MESSKO®MTeC® EPT202

SIMPLY GREAT COOLING CONTROL.

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OUR RELIABLE CLASSIC PRODUCT: USED WORLDWIDE.

Reliable cooling control is critical for the efficient operation of a power transformer. The MESSKO® MTeC® EPT202 is a cost-effective, robust solution that includes all necessary functions for independently protecting and extending the service life of the transformer for years to come. The top oil temperature and load current are measured and this data is used to calculate the hot spot temperature in accordance with IEC 60076-7 or ANSI IEEE C.57.91. This is because the aging behavior of the transformers' insulation system is highly dependent on the temperature in the winding. The estimated remaining service life of the transformer can be calculated by determining the hot spot temperature.

The most important functions at a glance

- Measurement/display of oil temperature
- Winding and ambient temperature display
- Remaining service life in accordance with the IEC and ANSI standard
- Drag indicator function for minimum and maximum values
- Internal data storage for up to 32,000 data records
- Data readout and save operation in Excel format
- Smart (cooling type-dependent/load-dependent) cooling stage activation; option of configuring parameters for individual cooling stages
- Load cycle mode for uniform fan load
- Device self-monitoring
- Information on the status, alarm, trip and state of the fans visible on the device LEDs
- Analog outputs for remote transmission of measurement values

Intelligent cooling control

Flexibility is an essential part of cooling control with the MESSKO® MTeC® EPT202. With the MESSKO® MTeC® EPT202, different groups of fans can be controlled via the oil temperatures. Up to four cooling stages can be freely configured. The MESSKO® MTeC® EPT202 offers various options in terms of the type of activation.

Load cycle mode

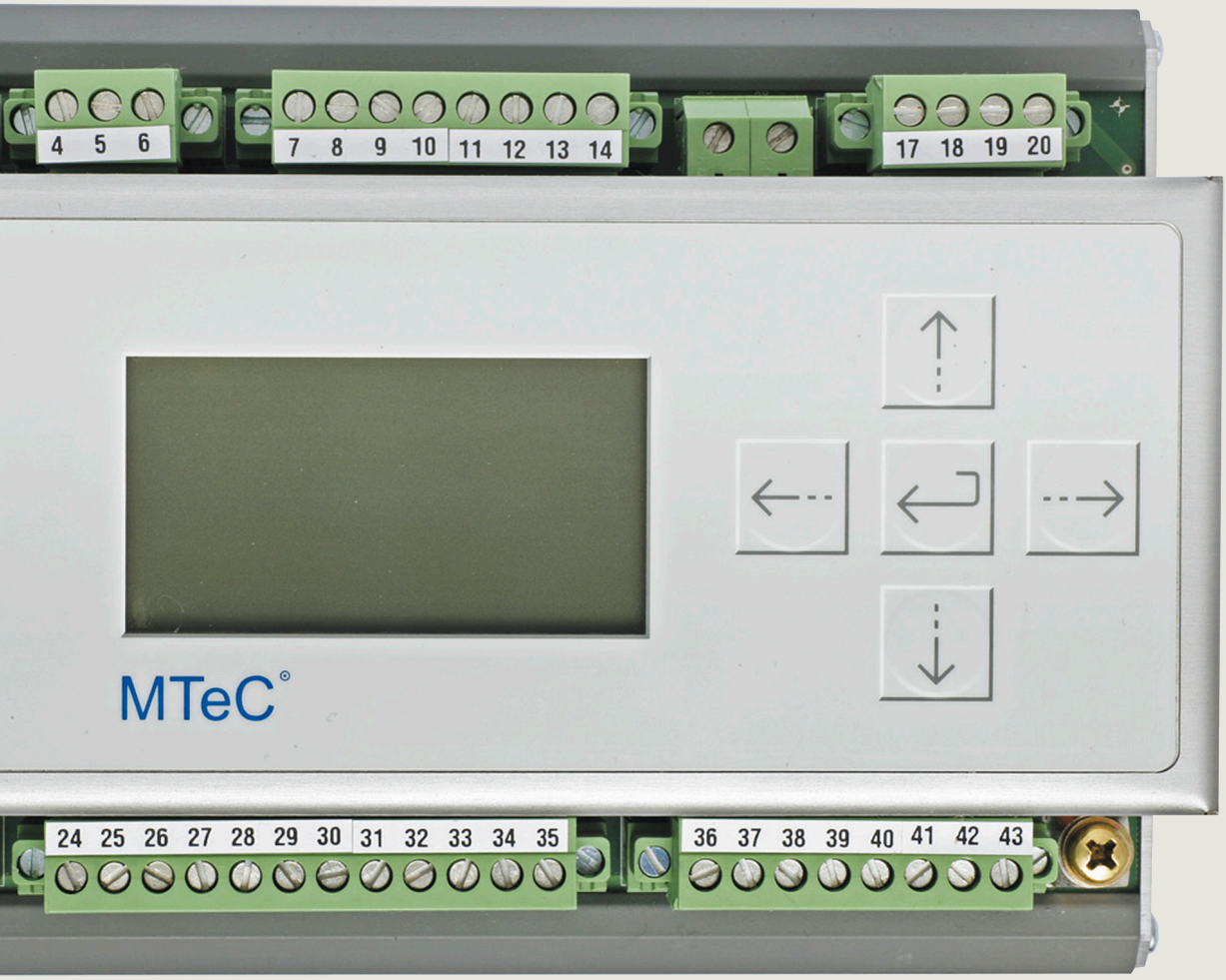
The individual fans are loaded uniformly with load cycle mode. The uniform wear associated with this process saves on maintenance costs. A load change interval can be configured in the MESSKO® MTeC® EPT202.

Activation of cooling stages depends on the load

If a transformer fails in parallel mode, this may cause a quick, significant load increase in the remaining transformer. For this reason, a load current activation limit can be configured in the MESSKO® MTeC® EPT202. This corresponds to the load of the transformers as a percentage. If this value is exceeded, the cooling stages are activated. But control over the cooling system using temperature limit values operates in the background at all times.

Periodic cooling stage activation

Cooling systems are rarely activated for transformers operated with low loads. Here, it is advisable to carry out periodic activation to prevent long downtimes. Periodic activation of fans can also be helpful in the winter months.



FUNCTIONAL SOLUTION.

The MESSKO® MTeC® EPT202 is equipped with a self-monitoring function and a test function. All device functions can be accessed via the device software menu. Using the cursor keys, the user can easily navigate through the menu levels to enter or change parameters. The MESSKO® MTeC® EPT202 also features self-explanatory visualization software with parameterization in four languages.

For this purpose, the MESSKO® MTeC® EPT202 is connected to a computer or laptop via the front-side USB connection and a USB driver is installed. Parameterization can also be started without an existing connection via an offline function. Once the connection is established, the data is simply uploaded. If no special settings are required, parameterization can also be carried out via an easy set function. For this process, we recommend that you use the standard parameter sets for cooling stages in accordance with IEC 60076-7.

The MESSKO® MTeC® EPT202 features internal data memory for up to 32,000 data records. The data storage can be read out via the visualization software. All data is saved in Excel format and can be processed at any time.

Reliable communication

The MESSKO® MTeC® EPT202 includes one analog output for the oil temperature and one for the winding temperature for various measuring ranges. This ensures that the values are transmitted securely to the switch room. A USB interface is available for parameterization and data readout. The RS485 interface is ideal for continuous communication with the visualization software.

SOLID VALUES.

Technical data

Protective housing	
DIN rail mounting	Snap-on aluminum housing for mounting rail in accordance with DIN EN 60715 TH 35-7.5 and TH 35-15, IP 20 protection type in accordance with IEC 60529, approx. weight of 1.2 kg
19" assembly rack	19-inch plug-in housing in accordance with DIN 41494 part 5, 223 x 133 x 178 mm (W x H x D) for installation in a 19-inch cabinet system, IP 20 protection type in accordance with IEC 60529, approx. weight of 1.5 kg
Control panel mounting	270 x 200 x 133 mm (W x H x D) aluminum housing for 236 mm x 142 mm (W x H) panel cutout, IP 20 protection type in accordance with IEC 60529, approx. weight of 1.5 kg
Installation in TAPMOTION® ED motor drive from MR	19-inch plug-in housing in accordance with DIN 41494 part 5, 483 x 133 x 178 mm (W x H x D) IP 20 degree of protection in accordance with IEC 60529, approx. weight of 2.5 kg
Temperature range	
Operation	–25 °C to 70 °C
Storage	–30 °C to 85 °C
Operating elements, display	
Operating elements	5 x function keys with tactile pressure point
Display	Monochrome display, LCD dot matrix display, 128 x 64 pixels
Status LEDs	1 x green LED for "POWER" operating status 1 x yellow LED for "ALARM" switching contact 1 x red LED for "TRIP" switching contact 1 x red LED for "ERROR" switching contact 4 x yellow LEDs for "S1", "S2", "S3" and "S4" switching contacts
Inputs	
Supply voltage	80–265 V AC, 40 Hz–400 Hz; 80–353 V DC; optional: 20–72 V DC Power consumption: Max. 10 VA or W
Temperature sensor	Pt100 signal in accordance with IEC 751 in a 2 or 3-wire design or 4–20 mA signal (active or passive), standard measuring range: –20 °C to 140 °C (other ranges on request). Transducers can be provided for input signals such as 0–1 mA or 0–10 V. Optional: The 4–20 mA input can be used to record the ambient temperature (active or passive signal), standard measuring range: –40 °C to +120 °C
Current transformer input	0.5–5 A CT nominal current Optional: Design with clamp-on current transformer for cable diameters up to Ø 10 mm
Outputs	
Analog outputs	1 x oil temperature, temperature range: –20 °C to +140 °C 1 x winding temperature, temperature range: 0 °C to +160 °C
Service interfaces	1 x USB, female, type B 1 x RS485 at the terminals
Relays	6 x changeover contacts for cooling control or messages 1 x changeover contact for device self-monitoring

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