15 mm

Pilot Valve
The 15 mm pilot valve has been designed and developed by Amisco as a logical evolution of the traditional product range manufactured for the pneumatic application.

The 15 mm solenoid valve is designed for those applications, more and more common on the actual market, where besides high performances in terms of pressure and flow, minimum dimension, very low power consumption and high reliability even at high cycling rates are specified.

This system is designed for use with air. The solenoid valve is composed by an encapsulated coil joined to a plastic valve body made by PPS. The assembly is not detachable.

Please contact Amisco for use with other media.

All the 15mm pilot valves feature:
• heat resistant bobbin moulded with 30% glass filled polyester (PBT)
• class H 200°C copper wire according to IEC 60317-13
• encapsulation with high quality specially designed glass filled polyamide (PA6.6)
• stainless steel guiding tube
• plunger and core made by a magnetic stainless steel specially designed for solenoid applications.

The pilot assembly is designed for more than 50 million cycles. The valve is normally equipped with FKM seals and monostable manual override, and it can be delivered with a specially designed seal and screws for its assembling on the main valve units.

The coil is designed and manufactured according to EN 60204.1 and VDE 0580 and it’s suitable for industrial ambient conditions. For use in different ambients with high humidity, take contact with Amisco. Copper and plastic materials used are UL-Listed.

The electrical part of the pilot can be manufactured and marked UL for Electrical Insulation System (EIS) "E200N", designated by Amisco as AMIF - UL file E343908. Pilot valve can be supplied and marked EAC for use in Russian Market.

More details about UL and EAC certification can be given on customer request.

Different electrical connections are available. The configuration of the valve unit can be with the pneumatic ports on the same side of the electrical connections or on the opposite side. Pneumatic connections are located in the valve body. The Amisco 15mm pilot valve is suitable for the use of subbases or the assembly in batteries, for common pressure and exhaust location.

More technical specifications are reported in the following pages.

The specifications and drawings contained herein are believed to be correct and are given in good faith, however no liability is accepted therefore. Manufacturer reserves the right to modify said specifications and drawings without notice for technical or commercial reasons.
# TECHNICAL DATA

## Pilot Valve technical data

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valve function</td>
<td>3/2 NC - 3/2 NO - 2/2 NC - 2/2 NO - 3/2 UNI</td>
</tr>
<tr>
<td>Media</td>
<td>air accordingly ISO 8573-1 class 3-4-3</td>
</tr>
<tr>
<td>Lubrification</td>
<td>not necessary</td>
</tr>
</tbody>
</table>
| Temperature                | ambient -10°C to + 50°C  
|                           | fluid -10°C to + 50°C  
| Orifice size               | 0,8 to 1,5 mm                                                                |
| Pressure                   | 0 - 16 bar                                                                   |
| Response time              | 5 - 15 ms                                                                    |
| Max cycling time           | 2000 cpm                                                                     |
| Life time expectancy       | 50 million cycles                                                            |
| Manual override            | monostable - bistable - no override                                           |
| Assembly                   | in any position                                                              |
| Fixing                     | n°2 screws M3 x 18                                                            |

## Coil technical data

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duty Cycle</td>
<td>ED 100%</td>
</tr>
</tbody>
</table>
| Power                         | 1 to 2.5 W (DC)  
|                               | 3 VA (AC)                                                                    |
| Voltage                       | 12 - 24 V DC  
|                               | 24 - 115 - 230 VAC  
|                               | (other voltages on request)                                                  |
| Voltage variation             | ± 10%                                                                        |
| Insulation Class              | F                                                                            |
| Degrees of protection         | IP 65 (according to EN 60529) with connector assembled with suitable seal   |
|                               | IP 67 Flying Leads and M12 version                                           |
| Electrical connection         | Amp 2,8 x 0,5 - DIN C - Flying Leads - M12                                   |
| Coil construction             | according to EN 60204.1 and VDE 0580                                         |

## Materials

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valve body</td>
<td>PPS</td>
</tr>
<tr>
<td>Seals</td>
<td>NBR - FKM - FKM Low temperature</td>
</tr>
<tr>
<td>Cores</td>
<td>stainless steel</td>
</tr>
<tr>
<td>Springs</td>
<td>stainless steel</td>
</tr>
<tr>
<td>Coil</td>
<td>PA 6.6 glass reinforced</td>
</tr>
</tbody>
</table>
| Copper wire       | class H 200°C  
|                   | IEC 60317 13                     |
## TECHNICAL SPECIFICATIONS

<table>
<thead>
<tr>
<th>Valve Types</th>
<th>Function</th>
<th>Orifice mm (Port 1)</th>
<th>Orifice mm (Port 3)</th>
<th>KV factor</th>
<th>Flow rate NL/min (Port 1→2) 6 bar Δp 1 bar</th>
<th>Pressure bar MIN</th>
<th>MAX</th>
<th>Power W</th>
<th>VA DC</th>
<th>AC</th>
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</thead>
<tbody>
<tr>
<td>A</td>
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<td>0,8</td>
<td>1,0</td>
<td>0,28</td>
<td>18</td>
<td>0</td>
<td>8</td>
<td>1</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>3/2 NC</td>
<td>1,1</td>
<td>1,5</td>
<td>0,42</td>
<td>28</td>
<td>0</td>
<td>10</td>
<td>2,5</td>
<td>3</td>
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</tr>
<tr>
<td>C</td>
<td>3/2 NC</td>
<td>1,5</td>
<td>1,5</td>
<td>0,55</td>
<td>36</td>
<td>0</td>
<td>6</td>
<td>2,5</td>
<td>3</td>
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<tr>
<td>D</td>
<td>2/2 NC</td>
<td>0,8</td>
<td>-</td>
<td>0,28</td>
<td>18</td>
<td>0</td>
<td>8</td>
<td>1</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>E</td>
<td>2/2 NC</td>
<td>1,1</td>
<td>-</td>
<td>0,42</td>
<td>28</td>
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<td>10</td>
<td>2,5</td>
<td>3</td>
<td></td>
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<tr>
<td>F</td>
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<td>-</td>
<td>0,55</td>
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<td>6</td>
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<td>3</td>
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<tr>
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<td>7</td>
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<tr>
<td>H</td>
<td>3/2 NO</td>
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<td>0,55</td>
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<td>3</td>
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<tr>
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<td>0</td>
<td>10</td>
<td>1</td>
<td>3</td>
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</tr>
<tr>
<td>J</td>
<td>2/2 NO</td>
<td>1,5</td>
<td>-</td>
<td>0,55</td>
<td>36</td>
<td>0</td>
<td>10</td>
<td>2,5</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>K</td>
<td>3/2 NC</td>
<td>0,8</td>
<td>1,0</td>
<td>0,28</td>
<td>18</td>
<td>0</td>
<td>16</td>
<td>2,5</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>3/2 NC</td>
<td>1,1</td>
<td>1,5</td>
<td>0,42</td>
<td>28</td>
<td>2</td>
<td>7,5</td>
<td>1</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Q</td>
<td>3/2 UNI</td>
<td>0,8</td>
<td>1,0</td>
<td>0,28 / 0,36</td>
<td>18 / 23</td>
<td>2</td>
<td>10</td>
<td>2,5</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

*Other specification upon customer request.*

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**Valves with recessed seal**

- Seal (Included)
- Alternative possibilities for CUSTOMER LOGO

**Valves with external seal**

- Aluminium plate + Seal
- Alternative possibilities for CUSTOMER LOGO
AMP 2.8x0.5
PART NUMBER 15S1...
M3 Torque 0.4 ÷ 0.6 Nm

DIN C
PART NUMBER 15D1...
M2.5 Torque 0.4 ÷ 0.6 Nm

Flying Leads
PART NUMBER 15C1...
Standard flying leads awg 24
High temperature (ht) flying leads awg 20  P/N 15C2...

M12
PART NUMBER 15M1...
15 mm PILOT VALVE CODING SPECIFICATION

PART NUMBER: 15ZZAKBYWCXX

ELECTRICAL CONNECTION
S1 = Industrial 9.4mm 3 pins
D1 = DIN C 8.0mm 3 pins
C1 = Std Flying Leads (105°C)
C2 = HT Flying Leads (140°C)
M1 = M12

NOMINAL VOLTAGES
C1 = 12VDC
C2 = 24VDC
PO = 24VAC 50/60 Hz
Other voltages available on demand
P2 = 110VAC 50/60 Hz
R5 = 220VAC 50/60 Hz
P9 = 230VAC 50/60 Hz

ASSEMBLING COIL-VALVE
1 = pneumatic and electrical ports on the opposite side (external seal)
2 = pneumatic and electrical ports on the same side (external seal)
4 = pneumatic and electrical ports on the opposite side (recessed seal)
5 = pneumatic and electrical ports on the same side (recessed seal)

WINDING CONFIGURATION
(see page 4 for details)
A = 2.5 W
B = 1.0 W
C = 3 VA
Other winding configurations available on demand

VALVE TYPES
(see page 4 Technical Specifications)
A = 3/2 NC Ø 0.8/1.0mm
B = 3/2 NC Ø 1.1/1.5mm
C = 3/2 NC Ø 1.5/1.5mm
E = 2/2 NC Ø 1.1mm
G = 3/2 NO Ø 1.0/1.1mm
Q = 3/2 UNI

SEAL MATERIALS
N = NBR
V = FKM
F = FKM Low Temperature (-30°C)

MANUAL OVERRIDE
M = monostable (no lock) Brass
B = bistable (turn and lock) Brass
O = no override
P = bistable (turn and lock) Plastic

MARKING
AM = Amisco logo and technical specifications
XX = according to customers demands
ZN = no marking

ASSEMBLING EQUIPMENT EXTERNAL SEAL VERSION - to be ordered separately
Aluminium plate + Seal
P/N 534047 (Aluminium plate + NBR seal)
P/N 534065 (Aluminium plate + FKM)
P/N 534074 (Aluminium plate + FKM Low temperature seal)

Screw M3x18TC
(2 pcs for each pilot)
P/N 560177

Torque: 0.4 ÷ 0.6 Nm
This Certificate does not replace the original EAC Document
In accordance with
SERCONS INTERNATIONAL
Russian Certification Authority in Europe
the company:
AMISCO S.p.A.
Via Piaggio 70,
Paderno Dugnano (MI), 20037
ITALY
fulfills the necessary requirements to be
certified according to EAC regulations.
Valid until: 22.05.2023

Amisco S.p.A.                                                                                                                           Tel. +39 02.9900181
Via Piaggio 70                                                                                                                         Fax +39 02.99001860
20037, Paderno Dugnano (MI) – Italy                                                                                                  www.amisco.it

UE DECLARATION OF CONFORMITY
We declare under our sole responsibility that the product:
Electrovalve: 15mm
Nominal voltage: up to 240V
Nominal Power: up to 2,5W [DC] or 3VA [AC]
Ambient temperature: -10 ÷ +50 °C
Tolerance range on nominal values: ±10 %

Is in conformity with the following directives:
• 2014/35/UE LV
• 2011/65/UE RoHS
with reference (if applicable) to the following harmonized standards:
• EN 12100 [2010]
• EN 60664/1 [2011]

Filippo Rotondo
Amisco Technical Division Manager
Paderno Dugnano, 20 April 2016

The data supplied in AMISCO Catalogues are to be consulted, and pertinent accident prevention regulations are to be followed
during product installation and use. Any unauthorized work performed by purchasers or by third parties can impair its function,
and relieves AMISCO of all warranty claims and liability for any resulting damage.

Issued to:

This is to certify that representative samples of
6<67(06(/(&75,&$/,168/$7,21

Have been investigated by Underwriters Laboratories Inc.® (UL) or any authorized
licensee of UL in accordance with the Standard(s) indicated on this Certificate.

Standard(s) for Safety:
8/67$1'$5')256<67(062),168/$7,1*0$7(5,$/6

Additional Information:

UL 1446 STANDARD FOR SYSTEMS OF INSULATING MATERIALS –
GENERAL Edition 8

Look for the UL Recognized Component Mark on the product.

This Certificate does not replace the original EAC Document
In accordance with
SERCONS INTERNATIONAL
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