

HTT, Postfach 1347, 34346 Hann. Münden

**Transformer protection**  
Information for commissioning

Hann. Münden, Apr-19

# Transformer protection

## Thermistor tripping unit and PTC (thermistor - temperature) sensor

HTT resin-encapsulated transformers are equipped with a thermistor tripping unit 220-240V AC for two measuring circuits and two PTC sensors per angle. The tripping unit is delivered separately together with the transformer and can be mounted into the switch cabinet on site. Tripping units for three measuring circuits and / or devices for deviating voltage are available on request. If there are different nominal reaction temperatures of the PTC sensors (normally with a temperature difference of 10 Kelvin), it is possible to connect an alarm with the lower reaction temperature and a tripping (transformer switch-off) with the higher reaction temperature. The mentioned thermistor tripping unit has been specially developed for applications in which a fault signal must be avoided at the moment of application of voltage. This means that the supply voltage can be obtained from the transformer to be protected. We deliver PT 100 sensors with different evaluation units or indicator thermometers on request.

## PTC thermistors

The thermistors are suitable as temperature sensors for monitoring of winding temperatures. Their particularly small dimensions guarantee extremely fast reaction. The thermistor bodies are insulated by means of shrink hoses. The strength and insulation of the sensor structure conforms with the requirements for installation in transformer windings.

Nominal reaction temperature in °C	tolerance in °C	standard color code (DIN 44081)
60	60 ± 5	white / grey
70	70 ± 5	white / brown
80	80 ± 5	white / white
90	90 ± 5	green / green
100	100 ± 5	red / red
110	110 ± 5	brown / brown
120	120 ± 5	grey / grey
130	130 ± 5	blue / blue
140	140 ± 5	white / blue
145	145 ± 5	white / black
150	150 ± 5	black / black
155	155 ± 5	blue / black
160	160 ± 5	blue / red
170	170 ± 5	white / green
180	180 ± 5	white / red