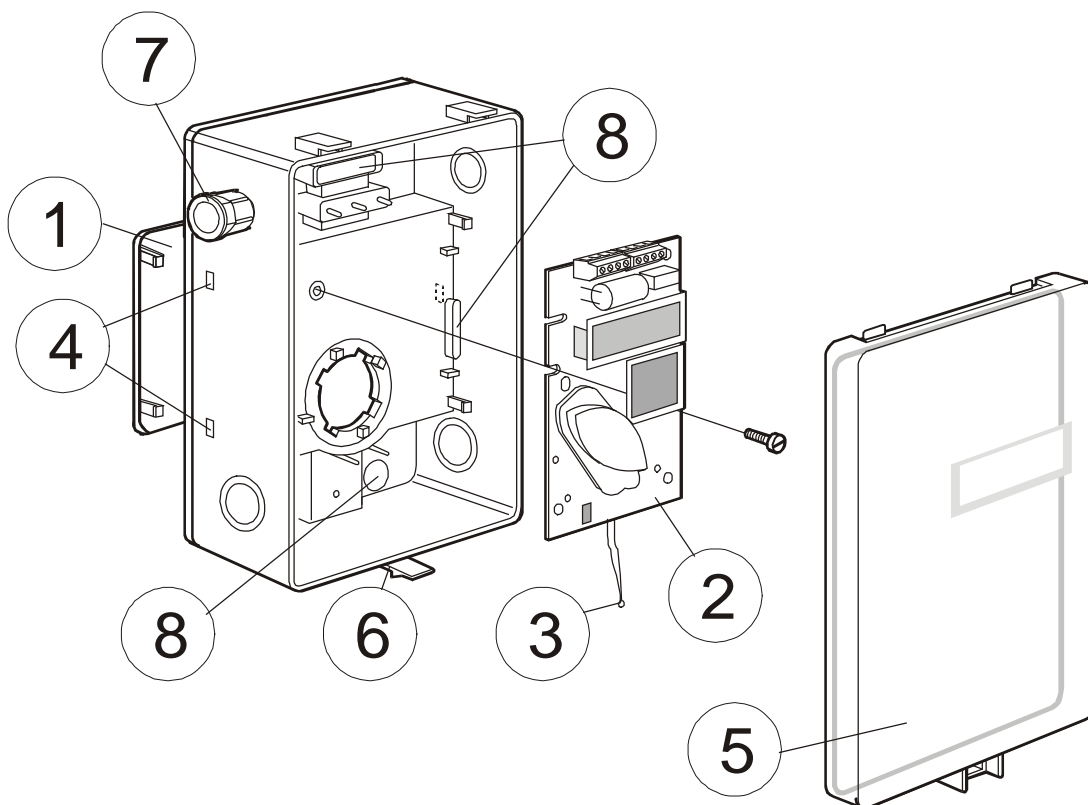


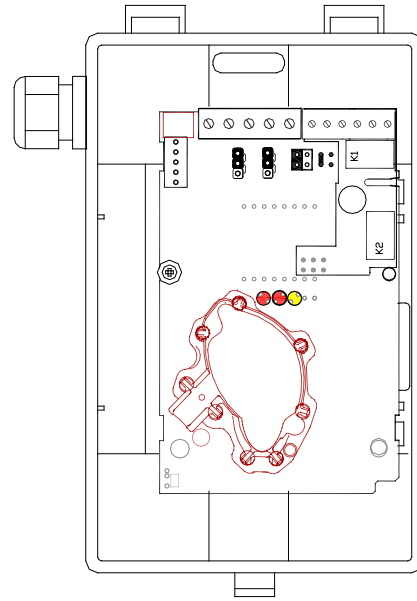
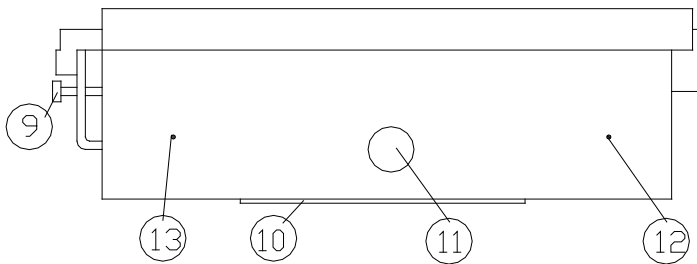
Installation manual

CF8-W-Disp-AL

CO₂ transmitter with two relays mounted in industrial housing prepared for Modbus communication protocol



- | | | | |
|---|---------------------------------------|---|--------------------------------------|
| 1 | Wall plate | 5 | Snap-in lid |
| 2 | PCB (Factory supplied mounted in box) | 6 | Locking screw of the lid (not shown) |
| 3 | Temperature sensor | 7 | PG9 cable entry bushing |
| 4 | Hole for wall plate hooks | 8 | Air holes |



- 9 Lid locking screw
- 10 Wall plate
- 11 Locking screw
- 12 Drill mark for cable entry bushing
- 13 Drill mark for cable entry bushing

Dismounting the wall plate

The sensor is delivered with the wall plate mounted. The wall plate has to be removed before the sensor is mounted onto the wall. Unscrew the screw on the side of the box. See figure 3.

Wall Mounting Instruction

Normally the PCB should not be removed from the housing. If for some reason the PCB must be removed it must be handled carefully and protected from electrostatic discharge.

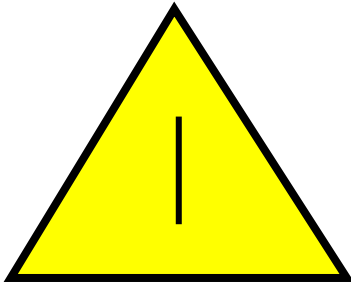
- 1) **Electrical cable entry:** The box has a factory mounted cable entry bushing in dimension PG9. Never feed more than one cable through each cable entry bushing, or else gas might leak through!
- 2) **Screw the wall plate onto the wall:** The wall plate has holes for three screws. Drill holes for 3,5mm screws and put dowel into them. Dowels and screws 3,5 x 25mm are included in a plastic bag
- 3) **Attaching the sensor box** to the wall plate is done by a snap-in fitting. The wall plate has three hooks that fit in holes in the sensor box. Fasten the screw on the side of the box.
- 4) **The lid can be locked** with the screw at the bottom of the sensor box.



If for some reason the PCB must be removed it must be handled carefully and protected from electrostatic discharge! Normally, removing the PCB is not required.

Electrical connections

The power supply has to be connected to $\overset{\sim}{+}$ and \perp . \perp is considered as system ground. If the analogue output is connected to a controller *the same ground reference has to be used for the CF8-W-Disp-AL unit and for the control system!* Unless different transformers are used, special precautions need to be taken.



PLEASE NOTE! The *CF8-W-Disp-AL* signal and power supply grounds are common.

PLEASE NOTE! The same ground reference has to be used for the *CF8-W-Disp-AL* unit and for the control system!

If possible keep the sensor powered up after mounting. Connect the analogue output before measuring.





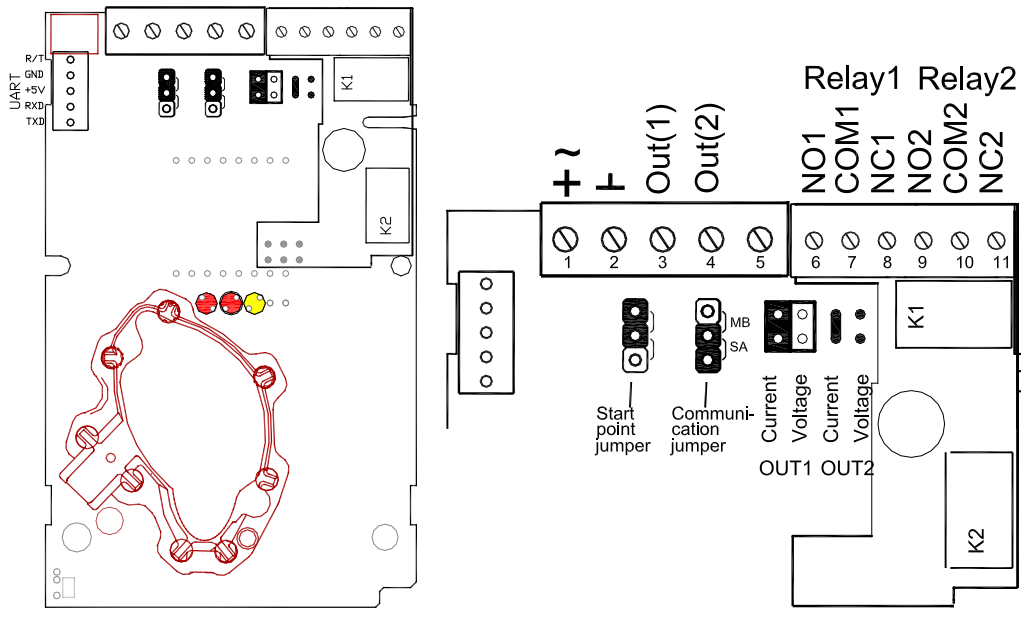
| No | Connection Terminal | Function | Electrical Data | Remarks |
|----|---|--|--|---|
| 1 |  | Power (+) | 24 VAC/DC+ (+-20%), 3W | 2W without output load See note 1! |
| 2 |  | Power ground (-) | 24 VAC/DC- | |
| 3 | Out(1) | Analogue Output 1 (+) | 0-10 VDC or 0-20 mA 2-10 VDC or 4-20 mA | According to positions of OUT1 and start point jumpers. See note 2! |
| 4 | Out(2) | Analogue Output 2 (+) | 0-10 VDC or 0-20 mA 2-10 VDC or 4-20 mA | According to positions of OUT2 and start point jumpers. See note 2! |
| 5 | Unmarked | Signal Ground (-) | Connected to  via PTC fuse | See note 1! |
| 6 | NO1 | Relay1 Normally Open | Contact free relay minimum load 1mA/5V rated load 0,5A/125VAC; 1A/24VDC | Standard Open < 1.4 % CO ₂ Closed > 1.5 % CO ₂ The relay output is potential free |
| 7 | COM1 | Relay1 Common | | |
| 8 | NC1 (OUT3) | Relay1 Normally Closed | | |
| 9 | NO2 | Relay2 Normally Open | Contact free relay minimum load 1mA/5V rated load 0,5A/125VAC; 1A/24VDC | Standard Open < 2.9 % CO ₂ Closed > 3.0 % CO ₂ The relay output is potential free |
| 10 | COM2 | Relay2 Common | | |
| 11 | NC2 (OUT4) | Relay2 Normally Closed | | |
| | Communi- cation jumper | Used to set communication protocol | Upper | Modbus communication protocol |

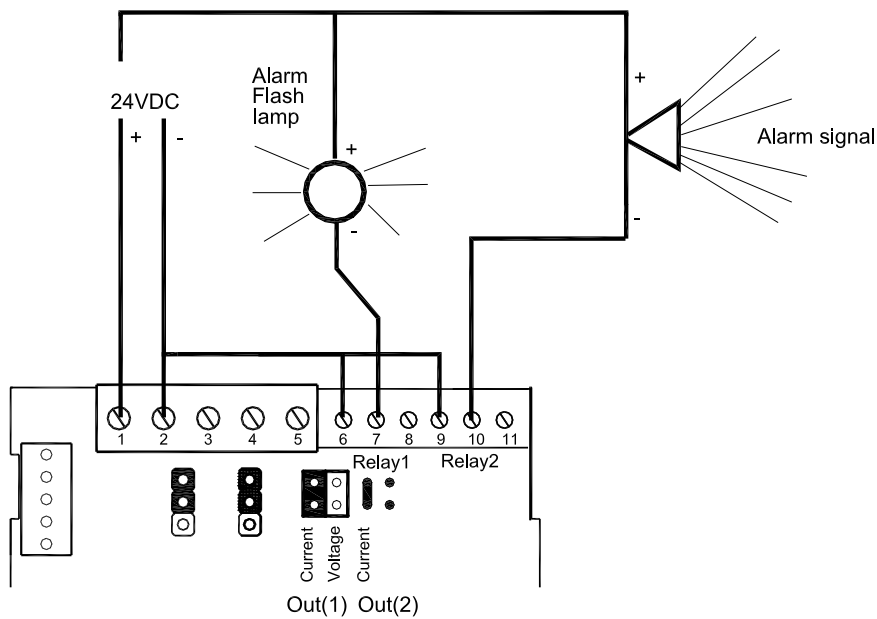
Table I. Electrical terminal connections for CF8-W-Disp-AL

Note 1: The ground terminal is used as negative power supply DC input or AC phase ground  (halfwave rectifier). The signal ground M, protected by a PTC resistor, is the same as power ground G0 (permitting a "3-wire" configuration). A single transformer may be used for the entire system.

Note 2: CF8-W-Disp-AL can deliver a voltage or a current loop for Out(1)/Out(2). To change between voltage and current output mode the hardware jumpers are used. There is one jumper for Out(1) and one for Out(2), so that one output can be a voltage output and the other a current output. Both, voltage output and current output, can have start points 0 % (0-10 VDC or 0-20mA) or 20% (2-10 VDC or 4-20mA). The same start point is used for both outputs. See the user manual.

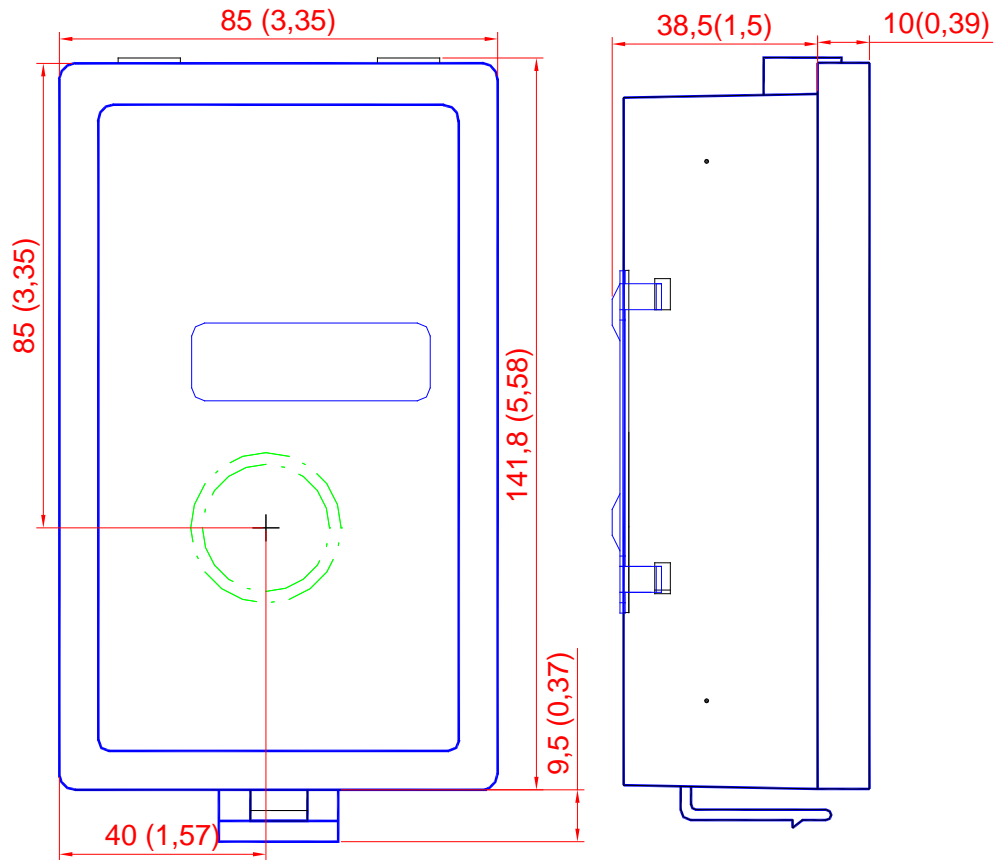


An application example illustrating connections to peripheral alarm devices are shown here.

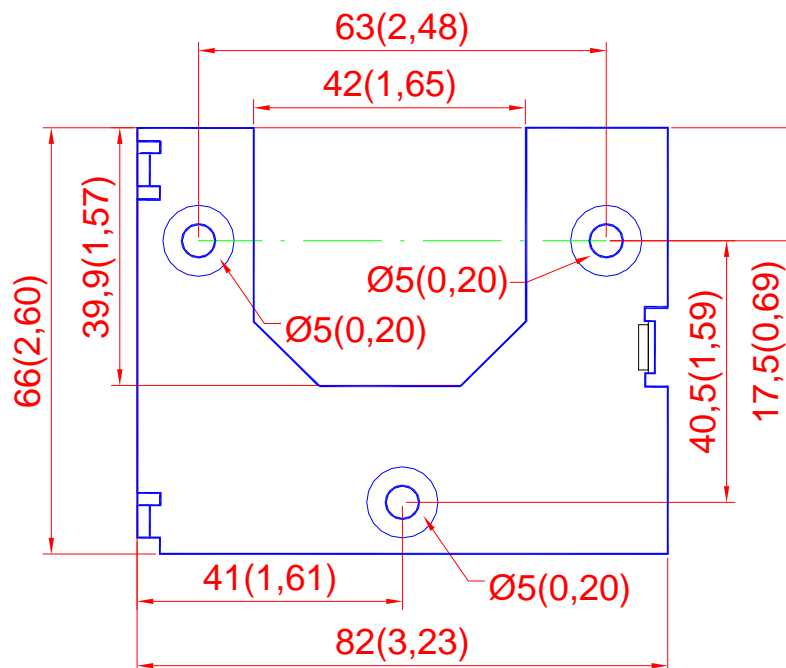


Connection of peripheral alarm devices to relay 1 and relay 2

Dimensions and holes



The dimensions of the sensor in mm and inches



The measurements of the wall plate in mm and inches