

**INTRODUCTION**

The **TEMP-WM** and **TEMP-DM** transmitter series incorporate the best high accuracy and great stability temperature sensors. They convert the measured values into linear 4 to 20 mA signals and optional 0 to 10 Vdc output can also be offered under request.

The microprocessor based circuit enables full configuration of output range when used with the TxConfig PC interface and the Windows® based software.

The **TEMP-WM** model is dedicated to wall mounted applications and the **TEMP-DM** version is suitable for duct and through-the-wall applications.



**FEATURES & SPECIFICATIONS**

**Temperature:**

- Accuracy: 0,5 °C @ 25 °C
  - Repetibility: ±0,1 °C
  - Range: programmable between -50 and 120 °C (please check operational limits)
  - Response Time: up to 30 s in fairly still air
  - Operational limits:
    - Electronic module(WM-DM): -20 to +65 °C, 0 to 95% RH
    - Sensor and Probe (DM): -40 to +100 °C
- Note: When measuring temperatures higher than +65 °C or lower than -20 °C, only 50% of the probe total length must be inserted into the measured environment

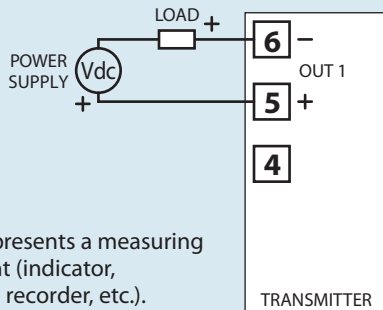
**General Features:**

- Power:
  - 12 to 30 Vdc (model 4-20 mA)
  - 18 to 30 Vdc (model 0-10 V)

- Cable input: PG7 cable gland
- Output:
  - Two-wire loop powered 4-20 mA or 20-4 mA
  - Voltage output: 0-10 Vdc or 10-0 Vdc (optional)
- Output resolution:
  - 0,006 mA (4-20 mA)
  - 0,003 V (0-10 Vcc)
- Output load (RL):
  - Model 4-20 mA:  $RL \text{ (max. in Ohms)} = (Vdc - 12) / 0.02$ ; where: Vdc=power voltage in Volts
  - Model 0-10 Vdc: 10 kOhms minimum
- Ingress Protection:
  - Electronic module case: IP65
  - Sensor probe: IP40
- Internal protection against reversed voltage wire polarity
- No electrical isolation between input, output and power circuits

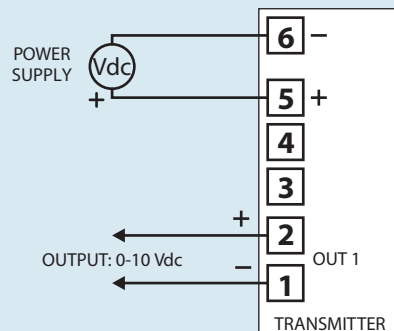
**ELECTRICAL CONNECTIONS**

**4-20 mA MODEL**



**Load** - represents a measuring instrument (indicator, controller, recorder, etc.).

**0-10 V MODEL**



**RECOMMENDATIONS FOR INSTALLATION**

- Input and communication signal conductors must pass through the system plant separated from the electrical network conductors, if possible, in grounded conduits.
- The supply for the instruments must be provided from a proper network for instrumentation.
- In control and monitoring applications, it is essential to consider what may occur if any of the system parts should fail.
- We recommend the use of RC FILTERS (47 R and 100nF, series) in parallel with contactor and solenoid coils which are close or connected to the transmitter.

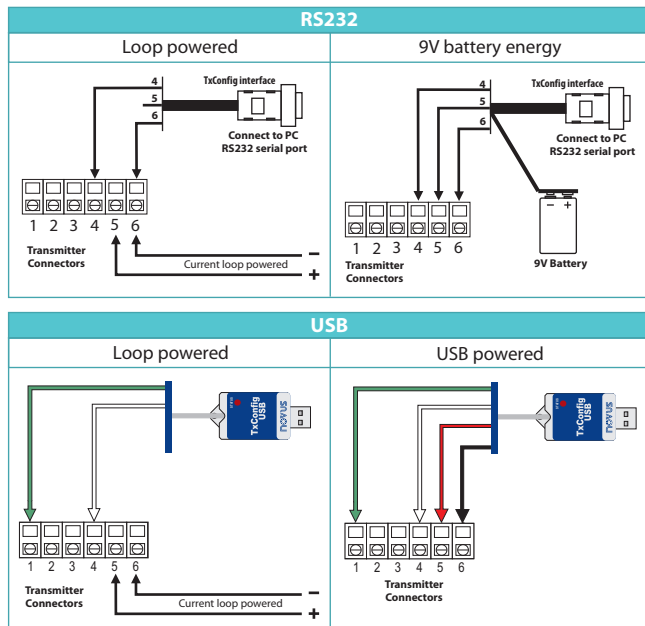
CONFIGURATION

**TEMP-WM** and **TEMP-DM** configuration is performed by using the **TxConfig** software and **TxConfig USB** interface connected to the PC.

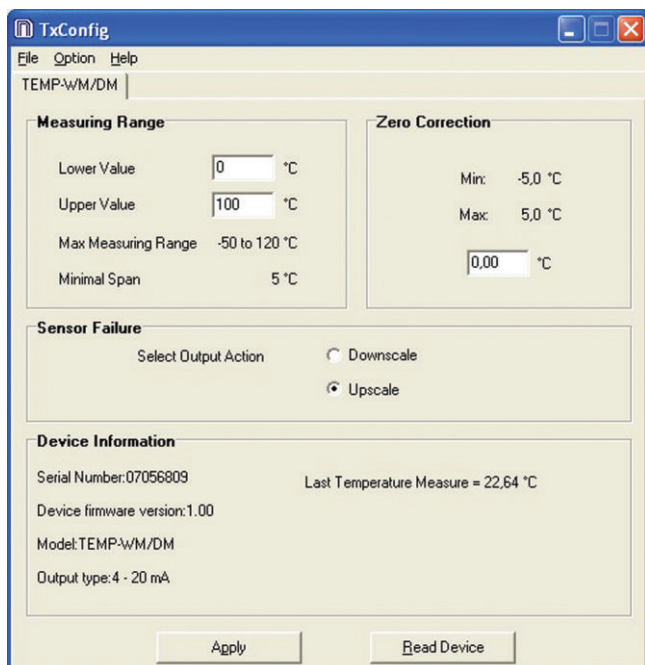
With the configuration one can set the transmitted output range, correct measuring deviations (zero correction) and choose sensor failure conditions (upscale or downscale). Sensor internal information as serial number, product version and model can also be digitally presented in the programming software menu.

The factory default settings are:

- Temperature measuring range: 0 to 100 °C
- Upscale signal outputs when sensor break or failure



TxConfig Interface Connections



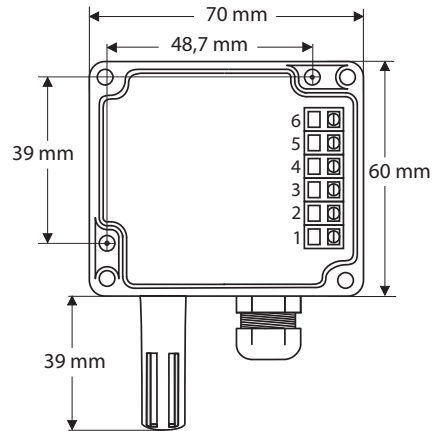
TxConfig software main screen

INSTALLATION

TEMP-WM Model

This compact electronic module performs fast and accurate measurements and isolates the sensor from internal module self heating. The sensor probe must be installed facing down.

Remove the four module cover screws to access the electrical terminal connectors and the two wall mounting fixing holes.



TEMP-DM Model

Sharing the same case and electronics as the **TEMP-WM** module, the **TEMP-DM** holds the sensor at the tip of a 150, 250 or 400 mm stainless steel or plastic sheath. A plastic flanged fixture is part of the unit.

