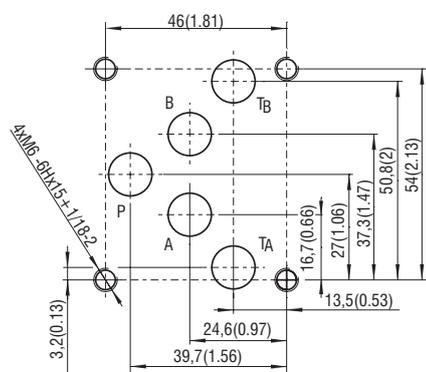




**Technical Features**

- › 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 Ø11.2 mm (0.44 in)

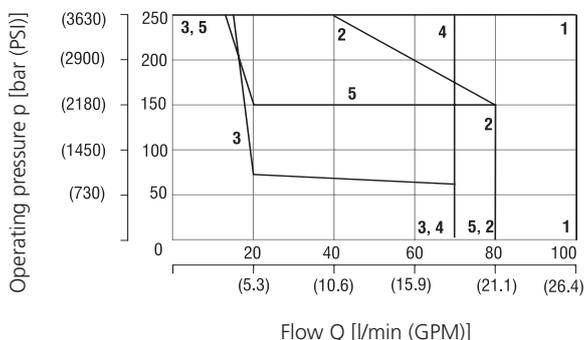
**Technical Data**

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 <sup>2</sup> /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)
	Datasheet	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 mm<sup>2</sup>/s (156 SUS)

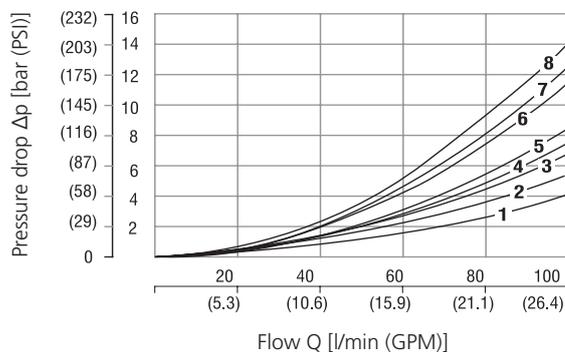
**Operating limits (p-Q)**

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**
**Valve size**
**Number of valve positions**

 two positions  
 three positions

**2**  
**3**
**Spool symbols**

see the table "Spool Symbols"

**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**
**No designation**
**A**  
**B**

 zinc-coated (ZnCr-3), ISO 9227 (240 h)  
 zinc-coated (ZnNi), ISO 9227 (520 h)

**Surface treatment**  
 standard

**No designation**
**V**
**Seals**

 NBR  
 FPM (Viton)

**No designation**
**N1**
**Manual override**  
 standard (operated by pin)  
 cap nut covered

**Connector**

<b>E1</b>	EN 175301-803-A
<b>E2</b>	E1 with quenching diode
<b>E3A</b>	AMP Junior Timer - axial direction (2 pins; male)
<b>E4A</b>	E3A with quenching diode
<b>E8</b>	loose conductors (two insulated wires)
<b>E9</b>	E8 with quenching diode
<b>E12A</b>	Deutsch DT04-2P - axial direction (2 pins; male)
<b>E13A</b>	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<sup>+1</sup> Nm (10.3<sup>+0.7</sup> 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 IP65	Protection degree IP67 / IP69K
		<p>Note: A = Standard 300 mm (11.81 in), other lengths on demand</p>	

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

### Manual Override in millimeters (inches)

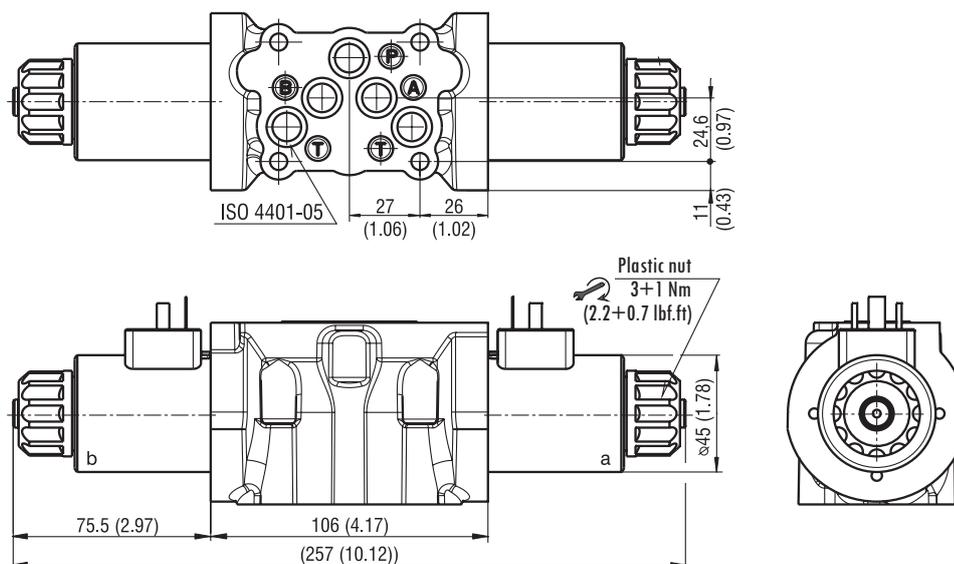
No designation - standard (operated by pin)	Designation N1 - cap nut covered

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\***

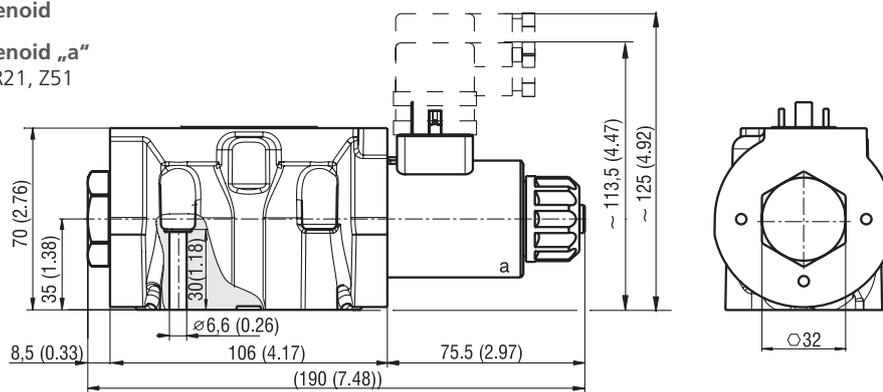
Valve with two solenoids



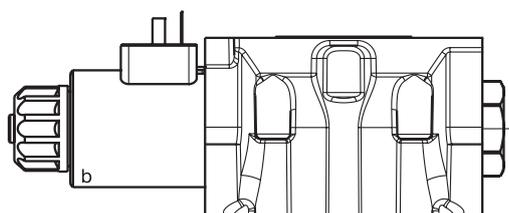
**RPEL1-102x/xE1\***

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<sup>+1</sup> Nm (10.3<sup>+0.7</sup> lbf.ft)  
4x M6 x 40 DIN 912-10.9