3/2 Directional Valve, Solenoid Operated, Spool Type, Direct Acting, Slip-In Style

**PD2E1**

Size D17/D20 • Q\(_{\text{max}}\) 30 l/min (8 GPM) • p\(_{\text{max}}\) 80 bar (1200 PSI)

### Technical Features

- 3/2 directional valve in an economical design
- Hardened precision parts
- High flow capacity
- Variety of optional spools available
- Standard version zinc-coated with surface protection acc. to ISO 9227 (240 h salt spray)

### Functional Description

3-way, 2-position spool valve in the form of an economically designed slip-in cartridge. The valve is designed for use in the low-pressure systems of mobile applications, e.g. for functional control of transmissions.

### Technical Data

<table>
<thead>
<tr>
<th>Valve size / Cartridge cavity</th>
<th>D17 / Y3</th>
<th>D20 / X3, W3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. flow l/min (GPM)</td>
<td>30 (7.9)</td>
<td></td>
</tr>
<tr>
<td>Max. operating pressure</td>
<td>bar (PSI)</td>
<td></td>
</tr>
<tr>
<td>version Y, X (2, 3), W (3, 1)</td>
<td>80 (1160)</td>
<td></td>
</tr>
<tr>
<td>Max. operating pressure</td>
<td>bar (PSI)</td>
<td></td>
</tr>
<tr>
<td>version Y, X (1), W (2)</td>
<td>30 (440)</td>
<td></td>
</tr>
<tr>
<td>Fluid temperature range °C (°F)</td>
<td>-30...90 (-22...194), +100 (212) short-time</td>
<td></td>
</tr>
<tr>
<td>Ambient temperature range °C (°F)</td>
<td>-30...90 (-22...194), +100 (212) short-time</td>
<td></td>
</tr>
<tr>
<td>Supply voltage tolerance %</td>
<td>± 10</td>
<td></td>
</tr>
<tr>
<td>Supply voltage V</td>
<td>12 DC</td>
<td></td>
</tr>
<tr>
<td>Quenching diode</td>
<td>BZW06-19B</td>
<td></td>
</tr>
<tr>
<td>Enclosure type acc. to EN 60529</td>
<td>IP67 / IP69K</td>
<td></td>
</tr>
<tr>
<td>Weight kg (lbs)</td>
<td>0.2 (0.44)</td>
<td></td>
</tr>
</tbody>
</table>

### Characteristics measured at \( v = 32 \text{ mm/s} \) (156 SUS)

### Operating limits

Oil 90 °C (194 °F) / Ambient temperature 90 °C (194 °F) / Voltage \( U_n \) ± 15% (21.6 VDC)

### Pressure drop related to flow rate

<table>
<thead>
<tr>
<th>Model</th>
<th>Connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y3</td>
<td>2D21 2→1 3→2</td>
</tr>
<tr>
<td>Y3</td>
<td>2D26 3→2</td>
</tr>
<tr>
<td>X3</td>
<td>2D21 2→1 3→2</td>
</tr>
<tr>
<td>W3</td>
<td>2D21 3→2</td>
</tr>
</tbody>
</table>

For operating limits under conditions and flow directions other than shown contact our technical support.
Y3 - Ø D17

Electrical Connector
AMP Junior Timer
E3, E4 - IP 67

Electrical Connector
DEUTSCH DT04-2P
E12, E13- IP 67 / IP 69K

Electrical Connector
DEUTSCH DT04-2P
E12A, E13A- IP 67 / IP 69K

X3, W3 - Ø D20

Electrical Connector
AMP Junior Timer - radial direction (2 pins; male)
E3 with quenching diode

Deutsch DT04-2P - radial direction
(2 pins; male)
E12 with quenching diode

Deutsch DT04-2P - axial direction (2 pins; male)
E12A with quenching diode

Dimensions in millimeters (inches)

Valve cavity
D17
D20
D20

Functional symbol

3/2 directional valve, solenoid operated, spool type, direct acting, slip-in style

Ordering Code

PD2E1 - / - - - -

Surface treatment
A zinc-coated (ZnCr-3), ISO 9227 (240 h)
B zinc-coated (ZnNi), ISO 9227 (520 h)

Seals
NER
FPM (Viton)

No designation
V

Connector
E3 AMP Junior Timer - radial direction (2 pins; male)
E3 with quenching diode
E4
E12 Deutsch DT04-2P - radial direction (2 pins; male)
E12 with quenching diode
E13
E12A Deutsch DT04-2P - axial direction (2 pins; male)
E12A with quenching diode

Nominal supply voltage
12 V DC / 1.67 A
24 V DC / 0.84 A

www.argo-hytos.com
Subject to change · PD2E1_4050_2en_10/2019