



DTW/DTB Flame-proof temperature monitor/limiter

Features

- 22 A switching capacity
- Can be used directly in Zone 1 and 2
- Direct heating circuit connection
- Flame-proof enclosure
- ATEX, UL, CSA, FM Approval

Description

The flame-proof encapsulated temperature controllers/limiters (DTW/DTB) are designed for (trace)-heating applications in the Ex area. They can be used both for protection against frost and for maintenance temperature applications.

Heating units and other operating equipment are switched on and off by means of the temperature controller when the temperature is too high or too low.

The DTB temperature limiter is designed with resetting lockout; resetting (restarting) is only possible on the device.

Can be used for monitoring temperature in the air or on surfaces.

Function

A change in temperature in the sensor causes a change in volume in the fluid filled in the measuring system, which in turn results in a movement of a membrane, which is connected to transmission mechanics and activates a microswitch. If the sensor temperature exceeds the pre-set level, the contact is actuated.

The temperature limiter switches off permanently if the temperature is exceeded. Once the temperature drops, the temperature limiter can be unlocked manually.

If there is a break in the measuring system (leakage), the circuit remains open permanently.

Application example

DTW and DTB switch temperature-dependent equipment (heating units) of up to 22/16 A directly. Higher switching currents or 3-phase applications are switched by means of a contactor.

➔ Explosion protection

Ex protection type

- ⊕ II 2G Ex d IIC T6
- ⊕ II 2D tD A21 IP 6X T 80°C

Certification

LCIE 08 ATEX 6073 X

Other variants available for:
USA, Canada

➔ Technical data

Temperature setting range

-4 °C up to +163 °C

Ambient temperature device

-40 °C up to +60 °C

Operating temperature sensor

-40 °C up to +215 °C

Storage temperature

-40 °C up to +60 °C

Repeat accuracy

±1.7 K

Switching differential temperature controller

5 K

Switching hysteresis temperature limiter

10 K

Switching point accuracy

±4.5 °C at 50 °C sensor temperature and 21 °C ambient temperature (falling)

Capillary tube

made of stainless steel
Length 3000 mm
Diameter 2 mm
Bending radius 15 mm
Operating temperature range -50 °C up to +215 °C



Sensor

made of stainless steel
 Length 203 mm
 Diameter 8 mm
 Operating temperature range -50 °C up to +215 °C

Weight

1.7 kg

Protection class

IP 65/NEMA 4, 7, 9

Terminals

Terminal screws 4/2.5 mm²
 AWG 10-14

Cable entries

2 x M25 borehole

Enclosure

Aluminium die-casting, lacquered,
 with internal lid seal

Electrical data

Rated voltage

AC 6/12/24/125/250/480 Volt,
 50/60 Hz

Switching current for monitor

22 A at AC 6/12/24/125/250/480 Volt

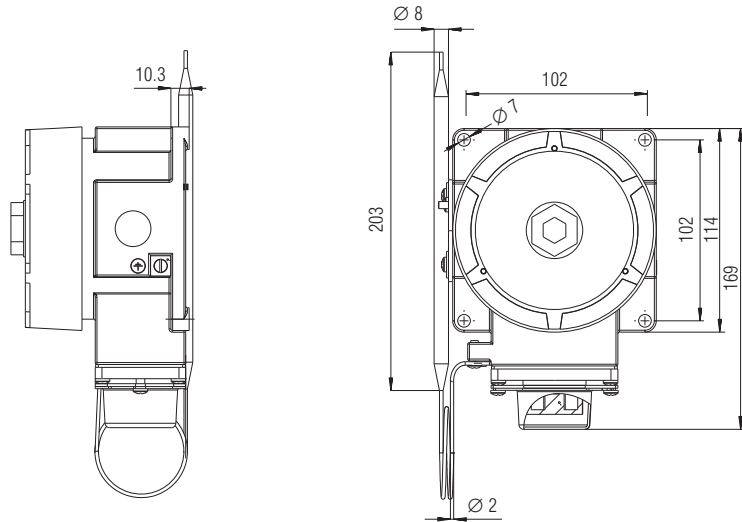
Switching current for limiter

16 A at AC 6/12/24/125/250 Volt,
 15 A at AC 480 Volt

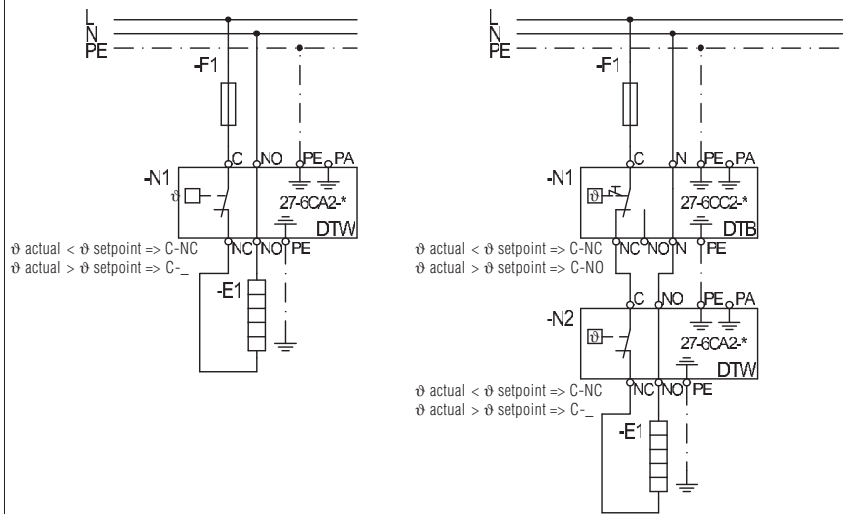
Contact

1 change-over contact
 100,000 switching cycles

Dimensions



Circuit diagram



Selection chart

Designation	Order no.
DTW flame-proof temperature monitor	27-6CA2-2411 2000
DTB flame-proof temperature limiter	27-6CC2-1411 2000