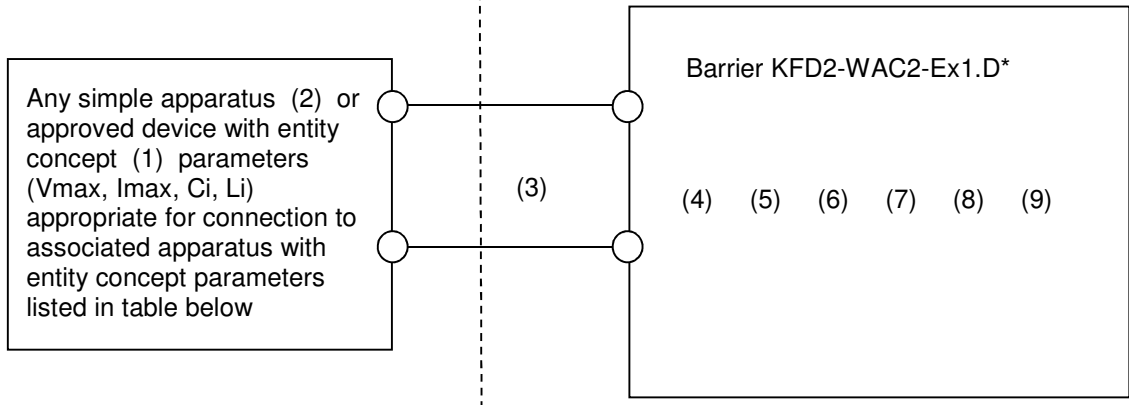


Connections


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

NON-HAZARDOUS LOCATION or
HAZARDOUS LOCATION
Class I, Division 2, Groups A, B, C, D or
Class I, Zone 2, IIC



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, 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.
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. Barriers shall not be connected to any device which uses or generates internally any voltage in excess of 250V r.m.s or DC resp. 40V r.m.s or DC unless the device has been determined to adequately isolate the voltage from the barrier.
5. These barriers are rated `non-incendive` for use in Class I, Division 2 or Zone 2. A temperature rating of T4 applies to all non-incendive rated barriers.
6. 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 IP2X.
7. If the barriers are intended to be mounted in a Zone 2 location, they shall be mounted within a tool-secured enclosure which is capable of accepting one or more of the Class I, Zone 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.
8. The permitted ambient temperature range is $-20^{\circ}C$ to $+60^{\circ}C$.

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9. Power feed modules KFD2-EB2* maybe 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

Terminals	Um
Relay terminals 10, 11, 12	250 V rms
Relay terminals 16, 17, 18	250 V rms
RS232 programming port	40 V
Terminals 7, 8, 9	40 V
RS485: Power rail & terminals 19, 20, 21	40 V
Supply: Power rail & terminals 23, 24	40 V

Model Number	Terminals	Uo (V)	Io (mA)	Po (mW)	Co (µF)			Lo (mH)		
					A,B IIC	C,E,F,G IIB	D IIA	A,B IIC	C,E,F,G IIB	D IIA
KFD2-WAC2-Ex1.D*	1,2,3,4,5,6	14	238	833	0.73	4.60	17.0	0.62	2.5	5.0

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 \geq 1% of the Lo value and
- the total Ci of the external circuit (excluding the cable) is \geq 1% of the Co 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/Zone 2.

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

WARNING - Do not disconnect the equipment or use programming plug when the equipment is energized and an explosive atmosphere is present.

AVERTISSEMENT - Ne pas débrancher l'équipement ou utilisez le connecteur de programmation lorsque l'équipement est sous tension et exposé à une atmosphère explosive.

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 PEPPERL+FUCHS	FM Control drawing	116-0302A
	Global	KFD2-WAC2-Ex1.D*
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