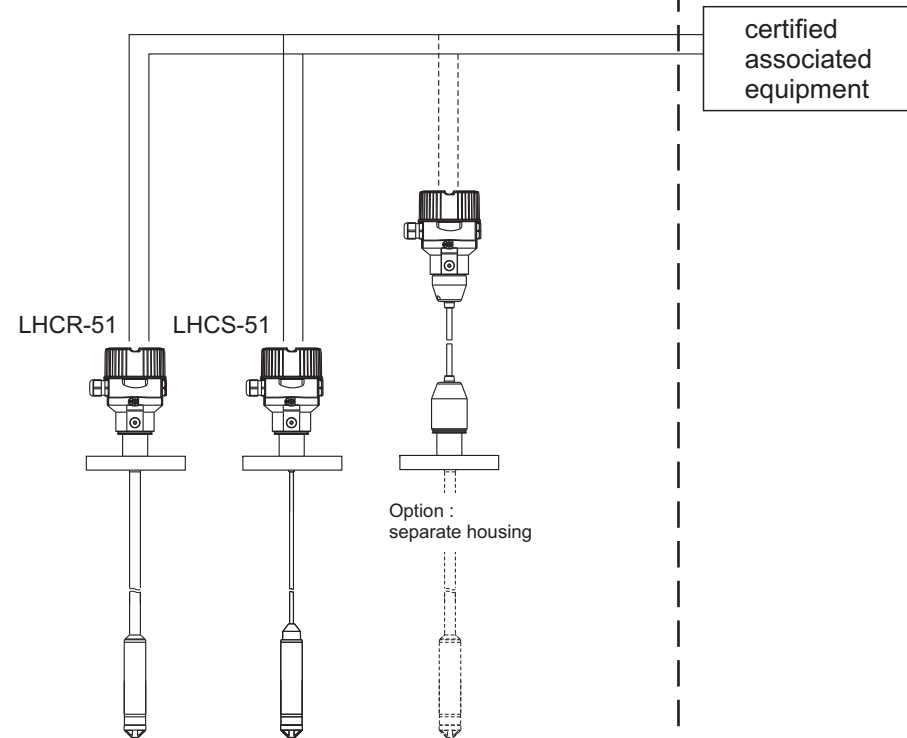


Hazardous location

Class I, Div. 1, 2, Groups A, B, C, D
 Class 1, Zone 0, IIC
 AEx ia IIC T6
 Class II, Div. 1, 2, Groups E, F, G
 Class III

Non hazardous location

Any FM approved barrier / associated equipment



Entity parameter:
 $V_{max} = 30 \text{ VDC}$
 $I_{max} = 300 \text{ mA}$
 $P_{max} = 1 \text{ W}$
 $C_i \leq 10 \text{ nF}$
 $L_i = 0$

Areas of application

The compact instruments are suitable for use in areas subject to explosion caused by gases, vapours or mists.

Table: Permissible ambient temperature and temperature code:

Temperature code	Permissible ambient temperature, electronic compartment
T6	-40...40 °C
T4	-40...70 °C

option for $T_a \text{ min} = -50 \text{ °C}$

Intrinsically safe installation

Intrinsically safe (entity), Class I, II, III, Div. 1, Groups A, B, C, D, E, F, G
Hazardous Location Installation

- Control room equipment may not use or generate over 250 V.
- Use Factory Mutual Entity-approved intrinsic safety barrier with V_{oc} or $V_t \leq V_{max}$, I_{sc} or $I_t \leq I_{max}$, $C_a \geq C_i + C_{cable}$, $L_a \geq L_i + L_{cable}$.
 Barrier must be incapable of delivering more than 1 Watt to a matched load.
 Transmitter entity parameters are as follows: $V_{max} = 30 \text{ VDC}$
 $I_{max} = 300 \text{ mA}$
 $C_i \leq 10 \text{ nF}$
 $L_i = 0$
 For T-code see table
- Installation should be in accordance with ANSI/ ISA RP 12.06.01 "Installation of intrinsically safe systems for hazardous (classified) locations and the National Electrical Code (ANSI/NFPA 70).
- Warning: Substitution of Components may impair intrinsic safety.
- Intrinsic safety barrier manufacturer's installation drawing must be followed, when installing this equipment: The configuration of the intrinsic safety barrier(s) must be FMRC approved.
- Use supply wires suitable for 5 °C above surrounding ambient.

Division 2 and Zone 2 installation

Nonincendive Class I, Div. 2, Groups A, B, C, D
Hazardous Location Installation (not for LHCS-51 and separate housing)

- Installation shall be in accordance with NEC using threaded conduits or other wiring methods in accordance with articles 500 to 510.
 Intrinsic safety barrier not required
 max. supply voltage 45 VDC.
 Max. ambient temperature: 70°C
- Warning: Explosion Hazard - Do not disconnect equipment unless power has been switched off or the area is known to be non hazardous.
- 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 apparatus not specifically examined in combination as a system using any of the wiring methods permitted for unclassified locations, when $V_{max} \geq V_{oc}$ or V_t , $C_a \geq C_i + C_{cable}$, $L_a \geq L_i + L_{cable}$.
 Transmitter parameters are as follows: $V_{max} = 45 \text{ VDC}$; $C_i \leq 10 \text{ nF}$; $L_i = 0$;
 $I_{max} = \text{see note 10}$
 Max. ambient temperature: 70°C
- For these current controlled circuit, 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.
 Warning: Substitution of Components may impair suitability for Cl. I, Div. 2.

Class II, III installation

DIP for Class II, III, Div. 1, Groups E, F, G
Hazardous Location Installation (not for LHCS-51 and separate housing)

- Installation of transmitter wiring according to NEC using threaded conduits or other wiring methods in accordance with articles 500 to 510.
- Use a dust tight seal at the conduit entry.

Functional ratings:

These ratings do not supersede Hazardous Location values.

$U_{nom} \leq 45 \text{ VDC}$
 $I_{nom} = 4...20 \text{ mA (max. 25 mA)}$

FM Control Drawing no. 116-0390

Dieses Dokument enthält sicherheitsrelevante Angaben. Es darf nicht ohne Absprache mit dem Normenfachmann (NE Ex) geändert werden!		
This document contains safety-relevant information. It must not be altered without the authorization of the norm expert (NE Ex) !		
CONFIDENTIAL acc. to ISO 16016	Only valid as long as released in EDM or with a valid production documentation!	date: 2014 March 04
 P+F Global	Control Drawing - FM LHCR-51, LHCS-51 4..20mA HART	16-990FM-12A
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