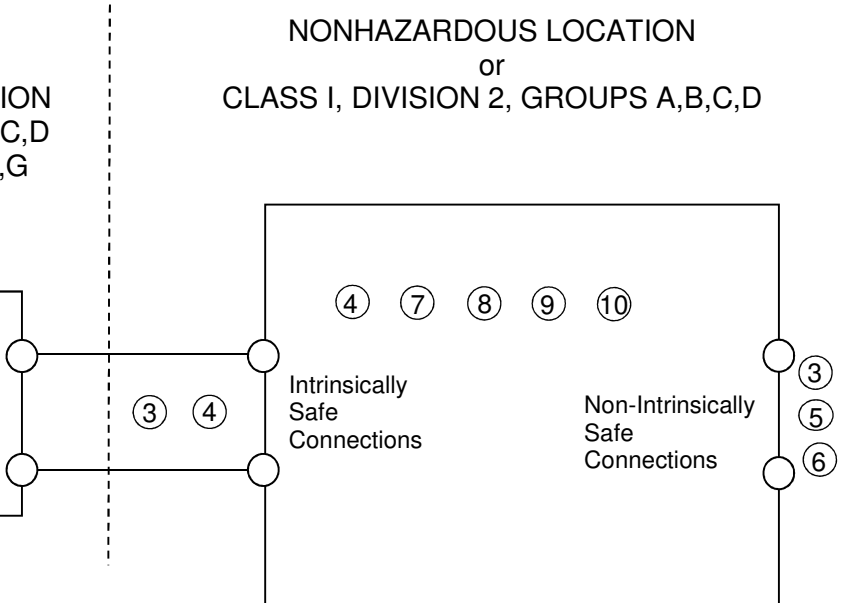


Connections

NONHAZARDOUS LOCATION
or
HAZARDOUS (CLASSIFIED) LOCATION
CLASS I, DIVISION 1, GROUPS A,B,C,D
CLASS II, DIVISION 1, GROUPS E,F,G
CLASS III, DIVISION 1


NONHAZARDOUS LOCATION
or
CLASS I, DIVISION 2, GROUPS A,B,C,D

Any simple apparatus (2) or approved device with Entity Concept (1) parameters (V_{max} , I_{max} , C_i , L_i) appropriate for connection to Associated Apparatus with Entity Concept parameters listed in Table 1.



Notes

- The Entity Concept allows interconnection of an apparatus (intrinsically safe or non-incendive) with an associated apparatus (intrinsically safe or non-incendive) 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 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 apparatus, Where $C_{cable} = 60pF/ft$ ($197pF/m$) if unknown
Where $L_{cable} = 0.20uH/ft$ ($0.66uH/m$) if unknown
- 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, 100mA, 25mW, or is a passive component that does not dissipate more than 1.3W and is compatible with the intrinsic safety of the circuit in which it is used.
- Wiring methods must be in accordance with all applicable installation requirements of the country in use. For US, this is NFPA 70 (NEC) article 504 with additional information in ANSI-ISA –RP12.06.01. For Canada this is CSA 22.1-12 (CEC) section 18 and appendix F.
- The devices may be used in an ambient temperature of $-20^{\circ}C$ to $+70^{\circ}C$ with a permitted T-Class of T4. The devices may be marked with an upper ambient temperature in the range $+40^{\circ}C$ to $+70^{\circ}C$ and a T-Class of T4.
- Equipment must be connected to a power supply where the primary and secondary windings of the supply transformer must not be connected to each other.
- Barriers shall not be connected to any device which uses or generates internally any voltage in excess of 250V r.m.s or DC unless the device has been determined to adequately isolate the voltage from the barrier.
- 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 barriers are rated “Non-incendive”. A temperature rating of T4 applies to all non-incendive rated barriers.
- In Class I, Division 2 installations live maintenance is not permitted.

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10. If the barriers are intended to be mounted in a Division 2 location, they shall be mounted within a tool-secured enclosure which is capable of accepting one or more of the Class I, Division 2 wiring methods specified in the National Electrical Code (ANSI/NFPA 70) or Canadian Electrical Code (C22.1), as applicable. The equipment shall be installed in an enclosure with a minimum ingress protection of IP54 which meets the requirements of UL/CSA 60529 and UL/CSA 60079-0. The enclosure must meet the requirements of UL121201 resp. C22.2 NO. 213.

Entity Parameters

Model Number	Terminals	U _o (V _{oc}) [V]	I _o (I _{sc}) [mA]	P _o [mW]	C _a (C _o) [μF]			L _a (L _o) [mH]		
					A,B (IIC)	C,E,F,G (IIB)	D (IIA)	A,B (IIC)	C,E,F,G (IIB)	D (IIA)
KFD0-CS-Ex1.50P	1,2	25.2	93.0	585	0.107	0.82	2.90	4.30	18	33
KFD0-CS-Ex1.51P	1,2	25.2	93.0	585	0.107	0.82	2.90	4.30	18	33
KFD0-CS-Ex2.50P	1,2;4,5	25.2	93.0	585	0.107	0.82	2.90	4.30	18	33
KFD0-CS-Ex2.51P	1,2;4,5	25.2	93.0	585	0.107	0.82	2.90	4.30	18	33

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 1μF for C, D, E, F, G (IIA, IIB) and 600nF for A, B (IIC).

WARNING - Substitution of components may impair intrinsic safety and suitability for use in Class I, Div.2.

AVERTISSEMENT - La substitution de composants peut compromettre la sécurité intrinsèque et l'adéquation à une utilisation en Classe I, Div. 2.

WARNING - Do not disconnect equipment when energized and an explosive atmosphere is present.
AVERTISSEMENT – Ne débranchez pas l'appareil si sous tension et en présence d'une atmosphère explosive.

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