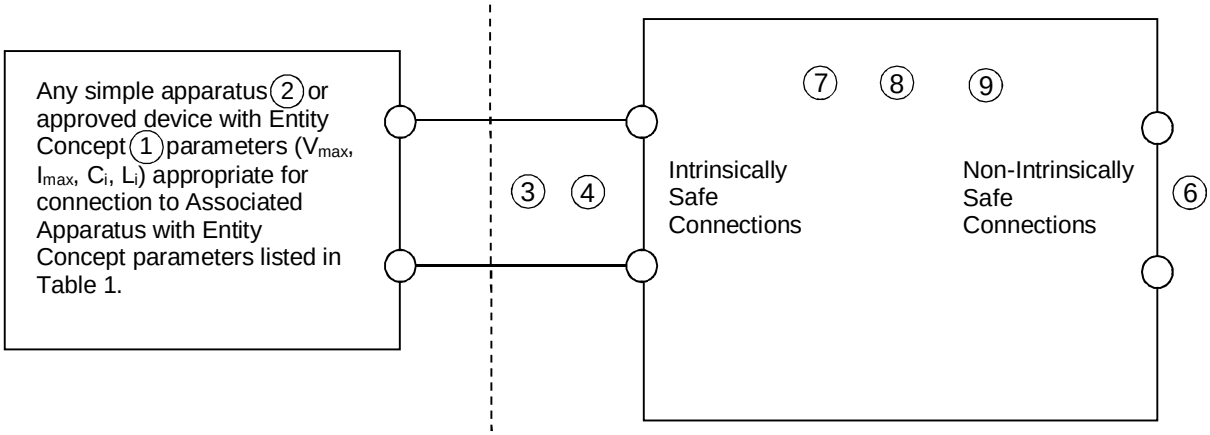
Connections

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



Notes

1. 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 Voc (or Uo) and Isc (or Io) for the associated apparatus are less than or equal to Vmax (Ui) and Imax(Ii) for the apparatus and the approved values of Ca(Co) and La(Lo) for the associated apparatus are greater than Ci + Ccable and Li + Lcable, respectively, for the apparatus,
   Where Ccable= 60pF/ft (197pF/m) if unknown
   Where Lcable= 0.20uH/ft (0.66uH/m) 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, 100mA, 25mW, or is a passive component that does not disipate more than 1.3W 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 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.

4. Intrinsically safe circuits must be wired and separated in accordance with Article 504.20 of the National Electrical Code (ANSI/NFPA 70) or other local codes, as applicable.

5. WARNING: Substitution of components may impair intrinsic safety and suitability for hazardous (classified) locations.

   AVERTISSEMENT: le remplacement des composants peut altérer la sécurité intrinsèque et l'adéquation à une utilisation dans des zones dangereuses (classées).

6. 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.

7. The barriers are rated ‘Nonincendive’. If the barriers are 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 barriers are

intended to be mounted in a Division 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 barriers are intended to be mounted in a Division 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 wiring methods. A temperature rating of T4 applies to all nonincendive rated barriers.

8. 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 AEx or Ex certified IP54 enclosure unless the apparatus is intended to be afforded an equivalent degree of protection by location.

9. The barriers must be installed and operated only in an environment that ensures a pollution degree 2 (or better) according to IEC/EN 60664-1.

10. Connection of the barrier to ground is not required.

11. Power feed modules KFD2-EB2* may be used in conjunction with power rail to energize P+F isolated barriers (KFD2 Series) when installed in accordance with Control Drawing 116-0160.

Entity Parameters

Model Number	Terminals	Uo (Voc) [V]	Io (Isc) [mA]	Po [mW]	Ca (Co) [µF]			La (Lo) [mH]		
					A,B (IIC)	C,E (IIB)	D,F,G (IIA)	A,B (IIC)	C,E (IIB)	D,F,G (IIA)
KFD2-CD-Ex1.32* (* = blank or -1 thru -8)	1,2	25.2	93.0	586	0.107	0.82	2.90	4.11	16.44	32.88
KFD2-CD-Ex1.32* (* = -9 thru -25)	1,2	25.2	95.0	590	0.107	0.82	2.90	3.93	15.75	31.51

The values of Lo and Co listed in the table above are allowed if one of the following conditions is met:
- The total Li of the external circuit (excluding the cable) is < 1% of the Lo value or
- The total Ci of the external circuit (excluding the cable) is < 1% of the Co value.

The values of Lo and Co listed in the table above shall be reduced to 50% when both of the following conditions are met:
- the total Li of the external circuit (excluding the cable) is ≥ 1% of the Lo value and
- the total Ci of the external circuit (excluding the cable) is ≥ 1% of the Co value.

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