

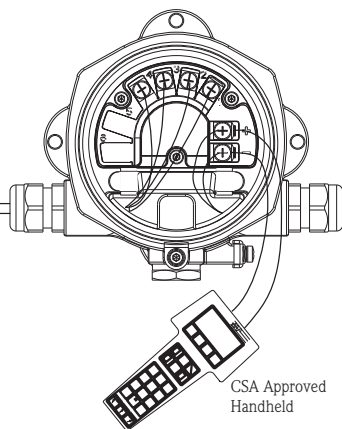
Hazardous (Classified) Location
Class I / Division 1 / Groups ABCD
Class I / Zone 0 / Ex ia IIC
Class I / Division 2 / Groups ABCD
Class II / Division 1 / Groups EFG
Class III / Division 1 / Hazardous Locations



Nonhazardous Locations

CSA Approved Associated Apparatus
or Associated Nonincendive Field
Wiring Apparatus

e.g. RTD or TC Sensor
(Simple Apparatus)
integral or remote mounted



CSA Approved
Handheld

Temperature range

T4 -40°C ... +85°C
T5 -40°C ... +70°C
T6 -40°C ... +55°C

INTRINSICALLY SAFE
NONINCENDIVE, FIELD WIRING

IS Class I / Div. 1 / Groups ABCD
NI Class I / Div. 2 / Groups ABCD

Sensor circuits (Terminals 1...4)

Uo or Voc or Vt = 7.6 V	Io or Isc = 29.3 mA	Po = 55.6 mW
Group A, B resp. IIC	Co or Ca = 10.4 µF	Lo or La = 40 mH
Group C resp. IIB	Co or Ca = 160 µF	Lo or La = 150 mH
Group D resp. IIA	Co or Ca = 1000 µF	Lo or La = 300 mH

Installation Notes TMT 142



- CSA approved apparatus must be installed in accordance with manufacturer's instructions.
- Use supply wires suitable for 5°C above surroundings.
- Stating that only simple apparatus should be terminated to the sensor connection.
Simple apparatus is defined as a device that will neither generate nor store more than 1.2V, 0.1A, 0.25mW or 20µJ. Examples are Thermocouples or RTDs.

INTRINSICALLY SAFE

Class I / Div. 1 / Groups ABCD

- Installation should be in accordance with the Canadian Electrical Code (CEC).
- CSA Approved Associated Apparatus must meet the following parameters:
 $U_o \leq U_i$ $I_o \leq I_i$ $P_o \leq P_i$ $C_a \geq C_i + C_{cable}$ $L_a \geq L_i + L_{cable}$
Transmitter entity parameters are as follows:
 U_i or $V_{max} \leq 30$ V DC $C_i = 5.3$ nF
 I_i or $I_{max} \leq 300$ mA $L_i = 0$
 $P_i \leq 1000$ mW
- $V_{oc} + V_{oc}$ of Handheld device < V_{max} , $I_{sc} + I_{sc}$ of Handheld device < I_{max} ,
 $P_o + P_o$ of Handheld device < P_i , $C_a > C_i + C_{cable} + C_i$ of Handheld device,
 $L_a > L_i + L_{cable} + L_i$ of Handheld device, when Programming Handheld device is used.
- Warning: Substitution of components may impair intrinsic safety.

NONINCENDIVE

Class I / Div. 2 / Groups ABCD

- Intrinsic safety barrier is not required. $V_{max} \leq 40$ V DC.
- Warning: Do not disconnect equipment unless power has been switched off or the area is known to be nonhazardous.
- Nonincendive field wiring installation
The Nonincendive Field Wiring Circuit Concept allows interconnection of Nonincendive Field Wiring Apparatus with Associated Nonincendive Field Wiring Apparatus or Associated Intrinsically Safe Apparatus or Associated Apparatus not specifically examined in combination as a system using any of the wiring methods permitted for unclassified locations, when $V_{oc} \leq V_{max}$, $C_a \geq C_i + C_{cable}$, $L_a \geq L_i + L_{cable}$.
Transmitter Nonincendive Field Wiring parameters are as follows:
 U_i or $V_{max} \leq 40$ V DC $C_i = 5.3$ nF $L_i = 0$
 I_i or I_{max} = see following note below
For these current controlled circuits, the parameter I_{max} is not required and need not to be aligned with parameter I_{sc} and I_t of the Associated Nonincendive Field Wiring Apparatus or Associated Apparatus.

Functional ratings

These ratings do not supersede Hazardous Location values
 $U_{nom} \leq 40$ DC $I_{nom} \leq 4$ to 20 mA

	Approved Pfanzelt	Date (yyyy-mm-dd) 2005-05-31	Drawing No. 14 25 00 112	Dwg.rev.	Revision no.	Revision date (yyyy-mm-dd)	Name	Material 71002454 ZD 044R/09/en/10.05	Endress+Hauser
Volume (mm³)	Designed Meroth	Date (yyyy-mm-dd) 2005-04-22	Unit iTEMP TMT142	Scale 1:1	Title CONTROL DRAWING CSA Intrinsical safety, Nonincendive			Series	
Refer to protection notice ISO 16016	Edge of working parts ISO 13715	Geometrical tolerancing ISO 2768-mH-E	Part No. -	Format A4				Objekt version Sheet 1 of 1	Endress + Hauser Wetzer GmbH+Co. KG Nesselwang / Germany