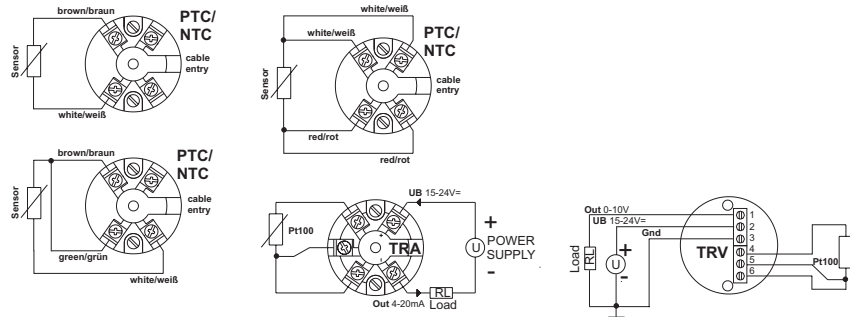


Screw-in temperature sensors
SFK03/SFKH03... RGS03...

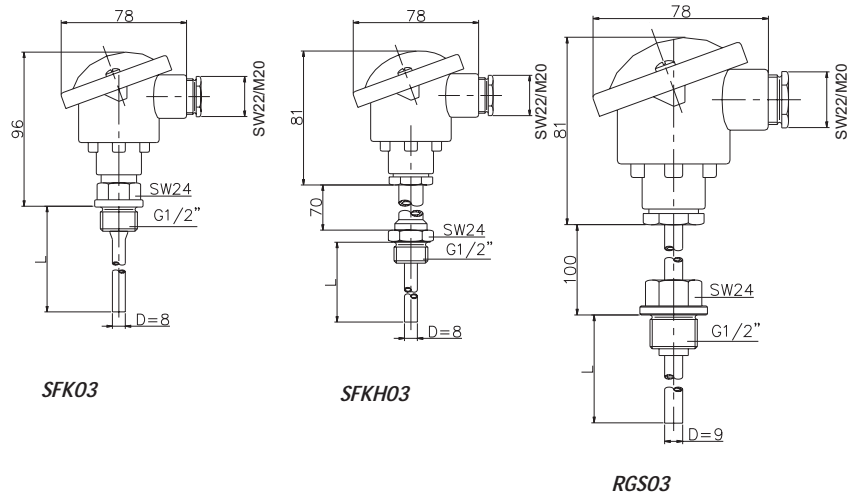
Thermokon
Sensortechnik GmbH

Terminal Connection Plan

Attention: With digital sensors such as AD592, SMT160, LM235, DS1820 the following applies: brown= plus (+), white= minus (-), green=out



Dimensions (mm)



Thermokon
Sensortechnik GmbH

15300... 15400...



Screw-in temperature sensors
SFK03/SFKH03... RGS03...



Application

Screw-in sensor for measuring temperature in liquid and gaseous media of heating, cooling and air-conditioning systems (e.g. in pipeline systems). Designed for locking on control and display systems.

Types Available

| Model | Type | Method of measurement (Output) |
|--------------|---------|--------------------------------|
| SFK03/SFKH03 | PTC/NTC | passive, resistance |
| | TRA | active, 4...20mA |
| | TRV | active, 0...10V |
| RGS03 | PTC/NTC | passive, resistance |
| | TRA | active, 4...20mA |
| | TRV | active, 0...10V |

Norms and Standards

| | |
|------------------------|---|
| Product safety: | EN60730-1 Automatic electr. control devices for domestic use and similar applications |
| EMV: | EN60730-1 (2000) Interference resistance EN60730-1 (2000) Emitted interference |
| CE-Conformity: | 89/336/EEG Electromagnetic compatibility |

Technical Data

Type PTC/NTC:

Measuring element: Sensor according to customer's request, e.g. PTC, NTC...

RGS03: only sensor PT100-3-wire or PT1000 possible

Measuring range¹⁾: Depending sensor used, max. operative temperature 160°C

RGS03: 500°C (short-time up to 600°C)

Accuracy: Depending on sensor used, e.g. DIN KL.B+

Measuring current: Typ. <1mA

Mounting length L: SFK03/SFKH03: 100mm/150mm/200mm/250mm

RGS03: 250mm/500mm

Sensor bushing: Stainless steel grade 1.4571, suitable up to 40bar

Screw-in part: SW24, G1/2", stainless steel grade 1.4305

Neck tube: SFKH03: L=70mm, stainless steel grade 1.4305

RGS03: L=100mm, stainless steel grade 1.4305

Clamps: 2pole (two-wire)

3pole (three-wire)

4pole (four-wire)

Terminal screw max 1,5mm²

Connection head: Aluminium, Form B

Temperature max³⁾: <90 °C

Protection: IP66

Cable entry: M20

Type TRA:

Measuring element: PT100 (3-wire)

Measuring range: SFK03/SFKH03:

TRA1: -50°C...+50°C

TRA3: 0°C...+50°C

TRA4: 0°C...+160°C

TRA5: 0°C...+300°C

RGS03: TRA5: 0°C...+300°C

TRA6: 0°C...+400°C

TRA7: 0°C...+600°C

Accuracy²⁾: Typ. +/-0,2°C +/-0,1% of measuring range

Measuring current: <1mA

Operating voltage: :15-24V=

Power consumption: max. 20mA

Load: <500 Ohm

Mounting lengths L: SFK03/SFKH03: 100mm/150mm/200mm/250mm

RGS03: 250mm/500mm

Sensor bushing: Stainless steel grade 1.4571, suitable up to 40bar

Screw-in part: SW24, G1/2", stainless steel grade 1.4305

Neck tube: SFKH03: L=70mm, stainless steel grade 1.4305

RGS03: L=100mm, stainless steel grade 1.4305

Clamps: 2pole (two-wire)

Terminal screw max 1,5mm²

Connection head: Aluminium, Form B

Temperature max³⁾: <70 °C

Protection: IP66

Cable entry: M20

Type TRV:

Measuring element: PT100 (3-wire)

Measuring range: SFK03/SFKH03:

TRV1: -50°C...+50°C

TRV3: 0°C...+50°C

TRV4: 0°C...+160°C

TRV5: 0°C...+300°C

RGS03: TRV5: 0°C...+300°C

TRV6: 0°C...+400°C

TRV7: 0°C...+600°C

Accuracy²⁾: Typ. +/-0,1% of measuring range

Measuring current: <1mA

Operating voltage: :15-24V=

Power consumption: max. 40mA

Load: min. 3kOhm

Mounting lengths L: SFK03/SFKH03: 100mm/150mm/200mm/250mm

RGS03: 250mm/500mm

Sensor bushing: Stainless steel grade 1.4571, suitable up to 40bar

Screw-in part: SW24, G1/2", stainless steel grade 1.4305

Neck tube: SFKH03: L=70mm, stainless steel grade 1.4305

RGS03: L=100mm, stainless steel grade 1.4305

Clamps: 3pole (three-wire)

Terminal screw max 1,5mm²

Connection head: Aluminium, Form B

Temperature max³⁾: <70 °C

Protection: IP66

Cable entry: M20

¹⁾ Maximum permissible operative temperature of sensor prod. Increased temperature ranges e.g. 260°C on request.

²⁾ Operating voltage 24V= and 21°C (+/-5K) ambient temperature. Please take care that the transducer is generally operated in the measuring range centre, as increased deviations could occur on the measuring range end points. In addition, the ambient temperature of the transducer should be kept constant.

³⁾ Maximum permissible ambient temperature connection head, humidity (without dew permeation) <80%r.F.

Mounting Advice

For risk of condensate permeation in the sensor tube, the bushing must be installed in that way, that occurred condensate can run off.

Material for sealing of single or double cable entry into the pipeline system is not included in delivery range.

Please also note the general remarks in our INFORMATION SHEET THK.