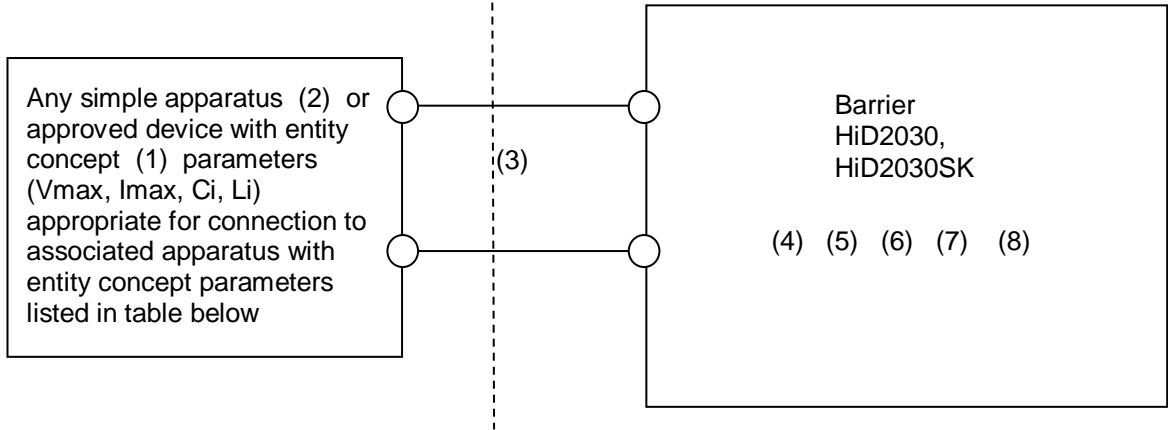


Connections


NON-HAZARDOUS LOCATION or
HAZARDOUS LOCATION
Class I, Division 1, Groups A, B, C, D
Class II, Division 1, Groups E, F, G
Class III, Division 1 or
Class I, Zone 0 and 1, IIC
Class I, Zone 20 and 21, IIIC

NON-HAZARDOUS LOCATION



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,
Where $C_{cable} = 60pF/ft$ if unknown
Where $L_{cable} = 0.20uH/ft$ if unknown
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 V, 100 mA, 25 mW, or is a passive component that does not dissipate more than 1.3 W and is compatible with the intrinsic safety of the circuit in which it is used.
3. Wiring methods must be in accordance with all applicable installation requirements of the country in use. For Canada this is CSA 22.1-12 (CEC) section 18 and appendix F. For US, this is NFPA 70 (NEC) article 504 with additional information in ANSI-ISA –RP12.06.01.
4. Barriers shall not be connected to any device which uses or generates internally any voltage in excess of 250V unless the device has been determined to adequately isolate the voltage from the barrier.
5. All circuits connected to the device must comply with the overvoltage category II (or better) according to IEC/EN 60664-1. The device may only be used in an area of not more than pollution degree 2 (or better) according to IEC/EN 60664-1. The equipment meets the requirements for Annex F and is intended to be installed in a controlled environment.
6. The permitted ambient temperature range is $-40^{\circ}C$ to $+60^{\circ}C$
7. The associated apparatus has not been evaluated for use in combination with other associated apparatus.
8. Isolation in accordance with CSA/UL 60079-11 clause 6.3.13 is provided between non-intrinsically safe circuits and intrinsically safe circuits.

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Entity Parameters

Model Number	Terminals	U _o (V)	I _o (mA)	P _o (mW)	C _o (uF)			L _o (mH)			L _o /R _o [uH / Ω]		
					A,B IIC	C,E,F,G IIB/IIIC	D IIA	A,B IIC	C,E,F,G IIB	D IIA	A,B IIC	C,E,F,G IIB	D IIA
HiD2030, HiD2030SK	5a, 5b; 1a, 1b	26.0	93	605	0.099	0.77	2.6	4.1	16.4	32.8	58	235	470
		C _i = 1.05nF											
	5b, 7a; 1b, 3b	1.2	50	15	1000	1000	1000	14	52	110	2100	8400	16800
		C _i = 5.64nF											

The values of L_o and C_o listed in the table above are allowed if one of the following conditions is met:

- the total L_i of the external circuit (excluding the cable) is < 1% of the L_o value or
- the total C_i of the external circuit (excluding the cable) is < 1% of the C_o value.


The values of L_o and C_o listed in the table above shall be reduced to 50% when both of the following conditions are met:

- the total L_i of the external circuit (excluding the cable) is ≥ 1% of the L_o value and
- the total C_i of the external circuit (excluding the cable) is ≥ 1% of the C_o value.

Note: the reduced capacitance of the external circuit (including cable) shall not be greater than 1 uF for IIA, IIB/IIIC and 600 nF for IIC.

WARNING - Substitution of components may impair intrinsic safety.

AVERTISSEMENT - La substitution de composants peut compromettre la sécurité intrinsèque.

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