

PTC Relay Type MSF220K

for Dry-Transformers, 2 PTC-Circuits

MSF220K



PTC-relay for the monitoring of dry transformers.

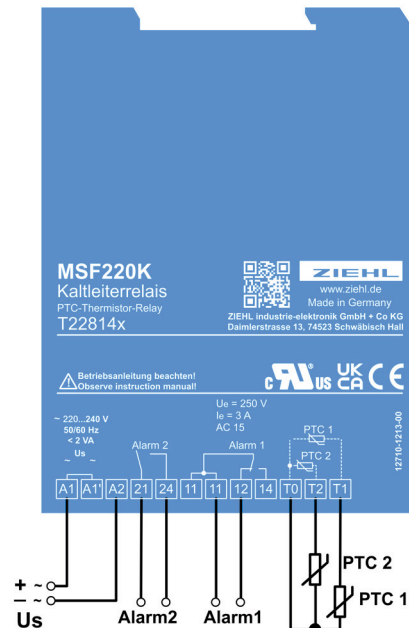
Alarm 1 with relay in closed-circuit current mode for preliminary warning, releases at over-temperature at PTC-set 1 and serves at the same time as functional monitoring.

Alarm 2 in operating current mode. Thus no wiping signal occurs when switching on the supply voltage on. Additional terminals enable comfortable wiring from supply voltage to relays K1 and/or K2.

- 2-PTC resistor sets
- 2 output relays 1 change-over contact (co) / 1 normally open contact (no)
- monitoring of sensors for short-circuit and break activatable
- Test-button (delayed)
- LEDs for ON, alarm 1 and 2
- K-type housing, vertically arranged terminals, 22,5 mm wide
- for attachment on DIN rail 35 mm or with 2 screws M4

Part numbers:

T228144 AC 220-240 V
T228143 AC/DC 24-240 V



Technical Data

Power supply (A1, A2)

Rated supply voltage

Model Us = AC/DC 24...240 V

Frequency

Power consumption

Model Us = AC 220...240 V

Power consumption

Us see type plate on device

DC 20,4 ... 297 V / AC 20 ... 264 V

AC 40...500 Hz, from AC 80 V: 10...500 Hz

< 1 W < 3 VA

AC 0,9 Us -1,1 Us 40 ... 62 Hz

< 2 W < 2 VA

Relay output

Contacts

Switching voltage

Minimum voltage / current

Switching current Ith

Current per terminal

Switching power (ohm resistive load)

rated operating current Ie

rated operational voltage Ue

UL electrical ratings

EN 60947-5-1

1 change-over contact , 1 NO contact

max. AC 300 V; DC 300 V

12 V / 10 mA

max. 5 A

max. 5 A

max. 1250 VA

max. 120 W at DC 24 V

AC-15 Ie = 3 A Ue = 250 V

DC-13 Ie = 2 A Ue = 24 V

DC-13 Ie = 0,2 A Ue = 240 V

250 V ac, 3 A, general use

240 V ac, 1/4 hp, 2.9 FLA

120 V ac, 1/10 hp, 3.0 FLA

C 300

PTC thermistor input (T0-T1, T0-T2)		acc. DIN 44081 / DIN 44082		
Number		2 x 1...6 PTC thermistor in series		
Rated response temperature TFS		60 °C ... 180 °C		
Response tolerance		±6 °C		
Temperature monitor cut-out-point		3,3 kΩ...3,65 kΩ...3,85 kΩ		
Temperature monitor reclosing point		1,5 kΩ...1,6 kΩ ...1,65 kΩ		
Collective resistance cold thermistor		≤ 1,5 kΩ		
Terminal voltage (PTC thermistor)		≤ 2,2 V at R ≤ 3,65 kΩ ≤ 5 V at R = ∞		
Terminal current (PTC thermistor)		≤ 1 mA		
Power consumption		≤ 1,5 mW		
Short circuit monitor		On: approx. 20 Ω Off: approx. 40 Ω		
Interruption monitor		On: approx. 20 kΩ, only if temperature monitor cutout-point has not previously exceeded, Off: approx. 1,6 kΩ		
Test conditions		EN 60947-8		
Rated impulse voltage		4000 V		
Overvoltage category		III		
Pollution degree		2		
Rated insulation voltage Ui		300 V		
Transformer		EN 61558-2-6 (VDE 0551)		
On-period		100 %		
EMC immunity (industry)		EN 61000-6-2		
EMC emission		EN 61000-6-3		
Reliability - failure rate		EN 61709 / SN29500		
Ambient conditions		Local operation in dry rooms		
Operation time 24/7/365		8760 h/a		
Tu = Tref (component not in operation)		Tu = 40 °C	Tu = 60 °C	Tu = 80 °C
Failure rate (FIT)		601 FIT	1214 FIT	2789 FIT
		100 (190) years	94 years	41 years
Installation conditions				
Fitting position		any		
Rated ambient temperature range		-20 °C ... +55 °C		
Storage temperature		-20 °C ... +70 °C		
Temperature for wiring (admissible)		-5 °C ...+70 °C		
Altitude		up to 2000 m		
Climatic conditions		5-85% rel. F., no condensation		
Vibration resistance EN 60068-2-6		2...13,2 Hz ±1 mm 13,2...100 Hz 0,7g		
Contact termination		Push-In spring-type terminal		
Protection class terminals		IP20		
Actuation type		Push-Button		
Number of levels		1		
Solid conductor		1 x 0,14 mm ² ... 1,5 mm ² / AWG 28 ... 16		
Fine-stranded conductor		1 x 0,14 mm ² ... 1,5 mm ² / AWG 26 ... 14		
Fine-stranded with insulated ferrule		1 x 0,25 mm ² ... 0,75 mm ²		
Fine-stranded with uninsulated ferrule		1 x 0,25 mm ² ... 1,5 mm ²		
Strip length		8 ... 9 mm / 0.31 ... 0.35 inches		
Housing		Type K		
Dimensions (W x H x D)		22,5 x 75 x 115 mm		
Width		1 M		
Protection class housing		IP40		
IK-Code		IK06 (1 J impact energy)		
Mounting		Snap mounting on 35 mm standard rail EN60715 or M4 screws (additional bar not included)		
Mounting position		any		
Weight	Model	AC 220...240 V	approx. 140 g	
		AC/DC 24...240 V	approx. 110 g	

Subject to technical changes