

mecalr CSN

# RAINTIGHT ENCLOSURE

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PENTAIR CLEAN AIR SYSTEMS

# MECAIR RAIN TIGHT ENCLOSURE

CSN



## DESCRIPTION

The **CSN waterproof enclosure** is designed for the piloting of diaphragm valves type VEM, and is 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, energised 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 diecast 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 II 3D Extc IIIC T100°C DC IP67.

## 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	Diecast 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: 50/60 Hz: 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

## HOW TO ORDER

Part Number Code: **CSN 5 - ..V/..Hz - R**

### CSN

Waterproof enclosure IP67

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

### Heater with thermostat

Available in two versions:  
GRT70 = 70 WATT (for CSN 1 + 5)  
GRT120 = 120 WATT (for CSN 6 + 12)

### Coil voltage/frequency

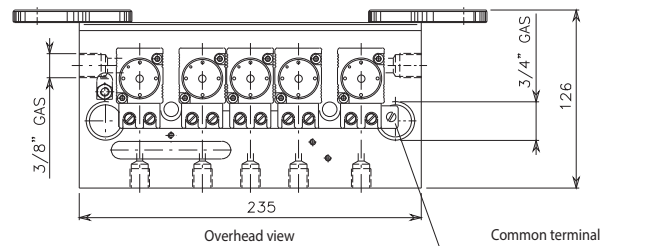
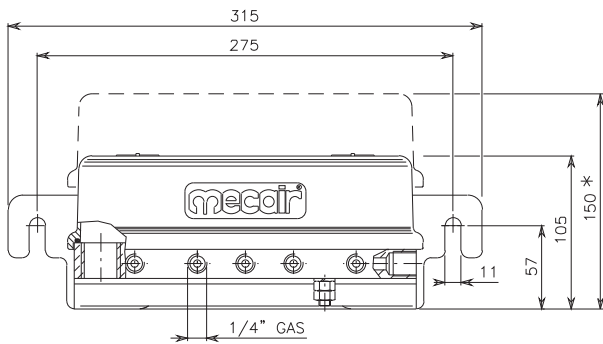
Nominal values	Operating range
24/50	24 V/50 Hz
24/60	24 V/60 Hz
24/DC	24 V/DC 15 W
110/50	110-127 V/50 Hz
110/60	110-127 V/60 Hz
220/50	220-240 V/50 Hz
220/60	220-240 V/60 Hz

# MECAIR RAINLIGHT ENCLOSURE

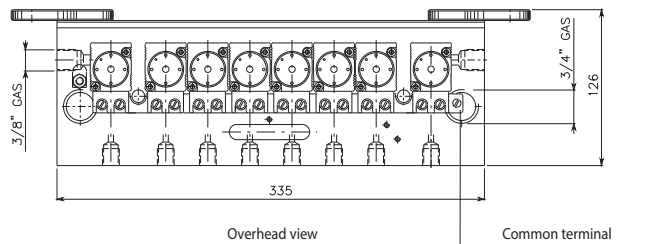
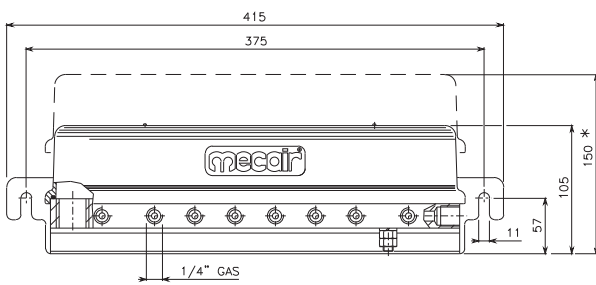
CSN

## DIMENSIONS (mm)

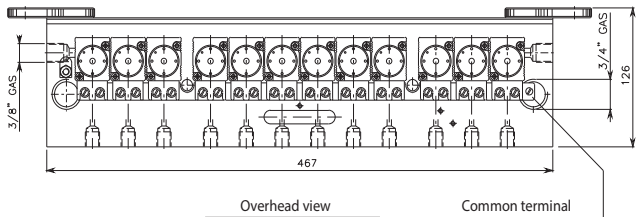
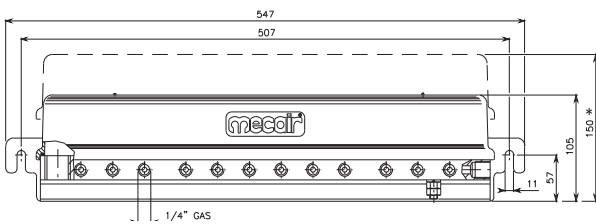
CSN 5



CSN 8



CSN 12

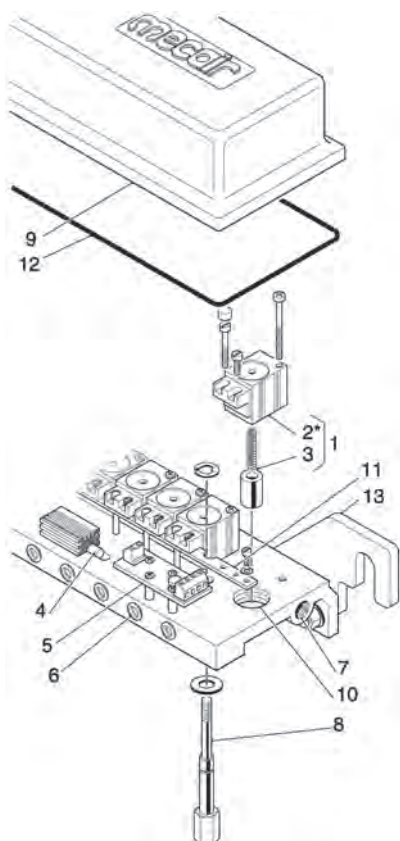


# MECAIR RAIN TIGHT ENCLOSURE

CSN

## SPARE PARTS

CSN 5 – CSN 8 – CSN 12



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

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

### RECOMMENDED 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.

# MECAIR RAIN TIGHT ENCLOSURE

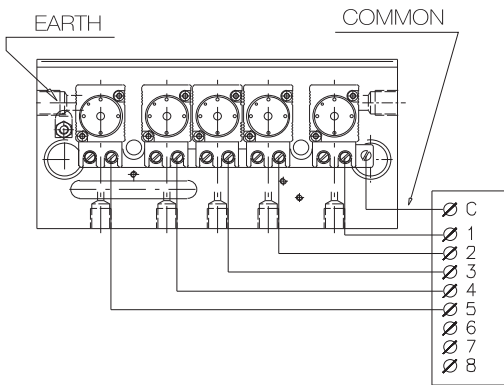
CSN

## ELECTRICAL AND PNEUMATIC CONNECTIONS

### ELECTRICAL CONNECTION

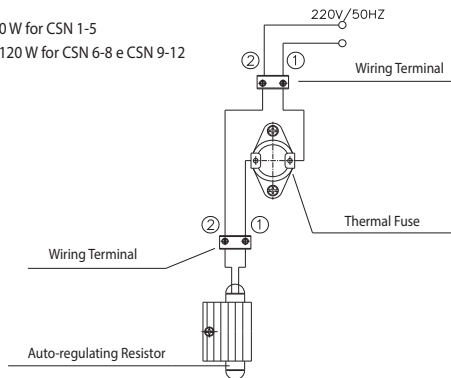
- A Unscrew the screw (8) and remove cover (9).
- B Connect electric wires as shown [E1] on following sheet.  
Cable entry (10): 3/4" Gas cylindrical thread.  
Use multi-core cable: 1 wire to common pre-wired (11), +1 wire to each coil.
- C Connect heater thermostat (optional); see [E2] on following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

#### E1 – SEQUENCER (plug-in terminal connector)



#### E2 – THERMOSTATICALLY CONTROLLED RESISTOR

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



### PNEUMATIC ASSEMBLY AND CONNECTIONS

Pneumatic Connections (6) 1/4" female Gas – valve connection with:

- Tube Ø 6/8 mm – Rilsan or stainless steel
- Max length 2 metres.

Fluid: Compressed air (or nitrogen) dried, filtered and oil free.  
Min/max pressure 0.5-7.5 bar (when 7.5 bar exceeded, the plunger opens to avoid pressure build-up).

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

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

### PNEUMATIC CONNECTIONS ON TANKS

