

Operating Instructions Ex-Capillary Tube Thermostat

Type EL-CT

1. Technical Data

Equipment group: II 2G Ex db IIC T6 Gb II 2D Ex tb IIIC T85°C Db
Ta -32°C...+50°C (Type -CT)

II 2G Ex db IIC T6 Gb II 2D Ex tb IIIC T85°C Db
Ta -50°C...+50°C (Type -CT (2))

(Attention: equipment group may change with cable entries!)

Ambient temp. range: - 32 up to + 50°C for -CT
- 50 up to + 50°C for -CT (2)

Set temp. range:

- 50 to + 30°C	(0X6303.)
0 to + 50°C	(0X6305.)
0 to + 200°C	(0X6320.)
+ 50 to + 250°C	(0X6325.)
+ 20 to + 500°C	(0X6350.)
± 0 to +180°C	(0X63180)
-10 to +30°C	(0X63032)
+5 to +65°C	(0X63065)
+50 to +320°C	(0X63320)
±0 to +100°C	(0X64100)

Switch rating: 16 A / 230 V for -CT
16 A / 230 V; 10A / 400V for -CT(2) 1-pole
20A / 400V for -CT(2) 3-pole

Switch type: two-position

Hysteresis: 2,5% from scale value

Capillary tube: Mat. 1.4571, length 2000 mm

Enclosure: Aluminium, varnished, dimensions
L x W x D approx. 140 x 120 x 120 mm

IP-Rating : IP 66

Cable entries: 1 x M20 for non-armoured cable,
Diameter 10 – 14 mm
1 x Thread M 20 x 1.5

Terminal block: 2 pcs. + PE, max. cross section 0.2 – 6,0 mm²

Attention: the following steps should only be carried out by workers trained for the handling of Ex-equipment and protective systems.

2. Receipt of equipment:

Verify upon receipt of the equipment that the delivered thermostats and ancillary types match the information on the delivery note and that the equipment have not been damaged during transport.

Verify that the corresponding equipment certificate from an authorized testing institution has been received. The label marking of the thermostats must be identical to the examination certificate number stated in the certificate.

Identification label printing EL-CT:

eltherm GmbH Burbach EL-CT...-Ex <part no.>

 2G Ex db IIC T6 Gb  II 2D Ex tb IIIC T85°C Db

230V / 16A IBExU 03 ATEX 1130 X <Lot-No.: ...>  0637
IECEX IBE 14.0069X

Identification label printing EL-CT (2):

eltherm GmbH Burbach EL-CT (2)...-Ex <part no.>

 II 2G Ex db IIC T6  Gb II 2D Ex tb IIIC T85°C Db

230V / 16A IBExU 03 ATEX 1130 X <Lot-No.: ...>  0637
IECEX IBE 14.0069X

3. Storage:

The thermostats should be stored in a dry area with an ambient temperature of -25...+60° C.

4. Safety instructions:

- for operation in connection with an electrical heating system, a current-operated earth-leakage circuit-breaker (30mA) shall be used.
- The thermostat is to be properly earthed by connecting the yellow-green wire of the supply lead to one of the provided earth terminals.

5. Installation instructions:

- choose the installation site carefully with respect to the permitted ambient temperature range. It is recommended that the equipment be protected against direct sunlight and weather. Ambient temperature must not exceed 50°C.
- secure the equipment to appropriate support
- the power supply may be connected directly with help of the provided entry. According to IEC EN 60079-14 clause 9.3, round, non-armoured, extruded cable of at least 3 m length must be used (see cover page for diameter). It needs to have a withstand temperature of its single cores of 90°C or higher. For this cable, fixed installation is required and it needs to be secured as near as possible to the cable entry. The cable entry is to be tightened by using an appropriate wrench (size 30) in the following way:
 - tighten until the inner grommet touches the inserted cable along the entire circumference
 - then make two complete additional turns
 - no specific given torque

The M20 thread can be used to directly connect the heater or another Ex-certified terminal box by installation of an appropriate flameproof entry „Ex db“.

- the electrical connection is to be made according to the electrical wiring diagram (see attachment). The connected cables are to be secured.
- All openings (cover, installation entries for cable entries, and cable entries) are to be tightly closed after connection of the cables.

6. Testing:

the following steps are to be followed after completion of the heating circuit installation:

- visual check of the thermostat for possible mechanical damage. Damaged thermostats must not be taken into operation and need to be exchanged
- check of the thermostat cover and installation materials (cable entries) for tight fit and correct sealing. All holes must be closed by means of appropriate glands or stopping plugs rated „db” and “tb”.
- check of the correct positioning of the temperature sensor
- control of the correct temperature setting

Attention:

The setting must not exceed the site temperature classification

7. Operation and maintenance:

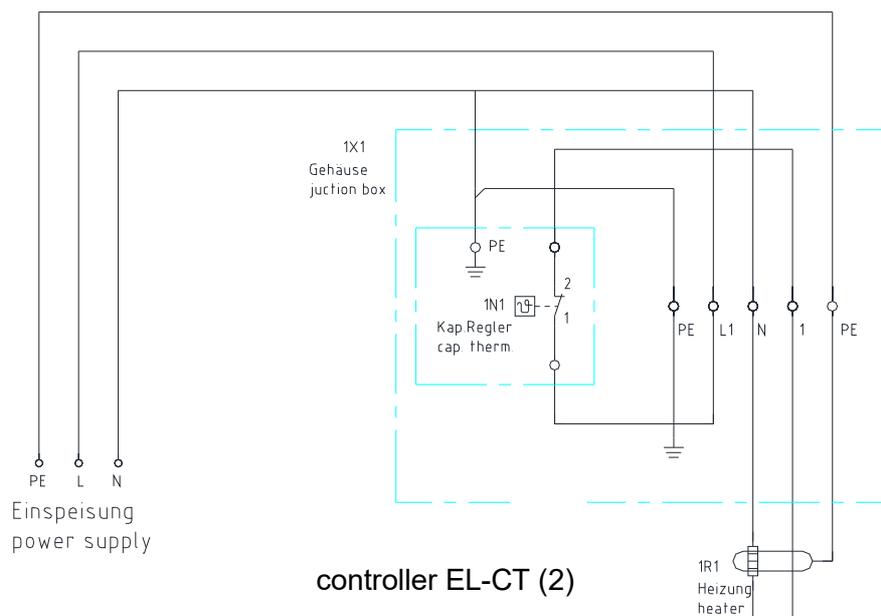
- the thermostat must be installed within the permitted ambient temperature. The local safety regulations must also be followed.
- the approved operation requirements according to part 1 „Technical Data“ (voltage, current, operation temperature, max. ambient temp., degree of protection) are to be followed
- a visual control and control of the switching function is recommended in regular intervals, at least once a year, through trained workers

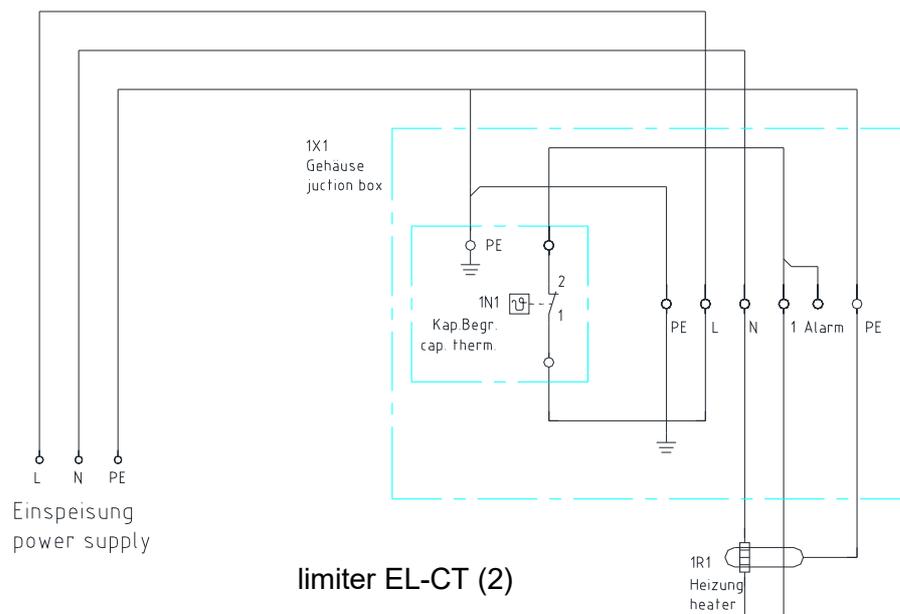
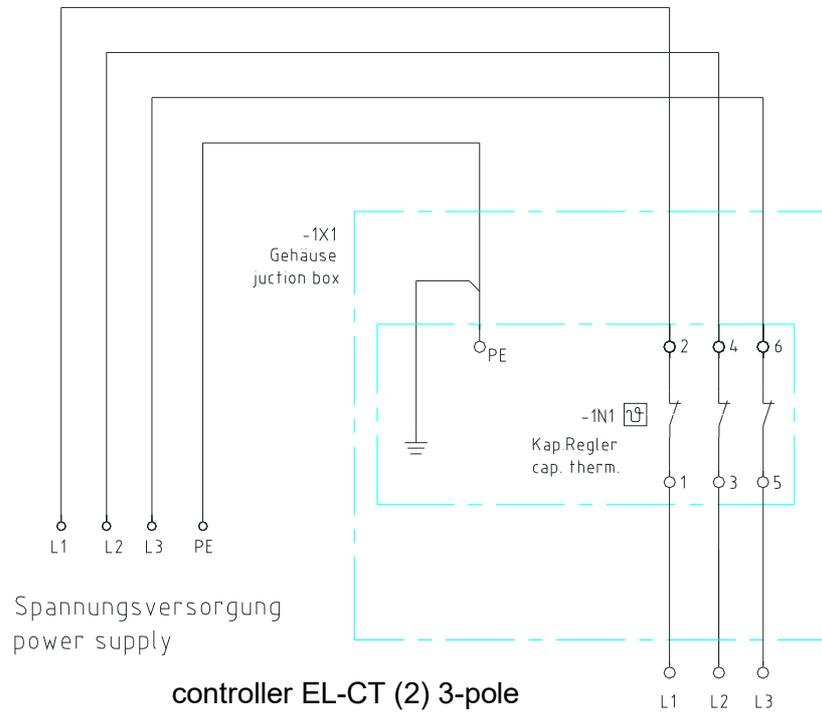
Attention:

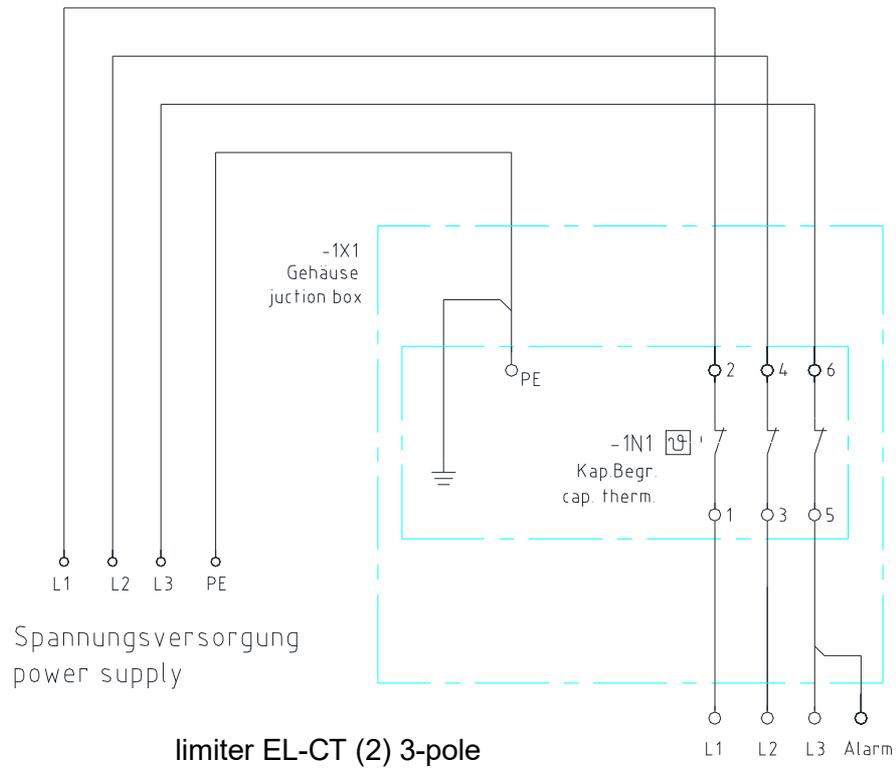
The opening of the thermostat (this includes the cable entries!) must not be done while energized.

- the thermostat is to be protected against damage during site repairs
- the thermostat is to be newly checked after completion of site repairs
- damaged thermostats are not to be taken into operation
- no repair work is to be done on the thermostat enclosure and its attachments, particularly on the flameproof gaps

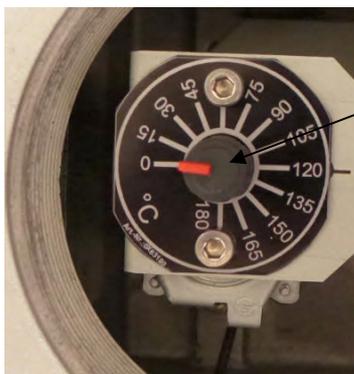
8. Wiring diagram EL-CT



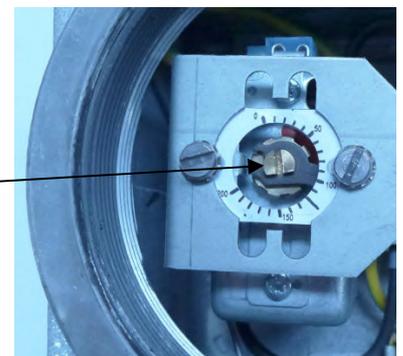




9. Temperature adjustment



Rotary knob
 EL-CT (2)



Adjusting
 screw
 EL-CT

10. View EL-CT

