

# AMISCO



## 15 mm

Pilot Valve

# 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 60335 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.

## TECHNICAL DATA

### Pilot Valve technical data

Valve function	3/2 NC - 3/2 NO - 2/2 NC - 2/2 NO - 3/2 UNI
Media	air accordingly ISO 8573-1 class 3-4-3
Lubrication	not necessary
Temperature	ambient -10°C to +50°C (-30°C FKM low temperature) 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

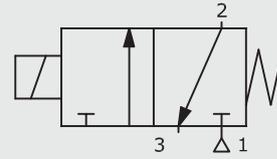
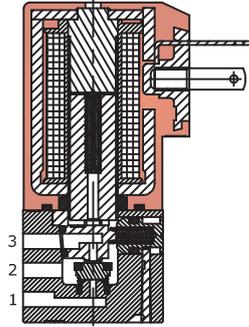
### Coil technical data

Duty Cycle	ED 100%
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 60335 and VDE 0580

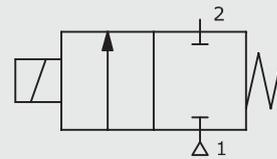
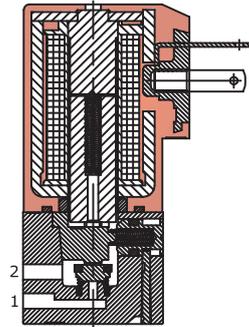
### Materials

Valve body	PPS
Seals	NBR - FKM - FKM Low temperature
Cores	stainless steel
Springs	stainless steel
Coil	PA 6.6 glass reinforced
Copper wire	class H 200°C IEC 60317 13

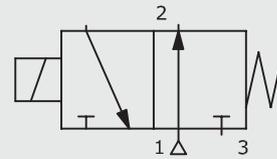
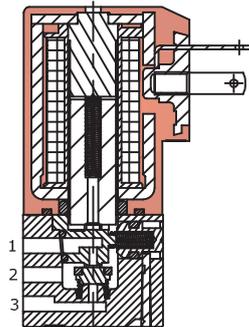
**3/2 NC**



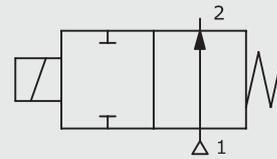
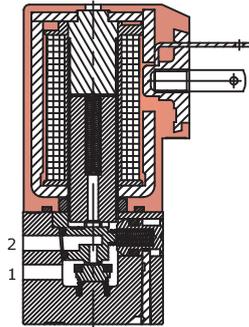
**2/2 NC**



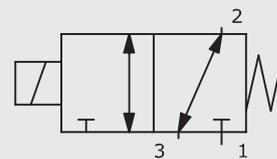
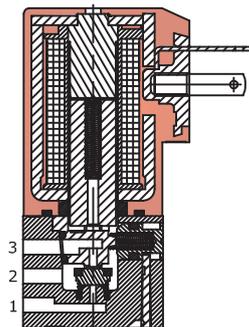
**3/2 NO**



**2/2 NO**



**3/2 UNI**

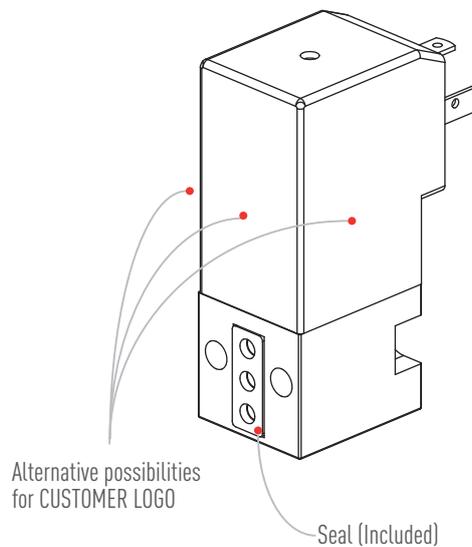


# TECHNICAL SPECIFICATIONS

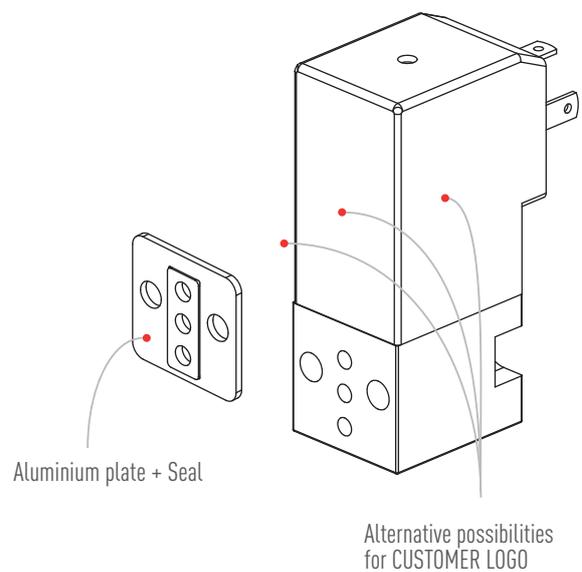
Valve Types	Function	Orifice mm (Port 1)	Orifice mm (Port 3)	KV factor	Flow rate NL/min (Port 1→2) 6 bar Δp 1 bar	Pressure		Power	
						bar		W	VA
						MIN	MAX	DC	AC
A	3/2 NC	0,8	1,0	0,28	18	0	8	1	3
B	3/2 NC	1,1	1,5	0,42	28	0	10	2,5	3
C	3/2 NC	1,5	1,5	0,55	36	0	6	2,5	3
D	2/2 NC	0,8	-	0,28	18	0	8	1	3
E	2/2 NC	1,1	-	0,42	28	0	10	2,5	3
F	2/2 NC	1,5	-	0,55	36	0	6	2,5	3
G	3/2 NO	1,0	1,1	0,36	23	0	7	2,5	3
H	3/2 NO	1,5	1,5	0,55	36	0	3,5	2,5	3
I	2/2 NO	1,0	-	0,40	26	0	10	1	3
J	2/2 NO	1,5	-	0,55	36	0	10	2,5	3
K	3/2 NC	0,8	1,0	0,28	18	0	16	2,5	3
N	3/2 NC	1,1	1,5	0,42	28	2	7,5	1	-
Q	3/2 UNI	0,8	1,0	0,28 / 0,36	18 / 23	0	10	2,5	3

Other specification upon customer request.

## Valves with recessed seal



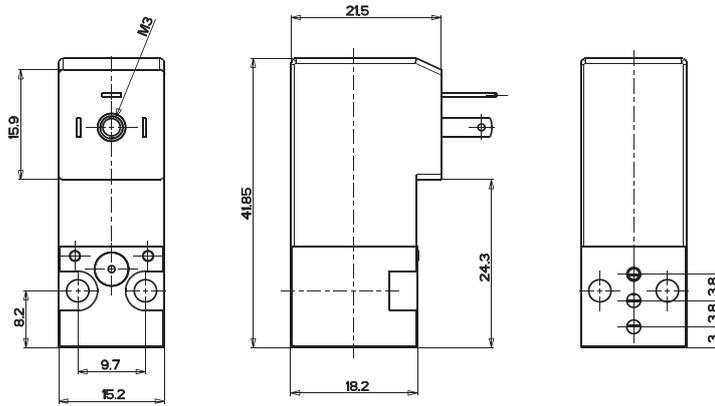
## Valves with external seal



## AMP 2.8x0.5

PART NUMBER 15S1...

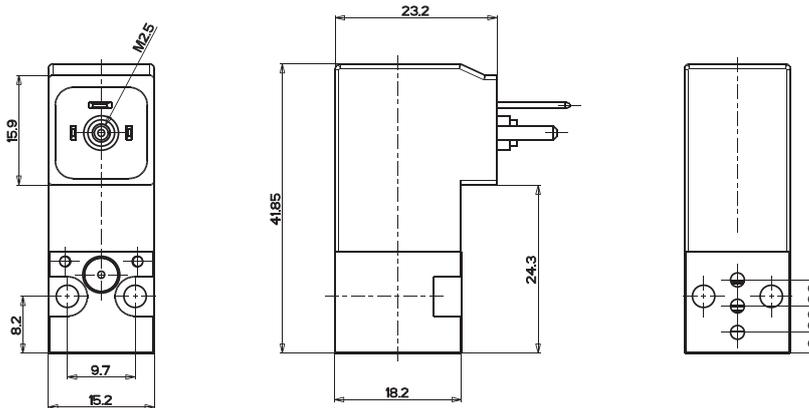
M3 Torque 0.4 ÷ 0.6 Nm



## DIN C

PART NUMBER 15D1...

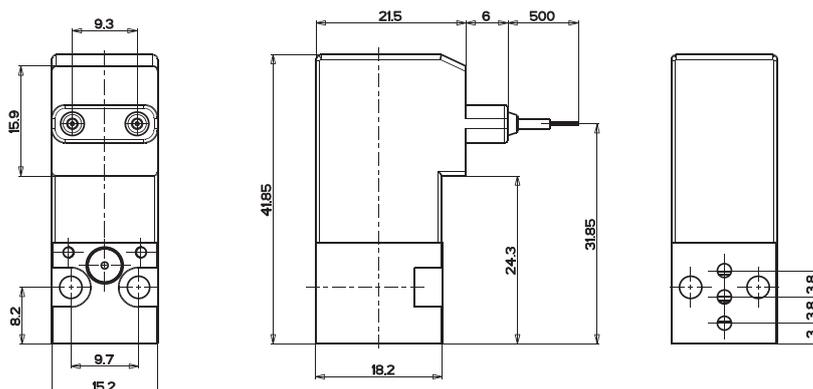
M2.5 Torque 0.4 ÷ 0.6 Nm



## Flying Leads

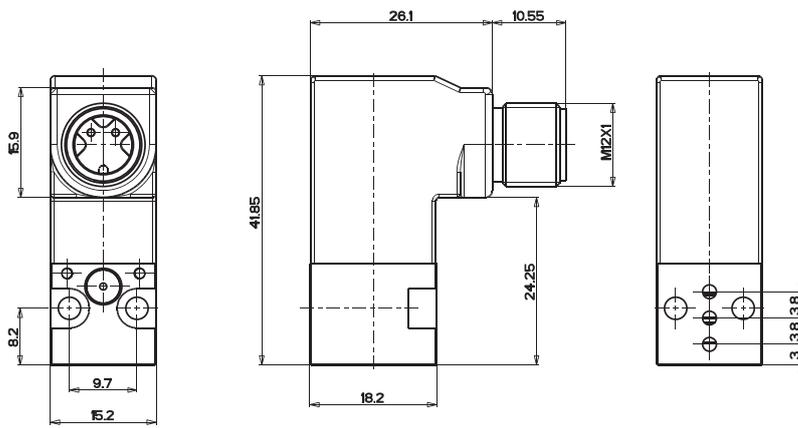
PART NUMBER 15C1...

Standard flying leads awg 24



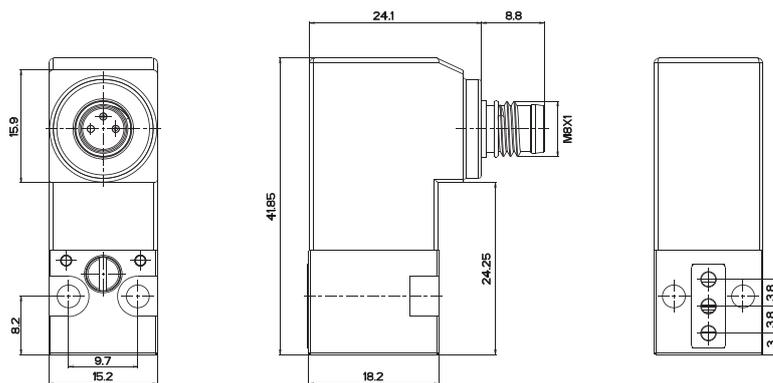
# M12

PART NUMBER 15M1...



# M8

PART NUMBER 15M8...



# 15 mm PILOT VALVE CODING SPECIFICATION

**PART NUMBER:**

**1 5 Z Z A A K B Y W C X X**

## 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  
 M8 = M8

## NOMINAL VOLTAGES

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

## WINDING CONFIGURATION

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

## 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)

## VALVE TYPES

(see pag4 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

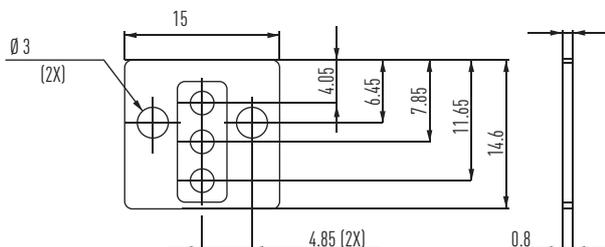
## MARKING

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 534076 (Aluminium plate + FKM Low temperature seal)

Screw M3x18TC  
 (2 pcs for each pilot)  
 P/N 540177



Torque: 0.4 ÷ 0.6 Nm



# Certifications



EU DECLARATION OF CONFORMITY



We declare under our sole responsibility that the electric coils and pilot valves families named:

- EVI 3
- EVI 5
- EVI 7
- EVI 9
- EVI 30
- 10 mm
- 15 mm

Marked with Amisco logo and CE marking are in conformity with the following directives:

**2011/65/EU (and it's amendment 2015/EU/863)**  
on the restriction of the use of certain hazardous substances in electrical and electronic equipment

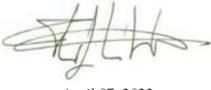
**2014/35/EU**  
on the harmonisation of the laws of the Member States relating to the making available on the market of electrical equipment designed for use within certain voltage limits

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For the evaluation of the conformity, the following standards, or part of them, has been consulted:

**EN 60335/1: 2020** - Household and similar electrical appliances - Safety - Part 1: General requirements  
**DIN VDE 0580: 2011** - Electromagnetic devices and components

Filippo Rotondo  
*Amisco Technical Division Director*



April 07, 2022

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Website: [www.amisco.it](http://www.amisco.it)



UKCA Declaration of Conformity



We declare under our sole responsibility that the electric coils and pilot valves families named:

- EVI 3
- EVI 5
- EVI 7
- EVI 9
- EVI 30
- 10 mm
- 15 mm

Marked with Amisco logo and UKCA marking are in conformity with to the following directives:

**SI 2012/3032**  
The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012

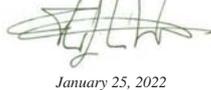
**SI 2016/1101**  
Electrical Equipment (Safety) Regulations 2016

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**DIN VDE 0580: 2011** - Electromagnetic devices and components

Filippo Rotondo  
*Amisco Technical Division Director*



January 25, 2022

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This Certificate does not replace the original EAC Document





## CERTIFICATE

*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



SERCONS INTERNATIONAL – Certification Authority  
Piazza della Repubblica, 22, 20124 MILAN | +39 02 8001 2140 | [www.SERCONS.ch.it](http://www.SERCONS.ch.it)

## Certificate of Compliance

Certificate Number 20101224-E343908  
Report Reference E343908, 2010 December 23  
Issue Date 2010 December 24

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*Issued to:* **AMISCO SPA**

VIA PIAGGIO 70  
20037 PADERNO DUGNANO MI ITALY

*This is to certify that representative samples of* **SYSTEMS, ELECTRICAL INSULATION**  
Class 155(F) insulation system, designated AMIF.

*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:* UL 1446, STANDARD FOR SYSTEMS OF INSULATING MATERIALS - GENERAL, Edition 6

*Additional Information:* See UL On-Line Certification Directory at [www.UL.com](http://www.UL.com) for additional information.

Only those products bearing the UL Recognized Component Mark should be considered as being covered by UL's Recognition and Follow-Up Service.  
The UL Recognized Component Mark generally consists of the manufacturer's identification and catalog number, model number or other product designation as specified under "Marking" for the particular Recognition as published in the appropriate UL Directory. As a supplementary means of identifying products that have been produced under UL's Component Recognition Program, UL's Recognized Component Mark may be used in conjunction with the required Recognized Marks. The Recognized Component Mark is required when specified in the UL Directory preceding the recognitions or under "Markings" for the individual recognitions.

Look for the UL Recognized Component Mark on the product

**William R. Carney**  
Director, North American Certification Programs  
Underwriters Laboratories Inc.



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