



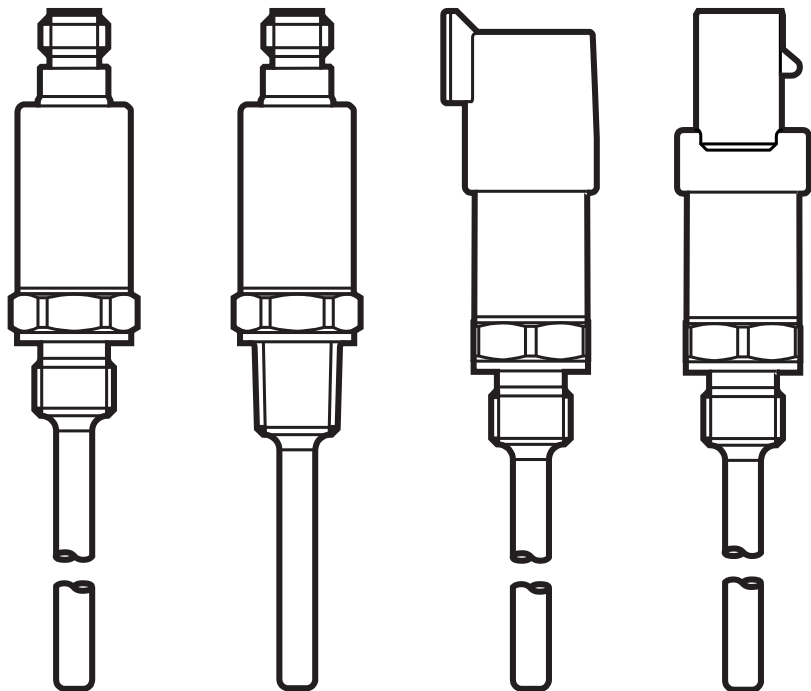
CE

## Installation Instructions Temperature transmitters

**TA3xxx**  
**TA4xxx**  
**TA5xxx**  
**TU3xxx**  
**TU4xxx**  
**TU5xxx**

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# 1 Safety instructions

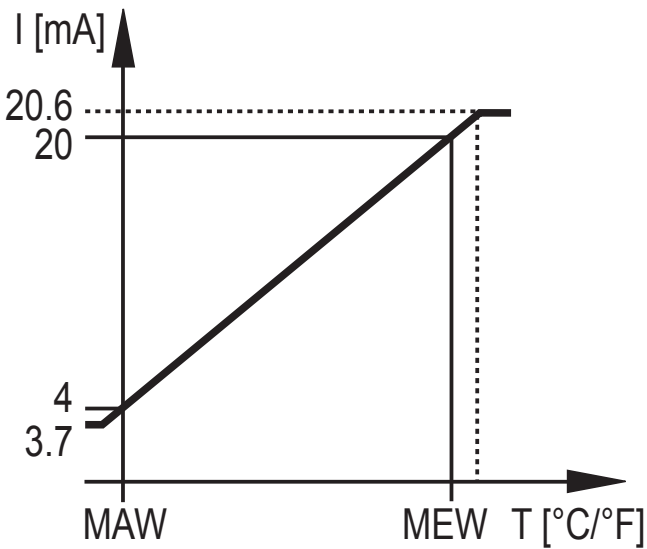
- Please read this document prior to set-up of the unit. Ensure that the product is suitable for your application without any restrictions.
- If the operating instructions or the technical data are not adhered to, personal injury and/or damage to property can occur.
- Improper or non-intended use may lead to malfunctions of the unit or to unwanted effects in your application. That is why installation, electrical connection, set-up, operation and maintenance of the unit must only be carried out by qualified personnel authorised by the machine operator.
- In order to guarantee the correct condition of the device for the operating time the device must only be used in media to which the wetted parts are sufficiently resistant (→ Technical data).
- The responsibility whether the measurement devices are suitable for the respective application lies with the operator. The manufacturer assumes no liability for consequences of misuse by the operator. Improper installation and use of the devices result in a loss of the warranty claims.

# 2 Functions and features

The unit detects the medium temperature and converts it into an analogue output signal.

### 3 Function

Fig. 1: Current output



TAxxxx:

In the measuring range the output signal is between 4 and 20 mA.

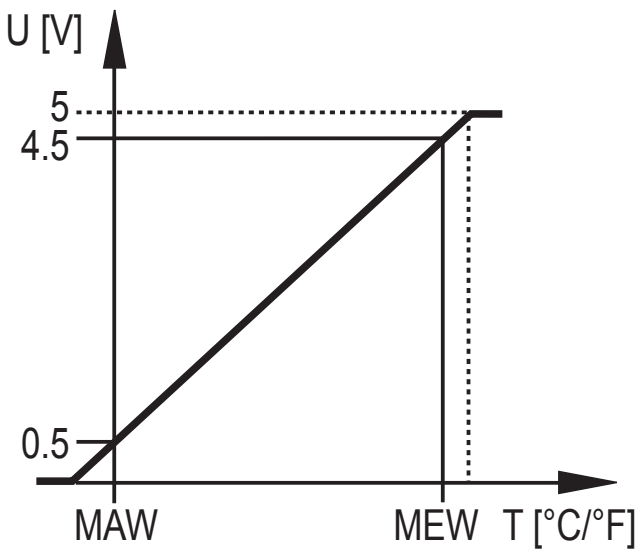
If the temperature is above or below the measuring range, the analogue output behaves as follows:

Temperature above the measuring range: 20...20.6 mA.

Temperature below the measuring range: 4...3.7 mA.

UK

Fig. 2: Voltage output



TUxxxx:

In the measuring range the output signal is between 0.5 and 4.5 V.

If the temperature is above or below the measuring range, the analogue output behaves as follows:

Temperature above the measuring range: 4.5...5V.

Temperature below the measuring range: 0.5..0 V.

T = Temperature

MAW = initial value of the measuring range

MEW = final value of the measuring range

## 4 Installation



Before installing and removing the unit: make sure that no pressure is applied to the system.

► Insert the unit in the process connection and tighten firmly.

- Tightening torque for units with G $\frac{1}{4}$ : 35 Nm.
- Tightening torque for units with  $\frac{1}{4}$ " NPT: tighten by hand plus 1.5 turns.
- Tightening torque for units with M10x1: 20...25 Nm.

## 5 Electrical connection




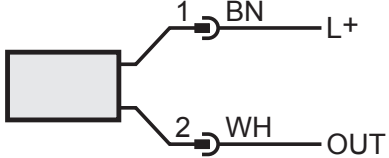
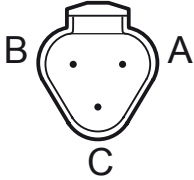
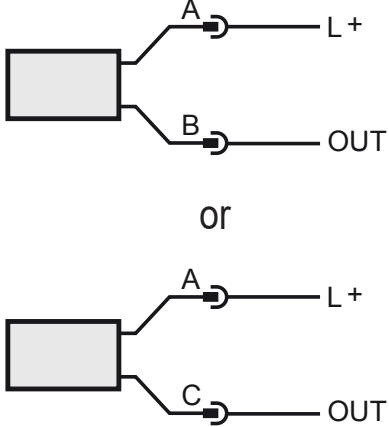
The unit must be connected by a qualified electrician.

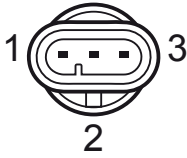
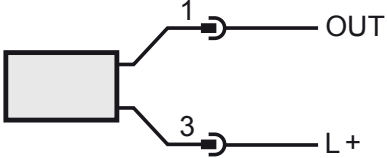

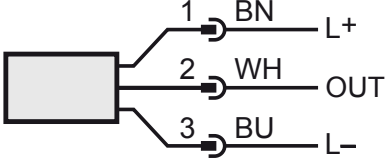
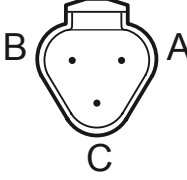
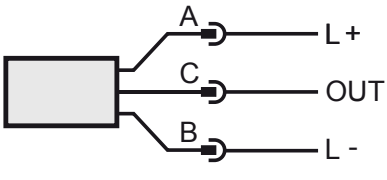
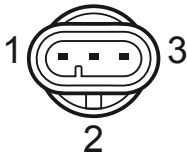
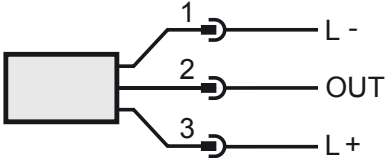
The national and international regulations for the installation of electrical equipment must be adhered to.

Voltage supply to EN 50178, SELV, PELV.

► Disconnect power.

► Connect the unit as follows:

TA3xxx	 <p>M12</p>	 <p>OUT: analogue output 4...20 mA</p>
TA4xxx	 <p>DEUTSCH DT04-3P</p>	 <p>→ Datasheet at <a href="http://www.ifm.com">www.ifm.com</a></p> <p>OUT: analogue output 4...20 mA</p>

TA5xxx	 <p>AMP Superseal</p>	 <p>OUT: analogue output 4...20 mA</p>
TU3xxx	 <p>M12</p>	 <p>OUT: analogue output 0.5...4.5 V</p>
TU4xxx	 <p>DEUTSCH DT04-3P</p>	 <p>OUT: analogue output 0.5...4.5 V</p>
TU5xxx	 <p>AMP Superseal</p>	 <p>OUT: analogue output 0.5...4.5 V</p>

Colours to DIN EN 60947-5-2

BK: black, BN: brown, BU: blue, WH: white

## 6 Operation

After power on, the unit is in the Run mode (= normal operating mode).

## 7 Technical data

Technical data and scale drawing at [www.ifm.com](http://www.ifm.com).

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