

optris CT for applications in hazardous areas

Features:

- Two-piece measuring system with active electronic for evaluation and passive IR receiver (sensing head)
- CTex sensing head can be installed as passive element in hazardous areas
- Energy limitation with appropriate zener barriers (PEPPERL+FUCHS)



Concept/ Scope of delivery

Concept	Classification of the optris CT sensing heads according to EN 60079-0/ EN 60079-11 (category of simple electrical devices) ²⁾
	Intrinsically safe by limitation of the energy with two double zener barriers, type Z955 (PEPPERL+FUCHS)
Scope of delivery	CT LT – Sensor (optics 2:1, 15:1, 22:1) CThot – Sensor (optics 2:1, 10:1) with cable length 3 m, 8 m or 15 m (selectable)
	Aluminum housing with mounting appliance for two zener barriers and CT electronics
	2 zener barriers, type Z955 (PEPPERL+FUCHS) ³⁾

Technical data (zener barriers)¹⁾

EU type examination certificate	BAS 01 ATEX 7005
TÜV certificate	TÜV 99 ATEX 1484 X
FM approval	FM 17 US 0370
UL approval	E106378 UL (QUZW)
IECEX certificate	IECEX BAS 09.0142 IECEX BAS 17.0091X
IECEX marking	[Ex ia Ga] IIC , [Ex ia Da] IIIC , [Ex ia Ma] I Ex ec IIC T4 Gc
Directive 2014/34/EU	EN IEC 60079-0:2018+AC:2020 , EN 60079-11:2012 , EN 60079-15:2010
Degree of protection	IEC 60529
Ambient temperature	-20 °C ... 60 °C

¹⁾ Declaration of company PEPPERL+FUCHS

²⁾ Verification by the operator

³⁾ NOTE: The functionality and correct reading of the CT sensor can only be guaranteed if the recommended barriers are used

Manufacturer's declaration for the CText measurement system

To verify that the optris CT sensing head is a simple electrical device according to EN 60079-11 item 5.7 we hereby confirm the following technical data:

• Inductance (available for the sensor cable only):

Inductance of the loops
min. 0.55 mH/ km max. 0.56 mH/ km

• In relation to a cable length of 15 m:

Inductance of the loops
min. $0.825 \cdot 10^{-3}$ mH max. $0.84 \cdot 10^{-3}$ mH

• Capacitance:

Capacitance of the sensor cable:

Capacitance lead/lead min. 16.5 nF/ km max. 17.9 nF/ km

Capacitance lead/rest min. 101.0 nF/ km max. 103.4 nF/ km

In relation to a cable length of 15 m:

Capacitance lead/lead min. 0.2475 nF max. 0.2685 nF

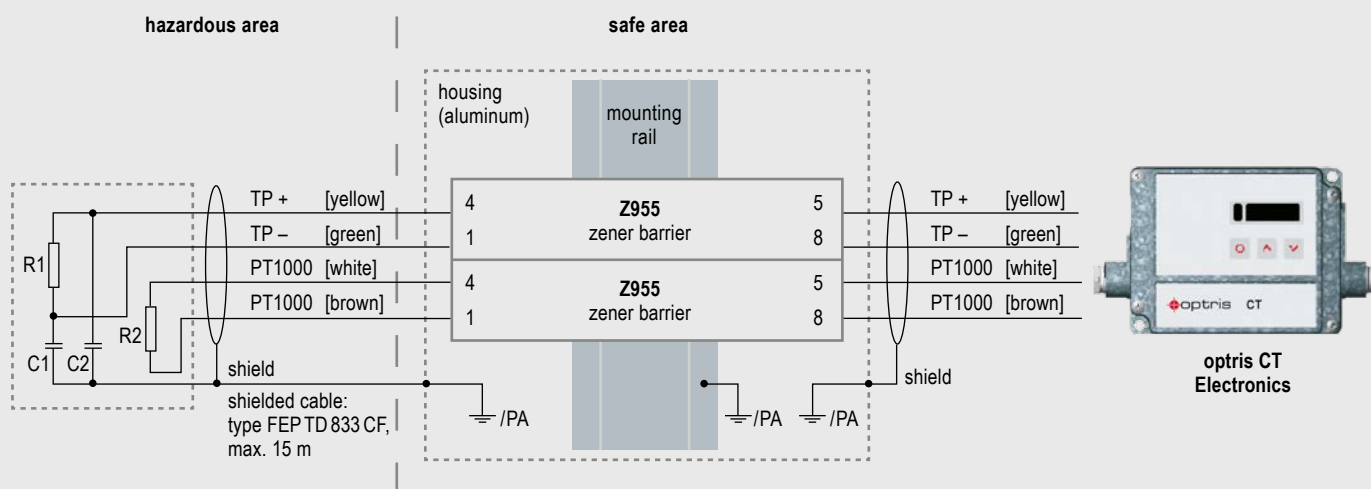
Capacitance lead/rest min. 1.515 nF max. 1.551 nF

Capacitance in the sensing head:

C1 = Ceramic SMD Capacitor 6.8 nF +/- 20 %

C2 = Ceramic SMD Capacitor 6.8 nF +/- 20 %

Connections



Dimensions in mm

