Directional valves • Supplementary products

LS04 series

Brochure
Compressed air connections Ø4 - Ø6

5/2-directional valve, Series LS04 XS
► Qn = 200 l/min ► pipe connection ► compressed air connection output: Ø 4 ► Electr. connection: Plug, M8, 3-pin ► Manual override: with detent, without detent ► Pilot: internal ► Qn = 200 - 310 l/min

5/2-directional valve, Series LS04 XS
► Qn = 200 l/min ► pipe connection ► compressed air connection output: Ø 4 ► Electr. connection: Plug, Industrial plug connector, 2-pin ► Manual override: with detent, without detent ► Pilot: internal ► Qn = 200 - 310 l/min

2x3/2-directional valve, Series LS04 AF
► Qn = 175 - 310 l/min ► pipe connection ► compressed air connection output: Ø 4 - Ø 6 ► Electr. connection: Plug, M8, 3-pin ► Manual override: without detent ► Pilot: internal ► Qn = 200 - 310 l/min

2x3/2-directional valve, Series LS04 AF
► Qn = 175 - 310 l/min ► pipe connection ► compressed air connection output: Ø 4 - Ø 6 ► Electr. connection: Plug, Industrial plug connector, 2-pin ► Manual override: without detent ► Pilot: internal ► Qn = 200 - 310 l/min

2x3/2-directional valve, Series LS04 AF
► Qn = 175 - 310 l/min ► pipe connection ► compressed air connection output: Ø 4 - Ø 6 ► Electr. connection: Plug, Industrial plug connector, 2-pin ► Manual override: without detent ► Pilot: internal ► Qn = 200 - 310 l/min

2x3/2-directional valve, Series LS04 AF
► Qn = 175 - 310 l/min ► pipe connection ► compressed air connection output: Ø 4 - Ø 6 ► Electr. connection: Plug, Industrial plug connector, 2-pin ► Manual override: with detent ► Pilot: internal ► Qn = 200 - 310 l/min

5/2-directional valve, Series LS04 AF
► Qn = 180 - 310 l/min ► pipe connection ► compressed air connection output: Ø 4 - Ø 6 ► Electr. connection: Plug, M8, 3-pin ► Manual override: without detent ► single solenoid, double solenoid ► Pilot: internal ► Qn = 200 - 310 l/min

5/2-directional valve, Series LS04 AF
► Qn = 180 - 310 l/min ► pipe connection ► compressed air connection output: Ø 4 - Ø 6 ► Electr. connection: Plug, M8, 3-pin ► Manual override: with detent ► Pilot: internal ► Qn = 200 - 310 l/min

5/2-directional valve, Series LS04 AF
► Qn = 180 - 310 l/min ► pipe connection ► compressed air connection output: Ø 4 - Ø 6 ► Electr. connection: Plug, Industrial plug connector, 2-pin ► Manual override: with detent ► single solenoid, double solenoid ► Pilot: internal ► Qn = 200 - 310 l/min

5/2-directional valve, Series LS04 AF
► Qn = 180 - 310 l/min ► pipe connection ► compressed air connection output: Ø 4 - Ø 6 ► Electr. connection: Plug, Industrial plug connector, 2-pin ► Manual override: with detent ► Pilot: internal ► Qn = 200 - 310 l/min

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information.

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### Directional valves ➔ Supplementary products

**LS04 series**

<table>
<thead>
<tr>
<th>5/3-directional valve, Series LS04 AF</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>➤ <strong>Qn</strong> = 170 - 270 l/min ➤ closed center ➤ pipe connection ➤ compressed air connection output: Ø 4 - Ø 6 ➤ Electr. connection: Plug, M8, 3-pin ➤ closed center ➤ Manual override: without detent ➤ Pilot: internal ➤ <strong>Qn</strong> = 200 - 310 l/min</td>
<td>30</td>
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</table>

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<tr>
<th>5/3-directional valve, Series LS04 AF</th>
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<tr>
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<tr>
<th>5/3-directional valve, Series LS04 AF</th>
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<td>34</td>
</tr>
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</table>

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<thead>
<tr>
<th>5/3-directional valve, Series LS04 AF</th>
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<td>➤ <strong>Qn</strong> = 170 - 270 l/min ➤ closed center ➤ pipe connection ➤ compressed air connection output: Ø 4 - Ø 6 ➤ Electr. connection: Plug, Industrial plug connector, 2-pin ➤ closed center ➤ Manual override: with detent ➤ Pilot: internal ➤ <strong>Qn</strong> = 200 - 310 l/min</td>
<td>36</td>
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### Accessories

<table>
<thead>
<tr>
<th>Connecting cable, Series CN2</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>➤ Socket, M8, 3-pin ➤ open cable ends, 3-pin ➤ straight</td>
<td>38</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Connecting cable, Series CN2</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>➤ Socket, M8, 3-pin ➤ open cable ends, 3-pin ➤ angled</td>
<td>38</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>M8x1 socket (female), Series CN2</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>➤ Socket, M8x1, 3-pin ➤ straight</td>
<td>39</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>M8x1 socket (female), Series CN2</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>➤ Socket, M8x1, 3-pin ➤ angled</td>
<td>40</td>
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</table>

<table>
<thead>
<tr>
<th>Connecting cable with socket, Series S</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>➤ Socket, Industrial plug connector, 2-pin ➤ without wire end ferrule, tin-plated, 2-pin</td>
<td>41</td>
</tr>
</tbody>
</table>
5/2-directional valve, Series LS04 XS

- Qn = 200 l/min
- Pipe connection
- Compressed air connection output: Ø 4
- Electr. connection: Plug, M8, 3-pin
- Manual override: with detent, without detent
- Pilot: internal
- Qn = 200 - 310 l/min

Version: Spool valve, zero overlap
Sealing principle: Soft sealing
Working pressure min./max.: 3 bar / 8 bar
Ambient temperature min./max.: -10°C / +50°C
Medium temperature min./max.: -10°C / +50°C
Medium: Compressed air
Max. particle size: 5 µm
Oil content of compressed air: 0 mg/m³ - 5 mg/m³
Electrical connection: Plug, M8, 3-pin
Manual override: with detent, without detent
Pilot: internal
Qn = 200 - 310 l/min

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Directional valves ► Supplementary products

5/2-directional valve, Series LS04 XS
► Qn = 200 l/min ► pipe connection ► compressed air connection output: Ø 4 ► Electr. connection: Plug, M8, 3-pin ► Manual override: with detent, without detent ► Pilot: internal ► Qn = 200 - 310 l/min

Dimensions

PIN assignment for electrical connector

1) Pin not assigned
3) 0 V
4) 24 V

Note: Bi-polar protective circuit to prevent overvoltage
Directional valves ► Supplementary products

5/2-directional valve, Series LS04 XS
► Qn = 200 l/min ► pipe connection ► compressed air connection output: Ø 4 ► Electr. connection: Plug, Industrial plug connector, 2-pin ► Manual override: with detent, without detent ► Pilot: internal ► Qn = 200 - 310 l/min

Version Spool valve, zero overlap
Sealing principle Soft sealing
Working pressure min./max. 3 bar / 8 bar
Ambient temperature min./max. -10°C / +50°C
Medium temperature min./max. -10°C / +50°C
Medium Compressed air
Max. particle size 5 µm
Oil content of compressed air 0 mg/m³ - 5 mg/m³

Protection class acc. to DIN EN 61140 Class III
electrically
Degree of protection With connection IP50
Protective circuit Z-diode
Status display LED Yellow
Duty cycle 100 %
Switch-on time 9 ms
Switch-off time 21 ms
Generic emission standard in accordance with EN 61000-6-4:2002
Generic immunity standard in accordance with IEC 61000-6-2:2005
Mounting screw M3
mounting screw tightening torque 0.5 Nm
Weight 0.03 kg

Materials:
Housing Polyamide; Polyoxymethylene
Seals Acrylonitrile Butadiene Rubber; Hydrogenated nitrile butadiene rubber; Polyurethane

Technical Remarks
- The min. control pressure must be adhered to, since otherwise faulty switching and valve failure may result!
- The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.
- The oil content of compressed air must remain constant during the life cycle.
- Use only the approved oils from AVENTICS, see chapter „Technical information“.

<table>
<thead>
<tr>
<th>Operational voltage</th>
<th>Voltage tolerance</th>
<th>Power consumption</th>
</tr>
</thead>
<tbody>
<tr>
<td>DC</td>
<td>DC</td>
<td>DC</td>
</tr>
<tr>
<td>24 V</td>
<td>-10% / +10%</td>
<td>0.7</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MO</th>
<th>Compressed air connection</th>
<th>Power consumption</th>
<th>Flow conductance</th>
<th>Flow rate value</th>
<th>Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>DC 24 V</td>
<td>[W]</td>
<td>[l/(s*bar)]</td>
<td>Qn [l/min]</td>
</tr>
<tr>
<td>Input</td>
<td>Output</td>
<td>Exhaust</td>
<td>[DC 24 V]</td>
<td>b</td>
<td>C</td>
</tr>
<tr>
<td></td>
<td>Ø 4</td>
<td>Ø 4</td>
<td>Ø 4</td>
<td>24 V</td>
<td>0.7</td>
</tr>
<tr>
<td></td>
<td>Ø 4</td>
<td>Ø 4</td>
<td>Ø 4</td>
<td>24 V</td>
<td>0.7</td>
</tr>
</tbody>
</table>

HHB = Manual override
Nominal flow Qn at 6 bar and Δp = 1 bar

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Directional valves ► Supplementary products

5/2-directional valve, Series LS04 XS
► Qn = 200 l/min ► pipe connection ► compressed air connection output: Ø 4 ► Electr. connection: Plug, Industrial plug connector, 2-pin ► Manual override: with detent, without detent ► Pilot: internal ► Qn = 200 - 310 l/ min

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Directional valves ► Supplementary products

2x3/2-directional valve, Series LS04 AF
► Qn = 175 - 310 l/min ► pipe connection ► compressed air connection output: Ø 4 - Ø 6 ► Electr. connection: Plug, M8, 3-pin ► Manual override: without detent ► Pilot: internal ► Qn = 200 - 310 l/min

Version Spool valve, zero overlap
Sealing principle Soft sealing
Working pressure min./max. 3 bar / 8 bar
Ambient temperature min./max. -10°C / +50°C
Medium temperature min./max. -10°C / +50°C
Medium Compressed air
Max. particle size 5 µm
Oil content of compressed air 0 mg/m³ - 5 mg/m³
Connector standard DIN EN 60947-5-2
Protection class acc. to DIN EN 61140 Class III
electrically
Degree of protection With connection IP65
Protective circuit Z-diode
Status display LED Yellow
Duty cycle 100 %
Switch-on time 12 ms
Switch-off time 20 ms
Generic emission standard in accordance with EN 61000-6-4:2002
Generic immunity standard in accordance with IEC 61000-6-2:2005
Mounting screw M3
mounting screw tightening torque 0.5 Nm
Weight 0.054 kg
Materials:
Housing Polyoxymethylene
Seals Acrylonitrile Butadiene Rubber; Hydrogenated nitrile butadiene rubber; Polyurethane

Technical Remarks
■ The min. control pressure must be adhered to, since otherwise faulty switching and valve failure may result!
■ The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.
■ The oil content of compressed air must remain constant during the life cycle.
■ Use only the approved oils from AVENTICS, see chapter „Technical information“.

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<tr>
<th>Operational voltage</th>
<th>Voltage tolerance</th>
<th>Power consumption</th>
</tr>
</thead>
<tbody>
<tr>
<td>DC</td>
<td>DC -10%/+10%</td>
<td>DC 0.7 W</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MO</th>
<th>Compressed air connection</th>
<th>Power consumption</th>
<th>Flow conductance</th>
<th>Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Input</td>
<td>Output</td>
<td>Exhaust</td>
<td>DC 24 V</td>
</tr>
<tr>
<td>---</td>
<td>------</td>
<td>-------</td>
<td>--------</td>
<td>--------</td>
</tr>
<tr>
<td>NO/NO</td>
<td>Ø 4</td>
<td>Ø 4</td>
<td>Ø 4</td>
<td>24 V</td>
</tr>
<tr>
<td>NC/NC</td>
<td>Ø 4</td>
<td>Ø 4</td>
<td>Ø 4</td>
<td>24 V</td>
</tr>
<tr>
<td>NC/NO</td>
<td>Ø 4</td>
<td>Ø 4</td>
<td>Ø 4</td>
<td>24 V</td>
</tr>
</tbody>
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Directional valves ► Supplementary products

2x3/2-directional valve, Series LS04 AF
► Qn = 175 - 310 l/min ► pipe connection ► compressed air connection output: Ø 4 - Ø 6 ► Electr. connection: Plug, M8, 3-pin ► Manual override: without detent ► Pilot: internal ► Qn = 200 - 310 l/min

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<tr>
<th>MO</th>
<th>Compressed air connection</th>
<th>Power consumption</th>
<th>Flow conductance</th>
<th>Part No.</th>
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<tbody>
<tr>
<td></td>
<td>Input</td>
<td>Output</td>
<td>Exhaust</td>
<td>DC</td>
</tr>
<tr>
<td>NO/NO</td>
<td>Ø 6</td>
<td>Ø 6</td>
<td>Ø 6</td>
<td>24 V</td>
</tr>
<tr>
<td>NC/NC</td>
<td>Ø 6</td>
<td>Ø 6</td>
<td>Ø 6</td>
<td>24 V</td>
</tr>
<tr>
<td>NC/NO</td>
<td>Ø 6</td>
<td>Ø 6</td>
<td>Ø 6</td>
<td>24 V</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Flow rate value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Qn</td>
<td>[l/min]</td>
</tr>
<tr>
<td>R422100573</td>
<td>175</td>
</tr>
<tr>
<td>R422100581</td>
<td>180</td>
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<tr>
<td>R422100589</td>
<td>175</td>
</tr>
<tr>
<td>R422100574</td>
<td>250</td>
</tr>
<tr>
<td>R422100582</td>
<td>310</td>
</tr>
<tr>
<td>R422100590</td>
<td>250</td>
</tr>
</tbody>
</table>

HHB = Manual override
Nominal flow Qn at 6 bar and Δp = 1 bar

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Pneumatics catalog, online PDF, as of 2015-01-14, ©AVENTICS S.a.r.l., subject to change
2x3/2-directional valve, Series LS04 AF
- Qn = 175 - 310 l/min
- pipe connection
- compressed air connection output: Ø 4 - Ø 6
- Electr. connection: Plug, M8, 3-pin
- Manual override: without detent
- Pilot: internal
- Qn = 200 - 310 l/min

Dimensions

PIN assignment for electrical connector

1) Pin not assigned
3) 0 V
4) 24 V

Note: Bi-polar protective circuit to prevent overvoltage

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information.

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2x3/2-directional valve, Series LS04 AF
► Qn = 175 - 310 l/min ▶ pipe connection ▶ compressed air connection output: Ø 4 - Ø 6 ▶ Electr. connection:
Plug, M8, 3-pin ▶ Manual override: with detent ▶ Pilot: internal ▶ Qn = 200 - 310 l/min

Version
Sealing principle
Working pressure min./max.
Ambient temperature min./max.
Medium temperature min./max.
Medium
Max. particle size
Oil content of compressed air
Connector standard

Protection class acc. to DIN EN 61140 electrically
Degree of protection With connection
Protective circuit
Status display LED
Duty cycle
Switch-on time
Switch-off time
Mounting screw
Mounting screw tightening torque
Weight

Materials:
Housing
Seals

Version Spool valve, zero overlap
Sealing principle Soft sealing
Working pressure min./max. 3 bar / 8 bar
Ambient temperature min./max. -10°C / +50°C
Medium temperature min./max. -10°C / +50°C
Medium Compressed air
Max. particle size 5 µm
Oil content of compressed air 0 mg/m³ - 5 mg/m³
Connector standard DIN EN 60947-5-2

Protection class acc. to DIN EN 61140 electrically
Degree of protection With connection IP65
Protective circuit Z-diode
Status display LED Yellow
Duty cycle 100 %
Switch-on time 12 ms
Switch-off time 20 ms
Mounting screw M3
mounting screw tightening torque 0.5 Nm
Weight 0.054 kg

Materials:
Housing Polyoxymethylene
Seals Acrylonitrile Butadiene Rubber; Hydrogenated nitrile butadiene rubber; Polyurethane

Technical Remarks
- The min. control pressure must be adhered to, since otherwise faulty switching and valve failure may result!
- The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.
- The oil content of compressed air must remain constant during the life cycle.
- Use only the approved oils from AVENTICS, see chapter „Technical information“.

**Operational voltage**

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<th>Voltage tolerance</th>
<th>Power consumption</th>
</tr>
</thead>
<tbody>
<tr>
<td>DC</td>
<td>DC</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Voltage</th>
<th>W</th>
</tr>
</thead>
<tbody>
<tr>
<td>DC 24 V</td>
<td>0.7</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MO</th>
<th>Compressed air connection</th>
<th>Power consumption</th>
<th>Flow conductance</th>
<th>Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Input</td>
<td>Output</td>
<td>Exhaust</td>
<td>DC</td>
</tr>
<tr>
<td>DC</td>
<td>[W]</td>
<td>[l/(s*bar)]</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MO...</th>
<th>NO/NO</th>
<th>Ø 4</th>
<th>Ø 4</th>
<th>Ø 4</th>
<th>24 V</th>
<th>0.7</th>
<th>0.4</th>
<th>0.8</th>
<th>R422100577</th>
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<tr>
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<td>Ø 4</td>
<td>Ø 4</td>
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<td>0.4</td>
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<td></td>
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<td>0.7</td>
<td>0.4</td>
<td>0.8</td>
<td>R422100593</td>
</tr>
</tbody>
</table>
### Directional valves ► Supplementary products

#### 2x3/2-directional valve, Series LS04 AF

- Qn = 175 - 310 l/min
- Pipe connection
- Compressed air connection output: Ø 4 - Ø 6
- Electr. connection: Plug, M8, 3-pin
- Manual override: with detent
- Pilot: internal
- Qn = 200 - 310 l/min

<table>
<thead>
<tr>
<th>MO</th>
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<th>Power consumption</th>
<th>Flow conductance</th>
<th>Part No.</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Input</td>
<td>Output</td>
<td>Exhaust</td>
<td>DC</td>
</tr>
<tr>
<td>NO/NO</td>
<td>Ø 6</td>
<td>Ø 6</td>
<td>Ø 6</td>
<td>24 V</td>
</tr>
<tr>
<td>NC/NC</td>
<td>Ø 6</td>
<td>Ø 6</td>
<td>Ø 6</td>
<td>24 V</td>
</tr>
<tr>
<td>NC/NO</td>
<td>Ø 6</td>
<td>Ø 6</td>
<td>Ø 6</td>
<td>24 V</td>
</tr>
</tbody>
</table>

#### Flow rate value

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Flow rate value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Qn [l/min]</td>
</tr>
<tr>
<td>R422100577</td>
<td>175</td>
</tr>
<tr>
<td>R422100585</td>
<td>180</td>
</tr>
<tr>
<td>R422100593</td>
<td>175</td>
</tr>
<tr>
<td>R422100578</td>
<td>250</td>
</tr>
<tr>
<td>R422100586</td>
<td>310</td>
</tr>
<tr>
<td>R422100594</td>
<td>250</td>
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</tbody>
</table>

**HHB = Manual override**

Nominal flow Qn at 6 bar and Δp = 1 bar

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Directional valves ► Supplementary products

**2x3/2-directional valve, Series LS04 AF**

- \( Q_n = 175 - 310 \text{ l/min} \)
- Pipe connection: \( \varnothing 4 - \varnothing 6 \)
- Compressed air connection output: \( \varnothing 4 - \varnothing 6 \)
- Electr. connection: Plug, M8, 3-pin
- Manual override: with detent
- Pilot: internal
- \( Q_n = 200 - 310 \text{ l/min} \)

**Dimensions**

![Diagram of the valve dimensions]

**PIN assignment for electrical connector**

1) Pin not assigned
3) 0 V
4) 24 V

Note: Bi-polar protective circuit to prevent overvoltage

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information.

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Directional valves - Supplementary products

2x3/2-directional valve, Series LS04 AF
► Qn = 175 - 310 l/min ► pipe connection ► compressed air connection output: Ø 4 - Ø 6 ► Electr. connection: Plug, Industrial plug connector, 2-pin ► Manual override: without detent ► Pilot: internal ► Qn = 200 - 310 l/min

Version
Sealing principle
Working pressure min./max.
Ambient temperature min./max.
Medium temperature min./max.
Medium
Max. particle size
Oil content of compressed air
Protection class acc. to DIN EN 61140 electrically
Degree of protection With connection
Protective circuit
Status display LED
Duty cycle
Switch-on time
Switch-off time
Generic emission standard in accordance with
Generic immunity standard in accordance with
Mounting screw
mounting screw tightening torque
Weight
Materials:
Housing
Seals

Technical Remarks

- The min. control pressure must be adhered to, since otherwise faulty switching and valve failure may result!
- The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.
- The oil content of compressed air must remain constant during the life cycle.
- Use only the approved oils from AVENTICS, see chapter „Technical information“.

Operational voltage
Voltage tolerance
Power consumption

DC
DC
DC

24 V
-10% / +10%

0.7

MO
Compressed air connection
Power consumption
Flow conductance
Part No.

Input
Output
Exhaust
DC
24 V
DC
b
C
[W]
[l/(s*bar)]

NO/NO
Ø 4
Ø 4
Ø 4
24 V
0.7
0.4
0.8
R422100571

NC/NC
Ø 4
Ø 4
Ø 4
24 V
0.7
0.4
0.8
R422100579

NC/NO
Ø 4
Ø 4
Ø 4
24 V
0.7
0.4
0.8
R422100587

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information.
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Directional valves ► Supplementary products

2x3/2-directional valve, Series LS04 AF

- Qn = 175 - 310 l/min
- pipe connection
- compressed air connection output: Ø 4 - Ø 6
- Electr. connection: Plug, Industrial plug connector, 2-pin
- Manual override: without detent
- Pilot: internal
- Qn = 200 - 310 l/min

<table>
<thead>
<tr>
<th>MO</th>
<th>Compressed air connection</th>
<th>Power consumption</th>
<th>Flow conductance</th>
<th>Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Input</td>
<td>Output</td>
<td>Exhaust</td>
<td>DC 24 V</td>
</tr>
<tr>
<td>NO/NO</td>
<td>Ø 6</td>
<td>Ø 6</td>
<td>Ø 6</td>
<td>0.7</td>
</tr>
<tr>
<td>NC/NC</td>
<td>Ø 6</td>
<td>Ø 6</td>
<td>Ø 6</td>
<td>0.7</td>
</tr>
<tr>
<td>NC/NO</td>
<td>Ø 6</td>
<td>Ø 6</td>
<td>Ø 6</td>
<td>0.7</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Flow rate value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Qn</td>
<td>[l/min]</td>
</tr>
<tr>
<td>R422100571</td>
<td>175</td>
</tr>
<tr>
<td>R422100579</td>
<td>180</td>
</tr>
<tr>
<td>R422100587</td>
<td>175</td>
</tr>
<tr>
<td>R422100572</td>
<td>250</td>
</tr>
<tr>
<td>R422100580</td>
<td>310</td>
</tr>
<tr>
<td>R422100588</td>
<td>250</td>
</tr>
</tbody>
</table>

HHB = Manual override
Nominal flow Qn at 6 bar and Δp = 1 bar
2x3/2-directional valve, Series LS04 AF
- Qn = 175 - 310 l/min
- pipe connection
- compressed air connection output: Ø 4 - Ø 6
- Electr. connection:
  - Plug, Industrial plug connector, 2-pin
  - Manual override: without detent
  - Pilot: internal
  - Qn = 200 - 310 l/min

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information.

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Directional valves ► Supplementary products

2x3/2-directional valve, Series LS04 AF

► Qn = 175 - 310 l/min ► pipe connection ► compressed air connection output: Ø 4 - Ø 6 ► Electr. connection: Plug, Industrial plug connector, 2-pin ► Manual override: with detent ► Pilot: internal ► Qn = 200 - 310 l/min

Version
Sealing principle
Working pressure min./max.
Ambient temperature min./max.
Medium temperature min./max.
Medium
Max. particle size
Oil content of compressed air

Protection class acc. to DIN EN 61140
electrically
Degree of protection With connection
Protective circuit
Status display LED
Duty cycle
Switch-on time
Switch-off time
Generic emission standard in accordance with
Generic immunity standard in accordance with
Mounting screw
mounting screw tightening torque
Weight

Materials:
Housing
Seals

Technical Remarks
- The min. control pressure must be adhered to, since otherwise faulty switching and valve failure may result!
- The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.
- The oil content of compressed air must remain constant during the life cycle.
- Use only the approved oils from AVENTICS, see chapter „Technical information“.

Operational voltage
Voltage tolerance
Power consumption
DC
DC
DC
W

<table>
<thead>
<tr>
<th>Operational voltage</th>
<th>Voltage tolerance</th>
<th>Power consumption</th>
</tr>
</thead>
<tbody>
<tr>
<td>DC 24 V</td>
<td>-10% / +10%</td>
<td>0.7</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MO</th>
<th>Compressed air connection</th>
<th>Power consumption</th>
<th>Flow conductance</th>
<th>Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Input</td>
<td>Output</td>
<td>Exhaust</td>
<td>DC 24 V DC</td>
</tr>
<tr>
<td>NO/NO</td>
<td>Ø 4</td>
<td>Ø 4</td>
<td>Ø 4</td>
<td>24 V</td>
</tr>
<tr>
<td>NC/NC</td>
<td>Ø 4</td>
<td>Ø 4</td>
<td>Ø 4</td>
<td>24 V</td>
</tr>
<tr>
<td>NO/NO</td>
<td>Ø 4</td>
<td>Ø 4</td>
<td>Ø 4</td>
<td>24 V</td>
</tr>
</tbody>
</table>

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information.

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2x3/2-directional valve, Series LS04 AF

- Qn = 175 - 310 l/min
- pipe connection
- compressed air connection output: Ø 4 - Ø 6
- Electr. connection: Plug, Industrial plug connector, 2-pin
- Manual override: with detent
- Pilot: internal
- Qn = 200 - 310 l/min

<table>
<thead>
<tr>
<th>MO</th>
<th>Compressed air connection</th>
<th>Power consumption</th>
<th>Flow conductance</th>
<th>Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Input</td>
<td>Output</td>
<td>Exhaust</td>
<td>DC</td>
</tr>
<tr>
<td>NO/NO</td>
<td>Ø 6</td>
<td>Ø 6</td>
<td>Ø 6</td>
<td>24 V</td>
</tr>
<tr>
<td>NC/NC</td>
<td>Ø 6</td>
<td>Ø 6</td>
<td>Ø 6</td>
<td>24 V</td>
</tr>
<tr>
<td>NC/NO</td>
<td>Ø 6</td>
<td>Ø 6</td>
<td>Ø 6</td>
<td>24 V</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Flow rate value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Qn</td>
<td>[l/min]</td>
</tr>
<tr>
<td>R422100575</td>
<td>175</td>
</tr>
<tr>
<td>R422100583</td>
<td>180</td>
</tr>
<tr>
<td>R422100591</td>
<td>175</td>
</tr>
<tr>
<td>R422100576</td>
<td>250</td>
</tr>
<tr>
<td>R422100584</td>
<td>310</td>
</tr>
<tr>
<td>R422100592</td>
<td>250</td>
</tr>
</tbody>
</table>

HHB = Manual override
Nominal flow Qn at 6 bar and Δp = 1 bar

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

Pneumatics catalog, online PDF, as of 2015-01-14, ©AVENTICS S.a.r.l., subject to change
2x3/2-directional valve, Series LS04 AF
- Qn = 175 - 310 l/min
- Pipe connection
- Compressed air connection output: Ø 4 - Ø 6
- Electr. connection: Plug, Industrial plug connector, 2-pin
- Manual override: with detent
- Pilot: internal
- Qn = 200 - 310 l/min

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information.
Directional valves  ➤  Supplementary products

5/2-directional valve, Series LS04 AF
➤ Qn = 180 - 310 l/min ➤ pipe connection ➤ compressed air connection output: Ø 4 - Ø 6 ➤ Electr. connection: Plug, M8, 3-pin ➤ Manual override: without detent ➤ single solenoid, double solenoid ➤ Pilot: internal ➤ Qn = 200 - 310 l/min

- Version: Spool valve, zero overlap
- Sealing principle: Soft sealing
- Working pressure min./max.: See table below
- Ambient temperature min./max.: -10°C / +50°C
- Medium temperature min./max.: -10°C / +50°C
- Medium: Compressed air
- Max. particle size: 5 µm
- Oil content of compressed air: 0 mg/m³ - 5 mg/m³
- Electr. connection:
  - Plug, M8, 3-pin
- Manual override: without detent
- Single solenoid, double solenoid
- Pilot: internal
- Qn = 200 - 310 l/min
- Connector standard: DIN EN 60947-5-2
- Protection class acc. to DIN EN 61140:
  - Electrically: Class III
- Degree of protection:
  - With connection: IP65
- Protective circuit: Z-diode
- Status display LED: Yellow
- Duty cycle: 100%
- Generic emission standard in accordance with:
  - EN 61000-6-4:2002
- Generic immunity standard in accordance with IEC 61000-6-2:2005
- Generic emission standard in accordance with EN 61000-6-4:2002
- Generic immunity standard in accordance with IEC 61000-6-2:2005
- Mounting screw:
  - M3
- Mounting screw tightening torque: 0.5 Nm
- Weight:
  - See table below
- Materials:
  - Housing: Polyoxymethylene
  - Seals: Acrylonitrile Butadiene Rubber; Hydrogenated nitrile butadiene rubber; Polyurethane

### Technical Remarks
- The min. control pressure must be adhered to, since otherwise faulty switching and valve failure may result!
- The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.
- The oil content of compressed air must remain constant during the life cycle.
- Use only the approved oils from AVENTICS, see chapter „Technical information“.

<table>
<thead>
<tr>
<th>Operational voltage</th>
<th>Voltage tolerance</th>
<th>Power consumption</th>
</tr>
</thead>
<tbody>
<tr>
<td>DC</td>
<td>DC</td>
<td>DC</td>
</tr>
<tr>
<td>24 V</td>
<td>-10% / +10%</td>
<td>0.7</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MO</th>
<th>Compressed air connection</th>
<th>Power consumption</th>
<th>Flow conductance</th>
<th>Flow rate value</th>
<th>Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Input</td>
<td>Output</td>
<td>Exhaust</td>
<td>DC</td>
<td>24 V DC</td>
</tr>
<tr>
<td></td>
<td>Ø 4</td>
<td>Ø 4</td>
<td>Ø 4</td>
<td>24 V</td>
<td>0.7</td>
</tr>
<tr>
<td></td>
<td>Ø 4</td>
<td>Ø 4</td>
<td>Ø 4</td>
<td>24 V</td>
<td>0.7</td>
</tr>
<tr>
<td></td>
<td>Ø 6</td>
<td>Ø 6</td>
<td>Ø 6</td>
<td>24 V</td>
<td>0.7</td>
</tr>
</tbody>
</table>

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information.

Pneumatics catalog, online PDF, as of 2015-01-14, ©AVENTICS S.a.r.l., subject to change.
5/2-directional valve, Series LS04 AF

- Qn = 180 - 310 l/min
- pipe connection
- compressed air connection output: Ø 4 - Ø 6
- Electr. connection:
  - Plug, M8, 3-pin
  - Manual override: without detent
  - single solenoid, double solenoid
  - Pilot: internal
- Qn = 200 - 310 l/min

<table>
<thead>
<tr>
<th>MO</th>
<th>Compressed air connection</th>
<th>Power consumption</th>
<th>Flow conductance</th>
<th>Flow rate value</th>
<th>Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>DC 24 V DC</td>
<td>b [l/(s*bar)]</td>
<td>C [l/min]</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>□</td>
<td>0.7</td>
<td>0.27</td>
<td>1.5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Working pressure min./max.</th>
<th>Switch-on time t_F [ms]</th>
<th>Switch-off time t_E [ms]</th>
<th>Weight [kg]</th>
</tr>
</thead>
<tbody>
<tr>
<td>R422100561</td>
<td>3 / 8</td>
<td>10</td>
<td>30</td>
<td>0.047</td>
</tr>
<tr>
<td>R422100569</td>
<td>2 / 8</td>
<td>9</td>
<td>9</td>
<td>0.051</td>
</tr>
<tr>
<td>R422100562</td>
<td>3 / 8</td>
<td>10</td>
<td>30</td>
<td>0.047</td>
</tr>
<tr>
<td>R422100570</td>
<td>2 / 8</td>
<td>9</td>
<td>9</td>
<td>0.051</td>
</tr>
</tbody>
</table>

HHB = Manual override
Nominal flow Qn at 6 bar and Δp = 1 bar

Dimensions, single solenoid

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information.
Pneumatics catalog, online PDF, as of 2015-01-14, ©AVENTICS S.a.r.l., subject to change.
5/2-directional valve, Series LS04 AF
- Qn = 180 - 310 l/min
- pipe connection
- compressed air connection output: Ø 4 - Ø 6
- Electr. connection: Plug, M8, 3-pin
- Manual override: without detent
- single solenoid, double solenoid
- Pilot: internal
- Qn = 200 - 310 l/min

**Dimensions, double solenoid**

**PIN assignment for electrical connector**

1) Pin not assigned
3) 0 V
4) 24 V

Note: Bi-polar protective circuit to prevent overvoltage
Directional valves ► Supplementary products

5/2-directional valve, Series LS04 AF

► Qn = 180 - 310 l/min ► pipe connection ► compressed air connection output: Ø 4 - Ø 6 ► Electr. connection: Plug, M8, 3-pin ► Manual override: with detent ► Pilot: internal ► Qn = 200 - 310 l/min

Version Spool valve, zero overlap
Sealing principle Soft sealing
Working pressure min./max. 3 bar / 8 bar
Ambient temperature min./max. -10°C / +50°C
Medium temperature min./max. -10°C / +50°C
Medium Compressed air
Max. particle size 5 µm
Oil content of compressed air 0 mg/m³ - 5 mg/m³
Electr. connection: Plug, M8, 3-pin
Manual override: with detent
Pilot: internal
Qn = 200 - 310 l/min

Protection class acc. to DIN EN 61140 Class III
degree Electrically
Degree of protection With connection IP65
Protective circuit Z-diode
Status display LED Yellow
Duty cycle 100 %
Switch-on time 10 ms
Switch-off time 30 ms
Generic emission standard in accordance with EN 61000-6-4:2002
Generic immunity standard in accordance with IEC 61000-6-2:2005
Mounting screw M3
Mounting screw tightening torque 0.5 Nm
Weight 0.047 kg

Materials:
Housing Polyoxymethylene
Seals Acrylonitrile Butadiene Rubber; Hydrogenated nitrile butadiene rubber; Polyurethane

Technical Remarks
■ The min. control pressure must be adhered to, since otherwise faulty switching and valve failure may result!
■ The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.
■ The oil content of compressed air must remain constant during the life cycle.
■ Use only the approved oils from AVENTICS, see chapter „Technical information“.

Operational voltage | Voltage tolerance | Power consumption
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>DC</td>
<td>DC</td>
<td>DC</td>
</tr>
<tr>
<td>24 V</td>
<td>-10% / +10%</td>
<td>0.7 W</td>
</tr>
</tbody>
</table>

MO | Compressed air connection | Power consumption | Flow conductance | Flow rate value | Part No. |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Input</td>
<td>Output</td>
<td>Exhaust</td>
<td>DC 24 V DC</td>
<td>b</td>
<td>C</td>
</tr>
<tr>
<td>Ø 4</td>
<td>Ø 4</td>
<td>Ø 4</td>
<td>24 V</td>
<td>0.7</td>
<td>0.3</td>
</tr>
<tr>
<td>Ø 6</td>
<td>Ø 6</td>
<td>Ø 6</td>
<td></td>
<td>0.27</td>
<td>1.5</td>
</tr>
</tbody>
</table>

HHB = Manual override
Nominal flow Qn at 6 bar and Δp = 1 bar

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

Pneumatics catalog, online PDF, as of 2015-01-14, ©AVENTICS S.a.r.l., subject to change
5/2-directional valve, Series LS04 AF
► Qn = 180 - 310 l/min ► pipe connection ► compressed air connection output: Ø 4 - Ø 6 ► Electr. connection:
Plug, M8, 3-pin ► Manual override: with detent ► Pilot: internal ► Qn = 200 - 310 l/min

Dimensions

PIN assignment for electrical connector

1) Pin not assigned
3) 0 V
4) 24 V

Note: Bi-polar protective circuit to prevent overvoltage
Directional valves ▶ Supplementary products

5/2-directional valve, Series LS04 AF
- Qn = 180 - 310 l/min ▶ pipe connection ▶ compressed air connection output: Ø 4 - Ø 6 ▶ Electr. connection:
Plug, Industrial plug connector, 2-pin ▶ Manual override: without detent ▶ single solenoid, double solenoid
- Pilot: internal ▶ Qn = 200 - 310 l/min

Version
Sealing principle
Working pressure min./max.
Ambient temperature min./max.
Medium temperature min./max.
Medium
Max. particle size
Oil content of compressed air
Protection class acc. to DIN EN 61140
electrically
Degree of protection With connection
Protective circuit
Status display LED
Duty cycle
Generic emission standard in accordance with
Generic immunity standard in accordance with
Mounting screw
mounting screw tightening torque
Weight
Materials:
Housing
Seals

Technical Remarks
- The min. control pressure must be adhered to, since otherwise faulty switching and valve failure may result!
- The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.
- The oil content of compressed air must remain constant during the life cycle.
- Use only the approved oils from AVENTICS, see chapter „Technical information“.

Operational voltage
<table>
<thead>
<tr>
<th>Voltage</th>
<th>Power consumption</th>
</tr>
</thead>
<tbody>
<tr>
<td>DC</td>
<td>DC</td>
</tr>
<tr>
<td>24 V</td>
<td>-10% / +10%</td>
</tr>
</tbody>
</table>

Compressed air connection
<table>
<thead>
<tr>
<th>Power consumption</th>
<th>Flow conductance</th>
<th>Flow rate value</th>
<th>Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input</td>
<td>Output</td>
<td>Exhaust</td>
<td>DC</td>
</tr>
<tr>
<td></td>
<td>[W]</td>
<td></td>
<td>DC</td>
</tr>
<tr>
<td>Ø 4</td>
<td>Ø 4</td>
<td>Ø 4</td>
<td>24 V</td>
</tr>
<tr>
<td>Ø 4</td>
<td>Ø 4</td>
<td>Ø 4</td>
<td>24 V</td>
</tr>
<tr>
<td>Ø 6</td>
<td>Ø 6</td>
<td>Ø 6</td>
<td>24 V</td>
</tr>
<tr>
<td>Ø 6</td>
<td>Ø 6</td>
<td>Ø 6</td>
<td>24 V</td>
</tr>
</tbody>
</table>

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5/2-directional valve, Series LS04 AF

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Working pressure min./max.</th>
<th>Switch-on time</th>
<th>Switch-off time</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>[bar]</td>
<td>t_F [ms]</td>
<td>t_E [ms]</td>
<td>[kg]</td>
</tr>
<tr>
<td>R422100559</td>
<td>3 / 8</td>
<td>10</td>
<td>30</td>
<td>0.047</td>
</tr>
<tr>
<td>R422100567</td>
<td>2 / 8</td>
<td>9</td>
<td>9</td>
<td>0.051</td>
</tr>
<tr>
<td>R422100560</td>
<td>3 / 8</td>
<td>10</td>
<td>30</td>
<td>0.047</td>
</tr>
<tr>
<td>R422100568</td>
<td>2 / 8</td>
<td>9</td>
<td>9</td>
<td>0.051</td>
</tr>
</tbody>
</table>

HHB = Manual override
Nominal flow Qn at 6 bar and Δp = 1 bar

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information
Pneumatics catalog, online PDF, as of 2015-01-14, ©AVENTICS S.a.r.l., subject to change
5/2-directional valve, Series LS04 AF
- Qn = 180 - 310 l/min
- pipe connection
- compressed air connection output: Ø 4 - Ø 6
- Electr. connection:
  Plug, Industrial plug connector, 2-pin
  Manual override: without detent
  single solenoid, double solenoid
- Pilot: internal
- Qn = 200 - 310 l/min

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information.
5/2-directional valve, Series LS04 AF

- Qn = 180 - 310 l/min
- pipe connection
- compressed air connection output: Ø 4 - Ø 6
- Electr. connection:
  Plug, Industrial plug connector, 2-pin
- Manual override: with detent
- Pilot: internal
- Qn = 200 - 310 l/min

Version
Sealing principle
Working pressure min./max.
Ambient temperature min./max.
Medium temperature min./max.
Medium
Max. particle size
Oil content of compressed air
Protection class acc. to DIN EN 61140
directionally
Degree of protection With connection
Protective circuit
Status display LED
Duty cycle
Switch-on time
Switch-off time
Generic emission standard in accordance with
Generic immunity standard in accordance with
Mounting screw
mounting screw tightening torque
Weight
Materials:
Housing
Seals

Technical Remarks
- The min. control pressure must be adhered to, since otherwise faulty switching and valve failure may result!
- The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.
- The oil content of compressed air must remain constant during the life cycle.
- Use only the approved oils from AVENTICS, see chapter „Technical information“.

Operational voltage
Voltage tolerance
Power consumption

<table>
<thead>
<tr>
<th>DC</th>
<th>DC</th>
<th>DC</th>
</tr>
</thead>
<tbody>
<tr>
<td>24 V</td>
<td>-10% / +10%</td>
<td>0.7</td>
</tr>
</tbody>
</table>

Compressed air connection

<table>
<thead>
<tr>
<th>MO</th>
<th>Compressed air connection</th>
<th>Power consumption</th>
<th>Flow conductance</th>
<th>Flow rate value</th>
<th>Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input</td>
<td>Output</td>
<td>Exhaust</td>
<td>DC</td>
<td>24 V DC</td>
<td>b</td>
</tr>
<tr>
<td>Ø 4</td>
<td>Ø 4</td>
<td>Ø 4</td>
<td>24 V</td>
<td>0.7</td>
<td>0.8</td>
</tr>
<tr>
<td>Ø 6</td>
<td>Ø 6</td>
<td>Ø 6</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

HHB = Manual override
Nominal flow Qn at 6 bar and Δp = 1 bar

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information.
Pneumatics catalog, online PDF, as of 2015-01-14, ©AVENTICS S.a.r.l., subject to change.
5/2-directional valve, Series LS04 AF
► Qn = 180 - 310 l/min ► pipe connection ► compressed air connection output: Ø 4 - Ø 6 ► Electr. connection: Plug, Industrial plug connector, 2-pin ► Manual override: with detent ► Pilot: internal ► Qn = 200 - 310 l/min

Dimensions
Directional valves ► Supplementary products

5/3-directional valve, Series LS04 AF
-> Qn = 170 - 270 l/min -> closed center -> pipe connection -> compressed air connection output: Ø 4 - Ø 6
-> Electr. connection: Plug, M8, 3-pin -> closed center -> Manual override: without detent -> Pilot: internal -> Qn = 200 - 310 l/min

Version
Sealing principle
Working pressure min./max.
Ambient temperature min./max.
Medium temperature min./max.
Medium
Max. particle size
Oil content of compressed air
Connector standard
Protection class acc. to DIN EN 61140
Degree of protection With connection
Protective circuit
Status display LED
Duty cycle
Switch-on time
Generic emission standard in accordance with
Generic immunity standard in accordance with
Mounting screw
mounting screw tightening torque
Weight
Materials:
Housing
Seals

Technical Remarks

■ The min. control pressure must be adhered to, since otherwise faulty switching and valve failure may result!
■ The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.
■ The oil content of compressed air must remain constant during the life cycle.
■ Use only the approved oils from AVENTICS, see chapter „Technical information“.

<table>
<thead>
<tr>
<th>Operational voltage</th>
<th>Voltage tolerance</th>
<th>Power consumption</th>
</tr>
</thead>
<tbody>
<tr>
<td>DC</td>
<td>DC -10% / +10%</td>
<td>DC 0.7 W</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MO</th>
<th>Compressed air connection</th>
<th>Power consumption</th>
<th>Flow conductance</th>
<th>Flow rate value</th>
<th>Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Input</td>
<td>Output</td>
<td>Exhaust</td>
<td>DC</td>
<td>24 V DC</td>
</tr>
<tr>
<td></td>
<td>Ø 4</td>
<td>Ø 4</td>
<td>Ø 4</td>
<td>24 V</td>
<td>0.7</td>
</tr>
<tr>
<td></td>
<td>Ø 6</td>
<td>Ø 6</td>
<td>Ø 6</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

HHB = Manual override
Nominal flow Qn at 6 bar and Δp = 1 bar

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Directional valves ► Supplementary products

5/3-directional valve, Series LS04 AF
► Qn = 170 - 270 l/min ► closed center ► pipe connection ► compressed air connection output: Ø 4 - Ø 6
► Electr. connection: Plug, M8, 3-pin ► closed center ► Manual override: without detent ► Pilot: internal ► Qn = 200 - 310 l/min

Dimensions

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Width</td>
<td>57.6 mm</td>
</tr>
<tr>
<td>Height</td>
<td>50 mm</td>
</tr>
<tr>
<td>Depth</td>
<td>13.1 mm</td>
</tr>
<tr>
<td>Hole diameter</td>
<td>3.4 mm (2x)</td>
</tr>
<tr>
<td>Hole size</td>
<td>Ø 4 - Ø 6</td>
</tr>
<tr>
<td>Torque</td>
<td>0.5 Nm</td>
</tr>
</tbody>
</table>

PIN assignment for electrical connector

1) Pin not assigned
3) 0 V
4) 24 V

Note: Bi-polar protective circuit to prevent overvoltage
Directional valves ► Supplementary products

5/3-directional valve, Series LS04 AF
► Qn = 170 - 270 l/min ► closed center ► pipe connection ► compressed air connection output: Ø 4 - Ø 6
► Electr. connection: Plug, M8, 3-pin ► closed center ► Manual override: with detent ► Pilot: internal ► Qn = 200 - 310 l/min

Version
Spool valve, zero overlap

Sealing principle
Soft sealing

Working pressure min./max.
3 bar / 8 bar

Ambient temperature min./max.
-10°C / +50°C

Medium temperature min./max.
-10°C / +50°C

Medium
Compressed air

Max. particle size
5 µm

Oil content of compressed air
0 mg/m³ - 5 mg/m³

Connector standard
DIN EN 60947-5-2

Protection class acc. to DIN EN 61140
Class III electrically

Degree of protection With connection
IP65

Protective circuit
Z-diode

Status display LED
Yellow

Duty cycle
100 %

Switch-on time
10 ms

Generic emission standard in accordance with
EN 61000-6-4:2002

Generic immunity standard in accordance with
IEC 61000-6-2:2005

Mounting screw
M3

Mounting screw tightening torque
0.5 Nm

Weight
0.054 kg

Materials:
Housing
Polyoxymethylene

Seals
Acrylonitrile Butadiene Rubber; Hydrogenated nitrile butadiene rubber; Polyurethane

Technical Remarks

■ The min. control pressure must be adhered to, since otherwise faulty switching and valve failure may result!
■ The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.
■ The oil content of compressed air must remain constant during the life cycle.
■ Use only the approved oils from AVENTICS, see chapter „Technical information“.

Operational voltage
Voltage tolerance
Power consumption
DC
DC
DC

<table>
<thead>
<tr>
<th>DC</th>
<th>-10% / +10%</th>
</tr>
</thead>
<tbody>
<tr>
<td>24 V</td>
<td>0.7</td>
</tr>
</tbody>
</table>

MO
Compressed air connection
Power consumption
Flow conductance
Flow rate value
Part No.

<table>
<thead>
<tr>
<th>Input</th>
<th>Output</th>
<th>Exhaust</th>
<th>DC</th>
<th>24 V</th>
<th>DC</th>
<th>b</th>
<th>C</th>
<th>Qn</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ø 4</td>
<td>Ø 4</td>
<td>Ø 4</td>
<td>24</td>
<td>V</td>
<td>0.7</td>
<td>0.4</td>
<td>0.8</td>
<td>170</td>
</tr>
<tr>
<td>Ø 6</td>
<td>Ø 6</td>
<td>Ø 6</td>
<td></td>
<td></td>
<td></td>
<td>0.3</td>
<td>1.3</td>
<td>270</td>
</tr>
</tbody>
</table>

HHB = Manual override
Nominal flow Qn at 6 bar and Δp = 1 bar

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information
Pneumatics catalog, online PDF, as of 2015-01-14, ©AVENTICS S.a.r.l., subject to change
5/3-directional valve, Series LS04 AF
► Qn = 170 - 270 l/min ► closed center ► pipe connection ► compressed air connection output: Ø 4 - Ø 6
► Electr. connection: Plug, M8, 3-pin ► closed center ► Manual override: with detent ► Pilot: internal ► Qn = 200 - 310 l/min

DIMENSIONS

PIN assignment for electrical connector

1) Pin not assigned
3) 0 V
4) 24 V

Note: Bi-polar protective circuit to prevent overvoltage
Directional valves ➤ Supplementary products

5/3-directional valve, Series LS04 AF
► Qn = 170 - 270 l/min ➤ closed center ➤ pipe connection ➤ compressed air connection output: Ø 4 - Ø 6
► Electr. connection: Plug, Industrial plug connector, 2-pin ➤ closed center ➤ Manual override: without detent
► Pilot: internal ➤ Qn = 200 - 310 l/min

Version
Sealing principle
Working pressure min./max.
Ambient temperature min./max.
Medium temperature min./max.
Medium
Max. particle size
Oil content of compressed air
Protection class acc. to DIN EN 61140
depth
Degree of protection With connection
Protective circuit
Status display LED
Duty cycle
Switch-on time
Generic emission standard in accordance with
Generic immunity standard in accordance with
Mounting screw
mounting screw tightening torque
Weight
Materials:
Housing
Seals

Technical Remarks
■ The min. control pressure must be adhered to, since otherwise faulty switching and valve failure may result!
■ The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.
■ The oil content of compressed air must remain constant during the life cycle.
■ Use only the approved oils from AVENTICS, see chapter „Technical information“.

Operational voltage
Voltage tolerance
Power consumption
<table>
<thead>
<tr>
<th>DC</th>
<th>DC</th>
<th>DC</th>
</tr>
</thead>
<tbody>
<tr>
<td>24 V</td>
<td>-10% / +10%</td>
<td>0.7</td>
</tr>
</tbody>
</table>

Compressed air connection
<table>
<thead>
<tr>
<th>Input</th>
<th>Output</th>
<th>Exhaust</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ø 4</td>
<td>Ø 4</td>
<td>Ø 4</td>
</tr>
<tr>
<td>Ø 6</td>
<td>Ø 6</td>
<td>Ø 6</td>
</tr>
</tbody>
</table>

Power consumption
<table>
<thead>
<tr>
<th>DC 24 V</th>
<th>b</th>
<th>C</th>
<th>Qn</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.7</td>
<td>0.4</td>
<td>0.8</td>
<td>170</td>
</tr>
</tbody>
</table>

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information.
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5/3-directional valve, Series LS04 AF
- Qn = 170 - 270 l/min - closed center - pipe connection - compressed air connection output: Ø 4 - Ø 6
- Pilot: internal - Qn = 200 - 310 l/min

Dimensions
5/3-directional valve, Series LS04 AF
- Qn = 170 - 270 l/min - closed center - pipe connection - compressed air connection output: Ø 4 - Ø 6
- Pilot: internal - Qn = 200 - 310 l/min

Version
Spool valve, zero overlap
Sealing principle
Soft sealing
Working pressure min./max.
3 bar / 8 bar
Ambient temperature min./max.
-10°C / +50°C
Medium temperature min./max.
-10°C / +50°C
Medium
Compressed air
Max. particle size
5 µm
Oil content of compressed air
0 mg/m³ - 5 mg/m³
Protection class acc. to DIN EN 61140
electrically
Class III
Degree of protection
With connection
IP50
Protective circuit
Z-diode
Status display LED
Yellow
Duty cycle
100 %
Switch-on time
10 ms
Generic emission standard in accordance with
EN 61000-6-4:2002
Generic immunity standard in accordance with
IEC 61000-6-2:2005
Mounting screw
M3
mounting screw tightening torque
0.5 Nm
Weight
0.054 kg
Materials:
Housing
Polyoxymethylene
Seals
Acrylonitrile Butadiene Rubber; Hydrogenated nitrile butadiene rubber; Polyurethane

Technical Remarks
- The min. control pressure must be adhered to, since otherwise faulty switching and valve failure may result!
- The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.
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<table>
<thead>
<tr>
<th>Operational voltage</th>
<th>Voltage tolerance</th>
<th>Power consumption</th>
</tr>
</thead>
<tbody>
<tr>
<td>DC 24 V DC</td>
<td>-10% / +10%</td>
<td>0.7 W</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MO</th>
<th>Compressed air connection</th>
<th>Power consumption</th>
<th>Flow conductance</th>
<th>Flow rate value</th>
<th>Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Input</td>
<td>Output</td>
<td>Exhaust</td>
<td>DC 24 V</td>
<td>b</td>
</tr>
<tr>
<td></td>
<td>Ø 4</td>
<td>Ø 4</td>
<td>Ø 4</td>
<td>24 V</td>
<td>0.7</td>
</tr>
<tr>
<td></td>
<td>Ø 6</td>
<td>Ø 6</td>
<td>Ø 6</td>
<td>24 V</td>
<td>0.7</td>
</tr>
</tbody>
</table>

HHB = Manual override
Nominal flow Qn at 6 bar and Δp = 1 bar
Directional valves ► Supplementary products

5/3-directional valve, Series LS04 AF
► Qn = 170 - 270 l/min ► closed center ► pipe connection ► compressed air connection output: Ø 4 - Ø 6
► Electr. connection: Plug, Industrial plug connector, 2-pin ► closed center ► Manual override: with detent
► Pilot: internal ► Qn = 200 - 310 l/min

Dimensions

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

Pneumatics catalog, online PDF, as of 2015-01-14, ©AVENTICS S.a.r.l., subject to change
Connecting cable, Series CN2
► Socket, M8, 3-pin ► open cable ends, 3-pin ► straight

- Ambient temperature min./max. -40°C / +85°C
- Protection class IP65
- Materials:
  - Cable sheath Polyurethane

Technical Remarks
■ The specified protection class is valid only in assembled and tested state.

| Max. current Number of wires Wire cross-section Cable exit Cable-Ø Cable length L Weight Part No. | [A] | [mm²] | [mm] | [m] | [kg] |
| --- | --- | --- | --- | --- | --- | --- |
| 1 BN | 4 | 3 | 0.24 | straight 180° | 3 | 0.091 | 1834484166 |
| 3 BU | 5 | 0.145 | 1834484168 |
| 4 BK | 10 | 0.33 | 1834484247 |

Dimensions

(1) BN=brown (3) BU=blue (4) BK=black
L = length

Connecting cable, Series CN2
► Socket, M8, 3-pin ► open cable ends, 3-pin ► angled

- Ambient temperature min./max. -40°C / +85°C
- Protection class IP65
- Materials:
  - Cable sheath Polyurethane

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Directional valves » Supplementary products

Series LS04
Accessories

Technical Remarks
- The specified protection class is valid only in assembled and tested state.

<table>
<thead>
<tr>
<th>Max. current [A]</th>
<th>Number of wires</th>
<th>Wire cross-section [mm²]</th>
<th>Cable exit</th>
<th>Cable Ø [mm]</th>
<th>Cable length L [m]</th>
<th>Weight [kg]</th>
<th>Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>3</td>
<td>0.24</td>
<td>angled 90°</td>
<td>4.5</td>
<td>3</td>
<td>0.092</td>
<td>1834484167</td>
</tr>
<tr>
<td>3</td>
<td>5</td>
<td>0.092</td>
<td></td>
<td></td>
<td>5</td>
<td>0.141</td>
<td>1834484169</td>
</tr>
<tr>
<td>10</td>
<td>10</td>
<td>0.141</td>
<td></td>
<td>10</td>
<td>10</td>
<td>0.276</td>
<td>1834484248</td>
</tr>
</tbody>
</table>

Dimensions

M8x1 socket (female), Series CN2
- Socket, M8x1, 3-pin - straight

Ambient temperature min./max. -25°C / +80°C
Protection class IP67
Materials:
- Housing Polyamide

Technical Remarks
- The specified protection class is valid only in assembled and tested state.
Series LS04
Accessories

<table>
<thead>
<tr>
<th>-20% / +20%</th>
<th>Max. current</th>
<th>Contact assignment</th>
<th>Cable exit</th>
<th>suitable cable-Ø min./max</th>
<th>Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>DC [V]</td>
<td>AC [V]</td>
<td>[A]</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>75</td>
<td>60</td>
<td>4</td>
<td>3</td>
<td>straight 180°</td>
<td>3.5 / 5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Part No.</th>
<th>number of plug options 1</th>
<th>Housing color</th>
<th>Weight [kg]</th>
</tr>
</thead>
<tbody>
<tr>
<td>1834484173</td>
<td>1 position</td>
<td>Black</td>
<td>0.008</td>
</tr>
</tbody>
</table>

Dimensions

M8x1 socket (female), Series CN2
> Socket, M8x1, 3-pin > angled

Ambient temperature min./max. -25°C / +85°C
Protection class IP65
Operational voltage AC, max. 60 V
Operational voltage DC, max. 75 V
Materials:
Housing Polyamide

Technical Remarks
■ The specified protection class is valid only in assembled and tested state.

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Directional valves ► Supplementary products

Series LS04
Accessories

<table>
<thead>
<tr>
<th>Max. current</th>
<th>Contact assignment</th>
<th>Cable exit</th>
<th>suitable cable-Ø min./max</th>
<th>number of plug options</th>
<th>Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>[A]</td>
<td>[mm]</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>BN</td>
<td>4</td>
<td>3</td>
<td>angled 90°</td>
<td>1 position</td>
</tr>
<tr>
<td>3</td>
<td>BU</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>BK</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Housing color</th>
<th>Weight [kg]</th>
</tr>
</thead>
<tbody>
<tr>
<td>1834484174</td>
<td>Black</td>
<td>0.008</td>
</tr>
</tbody>
</table>

Dimensions

Connecting cable with socket, Series S

► Socket, Industrial plug connector, 2-pin ► without wire end ferrule, tin-plated, 2-pin

Cable exit  
straight 180°

<table>
<thead>
<tr>
<th>Number of wires</th>
<th>Cable length L</th>
<th>Weight [kg]</th>
<th>Delivery quantity</th>
<th>Note</th>
<th>Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>[m]</td>
<td>[kg]</td>
<td>[Piece]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>5</td>
<td>0.042</td>
<td>5</td>
<td>-</td>
<td>1834484265</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>0.026</td>
<td>1</td>
<td>-</td>
<td>1834484266</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>0.003</td>
<td>10</td>
<td>1)</td>
<td>1834484267</td>
</tr>
</tbody>
</table>

1) without cable

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L = length

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Observe the applicable regulations and laws of the respective country. When integrating the product into applications, note the system manufacturer’s specifications for safe use of the product. The data specified only serve to describe the product. No statements concerning a certain condition or suitability for a certain application can be derived from our information. The information given does not release the user from the obligation of own judgment and verification. It must be remembered that the products are subject to a natural process of wear and aging.

14-01-2015