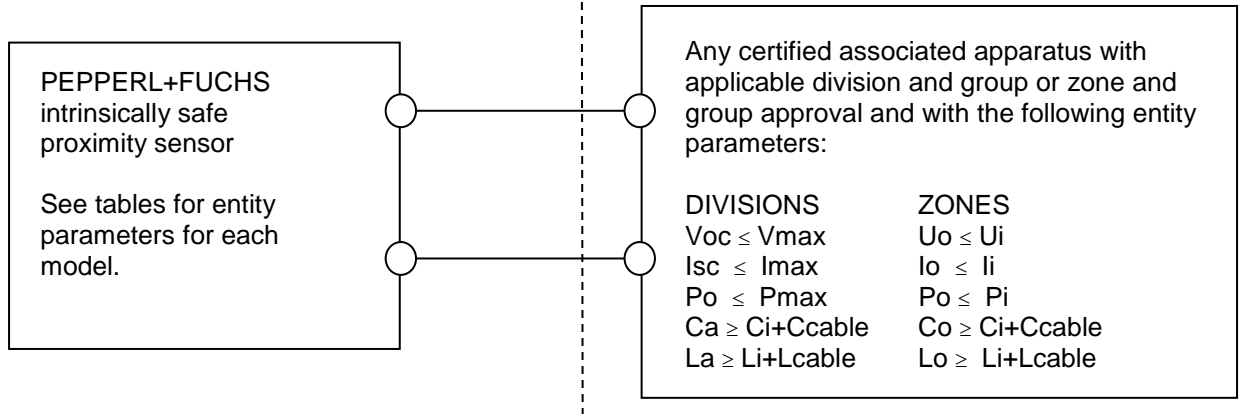


Connections

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 IIC
 Zone 20 IIIC


NON-HAZARDOUS LOCATION



Notes

1. MARKING

- Listee's name or Trade Mark
 - Model number or designation
 - Class-Division marking:
 - Class I, Division 1, Group A, B, C, D, T6...T1
 - And/Or
 - Class II, Division 1, Group E, F, G, T 135 °C
 - And/Or
 - Class III, Division 1, T 135 °C
 - And/Or
 - Class-Zone marking for USA:
 - Class I, Zone 0, AEx ia IIC T6...T1 Ga
 - And/Or,
 - Zone 20, AEx ia IIIC T 135 °C Da
 - And/Or
 - Class-Zone marking for Canada:
 - Ex ia IIC T6...T1 Ga X
 - And/Or,
 - Ex ia IIIC T 135 °C Da X
- The following abbreviations are permitted to be used: Class – Cl, Division – Div, Group – Gp, Zone – Zn
- An indication that the apparatus is intrinsically safe
 - A reference to the control drawing number
 - A reference to ambient temperature range shown under suitable tables in the Control Drawing
 - "WARNING – AVOID ELECTROSTATIC CHARGE – SEE INSTRUCTIONS" and/or "AVERTISSEMENT – DANGER POTENTIEL DE CHARGES ÉLECTROSTATIQUES – VOIR INSTRUCTIONS" for apparatus models according to suitable table in the Control Drawing.
 - A serial number, date code or equivalent

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2. STANDARDS

Investigation acc. United States Standards: UL 913, UL 60079-0, UL 60079-11 and acc. Canadian National Standards CSA C22.2 NO. 60079-0, CSA C22.2 NO. 60079-11

3. The Entity Concept allows interconnection of an intrinsically safe apparatus with an associated apparatus not specifically examined in combination as a system when the approved values of V_{oc} (or U_o), I_{sc} (or I_o) and P_o for the associated apparatus are less than or equal to V_{max} (or U_i), I_{max} (or I_i) and P_{max} (or P_i) for the intrinsically safe apparatus and the approved values of C_a (or C_o) and L_a (or 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

- $C_{cable} = 60 \text{ pF/ft}$ (197 pF/m) if unknown
- $L_{cable} = 0.20 \text{ }\mu\text{H/ft}$ ($0.66 \text{ }\mu\text{H/m}$) if unknown

4. The sum of all capacitances and inductances, including tolerance and a 10 m cable result to the given values for C_i and L_i for the respective sensor models, shown in Table 1 and Table 2.

5. Wiring methods must be in accordance with all applicable installation requirements of the country in use. For the U.S. see NFPA 70 (NEC) article 504. For Canada see CEC section 18.


6. **WARNING:** Substitution of components may impair intrinsic safety and suitability for hazardous (classified) locations.
AVERTISSEMENT - La substitution de composants peut compromettre la sécurité intrinsèque et l'adéquation à une utilisation en emplacements dangereux.

7. The correlation between the type of connected circuit and the maximum permissible ambient temperature are indicated at the top of Table 1 and Table 2 below.

When assigning the actual sensor to the respective table, use the type description, which describes the sensor best. Letters and digits describe the different types according to the type description key.

The dots in this type description represent free definable parameters. These free definable parameters can be omitted or replaced by letters or digits.

8. Appropriate measures need to be taken to protect the proximity sensors against mechanical damage due to impact, if they are used within an ambient temperature range between $-60 \text{ }^\circ\text{C}$ and $-20 \text{ }^\circ\text{C}$. An ambient temperature below $-60 \text{ }^\circ\text{C}$ is not permissible.

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9. When the following types of proximity sensors are applied acc. to the following classification

- Class I, Division 1, Class II, Division 1 or Class III Division 1 or
- Class I, Zone 0 or Zone 20

as tabulated below, inadmissible electrostatic charge of the plastic housing has to be prevented.

Model	Division Classification			Zone Classification	
	Class I, Division 1	Class II, Division 1	Class III, Division 1	Class I, Zone 0	Zone 20
	for Groups	for Groups	for Class	for Groups	for Group
SC2-N0...	-	-	-	-	-
SC3,5-N0-Y...	-	E, F, G	III	-	III
SC3,5...-N0...	-	E, F, G	III	-	III
SJ2-N...	-	-	-	-	-
SJ3,5-...-N...	-	E, F, G	III	-	III
SJ5-...-N...	-	E, F, G	III	-	III
SJ5-K...	A, B	E, F, G	III	IIC	III
SJ10-N...	A, B	E, F, G	III	IIC	III
SJ15-N...	A, B	E, F, G	III	IIC	III
SJ30-N...	A, B, C, D	E, F, G	III	IIA/IIB/IIC	III

WARNING – AVOID ELECTROSTATIC CHARGE – SEE INSTRUCTIONS

AVERTISSEMENT – DANGER POTENTIEL DE CHARGES ÉLECTROSTATIQUES – VOIR INSTRUCTIONS

Do not mount the supplied nameplate in dust hazardous areas that can be electrostatically charged.


Information on electrostatic hazards can be found in the technical specification IEC/TS 60079-32-1.

10. For the application of the following types of proximity sensors in hazardous locations appropriate measures need to be taken to protect the free resin surface against mechanical damage, if the free resin surface is accessible after installation:

SC2-N0...	SJ2-N-Y43896	SJ5-K...
SC3,5-N0-Y...	SJ2-N-Y43897	SJ10-N...
SC3,5...-N0...	SJ3,5-...-N...	SJ15-N...
SJ2-N-Y34361	SJ5-...-N...	SJ30-N...

11. The proximity sensors may be provided with a permanently connected cable having the following characteristics:


- Type: flexible jacketed power supply cord
- Rated Voltage: 500 V
- Rated Current: min. 76 mA

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Entity Parameters


**Table 1, Proximity sensors for use in
Class I, Division 1
Class I, Zone 0**

			Type 1 Ui = 16 V li = 25 mA Pi = 34 mW			Type 2 Ui = 16 V li = 25 mA Pi = 64 mW			Type 3 Ui = 16 V li = 52 mA Pi = 169 mW			Type 4 Ui = 16 V li = 76 mA Pi = 242 mW		
			Maximum permissible ambient temperature in °C for application in temperature class											
Model	Ci / nF	Li / µH	T6	T5	T4-T1	T6	T5	T4- T1	T6	T5	T4- T1	T6	T5	T4- T1
SC2-N0...	150	150	72	87	100	65	80	100	40	55	75	23	38	54
SC3,5-N0-Y...	150	150	72	87	100	65	80	100	40	55	75	23	38	54
SC3,5...-N0...	150	150	73	88	100	66	81	100	45	60	89	30	45	74
SJ2-N...	30	100	73	88	100	67	82	100	45	60	78	30	45	57
SJ3,5...-N...	50	250	73	88	100	66	81	100	45	60	89	30	45	74
SJ5-...-N...	50	250	73	88	100	66	81	100	45	60	89	30	45	74
SJ5-K...	50	550	72	87	100	66	81	100	42	57	82	26	41	63
SJ10-N...	50	1000	72	87	100	66	81	100	42	57	82	26	41	63
SJ15-N...	150	1200	72	87	100	66	81	100	42	57	82	26	41	63
SJ30-N...	150	1250	72	87	100	66	81	100	42	57	82	26	41	63

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**Table 2, Proximity sensors for use in
Class II, Division 1, Class III, Division 1 or
Zone 20**

			Type 1 Ui = 16 V Ii = 25 mA Pi = 34 mW	Type 2 Ui = 16 V Ii = 25 mA Pi = 64 mW	Type 3 Ui = 16 V Ii = 52 mA Pi = 169 mW	Type 4 Ui = 16 V Ii = 76 mA Pi = 242 mW
Model	Ci / nF	Li / µH	maximum permissible ambient temperature in °C			
SC2-N0...	150	150	100	100	75	54
SC3,5-N0-Y...	150	150	100	100	75	54
SC3,5-...-N0...	150	150	100	100	89	74
SJ2-N...	30	100	100	100	78	57
SJ3,5-...-N...	50	250	100	100	89	74
SJ5-...-N...	50	250	100	100	89	74
SJ5-K...	50	550	100	100	82	63
SJ10-N...	50	1000	100	100	82	63
SJ15-N...	150	1200	100	100	82	63
SJ30-N...	150	1250	100	100	82	63

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