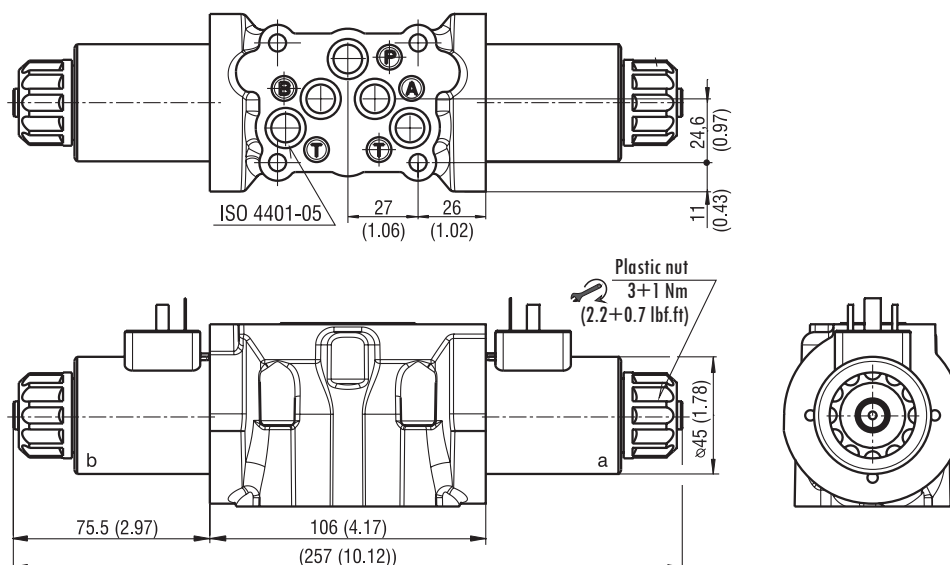
No designation - standard (operated by pin)	Designation N1 - cap nut covered
	

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)

RPEL1-103x/xE1*

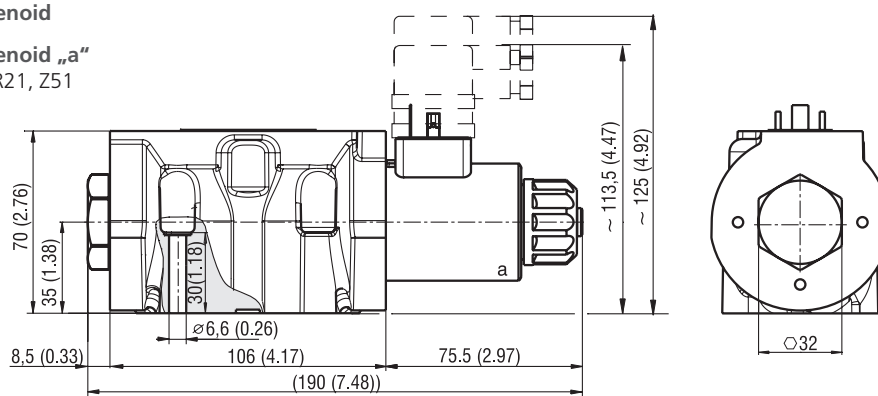
Valve with two solenoids


RPEL1-102x/xE1*

Valve with one solenoid

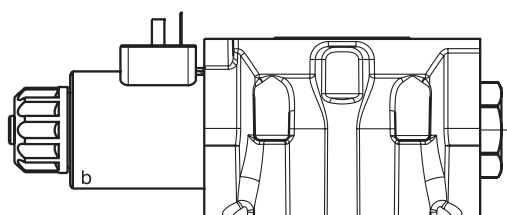
Valve with one solenoid „a“

Spool symbols R11, R21, Z51



Valve with one solenoid „b“

Spool symbols X11


 Mounting screws 14+1 Nm (10.3+0.7 lbf.ft)
 4x M6 x 40 DIN 912-10.9