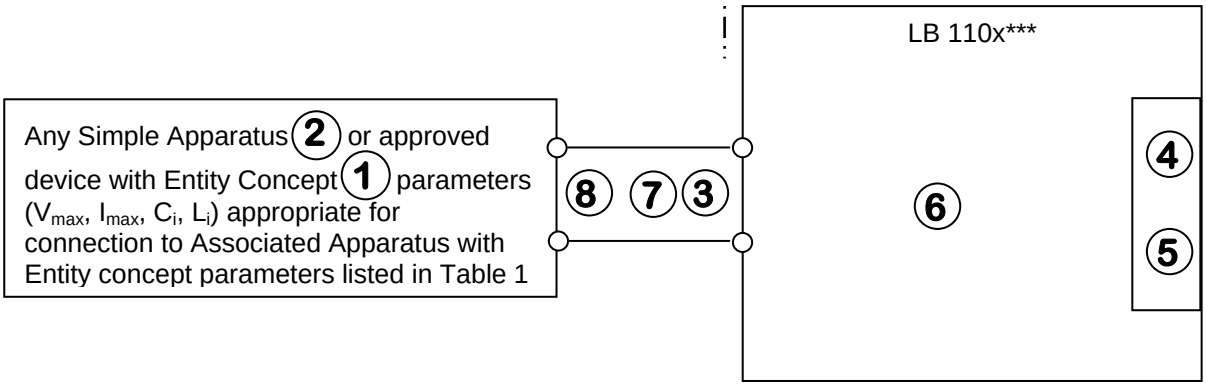
LB Remote I/O type LB 110x ***

UL-File Number E106378

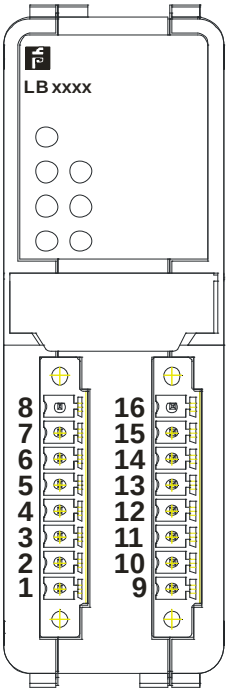
Non Hazardous Location
or
Hazardous (Classified) Location
Class I, Division 1, Groups A,B,C,D
Class II, Division 1, Groups E,F,G
Class III
or

Class I, Zone 0 and 1, Groups IIA,IIB,IIC

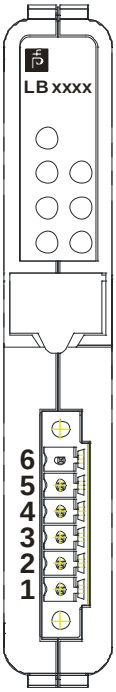
Non Hazardous Location
or
Hazardous (Classified) Location
Class I, Division 2, Groups A,B,C,D
or
Class I, Zone 2, Group IIC



LB 1108



LB 1101
LB 1102
LB 1103
LB 1104



1 ..... 8 see notes next sides !

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	date: 2014-Mar-21
PEPPERL+FUCHS	Control Drawing	**116-0320**
Worldwide	LB 110x ***	sheet 1 of 3

Type	Terminals				GP A, B, IIC		GP C, D, E, F,G IIB / IIA	
		U_0 [V]	I_0 [mA]	P_0 [mW]	C_0 [µF]	L_0 [mH]	C_0 [µF]	L_0 [mH]
LB 1101	1(+), 2(-)	12.6	12.8	40.1	1.15	100	7.4	100
	4(+), 5(-)	12.6	12.8	40.1	1.15	100	7.4	100
LB 1102	1(+), 4(-)	10.5	35	92	2.4	29	16.8	100
	2(+), 5(-)	10.5	35	92	2.4	29	16.8	100
	3(+), 6(-)	10.5	35	92	2.4	29	16.8	100
LB 1103 / LB 1104	1(+), 2(-)	10.5	23.3	61.2	2.41	65	16.8	100
	4(+), 5(-)	10.5	23.3	61.2	2.41	65	16.8	100
LB 1108	1(+), 2(-)	14.9	15.7	58.2	0.59	100	3.65	100
	3(+), 4(-)	14.9	15.7	58.2	0.59	100	3.65	100
	5(+), 6(-)	14.9	15.7	58.2	0.59	100	3.65	100
	7(+), 8(-)	14.9	15.7	58.2	0.59	100	3.65	100
	9(+), 10(-)	14.9	15.7	58.2	0.59	100	3.65	100
	11(+), 12(-)	14.9	15.7	58.2	0.59	100	3.65	100
	13(+), 14(-)	14.9	15.7	58.2	0.59	100	3.65	100
	15(+), 16(-)	14.9	15.7	58.2	0.59	100	3.65	100

Table 1 - Intrinsically Safe Entity Parameter

Notes:

1. The Entity Concept allows interconnection of intrinsically safe apparatus with associated apparatus not specifically examined in combination as a system when the approved values of V_{oc} (or U_o) and I_{sc} (or I_o) for the associated apparatus are less than or equal to $V_{max}(U_i)$ and $I_{max}(I_i)$ for the intrinsically safe apparatus and the approved values of $C_a(C_o)$ and $L_a(L_o)$ for the associated apparatus are greater than $C_i + C_{cable}$ and $L_i + L_{cable}$, respectively, for the intrinsically safe apparatus.
2. Simple Apparatus: An electrical component or combination of components of simple construction with well defined electrical parameters that does not generate more than 1.5 volts, 100 milliamps, and 25 milliwatts, or a passive component that does not dissipate more than 1.3 watts and is compatible with the intrinsic safety of the circuit in which it is used.
3. Wiring methods must be in accordance with National Electrical Code (NEC) for US, and Canadian Electrical Code (CEC) for Canada.
4. The maximum rms or dc U_m that can be applied is:
   - 60V for power supply input
   - 30V for bus signal input (communication input).
5. Connection only to certified Backplane Type LB9xxx
6. The LB Remote I/O are rated 'Nonincendive'. If the LB Remote I/O is intended to be mounted in a Division 2 location, they must be mounted in an enclosure with a minimum ingress protection of IP2X. If the LB Remote I/O are intended to be mounted in a Zone 2 location that is subject to contamination by water or dust, they must be mounted in an enclosure with a minimum ingress protection of IP54. If the LB Remote I/O are intended to be mounted in a Zone 2 indoor location that is not subject to contamination by water or dust, they must be mounted in an enclosure with a minimum ingress protection of IP4X. The enclosure must be able to accept Division 2 / Zone 2 wiring methods. A temperature rating of T4 applies to all nonincendive rated LB Remote I/O.
7. Modules with multiple intrinsically safe field wiring pairs shall be installed as separate intrinsically safe circuits.
8. For installations in which both the Ci and Li of the intrinsically safe apparatus exceeds 1% of the Co and Lo parameters of the associated apparatus (excluding the cable), then 50% of Co and Lo parameters are applicable and shall not be exceeded.
   Note: the reduced capacitance of the external circuit (including cable) shall not be greater than 1uF for IIB and 600nF for IIC.

WARNING – EXPLOSION HAZARD – Do not disconnect the equipment when it is energized and an explosive atmosphere is present.
AVERTISSMENT – RISQUE D'EXPLOSION – Ne pas débrancher l'équipement lorsqu'il est sous tension et exposé à une atmosphère explosive.

WARNING – EXPLOSION HAZARD – Substitution of components may impair intrinsic safety and suitability for use in Class I, Division 2 / Zone 2
AVERTISSEMENT – RISQUE D'EXPLOSION – Le remplacement des composants peut altérer la sécurité intrinsèque et l'adéquation à une utilisation en Classe I, Division 2 / Zone 2.

UL Notes:

- LB Remote I/O must be installed in an enclosure that meets the requirements of ANSI/ISA S82.01 and NEC rsp. ANSI/ISA 12.12.01-2007
- Installation should be in accordance with ANSI RP 12.6 „Installation of Intrinsically Safe Systems for Hazardous (Classified) Locations" and the National Electrical Code (ANSI/NFPA 70). Where multiple intrinsically safe circuits extend from an associated apparatus, they must be installed in separate cables or in one cable having suitable insulation.

c-UL Notes:

- LB Remote I/O must be installed in an enclosure that meets the requirements of the Canadian Electrical Code, CSA C 22.1; Part 1 Appendix F.
- Wiring methods must be in accordance with the Canadian Electrical Code CSA C22.1 Part 1 Appendix F.