Description

4-port, spool type, solenoid operated, directional control valves with wet armature AC or DC coils.

Features

1. Five chamber body and spool design. Requires minimal power for operation.
2. Conforms to ISO4401-5, NFPA T3.5.1M R1 and ANSI B93-7 D 05 interface.
3. Available in standard, interchangeable spool configurations.
4. Removable wet-armature AC and DC solenoids for quick replacement and conversions. Moulded solenoid coils to protect against moisture and ingress of dust.
5. Individual solenoid plug-in connectors with indicator lights to ISO 4400 and DIN 43650.
6. Special R-rings for high extrusion resistance. Increased stability under high dynamic condition.
7. Override for operation of valve without electrical power.

Note on solenoid identification:
Solenoid "a" is close to Port "A" and Solenoid "b" is close to Port "B" for a direct operated valve.
# Technical data

## General

<table>
<thead>
<tr>
<th>Weight</th>
<th>kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valve with 1 solenoid</td>
<td>3.5</td>
</tr>
<tr>
<td>Valve with 2 solenoids</td>
<td>4.2</td>
</tr>
</tbody>
</table>

## Hydraulic

<table>
<thead>
<tr>
<th>Nominal Pressure</th>
<th>bar</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ports P, A and B</td>
<td>210</td>
</tr>
<tr>
<td>Port T</td>
<td>175</td>
</tr>
<tr>
<td>Maximum Flow</td>
<td>lpm</td>
</tr>
<tr>
<td></td>
<td>100</td>
</tr>
</tbody>
</table>

- **Hydraulic Fluid**: Mineral Oil
- **Fluid Temperature**:
  - NBR: °C -30 to 80°C
  - FKM: °C -20 to 80°C
- **Maximum degree of fluid contamination**: Class 19/16 according to ISO 4406

## Electrical

<table>
<thead>
<tr>
<th>Power Requirement</th>
<th>W</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>30</td>
</tr>
</tbody>
</table>

- **Duty Cycle**: Continuous
- **Shifting Time**:
  - ON: ms 60
  - OFF: ms 30
- **Insulation**: IP 65

## Spool Types

### 4/2 Way Valve with "0" and "a" positions

- **A**
- **B**
- **T**
- **C**
- **D**

### 4/3 Way Valve

- **A**
- **B**
- **T**
- **C**
- **E**
- **G**
- **H**
- **J**

### 4/2 Way Valve with "0" and "b" positions

- **O**
- **B**
- **Y**

### Filter β

- β ≥ 75
4/3- and 4/2- way Directional Control Valves
Model: 4DE10-LP with Wet Pin AC or DC Solenoids

Size 10 (D 05)  210 bar  100lpm

**Ordering Code**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
</table>
| 4 DE 10 E S A220 A V -LP -01 | 4 Service Ports  
Directional Control, Electrically Operated  
ISO size 5, NFPA/ANSI D 05 interface  
Spool type (Refer Spool Chart)  
Spring Return S  
Without spring return O  
Coil Voltage  
12V DC D12 110V AC, 50-60Hz A110  
24V DC D24 220V AC, 50-60Hz A220  

**Installation**

**Note:**

(1) Length of valve with 1 solenoid  
(2) Length of valve with 2 solenoids  
(3) Space required to remove plug-in connector  
(4) Space required to remove solenoid coil  

**Valve Mounting Bolts:**

M6 x 40 mm or 1/4-20 UNC x 1.1/2”  
Tightening Torque 15.5 Nm  
Mounting Hardware not included in scope of supply
Spares

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Valve with 1 solenoid</th>
<th>Valve with 2 solenoids</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Valve Body</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>Spool</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>Spring Pad</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>4</td>
<td>Spring</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>5</td>
<td>O-ring 21.9 x 2.62</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>6</td>
<td>Adapter</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>7</td>
<td>Plug</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>8</td>
<td>Solenoid Assembly</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>9</td>
<td>Pole Tube</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>9.1</td>
<td>O-ring 17.2 x 1.78</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>9.2</td>
<td>O-ring 19.4 x 2.0</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>9.3</td>
<td>O-ring 21.8 x 3.55</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>9.4</td>
<td>Cap</td>
<td>0</td>
<td>2</td>
</tr>
</tbody>
</table>

* Recommended Spares

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4/3- and 4/2-way Directional Control Valves
Model: 4DE10-LP with Wet Pin AC or DC Solenoids

Size 10 (D 05) 210 bar 100 lpm

Y02401/07.10