



Remote solenoid enclosures and remote pilots

DESCRIPTION

CSN

The **CSN waterproof enclosure** is designed for the piloting of diaphragm valves type VEM, and are available in the following models:

- CSN 5: from 1 to 5 solenoid pilots,
- CSN 8: from 6 to 8 solenoid pilots,
- CSN 12: from 9 to 12 solenoid pilots.

The CSN enclosure is IP67 approved. Each solenoid pilot, energized in sequence, commands a corresponding VEM type diaphragm valve, by way of O.D. 8 mm. pneumatic tube being less than 2 metres in length. The CSN enclosures are supplied complete with fixing brackets. The common terminal is pre-wired. The CSN solenoid base is manufactured from extruded aluminium, while the cover is in die-cast aluminium both anodised'

for protection against aggressive agents. The CSN enclosure features a common exhaust port, located on the underside of the unit. The exhaust is open to the atmosphere and can be piped or muted with a silencer. For low temperature applications, enclosures are available with a thermostatically controlled heating device model "GRT" that keeps the internal temperature at +4°C.

The GRT is available in two models:

- GRT 70: for CSN 5
- GRT 120: for CSN 8 and CSN 12.

The CSN Enclosure conforms to ATEX 94/9//CE Zone 22 Dust, EN50281-1 with protection class IP67 in accordance to EN60529.



HOW TO ORDER:

CSN 5 - ..V/..Hz - R

CSN: waterproof enclosure IP67

CSN 1 ÷ 5 (small enclosure)
 CSN 6 ÷ 8 (medium enclosure)
 CSN 9 ÷ 12 (large enclosure)

COIL VOLTAGE / FREQUENCY	
nominal values	operating range
24/50	24 V / 50 Hz
24/60	24 V / 60 Hz
24/DC	24 V / DC 15W
110/50	110 - 127 V / 50 Hz
110/60	110 - 127 V / 60 Hz
220/50	220 - 240 V / 50 Hz
220/60	220 - 240 V / 60 Hz

R: heater with thermostat.
 Available in two versions:
 GRT70 = 70 WATT (for CSN 1÷5)
 GRT120 = 120 WATT (for CSN 6÷12)

GENERAL CHARACTERISTICS	
Operating temperature	-20 °C / +60 °C
Weight	CSN 5 - 3,5 Kg
	CSN 8 - 5 Kg
	CSN 12 - 7 Kg

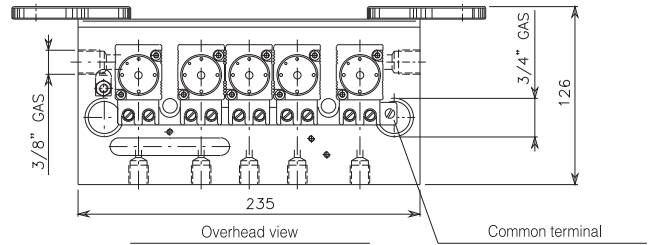
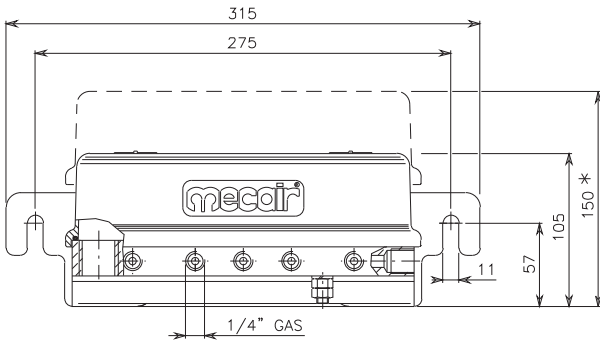
CONSTRUCTION FEATURES - ENCLOSURE	
Cover	Die-cast aluminium (Anodised)
Base	Extruded aluminium (Anodised)
Plunger	Stainless steel
Spring	Stainless steel
Gaskets	NBR

ELECTRICAL CHARACTERISTICS	
Coil insulation	Class H
Electrical connection	3/4" Female GAS
Electrical protection	IP67, CENELEC Certificate GR-93 / 032409
Voltage and frequency	AC: 50/60Hz: 24/110/220 V DC: 24/110 V
Pneumatic Connections	To VEM 1/4" valve female gas Common exhaust no.2 connections 3/8" female gas

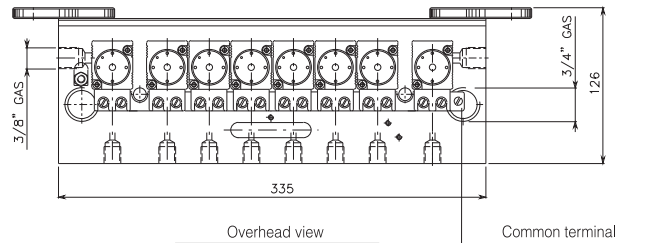
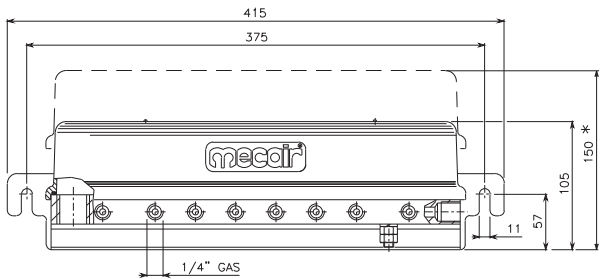
DIMENSIONS

CSN

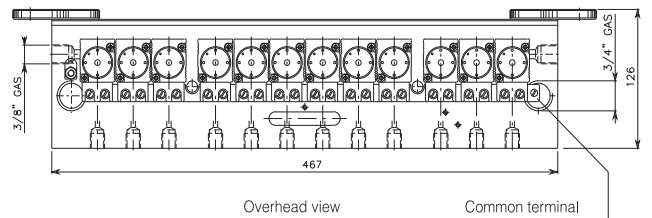
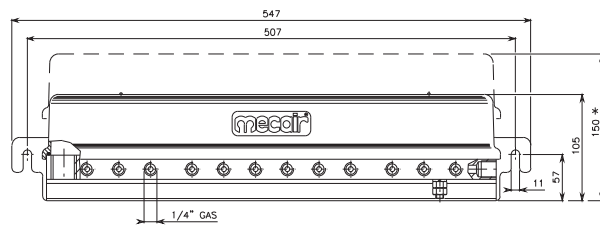
CSN 5

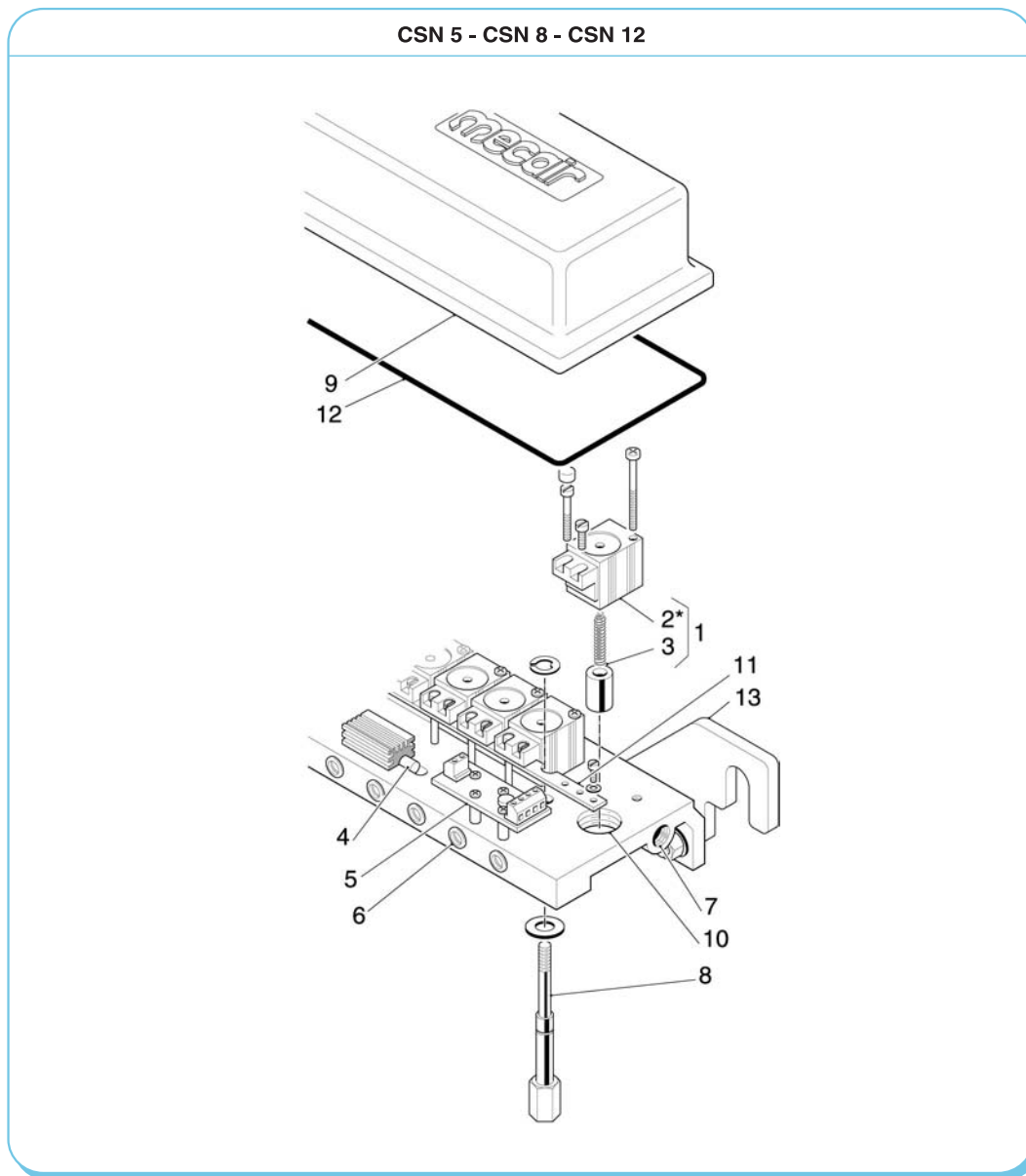


CSN 8



CSN 12





SPARE PARTS

POS.	DESCRIPTION	CODE
1 (2+3)	Pilot group complete with plunger, spring and coil	SB2N - ../.. (*)
2	Solenoid Coil (*)	SB2 - ../.. (*)
3	Plunger with spring	ESL 28
4	Heater + thermostat for CSN 1-2-3-4-5	GRT 70 - 220 V
5	Heater + thermostat for CSN 6-7-8-9-10-11-12	GRT 120 - 220 V

(*) Specify voltage, frequency (or DC).

RECOMENDED SPARE PARTS

For start up:

≥ 5% of supply (min. 1 piece):

- pilot group (1), complete with plunger, spring and coil.

For first 2 years of service:

≥ 10% of supply (min. 2 pieces):

- pilot group (1), complete with plunger, spring and coil.

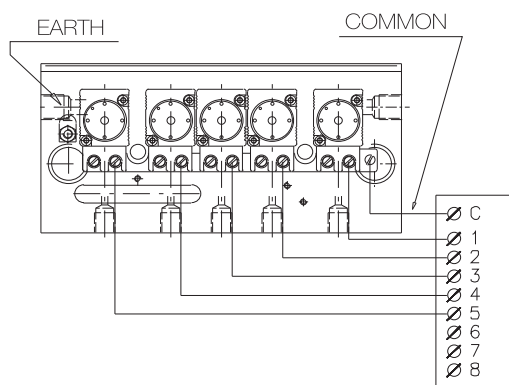
ELECTRICAL AND PNEUMATIC CONNECTIONS

CSN

ELECTRICAL CONNECTION

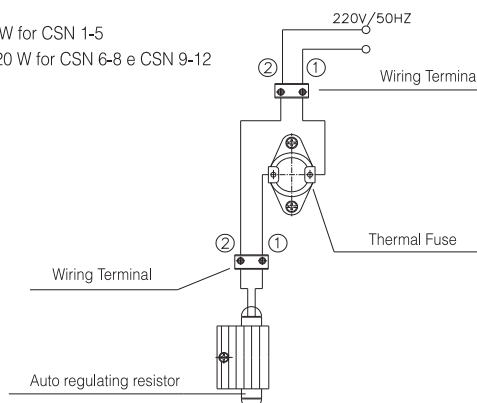
- A Unscrew the screw (8) and remove cover (9).
- B Connect electric wires as shown [E1] on following sheet.
Cable entry (10): 3/4" gas cylindrical thread.
Use multi core cable: 1 wire to common pre-wired (11), +1 wire to each coil.
- C Connect heater thermostat (optional), see [E2] on following sheet.
- D Reassemble the cover (9) make sure of correct position of gasket (12).

E1 - SEQUENCER (plug in terminal connector)



E2 - THERMOSTATICALLY CONTROLLED RESISTOR

GRT 70 - 70 W for CSN 1-5
GRT 120 - 120 W for CSN 6-8 e CSN 9-12



PNEUMATIC ASSEMBLY AND CONNECTIONS

Pneumatic Connections (6) 1/4" GAS - valve connection with:

- Tube Ø 6/8 mm - Rilsan or Stainless Steel
- Max length 2 mt.

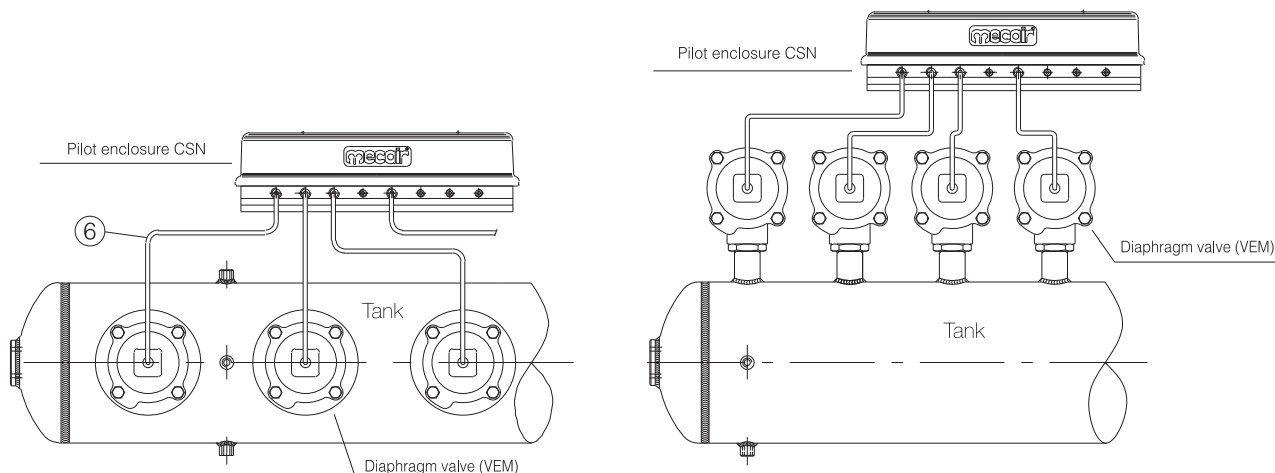
Fluid: Compressed air (or nitrogen) dried, filtered and oil free.

min/max pressure 0,5 ÷ 7,5 bar (when exceeded 7,5 bar the plunger opens to avoid pressure build up).

Exhaust Connections (7): connection 3/8" Gas:

- open to atmosphere
- or muted with silencer
- or piped to an external tank for nitrogen recovery

PNEUMATIC CONNECTIONS ON TANKS



DESCRIPTION

PR 1/4"

The **PR 1/4" single remote solenoid pilot** has been designed for the control of VEM type diaphragm valves. PR1/4" can be installed on the interior wall of any control box or external part of the filter, located near the diaphragm valves. To install the PR1/4" it is necessary to drill a hole of 18.5 mm DN in the control box wall, leaving the pneumatic connection (PR1/4") outside the box. Anchor the solenoid pilot to the wall with the lock nut. The pneumatic connection to the remotely piloted diaphragm valve, is made with pneumatic pipe with an OD of 8 mm. The pneumatic pipe should not exceed a maximum length of 2 meters to ensure correct functioning of the pilot valve. The electrical connection is made inside the box by way of a IP65 connector with PG9 cable entry. The PR1/4" solenoid pilot body is manufactured in brass and is available with solenoids with a full range of voltages.

Upon request the solenoid is also available in accordance to the ATEX Directive 94/9/CE, Zone 22 (Dust).

The PR1/4" is available with solenoid - 24DCX (24V-DC / 12 W) and Din socket PLG9-ATEX



GENERAL CHARACTERISTICS

Valve connection	1/4" Gas
Operating pressure	From 0,5 to 7,5 bar
Exhaust	1/8" Gas

CONSTRUCTION FEATURES - ENCLOSURE

Pilot Body	Brass
Ferrule	Brass
Locknut	Zinc Coated
O-ring	NBR

ELECTRICAL CHARACTERISTICS

Isolation class	Class H
Connector	Pg9
Standard connector	EN175301 - 803 / A/ISO 4400
Optional connector	Conf. Dir. 94/9/CE ATEX II 3GD T6
Isolation class connector	VDE 0110 - 1/89
Electrical protection	IP65 EN60529
Voltages	12V DC (-5%, +20%) 12W
	24V DC (-5%, +20%) 12W
	48 V DC (-10%, +20%) 9W
	110 V DC (-10%, +20%) 12W
	24V 50/60Hz (-10%, +20%) 16/12 VA
	48 V 50/60 Hz (-10%, +20%) 16/12 VA
Ambient temperature	110/127 V 50/60 Hz (-10%, +20%) 19/14 VA
	220/240 V 50/60 Hz (-10%, +20%) 19/14 VA
Ambient temperature	-20°C / +60°C

HOW TO ORDER:

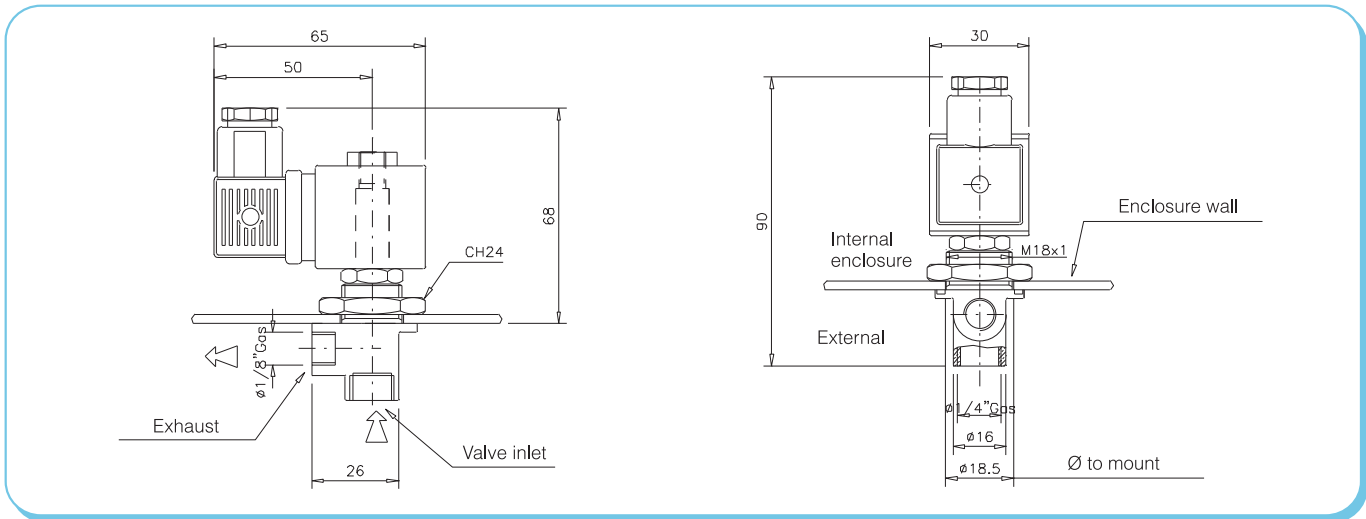
PR 1/4" - 110/50

- REMOTE PILOT
- Inlet 1/4" Gas

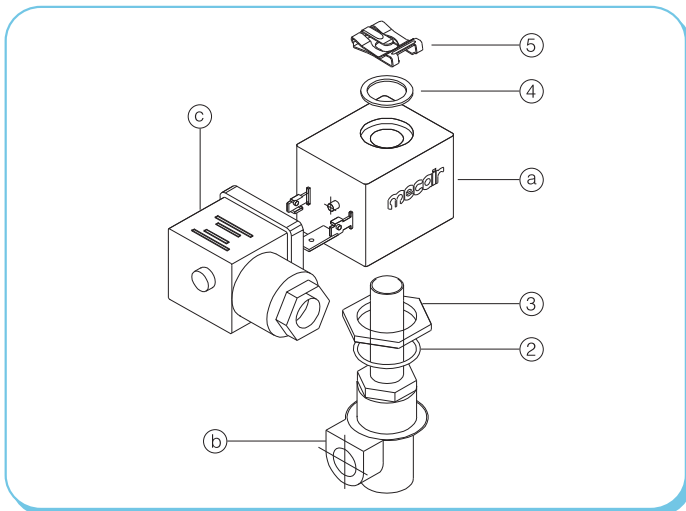
Voltage and frequency.

DIMENSION

PR 1/4"



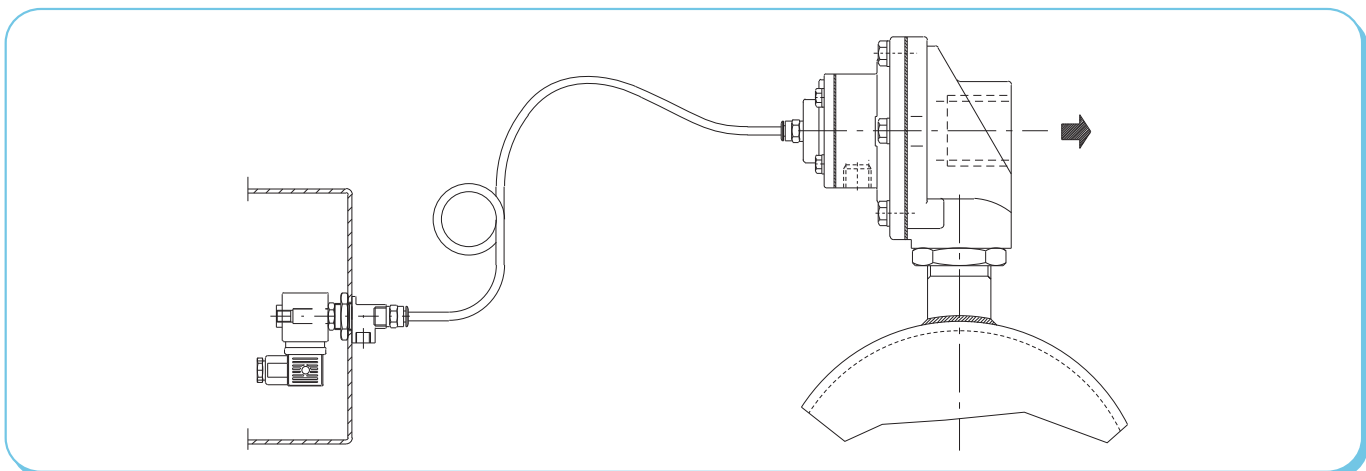
EXPLODED VIEW - PILOT



POS	DESCRIPTION	CODE
	a) Solenoid (*)	a) SB3 - ../.. (*)
	b) Ferrule	b) PR 1/4
	c) DIN Connector EN175301 - 803 IP65	c) PLG9
2	O-ring OR2081	M330013
3	Locknut M18x1	M540028
4	Nylon seal Ø 17 sp. 2	M530100
5	Fixing clip	G690586

(*) Specify voltage

EXAMPLE OF ASSEMBLY APPLICATION



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