

# Reed chain level transmitter RTM



## USER MANUAL

**BAMO** INTERNATIONAL

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Reed chain level transmitter  
RTM

LEV

586-01 /1

24-03-2022

M-586.01-EN-AB

## SAFETY INSTRUCTIONS

- Installation, commissioning and maintenance must be carried out by qualified technicians.
- The operation of the device must be in accordance with and strictly limited to the applications, as mentioned further on and on data-sheet.
- The installation and use of the devices must be done without any magnetic induction field.
- The device must be kept away from all metallic parts, or located at a minimum distance of 10 cm.
- Ensure compatibility of the liquid with the chemical resistance of the RTM's materials at operating pressure and temperature.
- **Reed bulbs are fragile and sensitive to shocks. It is imperative to handle the device with care.**

## APPLICATIONS

- Continuous level measurement of liquids in containers

## DESCRIPTION

The RTM transmitter consists of a Reed chain (REED contacts connected by resistors) switching when a magnetic actuator passes in front. The resulting resistor value is directly in correspondence with the liquid level.

The T2FR 5333 transmitter converts the resistor value into a 4-20 mA signal.

The necessary magnetic field is created by the MNR 6/7, MAGTOP floats or SFA counterweight.

## TECHNICAL FEATURES

|                         |  |
|-------------------------|--|
| Reed chain              | Specific Reed contacts   |
| Resistance              | * x $\Omega$ /10 mm (* other onrequest)  |
| Inner ruler             | Epoxy glass ruler  |
| Potentiometric output   | Résistor varies from * x $\Omega$ to 10 K $\Omega$ (by step of 1 cm)                       |
| 4-20 mA output          | Option: Transmitter 4-20 mA, 2-wire / 13 ... 30 V DC                                       |
| Measuring height limits | From 250 mm up to 1500 mm  |
| Accuracy                | Measuring step: 10 mm  |
| Stem                    | PVC-U: 0 to 50 °C<br>PPH: 5 ... 80 °C<br>PVDF: 0 ... 100 °C<br>AISI 316 L: -10 ... +110 °C |
| Housing                 | Or PBT-G, IP65<br>Or Aluminum alloy  |

|               |  |
|---------------|--|
| <b>Fig. A</b> | (1): Reed contact<br>(2): Resistor<br>(3): Float<br>(4): Magnet<br>(R): Housing and connexions<br>C: Red wire<br>100 %: Green wire<br>0%: Black wire |
|---------------|--|

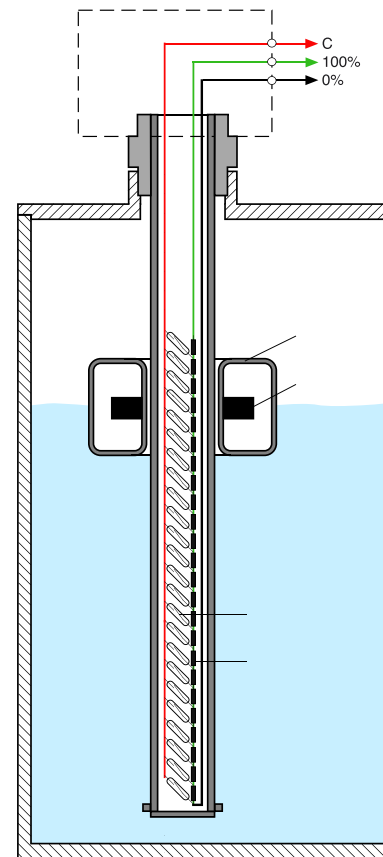


Fig. A

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## MOUNTING

With a MAGTOP: RTM is fixed to the measuring tube with specific collars. Adjust the position by sliding the collars to have the RTM all along the measuring distance of the MAGTOP (CtoC). RTM must be mounted vertically with the housing head on the top.

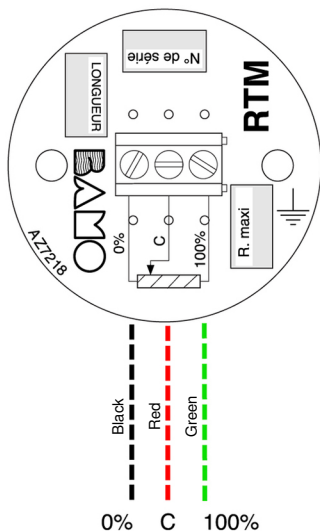
## ELECTRICAL CONNECTIONS

Once RTM is secured in place, open the housing and connect each terminal:

### Connections for a potentiometric output

(PCB)

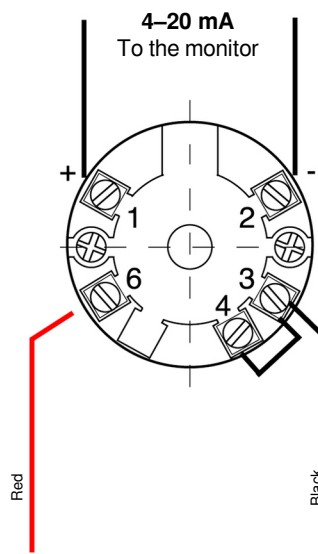
Potentiometric output: Red wire is always in use as it corresponds to the varying resistor value depending of the liquid level.



### Connections for the transmitter 4-20 mA

(T2FR 5333)

Loop 4-20 mA,  $\pm 24$  V DC between terminals "+" & "-"



Shunt between terminals 3 and 4.  
**Green wire: not connected**

## OPTIONS: Monitors, display units

- Proceed to the wiring according to the manuals of each device.

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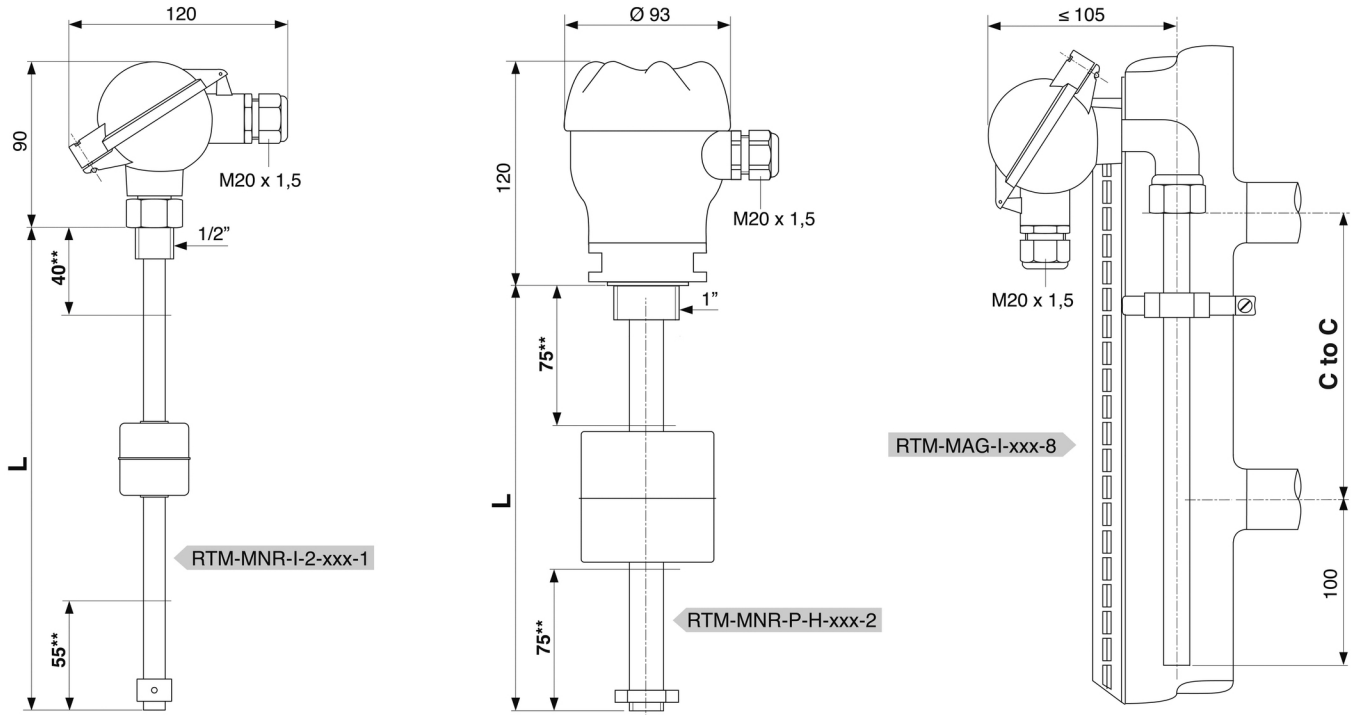
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## DIMENSIONS



Measuring height = Total distance (L) – Dead zones (\*\*)

## MAINTENANCE

The Reed chain being fragile, in the event of an impact, one or more Reed contacts may be broken and no more accurate measurement can be trusted (Possible check may be done between 0 and 100 %: continuous output -per step of 10 cm-) Please contact us: We shall advise if the device has to be sent back to us (in this case, caution to pack it very carefully).

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