

# Level gauges and controllers CF-80 / CF-3 / CF-4 / JE-100

The installer is responsible for implementing the instructions mentioned in this document.

## 1. ADVICE

### 1.1 Installation and connections for gauges with float

- All gauges are tested and adjusted in our factory, according to the customer's requirements.
- For fault-free operation and maximum efficiency of gauges, it is necessary to respect the mounting rules listed in this document.

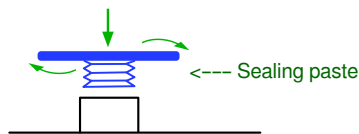
**Caution: The flange orientation on the tank and the installation of the gauge insure the correct functioning and the respect of warranty terms.**

## 2. ASSEMBLY

### 2.1 Mounting precautions:

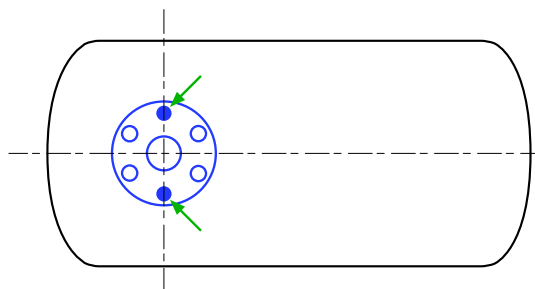
- 1) Before assembly, make sure that the devices correspond to the characteristics of the tank, in particular to the diameter and to the volume.
- 2) Make sure that the location of the sleeve on the tank will give the float and its arm, sufficient room to maneuver. The float must be able to freely move from top to bottom of the tank. (Take care of suction pipes and spacers)  
**The gauge must be mounted when the tank is empty.**
- 3) Do not change the factory settings: The gauge is adjusted and tested in the workshop and any action on it would have consequences on its operation, accuracy and warranty.
- 4) The cable gland on the probe head indicates the direction of movement of the float arm, take care to align it with the longitudinal axis of the tank (unless otherwise specified by factory)
- 5) Add sealing paste on the thread of the flange supplied with the gauge (Fig.1)

Fig. 1



- 6) Screw the flange on the tank taking care to align 2 opposite holes perpendicularly to the longitudinal axis of the tank. (Fig.2)

Fig. 2



- 7) Check that the threaded flange is correctly oriented in correspondence to the movement of the float arm.
- 8) Make sure that no pipe or spacer inside the tank interfere with the free movement of the float.

**BAMO** INTERNATIONAL

22, Rue de la Voie des Bans · Z.I. de la gare · 95100 ARGENTEUIL

Tel +33 (0)1 30 25 83 20 Web [www.bamo.eu](http://www.bamo.eu)

Fax +33 (0)1 34 10 16 05 E-mail [export@bamo.fr](mailto:export@bamo.fr)

Level gauges and controllers  
CF-80 / CF-3 / CF-4 / JE-100

14-03-2022

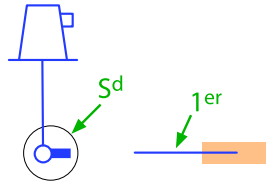
M-579.01-EN-AD

LEV

579-01 /1

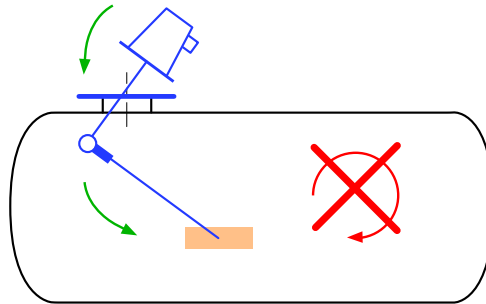
- 9) Fit the cork seal on the flange
- 10) First: Assemble the float on his arm (Fig.3 "1er")
- 11) Second: Mount the float arm on the vertical stem and lock it with screw (Fig.3 "Sd")

Fig. 3



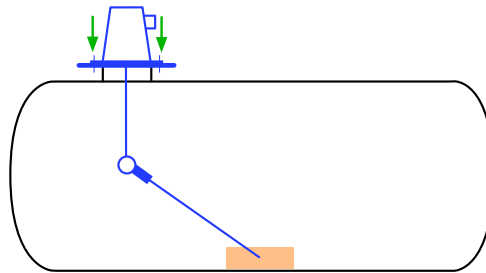
- 12) Insert the arm and the stem into the empty tank. (Fig.4)

Fig. 4



- 13) Fix the gauge on the flange with the 6 screws (Fig.5)

Fig. 5



### 3. ELECTRICAL CONNECTIONS

- Before assembly, check that supply voltage and/or level switches correspond to the application.
- Make sure the float can freely float up and down.
- Do not make connections when the loop is powered; level switches may not be powered before all connections are done.
- Do not change the factory settings; Any action on settings would affect the accuracy of the gauge and impact the warranty terms.
- Electrical connections should be made with care, glands properly used, especially for underground tanks or in places with uneasy accessibility.
- Level contacts are rated: 4 A / 250 V.

**BAMO INTERNATIONAL**

22, Rue de la Voie des Bans · Z.I. de la gare · 95100 ARGENTEUIL  
 Tel +33 (0)1 30 25 83 20 Web www.bamo.eu  
 Fax +33 (0)1 34 10 16 05 E-mail export@bamo.fr

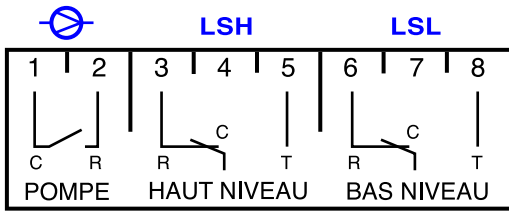
Level gauges and controllers  
**CF-80 / CF-3 / CF-4 / JE-100**

14-03-2022

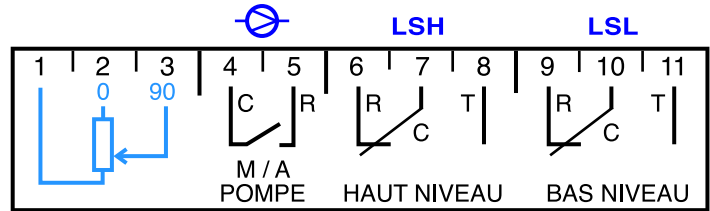
M-579.01-EN-AD

**LEV**

**579-01 /2**

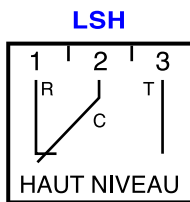


CF4 terminal

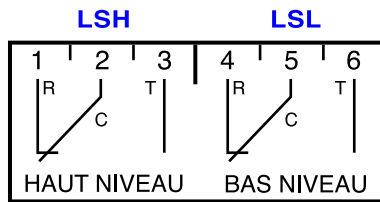


CF4 - RD terminal

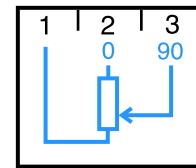
Vers GTC



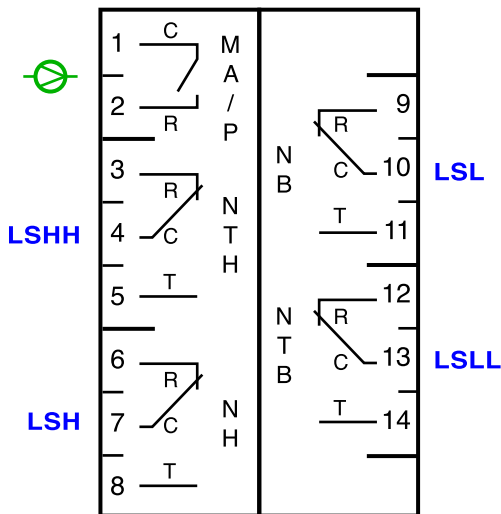
CF4- 1 threshold terminal



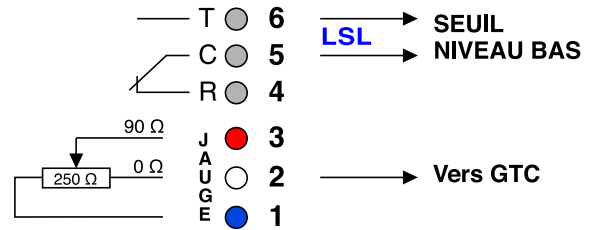
CF4- 2 thresholds terminal



CF3 terminal



CF4 - 4 or 5 thresholds terminal  
4 thresholds: 12, 13 and 14 not in use)



CS3 - 1 threshold terminal  
0 - 90 Ω

### 3.1 CF3 and JE100: Specificities

Level indication on the gauge head - Remote level signal (resistor) - PLC connection possible

### 3.2 Specificities of controllers CF4 SERIES

#### CF4 controller:

Level indication on the gauge head - Pump automation - Switch for high level alarm - Switch for low level alarm

Unless otherwise specified by the customer, the settings are made as follows:
Low level alarm at 30 % (LSL)
Pump automation: Switch on at 50 %
Pump automation: Switch off at 80 %
High level alarm at 90 % (LSH)

#### Controller CF4 - 1 threshold, specificities:

Level indication on the gauge head - Level switch for alarm signal (Low or High level) or pump automation.

Unless otherwise specified by the customer, the settings are made as follows:
High level alarm at 90 % (LSH) or Pump automation

#### Controller CF4 - 2 thresholds, specificities:

Level indication on the gauge head - Too high level alarm  
Too low level alarm or Pump automation

Unless otherwise specified by the customer, the settings are made as follows:
Level alarm: HIGH level at 90 % , and TOO HIGH level at 92 %
Level alarms: LOW level at 30 % and TOO LOW level at 15% OR pump control

#### Controller CF4 - 4 thresholds, specificities:

Level indication on gauge head - Too high level alarm - High level alarm  
Low level alarm - Too low level alarm or Pump automation contact

Unless otherwise specified by the customer, the settings are made as follows:
Too high level alarm at 80 % (LSHH)
High level alarm at 85 % (LSH)
Low level alarm at 30 % (LSL)
Too low level alarm at 15 % (LSLL), or Pump automation (50/80 %)

#### Controller CF4 - 5 thresholds, specificities:

Level indication on gauge head - Pump automation - Too high level alarm  
High level alarm - Low level alarm - Too low level alarm

Unless otherwise specified by the customer, the settings are made as follows:
Too low level alarm at 15 % (LSLL)
Low level alarm at 30 % (LSL)
Pump switches on, at 50 %
Pump switches off, at 80 %
High level alarm at 85 % (LSH)
Too high level alarm at 90 % (LSHH)

#### Controller CF4 - RD, specificities:

Level indication on gauge head - Pump automation - Remote signal (resistor) of level  
High level alarm - Low level alarm

Unless otherwise specified by the customer, the settings are made as follows:
Low level alarm at 30 % (LSL)
Pump switches on, at 50 %
Pump switches off, at 80 %
High level alarm at 90 % (LSH)
Remote signal (resistor): potentiometric

A fully stainless steel version exists for the corrosive liquid Adblue.



22, Rue de la Voie des Bans · Z.I. de la gare · 95100 ARGENTEUIL  
Tel +33 (0)1 30 25 83 20 Web www.bamo.eu  
Fax +33 (0)1 34 10 16 05 E-mail export@bamo.fr

Level gauges and controllers  
CF-80 / CF-3 / CF-4 / JE-100

14-03-2022

M-579.01-EN-AD

LEV

579-01 /4