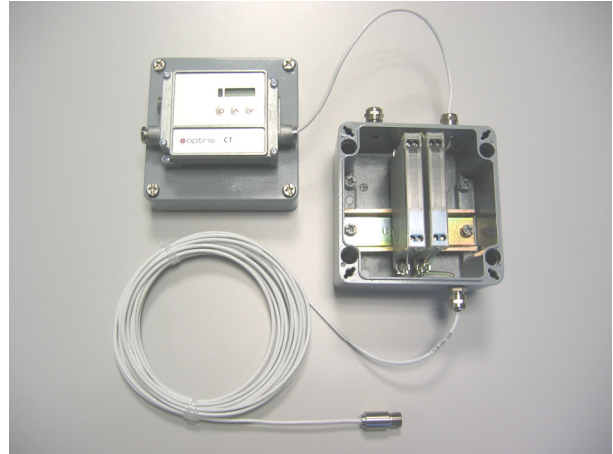


## Manual Addendum

### Scope of supply

**CTex:** optris CT LT for use in hazardous locations according zone 1:  
PTB 01 ATEX 2053/ E II (1/2) G [EEx ia/ib] IIC/IIB  
optris CT LT02, LT15 or LT22 with 3m, 8m or 15m cable incl. additional Ex-box incl. two zener barriers, completely assembled

**CTex-Kit:** Accessory-Kit for use of the CT LT in hazardous locations according zone 1:  
PTB 01 ATEX 2053/ E II (1/2) G [EEx ia/ib] IIC/IIB  
Preassembled Ex-box without zener barriers, combinable with CT LT02, LT15 or LT22 models



### Concept

The optris® CT LT sensing heads are defined as simple electrical devices (according to EN 60079-11). Therefore no special marking for intrinsically safety is necessary. The optris® CT LT gets intrinsically safe by limitation of the energy with two double zener barriers, type 9002/22-032-300-111 (R. STAHL AG).

### Zener barriers

The functionality and correct reading of the CT sensor can only be guaranteed, if the recommended barriers are used

- Type: double zener barriers 9002/22-032-300-111
- Source: company R. STAHL AG/ [www.stahl.de](http://www.stahl.de)

**Please note:** The barriers are not included in scope of supply of the CTex-Kit.

### Change of the Head calibration code

Due to the double zener barriers the changed resistance of the head cable has to be considered.

**CTex:** The necessary change of the head code of the supplied CT sensor will be made at Optris before delivery.

**CTex-Kit:** Please change the head calibration code of your CT sensor as follows:

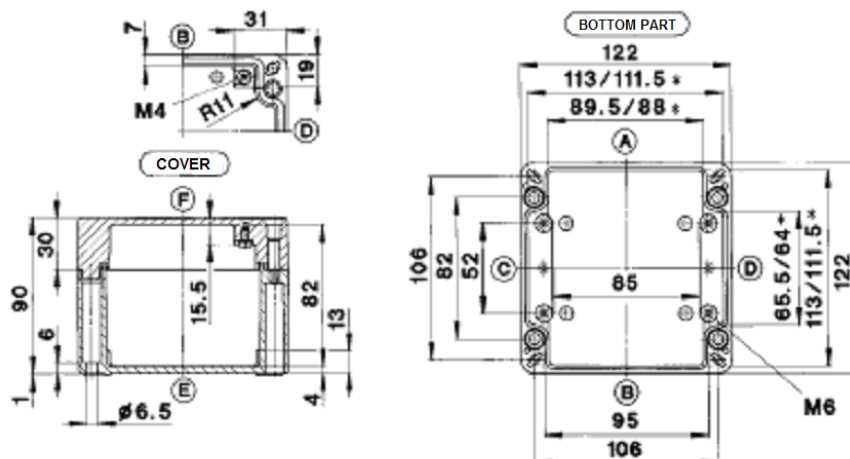
Please change the **1. sign** of the **3. block** from **0** to **1**

Example: EKJ0 – 0OUD – 0A1B → change to EKJ0 – 0OUD – 1A1B

**The head calibration code on the label of the CTex sensor cable shows the original calibration code without this change!**

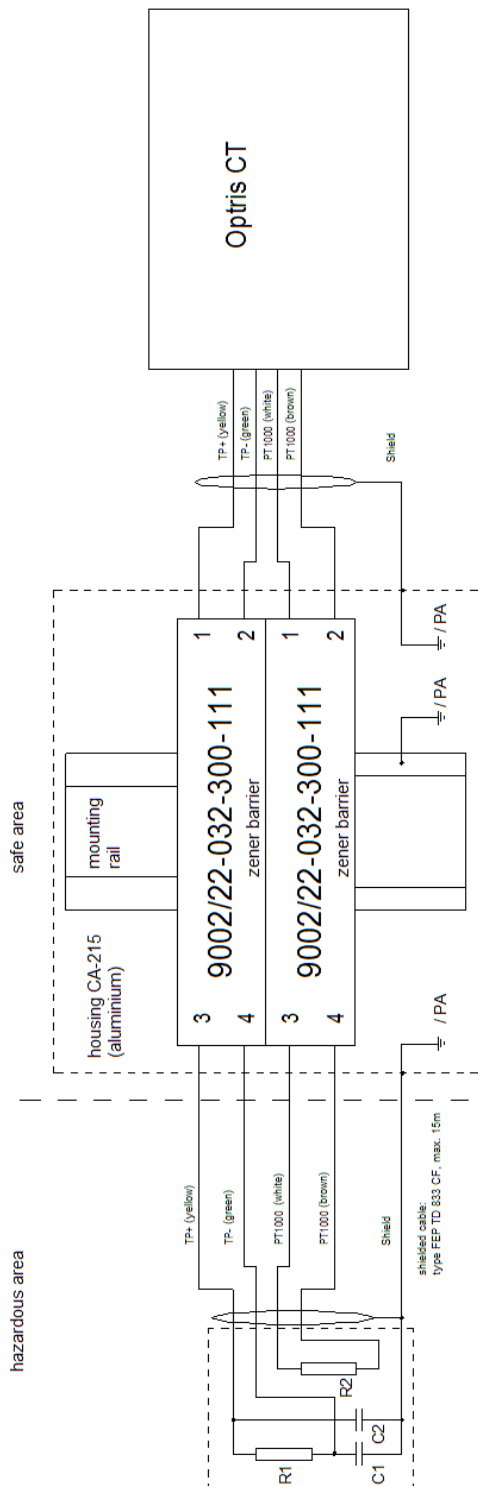
**You will find the description how to change the head code in the CT operators manual.**

### Dimensions (Ex-box/ Alu)



## Connection diagram

**NOTE:** The shield of the sensing head cable must be connected with the cable gland of the Ex-box housing.



Sensing head: simple electrical device (according EN 60079-11) temperature class T4 (maximum power loss < 1,3W)

The PA-terminals of the barriers must be grounded.

components OPTCTL02x:

- R1: thermocouple HTSA11(90KOhm ... 90KOhm)
- R2: resistor PT1000 (SMD 1206)
- C1: capacitor ceramic 6,8nF (SMD 0603)
- C2: capacitor ceramic 6,8nF (SMD 0603)

components OPTCTL120x/ OPTCTL115x:

- R1: thermocouple TS80 (15KOhm ... 35 KOhm)
- R2: resistor PT1000 (SMD 1206)
- C1: capacitor ceramic 6,8nF (SMD 0603)
- C2: capacitor ceramic 6,8nF (SMD 0603)

Ex-Approvals of the barrier

Europe for zone 1: E II (1/2) G (EEEx ia)ib IIC/II B (CENELEC) for zone 2: E II 3 G (EEEx na) II T4

USA I.S. circuits for: Class I, II, III, Division 1, Groups A, B, C, D, E, F, G  
I.S. circuits for: Class I, Zone 0, Group IIC  
Class I, Zone 2, Group IIC

Kanada I.S. circuits for: Class I, Groups A, B, C, D, Class II, Groups E, F, G, Class III  
Class I, Division 2, Groups A, B, C, D  
Class I, Zone 2, Groups IIC

Optris CT Electronics:

power supply: 8 VDC ... 36 VDC  
power consumption: 100 mA

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