AUTOMATIC SOLENOID VALVES

Serie IENAA..

DESCRIPTION

Gas automatic normally open solenoid valves serie IENAA, closed if it is electrically powered.

Pmax = 360 mbar(DN 15 - DN25)
Pmax = 1 bar
Pmax = 3 bar
Pmax = 6 bar

- **In conformity with the 97/23/EC Directive (Ped Directive)**
- **In conformity with the 94/9/EC Directive (ATEX Directive)**
- **In conformity with the 2004/108/EC Directive (Electromagnetic Compatibility)**
- **In conformity with the 2006/95/EC Directive (Low Voltage)**

IDENTIFICATION

IENAA 03 02N 1 B

Gas automatic solenoid valve N.O. **serie IENAA...**

B = biogas

Pmax

03 = Pmax 360 mbar (DN15 - DN 25)

1 = Pmax 1 bar
3 = Pmax 3 bar
6 = Pmax 6 bar

Voltage

1 = 12 V/50 Hz
2 = 12 Vdc
3 = 24 V/50 Hz
4 = 24 Vdc
6 = 110 V/50-60 Hz with rectifier
8 = 230 V/50-60 Hz with rectifier

Connections

Threaded				Flanged			
Code	**GAS**	**Code NPT**	**NPT**	**Code**	**PN 16**	**Code ANSI**	**ANSI PN 16**
02	DN 15 (G 1/2")	**02N**	DN 15 (NPT 1/2")				
03	DN 20 (G 3/4")	**03N**	DN 20 (NPT 3/4")				
04	DN 25 (G 1")	**04N**	DN 25 (NPT 1")	**25**	DN 25	**25A**	DN 25 ANSI
05	DN 32 (G 1"1/4)	**05N**	DN 32 (NPT 1"1/4)	**32**	DN 32	**32A**	DN 32 ANSI
06	DN 40 (G 1"1/2)	**06N**	DN 40 (NPT 1"1/2)	**40**	DN 40	**40A**	DN 40 ANSI
07	DN 50 (G 2")	**07N**	DN 50 (NPT 2")	**50**	DN 50	**50A**	DN 50 ANSI

NOTE: not all combinations are possible
Please contact the technical department.

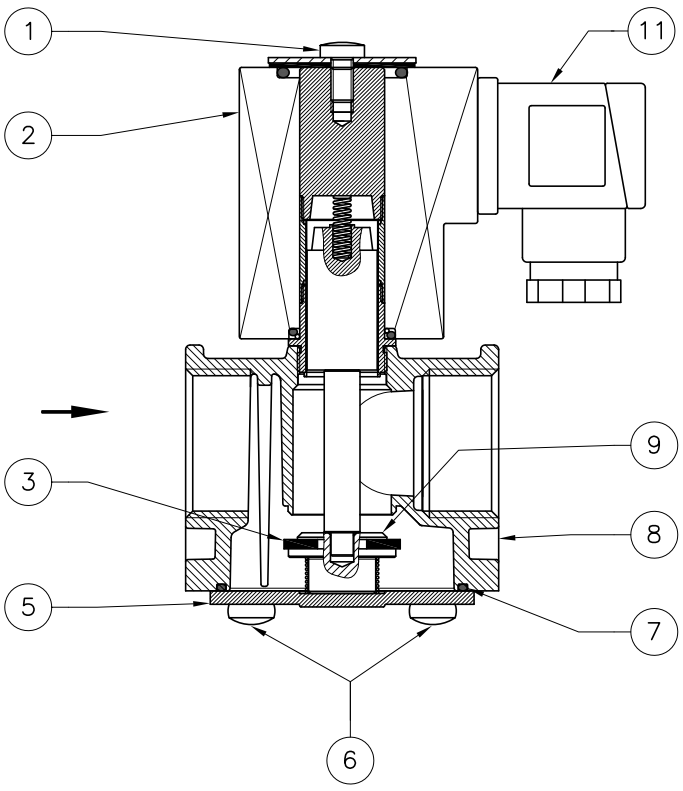
GENERAL DATA

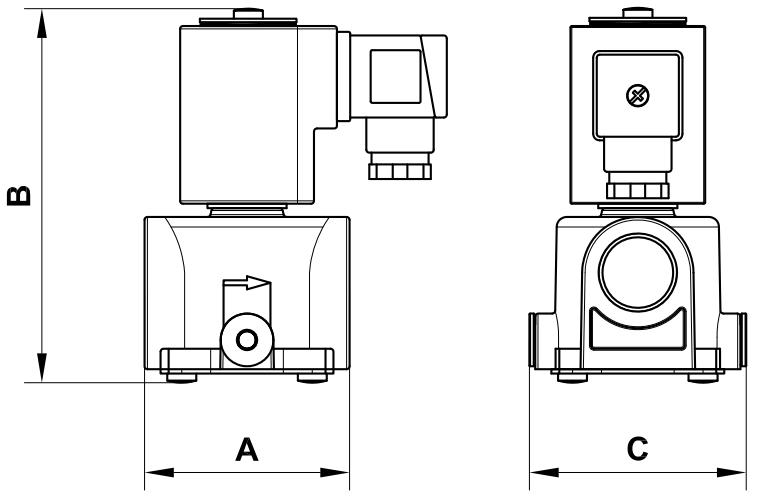
TECHNICAL DATA

- Use: not aggressive gases of the 3 families (dry gases)
- Threaded connections Rp: (DN 15 ÷ DN 25) according to EN 10226
- Power supply voltage: 12 Vdc, 12 V/50 Hz, 24 Vdc, 24 V/50 Hz, 110 V/50-60 Hz, 230 V/50-60 Hz
- Power supply voltage tolerance: -15% ... +10%
- Power absorption: see coils and connector table
- Max. working pressure: 360 mbar (DN 15 - DN25) ; 1 bar, 3 bar, 6 bar (DN15 - DN50)
- Environment temperature: -20 ÷ +60 °C
- Max superficial temperature: 80 °C

DIMENSIONS

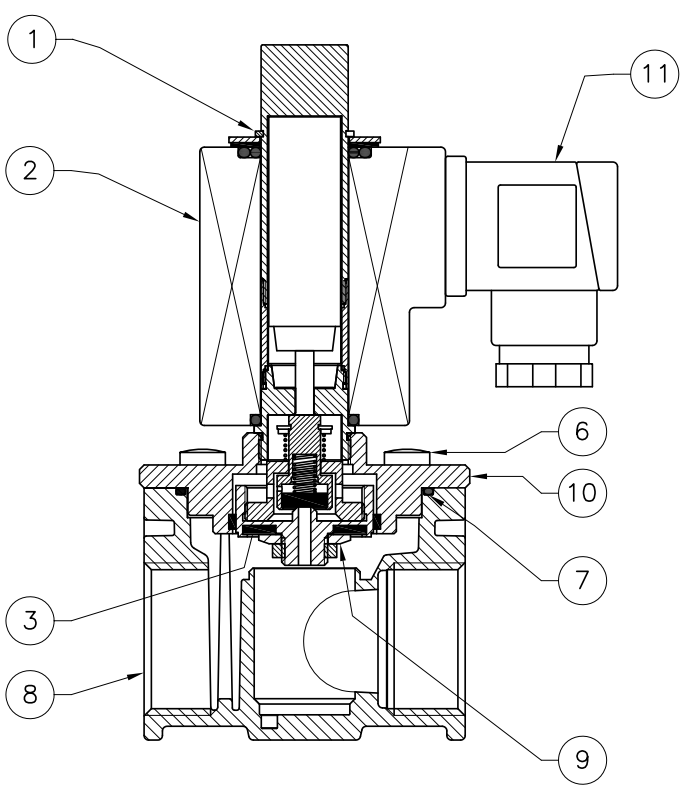
Overall dimensions in mm					
Threated connections	**Flanged connections**	**P. max**	**A**	**B**	**C**
DN 15 - DN 25	-	360 mbar	70	130	74
DN 15 - DN 25	-	1 - 3 - 6 bar	70	152	74
DN 32 - DN 50		1 - 3 - 6 bar	160	250	140
-	DN 25	360 mbar	142	147	115
-	DN 25	1 - 3 - 6 bar	142	187	115
	DN 32 - DN 50	1 - 3 - 6 bar	230	260	140

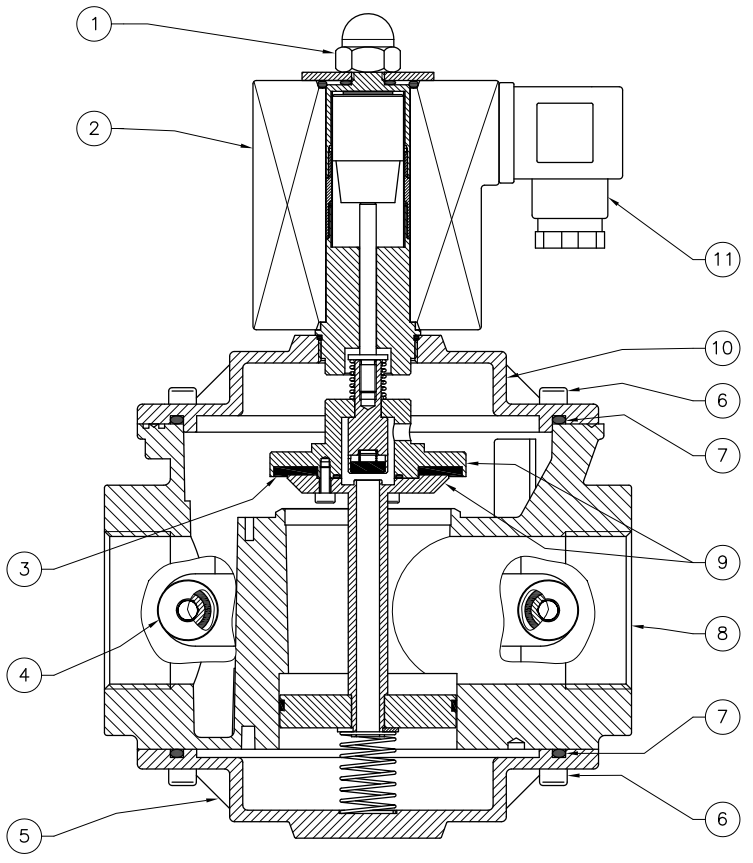




LEGEND

1 - Coil fixing screw/nut/seeger
2 - Electrical coil
3 - Seal washer
4 - G 1/4" connection
5 - Bottom
6 - Fixing screws
7 - Seal O-Ring
8 - Body valve
9 - Obturator
10 - Cover
11 - Electrical connector





COILS AND CONNECTORS

Connections	Voltage	Coil code	Coil stamping	Connector code	Connector type
DN 15 - DN 20 - DN 25 (P.max 360 mbar) (P.max 1 bar)	12 Vdc	BO-0400	BO-0400 12 VDC 17W	CN-0010	16 VA
	12 V/50 Hz	BO-0400	BO-0400 12 VDC 17W	CN-0050	12 VA
	24 Vdc	BO-0410	BO-0410 24 VDC 17W	CN-0010	17 VA
	24 V/50 Hz	BO-0410	BO-0410 24 VDC 17W	CN-0050	14 VA
	110 V/50-60 Hz	BO-0420	BO-0420 110 V RAC 17W	CN-0045	17 VA
	230 V/50-60 Hz	BO-0430	BO-0430 230 V RAC 17W	CN-0045	18 VA
DN 15 - DN 20 - DN 25 (P.max 3 - 6 bar)	12 Vdc	BO-0510	BO-0510 12 VDC 28W	CN-2100	23 VA Energy saving 6 VA
	12 V/50 Hz	BO-0510	BO-0510 12 VDC 28W	CN-2110	20 VA Energy saving 6 VA
	24 Vdc	BO-0520	BO-0520 24 VDC 28W	CN-2100	27 VA Energy saving 7 VA
	24 V/50 Hz	BO-0520	BO-0520 24 VDC 28W	CN-2110	24 VA Energy saving 7 VA
	110 V/50-60 Hz	BO-0530	BO-0520 110 V RAC 28W	CN-2130	29 VA Energy saving 9 VA
	230 V/50-60 Hz	BO-0540	BO-0530 230 V RAC 28W	CN-2130	30 VA Energy saving 9 VA
DN 32 - DN 40 - DN 50 (P.max 1 - 3 bar)	24 Vdc	BO-0300	BO-0300 24 VDC W45	CN-2100	45 VA Energy saving 11 VA
	24 V/50 Hz	BO-0300	BO-0300 24 VDC W45	CN-2110	45 VA Energy saving 11 VA
	110 V/50 Hz	BO-0310	BO-0310 V 98 DC W45	CN-2130	53 VA Energy saving 15 VA
	230 V/50-60 Hz	BO-0320	BO-0320 V 196 DC W45	CN-2130	55 VA Energy saving 16 VA
DN 32 - DN 40 - DN 50 (P.max 6 bar)	24 Vdc	BO-0355	BO-0355 24 V RAC ES	CN-2100	68 VA Energy saving 18 VA
	24 V/50 Hz	BO-0355	BO-355 24 V RAC ES	CN-2110	68 VA Energy saving 18 VA
	110 V/50-60 Hz	BO-0365	BO-0365 110 V RAC ES	CN-2130	77 VA Energy saving 23 VA
	230 V/50-60 Hz	BO-0375	BO-0375 230 V RAC ES	CN-2130	89 VA Energy saving 25 VA

Tipo connettore / Connector type / Type connecteur / Tipo conector

CN-0010 = Normale / Normal / Normal / Normal
CN-0045 = (230 Vac, 110 Vac) = Raddrizzatore / Rectifier / Redresseur / Retificador
CN-0050 = (24 Vac, 12 Vac) = Raddrizzatore / Rectifier / Reddresseur / Retificador
CN-2100 = Energy Saving 12 Vdc - 24 Vdc
CN-2110 = Energy Saving 12 Vac - 24 Vac
CN-2130 = Energy Saving 110 Vac - 230 Vac

INSTALLATION

The solenoid valve is in conformity with the Directive 94/9/CE (Directive ATEX 100 a) as device of group II, category 3G and as device of group II, category 3D; for this reason it is suitable to be installed in the zones 2 and 22 as classified in the attachment I to the Directive 99/92/EC.

The solenoid valve is not suitable to be used in zones 1 and 21 and, all the more so, in zones 0 and 20 as classified in the already said Directive 99/92/EC.

To determine the qualification and the extension of the dangerous zones, see the norm EN 60079-10.

The device, if installed and serviced respecting all the conditions and the technical instructions of this document, is not source of specific dangers: in particular, there is no emission in the atmosphere of inflammable substance in way to cause an explosive atmosphere.

Installation must be in compliance with local legislation in force!

WARNING: Read carefully the instruction sheet of each product before installing.
Installation and maintenance operations must be carried out by qualified personnel.

- The gas supply must be shut off before installation.
- Check that the line pressure **DOES NOT EXCEED** the maximum pressure stated on the product label.
- The solenoid valve must be installed with the arrow (on the body (**3**)) towards the user on gas pipe. It can be installed in any position without compromising the correct working.
- During installation take care not to allow debris or scraps of metal to enter the device.
- Check that the pipeline thread is not too long; overlong threads may damage the body of the device when screwed into place.
- Always check that the system is gas-tight after installation.

ELECTRICAL CONNECTIONS

- Before making electrical connections, check that the mains voltage is the same as the power supply voltage stated on the product label.
- Disconnect the power supply before wiring.
- Wire the connector with H05RN-F 3X0,75mm² cable outside Ø from 6,2 a 8,1 mm, taking care to ensure that the device has IP65 protection.
- Use the cable terminals when wiring the connector.
- Connect the power supply to terminals 1 and 2 and the ground wire to terminal ⏚.
- **IMPORTANT:** with tension 12 Vdc and 24 Vdc with energy saving C21-23 observe the polarity.

The coil is also suitable for permanent power supply. In case of continuous duty, it is absolutely normal for the coil to heat up. The coil should not be touched with bare hands after it has been continuously powered for more than 20 minutes. Before maintenance work, wait for the coil to cool or use suitable protective equipment.

The solenoid valve can be supplied also with the signalation microswitch.
In this case, with 12 Vdc and 24 Vdc power, you have to respect the polarity of the coil.

All operations must be carried out only by qualified personnel.

FOR FURTHER INFORMATION PLEASE CONTACT OUR TECHNICAL OFFICE.