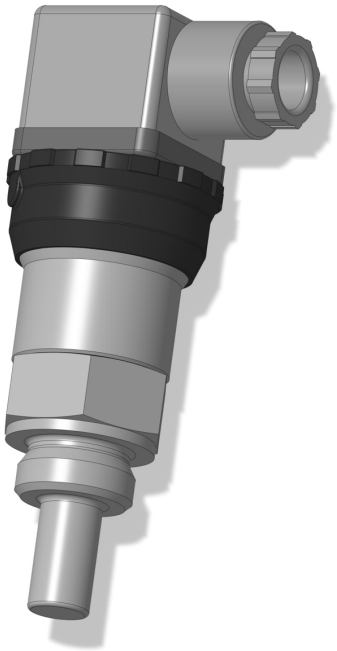
developing solutions

FISCHER
MESS- UND REGELTECHNIK

CE

RoHS III
COMPLIANT



Data sheet

TS61

Temperature switch
with a bimetallic switching element

09015538 • DB_EN_TS61 • Rev. ST4-A • 03/26

1 Product and functional description

1.1 Performance characteristics

Typical applications

- Cooling and heating circuits
- Compressors, motors, pumps, hydraulic systems
- Plastics processing equipment

Main features

- High resistance to electrical and magnetic interference in the contact system
- Short activation time
- Easy installation
- Instantaneous switching due to pronounced step response
- Self-resetting
- Fixed switching temperature in the range of 70–180 °C
- Switching point accuracy of ± 5 K for all switching temperatures
- Vibration-resistant (in accordance with DNV curve 2)

1.2 Intended use

The TS61 is a temperature switch designed to monitor, control and signal temperature limits, known as the nominal switching temperature (NST), in industrial processes.

1.3 Function diagram

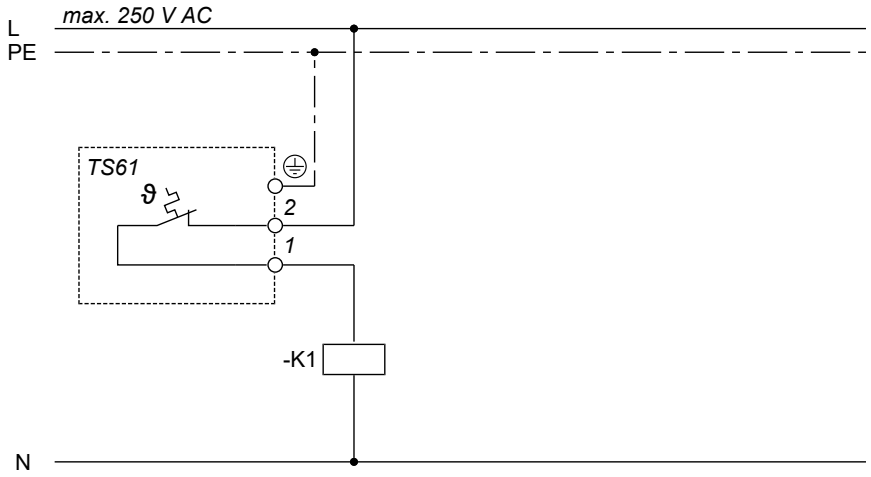


Fig. 1: Example application

1.4 Design and mode of operation

The TS61 temperature switch is housed in a stainless steel casing. It is vibration-resistant and is supplied with a range of fixed nominal switching temperatures. Please refer to the technical data or the order code for details regarding the achievable nominal switching temperatures.

If the temperature being monitored exceeds the nominal switching temperature, the switch abruptly opens the connected circuit. A variety of devices can be connected to this circuit. These could include, for example, a contactor, a process monitoring control system or similar.

The circuit is automatically closed as soon as the temperature being monitored has fallen back to the nominal switching temperature.

2 Technical data

2.1 General

Type designation	TS61
Measurement principle	Bimetallic switch
Sensor material	Stainless steel 1.4571 / AISI 306
Process connection	G½
Electrical connection	Valve connector in accordance with DIN EN 175301-803-A
Type of protection	IP54 in accordance with DIN EN 60529
Ambient temperature	
Sensor	-50 … +180 °C
Valve plug	-40 … +90 °C

2.2 Input variables

Nominal switching temperature (NST) [°C]	80	100	120	150	180
NST tolerance	±5 K				
Reset temperature (RST)	40 ± 15K below NST				

Bimetallic switch

Switching function	Self-resetting normally closed contact	
Switching principle	Instantaneous switch (current- and temperature-dependent)	
Switching cycles	10,000 cycles	
Operating voltage	230 V AC ±10 %	
Max. switching voltage	250 V AC	
Max. switching current	AC cos φ = 1.0	6.3 A/250 V
		2.5 A/250 V
	AC cos φ = 0.6	1.6 A/250 V
Contact resistance	< 50 mΩ	

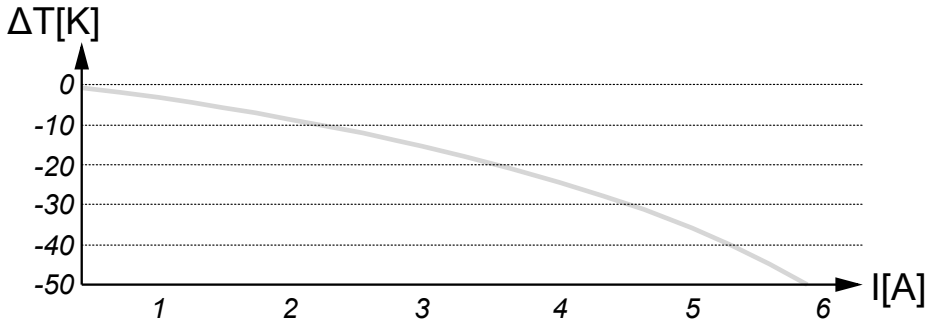


Fig. 2: Current and temperature dependence

2.3 Electrical connection

Valve plug	DIN EN 175301-803-A
Max. voltage	250 V AC
Max. current	16.0 A
Max. conductor cross-section	1.50 mm^2 or 16 AWG
Cable diameter	6 … 8 mm
Cable screw connection	M16x1.5
Central screw tightening torque	0.4 Nm
Seal	NBR profiled seal

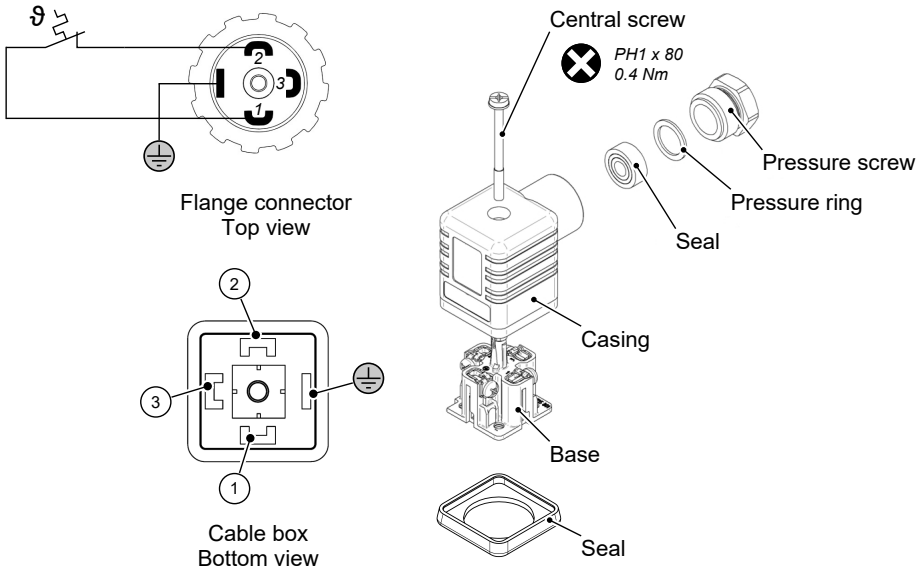


Fig. 3: Electrical connection

2.4 Dimension drawing

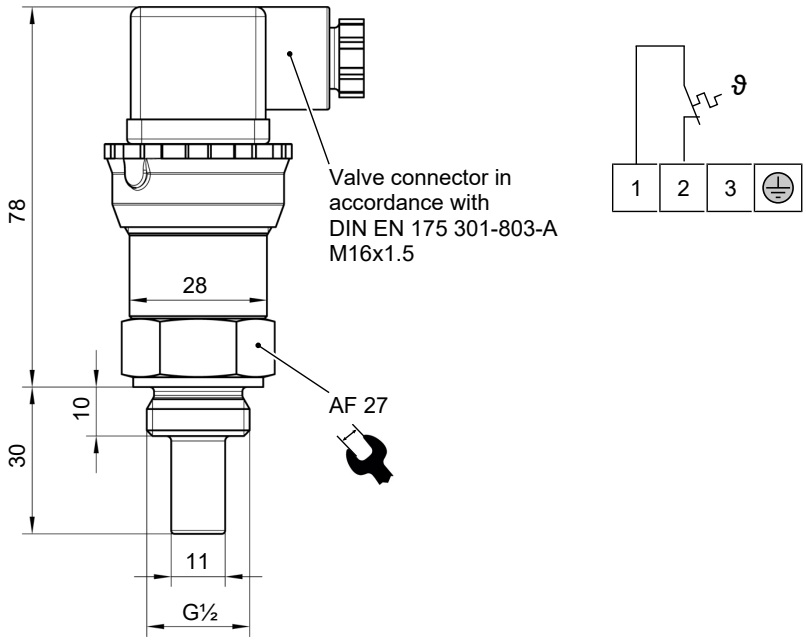
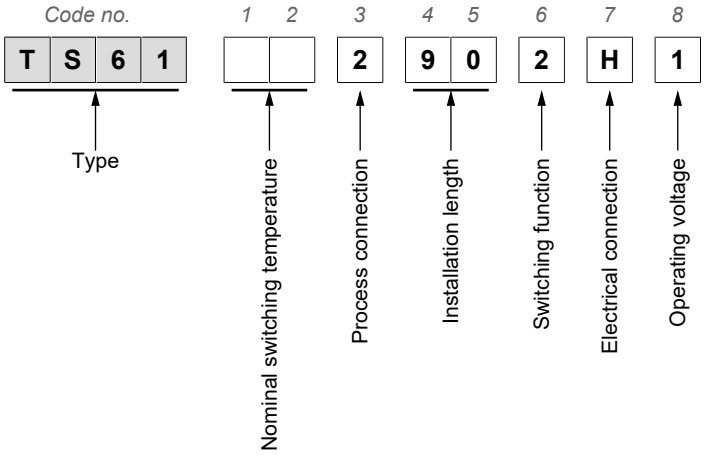


Fig. 4: Dimension drawing

3 Order codes



[1.2]	Nominal switching temperature (NST)
32	80 °C
40	100 °C
41	120 °C
50	150 °C
52	180 °C
99	Other options available on request

[3]	Process connection
2	G½ screw connection

[4.5]	Installation length
90	30 mm

[6]	Switching function
2	Normally closed

[7]	Electrical connection
H	3-pin + PE valve connector according to DIN EN 175 301-803-A

[8]	Operating voltage
1	230V AC ±10 %

4 Declaration of Conformity

FISCHER MESS- UND REGELTECHNIK

(Translation) CE

EU Declaration of Conformity

For the product described as follows

Product designation **Temperature switch**

Type designation **TS61**

it is hereby declared that it corresponds with the basic requirements specified in the following designated directives:

2014/35/EU	*Low Voltage Directive*
2011/65/EU	*RoHS Directive*
(EU) 2015/863	*Delegated Directive amending Annex II to Directive 2011/65/EU*

The products were tested in compliance with the following standards.

Low Voltage Directive (LVD)

DIN EN 61010-1:2020-03 *EN 61010-1:2010 + A1:2019 + A1:2019/ AC:2019*	*Safety requirements for electrical equipment for measurement, control, and laboratory use - Part 1: General requirements*

RoHS Directive (RoHS 3)

DIN EN IEC 63000:2019-05 *EN IEC 63000:2018*	*Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances*

Also they were subjected to the conformity assessment procedure „**Internal production control**".

Sole responsibility for the issue of this declaration of conformity in relation to fulfilment of the fundamental requirements and the production of the technical documents is with the manufacturer.

Manufacturer

FISCHER Mess- und Regeltechnik GmbH
Bielefelder Str. 37a
32107 Bad Salzuflen, Germany
Tel. +49 (0)5222 974 0

The devices bear the following marking: CE

Bad Salzuflen
18 Feb 2026

T. Malischewski
Managing Director

Notes

FISCHER Mess- und Regeltechnik GmbH
Bielefelder Str. 37a
D-32107 Bad Salzuflen
Tel. +49 5222 974-0
www.fischermesstechnik.de
info@fischermesstechnik.de

Technische Änderungen vorbehalten. Subject to technical changes. Sous réserve de modifications techniques.