Instruction Manual

Pulscon

LTC50, LTC51, LTC57

4 mA ... 20 mA, HART

Control Drawing IS

C US

SI00530O-D
116-0412

Safety instructions for electrical apparatus for explosion-hazardous areas

SI00530O-D/98/EN/16.14
116-0412
71266533

PEPPERL+FUCHS

DOCT-4108A 2016-09 277661

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LTC50, LTC51, LTC57

4 mA ... 20 mA, HART

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Associated documentation

This document is an integral part of the following Operating Instructions:
BA01000O, BA01001O, BA01004O
The Operating Instructions pertaining to the device apply.

Extended order code

The extended order code is indicated on the nameplate, which is affixed to the device in such a way that it is clearly visible. Additional information about the nameplate is provided in the associated Operating Instructions.

Structure of the extended order code

Device type		Basic specifications		Optional specifications
LTC5X	–	X-XXXXX-XXXXX-XX XXXXX	+	XXXXXXXXXX

X = Placeholder
At this position, an option (number or letter) selected from the specification is displayed instead of the placeholders.

Basic specifications

The features that are absolutely essential for the device (mandatory features) are specified in the basic specifications. The number of positions depends on the number of features available.

The selected option of a feature can consist of several positions.

Optional specifications

The optional specifications describe additional features for the device (optional features). The number of positions depends on the number of features available.

More detailed information about the device is provided in the following tables. These tables describe the individual positions and IDs in the extended order code which are relevant to hazardous locations.

Basic specifications

Selected option	Position		Description
Approval	LTC50-X-XXXXX-XXXXX-**XX** XXXXX	CB	CSA C/US IS Cl.I Div.1 Gr.A-D
	LTC5X-X-XXXXX-XXXXX-**XX** XXXXX	C1	CSA C/US IS Cl.I,II,III Div.1 Gr.A-G, NI Cl.1 Div.2, Ex ia
Electrical output	LTC5X-X-XXXXX-XX**XX**X-XX XXXXX	ID IE IH	2-wire, 4 ... 20 mA, HART, switching output 2-wire, 4 ... 20 mA, HART, 4 ... 20 mA 2-wire, 4 mA ... 20 mA, HART
Display, operation	LTC5X-X-XXXXX-XXXX**X**-XX XXXXX	B D E	without display, via communication SD02, 4-line, push-buttons and data backup function SD03, 4-line, illuminated, touch control and data backup function
Housing	LTC5X-X-XXXXX-**XX**XXX-XX XXXXX	A1 * A2	GT19 dual compartment, plastics PBT GT20 dual compartment, alu coated
	LTC51-X-XXXXX-**XX**XXX-XX XXXXX LTC57-X-XXXXX-**XX**XXX-XX XXXXX	A3	GT18 dual compartment, 316L
Seal	LTC50-X-XXXX**X**-XXXXX-XX XXXXX	2	Viton, -20 °C ... 80 °C
	LTC51-X-XXXX**X**-XXXXX-XX XXXXX	3 4 5	EPDM, -40 °C ... 120 °C Kalrez, -20 °C ... 200 °C Viton, -30 °C ... 150 °C
	LTC57-X-XXXX**X**-XXXXX-XX XXXXX	3 5	EPDM, -40 °C ... 120 °C Viton, -30 °C ... 150 °C

* only with approval CB

Optional specifications

Selected option	Position		Description
Probe design	XXXXXX**X**XXX	B	Sensor remote, 3 m cable, detachable, with mounting bracket

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Safety instructions: General

- Staff must meet the following conditions for mounting, electrical installation, commissioning and maintenance of the device:
  - Be suitably qualified for their role and the tasks they perform
  - Be trained in explosion protection
  - Be familiar with national regulations
- Install the device according to the manufacturer's instructions and national regulations.
- Do not operate the device outside the specified electrical, thermal and mechanical parameters.
- Only use the device in media to which the wetted materials have sufficient durability.
- Avoid electrostatic charging:
  - Of plastic surfaces (e. g. housing, sensor element, special varnishing , attached additional plates, ...)
  - Of isolated capacities (e. g. isolated metallic plates)
- Refer to the temperature tables for the relationship between the permitted ambient temperature for the sensor and/or transmitter, depending on the range of application, and the temperature class.
- Modifications to the device can affect the explosion protection and must be carried out by staff authorized to perform such work by Pepperl+Fuchs.

Safety instructions: Special conditions

Permitted ambient temperature range at the electronics housing: -40 °C ≤ T_{amb} ≤ +80 °C.

- Observe the information in the temperature tables.
- Use supply wires suitable for 20 K above the ambient temperature.

Electrostatic/impact sparks

- Warning: Avoid electrostatic charging of the plastic surfaces, for plastic process connections or plastic coatings.
- Warning: Install the device to exclude impact and friction sparks on the aluminum housing.

Device type LTC57

- The probes (rod and rope) with plastic coated surfaces can be electrostatically charged.

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Safety instructions:
Installation

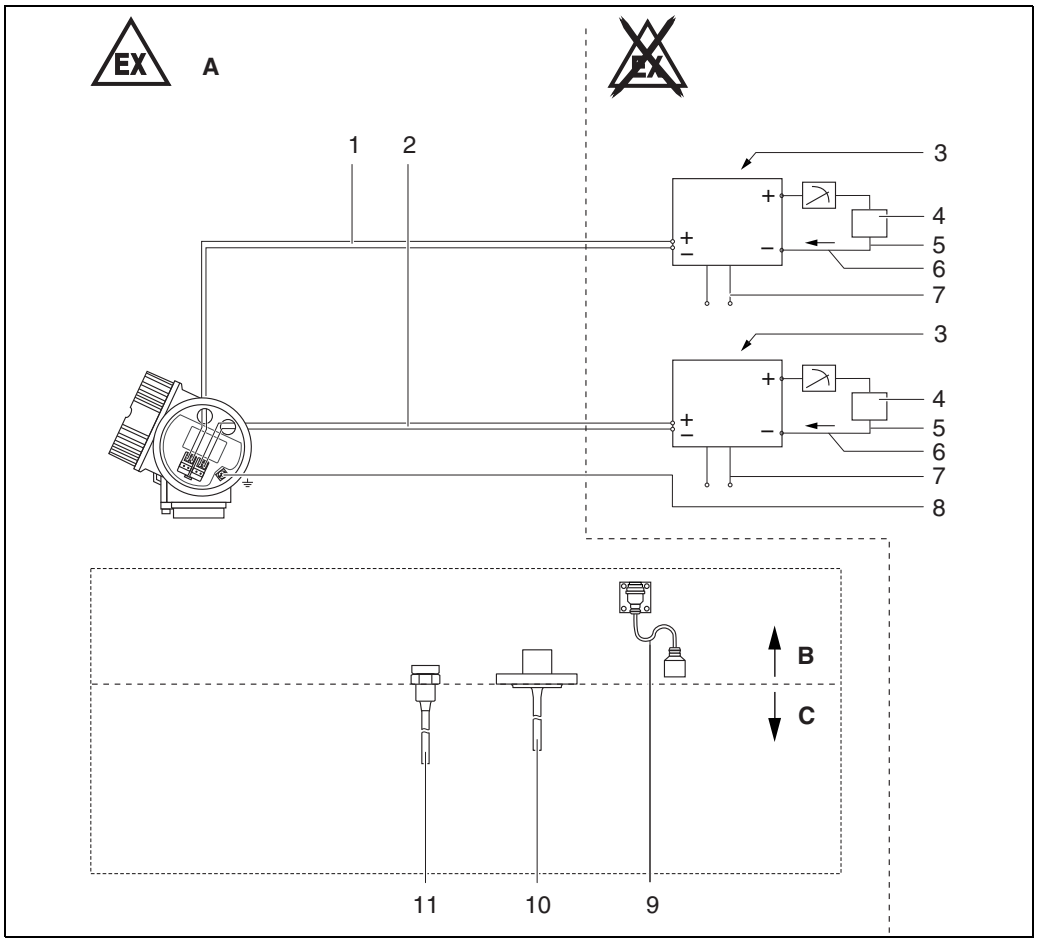

Figure 1

A Class I, Div. 1, Groups A, B, C, D;
Zone 0;
Class II, Div. 1, Groups E, F, G;
Class III
B Zone 1
C Zone 0

1 Output 4 mA ... 20 mA, HART
2 Output PFS passive or output 4 mA ... 20 mA passive
3 Barrier/associated equipment
4 External load
5 Loop
6 4 mA ... 20 mA
7 Supply
8 Ground stud
9 Remote cable
10 Flanges acc. international standards DN40 ... DN200, resp. 1-1/2 in to 8 in
11 G/NPT3/4 in, G/NPT1-1/2 in

Option:
Interconnection with CSA certified service interface.

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Intrinsic safety

Intrinsically safe, Class I, Div. 1, Groups A, B, C, D, Class II, Div. 1, Groups E, F, G, Class III Class I, Zone 0 or Zone 1, AEx ia IIC/Ex ia IIC

Entity installation

- Use an intrinsic safety barrier, or other associated equipment, that is approved for the country in use and satisfies the following conditions:
  U_o (V_{oc}) ≤ U_i (V_{max}), I_o (I_{sc}) ≤ I_i (I_{max}), C_o (C_a) ≥ C_i + C_{cable}, L_o (L_a) ≥ L_i + L_{cable} and P_o ≤ P_i
- For transmitter parameters: see "Connection data" section.
- Control room equipment may not use or generate over 250 V_{rms}.
- Install as per National Electrical Code (NFPA70) or Canadian Electrical Code, Part I (C22.1), as applicable.
- Warning: Substitution of components may impair intrinsic safety.
- Always follow the installation drawing provided by the intrinsic safety barrier manufacturer when installing this equipment.

For Class II and III

- Keep cover tight unless power has been switched off.

Class I, Div. 2, Groups A-D

Only for device type LTC5X, basic specification, option "Approval" = C1

Device type LTC50, basic specification, option "Approval" = CB is not marked for use in Class I, Division 2; however, these devices are suitable for this application when installed using the explosionproof instructions for Class I, Division 1.

Nonincendive field wiring (NIFW) installation

- The Nonincendive Field Wiring circuit concept allows interconnection of nonincendive field wiring apparatus with associated nonincendive field wiring apparatus or associated apparatus not specifically examined in combination as a system using any of the wiring methods permitted for unclassified locations, when the following conditions are met:
  V_{max} ≥ V_{oc} or V_t, C_a ≥ C_i + C_{cable}, L_a ≥ L_i + L_{cable}.
- For transmitter parameters: see "Connection data" section.
- The transmitter provides a current controlled circuit; therefore, the parameter I_{max} is not required and need not to be aligned with Isc of the associated nonincendive field wiring apparatus or associated apparatus.
- Control room equipment may not use or generate over 250 V_{rms}.
- Install per National Electrical Code (NFPA 70) or Canadian Electrical Code, Part I (C22.1), as applicable.
- Warning: Substitution of components may impair suitability for Class I, Div. 2.
- Always follow the installation drawing provided by the associated apparatus manufacturer. The configuration of the associated apparatus must be approved for the country in use.

Device type LTC5X, basic specification, option "Electrical output" = IH

- Probe is suitable for installation in Class I, Division 2 only when using this wiring method. If probe is installed in a location classified as Class I, II, III, Divison 1/Zone 0, supply must be connected to associated apparatus per the intrinsic safety instructions above.

Device type LTC5X, basic specification, option "Electrical output" = ID or IE

- Probe is intrinsically safe, AEx ia/Ex ia, and suitable for installation in Class I, II, III, Division 1 or Class I, Zone 0/1.

Standard wiring installation (only for NPT conduit entries)

- Install per the National Electrical Code (NFPA 70) or Canadian Electrical Code, Part I (C22.1), as applicable, using wiring methods appropriate for the location.
- Associated apparatus not required.
- For the maximum supply voltage: see "Connection data" section.
- Warning: Explosion hazard – Do not disconnect equipment unless power has been switched off or the area is known to be non-hazardous.
- Warning: Substitution of components may impair suitability for Class I, Div. 2.

Device type LTC5X, basic specification, option "Electrical output" = IH

- Probe is suitable for installation in Class I, Division 2 only when using this wiring method. If probe is installed in a location classified as Class I, II, III, Divison 1/Zone 0, supply must be connected to associated apparatus per the intrinsic safety instructions above.

Device type LTC5X, basic specification, option "Electrical output" = ID or IE

- Probe is intrinsically safe, AEx ia/Ex ia, and suitable for installation in Class I, II, III, Division 1 or Class I, Zone 0/1.

Process seals

The following models are dual seal devices per ANSI/ISA 12.27.01 and do not require the use of an external secondary process seal:

Device type	Basic specification, option "Approval"	MWP *	Method of annunciation
LTC51	C1	40 bars	Electronic firmware is incorporated to detect and signal any significant increases or decreases of measurement signal reflection caused by combustible or flammable process fluid between the primary and secondary seal.

* MWP = Maximum Working Pressure for the dual seal rating to be effective and may be a value less than the MWP for the device.

Connection data

Basic specification, option "Approval" = CB

Basic specification, option "Electrical output" = IH (TRC [21])
IS, Class I, Div. 1; Class I, Zone 0, AEx ia/Ex ia

Terminal 1 (+), 2 (-)
Power supply: U_i = 30 V I_i = 300 mA P_i = 1 W effective inner inductance L_i = 0 µH effective inner capacitance C_i = 12 nF

Basic specification, option "Electrical output" = ID (TRC [02])
IS, Class I, Div. 1; Class I, Zone 0, AEx ia/Ex ia

Terminal 1 (+), 2 (-)	Terminal 3 (+), 4 (-)
Power supply: U_i = 30 V I_i = 300 mA P_i = 1 W effective inner inductance L_i = 0 µH effective inner capacitance C_i = 5 nF	Switch output (PFS): U_i = 30 V I_i = 300 mA P_i = 1 W effective inner inductance L_i = 0 µH effective inner capacitance C_i = 3 nF effective inner capacitance to ground C_i = 5.28 nF

Basic specification, option "Electrical output" = IE (TRC [04])
IS, Class I, Div. 1; Class I, Zone 0, AEx ia/Ex ia

Terminal 1 (+), 2 (-)	Terminal 3 (+), 4 (-)
Power supply: U_i = 30 V I_i = 300 mA P_i = 1 W effective inner inductance L_i = 0 µH effective inner capacitance C_i = 30 nF	Output 4 mA ... 20 mA: U_i = 30 V I_i = 300 mA P_i = 1 W effective inner inductance L_i = 0 µH effective inner capacitance C_i = 30 nF

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Basic specification, option "Approval" = C1

Basic specification, option "Electrical output" = IH (TRC [21])
IS, Class I, II, III, Div. 1; Class I, Zone 0, AEx ia/Ex ia

Terminal 1 (+), 2 (-)
Power supply: U_i = 30 V I_i = 300 mA P_i = 1 W effective inner inductance L_i = 0 µH effective inner capacitance C_i = 12 nF

NIFW: Class I, Div. 2 *

Terminal 1 (+), 2 (-)
Power supply: U_i = 35 V I_i = transmitter is a current controlled device effective inner inductance L_i = 0 µH effective inner capacitance C_i = 12 nF

* Probe is suitable for installation in Class I, Division 2 only.
If probe is installed in a location classified as Class I, Division 1/Zone 0, Terminal 1 (+), 2 (-) must be connected to associated apparatus with intrinsically safe outputs.

Class I, Div. 2 *

Terminal 1 (+), 2 (-)
Power supply: Input voltage = 35 V Input current = 22.5 mA

* Probe is suitable for installation in Class I, Division 2 only.
If probe is installed in a location classified as Class I, Division 1/Zone 0, Terminal 1 (+), 2 (-) must be connected to associated apparatus with intrinsically safe outputs.

Basic specification, option "Electrical output" = ID (TRC [02])
IS, Class I, II, III, Div. 1; Class I, Zone 0, AEx ia/Ex ia

Terminal 1 (+), 2 (-)	Terminal 3 (+), 4 (-)
Power supply: U_i = 30 V I_i = 300 mA P_i = 1 W effective inner inductance L_i = 0 µH effective inner capacitance C_i = 5 nF	Switch output (PFS): U_i = 30 V I_i = 300 mA P_i = 1 W effective inner inductance L_i = 0 µH effective inner capacitance C_i = 3 nF effective inner capacitance to ground C_i = 5.28 nF

NIFW: Class I, Div. 2

Terminal 1 (+), 2 (-)	Terminal 3 (+), 4 (-)
Power supply: U_i = 35 V I_i = transmitter is a current controlled device effective inner inductance L_i = 0 µH effective inner capacitance C_i = 5 nF	Switch output (PFS): U_i = 35 V I_i = transmitter is a current controlled device effective inner inductance L_i = 0 µH effective inner capacitance C_i = 3 nF effective inner capacitance to ground C_i = 5.28 nF

Class I, Div. 2

Terminal 1 (+), 2 (-)	Terminal 3 (+), 4 (-)
Power supply: Input voltage = 35 V Input current = 22 mA	Switch output (PFS): Input voltage = 35 V * P_i = 1 W

* The power consumption of I/O modules with passive PFS output can be limited for certain applications.

- Recommended: Power consumption = 1 W.
  This is obtained for a supply voltage at the terminals of 27 V DC.
- For higher supply voltages (U_{max}): Insert a serial resistance (R_V) in order to limit the power consumption, see table below.

Table for the PFS serial resitance (R_V)

Power consumption	1.0 W
Total power consumption	1.88 W
Internal resistance R_I	760 Ω

U_{max} [V]	R_V min
35	205 Ω
34	177 Ω
33	150 Ω
32	122 Ω
31	95 Ω
30	67 Ω
29	39 Ω
28	12 Ω
27	0 Ω

Note!

For values associated with a higher or lower internal power consumption please contact Pepperl+Fuchs.

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Basic specification, option "Electrical output" = IE (TRC [04])
IS, Class I, II, III, Div. 1; Class I, Zone 0, AEx ia/Ex ia

Terminal 1 (+), 2 (-)	Terminal 3 (+), 4 (-)
Power supply: U_i = 30 V I_i = 300 mA P_i = 1 W effective inner inductance L_i = 0 µH effective inner capacitance C_i = 30 nF	Output 4 mA ... 20 mA: U_i = 30 V I_i = 300 mA P_i = 1 W effective inner inductance L_i = 0 µH effective inner capacitance C_i = 30 nF

NIFW: Class I, Div. 2

Terminal 1 (+), 2 (-)	Terminal 3 (+), 4 (-)
Power supply: U_i = 30 V I_i = transmitter is a current controlled device effective inner inductance L_i = 0 µH effective inner capacitance C_i = 30 nF	Output 4mA ... 20 mA: U_i = 30 V I_i = transmitter is a current controlled device effective inner inductance L_i = 0 µH effective inner capacitance C_i = 30 nF

Class I, Div. 2

Terminal 1 (+), 2 (-)	Terminal 3 (+), 4 (-)
Power supply: Input voltage = 30 V Input current = 22 mA	Output 4 mA ... 20 mA: Input voltage = 30 V Input current = 22 mA

Service interface (CDI)

Taking the following values into consideration, the device can be connected to the certified service tool or a similar interface:

Service interface												
U_i = 7.3 V effective inner inductance L_i = negligible effective inner capacitance C_i = negligible												
U_o = 7.3 V I_o = 100 mA P_o = 160 mW												
L_o (mH) =	5.00	2.00	1.00	0.50	0.20	0.10	0.05	0.02	0.01	0.005	0.002	0.001
C_o (µF) =	0.73	1.20	1.60	2.00	2.60	3.20	4.00	5.50	7.30	10.00	12.70	12.70

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Temperature tables

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General notes

Unless otherwise indicated, the positions always refer to the basic specification.

Note!

Observe the permitted temperature range at the probe.

Selection table

Approval		Housing	
CB C1	CSA C/US IS Cl.I Div.1 Gr.A-D CSA C/US IS Cl.I,II,III Div.1 Gr.A-G, NI Cl.1 Div.2, Ex ia	A1 A2 A3	GT19 dual compartment, plastics PBT GT20 dual compartment, Alu coated GT18 double compartiment, 316L

Electrical output		Transmission code of the terminal module [1]	Channels
ID IE IH	2-wire, 4 ... 20 mA, HART, switching output (PFS) 2-wire, 4 ... 20 mA, HART, 4 ... 20 mA 2-wire, 4 mA ... 20 mA, HART	TRC [02] TRC [04] TRC [21]	1 or 2 channels used 1 or 2 channels used –

[1] see nameplate

Diagram

Example diagrams to the temperature tables

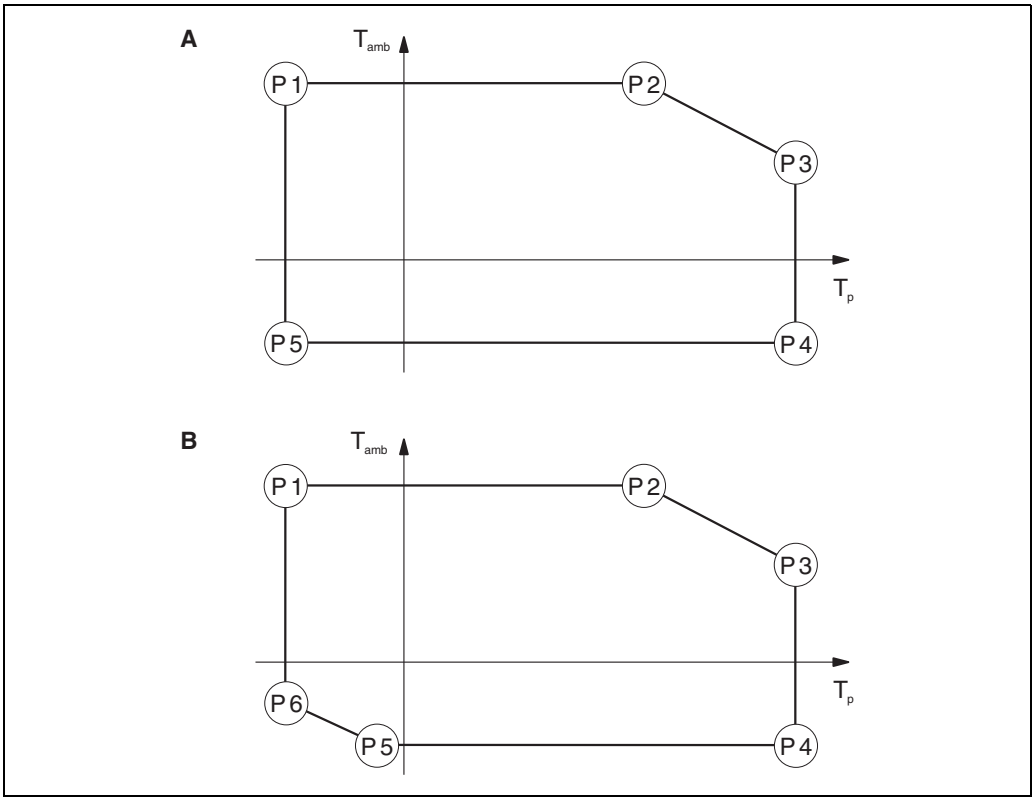

Figure 1

A Version 1
B Version 2

T_{amb} Ambient temperature
T_p Process temperature

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Intrinsically safe (IS)

Probe: Class I, Zone 0/Class I, Division 1
Electronics housing: Class I, Zone 1/Class I, Division 1

LTC50

Electrical output = IH (TRC [21])

Housing = A1													
Electrical output	Temperature class	P 1		P 2		P 3		P 4		P 5		P 6	
		T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}
IH	T6 (85 °C)	-20 °C	60 °C	60 °C	60 °C	80 °C	54 °C	80 °C	-20 °C	-20 °C	-20 °C	–	–

Housing = A2													
Electrical output	Temperature class	P 1		P 2		P 3		P 4		P 5		P 6	
		T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}
IH	T6 (85 °C)	-20 °C	60 °C	60 °C	60 °C	80 °C	56 °C	80 °C	-20 °C	-20 °C	-20 °C	–	–

Electrical output = ID (TRC [02])

Housing = A1													
Electrical output	Temperature class	P 1		P 2		P 3		P 4		P 5		P 6	
		T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}
ID 1 channel used	T6 (85 °C)	-20 °C	57 °C	57 °C	57 °C	80 °C	53 °C	80 °C	-20 °C	-20 °C	-20 °C	–	–
ID 2 channels used	T6 (85 °C)	-20 °C	43 °C	43 °C	43 °C	80 °C	37 °C	80 °C	-20 °C	-20 °C	-20 °C	–	–

Housing = A2													
Electrical output	Temperature class	P 1		P 2		P 3		P 4		P 5		P 6	
		T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}
ID 1 channel used	T6 (85 °C)	-20 °C	60 °C	60 °C	60 °C	80 °C	56 °C	80 °C	-20 °C	-20 °C	-20 °C	–	–
ID 2 channels used	T6 (85 °C)	-20 °C	51 °C	51 °C	51 °C	80 °C	49 °C	80 °C	-20 °C	-20 °C	-20 °C	–	–

Electrical output = IE (TRC [04])

Housing = A1													
Electrical output	Temperature class	P 1		P 2		P 3		P 4		P 5		P 6	
		T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}
IE 1 channel used	T6 (85 °C)	-20 °C	60 °C	60 °C	60 °C	80 °C	53 °C	80 °C	-20 °C	-20 °C	-20 °C	–	–
IE 2 channels used	T6 (85 °C)	-20 °C	52 °C	52 °C	52 °C	80 °C	47 °C	80 °C	-20 °C	-20 °C	-20 °C	–	–

Housing = A2													
Electrical output	Temperature class	P 1		P 2		P 3		P 4		P 5		P 6	
		T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}
IE 1 channel used	T6 (85 °C)	-20 °C	60 °C	60 °C	60 °C	80 °C	56 °C	80 °C	-20 °C	-20 °C	-20 °C	–	–
IE 2 channels used	T6 (85 °C)	-20 °C	54 °C	54 °C	54 °C	80 °C	52 °C	80 °C	-20 °C	-20 °C	-20 °C	–	–

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Intrinsically safe (IS)

Probe: Class I, Zone 0/Class I, Division 1
Electronics housing: Class I, Zone 1/Class I, Division 1

LTC51

Electrical output = IH (TRC [21])

Housing = A2													
Electrical output	Temperature class	P 1		P 2		P 3		P 4		P 5		P 6	
		T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}
IH	T6 (85 °C)	-40 °C	60 °C	60 °C	60 °C	85 °C	54 °C	85 °C	-40 °C	-40 °C	-40 °C	–	–
	T5 (100 °C)	-40 °C	75 °C	75 °C	75 °C	100 °C	69 °C	100 °C	-40 °C	-40 °C	-40 °C	–	–
	T4 (135 °C)	-40 °C	80 °C	81 °C	80 °C	135 °C	70 °C	135 °C	-40 °C	-40 °C	-40 °C	–	–
	T3 (200 °C)	-40 °C	80 °C	81 °C	80 °C	200 °C	57 °C	200 °C	-40 °C	-40 °C	-40 °C	–	–

Housing = A3													
Electrical output	Temperature class	P 1		P 2		P 3		P 4		P 5		P 6	
		T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}
IH	T6 (85 °C)	-40 °C	60 °C	60 °C	60 °C	85 °C	52 °C	85 °C	-40 °C	-40 °C	-40 °C	–	–
	T5 (100 °C)	-40 °C	75 °C	75 °C	75 °C	100 °C	67 °C	100 °C	-40 °C	-40 °C	-40 °C	–	–
	T4 (135 °C)	-40 °C	80 °C	81 °C	80 °C	135 °C	68 °C	135 °C	-40 °C	-40 °C	-40 °C	–	–
	T3 (200 °C)	-40 °C	80 °C	81 °C	80 °C	200 °C	49 °C	200 °C	-40 °C	-40 °C	-40 °C	–	–

Electrical output = ID (TRC [02])

Housing = A2													
Electrical output	Temperature class	P 1		P 2		P 3		P 4		P 5		P 6	
		T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}
ID 1 channel used	T6 (85 °C)	-40 °C	60 °C	60 °C	60 °C	85 °C	54 °C	85 °C	-40 °C	-40 °C	-40 °C	–	–
	T5 (100 °C)	-40 °C	75 °C	75 °C	75 °C	100 °C	69 °C	100 °C	-40 °C	-40 °C	-40 °C	–	–
	T4 (135 °C)	-40 °C	80 °C	80 °C	80 °C	135 °C	69 °C	135 °C	-40 °C	-40 °C	-40 °C	–	–
	T3 (200 °C)	-40 °C	80 °C	80 °C	80 °C	200 °C	56 °C	200 °C	-40 °C	-40 °C	-40 °C	–	–
ID 2 channels used	T6 (85 °C)	-40 °C	51 °C	51 °C	51 °C	85 °C	44 °C	85 °C	-40 °C	-40 °C	-40 °C	–	–
	T5 (100 °C)	-40 °C	66 °C	66 °C	66 °C	100 °C	59 °C	100 °C	-40 °C	-40 °C	-40 °C	–	–
	T4 (135 °C)	-40 °C	75 °C	75 °C	75 °C	135 °C	63 °C	135 °C	-40 °C	-40 °C	-40 °C	–	–
	T3 (200 °C)	-40 °C	75 °C	75 °C	75 °C	200 °C	50 °C	200 °C	-40 °C	-40 °C	-40 °C	–	–

Housing = A3													
Electrical output	Temperature class	P 1		P 2		P 3		P 4		P 5		P 6	
		T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}
ID 1 channel used	T6 (85 °C)	-40 °C	60 °C	60 °C	60 °C	85 °C	52 °C	85 °C	-40 °C	-40 °C	-40 °C	–	–
	T5 (100 °C)	-40 °C	75 °C	75 °C	75 °C	100 °C	67 °C	100 °C	-40 °C	-40 °C	-40 °C	–	–
	T4 (135 °C)	-40 °C	80 °C	80 °C	80 °C	135 °C	67 °C	135 °C	-40 °C	-40 °C	-40 °C	–	–
	T3 (200 °C)	-40 °C	80 °C	80 °C	80 °C	200 °C	49 °C	200 °C	-40 °C	-40 °C	-40 °C	–	–
ID 2 channels used	T6 (85 °C)	-40 °C	51 °C	51 °C	51 °C	85 °C	43 °C	85 °C	-40 °C	-40 °C	-40 °C	–	–
	T5 (100 °C)	-40 °C	66 °C	66 °C	66 °C	100 °C	58 °C	100 °C	-40 °C	-40 °C	-40 °C	–	–
	T4 (135 °C)	-40 °C	75 °C	75 °C	75 °C	135 °C	60 °C	135 °C	-40 °C	-40 °C	-40 °C	–	–
	T3 (200 °C)	-40 °C	75 °C	75 °C	75 °C	200 °C	45 °C	200 °C	-40 °C	-40 °C	-40 °C	–	–

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Electrical output = IE (TRC [04])

Housing = A2													
Electrical output	Temperature class	P 1		P 2		P 3		P 4		P 5		P 6	
		T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}
IE 1 channel used	T6 (85 °C)	-40 °C	60 °C	60 °C	60 °C	85 °C	53 °C	85 °C	-40 °C	-40 °C	-40 °C	–	–
	T5 (100 °C)	-40 °C	75 °C	75 °C	75 °C	100 °C	68 °C	100 °C	-40 °C	-40 °C	-40 °C	–	–
	T4 (135 °C)	-40 °C	80 °C	80 °C	80 °C	135 °C	70 °C	135 °C	-40 °C	-40 °C	-40 °C	–	–
	T3 (200 °C)	-40 °C	80 °C	80 °C	80 °C	200 °C	56 °C	200 °C	-40 °C	-40 °C	-40 °C	–	–
IE 2 channels used	T6 (85 °C)	-40 °C	54 °C	54 °C	54 °C	85 °C	48 °C	85 °C	-40 °C	-40 °C	-40 °C	–	–
	T5 (100 °C)	-40 °C	69 °C	69 °C	69 °C	100 °C	63 °C	100 °C	-40 °C	-40 °C	-40 °C	–	–
	T4 (135 °C)	-40 °C	78 °C	78 °C	78 °C	135 °C	66 °C	135 °C	-40 °C	-40 °C	-40 °C	–	–
	T3 (200 °C)	-40 °C	78 °C	78 °C	78 °C	200 °C	53 °C	200 °C	-40 °C	-40 °C	-40 °C	–	–

Housing = A3													
Electrical output	Temperature class	P 1		P 2		P 3		P 4		P 5		P 6	
		T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}
IE 1 channel used	T6 (85 °C)	-40 °C	60 °C	60 °C	60 °C	85 °C	51 °C	85 °C	-40 °C	-40 °C	-40 °C	–	–
	T5 (100 °C)	-40 °C	75 °C	75 °C	75 °C	100 °C	66 °C	100 °C	-40 °C	-40 °C	-40 °C	–	–
	T4 (135 °C)	-40 °C	80 °C	80 °C	80 °C	135 °C	68 °C	135 °C	-40 °C	-40 °C	-40 °C	–	–
	T3 (200 °C)	-40 °C	80 °C	80 °C	80 °C	200 °C	48 °C	200 °C	-40 °C	-40 °C	-40 °C	–	–
IE 2 channels used	T6 (85 °C)	-40 °C	54 °C	54 °C	54 °C	85 °C	46 °C	85 °C	-40 °C	-40 °C	-40 °C	–	–
	T5 (100 °C)	-40 °C	69 °C	69 °C	69 °C	100 °C	61 °C	100 °C	-40 °C	-40 °C	-40 °C	–	–
	T4 (135 °C)	-40 °C	78 °C	78 °C	78 °C	135 °C	64 °C	135 °C	-40 °C	-40 °C	-40 °C	–	–
	T3 (200 °C)	-40 °C	78 °C	78 °C	78 °C	200 °C	48 °C	200 °C	-40 °C	-40 °C	-40 °C	–	–

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Intrinsically safe (IS)

Probe: Class I, Zone 0/Class I, Division 1
Electronics housing: Class I, Zone 1/Class I, Division 1

LTC57

Electrical output = IH (TRC [21])

Housing = A2													
Electrical output	Temperature class	P 1		P 2		P 3		P 4		P 5		P 6	
		T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}
IH	T6 (85 °C)	-40 °C	60 °C	60 °C	60 °C	85 °C	55 °C	85 °C	-40 °C	-40 °C	-40 °C	–	–
	T5 (100 °C)	-40 °C	75 °C	75 °C	75 °C	100 °C	70 °C	100 °C	-40 °C	-40 °C	-40 °C	–	–
	T4 (135 °C)	-40 °C	80 °C	81 °C	80 °C	135 °C	72 °C	135 °C	-40 °C	-40 °C	-40 °C	–	–
	T3 (200 °C)	-40 °C	80 °C	81 °C	80 °C	185 °C	64 °C	185 °C	-40 °C	-40 °C	-40 °C	–	–

Housing = A3													
Electrical output	Temperature class	P 1		P 2		P 3		P 4		P 5		P 6	
		T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}
IH	T6 (85 °C)	-40 °C	60 °C	60 °C	60 °C	85 °C	54 °C	85 °C	-40 °C	-40 °C	-40 °C	–	–
	T5 (100 °C)	-40 °C	75 °C	75 °C	75 °C	100 °C	69 °C	100 °C	-40 °C	-40 °C	-40 °C	–	–
	T4 (135 °C)	-40 °C	80 °C	81 °C	80 °C	135 °C	70 °C	135 °C	-40 °C	-40 °C	-40 °C	–	–
	T3 (200 °C)	-40 °C	80 °C	81 °C	80 °C	185 °C	60 °C	185 °C	-40 °C	-40 °C	-40 °C	–	–

Electrical output = ID (TRC [02])

Housing = A2													
Electrical output	Temperature class	P 1		P 2		P 3		P 4		P 5		P 6	
		T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}
ID 1 channel used	T6 (85 °C)	-40 °C	60 °C	60 °C	60 °C	85 °C	55 °C	85 °C	-40 °C	-40 °C	-40 °C	–	–
	T5 (100 °C)	-40 °C	75 °C	75 °C	75 °C	100 °C	70 °C	100 °C	-40 °C	-40 °C	-40 °C	–	–
	T4 (135 °C)	-40 °C	80 °C	80 °C	80 °C	135 °C	71 °C	135 °C	-40 °C	-40 °C	-40 °C	–	–
	T3 (200 °C)	-40 °C	80 °C	80 °C	80 °C	185 °C	63 °C	185 °C	-40 °C	-40 °C	-40 °C	–	–
ID 2 channels used	T6 (85 °C)	-40 °C	51 °C	51 °C	51 °C	85 °C	46 °C	85 °C	-40 °C	-40 °C	-40 °C	–	–
	T5 (100 °C)	-40 °C	66 °C	66 °C	66 °C	100 °C	61 °C	100 °C	-40 °C	-40 °C	-40 °C	–	–
	T4 (135 °C)	-40 °C	75 °C	75 °C	75 °C	135 °C	65 °C	135 °C	-40 °C	-40 °C	-40 °C	–	–
	T3 (200 °C)	-40 °C	75 °C	75 °C	75 °C	185 °C	57 °C	185 °C	-40 °C	-40 °C	-40 °C	–	–

Housing = A3													
Electrical output	Temperature class	P 1		P 2		P 3		P 4		P 5		P 6	
		T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}
ID 1 channel used	T6 (85 °C)	-40 °C	60 °C	60 °C	60 °C	85 °C	54 °C	85 °C	-40 °C	-40 °C	-40 °C	–	–
	T5 (100 °C)	-40 °C	75 °C	75 °C	75 °C	100 °C	69 °C	100 °C	-40 °C	-40 °C	-40 °C	–	–
	T4 (135 °C)	-40 °C	80 °C	80 °C	80 °C	135 °C	69 °C	135 °C	-40 °C	-40 °C	-40 °C	–	–
	T3 (200 °C)	-40 °C	80 °C	80 °C	80 °C	185 °C	59 °C	185 °C	-40 °C	-40 °C	-40 °C	–	–
ID 2 channels used	T6 (85 °C)	-40 °C	51 °C	51 °C	51 °C	85 °C	45 °C	85 °C	-40 °C	-40 °C	-40 °C	–	–
	T5 (100 °C)	-40 °C	66 °C	66 °C	66 °C	100 °C	60 °C	100 °C	-40 °C	-40 °C	-40 °C	–	–
	T4 (135 °C)	-40 °C	75 °C	75 °C	75 °C	135 °C	63 °C	135 °C	-40 °C	-40 °C	-40 °C	–	–
	T3 (200 °C)	-40 °C	75 °C	75 °C	75 °C	185 °C	53 °C	185 °C	-40 °C	-40 °C	-40 °C	–	–

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Electrical output = IE (TRC [04])

Housing = A2													
Electrical output	Temperature class	P 1		P 2		P 3		P 4		P 5		P 6	
		T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}
IE 1 channel used	T6 (85 °C)	-40 °C	60 °C	60 °C	60 °C	85 °C	55 °C	85 °C	-40 °C	-40 °C	-40 °C	–	–
	T5 (100 °C)	-40 °C	75 °C	75 °C	75 °C	100 °C	70 °C	100 °C	-40 °C	-40 °C	-40 °C	–	–
	T4 (135 °C)	-40 °C	80 °C	80 °C	80 °C	135 °C	72 °C	135 °C	-40 °C	-40 °C	-40 °C	–	–
	T3 (200 °C)	-40 °C	80 °C	80 °C	80 °C	185 °C	65 °C	185 °C	-40 °C	-40 °C	-40 °C	–	–
IE 2 channels used	T6 (85 °C)	-40 °C	54 °C	54 °C	54 °C	85 °C	49 °C	85 °C	-40 °C	-40 °C	-40 °C	–	–
	T5 (100 °C)	-40 °C	69 °C	69 °C	69 °C	100 °C	64 °C	100 °C	-40 °C	-40 °C	-40 °C	–	–
	T4 (135 °C)	-40 °C	78 °C	78 °C	78 °C	135 °C	68 °C	135 °C	-40 °C	-40 °C	-40 °C	–	–
	T3 (200 °C)	-40 °C	78 °C	78 °C	78 °C	185 °C	61 °C	185 °C	-40 °C	-40 °C	-40 °C	–	–

Housing = A3													
Electrical output	Temperature class	P 1		P 2		P 3		P 4		P 5		P 6	
		T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}
IE 1 channel used	T6 (85 °C)	-40 °C	60 °C	60 °C	60 °C	85 °C	53 °C	85 °C	-40 °C	-40 °C	-40 °C	–	–
	T5 (100 °C)	-40 °C	75 °C	75 °C	75 °C	100 °C	68 °C	100 °C	-40 °C	-40 °C	-40 °C	–	–
	T4 (135 °C)	-40 °C	80 °C	80 °C	80 °C	135 °C	71 °C	135 °C	-40 °C	-40 °C	-40 °C	–	–
	T3 (200 °C)	-40 °C	80 °C	80 °C	80 °C	185 °C	60 °C	185 °C	-40 °C	-40 °C	-40 °C	–	–
IE 2 channels used	T6 (85 °C)	-40 °C	54 °C	54 °C	54 °C	85 °C	48 °C	85 °C	-40 °C	-40 °C	-40 °C	–	–
	T5 (100 °C)	-40 °C	69 °C	69 °C	69 °C	100 °C	63 °C	100 °C	-40 °C	-40 °C	-40 °C	–	–
	T4 (135 °C)	-40 °C	78 °C	78 °C	78 °C	135 °C	66 °C	135 °C	-40 °C	-40 °C	-40 °C	–	–
	T3 (200 °C)	-40 °C	78 °C	78 °C	78 °C	185 °C	57 °C	185 °C	-40 °C	-40 °C	-40 °C	–	–

Intrinsically Safe (IS)

Probe: Class I, Zone 0/Class I, Division 1
Electronics housing: Class I, Zone 1/Class I, Division 1

LTC5X
optional specification, option "Probe design" = B

Electrical output = IH (TRC [21])

Housing = A1													
Electrical output	Temperature class	P 1		P 2		P 3		P 4		P 5		P 6	
		T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}
IH	T6 (85 °C)	–	58 °C	–	58 °C	–	58 °C	–	-40 °C	–	-40 °C	–	–

Housing = A2, A3													
Electrical output	Temperature class	P 1		P 2		P 3		P 4		P 5		P 6	
		T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}
IH	T6 (85 °C)	–	60 °C	–	60 °C	–	60 °C	–	-40 °C	–	-40 °C	–	–
	T6 (85 °C)	–	75 °C	–	75 °C	–	75 °C	–	-40 °C	–	-40 °C	–	–

Electrical output = ID (TRC [02])

Housing = A1													
Electrical output	Temperature class	P 1		P 2		P 3		P 4		P 5		P 6	
		T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}
ID 1 channel used	T6 (85 °C)	–	57 °C	–	57 °C	–	57 °C	–	-40 °C	–	-40 °C	–	–
ID 2 channels used	T6 (85 °C)	–	43 °C	–	43 °C	–	43 °C	–	-40 °C	–	-40 °C	–	–

Housing = A2, A3													
Electrical output	Temperature class	P 1		P 2		P 3		P 4		P 5		P 6	
		T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}
ID 1 channel used	T6 (85 °C)	–	60 °C	–	60 °C	–	60 °C	–	-40 °C	–	-40 °C	–	–
	T5 (100 °C)	–	75 °C	–	75 °C	–	75 °C	–	-40 °C	–	-40 °C	–	–
ID 2 channels used	T6 (85 °C)	–	51 °C	–	51 °C	–	51 °C	–	-40 °C	–	-40 °C	–	–
	T5 (100 °C)	–	66 °C	–	66 °C	–	66 °C	–	-40 °C	–	-40 °C	–	–

Electrical output = IE (TRC [04])

Housing = A1													
Electrical output	Temperature class	P 1		P 2		P 3		P 4		P 5		P 6	
		T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}
IE 1 channel used	T6 (85 °C)	–	60 °C	–	60 °C	–	60 °C	–	-40 °C	–	-40 °C	–	–
IE 2 channels used	T6 (85 °C)	–	52 °C	–	52 °C	–	52 °C	–	-40 °C	–	-40 °C	–	–

Housing = A2, A3													
Electrical output	Temperature class	P 1		P 2		P 3		P 4		P 5		P 6	
		T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}
IE 1 channel used	T6 (85 °C)	–	60 °C	–	60 °C	–	60 °C	–	-40 °C	–	-40 °C	–	–
	T5 (100 °C)	–	80 °C	–	80 °C	–	80 °C	–	-40 °C	–	-40 °C	–	–
IE 2 channels used	T6 (85 °C)	–	54 °C	–	54 °C	–	54 °C	–	-40 °C	–	-40 °C	–	–
	T5 (100 °C)	–	78 °C	–	78 °C	–	78 °C	–	-40 °C	–	-40 °C	–	–

T_p = dependent on the sensor

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Nonincendive Field Wiring (NIFW)

Probe: Class I, Division 2
Electronics housing: Class I, Division 2

LTC50

Electrical output = IH (TRC [21])

Housing = A2													
Electrical output	Temperature class	P 1		P 2		P 3		P 4		P 5		P 6	
		T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}
IH	T6 (85 °C)	-20 °C	60 °C	60 °C	60 °C	80 °C	56 °C	80 °C	-20 °C	-20 °C	-20 °C	–	–

LTC51

Electrical output = IH (TRC [21])

Housing = A2													
Electrical output	Temperature class	P 1		P 2		P 3		P 4		P 5		P 6	
		T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}
IH	T6 (85 °C)	-40 °C	60 °C	60 °C	60 °C	85 °C	54 °C	85 °C	-40 °C	-40 °C	-40 °C	–	–
	T5 (100 °C)	-40 °C	75 °C	75 °C	75 °C	100 °C	69 °C	100 °C	-40 °C	-40 °C	-40 °C	–	–
	T4 (135 °C)	-40 °C	80 °C	81 °C	80 °C	135 °C	70 °C	135 °C	-40 °C	-40 °C	-40 °C	–	–
	T3 (200 °C)	-40 °C	80 °C	81 °C	80 °C	200 °C	57 °C	200 °C	-40 °C	-40 °C	-40 °C	–	–

Housing = A3													
Electrical output	Temperature class	P 1		P 2		P 3		P 4		P 5		P 6	
		T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}
IH	T6 (85 °C)	-40 °C	60 °C	60 °C	60 °C	85 °C	52 °C	85 °C	-40 °C	-40 °C	-40 °C	–	–
	T5 (100 °C)	-40 °C	75 °C	75 °C	75 °C	100 °C	67 °C	100 °C	-40 °C	-40 °C	-40 °C	–	–
	T4 (135 °C)	-40 °C	80 °C	81 °C	80 °C	135 °C	68 °C	135 °C	-40 °C	-40 °C	-40 °C	–	–
	T3 (200 °C)	-40 °C	80 °C	81 °C	80 °C	200 °C	49 °C	200 °C	-40 °C	-40 °C	-40 °C	–	–

Nonincendive Field Wiring (NIFW)

Probe: Class I, Division 2
Electronics housing: Class I, Division 2

LTC57

Electrical output = IH (TRC [21])

Housing = A2													
Electrical output	Temperature class	P 1		P 2		P 3		P 4		P 5		P 6	
		T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}
IH	T6 (85 °C)	-40 °C	60 °C	60 °C	60 °C	85 °C	55 °C	85 °C	-40 °C	-40 °C	-40 °C	–	–
	T5 (100 °C)	-40 °C	75 °C	75 °C	75 °C	100 °C	70 °C	100 °C	-40 °C	-40 °C	-40 °C	–	–
	T4 (135 °C)	-40 °C	80 °C	81 °C	80 °C	135 °C	72 °C	135 °C	-40 °C	-40 °C	-40 °C	–	–
	T3 (200 °C)	-40 °C	80 °C	81 °C	80 °C	185 °C	64 °C	185 °C	-40 °C	-40 °C	-40 °C	–	–

Housing = A3													
Electrical output	Temperature class	P 1		P 2		P 3		P 4		P 5		P 6	
		T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}
IH	T6 (85 °C)	-40 °C	60 °C	60 °C	60 °C	85 °C	54 °C	85 °C	-40 °C	-40 °C	-40 °C	–	–
	T5 (100 °C)	-40 °C	75 °C	75 °C	75 °C	100 °C	69 °C	100 °C	-40 °C	-40 °C	-40 °C	–	–
	T4 (135 °C)	-40 °C	80 °C	81 °C	80 °C	135 °C	70 °C	135 °C	-40 °C	-40 °C	-40 °C	–	–
	T3 (200 °C)	-40 °C	80 °C	81 °C	80 °C	185 °C	60 °C	185 °C	-40 °C	-40 °C	-40 °C	–	–

LTC5X
optional specification, option "Probe design" = B

Electrical output = IH (TRC [21])

Housing = A2, A3													
Electrical output	Temperature class	P 1		P 2		P 3		P 4		P 5		P 6	
		T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}
IH	T6 (85 °C)	–	60 °C	–	60 °C	–	60 °C	–	-40 °C	–	-40 °C	–	–
	T5 (100 °C)	–	75 °C	–	75 °C	–	75 °C	–	-40 °C	–	-40 °C	–	–

T_p = dependent on the sensor

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Nonincendive Field Wiring (NIFW)

Probe: Class I, Zone 0 or Zone 1/Class I, Division 1 or Division 2
Electronics housing: Class I, Division 2

LTC50

Electrical output = ID (TRC [02])

Housing = A2													
Electrical output	Temperature class	P 1		P 2		P 3		P 4		P 5		P 6	
		T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}
ID 1 channel used	T6 (85 °C)	-20 °C	60 °C	60 °C	60 °C	80 °C	56 °C	80 °C	-20 °C	-20 °C	-20 °C	–	–
ID 2 channels used	T6 (85 °C)	-20 °C	51 °C	51 °C	51 °C	80 °C	49 °C	80 °C	-20 °C	-20 °C	-20 °C	–	–

Electrical output = IE (TRC [04])

Housing = A2													
Electrical output	Temperature class	P 1		P 2		P 3		P 4		P 5		P 6	
		T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}
IE 1 channel used	T6 (85 °C)	-20 °C	60 °C	60 °C	60 °C	80 °C	56 °C	80 °C	-20 °C	-20 °C	-20 °C	–	–
IE 2 channels used	T6 (85 °C)	-20 °C	60 °C	60 °C	60 °C	80 °C	56 °C	80 °C	-20 °C	-20 °C	-20 °C	–	–

Nonincendive Field Wiring (NIFW)

Probe: Class I, Zone 0 or Zone 1/Class I, Division 1 or Division 2
Electronics housing: Class I, Division 2

LTC51

Electrical output = ID (TRC [02])

Housing = A2													
Electrical output	Temperature class	P 1		P 2		P 3		P 4		P 5		P 6	
		T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}
ID 1 channel used	T6 (85 °C)	-40 °C	60 °C	60 °C	60 °C	85 °C	54 °C	85 °C	-40 °C	-40 °C	-40 °C	–	–
	T5 (100 °C)	-40 °C	75 °C	75 °C	75 °C	100 °C	69 °C	100 °C	-40 °C	-40 °C	-40 °C	–	–
	T4 (135 °C)	-40 °C	80 °C	80 °C	80 °C	135 °C	69 °C	135 °C	-40 °C	-40 °C	-40 °C	–	–
	T3 (200 °C)	-40 °C	80 °C	80 °C	80 °C	200 °C	56 °C	200 °C	-40 °C	-40 °C	-40 °C	–	–
ID 2 channels used	T6 (85 °C)	-40 °C	51 °C	51 °C	51 °C	85 °C	44 °C	85 °C	-40 °C	-40 °C	-40 °C	–	–
	T5 (100 °C)	-40 °C	66 °C	66 °C	66 °C	100 °C	59 °C	100 °C	-40 °C	-40 °C	-40 °C	–	–
	T4 (135 °C)	-40 °C	75 °C	75 °C	75 °C	135 °C	63 °C	135 °C	-40 °C	-40 °C	-40 °C	–	–
	T3 (200 °C)	-40 °C	75 °C	75 °C	75 °C	200 °C	50 °C	200 °C	-40 °C	-40 °C	-40 °C	–	–

Housing = A3													
Electrical output	Temperature class	P 1		P 2		P 3		P 4		P 5		P 6	
		T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}
ID 1 channel used	T6 (85 °C)	-40 °C	60 °C	60 °C	60 °C	85 °C	52 °C	85 °C	-40 °C	-40 °C	-40 °C	–	–
	T5 (100 °C)	-40 °C	75 °C	75 °C	75 °C	100 °C	67 °C	100 °C	-40 °C	-40 °C	-40 °C	–	–
	T4 (135 °C)	-40 °C	80 °C	80 °C	80 °C	135 °C	67 °C	135 °C	-40 °C	-40 °C	-40 °C	–	–
	T3 (200 °C)	-40 °C	80 °C	80 °C	80 °C	200 °C	49 °C	200 °C	-40 °C	-40 °C	-40 °C	–	–
ID 2 channels used	T6 (85 °C)	-40 °C	51 °C	51 °C	51 °C	85 °C	43 °C	85 °C	-40 °C	-40 °C	-40 °C	–	–
	T5 (100 °C)	-40 °C	66 °C	66 °C	66 °C	100 °C	58 °C	100 °C	-40 °C	-40 °C	-40 °C	–	–
	T4 (135 °C)	-40 °C	75 °C	75 °C	75 °C	135 °C	60 °C	135 °C	-40 °C	-40 °C	-40 °C	–	–
	T3 (200 °C)	-40 °C	75 °C	75 °C	75 °C	200 °C	45 °C	200 °C	-40 °C	-40 °C	-40 °C	–	–

Electrical output = IE (TRC [04])

Housing = A2													
Electrical output	Temperature class	P 1		P 2		P 3		P 4		P 5		P 6	
		T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}
IE 1 channel used	T6 (85 °C)	-40 °C	60 °C	60 °C	60 °C	85 °C	53 °C	85 °C	-40 °C	-40 °C	-40 °C	–	–
	T5 (100 °C)	-40 °C	75 °C	75 °C	75 °C	100 °C	68 °C	100 °C	-40 °C	-40 °C	-40 °C	–	–
	T4 (135 °C)	-40 °C	80 °C	80 °C	80 °C	135 °C	70 °C	135 °C	-40 °C	-40 °C	-40 °C	–	–
	T3 (200 °C)	-40 °C	80 °C	80 °C	80 °C	200 °C	56 °C	200 °C	-40 °C	-40 °C	-40 °C	–	–
IE 2 channels used	T6 (85 °C)	-40 °C	60 °C	60 °C	60 °C	85 °C	53 °C	85 °C	-40 °C	-40 °C	-40 °C	–	–
	T5 (100 °C)	-40 °C	75 °C	75 °C	75 °C	100 °C	68 °C	100 °C	-40 °C	-40 °C	-40 °C	–	–
	T4 (135 °C)	-40 °C	78 °C	78 °C	78 °C	135 °C	66 °C	135 °C	-40 °C	-40 °C	-40 °C	–	–
	T3 (200 °C)	-40 °C	78 °C	78 °C	78 °C	200 °C	53 °C	200 °C	-40 °C	-40 °C	-40 °C	–	–

Housing = A3													
Electrical output	Temperature class	P 1		P 2		P 3		P 4		P 5		P 6	
		T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}
IE 1 channel used	T6 (85 °C)	-40 °C	60 °C	60 °C	60 °C	85 °C	51 °C	85 °C	-40 °C	-40 °C	-40 °C	–	–
	T5 (100 °C)	-40 °C	75 °C	75 °C	75 °C	100 °C	66 °C	100 °C	-40 °C	-40 °C	-40 °C	–	–
	T4 (135 °C)	-40 °C	80 °C	80 °C	80 °C	135 °C	68 °C	135 °C	-40 °C	-40 °C	-40 °C	–	–
	T3 (200 °C)	-40 °C	80 °C	80 °C	80 °C	200 °C	48 °C	200 °C	-40 °C	-40 °C	-40 °C	–	–
IE 2 channels used	T6 (85 °C)	-40 °C	60 °C	60 °C	60 °C	85 °C	51 °C	85 °C	-40 °C	-40 °C	-40 °C	–	–
	T5 (100 °C)	-40 °C	75 °C	75 °C	75 °C	100 °C	66 °C	100 °C	-40 °C	-40 °C	-40 °C	–	–
	T4 (135 °C)	-40 °C	78 °C	78 °C	78 °C	135 °C	64 °C	135 °C	-40 °C	-40 °C	-40 °C	–	–
	T3 (200 °C)	-40 °C	78 °C	78 °C	78 °C	200 °C	48 °C	200 °C	-40 °C	-40 °C	-40 °C	–	–

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Nonincendive Field Wiring (NIFW)

Probe: Class I, Zone 0 or Zone 1/Class I, Division 1 or Division 2
Electronics housing: Class I, Division 2

LTC57

Electrical output = ID (TRC [02])

Housing = A2													
Electrical output	Temperature class	P 1		P 2		P 3		P 4		P 5		P 6	
		T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}
ID 1 channel used	T6 (85 °C)	-40 °C	60 °C	60 °C	60 °C	85 °C	55 °C	85 °C	-40 °C	-40 °C	-40 °C	–	–
	T5 (100 °C)	-40 °C	75 °C	75 °C	75 °C	100 °C	70 °C	100 °C	-40 °C	-40 °C	-40 °C	–	–
	T4 (135 °C)	-40 °C	80 °C	80 °C	80 °C	135 °C	71 °C	135 °C	-40 °C	-40 °C	-40 °C	–	–
	T3 (200 °C)	-40 °C	80 °C	80 °C	80 °C	185 °C	63 °C	185 °C	-40 °C	-40 °C	-40 °C	–	–
ID 2 channels used	T6 (85 °C)	-40 °C	51 °C	51 °C	51 °C	85 °C	46 °C	85 °C	-40 °C	-40 °C	-40 °C	–	–
	T5 (100 °C)	-40 °C	66 °C	66 °C	66 °C	100 °C	61 °C	100 °C	-40 °C	-40 °C	-40 °C	–	–
	T4 (135 °C)	-40 °C	75 °C	75 °C	75 °C	135 °C	65 °C	135 °C	-40 °C	-40 °C	-40 °C	–	–
	T3 (200 °C)	-40 °C	75 °C	75 °C	75 °C	185 °C	57 °C	185 °C	-40 °C	-40 °C	-40 °C	–	–

Housing = A3													
Electrical output	Temperature class	P 1		P 2		P 3		P 4		P 5		P 6	
		T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}
ID 1 channel used	T6 (85 °C)	-40 °C	60 °C	60 °C	60 °C	85 °C	54 °C	85 °C	-40 °C	-40 °C	-40 °C	–	–
	T5 (100 °C)	-40 °C	75 °C	75 °C	75 °C	100 °C	69 °C	100 °C	-40 °C	-40 °C	-40 °C	–	–
	T4 (135 °C)	-40 °C	80 °C	80 °C	80 °C	135 °C	69 °C	135 °C	-40 °C	-40 °C	-40 °C	–	–
	T3 (200 °C)	-40 °C	80 °C	80 °C	80 °C	185 °C	59 °C	185 °C	-40 °C	-40 °C	-40 °C	–	–
ID 2 channels used	T6 (85 °C)	-40 °C	51 °C	51 °C	51 °C	85 °C	45 °C	85 °C	-40 °C	-40 °C	-40 °C	–	–
	T5 (100 °C)	-40 °C	66 °C	66 °C	66 °C	100 °C	60 °C	100 °C	-40 °C	-40 °C	-40 °C	–	–
	T4 (135 °C)	-40 °C	75 °C	75 °C	75 °C	135 °C	63 °C	135 °C	-40 °C	-40 °C	-40 °C	–	–
	T3 (200 °C)	-40 °C	75 °C	75 °C	75 °C	185 °C	53 °C	185 °C	-40 °C	-40 °C	-40 °C	–	–

Electrical output = IE (TRC [04])

Housing = A2													
Electrical output	Temperature class	P 1		P 2		P 3		P 4		P 5		P 6	
		T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}
IE 1 channel used	T6 (85 °C)	-40 °C	60 °C	60 °C	60 °C	85 °C	55 °C	85 °C	-40 °C	-40 °C	-40 °C	–	–
	T5 (100 °C)	-40 °C	75 °C	75 °C	75 °C	100 °C	70 °C	100 °C	-40 °C	-40 °C	-40 °C	–	–
	T4 (135 °C)	-40 °C	80 °C	80 °C	80 °C	135 °C	72 °C	135 °C	-40 °C	-40 °C	-40 °C	–	–
	T3 (200 °C)	-40 °C	80 °C	80 °C	80 °C	185 °C	65 °C	185 °C	-40 °C	-40 °C	-40 °C	–	–
IE 2 channels used	T6 (85 °C)	-40 °C	60 °C	60 °C	60 °C	85 °C	55 °C	85 °C	-40 °C	-40 °C	-40 °C	–	–
	T5 (100 °C)	-40 °C	75 °C	75 °C	75 °C	100 °C	70 °C	100 °C	-40 °C	-40 °C	-40 °C	–	–
	T4 (135 °C)	-40 °C	78 °C	78 °C	78 °C	135 °C	68 °C	135 °C	-40 °C	-40 °C	-40 °C	–	–
	T3 (200 °C)	-40 °C	78 °C	78 °C	78 °C	185 °C	61 °C	185 °C	-40 °C	-40 °C	-40 °C	–	–

Housing = A3													
Electrical output	Temperature class	P 1		P 2		P 3		P 4		P 5		P 6	
		T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}
IE 1 channel used	T6 (85 °C)	-40 °C	60 °C	60 °C	60 °C	85 °C	53 °C	85 °C	-40 °C	-40 °C	-40 °C	–	–
	T5 (100 °C)	-40 °C	75 °C	75 °C	75 °C	100 °C	68 °C	100 °C	-40 °C	-40 °C	-40 °C	–	–
	T4 (135 °C)	-40 °C	80 °C	80 °C	80 °C	135 °C	71 °C	135 °C	-40 °C	-40 °C	-40 °C	–	–
	T3 (200 °C)	-40 °C	80 °C	80 °C	80 °C	185 °C	60 °C	185 °C	-40 °C	-40 °C	-40 °C	–	–
IE 2 channels used	T6 (85 °C)	-40 °C	60 °C	60 °C	60 °C	85 °C	53 °C	85 °C	-40 °C	-40 °C	-40 °C	–	–
	T5 (100 °C)	-40 °C	75 °C	75 °C	75 °C	100 °C	68 °C	100 °C	-40 °C	-40 °C	-40 °C	–	–
	T4 (135 °C)	-40 °C	78 °C	78 °C	78 °C	135 °C	66 °C	135 °C	-40 °C	-40 °C	-40 °C	–	–
	T3 (200 °C)	-40 °C	78 °C	78 °C	78 °C	185 °C	57 °C	185 °C	-40 °C	-40 °C	-40 °C	–	–

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Nonincendive Field Wiring (NIFW)

Probe: Class I, Zone 0 or Zone 1/Class I, Division 1 or Division 2
Electronics housing: Class I, Division 2

LTC5X
optional specification, option "Probe design" = B

Electrical output = ID (TRC [02])

Housing = A2, A3													
Electrical output	Temperature class	P 1		P 2		P 3		P 4		P 5		P 6	
		T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}
ID 1 channel used	T6 (85 °C)	–	60 °C	–	60 °C	–	60 °C	–	-40 °C	–	-40 °C	–	–
	T5 (100 °C)	–	75 °C	–	75 °C	–	75 °C	–	-40 °C	–	-40 °C	–	–
ID 2 channels used	T6 (85 °C)	–	51 °C	–	51 °C	–	51 °C	–	-40 °C	–	-40 °C	–	–
	T5 (100 °C)	–	66 °C	–	66 °C	–	66 °C	–	-40 °C	–	-40 °C	–	–

Electrical output = IE (TRC [04])

Housing = A2, A3													
Electrical output	Temperature class	P 1		P 2		P 3		P 4		P 5		P 6	
		T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}
IE 1 channel used	T6 (85 °C)	–	60 °C	–	60 °C	–	60 °C	–	-40 °C	–	-40 °C	–	–
	T5 (100 °C)	–	80 °C	–	80 °C	–	80 °C	–	-40 °C	–	-40 °C	–	–
IE 2 channels used	T6 (85 °C)	–	60 °C	–	60 °C	–	60 °C	–	-40 °C	–	-40 °C	–	–
	T5 (100 °C)	–	75 °C	–	75 °C	–	75 °C	–	-40 °C	–	-40 °C	–	–

T_p = dependent on the sensor

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Standard Division 2 Wiring

Probe: Class I, Division 2
Electronics housing: Class I, Division 2

LTC50

Electrical output = IH (TRC [21])

Housing = A2													
Electrical output	Temperature class	P 1		P 2		P 3		P 4		P 5		P 6	
		T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}
IH	T6 (85 °C)	-20 °C	60 °C	60 °C	60 °C	80 °C	56 °C	80 °C	-20 °C	-20 °C	-20 °C	–	–

LTC51

Electrical output = IH (TRC [21])

Housing = A2													
Electrical output	Temperature class	P 1		P 2		P 3		P 4		P 5		P 6	
		T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}
IH	T6 (85 °C)	-40 °C	60 °C	60 °C	60 °C	85 °C	54 °C	85 °C	-40 °C	-40 °C	-40 °C	–	–
	T5 (100 °C)	-40 °C	75 °C	75 °C	75 °C	100 °C	69 °C	100 °C	-40 °C	-40 °C	-40 °C	–	–
	T4 (135 °C)	-40 °C	80 °C	81 °C	80 °C	135 °C	70 °C	135 °C	-40 °C	-40 °C	-40 °C	–	–
	T3 (200 °C)	-40 °C	80 °C	81 °C	80 °C	200 °C	57 °C	200 °C	-40 °C	-40 °C	-40 °C	–	–

Housing = A3													
Electrical output	Temperature class	P 1		P 2		P 3		P 4		P 5		P 6	
		T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}
IH	T6 (85 °C)	-40 °C	60 °C	60 °C	60 °C	85 °C	52 °C	85 °C	-40 °C	-40 °C	-40 °C	–	–
	T5 (100 °C)	-40 °C	75 °C	75 °C	75 °C	100 °C	67 °C	100 °C	-40 °C	-40 °C	-40 °C	–	–
	T4 (135 °C)	-40 °C	80 °C	81 °C	80 °C	135 °C	68 °C	135 °C	-40 °C	-40 °C	-40 °C	–	–
	T3 (200 °C)	-40 °C	80 °C	81 °C	80 °C	200 °C	49 °C	200 °C	-40 °C	-40 °C	-40 °C	–	–

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Standard Division 2 Wiring

Probe: Class I, Division 2
Electronics housing: Class I, Division 2

LTC57

Electrical output = IH (TRC [21])

Housing = A2													
Electrical output	Temperature class	P 1		P 2		P 3		P 4		P 5		P 6	
		T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}
IH	T6 (85 °C)	-40 °C	60 °C	60 °C	60 °C	85 °C	55 °C	85 °C	-40 °C	-40 °C	-40 °C	–	–
	T5 (100 °C)	-40 °C	75 °C	75 °C	75 °C	100 °C	70 °C	100 °C	-40 °C	-40 °C	-40 °C	–	–
	T4 (135 °C)	-40 °C	80 °C	81 °C	80 °C	135 °C	72 °C	135 °C	-40 °C	-40 °C	-40 °C	–	–
	T3 (200 °C)	-40 °C	80 °C	81 °C	80 °C	185 °C	64 °C	185 °C	-40 °C	-40 °C	-40 °C	–	–

Housing = A3													
Electrical output	Temperature class	P 1		P 2		P 3		P 4		P 5		P 6	
		T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}
IH	T6 (85 °C)	-40 °C	60 °C	60 °C	60 °C	85 °C	54 °C	85 °C	-40 °C	-40 °C	-40 °C	–	–
	T5 (100 °C)	-40 °C	75 °C	75 °C	75 °C	100 °C	69 °C	100 °C	-40 °C	-40 °C	-40 °C	–	–
	T4 (135 °C)	-40 °C	80 °C	81 °C	80 °C	135 °C	70 °C	135 °C	-40 °C	-40 °C	-40 °C	–	–
	T3 (200 °C)	-40 °C	80 °C	81 °C	80 °C	185 °C	60 °C	185 °C	-40 °C	-40 °C	-40 °C	–	–

LTC5X
optional specification, option "Probe design" = B

Electrical output = IH (TRC [21])

Housing = A2, A3													
Electrical output	Temperature class	P 1		P 2		P 3		P 4		P 5		P 6	
		T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}
IH	T6 (85 °C)	–	60 °C	–	60 °C	–	60 °C	–	-40 °C	–	-40 °C	–	–
	T5 (100 °C)	–	75 °C	–	75 °C	–	75 °C	–	-40 °C	–	-40 °C	–	–

T_p = dependent on the sensor

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Standard Division 2 Wiring

Probe: Class I, Zone 0 or Zone 1/Class I, Division 1 or Division 2
Electronics housing: Class I, Division 2

LTC50

Electrical output = ID (TRC [02])

Housing = A2													
Electrical output	Temperature class	P 1		P 2		P 3		P 4		P 5		P 6	
		T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}
ID 1 channel used	T6 (85 °C)	-20 °C	60 °C	60 °C	60 °C	80 °C	56 °C	80 °C	-20 °C	-20 °C	-20 °C	–	–
ID 2 channels used	T6 (85 °C)	-20 °C	51 °C	51 °C	51 °C	80 °C	49 °C	80 °C	-20 °C	-20 °C	-20 °C	–	–

Electrical output = IE (TRC [04])

Housing = A2													
Electrical output	Temperature class	P 1		P 2		P 3		P 4		P 5		P 6	
		T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}
IE 1 channel used	T6 (85 °C)	-20 °C	60 °C	60 °C	60 °C	80 °C	56 °C	80 °C	-20 °C	-20 °C	-20 °C	–	–
IE 2 channels used	T6 (85 °C)	-20 °C	60 °C	60 °C	60 °C	80 °C	56 °C	80 °C	-20 °C	-20 °C	-20 °C	–	–

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Standard Division 2 Wiring

Probe: Class I, Zone 0 or Zone 1/Class I, Division 1 or Division 2
Electronics housing: Class I, Division 2

LTC51

Electrical output = ID (TRC [02])

Housing = A2													
Electrical output	Temperature class	P 1		P 2		P 3		P 4		P 5		P 6	
		T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}
ID 1 channel used	T6 (85 °C)	-40 °C	60 °C	60 °C	60 °C	85 °C	54 °C	85 °C	-40 °C	-40 °C	-40 °C	–	–
	T5 (100 °C)	-40 °C	75 °C	75 °C	75 °C	100 °C	69 °C	100 °C	-40 °C	-40 °C	-40 °C	–	–
	T4 (135 °C)	-40 °C	80 °C	80 °C	80 °C	135 °C	69 °C	135 °C	-40 °C	-40 °C	-40 °C	–	–
	T3 (200 °C)	-40 °C	80 °C	80 °C	80 °C	200 °C	56 °C	200 °C	-40 °C	-40 °C	-40 °C	–	–
ID 2 channels used	T6 (85 °C)	-40 °C	51 °C	51 °C	51 °C	85 °C	44 °C	85 °C	-40 °C	-40 °C	-40 °C	–	–
	T5 (100 °C)	-40 °C	66 °C	66 °C	66 °C	100 °C	59 °C	100 °C	-40 °C	-40 °C	-40 °C	–	–
	T4 (135 °C)	-40 °C	75 °C	75 °C	75 °C	135 °C	63 °C	135 °C	-40 °C	-40 °C	-40 °C	–	–
	T3 (200 °C)	-40 °C	75 °C	75 °C	75 °C	200 °C	50 °C	200 °C	-40 °C	-40 °C	-40 °C	–	–

Housing = A3													
Electrical output	Temperature class	P 1		P 2		P 3		P 4		P 5		P 6	
		T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}
ID 1 channel used	T6 (85 °C)	-40 °C	60 °C	60 °C	60 °C	85 °C	52 °C	85 °C	-40 °C	-40 °C	-40 °C	–	–
	T5 (100 °C)	-40 °C	75 °C	75 °C	75 °C	100 °C	67 °C	100 °C	-40 °C	-40 °C	-40 °C	–	–
	T4 (135 °C)	-40 °C	80 °C	80 °C	80 °C	135 °C	67 °C	135 °C	-40 °C	-40 °C	-40 °C	–	–
	T3 (200 °C)	-40 °C	80 °C	80 °C	80 °C	200 °C	49 °C	200 °C	-40 °C	-40 °C	-40 °C	–	–
ID 2 channels used	T6 (85 °C)	-40 °C	51 °C	51 °C	51 °C	85 °C	43 °C	85 °C	-40 °C	-40 °C	-40 °C	–	–
	T5 (100 °C)	-40 °C	66 °C	66 °C	66 °C	100 °C	58 °C	100 °C	-40 °C	-40 °C	-40 °C	–	–
	T4 (135 °C)	-40 °C	75 °C	75 °C	75 °C	135 °C	60 °C	135 °C	-40 °C	-40 °C	-40 °C	–	–
	T3 (200 °C)	-40 °C	75 °C	75 °C	75 °C	200 °C	45 °C	200 °C	-40 °C	-40 °C	-40 °C	–	–

Electrical output = IE (TRC [04])

Housing = A2													
Electrical output	Temperature class	P 1		P 2		P 3		P 4		P 5		P 6	
		T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}
IE 1 channel used	T6 (85 °C)	-40 °C	60 °C	60 °C	60 °C	85 °C	53 °C	85 °C	-40 °C	-40 °C	-40 °C	–	–
	T5 (100 °C)	-40 °C	75 °C	75 °C	75 °C	100 °C	68 °C	100 °C	-40 °C	-40 °C	-40 °C	–	–
	T4 (135 °C)	-40 °C	80 °C	80 °C	80 °C	135 °C	70 °C	135 °C	-40 °C	-40 °C	-40 °C	–	–
	T3 (200 °C)	-40 °C	80 °C	80 °C	80 °C	200 °C	56 °C	200 °C	-40 °C	-40 °C	-40 °C	–	–
IE 2 channels used	T6 (85 °C)	-40 °C	60 °C	60 °C	60 °C	85 °C	53 °C	85 °C	-40 °C	-40 °C	-40 °C	–	–
	T5 (100 °C)	-40 °C	75 °C	75 °C	75 °C	100 °C	68 °C	100 °C	-40 °C	-40 °C	-40 °C	–	–
	T4 (135 °C)	-40 °C	78 °C	78 °C	78 °C	135 °C	66 °C	135 °C	-40 °C	-40 °C	-40 °C	–	–
	T3 (200 °C)	-40 °C	78 °C	78 °C	78 °C	200 °C	53 °C	200 °C	-40 °C	-40 °C	-40 °C	–	–

Housing = A3													
Electrical output	Temperature class	P 1		P 2		P 3		P 4		P 5		P 6	
		T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}
IE 1 channel used	T6 (85 °C)	-40 °C	60 °C	60 °C	60 °C	85 °C	51 °C	85 °C	-40 °C	-40 °C	-40 °C	–	–
	T5 (100 °C)	-40 °C	75 °C	75 °C	75 °C	100 °C	66 °C	100 °C	-40 °C	-40 °C	-40 °C	–	–
	T4 (135 °C)	-40 °C	80 °C	80 °C	80 °C	135 °C	68 °C	135 °C	-40 °C	-40 °C	-40 °C	–	–
	T3 (200 °C)	-40 °C	80 °C	80 °C	80 °C	200 °C	48 °C	200 °C	-40 °C	-40 °C	-40 °C	–	–
IE 2 channels used	T6 (85 °C)	-40 °C	60 °C	60 °C	60 °C	85 °C	51 °C	85 °C	-40 °C	-40 °C	-40 °C	–	–
	T5 (100 °C)	-40 °C	75 °C	75 °C	75 °C	100 °C	66 °C	100 °C	-40 °C	-40 °C	-40 °C	–	–
	T4 (135 °C)	-40 °C	78 °C	78 °C	78 °C	135 °C	64 °C	135 °C	-40 °C	-40 °C	-40 °C	–	–
	T3 (200 °C)	-40 °C	78 °C	78 °C	78 °C	200 °C	48 °C	200 °C	-40 °C	-40 °C	-40 °C	–	–

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Standard Division 2 Wiring

Probe: Class I, Zone 0 or Zone 1/Class I, Division 1 or Division 2
Electronics housing: Class I, Division 2

LTC57

Electrical output = ID (TRC [02])

Housing = A2													
Electrical output	Temperature class	P 1		P 2		P 3		P 4		P 5		P 6	
		T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}
ID 1 channel used	T6 (85 °C)	-40 °C	60 °C	60 °C	60 °C	85 °C	55 °C	85 °C	-40 °C	-40 °C	-40 °C	–	–
	T5 (100 °C)	-40 °C	75 °C	75 °C	75 °C	100 °C	70 °C	100 °C	-40 °C	-40 °C	-40 °C	–	–
	T4 (135 °C)	-40 °C	80 °C	80 °C	80 °C	135 °C	71 °C	135 °C	-40 °C	-40 °C	-40 °C	–	–
	T3 (200 °C)	-40 °C	80 °C	80 °C	80 °C	185 °C	63 °C	185 °C	-40 °C	-40 °C	-40 °C	–	–
ID 2 channels used	T6 (85 °C)	-40 °C	51 °C	51 °C	51 °C	85 °C	46 °C	85 °C	-40 °C	-40 °C	-40 °C	–	–
	T5 (100 °C)	-40 °C	66 °C	66 °C	66 °C	100 °C	61 °C	100 °C	-40 °C	-40 °C	-40 °C	–	–
	T4 (135 °C)	-40 °C	75 °C	75 °C	75 °C	135 °C	65 °C	135 °C	-40 °C	-40 °C	-40 °C	–	–
	T3 (200 °C)	-40 °C	75 °C	75 °C	75 °C	185 °C	57 °C	185 °C	-40 °C	-40 °C	-40 °C	–	–

Housing = A3													
Electrical output	Temperature class	P 1		P 2		P 3		P 4		P 5		P 6	
		T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}
ID 1 channel used	T6 (85 °C)	-40 °C	60 °C	60 °C	60 °C	85 °C	54 °C	85 °C	-40 °C	-40 °C	-40 °C	–	–
	T5 (100 °C)	-40 °C	75 °C	75 °C	75 °C	100 °C	69 °C	100 °C	-40 °C	-40 °C	-40 °C	–	–
	T4 (135 °C)	-40 °C	80 °C	80 °C	80 °C	135 °C	69 °C	135 °C	-40 °C	-40 °C	-40 °C	–	–
	T3 (200 °C)	-40 °C	80 °C	80 °C	80 °C	185 °C	59 °C	185 °C	-40 °C	-40 °C	-40 °C	–	–
ID 2 channels used	T6 (85 °C)	-40 °C	51 °C	51 °C	51 °C	85 °C	45 °C	85 °C	-40 °C	-40 °C	-40 °C	–	–
	T5 (100 °C)	-40 °C	66 °C	66 °C	66 °C	100 °C	60 °C	100 °C	-40 °C	-40 °C	-40 °C	–	–
	T4 (135 °C)	-40 °C	75 °C	75 °C	75 °C	135 °C	63 °C	135 °C	-40 °C	-40 °C	-40 °C	–	–
	T3 (200 °C)	-40 °C	75 °C	75 °C	75 °C	185 °C	53 °C	185 °C	-40 °C	-40 °C	-40 °C	–	–

Electrical output = IE (TRC [04])

Housing = A2													
Electrical output	Temperature class	P 1		P 2		P 3		P 4		P 5		P 6	
		T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}
IE 1 channel used	T6 (85 °C)	-40 °C	60 °C	60 °C	60 °C	85 °C	55 °C	85 °C	-40 °C	-40 °C	-40 °C	–	–
	T5 (100 °C)	-40 °C	75 °C	75 °C	75 °C	100 °C	70 °C	100 °C	-40 °C	-40 °C	-40 °C	–	–
	T4 (135 °C)	-40 °C	80 °C	80 °C	80 °C	135 °C	72 °C	135 °C	-40 °C	-40 °C	-40 °C	–	–
	T3 (200 °C)	-40 °C	80 °C	80 °C	80 °C	185 °C	65 °C	185 °C	-40 °C	-40 °C	-40 °C	–	–
IE 2 channels used	T6 (85 °C)	-40 °C	60 °C	60 °C	60 °C	85 °C	55 °C	85 °C	-40 °C	-40 °C	-40 °C	–	–
	T5 (100 °C)	-40 °C	75 °C	75 °C	75 °C	100 °C	70 °C	100 °C	-40 °C	-40 °C	-40 °C	–	–
	T4 (135 °C)	-40 °C	78 °C	78 °C	78 °C	135 °C	68 °C	135 °C	-40 °C	-40 °C	-40 °C	–	–
	T3 (200 °C)	-40 °C	78 °C	78 °C	78 °C	185 °C	61 °C	185 °C	-40 °C	-40 °C	-40 °C	–	–

Housing = A3													
Electrical output	Temperature class	P 1		P 2		P 3		P 4		P 5		P 6	
		T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}
IE 1 channel used	T6 (85 °C)	-40 °C	60 °C	60 °C	60 °C	85 °C	53 °C	85 °C	-40 °C	-40 °C	-40 °C	–	–
	T5 (100 °C)	-40 °C	75 °C	75 °C	75 °C	100 °C	68 °C	100 °C	-40 °C	-40 °C	-40 °C	–	–
	T4 (135 °C)	-40 °C	80 °C	80 °C	80 °C	135 °C	71 °C	135 °C	-40 °C	-40 °C	-40 °C	–	–
	T3 (200 °C)	-40 °C	80 °C	80 °C	80 °C	185 °C	60 °C	185 °C	-40 °C	-40 °C	-40 °C	–	–
IE 2 channels used	T6 (85 °C)	-40 °C	60 °C	60 °C	60 °C	85 °C	53 °C	85 °C	-40 °C	-40 °C	-40 °C	–	–
	T5 (100 °C)	-40 °C	75 °C	75 °C	75 °C	100 °C	68 °C	100 °C	-40 °C	-40 °C	-40 °C	–	–
	T4 (135 °C)	-40 °C	78 °C	78 °C	78 °C	135 °C	66 °C	135 °C	-40 °C	-40 °C	-40 °C	–	–
	T3 (200 °C)	-40 °C	78 °C	78 °C	78 °C	185 °C	57 °C	185 °C	-40 °C	-40 °C	-40 °C	–	–

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Standard Division 2 Wiring

Probe: Class I, Zone 0 or Zone 1/Class I, Division 1 or Division 2
Electronics housing: Class I, Division 2

LTC5X
optional specification, option "Probe design" = B

Electrical output = ID (TRC [02])

Housing = A2, A3													
Electrical output	Temperature class	P 1		P 2		P 3		P 4		P 5		P 6	
		T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}
ID 1 channel used	T6 (85 °C)	–	60 °C	–	60 °C	–	60 °C	–	-40 °C	–	-40 °C	–	–
	T5 (100 °C)	–	75 °C	–	75 °C	–	75 °C	–	-40 °C	–	-40 °C	–	–
ID 2 channels used	T6 (85 °C)	–	51 °C	–	51 °C	–	51 °C	–	-40 °C	–	-40 °C	–	–
	T5 (100 °C)	–	66 °C	–	66 °C	–	66 °C	–	-40 °C	–	-40 °C	–	–

Electrical output = IE (TRC [04])

Housing = A2, A3													
Electrical output	Temperature class	P 1		P 2		P 3		P 4		P 5		P 6	
		T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}	T_p	T_{amb}
IE 1 channel used	T6 (85 °C)	–	60 °C	–	60 °C	–	60 °C	–	-40 °C	–	-40 °C	–	–
	T5 (100 °C)	–	80 °C	–	80 °C	–	80 °C	–	-40 °C	–	-40 °C	–	–
IE 2 channels used	T6 (85 °C)	–	60 °C	–	60 °C	–	60 °C	–	-40 °C	–	-40 °C	–	–
	T5 (100 °C)	–	78 °C	–	78 °C	–	78 °C	–	-40 °C	–	-40 °C	–	–

T_p = dependent on the sensor

Probe and electronics housing: Class II, III, Division 1

LTC5X

Electrical output = IH (TRC [21])

Housing = A2, A3
–
$T = T_{amb} + 5$ K

Electrical output = ID (TRC [02])

Housing = A2, A3	
1 channel used	2 channels used
$T = T_{amb} + 5$ K	$T = T_{amb} + 10$ K

Electrical output = IE (TRC [04])

Housing = A2, A3	
1 channel used	2 channels used
$T = T_{amb} + 5$ K	$T = T_{amb} + 10$ K

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