FAS Microsol & Microsol Interface 15 mm
Direct acting & pilot operated solenoid valves
Sub-base mounted
2/2, 3/2, NC / NO

Very compact design
High flow rate
Low power consumption
High cycling rate – 2000 c.p.m. maximum
Long life – in excess of 100 million cycles 1)

1) Except Hit & Hold valves: 10 million cycles

Technical data
Medium:
Compressed air, filtered to 40 µm, lubricated or non-lubricated;
neutral fluids or gases (other mediums contact Technical Service)
Operation:
Microsol: Poppet valve, directly actuated with spring return
Microsol interface: Solenoid pilot operated poppet valve,
        servo assisted
Operating pressure:
0 to 10 bar (see page 2 for details)
Mounting:
Through holes, M3 threaded
Flow characteristics:
Flow Orifice kv
2 ... 194 l/min 0,12 ... 3,00 0,5 ...3,6
Fluid response time:
15ms
Ambient temperature:
-10°C to +50°C
Fluid temperature:
-10°C to +30°C
(consult our Technical Service for use below +2°C)
Weight:
Direct acting: 0,03 kg
Pilot acting: 0,06 kg

Materials
(in contact with medium)
Direct acting
Body: for 2/2 valves PPS, for 3/2 valves PPS, PA, AISI 302
Solenoid: AISI 430FR, PAA, AISI 302
Elastomers: NBR

Pilot operated
Body: PPS, PA, POM
Solenoid: AISI 303 and 430FR, PAA
Elastomers: NBR, PUR

Alternative options on request
Function, Pressure range
Vacuum, Coil orientation
Material, Manual override
Voltage, Electrical connector
Power, High speed valve
IP65 or IP67 protection
Operation with other medium
Sub-base options
refer to data sheet N/UK 5.4.118.00
### Standard models

#### 2/2 direct acting valves

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</thead>
<tbody>
<tr>
<td><img src="image" alt="2/2 NC" /></td>
<td>1.1</td>
<td>48</td>
<td>0.75</td>
<td>0 ... 10</td>
<td>None</td>
<td>No</td>
<td>01-21P0202-H0+63111+AYZ</td>
<td>24 V d.c.</td>
<td>2</td>
<td>1</td>
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<tr>
<td><img src="image" alt="2/2 NO" /></td>
<td>1.1</td>
<td>48</td>
<td>0.75</td>
<td>0 ... 10</td>
<td>None</td>
<td>No</td>
<td>01-22P0202-H0+631A1+AYZ</td>
<td>24 V d.c.</td>
<td>2</td>
<td>2</td>
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</tbody>
</table>

Note: Electrical connection: for AMP connector. IP51 protection

### 3/2 direct acting valves

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<tr>
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<tbody>
<tr>
<td><img src="image" alt="3/2 NC" /></td>
<td>1.1</td>
<td>27</td>
<td>0.42</td>
<td>0 ... 10</td>
<td>Push only</td>
<td>No</td>
<td>01-31P0101H0+61111+AYZ</td>
<td>24 V d.c.</td>
<td>2</td>
<td>4</td>
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<tr>
<td><img src="image" alt="3/2 NO" /></td>
<td>1.1</td>
<td>27</td>
<td>0.42</td>
<td>0 ... 6</td>
<td>None</td>
<td>No</td>
<td>01-32P0101H0+631A1+AYZ</td>
<td>24 V d.c.</td>
<td>2</td>
<td>4</td>
</tr>
</tbody>
</table>

Note: Electrical connection: for AMP connector. IP51 protection

### High Flow models

#### 2/2 direct acting valves

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<thead>
<tr>
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<tbody>
<tr>
<td><img src="image" alt="2/2 NC" /></td>
<td>3.6</td>
<td>194</td>
<td>3.0</td>
<td>0 ... 6</td>
<td>None</td>
<td>Yes</td>
<td>01-21P036H0+63111+AZN</td>
<td>24 V d.c.</td>
<td>12 / 0.5</td>
<td>3</td>
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</table>

Note: Electrical connection: for AMP connector. IP51 protection

### 3/2 interface valves

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</thead>
<tbody>
<tr>
<td><img src="image" alt="3/2 NC" /></td>
<td>3.0</td>
<td>194</td>
<td>3.00</td>
<td>1.5 ... 10</td>
<td>Push only</td>
<td>No</td>
<td>01-31E0-6-H0+A1171+AYV</td>
<td>24 V d.c.</td>
<td>1</td>
<td>6</td>
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<tr>
<td><img src="image" alt="3/2 NO" /></td>
<td>3.0</td>
<td>194</td>
<td>3.00</td>
<td>1.5 ... 10</td>
<td>None</td>
<td>No</td>
<td>01-32E0-6-H0+C31G1+AYZ</td>
<td>24 V d.c.</td>
<td>2</td>
<td>6</td>
</tr>
</tbody>
</table>

Note: Electrical connection: for AMP connector. IP51 protection

### Intrinsincally Safe (IS) models

#### 3/2 direct acting valves

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</thead>
<tbody>
<tr>
<td><img src="image" alt="3/2 NC" /></td>
<td>0.5</td>
<td>8</td>
<td>0.12</td>
<td>0 ... 7</td>
<td>Push only</td>
<td>No</td>
<td>01-31P0-00-H0+F01003+BCC</td>
<td>12 V a.c./d.c.</td>
<td>0.55</td>
<td>5</td>
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<tr>
<td><img src="image" alt="3/2 NO" /></td>
<td>0.5</td>
<td>8</td>
<td>0.12</td>
<td>0 ... 7</td>
<td>Push only</td>
<td>No</td>
<td>01-31P0-00-H0+F01003+BDC</td>
<td>12 V a.c./d.c.</td>
<td>0.7</td>
<td>5</td>
</tr>
<tr>
<td><img src="image" alt="3/2 NC" /></td>
<td>0.5</td>
<td>8</td>
<td>0.12</td>
<td>0 ... 7</td>
<td>Push only</td>
<td>No</td>
<td>01-31P0-00-H0+H01014+AWD</td>
<td>12 V d.c.</td>
<td>0.1</td>
<td>5</td>
</tr>
<tr>
<td><img src="image" alt="3/2 NO" /></td>
<td>0.5</td>
<td>8</td>
<td>0.12</td>
<td>0 ... 7</td>
<td>Push only</td>
<td>No</td>
<td>01-31P0-00-H0+H01016+AYG</td>
<td>24 V d.c.</td>
<td>0.1</td>
<td>5</td>
</tr>
</tbody>
</table>

Note: Electrical connection: for AMP connector. IP51 protection

Labeling: EEx ia IIC T6
Standard conformity: INERIS 00ATEX0031 X

### Other options as used on M54 range

#### 3/2 direct acting valves

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<tbody>
<tr>
<td><img src="image" alt="3/2 NC" /></td>
<td>0.8</td>
<td>18</td>
<td>0.28</td>
<td>0 ... 10</td>
<td>Push only</td>
<td>No</td>
<td>01-31P101-H0+61511i+AWM</td>
<td>12 V d.c.</td>
<td>1.5</td>
<td>4</td>
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<tr>
<td><img src="image" alt="3/2 NO" /></td>
<td>0.8</td>
<td>18</td>
<td>0.28</td>
<td>0 ... 10</td>
<td>Push only</td>
<td>No</td>
<td>01-31P101-H0+61511i+AYS</td>
<td>24 V d.c.</td>
<td>1.5</td>
<td>4</td>
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<tr>
<td><img src="image" alt="3/2 NC" /></td>
<td>0.8</td>
<td>18</td>
<td>0.28</td>
<td>0 ... 10</td>
<td>Push only</td>
<td>No</td>
<td>01-31P101-H0+61511i+AXX</td>
<td>24 V a.c.</td>
<td>1</td>
<td>4</td>
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<tr>
<td><img src="image" alt="3/2 NO" /></td>
<td>0.8</td>
<td>18</td>
<td>0.28</td>
<td>0 ... 10</td>
<td>Push only</td>
<td>No</td>
<td>01-31P101-H0+11511i+BBJ</td>
<td>48 V a.c.</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td><img src="image" alt="3/2 NC" /></td>
<td>0.8</td>
<td>18</td>
<td>0.28</td>
<td>0 ... 10</td>
<td>Push only</td>
<td>No</td>
<td>01-31P101-H0+11511i+BBJ</td>
<td>110 V a.c.</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td><img src="image" alt="3/2 NO" /></td>
<td>0.8</td>
<td>18</td>
<td>0.28</td>
<td>0 ... 10</td>
<td>Push only</td>
<td>No</td>
<td>01-31P101-H0+11511i+BCK</td>
<td>220 V a.c.</td>
<td>1</td>
<td>4</td>
</tr>
</tbody>
</table>

for AMP connector with ground pin IP 65 solenoid valves
2/2 NC models with 1,1 mm orifice for Amp connection

2/2 NO models with 1,1 mm orifice for Amp connection (flow: port 2 to port 1)

High flow
2/2 NC models with 3,6 mm orifice for Amp connection (flow: port 2 to port 1)

Electrical details
- Voltage tolerance: -10%/+15%
- Rating: 100% E.D.
- Electrical insulation: 1500 V a.c.
- Insulation class: F155°C

Accessories
- Electrical connection
  - Single connector M/P43082
  - Single connector LED+VDR 24v M/P43086
  - Single connector LED+VDR 110v M/P43148
  - Single connector LED+VDR 220v M/P43087
  - 1 m flying lead M/P43068

Wire (red) / Pin +
Wire (black) / Pin -
Manual override
Mounting pattern
The recommended mounting screw tightening torque is 0.6 nm
All solenoids are supplied with mounting screws and gasket

Warning for Hit & Hold valves: damage could be caused to the valve if wired incorrectly.
Standard
all 3/2 models for AMP connection

Intrinsically safe for AMP connection

High flow
3/2 interface valve for AMP connector

Warning
These products are intended for use in industrial compressed air systems only. Do not use these products where pressures and temperatures can exceed those listed under 'Technical Data'.

Before using these products with fluids other than those specified, for non-industrial applications, life-support systems, or other applications not within published specifications, consult FAS.

Through misuse, age, or malfunction, components used in fluid power systems can fail in various modes.

The system designer is warned to consider the failure modes of all component parts used in fluid power systems and to provide adequate safeguards to prevent personal injury or damage to equipment in the event of such failure.

System designers must provide a warning to end users in the system instructional manual if protection against a failure mode cannot be adequately provided.

System designers and end users are cautioned to review specific warnings found in instruction sheets packed and shipped with these products.