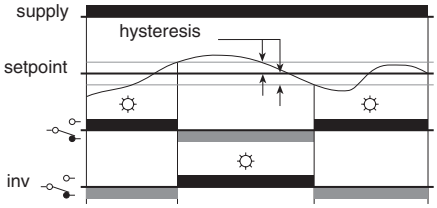
DESCRIPTION

A thermostat relay for the monitoring or control of temperature in the range -50 to 300°C. The probe is a standard Pt100, either 2 or 3 wire. LED indication of a non-functional probe and relay activated.
When the temperature rises and reaches the determined setpoint, plus the hysteresis, which is adjusted on the front, the relay de-energises. As the temperature falls and passes the setpoint, minus the hysteresis, the relay re-energises. By strapping 2 terminals, the relay can be inverted allowing the thermostat relay to be used for the control of heating as well as cooling systems.
The relay has two analogue 0-10VDC outputs, one for measured temperature and the other for the setpoint.

Features
- 2/3 wire Pt100 input (DIN43760).
- Monitoring or control of temperature - 50 to 300°C in 5 ranges in one version.
- Adjustable Setpoint.
- Hysteresis adjustable ±0,5-20%.
- Inversion of the relay contact function - heating/cooling control.
- LED indication of probe failure.
- Outputs.
- SPDT.
- Analogue 0 - 10VDC with ref. to measured temperature.
- Analogue 0 - 10VDC with ref. to setpoint.
- Supply voltage 24VDC, 24/115VAC or 24/230VAC.

OPERATION

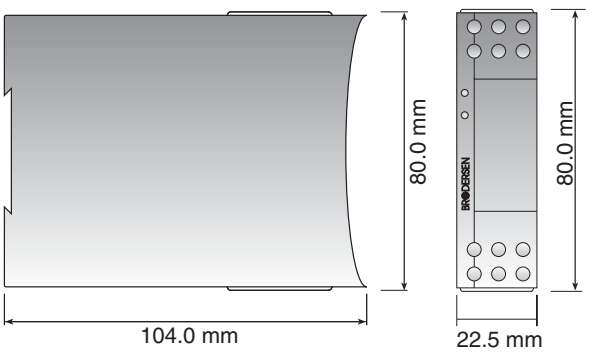
Temperature monitoring



VERSIONS/ORDERING CODES

Type:	MXT-10	230
Thermostat relay	MXT-10	
Supply voltage		
24V DC		924
115V AC / 24V AC		115
230V AC / 24V AC		230

MECHANICAL DIMENSIONS



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TECHNICAL DATA

Input: Pt-100 probe(DIN 43760), 3 conductors withcompensation for cable resistance.

Temperature range:	-50-50°C 0-50°C 0-100°C 100-200°C 200-300°C
Temperature drift	Max. 0,05%/°C
Setting accuracy:	Typically ± 10%
Hysteresis:	±0,5-20% of chosen area, adjustable
Response time:	time constant τ = 0,2s, Worst case of response time max. 5 x τ

Output:

SPDT relay:	Contact material, AgNi 0,15 with hardened gold plating Au. Max. load AC: 8A/240V AC (cos φ=1) Max. breaking capasity 2000VA. Inductive load. See fig. 1. Max. load DC: 8A/24V DC Max. breaking capasity 50- 270W. See fig. 2.
Max. in rush current:	15A(max. 4s/duty cycle less than 10%).
Min. in rush current:	10mA, 24V DC
Frequency:	Max. 1000 operations pr. time.
Life span:	Mech. Min. 3 x 10^7 operations Elect. Min. 1x 10^5 operations with full load.
Delay;	<20ms.
Analogue outputs:	0-10V DC, refers to setpoint and measured temperature in chosen areas. I_{max}=2mA /R_{load} >5 kOhm.
Accuracy:	Setpoint: ±1% Measured value ±5%

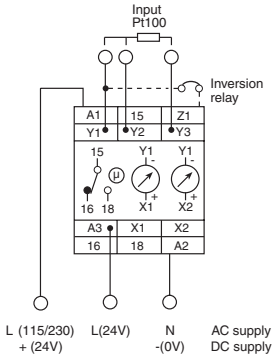
Supply voltage:

Versions:	924=24V DC (20,4-27,6)V DC 115=24/115V AC (20,4-27,6 /98-132)V AC 230=24/230V AC (20,4-27,6/196-264)V AC
Net frequency:	45-65Hz.
Consumption:	AC; 3VA DC; 2W

General data:

Ambient temperature:	-20 to 55°C.
Storage temperature:	-40 to 80°C.
Mounting:	35mm DIN-rail (EN50022).
Terminals:	Screw terminals with dual compartment. Terminal screws are combined crosshead/ slotted.Up to 2 x 2,5mm² wire (2 x 1,5mm² inc. ferrule). Recommended torque, 0,5 Nm, max. 0,7 Nm (VDE0609-1). Terminal identification in accordance with DIN46199/EN50005.
Indicators:	Green LED = operating voltage. Red LED (constant)= relay switched on. Red LED (flashing)= non-functional probe.
Protection:	IP20.
Electric isolation:	3,75kVAC (1 min.) between input, supply and relay output (EN60950). **Note:** No galvanic isolation between input and analogue output.
Housing:	Noryl (GE), UL94V1. Terminal block: Noryl (GE), UL94V0.
Weight:	180 g.

WIRING DIAGRAM



Coding:
Relay inverter, Jumper Y1-Z1

Analogue output 0-10V DC
Setpoint: X1= (+) V
Y1= (-) 0

Measured temperature: X2=(+) V
Y1=(-) 0

SPECIFICATIONS:

MXT-10 is designed and developed with regard to relevant specifications:

- EN60204-1 / VDE0113 electrical material on machines.
- VDE0110 / IEC664 Isolation specifications/creepage and clearance distances.
- Electrical safety in accordance with EN61010.
- IEC414 Safety regulations for control and monitoring equipment.
- EMC: Emission EN50081-1
  Immunity EN50082-2
- Humidity in accordance with IEC68-2-3; RH=95%, 40°C.
- Vibration in accordance with IEC68-2-6:
- Shock when mounted, in accordance with IEC68-2-27.

MXT-10 is CE-marked in accordance with EMC-and the Low Voltage Directive.

OUTPUT LOAD DIAGRAMS

Fig. 1

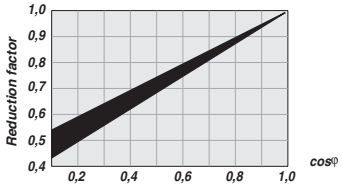
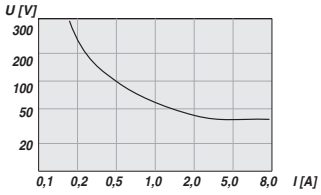


Fig. 2



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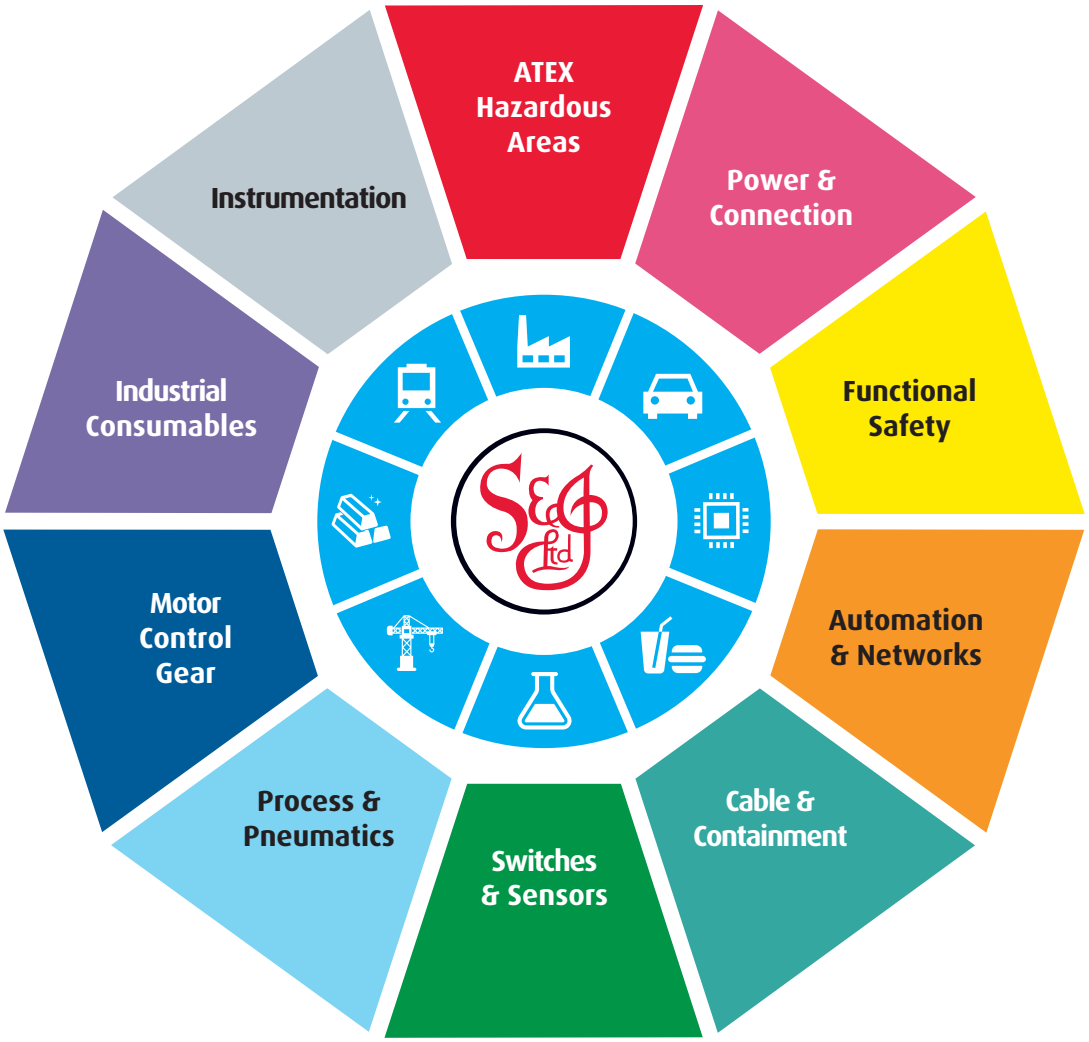

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