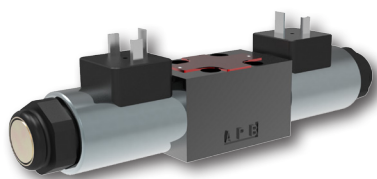


## 4/2 and 4/3 Directional Control Valve, Solenoid Operated

### RPE3-04

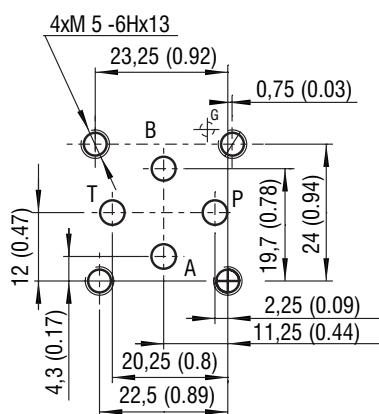
Size 04 (D02) •  $Q_{max}$  30 l/min (8 GPM) •  $p_{max}$  320 bar (4600 PSI)



#### Technical Features

- › Direct acting, directional control valve with subplate mounting interface acc. to ISO 4401, DIN 24340 (CETOP 02)
- › High transmitted hydraulic power up to 320 bar with optimized design to minimize pressure drop
- › Three chamber housing design for production cost saving
- › The valve is available with interchangeable DC solenoids, also for AC power supply using a built-in rectifier bridge
- › Wide range of solenoid electrical terminal versions available
- › CSA Certificate upon request
- › The coil is fastened to the core tube with 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)

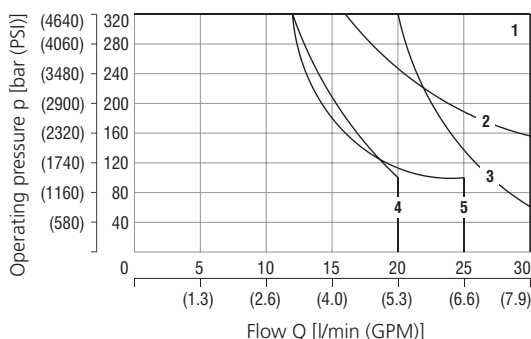
#### Technical Data

Valve size		04 (D02)	
Max. flow	l/min (GPM)	30 (8)	
Max. operating pressure at ports P, A, B	bar (PSI)	320 (4640)	
Max. operating pressure at port T	bar (PSI)	210 (3050)	
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	%	AC: $\pm$ 10 DC: $\pm$ 10	
Max. switching frequency	1/h	15 000	
Switching time at $v=32$ mm <sup>2</sup> /s (156 SUS)	ON	ms	
	OFF	ms	
Mass	- valve with 1 solenoid	kg (lbs)	
	- valve with 2 solenoids	kg (lbs)	
		Datasheet	Type
General information		GI_0060	Products and operating conditions
Coil types / connectors		C_8007 / K_8008	C19B* / K*
Mounting interface / tolerances		SMT_0019	Size 04
Spare parts		SP_8010	
Subplates		SP_0002	DP*-04

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

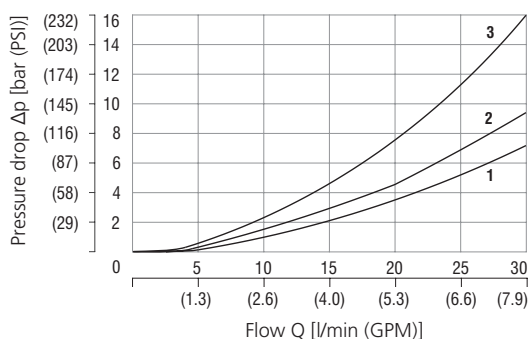
#### Operating limits

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



Spool symbol	Spool symbol
1	Z11, Z51, H11, P11, P51, Y11, Y51, B11, R11, X11, J15
2	C11, C51
3	R21
4	L21, A51, J75
5	Y71

#### Pressure drop related to flow rate



Spool symbol	P-A	P-B	A-T	B-T	P-T		P-A	P-B	A-T	B-T	P-T
Z11, P11, Y11, L21, B11	1	1	1	1		C11	3	3	3	3	2
R11, R21, X11, J15	2	2	2	2		C51	3			3	2
A51, J75	1	1				H11	1	1	1	1	2
P51, Y51, Z51		1	1			Y71	2		2	1	

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

### Ordering Code

RPE3 - 04   /     -

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

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	<b>01200</b>
24 V DC / 1.15 A	<b>02400</b>
27 V DC / 0.89 A	<b>02700</b>
205 V DC / 0.12 A	<b>20500</b>
24 V AC / 1.31 A / 50 (60) Hz	<b>02450</b>
120 V AC / 0.22 A / 50 (60) Hz	<b>12060</b>
230 V AC / 0.12 A / 50 (60) Hz	<b>23050</b>

CSA upon request

- 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 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.

No designation  
**U**

CSA Certified  
standard  
CSA marking

No designation housing phosphated, steel parts  
**A** zinc-coated (ZnCr-3), ISO 9227 (240 h)  
**B** zinc-coated (ZnNi), ISO 9227 (520 h)

Surface treatment

No designation  
**V**

Seals  
NBR  
FPM (Viton)

No designation  
**N2**  
**N4**  
**N5**

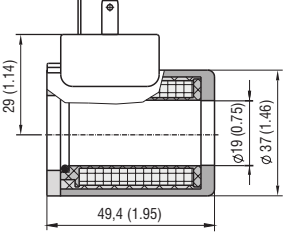
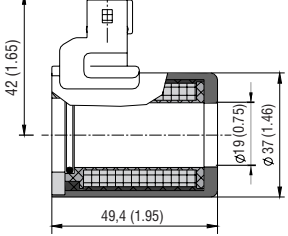
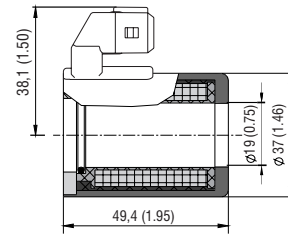
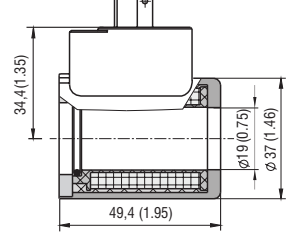
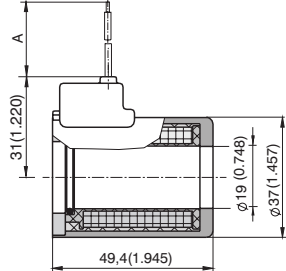
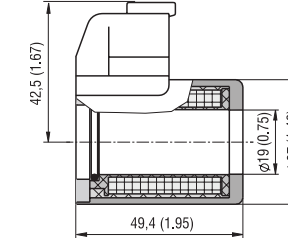
Manual override  
standard  
rubber boot protected  
hand screw  
socket head screw

**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

### Spool Symbols

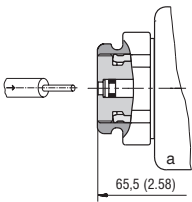
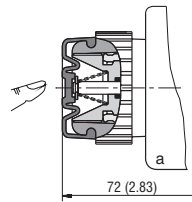
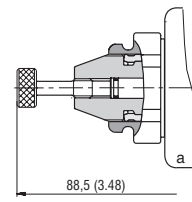
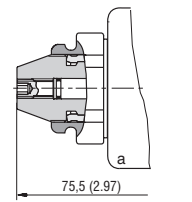
Type	Symbol	Interposition	Type	Symbol	Interposition	Type	Symbol	Interposition
Z11			Y71			Z51		
C11			R11			Z11		
H11			R21			X11		
P11			A51			C11		
Y11			P51			H11		
L21			Y51			J15		
B11			C51			J75		

### Solenoid Coil in millimeters (inches)

<p>E1 - EN 175301-803-A</p> <p>E2 - E1 with quenching diode</p> <p>Protection degree IP65</p>	<p>E3 - AMP Junior Timer - radial direction</p> <p>E4 - E3 with quenching diode</p> <p>Protection degree IP67</p>	<p>E3A - AMP Junior Timer - axial direction</p> <p>E4A - E3A with quenching diode</p> <p>Protection degree IP67</p>	<p>E5 - EN 175301-803-A and integrated rectifier</p> <p>Protection degree IP65</p>
			
<p>E8 - Loose conductors (two insulated cables)</p> <p>E9 - (E8 with quenching diode)</p> <p>Protection degree IP65</p>	<p>E12A - Deutsch DT04-2P</p> <p>E13A - E12A with quenching diode</p> <p>Protection degree IP67 / IP69K</p>		
 <p><b>Note:</b> 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)

<p>No designation - standard</p> 	<p>Designation N2 - rubber boot protected</p> 	<p>Designation N4 - hand screw</p> 	<p>Designation N5 - socket head screw, size 3</p> 
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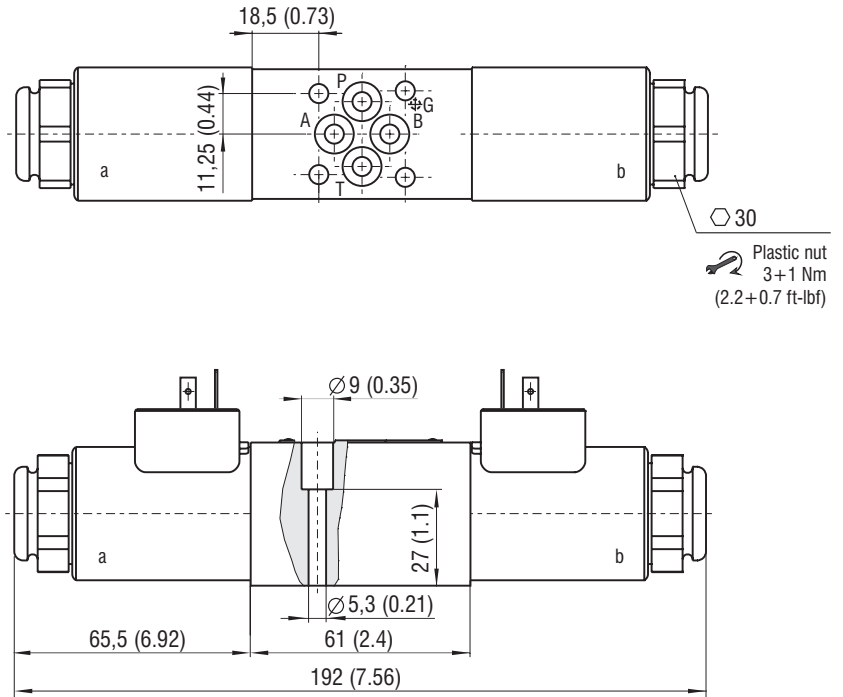
In case of solenoid malfunction or power failure, the spool of the valve can be shifted by manual override as long as the pressure in port T does not exceed 25 bar (363 PSI). For alternative manual overrides contact our technical support.

**Dimensions** in millimeters (inches)

**RPE3-043\*/\*E1\***

**Valve with two solenoids**

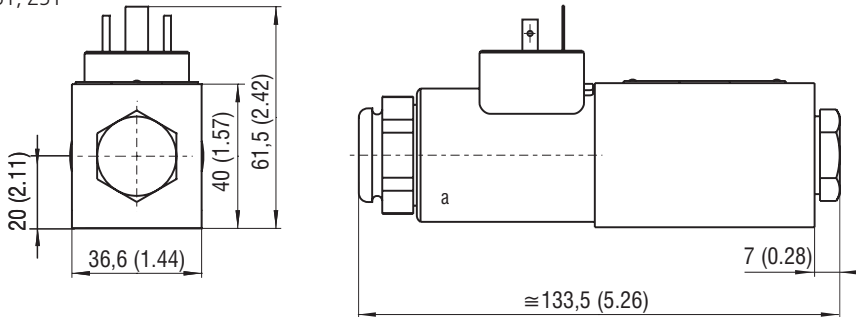
Spool symbols Z11, C11, H11, P11, Y11, L21, B11, Y71



**RPE3-042\*/\*E1\***

**Valve with one solenoid „a”**

Spool symbols R11, R21, A51, P51, Y51, C51, Z51



**RPE3-042\*/\*E1\***

**Valve with one solenoid „b”**

Spool symbols Z11, X11, C11, H11

