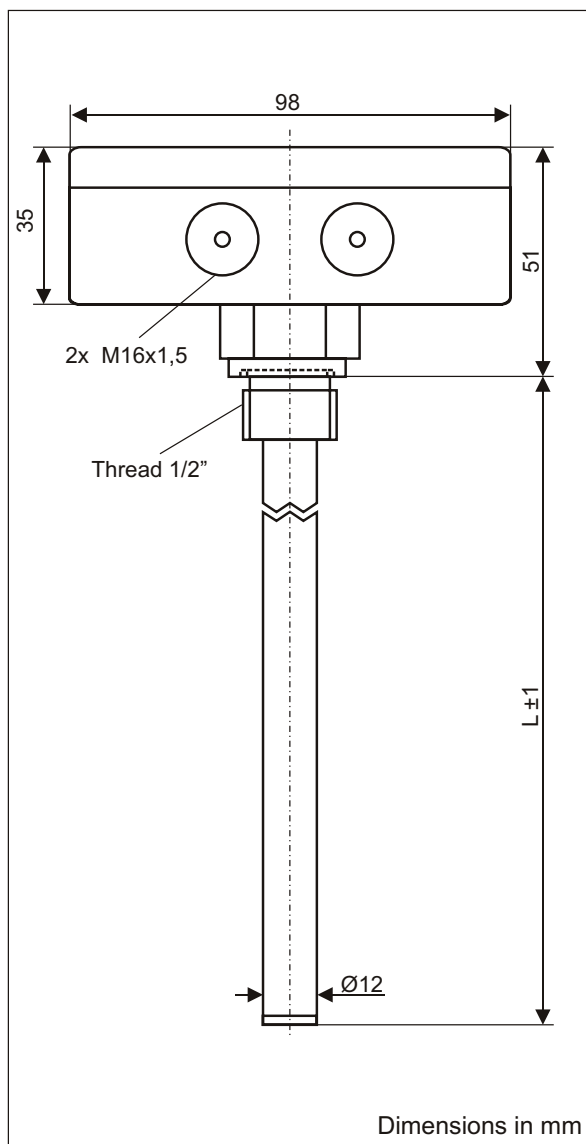


Data sheet

Adjustable temperature switch, controller

Type: ETS-1...01



Features

- Adjustable temperature switch up to max. 2 steps
- Temperature sensor in conduit, mounted on the housing or externally via cable connection

Fields of application

- Temperature control
- Monitoring of cooling and heating circuits
- Temperature overload protection for systems

Order key

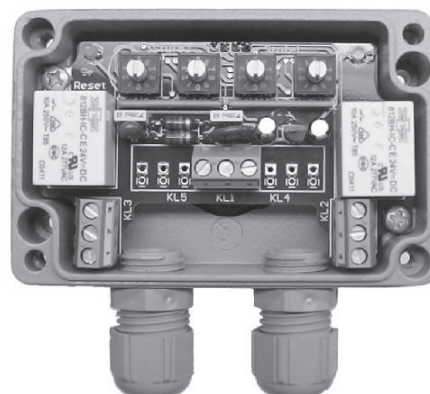
Type ETS-1

No. of temperature steps

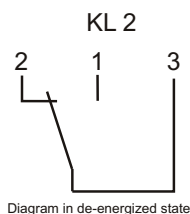
Conduit length in mm, e.g. 200

Design - 01

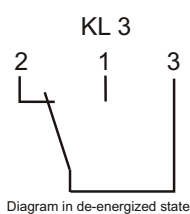
Example: **ETS-1. 2. 200. 01**



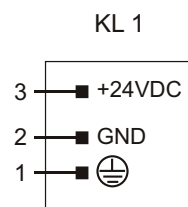
Terminal diagram



Step 1:
Temperature switch, controller
change-over contact,
230VAC / 2A



Step 1:
Temperature switch, controller
change-over contact,
230VAC / 2A



Supply voltage

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TS03 - 07.10.2016 - hm/nm/mu - G; ig - Ü: je, ph (051018) - TS_DKat_ETS-1.cdr

1 / 3

Data sheet

Adjustable temperature switch, controller

Type: ETS-1...01

Technical data

Housing:	alu die-cast housing, colour RAL7001 (grey) 98x64x35mm (wxdxh)
Connection:	cable entry at the housing 2x M16x1,5 customized connections on demand conductor cross section solid: 0,14 to 2,5mm ² , AWG 26-14 conductor cross section flexible: 0,14 bis 1,5mm ² , AWG 26-16
Mounting:	½" alu tread, other mountings on demand
Seal:	material NBR, other materials on demand
Sensor tube:	ø12mm or ø8mm, length L ±1mm acc. to specification, material brass or stainless steel
Switching capacity:	230VAC / 2A
Switching function relay:	off when upper limit value is exceeded on when actual value goes below lower limit value
Setting range temperature:	upper limiting value 0°C to 99°C lower limiting value = upper limiting value minus hysteresis hysteresis 3°C
Measuring range temperature:	measuring range -55°C to 125°C (attention! see operating temperature) resolution 1,0°C measuring accuracy ±0,5°C from -20°C to 110°C
Supply voltage:	24VDC ±15%, reverse polarity protected
Operating current:	< 45mA
Pressure:	max. 1 bar
Operating temperature:	-20°C to 100°C in medium, -10°C to 70°C above mounting
Protection rating:	IP 65
Certificate:	in accordance with CE

Data sheet

Adjustable temperature switch, controller

Type: ETS-1...01

Technical description

Setting:	After opening the housing the temperature switching point can be set in °C by using the two rotary encoder switches. Use the left rotary switch to enter the 1 st digit respectively the tens digit of the value. Enter the 2nd digit respectively the unit digit by using the right rotary switch. You will find a detailed adjusting guideline on our website.
Intrinsic safety:	The relay is energized at rest, ig. limit is not exceeded. A sensor failure, sensor connection, upper limit value overrun or power failure results in a drop in the relay and possibly a fault indication.
Operating indication:	The operation indicator (red LED) indicates both the operation and a malfunction. A short flash signalises an evaluation cycle consisting of read temperature, read code switch, update evaluation and relay. The relay has a display (yellow LED) which lights up in rest position, ig. upper limit is not exceeded.
Fault indication:	<p>The combined trip and fault indication (red LED) is predominantly on in the event of a fault and flashing indicates an error code.</p> <p>Display 1x flash = short circuit line 1 sensor Display 2x flash = short circuit line 2 sensor Display 3x flash = sensor fault Display 4x flash = sensor short circuit</p>

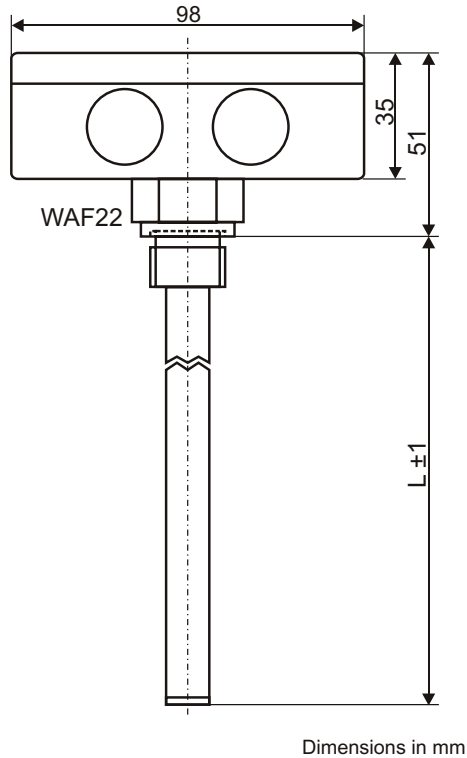
Data sheet

Adjustable temperature switch with actual value indicator

Type: ETSA-1...

Design 01

- see page 2 for further designs



Features

- Adjustable temperature switch up to max. 2 steps
- Temperature sensor in tube, mounted on the housing or externally via cable connection
- 2-digit display

Fields of application

- Temperature control
- Monitoring of cooling and heating circuits
- Temperature overload protection for systems

Order key

Type ETSA-1

Number of temperature steps, max. 2

Length of sensor tube L in mm

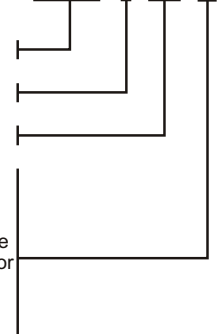
Design - see page 2

01 = mounting via alu-thread 1/2", tube Ø12mm material brass, 2x M16x1.5 cable glands

09 = mounting via housing floor, with external sensor, tube Ø12mm material brass, 4xM12x1 plug-type connector

12 = aluminium housing, upright, 360° rotatable, tube Ø8 material brass, mounting via 1/2" thread material brass, 2x M16x1.5 cable glands

Example: **ETSA-1. 2. 500. 01**



Terminal diagram

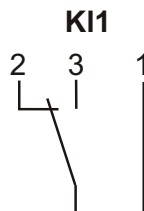


Diagram in de-energized state

Step 1: Temperature switch change-over contact
230VAC / 2A

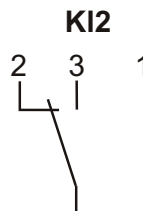
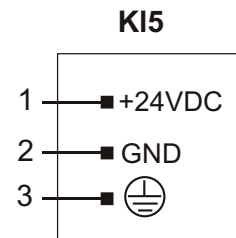


Diagram in de-energized state

Step 2: Temperature switch change-over contact
230VAC / 2A



Supply voltage

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TS05 - 12.03.2018 - be - G: ph, je - TS_EKat_ETSA-1.cdr

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Data sheet

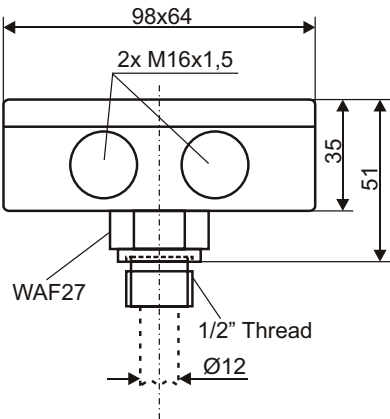
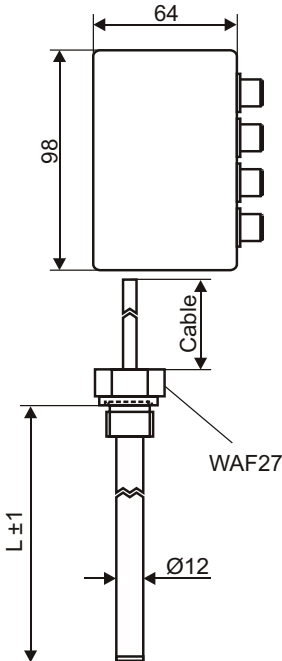
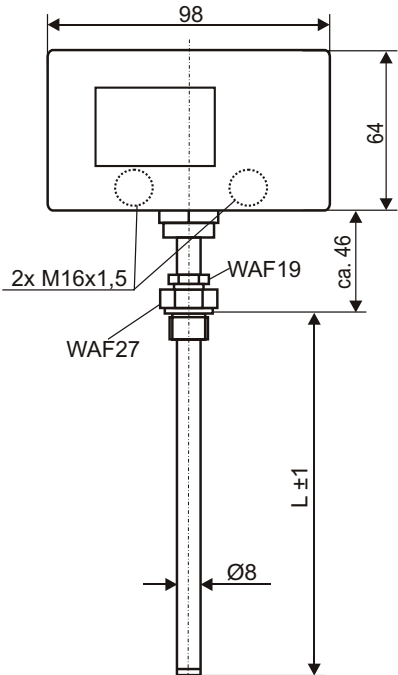
Adjustable temperature switch with actual value indicator

Type: ETSA-1...

Technical data

Housing:	aluminium die-cast housing, color RAL7001 (silvergrey), 98x64x36mm (wxhxd)
Connection:	see respective design, other connections on demand
Mounting:	see respective design, other mountings on demand
Sensor tube:	Ø12mm or Ø8mm depending on design, length $L \pm 1$ mm acc. to spec. material brass
Switching capacity	230VAC / 2A
Temperature setting range:	upper limiting value 0 °C to 99 °C lower limiting value = upper limiting value minus hysteresis hysteresis 3°C or acc. to specification
Temperature measuring range:	measuring range -9 °C to 125 °C (Attention! see operating temperature) resolution 1,0 °C measuring accuracy $\pm 0,5$ °C from -9 °C to 125 °C
Supply voltage:	24 VDC $\pm 15\%$ reverse polarity protected
Operating current:	<45mA
Pressure:	max. 1 bar
Operating temperature:	-20°C to 100°C in medium, -20°C to 70°C above mounting
Protection rating:	IP 65
Certificate:	in accordance with CE

Design

 <p>Design 01 Mounting via aluminium thread 1/2" Sensor tube Ø12mm material brass 2x M16x1.5 cable glands</p>	 <p>Design 09 Mounting of aluminium housing on the wall 2x M4 4x M12x1 plug-type connector Sensor mounting via brass thread 1/2" Sensor tube Ø12mm, material brass Sensor connection M12x1 Sensor cable, standard length</p>	 <p>Design 12 Aluminium housing, upright, 360° rotatable Mounting via brass thread 1/2" Sensor tube Ø8mm, material brass 2x M16x1.5 cable glands</p>
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Maße in mm

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2 / 3

Data sheet

Adjustable temperature switch with actual value indicator

Type: ETSA-1...

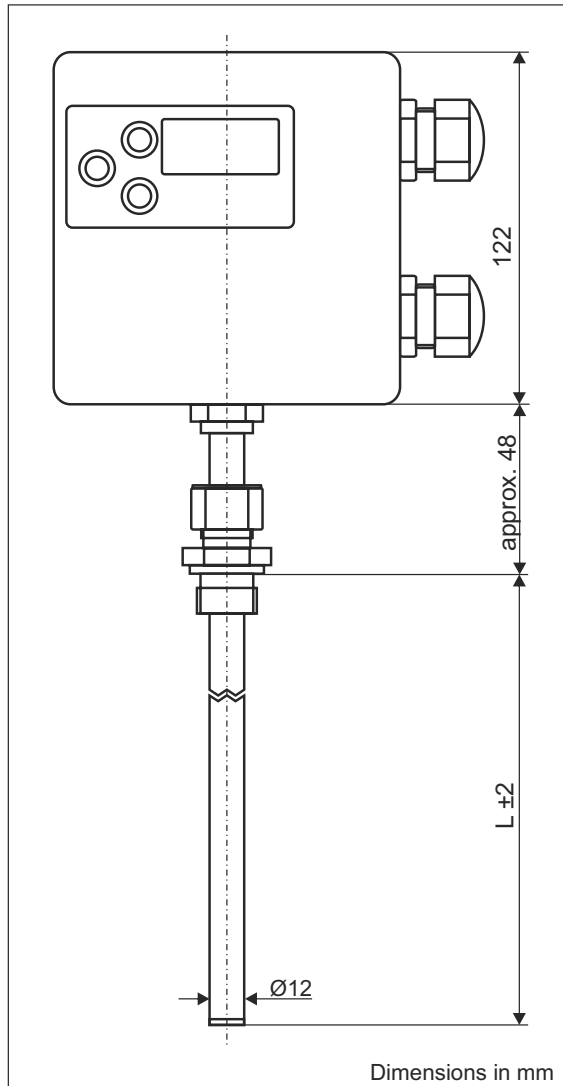
Technical information

Adjustment:	After opening the housing the temperature switching point can be set in °C by using the two rotary encoder switches. Use the left rotary switch to enter the 1 st digit respectively the tens digit of the value. Enter the 2nd digit respectively the unit digit by using the right rotary switch. You will also find a detailed adjusting guideline on our website.
Intrinsic safety:	The contacts of the relays are connected in normal rest position, that means upper limiting value not exceeded. A defect of the sensor, sensor connection, exceeding of upper limiting value or break-down of the power supply results in a drop of the relays and eventually a failure indication.
Operating indication:	The operating indicator (red display) indicates both, operation and failure. Every relay is equipped with an indicator (yellow LED) that lights up in normal rest position, that means upper limiting value is not exceeded.
Commissioning:	During the set up of the power supply the indicator in the left display shows a small blinking „ u „ that characterizes the undefined condition. As soon as the temperature sensor has detected the first value, this value is shown in the display.
Display:	Range of indication: -9°C to 125°C. As a result of the two-digit design of the indicator, temperature values lower than -9°C and higher than 99 °C can not be displayed. Temperatures lower than -9 °C are indicated by "- -". Temperatures higher than 99 °C are indicated by blinking. The blinking signalizes the indicated blinking value plus 100°C, e.g. a blinking "13" means 100°C + 13°C = 113°C
Fault indication:	The combined operating and failure indication shows a failure code while blinking. Indication: Type of failure E1: Type of failure - Short circuit conductor 1 sensor E2: Type of failure - Short circuit conductor 2 sensor E3: Type of failure - Sensor defective E4: Type of failure - Sensor short circuit

Data sheet

Adjustable temperature switch / controller with actual value display

Type: ETSM-1...



Features

- Adjustable temperature switch up to a max. of 6 steps
- Temperature sensor in tube, mounted on the housing or externally via cable connection
- 3-digit display
- 6 Temperature limit value LEDs
- Menu-driven parameter adjustment
- Optionally with diverse temperature sensors
- hysteresis is freely selectable

Fieds of application

- Temperature control
- Monitoring of cooling and heating circuits
- Temperature overload protection for systems
- Process control

Order key

Type ETSM-1

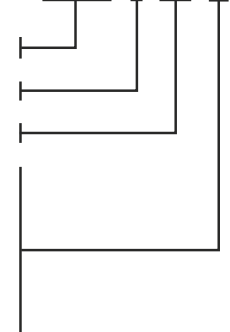
Number of temperatur steps, max.6

Sensor tube length L in mm

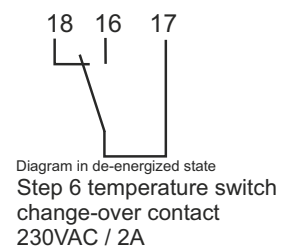
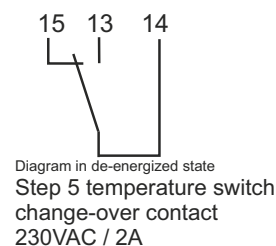
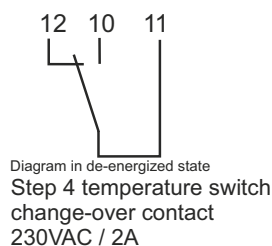
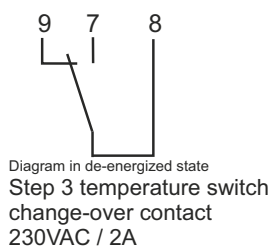
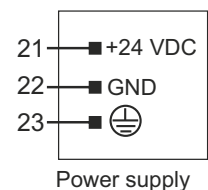
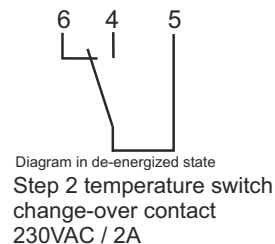
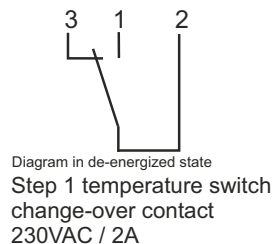
Design see page 2:

- 01 = alu housing with 2x M20x1,5 cable gland, mounting via 1/2" thread
- 02 = alu housing with 2x M20x1,5 cable gland with oval flange mounting
- 03 = alu housing with separate sensor, 3x M16x1,5 cable gland, M12 plug-type connector for the external sensor

Example: **ETSM-1. 4. 350. 01**



Terminal diagram



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Data sheet

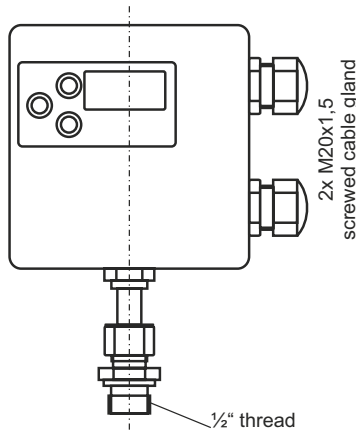
Adjustable temperature switch / controller with actual value display

Type: ETSM-1...

Technical data

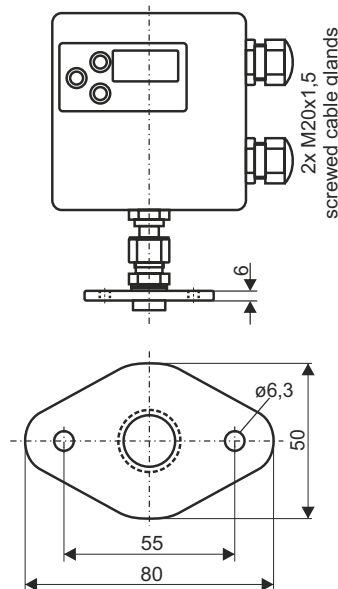
Housing:	alu housing 122 x 120 x 65mm (wxixd),
Connection:	cable entry see designs, terminal connection: conductor cross section flexible 1,0mm ² to 1,5mm ² screwed cable gland or flange mounting depending on design
Mounting:	360° rotatable
Mounting position:	360° rotatable
Seal:	material NBR
Sensor tube:	Ø12mm, length L in mm acc. to customer specification, material brass
Display:	red 3-digit display, height 13mm
Switching points:	max. 6x change-over relays
Setting range:	-20°C to 120°C hysteresis is freely selectable measuring range -55°C to 125°C
Measuring range :	Measuring accuracy: ±0,5°C from -20 °C to 125 °C resolution 0,5°C, display resolution 1,0°C
Switching capacity:	230VAC / 2A
Supply voltage:	24VDC reverse polarity protected, other supply voltage on request
Operating current:	<120mA
Pressure:	max. 1 bar, higher pressure on request
Operating temperature:	-20°C to 100°C in medium, -20 to 70°C above mounting
Protection rating:	IP 65
Certificate:	in accordance with CE

Designs



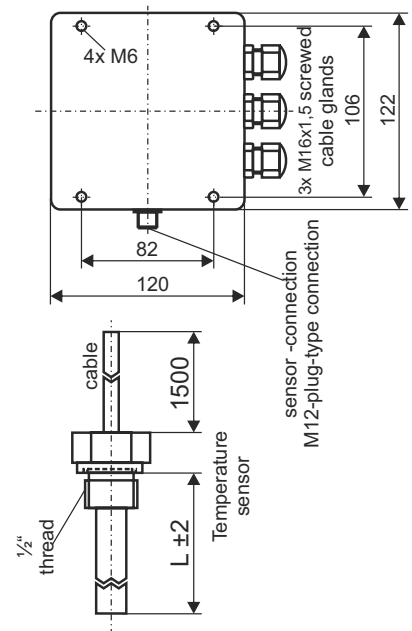
Design 01

Mounting via 1/2" thread
screwed cable gland 2x M20x1.5
sensor tube Ø12mm, material brass
immersion depth of the tube will be adjusted via the thread



Design 02

Oval-flange mounting
screwde cable gland 2x M20x1.5
sensor tube Ø12mm, material brass
immersion depth of the tube will be adjusted via the thread



Design 03

Mounting over alu housing
with separate sensor
screwde cable glands 3x M16x1.5
sensor tube Ø12mm, material brass

Dimensions in mm

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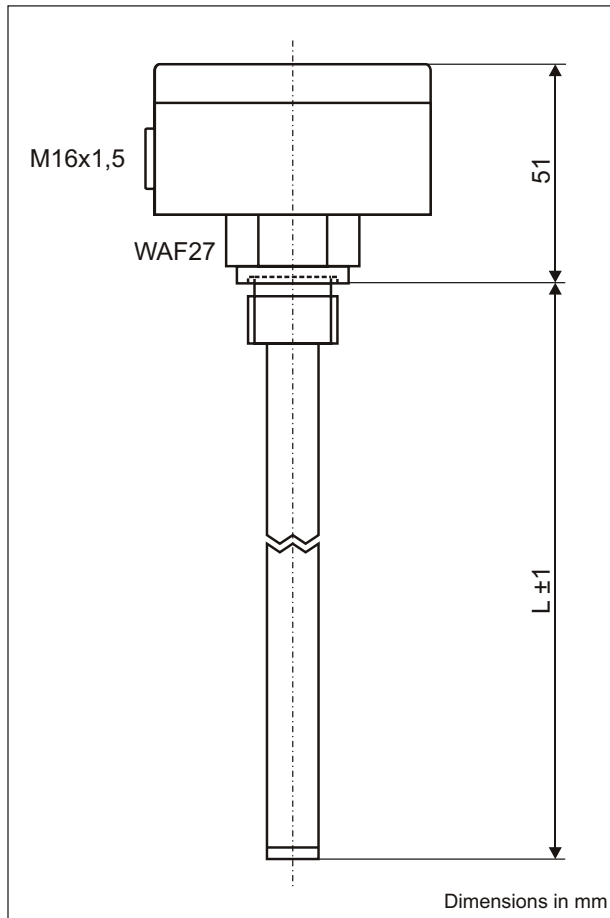
TS07 - 19.05.2020 - be - G: hge - TS_DKat_ETSM-1.cdr

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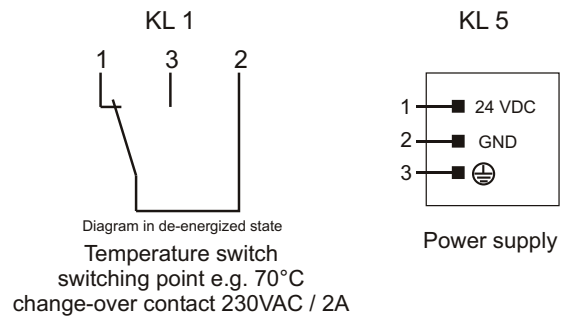
Data sheet

Electronic temperature switch

Type: STB-2...02...

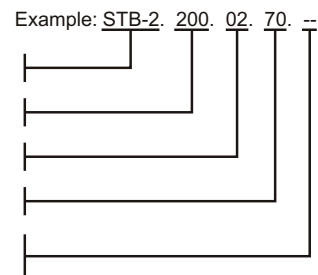


Terminal diagram



Order key

Type STB-2
Conduit length L in mm
02 - design
Upper temperature switching point T in °C
Hysteresis HY in °C for standard (3°C) no specification



Technical data

Connection:	terminal connection in the housing 64x58x35mm wxdxh, drilling for M16x1,5 screwed cable gland
Mounting:	thread 1/2", material alu
Seal:	material NBR, profile seal
Tube:	Ø12mm, length L ±1mm acc. to specification, material brass
Temperature switching point:	1x relay change-over contact, switching point acc. to specification fixed setting
Switching capacity:	230VAC / 2A
Temperature measurement:	at the bottom of the tube
Relay switching function:	relay is actuated when temperature T > limiting value relay is released when temperature T < limiting value or device fault
Temperature measuring range:	-20°C to 100°C
Temperature measuring accuracy:	±5% at -20°C to 100°C
Temperature hysteresis:	3°C fixed setting, other on request
Supply voltage:	24VDC ±10%, reverse polarity protected
Operating current:	<25mA
Pressure:	max. 1 bar
Operating temperature:	-20°C to 100°C in medium; -20°C to 70°C above mounting
Protection rating:	IP 65

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TS04 - 12.02.2014 - hm - G: ig - Ü: je, twe (170418) - TS_EKat_STB-2...02.cdr

1 / 1

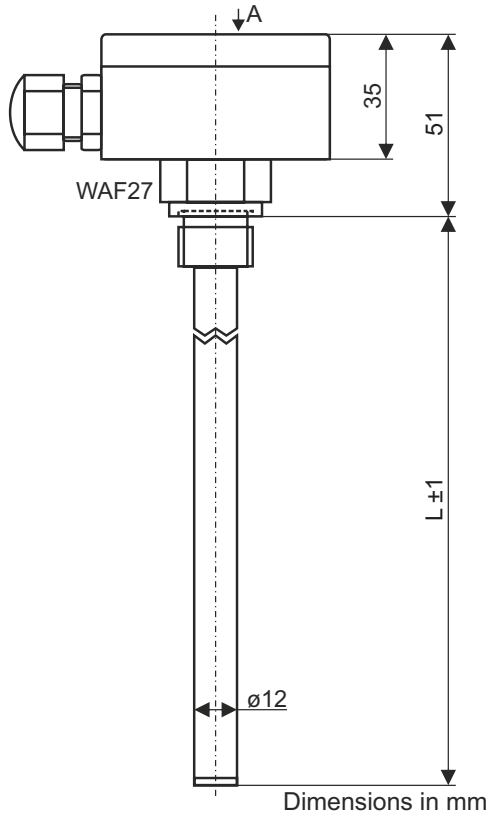
Data sheet

Electronic temperature switch

Type: TSE...

Designs 1

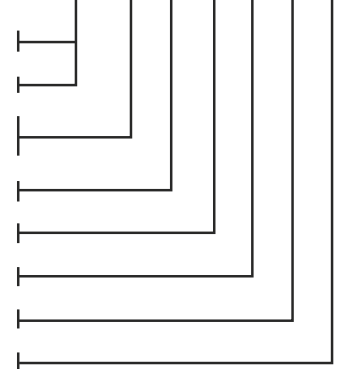
- see page 2 for more desings



Order key

Type TSE
Design 1
Material M - brass
E - stainless steel
Sensor tube length L in mm
Temp. step 1: limiting value °C
Temp. step 1: reset value °C
Temp. step 2: limiting value °C
Temp. step 2: reset value °C

Example: TSE-1. M. 200. 50. 45. 70. 69



Terminal diagram

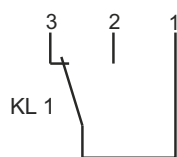


Diagram in de-energized state

Step 1
Temperature switch/controller
change-over contact, 230VAC / 2A

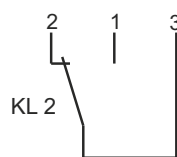
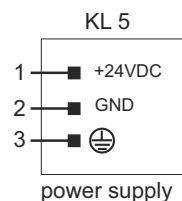
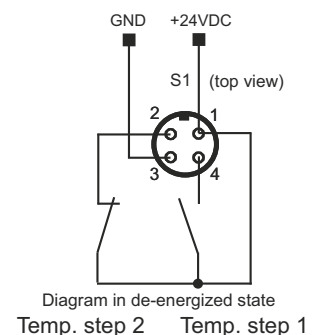


Diagram in de-energized state

Step 2
Temperature switch/controller
change-over contact, 230VAC / 2A



Design 15 M12x1 4-pin connector



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1 / 2

Data sheet

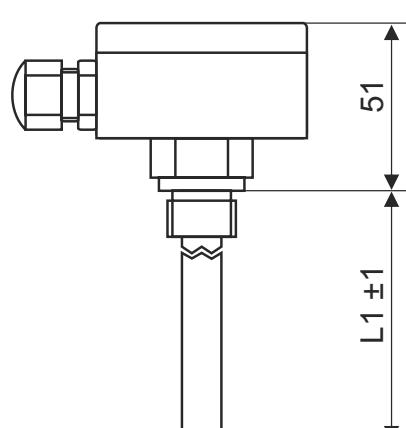
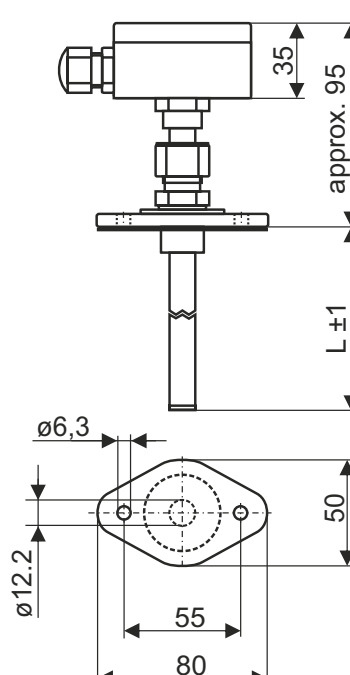
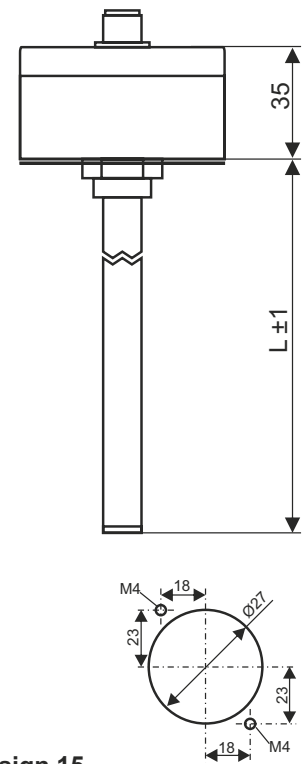
Electronic temperature switch

Type: TSE...

Technical data

Housing:	aluminium die-cast housing 64 x 58 x 35mm (wxdxh)
Connection:	see respective design, other connections on demand
Mounting:	see respective design, other mountings on demand
Seal:	material NBR
Sensor tube:	ø8mm, ø12mm, length L±1mm according to specification material brass oder stainless steel
Temp. switching point:	max. 2 change-over relays
Switching capacity:	230 VAC / 2A or 24VDC / 150mA
Temperature measurement:	Sensor at the lower end of the tube
Relay switching function:	relay is actuated at temperature T< limit value yellow LED lights on relay breaks at temperature T> limit value or device fault
Temp. Switching points:	step 1: temp.switching point and reset temperature in °C acc. to specification, step 2: temp. switching point and reset temperature in °C acc. to specification
Temp. measurement range:	measuring range -55°C to 125°C measuring accuracy ± 0.5 °C from -20 °C to 110 °C
Supply voltage:	24 VDC ± 15% reverse polarity protected
Operating current:	<40mA
Prennure:	depending on design max. 5 bar
Operating temperature:	-20°C to 100°C in medium, -20°C to 70°C above mounting.
Protection rating:	IP 65
Certificate:	in accordance with CE

Designs

 <p>Design 01 Aluminium housing thread 1/2" aluminium or stainless steel M16x1.5 cable gland sensor tube ø12mm, material brass or stainless steel</p>	 <p>Design 08 360° rotatable aluminium housing Mounting via oval flange M16x1.5 cable gland at the housing sensor tube ø12mm material brass</p>	 <p>Design 15 Aluminium housing via housing floor - see drilling pattern Connection via M12x1 4-pin connector sensor tube ø12mm material brass</p> <p style="text-align: right;">Dimensions in mm</p>
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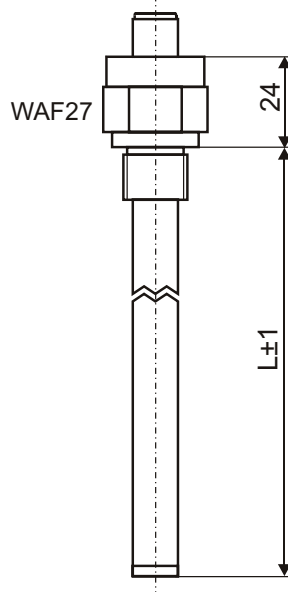
2 / 2

Data sheet

Temperature sensor PT100 in 2-, 3-, and 4- wire technology

Type: PT100..., PT103..., PT104...

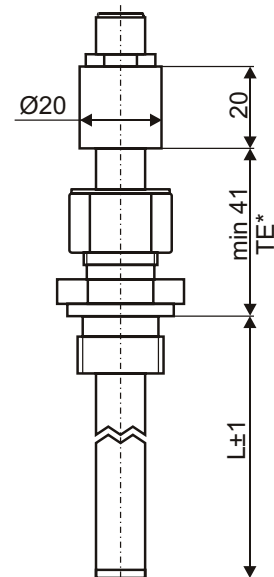
Design / connection 30



Connection:
plug-type connector M12x1 4-pol, material TPU
Mounting:
thread 1/2" or 3/8", material alu or stainless steel
Operating temperature:
BT01
Pressure:
with brass / alu 1bar
with stainless steel 35bar

Dimensions in mm

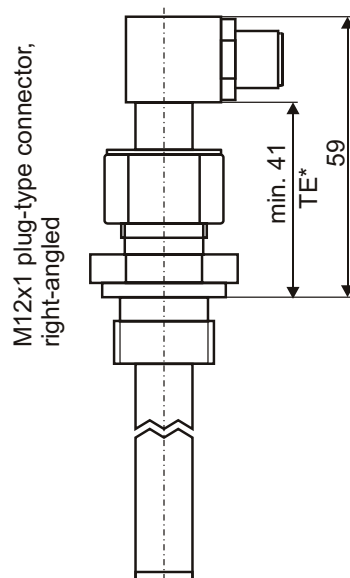
Design / connection 31



Connection:
plug-type connector M12x1 4-pole, material TPU
Mounting:
depth setting, thread see order key,
material brass or stainless steel
Operating temperature:
BT01 and BT06
Pressure:
with brass 1bar
with stainless steel 35bar

(TE) Depth setting on the screw connection can be selected by the customer

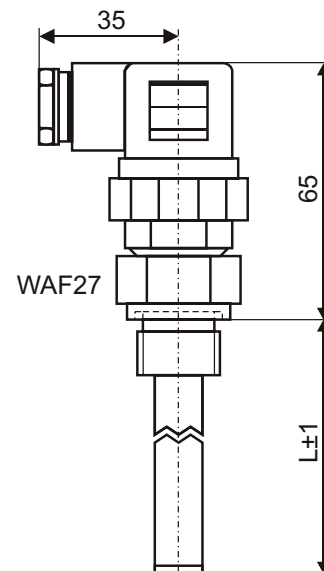
Design / connection 32



Connection:
plug-type connector M12x1 4-pole right-angled, material TPU
Mounting:
depth setting, thread see order key,
material brass or stainless steel
Operating temperature:
BT01 and BT06
Pressure:
with brass 1bar
with stainless steel 35bar

(TE) Depth setting on the screw connection can be selected by the customer

Design / connection 33



Connection:
plug-type connector 2-, 3pol+ PE, DIN EN 175301-803, material PA
Mounting:
thread 1/2" or 3/8", material alu or stainless steel
Operating temperature:
BT01 und BT06
Pressure:
with brass / alu 1bar
with stainless steel 35bar

-Further version in plastic see page 5

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TS04 - 03.09.2018 - be - G: je, ph - TS_EKat_PT10x.cdr

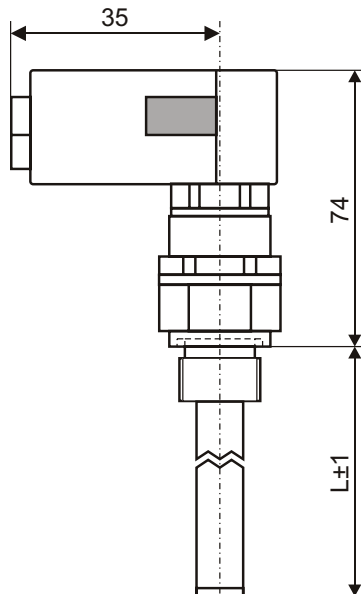
Seite 1 / 5

Data sheet

Temperature sensor PT100 in 2-, 3-, and 4- wire technology

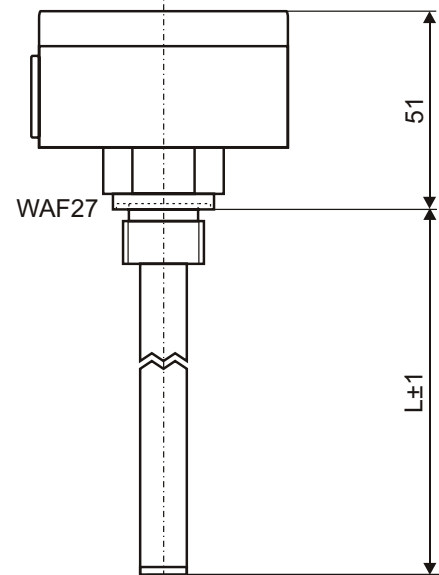
Type: PT100..., PT103..., PT104...

Design / connection 34



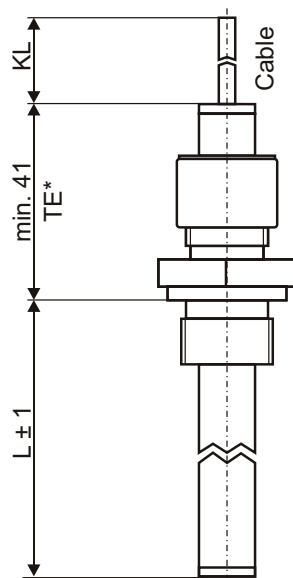
Connection:
plug-type connector 6pol+ PE, DIN EN 175201-804
material PA or DIN EN 175201-804 (DIN 43651), material PET
Mounting:
thread 1/2" or 3/8", material alu or stainless steel
Operating temperature:
BT01
Pressure:
with brass / alu 1bar
with stainless steel 35bar

Design / connection 35



Connection:
terminal connection 1,5mm² in the housing 64x58x35mm (hwxwd)
cable entry over M16x1,5 screwed cable glands
Mounting:
thread 1/2" or 3/8", material alu or stainless steel
Operating temperature:
BT01 und BT06
Pressure:
with brass / alu 1bar
with stainless steel 35 bar

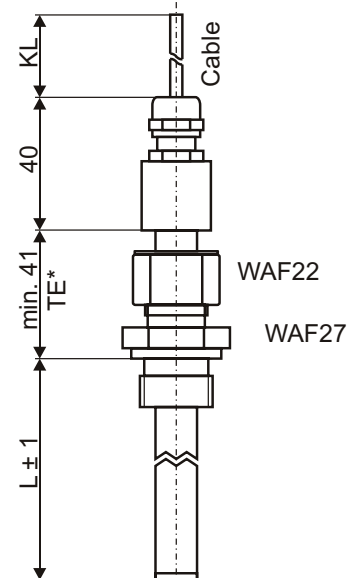
Design / connection 36



Connection:
oil-resistant FDCP-cable, shielded
without cable strain relief, length according to specification
Mounting:
depth setting, thread see order key,
material brass or stainless steel
Operating temperature:
BT01
Pressure:
with brass 1bar
with stainless steel 35 bar

(TE) Depth setting on the screw connection can be selected by the customer

Design / connection 37



Connection:
oil-resistant FDCP-cable, shielded
with cable strain relief, length according to specification
Mounting:
depth setting, thread see order key,
material brass or stainless steel
Operating temperature:
BT01
Pressure:
with brass 1bar
with stainless steel 35 bar

(TE) Depth setting on the screw connection can be selected by the customer

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Seite 2 / 5

Data sheet

Temperature sensor PT100 in 2-, 3-, and 4- wire technology

Type: PT100..., PT103..., PT104...

Order key

Sensor element

PT100 = 2-wire technology
PT103 = 3-wire technology
PT104 = 4-wire technology

Mounting

14 = thread 1/4" (only in connection with sensor tube Ø6 and Ø8mm)
38 = thread 3/8"
12 = thread 1/2"

Sensor tube:

outer diameter: 06 = Ø6mm
08 = Ø8mm
10 = Ø10mm
12 = Ø12mm

material: M = brass

E = stainless steel

sensor tube length L in mm

Design / connection

30 = M12 plug-type connector 4-pole
31 = M12 plug-type connector 4-pole, adjustable
32 = M12 plug-type connector right-angled
33 = plug-type connector 2-, 3 pole
34 = plug-type connector 6-pole
35 = terminal connection in the housing
36 = cable connection
37 = cable connection, cable strain relief

Cable length

KL = L in mm (Specification only for design 36 and 37 required)

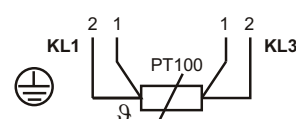
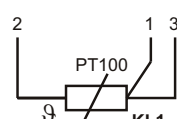
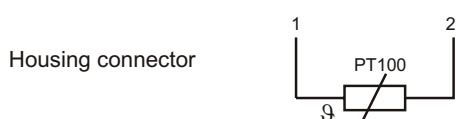
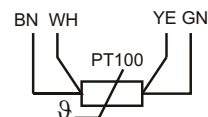
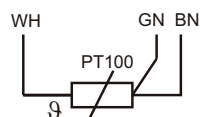
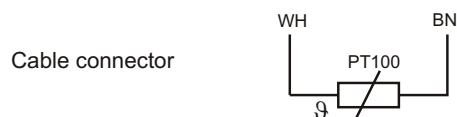
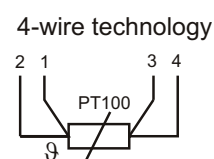
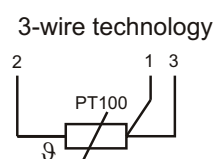
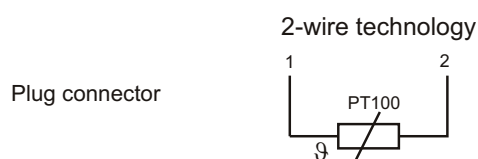
Operating temperature

BT...

Example: PT104. 12. 12E. 100. 30. KL1000. BT01

Note: Material brass and stainless steel are not combinable

Terminal diagrams



Data sheet

Temperature sensor PT100 in 2-, 3-, and 4- wire technology

Type: PT100..., PT103..., PT104...

Technical data

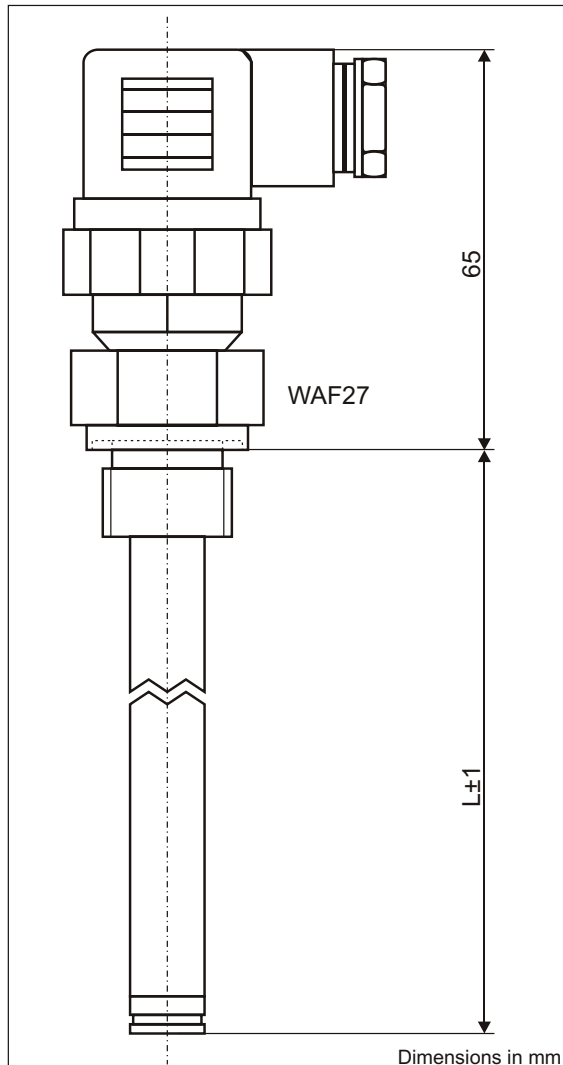
Connection:	see respective design / connection, further connections on request
Mounting:	see respective design / connection, further mountings on request
Sensor tube:	ø6mm, ø8mm, ø10mm or ø12mm, length L±1mm according to specification, material brass or stainless steel, other materials available on request
Temperature sensor:	platinum resistor PT100 in 2-, 3- and 4-wire technology
Tolerance class:	DIN EN 60751, class B
Nominal resistance:	100 Ohm at 0°C
Temperature coefficient:	3850ppm/K
Inductance of the measuring element:	0,03 µH
Self-heating:	0,4K/mW
Long-term stability after 1000h at 150°C:	R ₀ -Drift < 0,06 %
Pressure:	see design / connection
Operating temperature:	see design / connection BT01: -15°C to 100°C in medium, -20°C to 70°C above mounting BT06: -30°C to 180°C in medium, -20°C to 70°C above mounting (only in connection with stainless steel) BT08: -30°C to 150°C in medium, -20°C to 70°C above mounting (only in connection with stainless steel) higher temperatures on request
Protection rating:	IP 65

Comment: For further protection, a thermowell can be used, see additional data sheet THE..., select sensor tube 16mm longer than protective tube of thermowell.

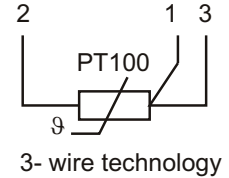
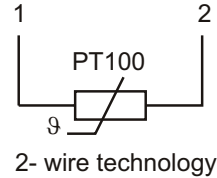
Data sheet

Temperature sensor PT100 in 2-, 3-, and 4- wire technology

Type: PT100..., PT103..., PT104...



Terminal diagram



Order key

Example: **PT103. 12. 12PP. 100. 33. BT01**

Sensor element

PT100 = 2-wire technology
PT103 = 3-wire technology

Mounting

38 = thread 3/8"*
12 = thread 1/2"

Sensor tube

outer diameter 12 = Ø12mm
16 = Ø16mm

Material PP = polypropylene
PVDF = polyvinyliden fluoride

Sensor tube length L in mm

Design - 33

Operating temperature - BT...
- see techn. data

* 3/8" only in connection with PP tube

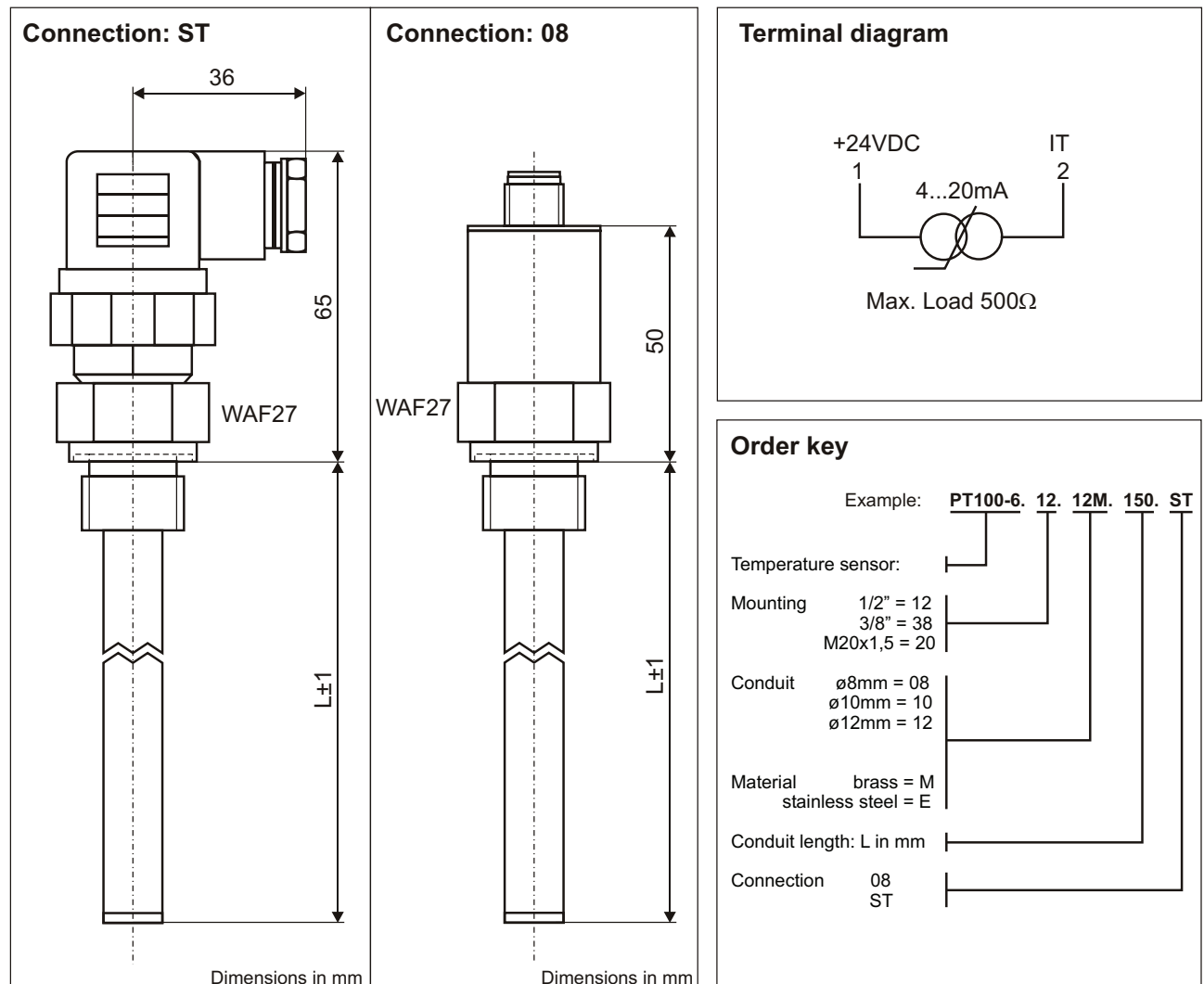
Technical data

Connection:	plug-type connection 2-, 3-pole + PE DIN EN 175301-803, material PA
Mounting:	thread 1/2" material PP or PVDF thread 3/8", material PP
Seal:	material NBR
Sensor tube:	Ø12mm, length L±1mm acc. to customer specification, material PP Ø16mm, length L±1mm acc. to customer specification, material PVDF
Temperature sensor:	platinum measuring resistor PT100 in 2-, 3- wire technology
Tolerance class:	DIN EN 60751, class B
Nominal resistance:	100Ohm at 0°C
Temperature coefficient:	38850ppm/K
Inductance of the measuring element:	0,03µH
Self-heating:	0,4K/mW
Long-term stability after 1000h at 150°C:	R ₀ -Drift < 0,06 %
Pressure:	max. 5bar
Operating temperature:	BT03: -15°C to 80°C in medium, -20°C to 70°C above mounting (only in connection with PP) BT01: -15°C to 100°C in medium, -20°C to 70°C above mounting (only in connection with PVDF)
Protection rating:	IP65

Data sheet

Temperature sensor with integrad measuring transducer 4...20mA

Type: PT100-6....



Technical data

Connection:	right-angled connector 3-pole + PE DIN EN 175301-803 (DIN 43650), material PA, connection ST plug-type connector M12x1 4-pole, material TPU, connection 08
Mounting:	1/2", 3/8", M20x1,5 thread, material alu or stainless steel, further threads on request
Seal:	material NBR
Conduit:	ø8mm, ø10mm, ø12mm, material brass or stainless steel length L of the conduit according to customer specification
Sensor:	platinum- measuring resistor PT100 acc. DIN EN 60751 class B
Output:	4...20mA at 0°C to 100°C
Load:	max. 500 Ohm
Supply voltage:	24 VDC ± 15%, reverse polarity protected
Linearity:	0,35% at 0°C to 100°C
Accuracy:	0,6% at 0°C
Pressure:	max. 1 bar
Operating temperature:	-20°C to 100°C in medium, -20°C to 70°C above mounting
Protection rating:	IP 65

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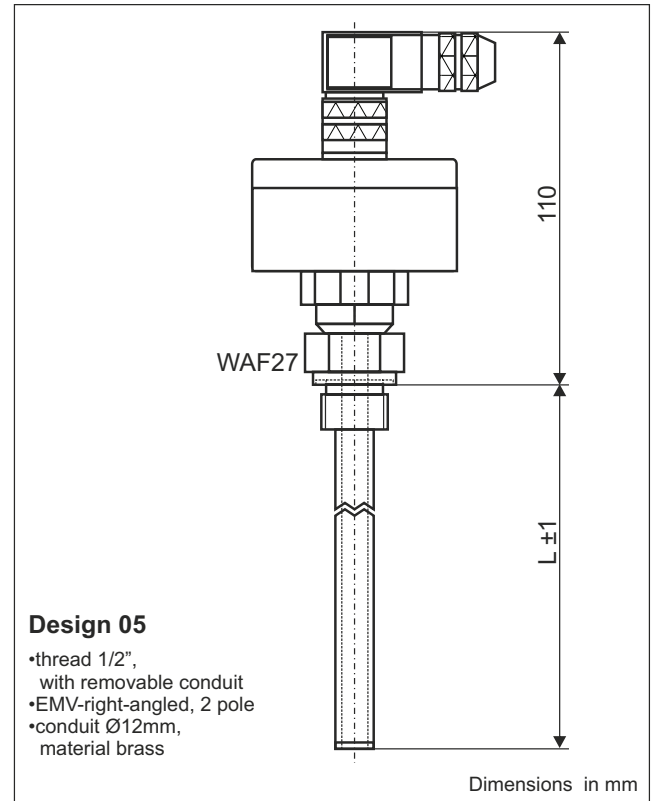
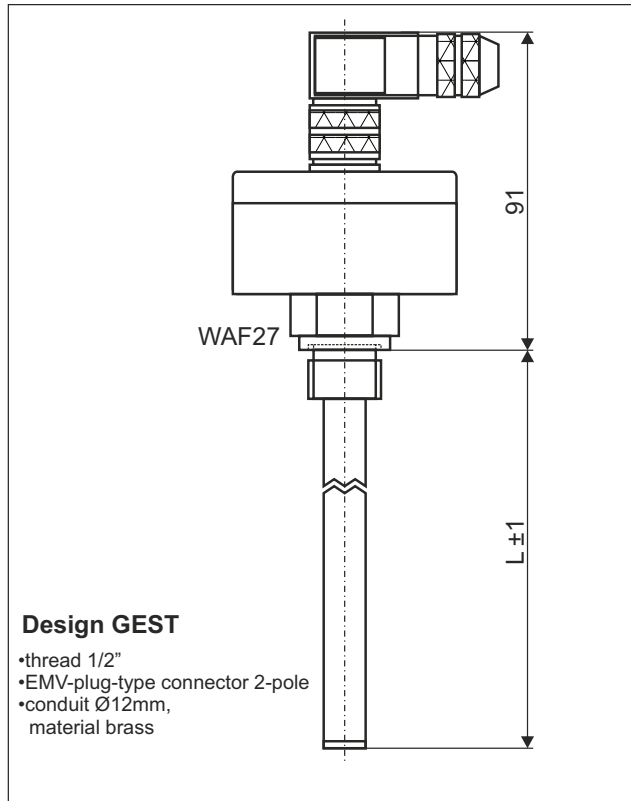
TS06 - 12.05.2016 - nm - G: tve, je - Ü: je, ph (040618) - TS_DKat_PT100-6.cdr

1 / 1

Data sheet

Temperature sensor with integrated measuring transducer in 4 ... 20mA

Type: PT100-6L...



Order key

Type PT100-6L

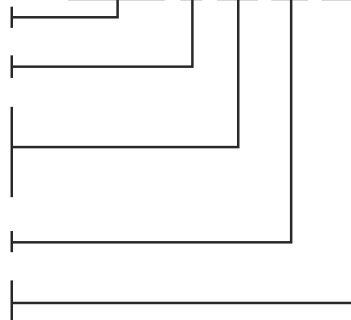
Mounting: 12 = 1/2", 14 = 1/4", 38 = 3/8"

Conduit: 06 = Ø 6mm, 08 = Ø 8mm,
10 = Ø 10mm, 12 = Ø 12mm
material: M = brass,
E = stainless steel

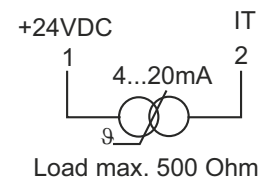
Conduit length in mm

Design: GEST
05

Example: PT100-6L. 12. 12M. 200. GEST



Terminal diagram



Technical data

Connection:	EMV-right angled connector 2-pole, material brass nickel plated
Mounting:	thread 1/2", 1/4", 3/8", with profile seal, material alu
Conduit:	Ø6mm, Ø8mm, Ø10mm, Ø12mm, length L±1mm according to specification, material brass or stainless steel
Sensor:	platinum-measuring resistor PT100 acc. DIN EN 60751 (DIN 43760)
Output:	4 ... 20mA at 0°C to 100°C
Load:	max. 500 Ohm
Linearity:	0,35% at 0°C to 100°C
Precision:	±0,6%
Supply voltage:	24VDC ±15%, reverse polarity protected
Pressure:	max. 1 bar
Operating temperature:	-20°C to 100°C in medium, -20°C to 70°C above mounting
Protection rating:	IP 65

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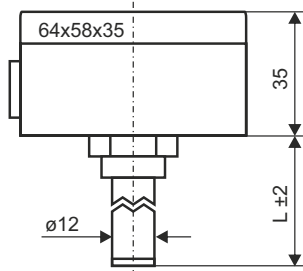
1 / 1

Data sheet

Bimetal temperature switch

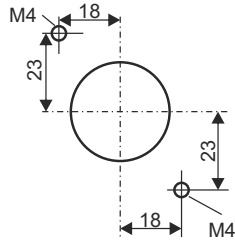
Type: T...

Design 1



Dimensions in mm

Drilling pattern



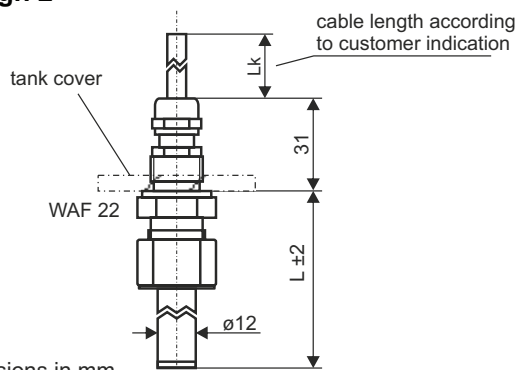
Connection: terminal connection in aluminium housing
64x58x35mm WxDxH
cable entry M16x1.5 screwed cable gland
Mounting: via housing floor - see drilling pattern
Gasket: material NBR
Pressure: max. 1 bar

Terminal diagram



1 temperature switch
n.c. contact / n.o. contact

Design 2



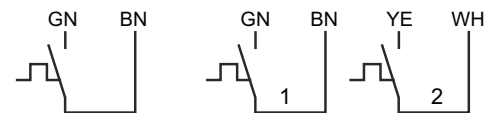
Dimensions in mm

Connection: oil-resistant cable, length LK in mm,
mit cable grip

Mounting: G 3/8" thread, material brass
or stainless steel

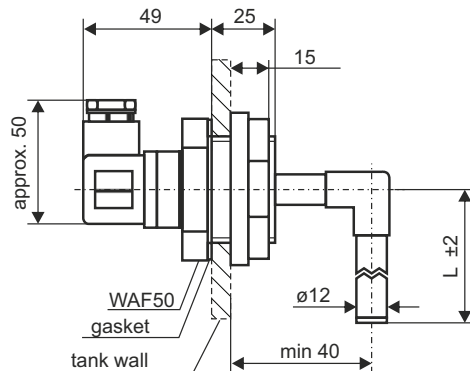
Pressure: max. 1 bar

Terminal diagram



1 temperature switch
n.c. contact / n.o. contact

Design 4



Dimensions in mm

Connection: right-angled socket 3-pole + PE
DIN EN 175301-803 (DIN 43650),
material PA

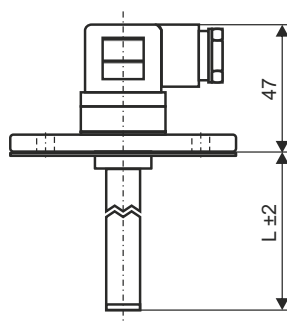
Mounting: G 1 1/4" thread, material PVC

Gasket: material EPDM

Pressure: atmospheric

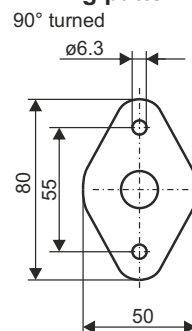
Terminal diagram: see page 2

Design 5



Dimensions in mm

Drilling pattern



Connection: right-angled socket 3-pole + PE
DIN EN 175301-803 (DIN 43650),
material PA

Mounting: oval-flange 80x50mm, material PA,
see drilling pattern

Gasket: material NBR

Pressure: atmospheric

Terminal diagram: see page 2

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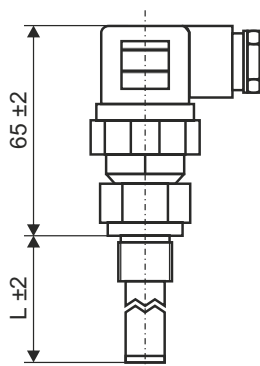
1 / 2

Data sheet

Bimetal temperature switch

Type: T...

Design 7 and 10



Dimensions in mm

Design 7

Connection: right-angled socket 3-pole + PE
DIN EN 175301-803 (DIN 43650), material PA ,
Mounting: G1/2" thread, material alu or stainless steel
Gasket: material NBR
Pressure: max. 1 bar
Key-wide: SW27

Design 10

Connection: right-angled socket 3-pole + PE
DIN EN 175301-803 (DIN 43650), material PA
Mounting: G3/8" thread, material brass or stainless steel
Pressure: max. 1 bar
Key-wide: SW24

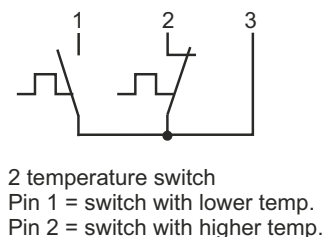
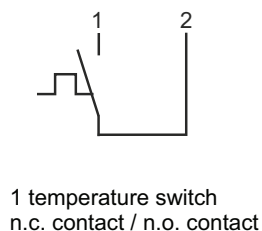
Terminal diagram: see below

Note materials: conduit brass - thread aluminum
conduit stainless steel - thread stainless steel

Order key

Example: T 70S/75O . 12M . 2 . 200 . 7	
Temperature range S = n.o. contact O = n.c. contact	T
Tube diameter 08 = 8mm 10 = 10mm 12 = 12mm	12M
Tube material M - brass E - stainless steel	M
Number of switching contacts - max. 1 (to ø10 & ø12, 2 switching points possible)	2
tube length	200
Design	7

Terminal diagram for design 4, 5, 7 and 10



Technical data for ALL design

Tube:	ø8, ø10, ø12, material brass or stainless steel, length according to customers specification
Temperature switch:	bimetal
Temperature switching values T:	normally closed contact: T 40°C in steps with 5°C until 145°C normally opened contact: T 40°C in steps with 5°C until 145°C, further temp. values on request
Number of switching point:	with ø8 tube, one switching point possible. with ø10 and ø12 tube two switching points possible
Switching point precision:	±5°C, smaller tolerances on request
Reset temperature:	temperature switching point -8°C to -30°C ±15°C
Switching voltage:	max. 230VAC / 50-60Hz
Switching current:	max. 24VDC, 5A; 230VAC, 6A
Operating temperature:	-20°C to temperature switching value T +5°C, -20°C to 70°C above mounting
Protection rating:	IP 65

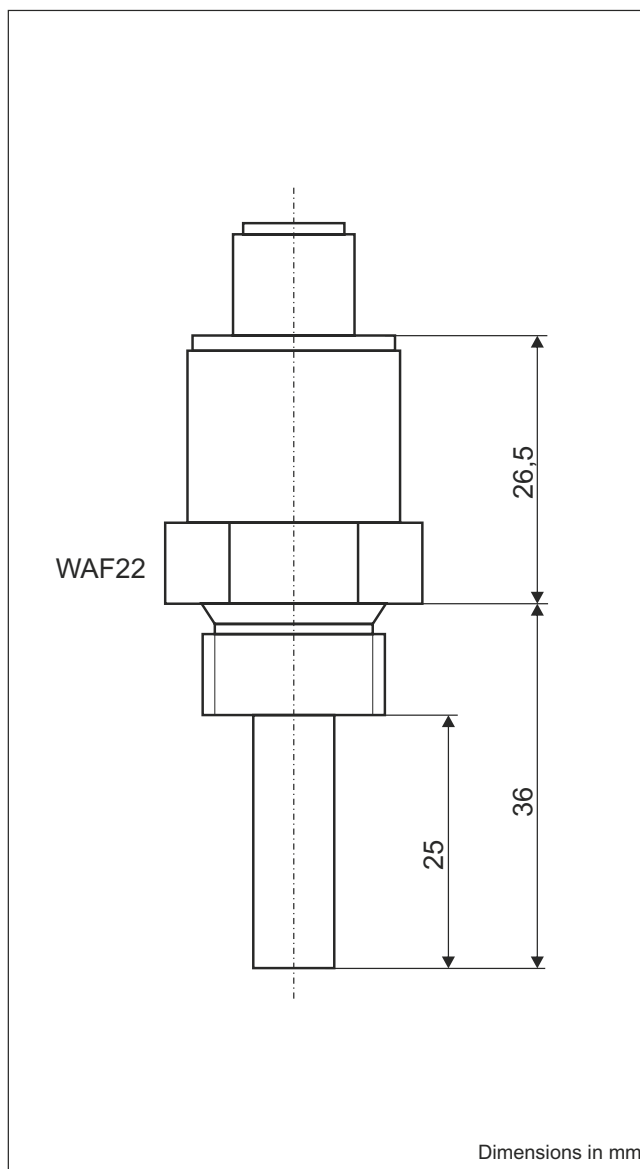
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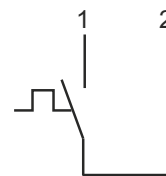
Data sheet

Temperature switch

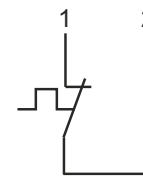
Type: T...31...



Terminal diagram

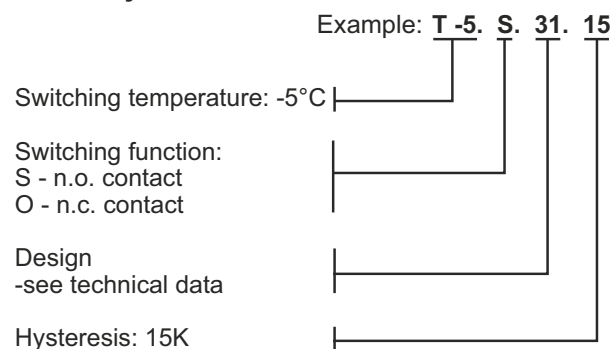


Temperature switch
normally open contact
24VDC/1A



Temperature switch
normally closed contact
24VDC/1A

Order key



Technical data

Connection:	plug-type connector M12x1 4-pole, material TPU
Mounting:	thread M18x1,5, material brass
Probe:	ø8mm, material brass
Temperature switch:	normally open contact or normally closed contact
Switching temperature:	-25°C to 100°C ±3, freely selectable
Switching hysteresis	15K or 5K of your choice
Switching voltage:	24VDC
Switching capacity:	1A
Pressure:	max. 5bar
Operating temperature:	-20°C to 100°C in medium; -20°C to 70°C above mounting
Protection rating:	IP 65

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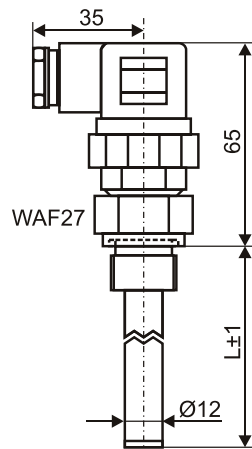
TS01 - 17.07.2020 - be - G: je, ph - TS_EKat_T-...31.cdr

Data sheet

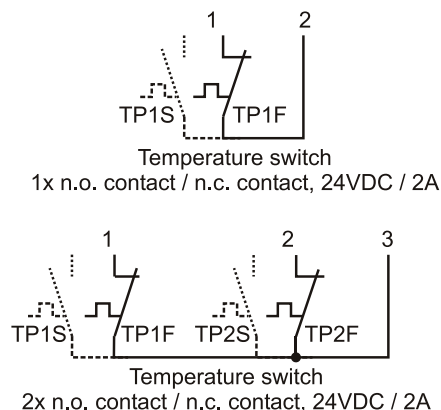
Temperature circuit breaker bi-metal $\pm 3^\circ\text{C}$

Type: TSB-1...

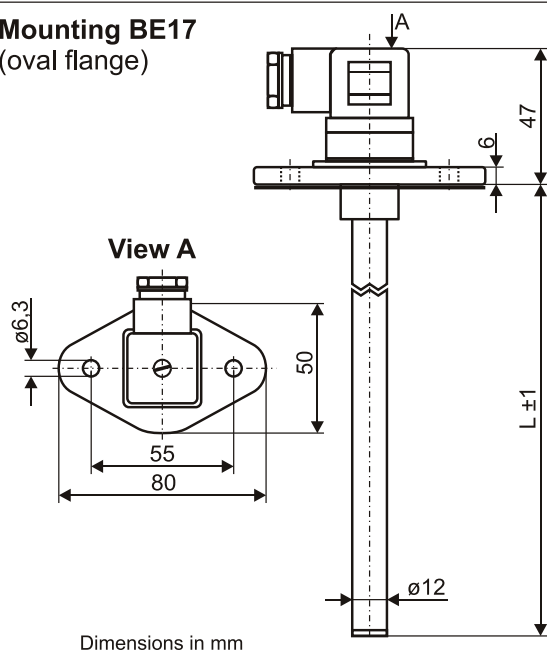
Mounting BE12 to BE16 (thread)



Terminal diagrams



Mounting BE17 (oval flange)



Order key

Example: TSB-1 . AS08.BE15.RH09=150.TP1S=60.TP2F=68

Type TSB-1	
Electrical connection AS08: plug-type connection 3-polig, DIN EN 175301-803	
Mounting BE12: 1/2" brass BE13: 3/8" brass BE14: 3/4" aluminium BE15: 1/2" stainless steel BE16: 3/8" stainless steel BE17: oval flange	
Conduit RHxx = length L in mm RH03: Ø12mm brass RH09: Ø12mm stainless steel	
Temperature switching point TPxF/S = temp. in $^\circ\text{C}$ x = 1, switching point 1 x = 2, switching point 2 normally closed contact: TP1F; TP2F normally open contact: TP1S; TP2S	

Technical data

Connection:	plug-type connection 3-pole + PE, DIN EN 175301-803 (DIN 43650), material PA
Mounting:	see order key, further mountings on demand
Seal for mounting BE17:	material NBR
Conduit:	Ø12mm, material brass or stainless steel 1.4571 length L ± 1 mm accord. to customer specification
Temperature switch	
Technology, no. of contacts:	bi-metal, max. 2x n.c. contacts / n.o. contacts
Temperature setting range:	30°C to 125°C, other temperatures on demand
Tolerance:	$\pm 3\text{K}$
Reset temperature:	temperature switching point (TP) - 1°C
Switching capacity:	24VDC / 2A
Pressure:	with mounting BE17: atmospheric; with BE12 to BE16: max. 1 bar
Operating temperature:	-20°C to 80°C in medium; -20°C to 70°C above mounting
Protection rating:	IP 65

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TS02 - 28.07.2014 - hm - G: je - Ü: je, ph (110618) - TS_DKat_TSB-1.cdr

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