



Operating instructions
Electronic temperature sensor

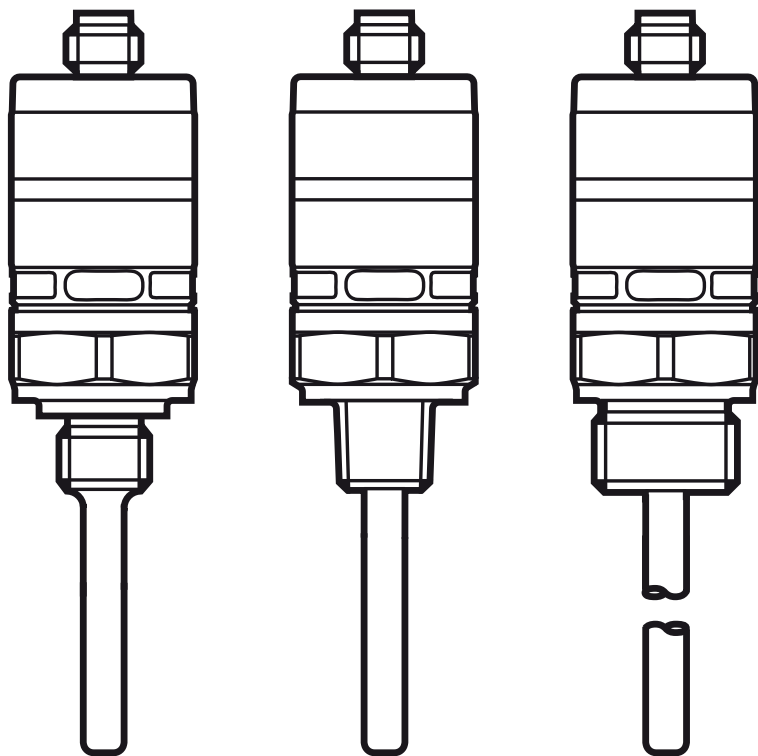
TK7110

TK7310

TK7460

UK

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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 system temperature in machines and installations.

3 Function

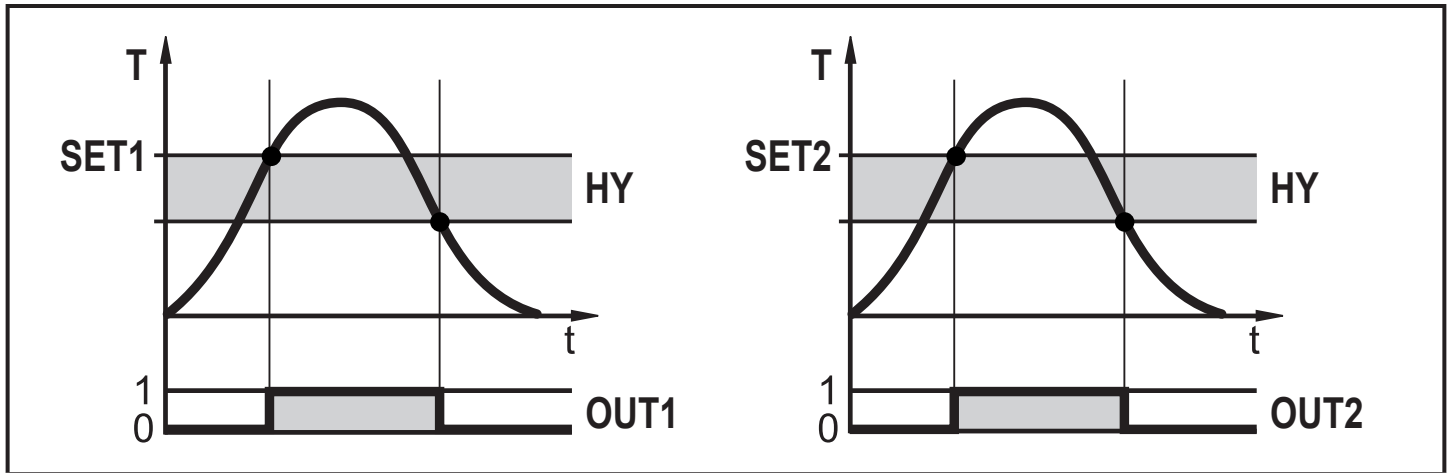
The unit generates 2 output signals. The two switch points SET1 and SET2 are separately adjustable.

The hysteresis is fixed. It is 5 K.

3.1 TK7110, TK7310 (2 x NO)

- With rising temperature OUT1 closes / OUT2 closes when the value SET1 / SET2 is reached.
- With falling temperature OUT1 opens / OUT2 opens, when the value SET1 minus hysteresis / SET2 minus hysteresis is reached.

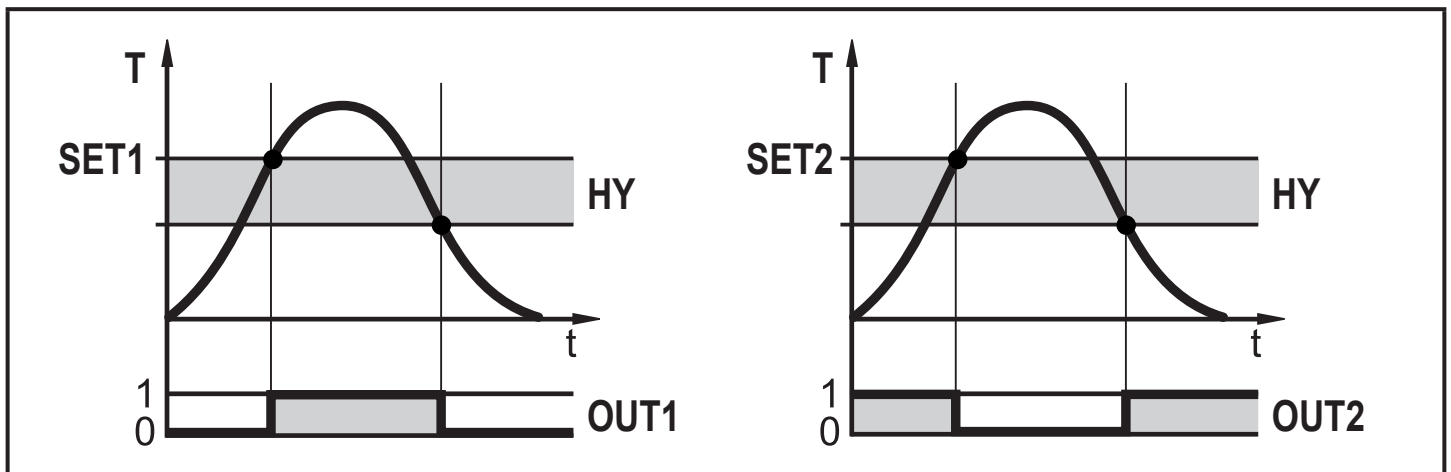
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T = Temperature; HY = Hysteresis

3.2 TK7460 (1 x NO + 1 x NC)

- With rising temperature OUT1 closes / OUT2 opens when the value SET1 / SET2 is reached.
- With falling temperature OUT1 opens / OUT2 closes, when the value SET1 minus hysteresis / SET2 minus hysteresis is reached.



T = Temperature; HY = Hysteresis

4 Installation



Before mounting and removing the unit:

- ▶ Ensure that no medium can leak at the process connection.



Horizontal mounting recommended for high medium temperatures.

- ▶ Insert the unit in a process connection and tighten firmly. Recommended Tightening torque:

- Process connection G ¼: 35 Nm
- Process connection G ½: 45 Nm
- Process connection ¼" NPT: 1.5 turns past hand tight

5 Electrical connection

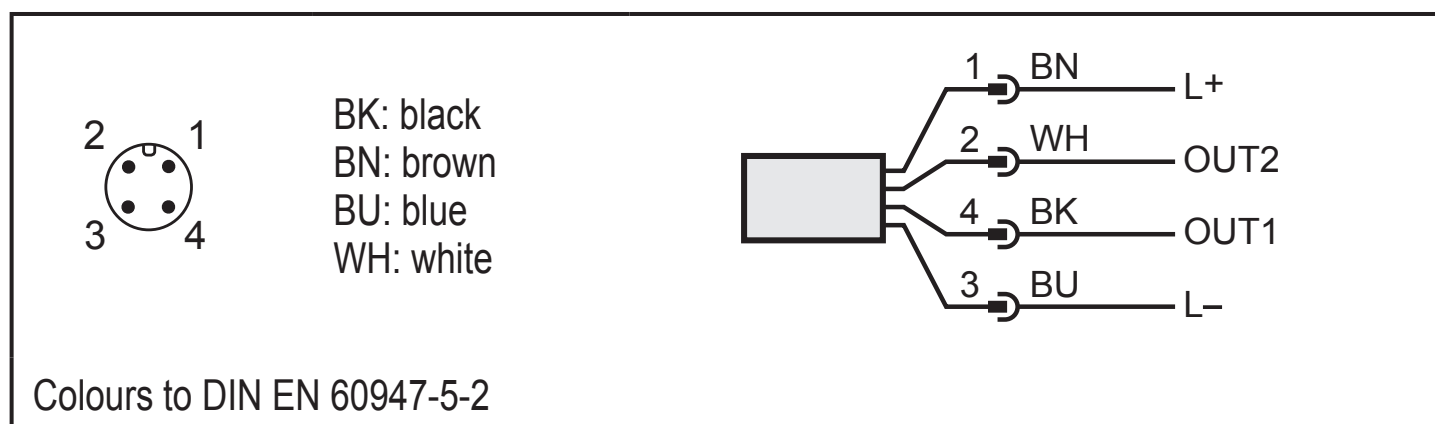


The unit must be connected by a qualified electrician.

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

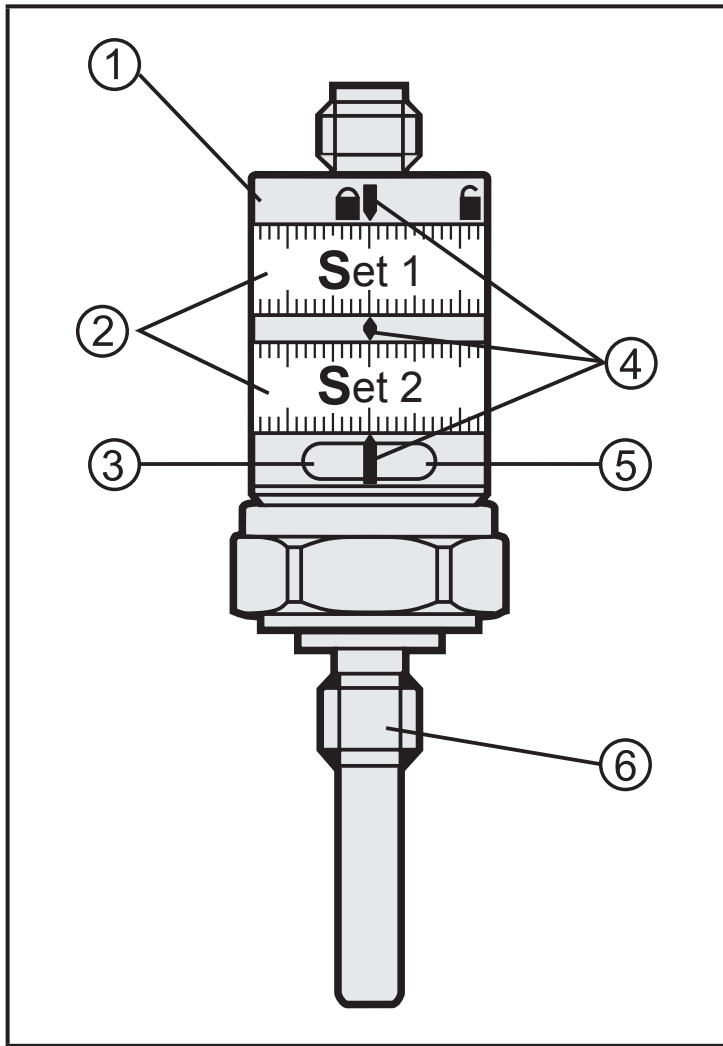
Voltage supply according to EN 50178, SELV, PELV.

- ▶ Disconnect power.
- ▶ Connect the unit as follows:



	TK7110, TK7310	TK7460
Pin 1	L+	L+
Pin 3	L-	L-
Pin 4 (OUT1)	Normally open (NO)	Normally open (NO)
Pin 2 (OUT2)	Normally open (NO)	Normally closed (NC)

6 Setting



- 1: locking ring
- 2: setting rings
- 3: LED yellow: OUT1 closed
- 4: setting marks
- 5: LED yellow: OUT2 closed
- 6: process connection

- ▶ Turn the locking ring to the unlocked position.
- ▶ Turn both setting rings to the lowest setting.
! This is important to ensure the setting accuracy.
- ▶ Rotate SET1 ring to desired temperature.
- ▶ Rotate SET2 ring to desired temperature.
- ▶ Turn the locking ring to the locked position.

Technical data, approvals, accessories and further information at
www.ifm.com.