

## Installation Instructions Temperature transmitters

**TA3xxx**

**TA4xxx**

**TA5xxx**

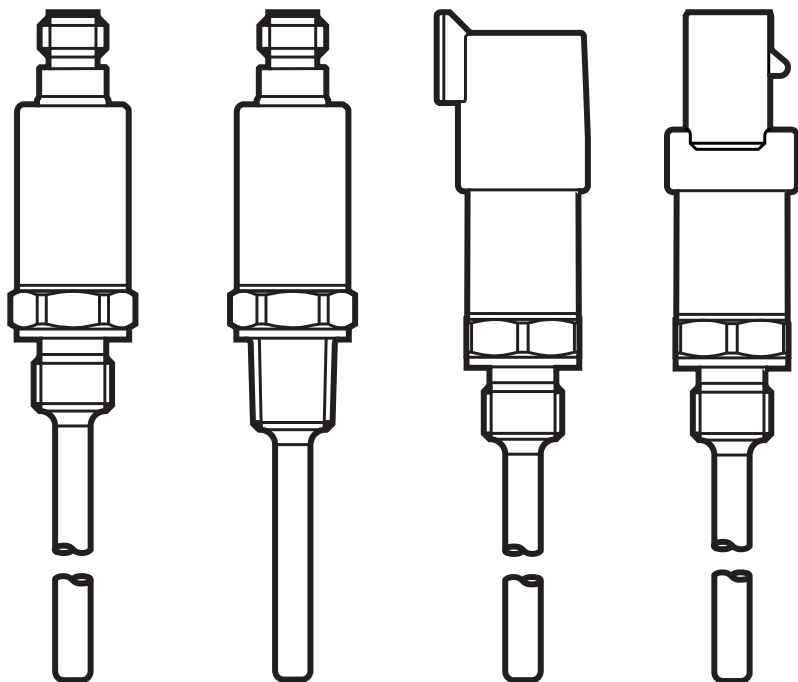
**TU3xxx**

**TU4xxx**

**TU5xxx**

**UK**

80288981 / 00 09 / 2019



# 1 Safety instructions

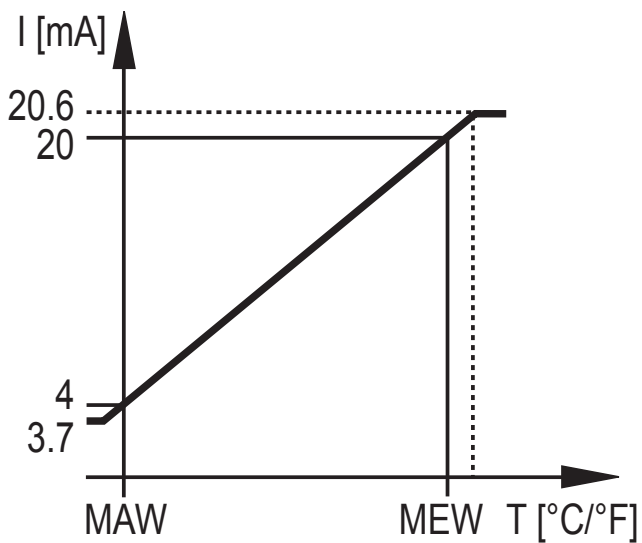
- The device described is a subcomponent for integration into a system.
  - The manufacturer of the system is responsible for the safety of the system.
  - The system manufacturer undertakes to perform a risk assessment and to create a documentation in accordance with legal and normative requirements to be provided to the operator and user of the system. This documentation must contain all necessary information and safety instructions for the operator, the user and, if applicable, for any service personnel authorised by the manufacturer of the system.
- Read this document before setting up the product and keep it during the entire service life.
- The product must be suitable for the corresponding applications and environmental conditions without any restrictions.
- Only use the product for its intended purpose (→ Functions and features).
- Only use the product for permissible media (→ Technical data).
- If the operating instructions or the technical data are not adhered to, personal injury and/or damage to property may occur.
- The manufacturer assumes no liability or warranty for any consequences caused by tampering with the product or incorrect use by the operator.
- Installation, electrical connection, set-up, operation and maintenance of the unit must be carried out by qualified personnel authorised by the machine operator.
- Protect units and cables against damage.

# 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.

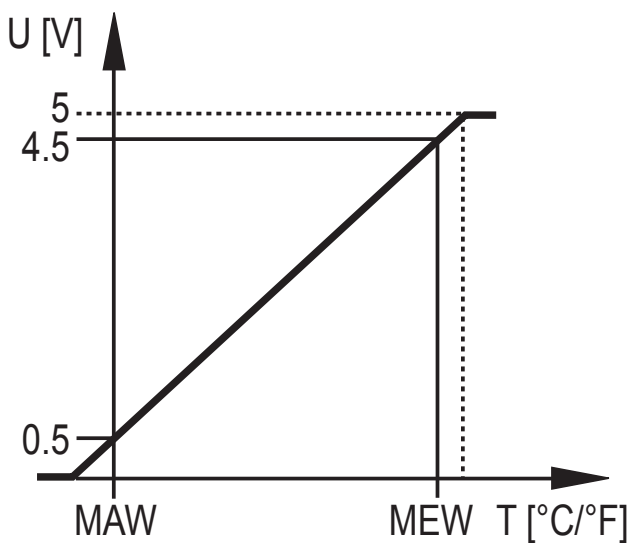
If the temperature is above or below the measuring range, the analogue output behaves as follows:

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 und 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.


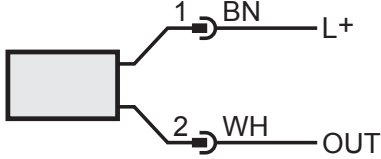
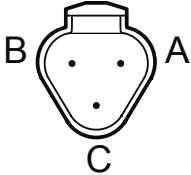
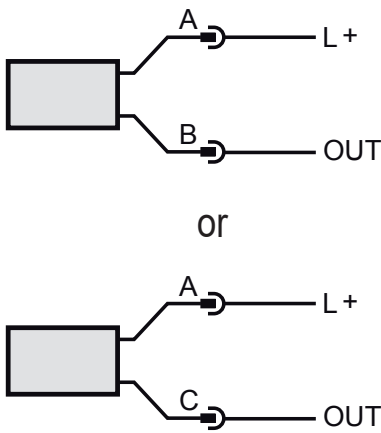
- ▶ Insert the unit in the process connection and tighten firmly.
  - Tightening torque for units with G $\frac{1}{4}$ : 35 Nm.
  - Tightening torque for units with  $\frac{1}{4}$ " NPT: tighten by hand plus 1.5 turns.
  - Tightening torque for units with M10x1: 20...25 Nm.

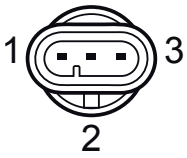
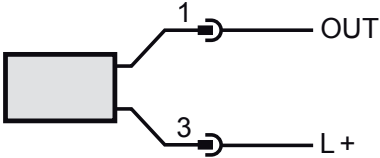
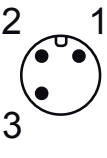
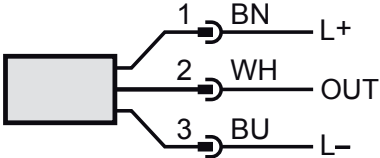
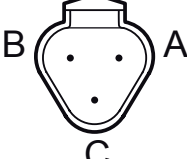
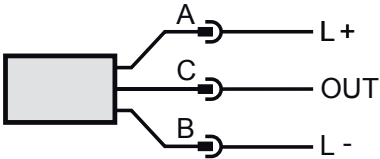
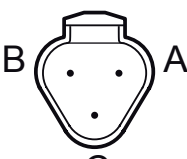
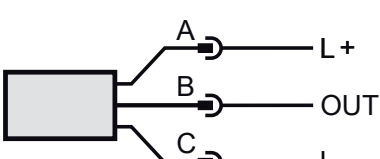
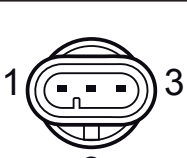
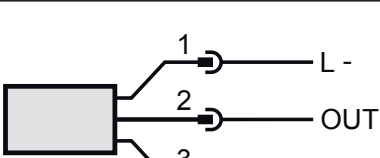
## 5 Electrical connection



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>                  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>
TU41xx	 <p>DEUTSCH DT04-3P</p>	 <p>OUT: analogue output 0.5...4.5 V</p>
TU47xx	 <p>DEUTSCH DT04-3P</p>	 <p>OUT: sortie analogique 0,5...4,5 V</p>
TU5xxx	 <p>AMP Superseal</p>	 <p>OUT: analogue output 0.5...4.5 V</p>

UK

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).