

Rivelatori di Gas

RGG-RGM WAVE

Manuale d'Uso

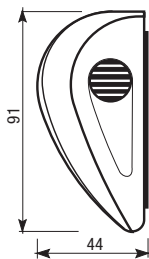
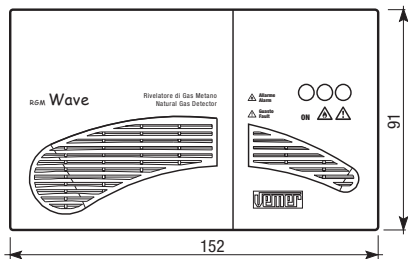


Gas Detectors User Manual

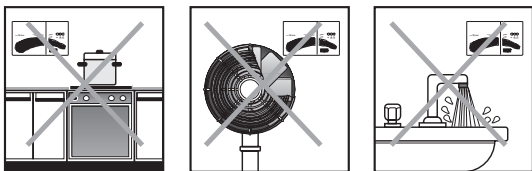


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SPA

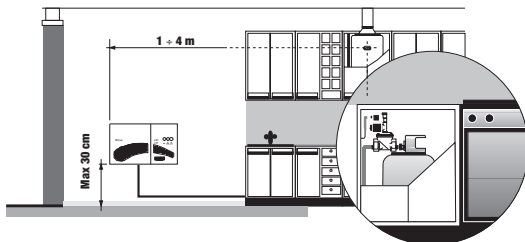
DIMENSIONI / DIMENSIONS - (A)



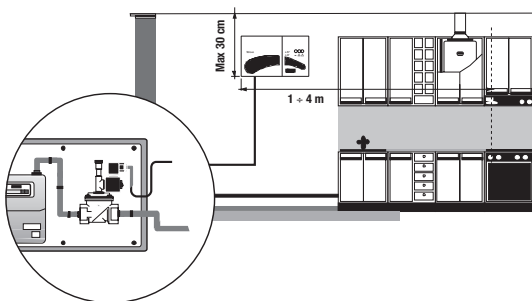
POSIZIONAMENTO / POSITIONING - (B)



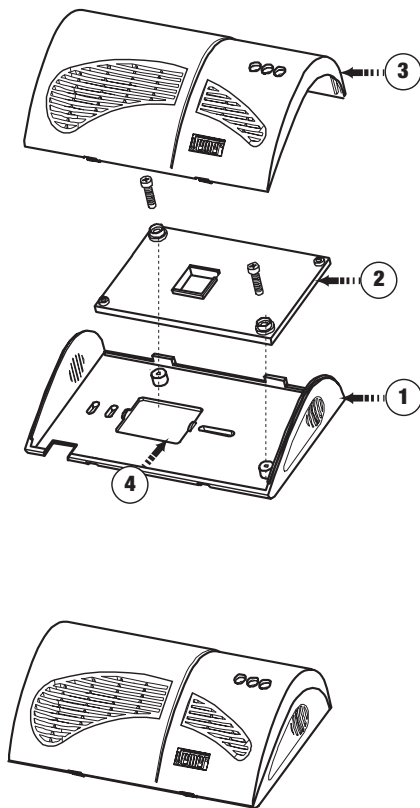
RGG - (B1)



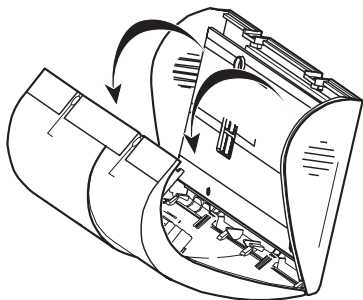
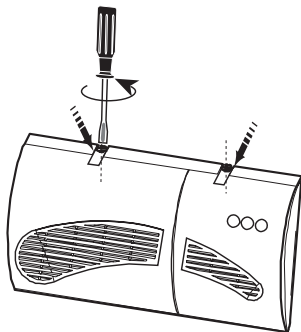
RGM - (B2)



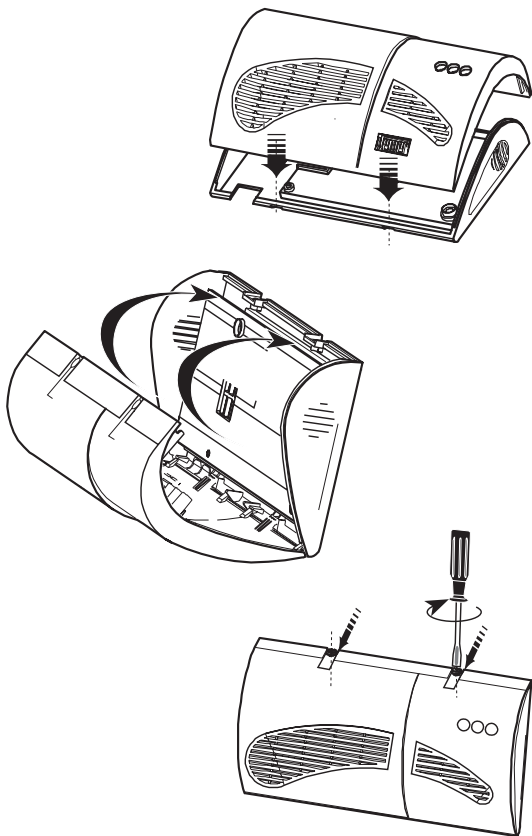
MONTAGGIO / ASSEMBLY - (C)



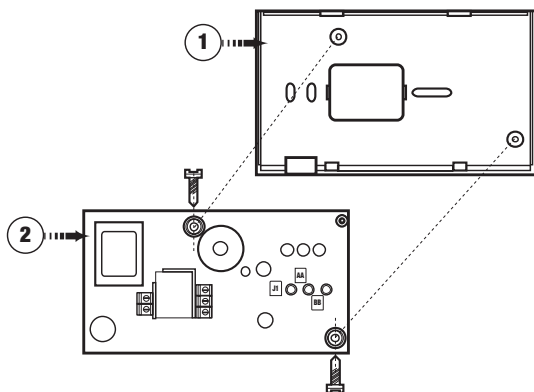
MONTAGGIO / ASSEMBLY - (C1 a)



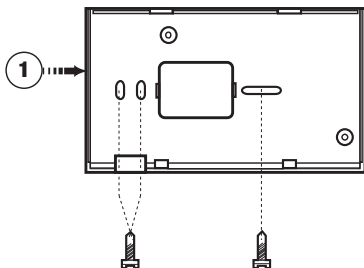
MONTAGGIO / ASSEMBLY - (C1 b)



MONTAGGIO / ASSEMBLY - (C2)

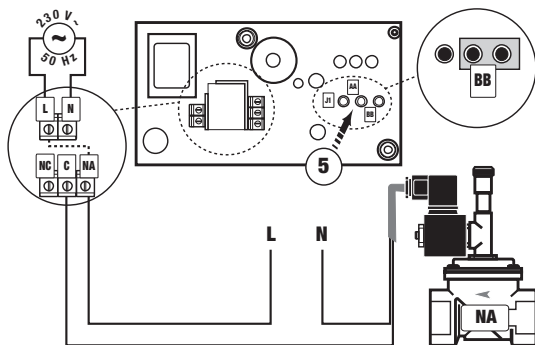


(C3)

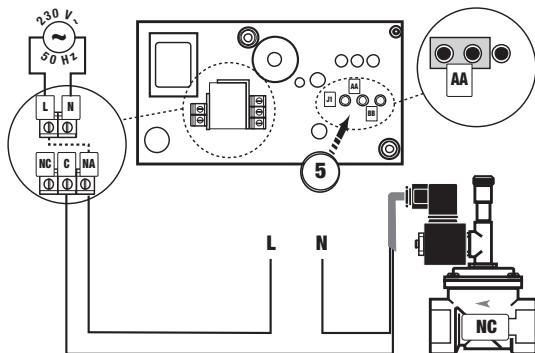


COLLEGAMENTI ELETTRICI / ELECTRICAL CONNECTIONS - (D)

RGG/RGM - (D1)



RGG/RGM - (D2)



ETICHETTA DI SOSTITUZIONE / REPLACEMENT LABEL - (E)

Sostituire entro <div style="border: 1px solid black; height: 30px; width: 150px; margin: 0 auto;"></div> Replace within

SCHEDA DI INSTALLAZIONE / INSTALLATION CARD - (F)

Da compilarsi a cura dell'installatore Fill in the form carefully		
Data di installazione		Installation date
Lotto di fabbricazione		Manufacturing lot
Locale di installazione		Installation room
Timbro e Firma installatore	Installer signature and stamp

ISTRUZIONI PER L'INSTALLAZIONE

■ POSIZIONAMENTO (fig. B)

- Installare in luoghi con un buon ricircolo d'aria (NON dietro a porte, tendaggi, arredi, ...), lontano da aperture o condotti di ventilazione, al sicuro da possibili urti o getti d'acqua.

Evitare zone particolarmente umide o con accumuli di polvere e con temperature al di fuori di quelle consentite.

NON installare al di sopra o presso apparecchiature a gas (piccoli rilasci all'accensione potrebbero provocare interventi intempestivi).

NON installare sopra fornelli (il vapore generato dalla cottura potrebbe danneggiare il rivelatore)

NON installare sopra o vicino ai lavelli perché il vapore o gli spruzzi possono causare malfunzionamenti

NON installare vicino a detersivi, solventi, vernici, lucidanti e simili perché potrebbero sprigionare gas o sostanze che possono influenzare l'affidabilità del dispositivo nel breve o nel lungo periodo (ad esempio: acetone, ammoniaca, alcool, vapori siliconici);

- Modello **RGG** (fig. B1): posizionare il rivelatore su una parete liscia ad un'altezza max. di **30 cm** dal pavimento e ad una distanza compresa tra **1 e 4 m** dall'apparecchiatura da controllare.
- Modello **RGM** (fig. B2): posizionare il rivelatore su una parete liscia ad un'altezza max. di **30 cm** dal soffitto e ad una distanza compresa tra **1 e 4 m** dall'apparecchiatura da controllare.

■ MONTAGGIO (fig. C)

- Aprire il dispositivo (fig. C1 a) e rimuovere la bassetta ② che alloggia il circuito elettronico (fig. C2).
- Predisporre i cavi di comando dell'elettrovalvola e i cavi di alimentazione del rivelatore utilizzando le fessure presenti nella base del dispositivo (fig. C: ④) Per il collegamento del rivelatore e della eventuale elettrovalvola utilizzare cavi sottotraccia.
- Fissare la base ① del rivelatore sulla parete (fig C3) usando le viti in dotazione.
- Riposizionare la bassetta ② che alloggia il circuito elettronico sulla base ① del rivelatore (fig. C2).
- Effettuare i collegamenti elettrici (vedi voce "**COLLEGAMENTI ELETTRICI**")

- Compilare l'etichetta (fig. E) con la data di sostituzione (data di installazione più 4 anni) ed applicarla in posizione visibile sulla copertura del rivelatore.
- Riposizionare la copertura (fig. C1 b) ed alimentare il rivelatore.
- Compilare la scheda d'installazione (fig. F) e consegnarla, unitamente al manuale d'uso, all'utente.

■ COLLEGAMENTI ELETTRICI (fig. D)

- Prima di accedere ai morsetti assicurarsi che i conduttori elettrici non siano in tensione
- Posizionare il ponticello "J1" in funzione del tipo di elettrovalvola da comandare:
 - Elettrovalvola normalmente aperta (NA) a riarmo manuale (ponticello sui piedini BB, fig. D1).
 - Elettrovalvola normalmente chiusa (NC) a riarmo manuale (ponticello sui piedini AA, fig. D2).
- Collegare i cavi dell'alimentazione (230 V AC) ai morsetti L-N e i cavi di comando dell'elettrovalvola ai morsetti C-NA

NOTA: l'apparecchio diventa operativo 30 secondi dopo averlo alimentato.

■ FUNZIONAMENTO

- A causa dell'inevitabile decadimento delle caratteristiche chimico-fisiche dell'elemento sensibile, il rivelatore funziona correttamente per un periodo di **4 anni** a partire dalla data di alimentazione
- **Indicazioni luminose**
LED VERDE (ON): dispositivo alimentato
LED GIALLO (△): funzionamento del sensore non corretto; in questo caso il rivelatore va considerato guasto
LED ROSSO (△): rivelatore in stato di allarme; contemporaneamente viene attivata anche una segnalazione acustica mentre il relè commuta dopo **30 s** (se rimane la condizione di allarme).
- **Stato di allarme:** quando la concentrazione di gas nel locale in cui il rivelatore è installato supera la soglia di sicurezza, viene attivata una segnalazione acustica e luminosa (luce rossa △); il relè commuta se lo stato d'allarme permane per più di **30 s**. Le segnalazioni acustiche e luminose restano attive finché la concentrazione di gas non rientra nei limiti di sicurezza (oppure finché non viene tolta l'alimentazione).
- **EVITARE** di bagnare o urtare il rivelatore (ad esempio durante le normali operazioni di pulizia domestica)

- Il dispositivo è tarato per intervenire prima che la concentrazione di gas raggiunga il L.I.E. (limite inferiore di esplosività: 5% per il metano, 1,8% per il butano, principale componente del gpl), cioè prima che possa instaurarsi un pericolo d'esplosione.
- **In caso di allarme:** spegnere le fiamme libere, chiudere il rubinetto del gas o della bombola, non accendere luci, non azionare dispositivi elettrici, aprire porte e finestre, individuare ed eliminare la causa dell'allarme. Se la causa dell'allarme non è individuabile, abbandonare il locale ed avvisare il servizio d'emergenza
- Soglie di allarme
RGM: 8% del L.I.E. del metano
RGG: 8% del L.I.E. del GPL

■ PULIZIA

Attenzione: Pulire la calotta del dispositivo con un panno morbido asciutto e non abrasivo. Non fare uso di solventi, lucidanti e detersivi perché potrebbero influenzare l'affidabilità del dispositivo.

ATTENZIONE:

È possibile avvertire odore di gas prima che scatti l'allarme; ciò accade perché nel posto dove è installato il rivelatore non si è ancora raggiunta la concentrazione critica di gas.

NORME DI RIFERIMENTO

- La conformità alle Direttive Comunitarie
2006/95/CE (Bassa tensione)
2004/108/CE (Compatibilità elettromagnetica)
è dichiarata in riferimento alla seguente norma armonizzata: **EN 50194**.

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SAFETY WARNINGS

- 1) The device should be installed by qualified personnel
- 2) Power supply must be equipped by bipolar circuit breaker; Connection terminals have cross section of 1,5mm²
- 3) Before removing the cover, isolate the power supply and make sure there is NO power to the device
- 4) Before touching the terminals, make sure there is no power supply to the electric wires
- 5) Install the detector in the correct position (see Positioning)
- 6) Do not power the instrument if any part of it is damaged
- 7) Danger of electrical shock or malfunctioning in case of manumission or misuse of the device
- 8) Do not operate the device for longer than the time indicated in the label

The installation of the gas detector does not affect the need to comply with all the regulations regarding the specifications, installation and use of gas appliances, the ventilation of the rooms and the discharge of the combustion product, as laid down in the UNI EN 1775 standards for the application of article 3 of law no. 1083/71 and the legislation in force.

TECHNICAL SPECIFICATIONS

- Power supply: **230 V AC** 50 Hz (-15%/+10%)
- Power absorbed: 4 VA
- Operating conditions: temperature -10 ÷ +40 °C
 humidity 30 ÷ 90%
- Protection level: IP42
- Noise pressure of the acoustic warning device: 85 dBA at 1 m
- Contact capacity: 8(2) A 250 V AC

Code	Model	Description
VN783700	RGM WAVE Bianco Siberian	Methane gas detector
VN784500	RGM WAVE Aluminium Raider	Methane gas detector
VN785200	RGG WAVE Bianco Siberian	LPG gas detector
VN786000	RGG WAVE Aluminium Raider	LPG gas detector

LEGEND**A) Dimensions (page 3)****B) Positioning****C) Assembly**

- ① Detector base
- ② Base housing the electronic circuits
- ③ Cover
- ④ Cable outlet for fixing to the built-in box (type 503 or equivalent)

D) Electrical connections

- ⑤ jumpers

E) Replacement label (page 10)**F) Installation card (page 10)****INSTALLATION INSTRUCTIONS****■ POSITIONING (fig. B page 4)**

- Install in rooms where there is good air circulation (NOT behind doors, curtains, furniture, etc), away from ventilation openings or ducts, protected from shock or sources of water.

Avoid particularly damp zones or those with dust build-ups or temperatures outside the range specified.

Do NOT install over or near gas appliances (minor leakage on switching on could cause incorrect activation).

Do NOT install over cookers (the steam generated during cooking could damage the detector)

NOT to be installed close to water sources, steam and water dip may cause malfunctions

NOT to be installed close to recipient of paints, thinners, cleaners etc.; such substances may release gas that can affect to good functioning of detector (detector is particularly sensitive to ammonia, thinners, solvents, etc)

- Model **RGG** (fig. B1): position the detector on a smooth wall at a maximum height of **30 cm** from the floor and at a distance from **1 to 4 metres** from the appliances to be controlled.
- Model **RGM** (fig. B2): position the detector on a smooth wall at a maximum height of **30 cm** from the ceiling) at a distance between **1 and 4 metres** from the appliances to be controlled.

■ ASSEMBLY (fig. C page 5)

- Open the device (fig. C1 a) and remove the base ② that houses the electronic circuit (fig. C2).
- Fit the solenoid valve control cables and the detector power cables in the appropriate slots in the base of the device (fig. C: ④). For electrical connection of both, detector and valve, use only in-wall wires.
- Fix the base ① of the detector to the wall (fig C3) using the screws supplied.
- Replace the base ② that houses the electronic circuit on the base ① of the detector (fig. C2).
- Make the electrical connections (see **“ELECTRICAL CONNECTIONS”**)
- Fill in the label (fig. E) with the replacement date (date of installation plus 4 years) and apply it in a clearly visible position of the detector cover.
- Replace the cover (fig. C1 b) and power the detector.
- Fill in the installation schedule (fig. F) and hand it over to the user, together with the user manual.

■ ELECTRICAL CONNECTIONS (fig. D page 9)

- Before touching the terminals, make sure there is no power supply to the electric wires
- Position jumper “J1” in accordance with the type of solenoid valve to be controlled:
 - Normally open manual rearm solenoid valve (NO) (jumper on legs BB, fig. D1).
 - Normally closed manual rearm solenoid valve (NC) (jumper on legs AA, fig. D2).
- Connect the power supply cables (230 V AC) to the L-N terminals and the solenoid valve control cables to the C-NA terminals

NOTE: the appliance will come into operation 30 seconds after being switched on.

■ OPERATION

- Due to the inevitable deterioration of the chemical and physical characteristics of the sensitive element, the detector will operate correctly for a period of **4 years** from the date of activation
- **Warning lamps**
GREEN WARNING LAMP (ON): power on
YELLOW WARNING LAMP (Δ): incorrect sensor operation. The detector is faulty

RED WARNING LAMP (△): detector in alarm status. An acoustic warning signal is issued at the same time and the relay switches after 30 seconds (if the alarm condition remains).

- **Alarm status:** when the concentration of gas in the room where the detector is installed exceeds the safety threshold, an acoustic and light warning signal is activated (red warning lamp △); the relay switches if the alarm status continues for more than 30 seconds. The acoustic and light warning signals remain active until the gas concentration returns within the safety limits (or the power supply is cut off).
- **AVOID** getting the detector wet or subjecting it to shock (during normal household cleaning operations, for example)
- the device may control a normally open (NO) or normally closed (NC) solenoid valve to cut off the combustible gas
- The device is calibrated to intervene before the concentration of gas reaches the L.L.E. (lower limit of explosiveness: 5% for methane, 1.8% for butane, the main component of LPG), that is, before the concentration creates a risk of explosion.
- **In the event of alarm:** switch off naked flames, close the gas tap or the cylinder, do not switch on lights or, activate electrical equipment. Open doors and windows, identify the cause of the alarm and eliminate it. If it is not possible to identify the cause of the alarm, leave the room and call the emergency services
- Alarm thresholds
RGM: 8% of the L.L.E. for methane
RGG: 8% of the L.L.E for LPG

■ CLEANING

- Attention: Clean up the cap of the device with a dry, soft, not abrasive cloth. Don't use dissolvent, polishing and detergents because they could influence the reliability of the device.

CAUTION:

May happen to smell gas before alarm takes ON, this is normal; it may happen according to where detector is located; in fact gas detector react according to gas concentration on the room.

REFERENCE STANDARDS

- Conformity to the European Community directives

2006/95/EC (Low voltage)

2004/108/EC (Electromagnetic compatibility)

is declared with reference to the following harmonised standards: **EN 50194**

Vemer

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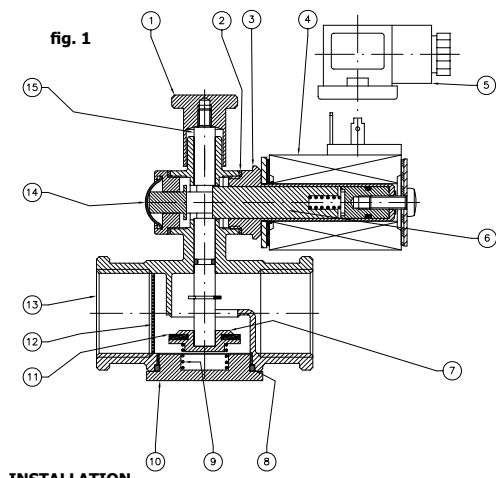
e-mail: info@vemer.it

web site: www.vemer.it

**DESCRIPTION**

The functioning principle of M16/RMO N.A. (normally-open manual reset solenoid valve) is very simple and extremely safe. The coil, when under tension, releases and springs up the closing device.

The reset is manual to check the causes for gas detection. M16/RMOC N.A. versions are equipped with a push button (14) that allows to close manually the gas substituting the manual tap of the gas line allowing also to test at intervals the good working of the solenoid valve. During normal conditions there is no electric absorption, and so, over the saving energy, no organ is subjected to wear and tear.



- 1 - Reset handgrip
- 2 - Aluminium washer
- 3 - Coil armature assembly
- 4 - Electrical coil
- 5 - Electrical connector
- 6 - Plunger
- 7 - Obturator
- 8 - Seal O-Ring
- 9 - Closing spring
- 10 - Lower cap
- 11 - Seal washer
- 12 - Filtering organ (on request)
- 13 - Body valve
- 14 - Closing manual push button (only on M16/RMOC N.A.)
- 15 - Central pin

INSTALLATION

The solenoid valve is in conformity with the Directive 94/9/CE (said 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, during the normal working, is not forecast, by the solenoid valve, the emission in the atmosphere of inflammable substance in way to cause an explosive atmosphere.

WARNING: all installation/wiring/maintenance work must be carried out by skilled staff.

- 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.
- They are normally installed upstream of the regulator devices and must be installed with the arrow (on the body of the device) facing towards the user appliance.
- It can be installed in any position.
- 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. Do not use the coil for leverage when screwing into position; use the appropriate tool.
- Always check that the system is gas-tight after installation.

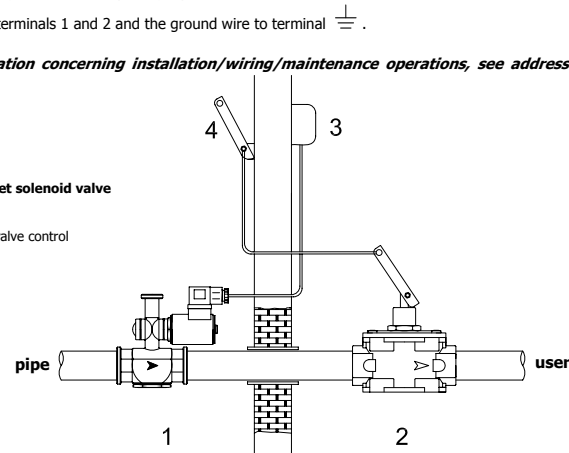
ELECTRICAL CONNECTIONS

- 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 8.1mm, taking care to ensure that the device has IP65 protection.
- Use cable terminals when wiring the connector (see fig. 2).
- Connect the power supply to terminals 1 and 2 and the ground wire to terminal 3.

For any problems or information concerning installation/wiring/maintenance operations, see address and telephone numbers on the back page.

EXAMPLE OF INSTALLATION

- 1. M16/RMO N.A. manual reset solenoid valve
- 2. SM Series jerk handle
- 3. Gas detector
- 3. Lever for remote SM ON/OFF valve control

**TECHNICAL DATA**

- Use : not aggressive gases of the three families (dry gases)
- Environment temperature : -15 ÷ +60 °C
- Max. superficial temperature : 70 °C
- Power supply voltage : 12 Vdc, 12 V/50 Hz, 24 Vdc, 24 V/50 Hz, 110 V/50 Hz, 230 V/50-60 Hz
- Power supply voltage tolerance : -15% ... +10%
- Power absorption : see table
- Max. working pressure : 500 mbar
- Closing time : < 1 s
- Degree of protection : IP65
- Group : 2
- Threaded connections Rp (brass body) : (DN 15 ÷ DN 25) according to EN 10226

In conformity with 2004-108/EC Directive (Electromagnetic Compatibility); 2006/95/EC Directive (Low Voltage); 94/9/EC Directive (ATEX)

RIARMO MANUALE

- Push the reset handgrip (1) till the hooking.
- To close manually the solenoid valve, push the closing push button (14).
- The red label under the manual reset (1), if visible, shows that the valve is closed.

MANUTENZIONE

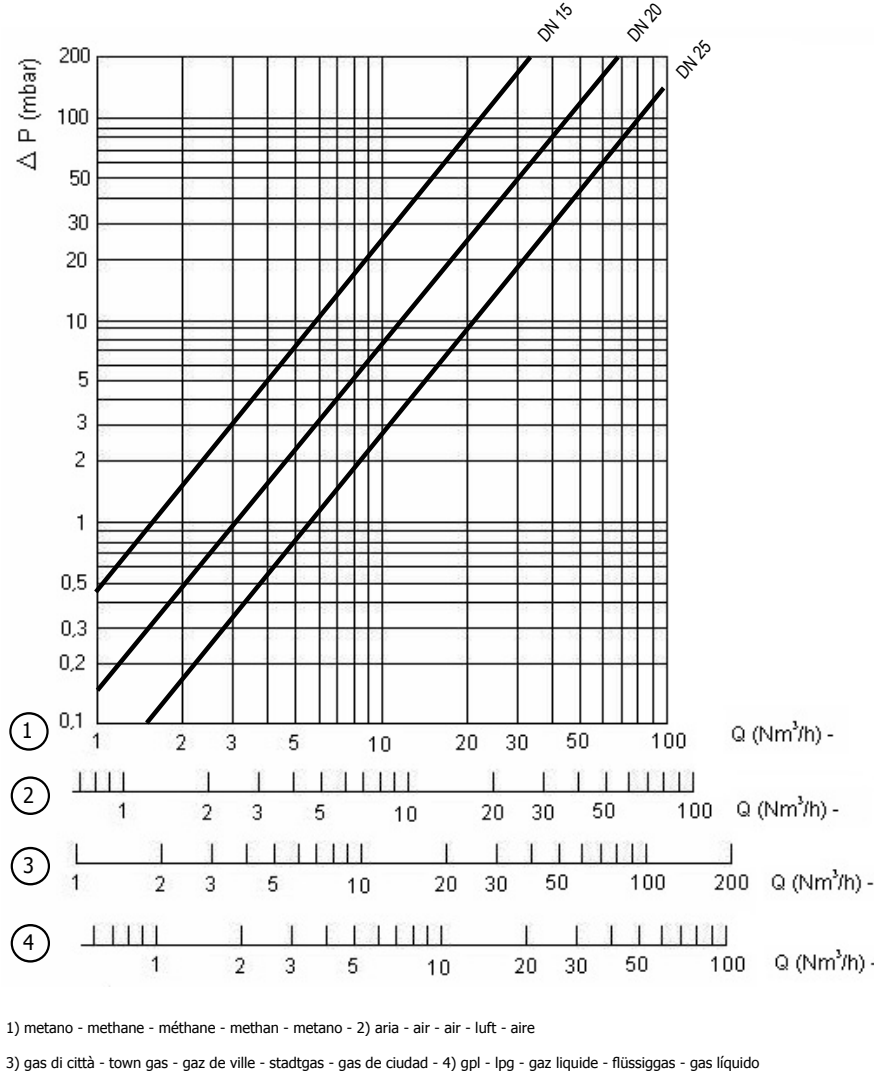
In ogni caso prima di effettuare verifiche interne accertarsi che:

1. l'apparecchio non sia alimentato elettricamente
2. all'interno dell'apparecchio non vi sia gas in pressione

- Unscrew the lower cap (10) from the body valve (13), then check the obturator (7) and if necessary change the rubber seal component (11).
- Reassemble doing backward the same operation of dismantling

⚠ The above-said operations must be carried out only by qualified technicians.

DIAGRAMMA PERDITE DI CARICO
LOAD LOSS DIAGRAM
DIAGRAMME PERTES DE CHARGE
DRUCKVERLUST-DIAGRAMM
DIAGRAMMA PERDIDAS DA CARGA

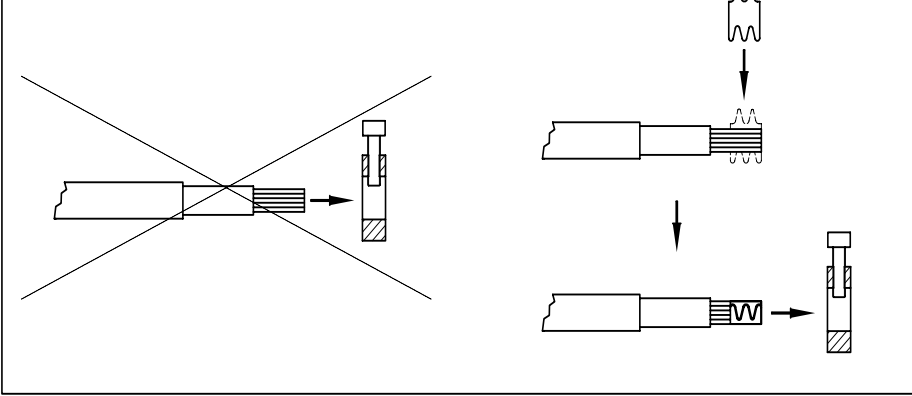


- 1) metano - methane - méthane - methan - metano - 2) aria - air - air - luft - aire
- 3) gas di città - town gas - gaz de ville - stadgas - gas de ciudad - 4) gpl - lpg - gaz liquide - flüssiggas - gas líquido

Dimensioni di ingombro in mm
Overall dimensions in mm
Mesures d'encombrement en mm
Raumbefarmlasse in mm
Dimensiones en mm

versione standard standard version version standard Standardversion versión estándar	con pulsante di chiusura manuale with manual closing push button avec bouton de fermeture manuelle mit taste für manuelle schließung con botón de cierre manual	Attacchi Connections Fixations Anschlüsse Conexiones	A	B
M16/RMO N.A.	M16/RMOC N.A.			
codice code code Kode código	codice code code Kode código			
RO02	RO02C	DN 15	66	107
RO03	RO03C	DN 20	66	107
RO04	RO04C	DN 25	82	118

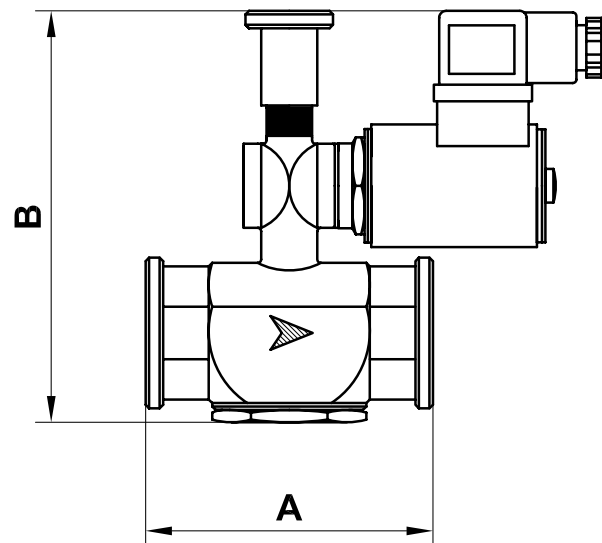
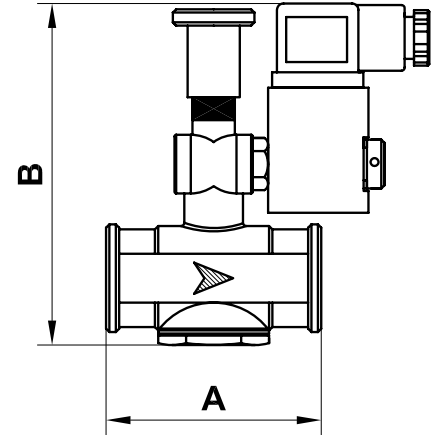
fig. 2 - fig. 2 - fig. 2 - Abb. 2 - fig. 2



Attacchi Connections Fixations Anschlüsse Conexiones	Bobine e connettori per elettrovalvole M16/RMO N.A. - M16/RMOC N.A. Coils and connectors for M16/RMO N.A. - M16/RMOC N.A. solenoid valves Bobines et connecteurs pour électrovalvules M16/RMO N.A. - M16/RMOC N.A. Spulen und anschlüsse für elektroventile M16/RMO N.A. - M16/RMOC N.A. Bobinas y conectores para electroválvulas M16/RMO N.A. - M16/RMOC N.A.				
	Tensione Tension Tension Spannung Tensión	Codice bobina Coil code Code bobine Spulenkode Código bobina	Timbratura bobina Coil stamping Timbrage bobine Spulenstempel Timbre bobina	Codice connettore Connector code Code connecteur Anschlusskode Código conector	Potenza assorbita Power absorption Puissance absorbée Kraftverbrauch Potencia absorbida
DN 15 - DN 20	12 Vdc	BO-0600	12 V DC	CN-0010	6 VA
	12 V/50 Hz	BO-0800	12 V 50-60 Hz	CN-0010	4 VA
	24 Vdc	BO-0610	24 V DC	CN-0010	6 VA
	24 V/50 Hz	BO-0810	24 V 50-60 Hz	CN-0010	4 VA
	110 V/50 Hz	BO-0820	110 V 50-60 Hz	CN-0010	4 VA
DN 25	230 V/50-60 Hz	BO-0830	230V 50-60 Hz	CN-0010	7 VA
	12 Vdc	BO-0030	12 V DC R	CN-0010	8 VA
	12 V/50 Hz	BO-0010	12 V DC	CN-0050	20 VA
	24 Vdc	BO-0040	24 V DC R	CN-0010	8 VA
	24 V/50 Hz	BO-0070	24 V 50 Hz D	CN-0010	22 VA
	110 V/50 Hz	BO-0105	110 V 50 Hz D	CN-0010	21 VA
230 V/50-60 Hz	BO-0120	230 V 50 Hz V	CN-0010	8 VA	

Tipo connettore / Connector type / Type connecteur / Anschluss type / Tipo conector

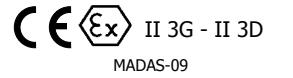
CN-0010 = Normale / Normal / Normal / Normal / Normal
 CN-0050 (24 Vac, 12 Vac) = Radrizzatore / Rectifier / Redresseur / Gleichrichter / Retificador



Manufactured by: **MADAS s.r.l.**
 Via Moratello, 5/6/7 - 37045
 Z.A.I. Legnago (VR) Italy

ELETTROVALVOLA A RIARMO MANUALE NORMALMENTE APERTA PER GAS
MANUAL RESET NORMALLY OPEN SOLENOID VALVE FOR GAS
ELECTROVANNE NORMALEMENT OUVERTE A REARMEMENT MANUEL POUR GAZ
ELEKTROVENTILE MANUALFRÜSTUNG NORMALÖFFNUNG FUER GAS
ELECTROVÁLVULA NORMALMENTE ABIERTA A REARME MANUAL PARA GAS

M16/RMO N.A. - M16/RMOC N.A.



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