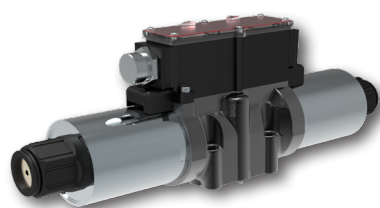


4/2 and 4/3 Directional Control Valve, Solenoid Operated, Wire Box

RPEW4-10

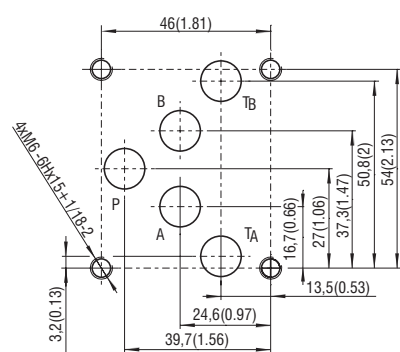
Size 10 (D05) • Q_{max} 140 l/min (37 GPM) • p_{max} 350 bar (5100 PSI)



Technical Features

- › Direct acting directional control valve with subplate mounting surface acc. to ISO 4401, DIN 24340 (CETOP 05)
- › High transmitted hydraulic power up to 350 bar with optimized design to minimize pressure drop
- › Five chamber housing design with reduced hydraulic power dependence on fluid viscosity
- › Wire box for solenoid electrical connection with cable gland [1/2" NPT]
- › Optional 3-pin or 5-pin connector acc. to ANSI/B93.55M
- › Type for AC power supply with a rectifier bridge built in the wire box
- › Wide range of interchangeable spools and manual overrides available
- › CSA Certificate upon request
- › Soft-shift spool speed control option
- › Optional LED indication of the switched ON solenoid (arrows on the cover of the wire box)
- › 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

ISO 4401-05-04-0-05



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

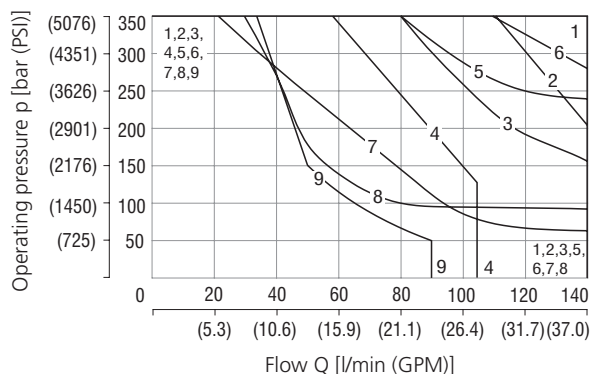
Technical Data

Valve size	10 (D05)		
Max. flow	l/min (GPM)	140 (37)	
Max. operating pressure at ports P, A, B	bar (PSI)	350 (5080)	
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: ± 10	DC: ± 10
Max. switching frequency	1/h	15 000	
Enclosure type acc. to EN 60529		IP65	
Switching time at $v=32$ mm ² /s (156 SUS)	ON	ms	AC: 50 ... 330
	OFF	ms	DC: 50 ... 120
Weight	- valve with 1 solenoid	kg (lbs)	3.9 (8.6)
	- valve with 2 solenoids		5.4 (11.9)
	Datasheet	Type	
General information	GI_0060	Products and operating conditions	
Coil types	C_8007	C31K*	
Mounting interface	SMT_0019	Size 10	
Spare parts	SP_8010		

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

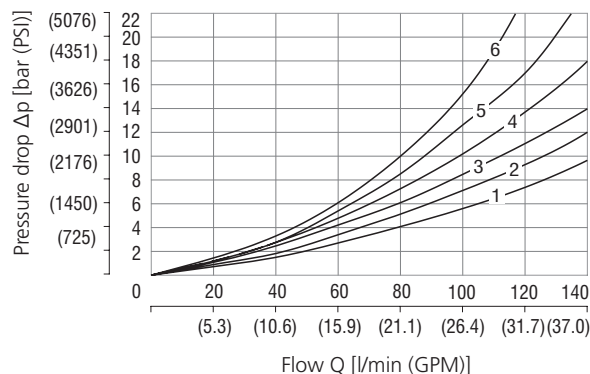
Operating limits

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



1	Z11	5	Y51	7	L21
1	Z51	3	C11	2	R21
1	H11	3	C51	6	J15
1	H51	2	R11	6	J75
1	P11	2	X11	8	A51
1	P51	4	B11	9	C21
5	Y11	4	B51		

Pressure drop related to flow rate



	P-A	P-B	A-T	B-T	P-T		P-A	P-B	A-T	B-T	P-T
Z11,P11,Y11, R11,X11,B11	1	1	2	2		C11	4	3	4	5	1
Z51,P51,Y51, B51		1	2			C21	6	6	6	6	4
R21	1	1	1	3		C51	4			5	1
J15	1	2	2	3		L21	1	1	1	2	2
J75,A51	1	1				H11	1	1	2	2	1
H51		1	2		1						

For operating limits under conditions and flow directions other than shown contact our technical support. Admissible operating limits may be considerably lower with only one direction of flow (A or B plugged, or without flow.)

Ordering Code

RPEW4 - 10

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

Valve size

Number of valve positions

two positions

three positions

Spool symbols

see the table "Spool Symbols"

Rated supply voltage of solenoid

(at the wire box terminal)

12 V DC / 3.17 A

24 V DC / 1.73 A

120 V AC / 0.38 A, 60 Hz*

*DC coils with rectifier in wire box

Connector for wire box and wire box power

DC solenoid for DC power supply

DC solenoid for AC power supply (rectifier in wirebox)

EW1K

EW1R

Wire box version

without connector, 1/2" NPT thread at both ends (either side
can be used for wiring, remove cover-plug accordingly)

50

50 with LED (B side plugged, A side with feed-through plug)

51

Certificate
No designation without certificate
U Certificate CSA

Surface treatment
No designation standard

Seals
No designation NBR
V FPM (Viton)

Soft-shift spool speed control
No designation without soft-shift control
T0 with plugged cavity for optional soft shift installation
T2 orifice Ø 0.6 mm (0.02 inch) in T line bridge
T3 adjustable needle valve in T line bridge

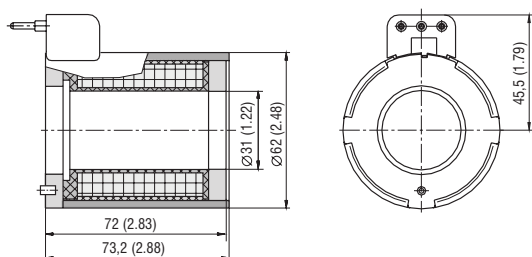
Manual override
No designation standard
N2 rubber boot protected

- For directional valves with two solenoids, one solenoid must be de-energized before the other solenoid can be charged.
- The port restrictor plugs can be ordered separately from the spare parts datasheet SP_8010.
- Mounting bolts M6 x 45 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			P51		
C11			Y51		
H11			C51		
P11			B51		
Y11			Z51		
L21			H51		
B11			X11		
C21			C11		
R11			H11		
R21			J15		
A51			J75		

Solenoid Coil for Wire box in millimeters (inches)

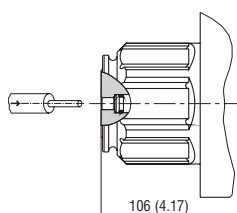


Protection degree IP65

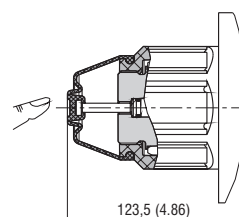
The specified IP rating applies only in the case of correctly connected connectors (male + female) with the corresponding IP rating.

Manual Override in millimeters (inches)

No designation
- standard



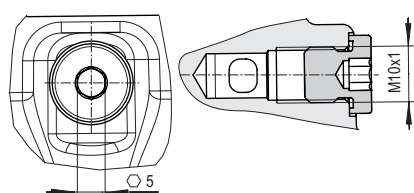
Designation N2
- rubber boot protected



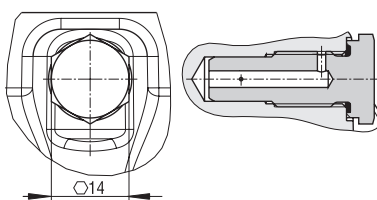
In case of solenoid malfunction or power failure, the spool of the valve can be shifted by manual override as long as the pressure in port T does not exceed 25 bar (363 PSI). For alternative manual overrides contact our technical support.

Spool Speed Control in millimeters (inches)

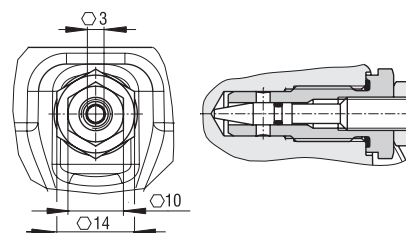
Designation T0 - Plug VSTI M10 x 1



Designation T2 - Orifice Ø 0.6 (0.02)



Designation T3 - Needle valve



Plugged cavity for optional soft-shift control devices installation (T2, T3)

Switching time
ON and OFF

The orifice extends the valve shifting time.

120 ... 350 ms

The needle valve allows continuous adjustment of the shifting time.

30 ... 2000 ms

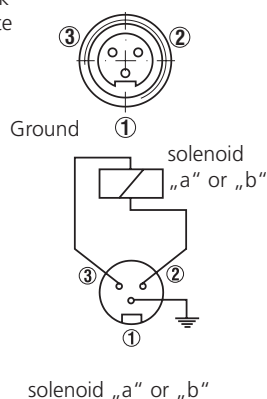
The switching times shown are valid for viscosity $\nu = 32 \text{ mm}^2/\text{s}$ (156 SUS) and nominal voltage. They depend on working pressure and flow rate of the directional control valve.

Example - connecting of connectors ANSI / B93.55M

Electrical connection

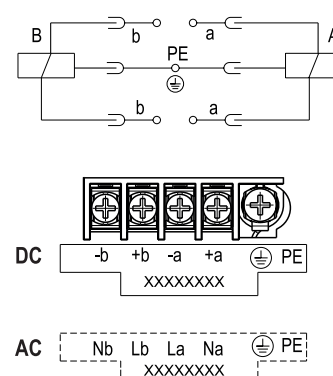
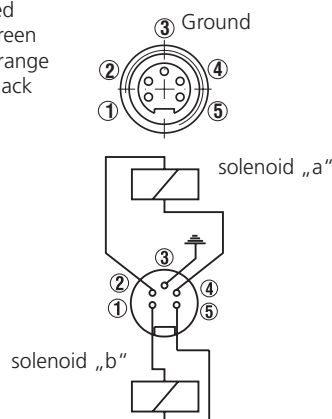
Pinout - 3-pin connector

- 1 - green
- 2 - black
- 3 - white



Pinout - 5-pin connector

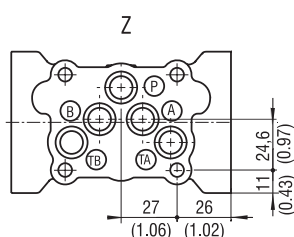
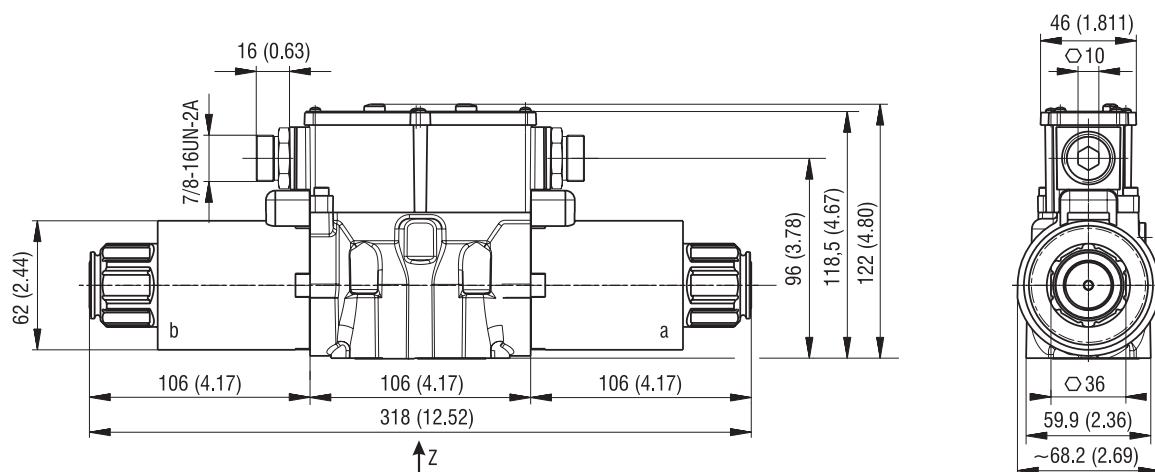
- 1 - white
- 2 - red
- 3 - green
- 4 - orange
- 5 - black



Dimensions in millimeters (inches)

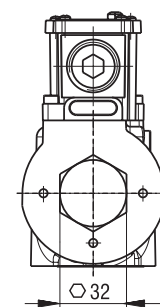
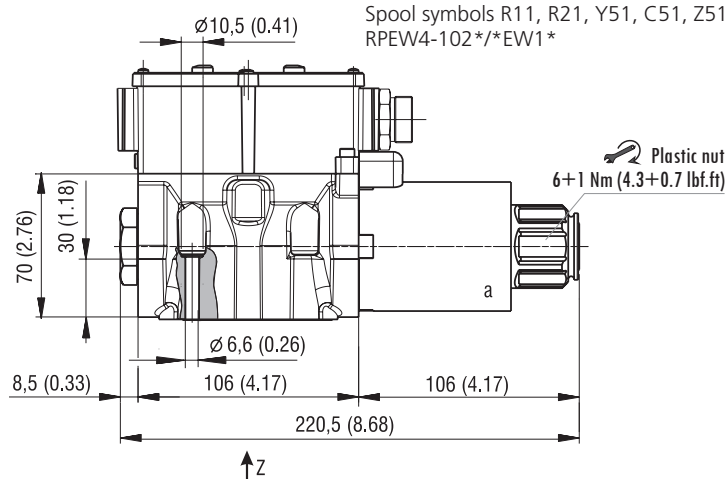
Valve with two solenoids

RPEW4-103*/*EW1*



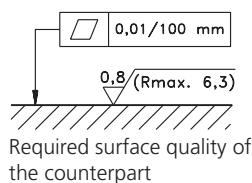
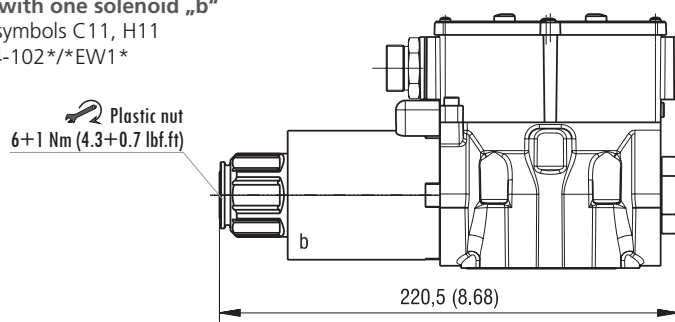
Valve with one solenoid „a“

Spool symbols R11, R21, Y51, C51, Z51, H51
RPEW4-102*/*EW1*



Valve with one solenoid „b“

Spool symbols C11, H11
RPEW4-102*/*EW1*



Mounting screws 14+1 Nm (10.3+0.7 lbf.ft)
M6 x 45 DIN 912-10.9