## PTC-Resistor-Relay Type MSF 220 V / VU <br> for Dry-Transformers, 3 PTC-Circuits

## MSF 220 V/ <br> MSF 220 VU



The MSF 220 V is particularly suitable for the temperature monitoring at dry transformers.
3 PTC-circuits with different nominal response temperatures (NRT) can be connected to this unit, one for controlling an fan (forced cooling) and two for alarms.
Each PTC-circuit is monitored for break and short circuit. This reduces the probability of false alarms.

- 3 PTC-circuits
- MSF 220 VU for universal supply voltage AC/DC 24-
- 240 V intelligent control of fan (relay
- K0, 1 normally-open contact)
ALARM 1 in closed-circuit current mode (relay K1, 1
- change-over contact) for prealarm. Signals also error in any sensor and interruption of supply voltage.
- ALARM 2 in operation current mode (relay K2, 1 changeover contact). No signal when switching on ond off the supply voltage.
- all output relays potentially separated from each other.
- monitoring of sensor lines
- TEST-button (stop possible
before ALARM 2)
- simple testing with disconnectable monitoring of break and short-circuit (for 10 minutes)
- LEDs for ON, sensor error, Fan, ALARM 1 and ALARM 2
- plug-in terminals
- housing for mounting on DIN-rail or wall-mount
- mounting height 55 mm

Order numbers:

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\begin{array}{lll}
\text { MSF 220 V } & \text { AC 230/240 V } & \text { T } 221738 \\
\text { MSF 220 VU } & \text { AC/DC 24-240 V } & \text { T } 221737
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AC $220-240 \mathrm{~V} \pm 10 \%, 50 / 60 \mathrm{~Hz}, \leq 3 \mathrm{VA}$ AC/DC $24-240 \mathrm{~V} \pm 15 \%,<3 \mathrm{VA}$
$3 \times 1 \ldots 6$ PTC according to DIN 44081 or 44082 $<4000 \Omega$
$2 \times 1$ change-over contacts, 1 normally-open contact type 2 (see "general technical informations")
see "general technical informations"
$-20 \ldots+55{ }^{\circ} \mathrm{C}$
design V 4: $90 \times 70 \times 58$ [ mm ]
on 35 mm DIN rail according to DIN EN 50022
or with screws M4
IP 30 / IP 20
approx. 320 g

