

1. SAFETY REGULATIONS AND INFORMATION

Please read the installation instructions before starting work with the device. The installation instructions are a part of the complete device. They must accompany the device if it is passed on. The installation instructions may be copied for information purposes.

1.1. Personnel qualifications

The device may only be transported, unpacked, operated, maintained and otherwise used by qualified, trained and authorised technical staff.

1.2. Storage

Store the device in the original packaging in a clean and dry environment that offers protection from the weather. Protect the device against environmental effects and dirt until final installation. The storage temperature must not exceed 85 °C.

2. INTENDED USE

The device is designed exclusively for use as a temperature control sensor for fans. Any other usage does not conform with the intended purpose and constitutes misuse of the device. Customer facilities must conform with the permitted usages.

Improper use:

- Operating the device close to flammable materials.
- Operating the device in an explosive atmosphere.
- Operating the device in water or other liquids.
- Using the device as a safety component or to perform safety-related functions.

3. CONNECTION AND START-UP

Ensure isolation from supply (all phases). An additional power supply is required for fans without 10V output.



WARNING

The fan may start automatically.

Secure the fan against automatic starting. This can lead to injuries.

3.1. Installation

For vertical installation, fasten the temperature measurement sensor so that the cable runs downwards. Water must be prevented from running along the cable towards the sensor.



NOTE

Bending the connection line can damage the device

Comply with the stated minimum bending radius.

This is 3xD.

With a cable section diameter of 4.9 mm, the minimum bending radius is 3x4.9 mm.

Therefore the minimum bending radius is 14.7 mm.

3.2. Tightening torque



NOTE

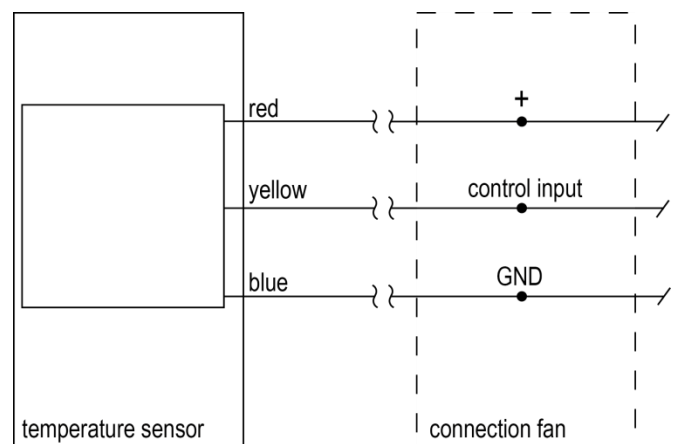
Observe the tightening conditions. Non-observation may result in the sensor breaking.

The tightening torque:

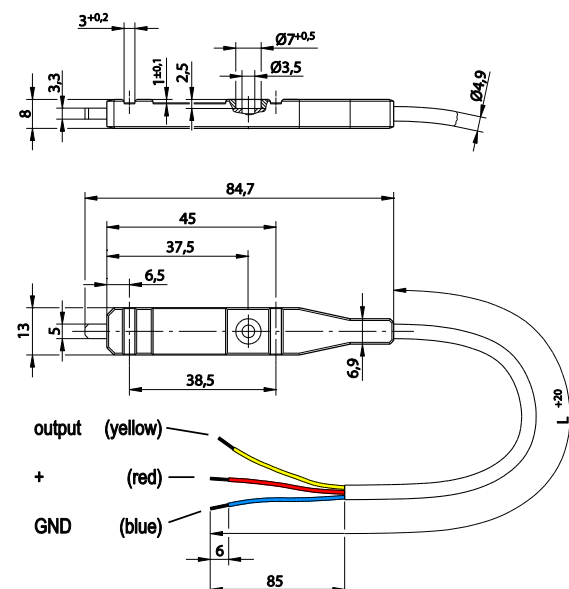
0.6 Nm ±0.2 (n≤700 1/min)

The supporting surface of the sensor must be directly on the mounting hole.

3.3. Connection diagram



3.4. Product drawing

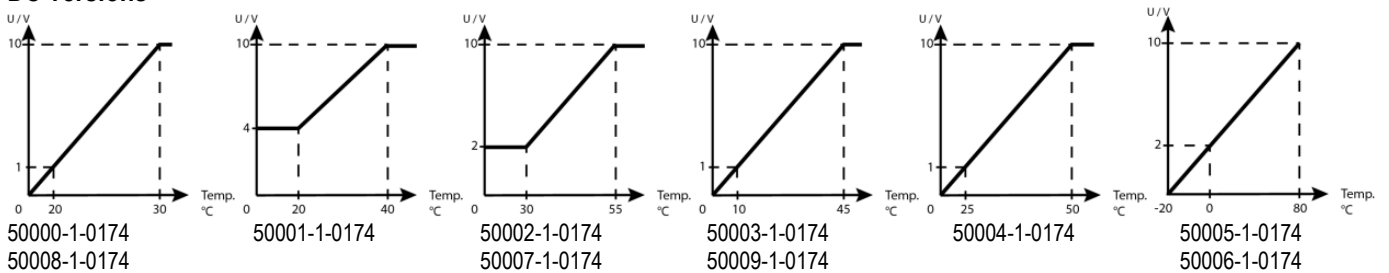


4. NOMINAL DATA

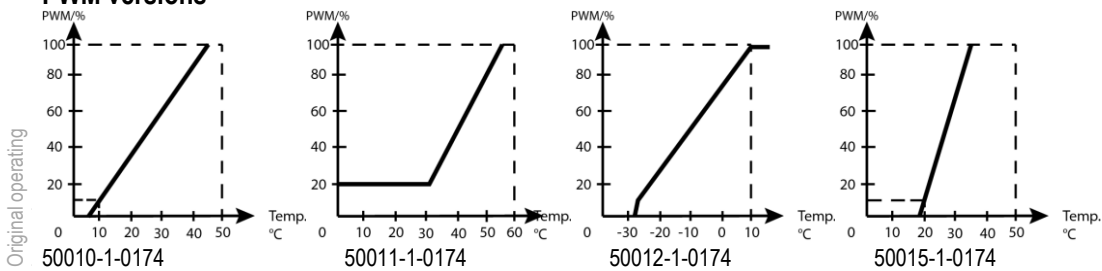
Type no.	Nominal voltage	Input current	Output	Output current	Temperature regulation range	Cable length (L)
DC versions						
50000-1-0174	18 – 60 VDC	10 mA	1 V – 10 V	1 mA	+20 °C – +30 °C	450 mm
50001-1-0174	18 – 60 VDC	10 mA	4 V – 10 V	1 mA	+20 °C – +40 °C	450 mm
50002-1-0174	18 – 60 VDC	10 mA	2 V – 10 V	1 mA	+30 °C – +55 °C	450 mm
50003-1-0174	18 – 60 VDC	10 mA	1 V – 10 V	1 mA	+10 °C – +45 °C	450 mm
50004-1-0174	18 – 60 VDC	10 mA	1 V – 10 V	1 mA	+25 °C – +50 °C	450 mm
50005-1-0174	15 – 30 VDC	10 mA	0 V – 10 V	1 mA	-20 °C – +80 °C	450 mm
50006-1-0174	15 – 30 VDC	10 mA	0 V – 10 V	1 mA	-20 °C – +80 °C	1000 mm
50007-1-0174	18 – 60 VDC	10 mA	2 V – 10 V	1 mA	+30 °C – +55 °C	3000 mm
50008-1-0174	18 – 60 VDC	10 mA	1 V – 10 V	1 mA	+20 °C – +30 °C	1500 mm
50009-1-0174	18 – 60 VDC	10 mA	1 V – 10 V	1 mA	+10 °C – +45 °C	5000 mm
PWM versions						
50010-1-0174	10 – 12 VDC	1 mA	10 % – 100 % PWM	0.2 mA	+10 °C – +45 °C	450 mm
50011-1-0174	10 – 12 VDC	1 mA	20 % – 100 % PWM	0.2 mA	+30 °C – +55 °C	450 mm
50012-1-0174	10 – 12 VDC	1 mA	10 % – 100 % PWM	0.2 mA	-25 °C – +10 °C	450 mm
50015-1-0174	10 – 12 VDC	1 mA	10 % – 100 % PWM	0.2 mA	+20 °C – +35 °C	3000 mm

4.1. Curves

DC versions



PWM versions



EC temperature measurement sensors emit a PWM signal. ebm-papst applications convert this internally into DC voltage.

