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

**Technical Features**
- Direct acting directional control valve with subplate mounting interface acc. to ISO 4401, DIN 24340 (CETOP 03)
- 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 solenoidal 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 shift position indicators (raised arrows) installed on the terminal plate
- In the standard version, the valve housing is phosphated and steel parts zinc-coated for 240 h salt spray protection acc. to ISO 9227

**Technical Data**

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valve size</td>
<td>06 (D03)</td>
</tr>
<tr>
<td>Max. flow</td>
<td>80 (21.1) l/min (GPM)</td>
</tr>
<tr>
<td>Max. operating pressure at ports P, A, B</td>
<td>350 (5080) bar (PSI)</td>
</tr>
<tr>
<td>Max. operating pressure at port T</td>
<td>210 (3050) bar (PSI)</td>
</tr>
<tr>
<td>Fluid temperature range (NBR)</td>
<td>-30 ... +80 (+22 ... +176) °C (°F)</td>
</tr>
<tr>
<td>Fluid temperature range (FPM)</td>
<td>-20 ... +80 (-4 ... +176) °C (°F)</td>
</tr>
<tr>
<td>Ambient temperature range</td>
<td>-30 ... +50 (-22 ... +122) °C</td>
</tr>
<tr>
<td>Supply voltage tolerance</td>
<td>AC: ±10 %</td>
</tr>
<tr>
<td>Max. switching frequency</td>
<td>1/h</td>
</tr>
<tr>
<td>Enclosure type acc. to EN 60529</td>
<td>IP 65</td>
</tr>
<tr>
<td>Switcbing time at ν = 32 mm²/s (156 SUS)</td>
<td>ms</td>
</tr>
<tr>
<td>General information</td>
<td>Gi_0060</td>
</tr>
<tr>
<td>Coil types</td>
<td>C_8007</td>
</tr>
<tr>
<td>Mounting interface</td>
<td>SMT_0019</td>
</tr>
<tr>
<td>Spare parts</td>
<td>SP_8010</td>
</tr>
</tbody>
</table>

**Operating limits**

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

**Pressure drop related to flow rate**

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 - 06

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

<table>
<thead>
<tr>
<th>Valve size</th>
<th>No designation</th>
<th>CSA Certified</th>
<th>Interposition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of valve positions</td>
<td>2</td>
<td>standard</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>CSA marking</td>
<td></td>
</tr>
</tbody>
</table>

Spool symbols
see the table “Spool symbols”

<table>
<thead>
<tr>
<th>Type</th>
<th>Symbol</th>
<th>Interposition</th>
</tr>
</thead>
</table>

**Rated supply voltage of solenoid**
(at the wire box terminal)
- 12 V DC / 2.72 A
- 24 V DC / 1.29 A
- 120 V AC / 0.26 A, 60 Hz*  

*DC coils with rectifier in wire box

<table>
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**Connector for wire box and wire box power**

- DC solenoid for DC power supply
- DC solenoid for AC power supply (rectifier in wirebox)
- DC solenoid with quenching diode for DC power supply

**Wire box version, supply connector**
without connector, 1/2 NPT thread at both ends (either side can be used for wiring, remove cover-plug accordingly)
50 with LED (B side plugged, A side with feed-through plug)

- For directional valves with two solenoids, one solenoid must be de-energized before the other solenoid can be charged.
- The orifice to the P port can be ordered separately, see data sheet SP_8010.
- Mounting bolts M5 x 45 DIN 912-10.9 or studs must be ordered separately. Tightening torque is 8.9 Nm (6.56 lbf.ft).
- Besides the commonly used valve versions shown other special models are available. Contact our technical support for their identification, feasibility and operating limits.

### Spool Symbols

<table>
<thead>
<tr>
<th>Type</th>
<th>Symbol</th>
<th>Interposition</th>
</tr>
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<tbody>
<tr>
<td>Z11</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Z21</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C11</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B11</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F11</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- No designation

- Manual override

- Standard

- Rubber boot protected

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**Example - connecting of connectors ANSI / B93.55M**

**Pinout - 3-pin connector**
- 1 - green
- 2 - black
- 3 - white

**Pinout - 5-pin connector**
- 1 - white
- 2 - red
- 3 - green
- 4 - orange
- 5 - black

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**Important:**

This directional valve provides the means to control spool soft shifting by an orifice situated in the solenoid armature. To ensure the proper function of the valve, unobstructed venting of the solenoid is required through the bleeding plug (1). The plugs are accessible after removing the rubber boot (2) from the solenoid cap nut (3).

**Switching time ON and OFF**

300 ... 800 ms

The switching times shown are valid for viscosity $\nu = 32 \text{ mm}^2/\text{s} \ (156 \text{ SUS})$ and nominal voltage. They depend on working pressure and flow rate of the directional control valve.
**Valve with two solenoids**
RPEW4-063/**EW**

**Valve with one solenoid „a“**
RPEW4-062/**EW**

**Valve with one solenoid „b“**
Spool symbols X11, Z11, C11, H11, N11, F11
RPEW4-062/**EW**

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Dimensions in millimeters (inches)

**Mounting screws**
8.9 Nm (7 lbf.ft)
M5 x 45 DIN 912-10.9