



MESSKO® TRASY2

MODULAR TEMPERATURE
MEASURING SYSTEM WITH AN
EXTENSIVE RANGE OF ACCESSORIES.

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MESSKO® TRASY2 – INDICATOR THERMOMETER FOR DISTRIBUTION AND POWER TRANSFORMERS.

Continually monitoring oil and winding temperature is one of the most important tasks for ensuring the functionality, reliability and operational readiness of a transformer.

The requirements for a good transformer thermometer are identical around the world: Rugged, durable technology, functional reliability, accuracy, low maintenance and resistance to shocks and vibration. The thermometer in a transformer should ideally last throughout the service life of the transformer and, under the best circumstances, without any readjustment or recalibration.

More than 100 years of measuring and monitoring

MESSKO thermometers stand out in temperature monitoring thanks to the 100 years of experience. The MESSKO® TRASY2 temperature measuring system was specifically developed for use in distribution and power transformers. The product series is used both for monitoring oil as well as winding temperature.

The centerpiece: The Bourdon spring

The MESSKO® TRASY2 indicator thermometer is based on Bourdon technology. The core element of this principal is the Bourdon spring, and as a know-how carrier, the company produces the product from start to finish in Oberursel, Germany. Critical components alongside the spring include the temperature sensor, the capillary tube and, of course, the indicator. They work together to create a precise and reliable temperature indicator.

The indicator thermometer also works independently and without any additional energy and can detect various switching tasks (e.g. cooling control, alarm, trip) with the help of its micro-switches.

Two strong technologies from a single source

In addition to the Bourdon principle, bellow-type technology has emerged as a second generic thermometer technology over the years. MESSKO customers can obtain both of these proven technologies from a single source. While the two MESSKO® COMPACT and TRASY2 series utilize Bourdon technology, the MESSKO® BeTech thermometer operates using the bellow-type technology.



Additional products



MESSKO® COMPACT
Temperature measuring system with a Bourdon spring



MESSKO® BeTech
Temperature measuring system with expansion bellows



MESSKO® MTeC EPT303
Digital temperature management

MESSKO® TRASY2 – BENEFITS AT A GLANCE.

Extremely durable

- ▮ Precise and rugged Bourdon tube measuring system without any additional mechanics
- ▮ Extremely durable and operatively sound, meaning there is no need for readjustment or recalibration over the entire service life
- ▮ Reliable operation, even when subjected to vibrations and extreme outdoor conditions

Modular building block system for oil and winding temperature

- ▮ Two redundant measurement points in conjunction with combi well or ZT-F2.1 winding temperature transmitter
- ▮ Various output signal options: Cu10 (only via combi well), PT100, 4...20 mA
- ▮ In combination with signal converter: 0...1 mA, 0...20 mA, 4...20 mA analog signals; relay output; RS 485 digital signals
- ▮ Compatible with a variety of remote displays in the switch room: D1272AT digital display, PQ96 / PQ144 moving coil instrument, EI 100 / 160 electronic display



Variants and options

- ▮ Offshore version
- ▮ Protective tube made from PVC or V4A stainless steel

Easy installation and commissioning

- ▮ Quick and easy configuration of gradients using DIP switches in the ZT-F2.1 (thermal image of the winding temperature)
- ▮ Automatic compensation for ambient temperature
- ▮ Installation in thermometer pockets in accordance with EN 50216-4 possible

Optimized blending and scaling

- ▮ Use of pictograms for quickly and easily distinguishing between various functions, such as oil and winding temperature
- ▮ The latest generation of digital printing ensures higher scratch resistance, better color stability and lower mechanical wear
- ▮ Viewing glass with laminated safety glass construction and integrated UV filter

Sample configurations



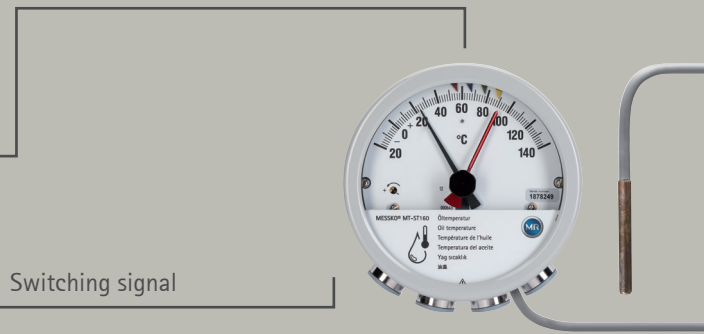
TRASY2 MT-STW160F2
For measuring winding temperatures (thermal image), with direct display



TRASY2 MT-ST160F
For measuring oil temperature, with direct display

MESSKO® TRASY2 – FEATURE MODULAR KIT FOR TEMPERATURE MEASUREMENT.

Direct displays
at the transformer

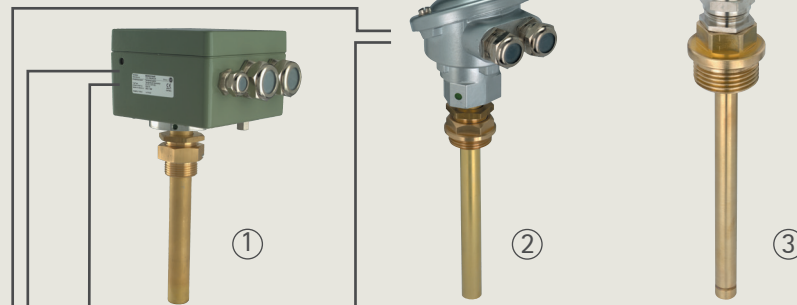


Matching
accessories

Sensors

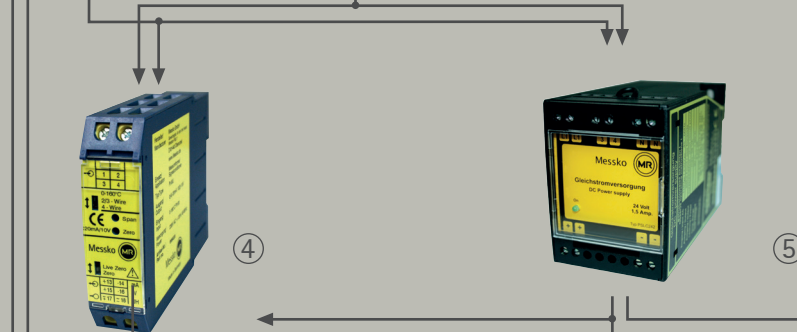


Winding temperature Oil temperature



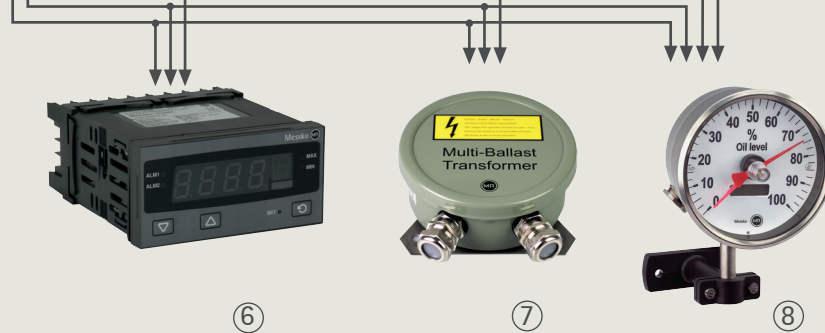
- ① Temperature transmitter ZT-F2.1
- ② Combi well
- ③ Mounting well

Signal converter
at control cabinet



- ④ Measuring transducer
- ⑤ Power supply

Remote displays
at the switch room



- ⑥ Digital indicator 1272/1272 AT
- ⑦ Multi-ballast transformer
- ⑧ Electronic indicator

Control room



SCADA-System



Additional
information:



ONE TEAM – MESSKO® TRASY2 AND THE ZT-F2.1 TEMPERATURE TRANSMITTER.

MESSKO® TRASY2	Technical data
Housing (standard)	Galvanized steel plate
Front ring and housing	Powder-coated, bayonet ring with silicone seal
Viewing glass	Laminated safety glass with built-in UV filter
Temperature sensor	Bare brass
Mounting plate	Stainless steel
Cable gland	M25 x 1.5 nickel-plated brass
	Characteristic data
Measuring range	-20 ... 140° C or 0 ... 160°C
Accuracy	Class 1 in accordance with DIN EN 13190
Installation	Indoors and outdoors, tropic-proof
Ambient temperature	-50 ... 80° C
Degree of protection	IP55 after IEC 60529
Aeration	The viewing glass resists fogging up to 80% relative humidity thanks to an aerator
Trailing indicator	All thermometers have a resettable red trailing indicator
Weight	Approximately 2.5 kg (6 m capillary line)
	Micro-switches
Number	1 ... 6 adjustable micro-switches (1 ... 4 changeover contacts)
Contact load	For adjustable micro-switches in accordance with IEC 60947-5-1
Switching distance	6% of the measuring range
Contact material	Silver cadmium oxide (AgCd010)
Rated insulation voltage	AC: 2,500 V / 1 min
Switch hysteresis	Approximately 5 K
Connecting terminal	Min. 0.25 mm ² / max. 2.5 mm ²

MESSKO ZT-F2.1	Technical data
Housing/terminal box	Cast aluminum alloy, painted
HxWxD dimensions	274 mm x approx. 143 mm x 122 mm / 10.78" x approx. 5.64" x 4.80"
Temperature sensor sleeve	Bare brass
Screw connection	G1B double screw connection, bare brass (optional M27x2, M27x1.5, G3/4B double screw connection)
Installation	DIN EN 50216-4 Type A1 thermometer pocket or similar
Installation position	Any
Degree of protection	IP 56 in accordance with DIN EN 60 529
Flange	Teflon
Weight	1.7 kg
Cable gland	1x M16 x 1,5 WADI; 2 x M25 x 1,5 WADI
Connecting terminals	4 mm ² single wire
Aeration	Via pressure compensation element
CT rated current	2 A from converter
Overload resistance	Continuously max. 3 A (corresponds to CT rated current x 1.5); 12 A for 30 sec.
Gradient configuration	Via DIP switches: 4 - 50K in 1K increments (at min. 18 VA of power at the CT input)
Thermometer measuring range	Corresponds to thermometer in use
Ambient temperature	-50 to +85 °C
Installation	Indoors and outdoors, tropic-proof
Heater	Integrated into temperature sensor sleeve
Power at the CT input	$P [VA] = I_{CT}^2 \times 4,5$
Rated insulation voltage	300 VAC, 50 Hz
Analog output signal	Up to 2x for PT100 / PT1000 or 2x 4...20 mA, other on request 4...20 mA: Passive; Supply voltage: Min. 10 VDC up to max. 30 V DC; Load: Max. 750 at 24 V DC

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Bitte beachten:

Die in allen unseren Publikationen enthaltenen Angaben
können in Details von dem gelieferten Gerät abweichen.
Änderungen bleiben vorbehalten.

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THE POWER BEHIND POWER.

