



MESSKO[®] MTeC[®] EPT303

THE DAWNING OF A NEW AGE IN TEMPERATURE
MANAGEMENT OF TRANSFORMERS.

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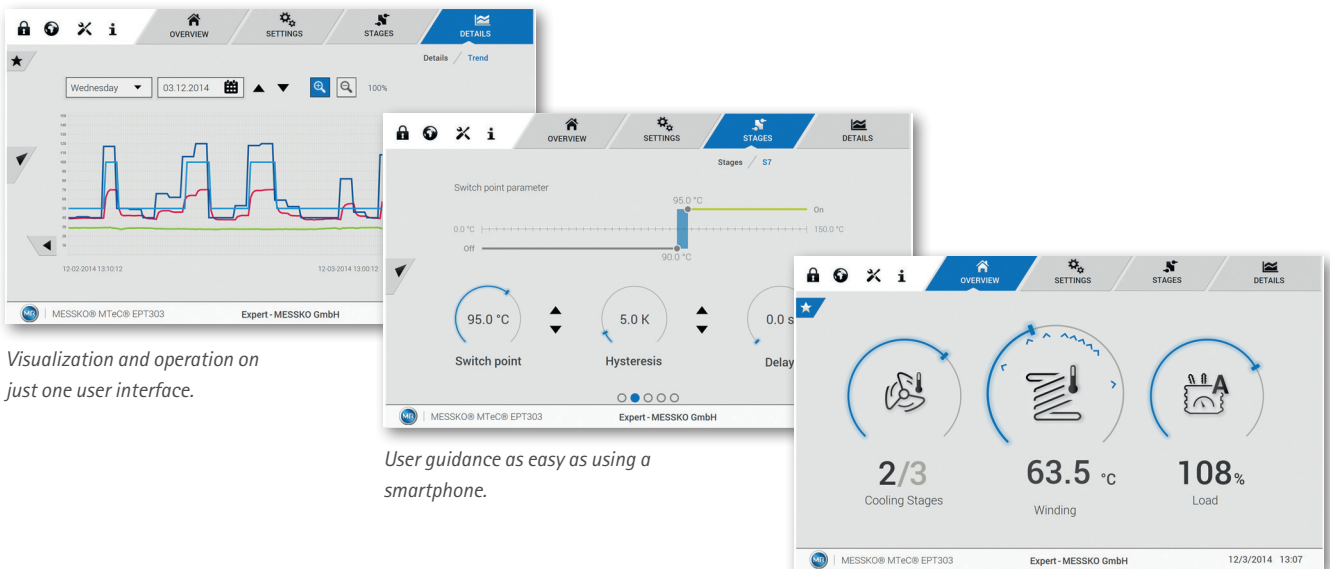


THE BEGINNING OF A NEW ERA.

MESSKO is setting new standards in power transformer cooling system control with the MTec® EPT303. The modularly expandable, digital measurement unit impresses with highly intelligent solutions in the areas of safety, functionality and user-friendliness. Developed from many years of experience, based on a completely new hardware and software platform and equipped standard with forward-looking features, the MESSKO® MTec® EPT303 marks the switch from insulated cooling control to networked industry 4.0 application. Discover for yourself the engineering output of a company that already uses a visionary engineering mindset to deliver decidedly more than the current technological standard.

Brings the future to the surface

Even at first glance, the MESSKO® MTec® EPT303 shows how instrumental it is in bringing about a new age in transformer control thanks to user interface design and ease of use on par with the user experience for consumer electronics.



Visualization and operation on just one user interface.

User guidance as easy as using a smartphone.

Important information at a glance. Thanks to stylized icons.

The user interface features intuitive operability and can be configured to meet individual needs. Alarm levels, triggers and warning notices can be configured as needed. A favorites function allows you to prioritize the data display, enabling quick access to the most important values through adaptation to specific requirements.

Operation and parameterization of the MESSKO® MTec® EPT303 can also be carried out using the separate MESSKO® MControl® 7-inch touch display. This can be installed either in the control cabinet door or on a control panel or DIN rail. This offers you the convenience of accessing measurement values and analyses directly on-site or remotely.

In addition, a simulation mode prevents incorrect parameterization. Access rights can be individually assigned using a three-level role concept. The choice of eight languages makes the MESSKO® MTec® EPT303 ideally suited for global application and guarantees safe use anywhere.

HIGH-QUALITY NUMBER CRUNCHING.



Whether it comes with or without a MESSKO® MControl® touch display, the MESSKO® MTeC® EPT303 accurately meets specific requirements.

Two to three times safer

A smart selection of control parameters for the cooling system results in fewer overall electrical energy losses in the transformer, a higher temporary overload capacity and a longer service life.

The MESSKO® MTeC® EPT303 plays a key role in contributing to these benefits thanks to its ability to carry out complex interpretations of a wide variety of combinable measurement values and its smart cooling control.

The MESSKO® MTeC® EPT303 measures the relevant values at various locations in the transformer to determine the hot spot temperature. This takes place in two steps:

To determine the maximum top oil temperature, two temperature measurements are carried out. The load measurement can be carried out in each phase, i.e. three times. From the compiled values, calculation of the winding temperature is carried out threefold and then the hot spot temperature is determined using this data.

This procedure protects the transformer in a variety of ways. To simplify the calculation of the time for transformer replacement, the estimated remaining service life is displayed using the calculated values.

Additional values, such as the ambient temperature, can be included for more precise cooling control. In addition, two freely definable temperature differences can be calculated and the oil level can be measured. Thanks to more free inputs in the MESSKO® MTeC® EPT303, you can assign additional functions yourself.

Optimal dosing, calculated control

Up to seven freely configurable cooling stages can be activated via relay contacts. The activation can be periodical or based on the load. A cyclical cooling group change is also possible.

Thanks to high flexibility in activation and improved dosing options, even a controlled overload of the transformer can be achieved without any problems. The newly gained efficiency is paying dividends through reduced operating costs and a longer runtime for the transformer.

SUSTAINABILITY AS STANDARD.



Depending on your individual needs, the MESSKO® MTeC® EPT303 is available as a standalone product or integrated into a customized control cabinet solution.

More input. More output

Up to 8 analog inputs and 6 outputs: The MESSKO® MTeC® EPT303 ensures you are well-equipped for the future. A wide variety of sensors and actuators are supported; this includes Pt100 in 2 and 4-conductor types and all standard types of thermal elements.

Long-term use is also ensured thanks to support for all major communication standards. Whether DNP3 (Distributed Network Protocol), IEC 60870, IEC 61850 or Modbus: The MESSKO® MTeC® EPT303 is familiar with them all – and that is standard.

The modular design of the hardware not only provides flexibility in terms of space when integrating the unit into existing control cabinets, but most importantly, it also enables you to carry out demand-based expansion at any time. Even here, the MESSKO® MTeC® EPT303 attends to your needs with long-term viability as a standard feature.

No more software conflicts

Compatibility problems between software and various operating systems are a thing of the past when using MESSKO® MTeC® EPT303. The digital measurement unit features its own operating system, can be called up in any conventional web browser. This means it does not require a separate software installation. Service computers are no longer needed for on-site parameterization.

Making the old new

The MESSKO® MTeC® EPT303 is ideal for upgrading and as a retrofit solution. It is available as a standalone product or integrated into a customized control cabinet solution from MESSKO.

ALL INCLUSIVE.

Technical data

Basic module	MESSKO® MTeC® EPT303
Supply voltage	24 volts
Power consumption	60 watts (<i>varies depending on configuration</i>)
Installation	On DIN rail
Ambient conditions during operation	Ambient temperature for horizontal installation position: -25 °C to +70 °C Relative operating humidity: 10% to 95%, non-condensing Air pressure and altitude: up to 2000 m above sea level
Contamination level	2
Protection class	II
Degree of protection	IP 20
Mounting orientation	Horizontal
Ambient conditions for transport/storage	Temperature: -40 °C to +85 °C Relative humidity: 10 % to 95 %, non-condensing Air pressure: corresponds to 4500 m above sea level
Dimensions and weight	Width x depth x height: 329 x 97 x 119 mm Approx. weight: 2.2 kg
Characteristic data	
Analog inputs: 11	6 x current: Standard 4–20 mA (<i>variations on request</i>) 3 x CT current for 3-phase CT measurement or 1 x CT current for 1-phase CT measurement: 12.5 A continuous; 500 A for 1 s; burden < 1 VA Connection plug up to 4.5 mm ² (<i>clamp-on current transformer on request</i>) 2 x RTD element: Standard Pt100 with 4-conductor design (<i>variations on request</i>)
Analog outputs: 6	6 x current: Standard 4–20 mA (<i>variations on request</i>)
Digital outputs in the form of changeover contacts: 10	10 x relay with: AC switching capacity: $I_{MAX} = 12 \text{ A}$ $I_{NOMINAL} = 8 \text{ A}$ for 300,000 switching cycles; $U_{MAX} = 250 \text{ V} / U_{NOMINAL} = 230 \text{ V}$ DC switching capacity: 250 V / 300 mA resistive; 120 V / 400 mA resistive; 24 V / 8 A resistive
Communication	Ethernet with 3 ports, 2 separate networks: 2 x RJ45 (for display and service) 1 x RJ45 (for SCADA)
Protocols	DNP3 over Ethernet; IEC 60870-5-104; IEC 61850; Modbus TCP
Internal data memory	Recording: Events and measurement parameters
Options	
Display	7"-touchscreen for network connection and operation Installation on DIN rail or on the front panel Power supply: 24 V DC Power consumption: < 20 watts Communication connection: 2 x Ethernet on RJ45 Temperature range: -20 to +70 °C Degree of protection: IP 54 (front side) or IP 20 (back side)
Power supply unit	Wide range input: 100 to 240 V AC 50/60 Hz 110 to 375 V DC Output voltage: 24 DC Output power: 80 watts Temperature range: -25 to +70 °C Degree of protection: IP 20 Dimensions: W x H x D: 32 x 124 x 102 mm

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Please note:

The information contained in all our publications may differ in detail from the actually delivered device. Subject to change without prior notice.

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THE POWER BEHIND POWER.

