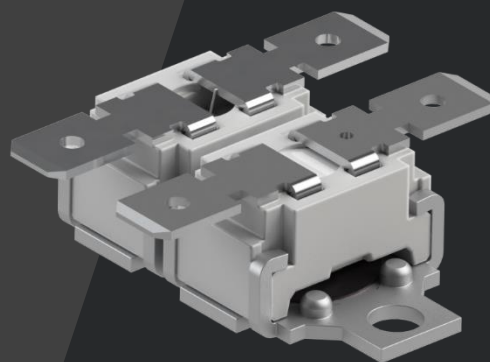


SmartySense

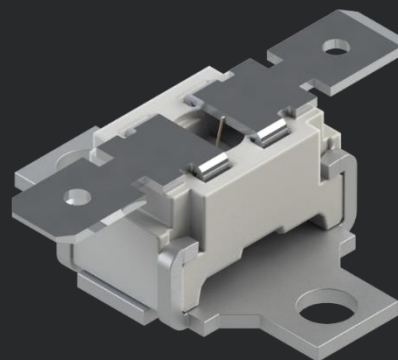
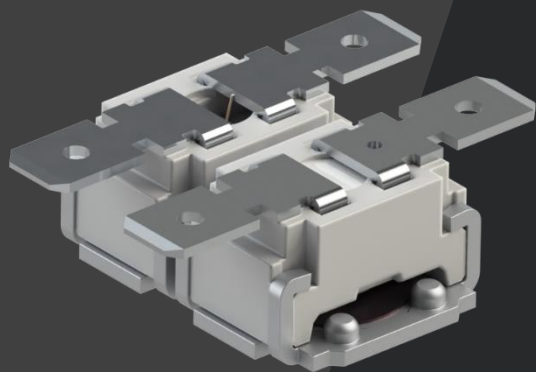
THERMAL SENSORS – DESIGNED FOR
EASY, FAST AND SAFE FIXATION



Temperature Sensors

Single Sensor
NTC

Combination Products
NTC / TR
NTC / TS
NTC / NTC
NTC / SOD



SmartySense

SmartySense Sensors

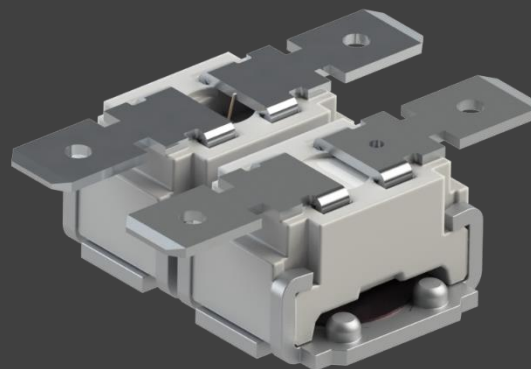
Control and Protect Equipment in Domestic and Industrial Applications

Abstract:

SmartySense Sensors ease and optimize the installation method of NTC Sensor elements. A main development objective was to ensure a time-efficient but **safe and reliable mounting** of the sensor component on a heating element.

SmartySense Sensors feature a temperature resistant and field proven ceramic housing, most commonly used terminal connections and an **optimal thermal coupling** between the sensor and the surface of the heating element to be controlled.

Depending on the application, **SmartySense** Sensors can be configured as **single or combination product**, with NTC, thermostat, thermal link or SOD alternatively.



SmartySense

Advantages:

- Time constant: typical < 5,8 sec.
- Resistance value R(25 °C): 100 kΩ
- Operating temperature: up to 250°C
- High insulation voltage: 500 V DC / 60 sec.
- Robust ceramic housing
- Wide range of standard terminations
- Easy mounting and well-proven fixation method
- Can be combined with NTC, thermostat, thermal link or SOD
- Low resistance drift under cycled operational temperature

Applications:

SmartySense for Electric Heaters:

- Major & Small Household Appliances
- Steam Cleaning & Garment Preparation
- Beverage Processing
- Hot Water Preparation
- Building & Room Heating
- Industrial Applications

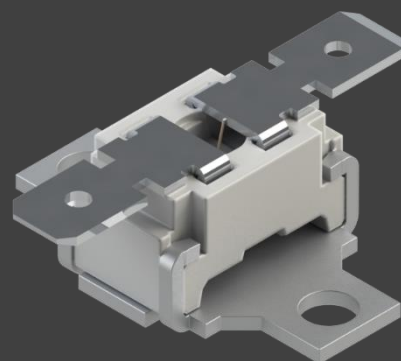
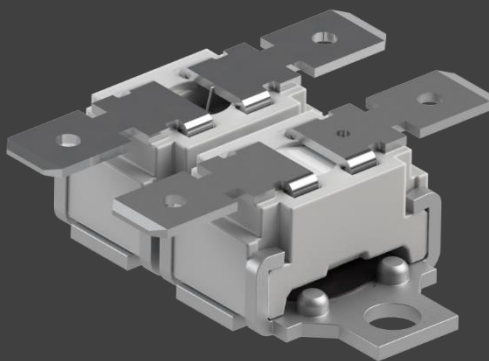
SmartySense

General technical data for reference:

Resistance (25°C)	R25	100	kΩ
B constant	B25 / 100	4092	K ($\Delta B/B \pm 1\%$)
Operating Temperature Range	T	-25 ... +250	°C
Thermal time constant	τ	typical < 5,8	sec. measured on surface
Max. Power (25 °C)	P25	32	mW
Insulation resistance (500 V DC, 60 sec)	Rins	>100	MΩ
Resistance tolerance	$\Delta R/R$	± 3	%
Dielectric high voltage (between terminals and baseplate)	Vtest	2.000	V AC (1 sec.)

Testing:

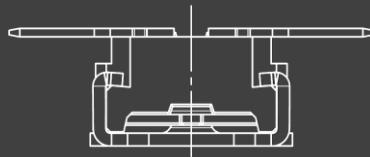
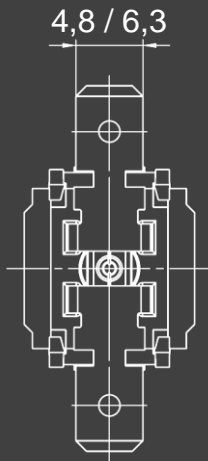
- 100% tested for functionality and dielectric high voltage (2 kV, 1 sec).
- 100% step response test planned.



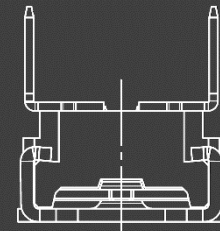
SmartySense

Terminals

Push-on terminal 4,8 x 0,8 mm / 6,3 x 0,8 mm



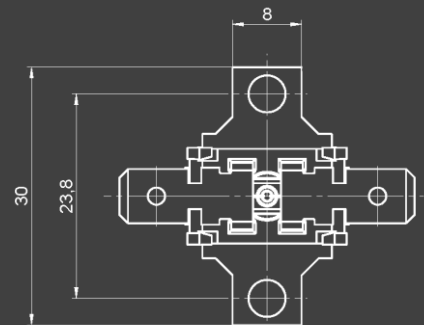
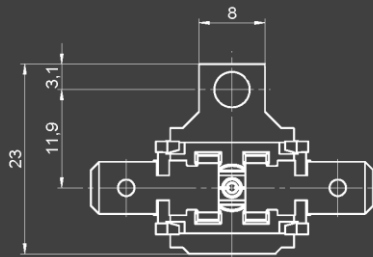
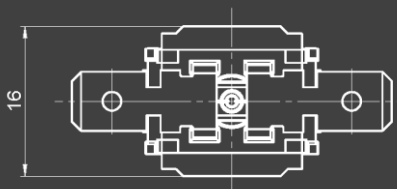
Standard +/- 0° - horizontal



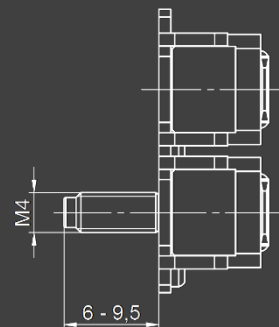
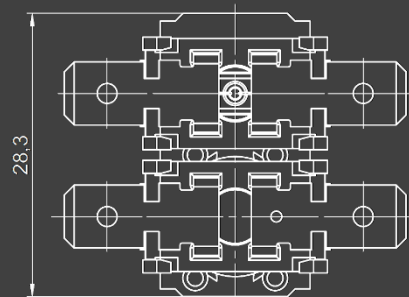
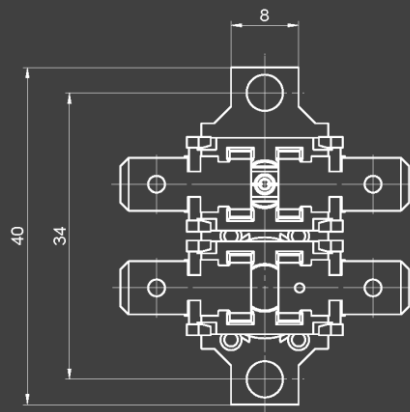
0° - 90° (in 5° steps)

Mounting

Single Sensor mounting holes 2,8 / 3,2 / 3,7 / 4,3 mm



Combination Sensor mounting holes 2,8 / 3,2 / 4,3 mm



SmartySense

THERMAL SENSORS – DESIGNED FOR
EASY, FAST AND SAFE FIXATION

INTER CONTROL

Hermann Koehler Elektrik GmbH & Co. KG
Schafhofstraße 30
90411 Nuernberg, Germany
www.intercontrol.de

Contact:

Phone: +49 911 9522 - 810
E-Mail: info@intercontrol.de

