

Connections (kit version system, 6000-xx-S2-UN-CK-xx)

HAZARDOUS (CLASSIFIED) LOCATION

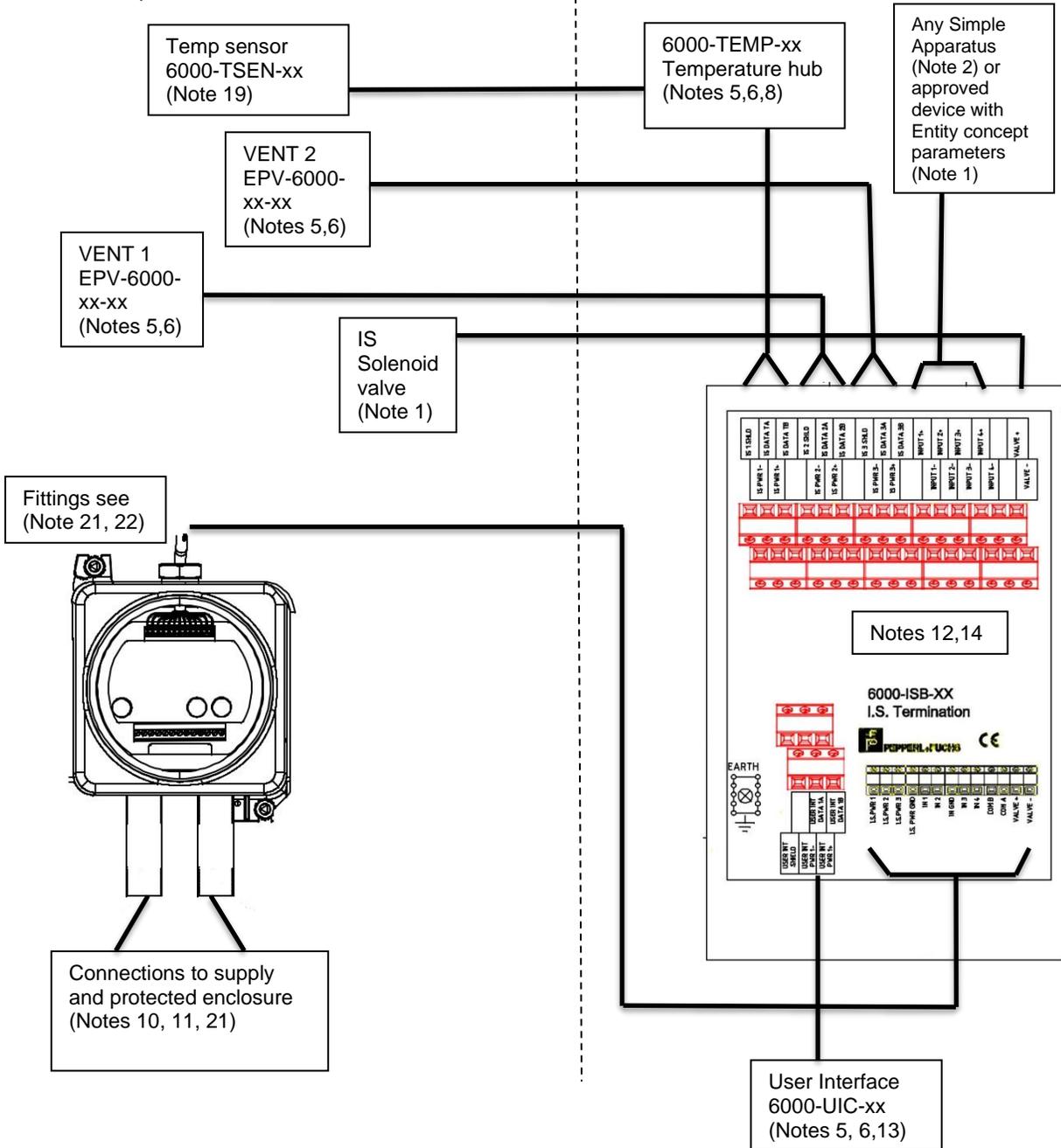
Class I Division 1, Group A, B, C, D
 Class II Division 1, Group E, F, G
 Class III

Zone 1, Group IIC
 Zone 21 Group IIIC

HAZARDOUS (CLASSIFIED) LOCATION

Class I Division 1, Group A, B, C, D

Zone 1, Group IIC



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		sheet 2 of 9

■ **Connections (Alternate housing system, 6000-EXKIT-xx-xx-YY)**
 Where YY = "blank" or "GO"

HAZARDOUS (CLASSIFIED) LOCATION

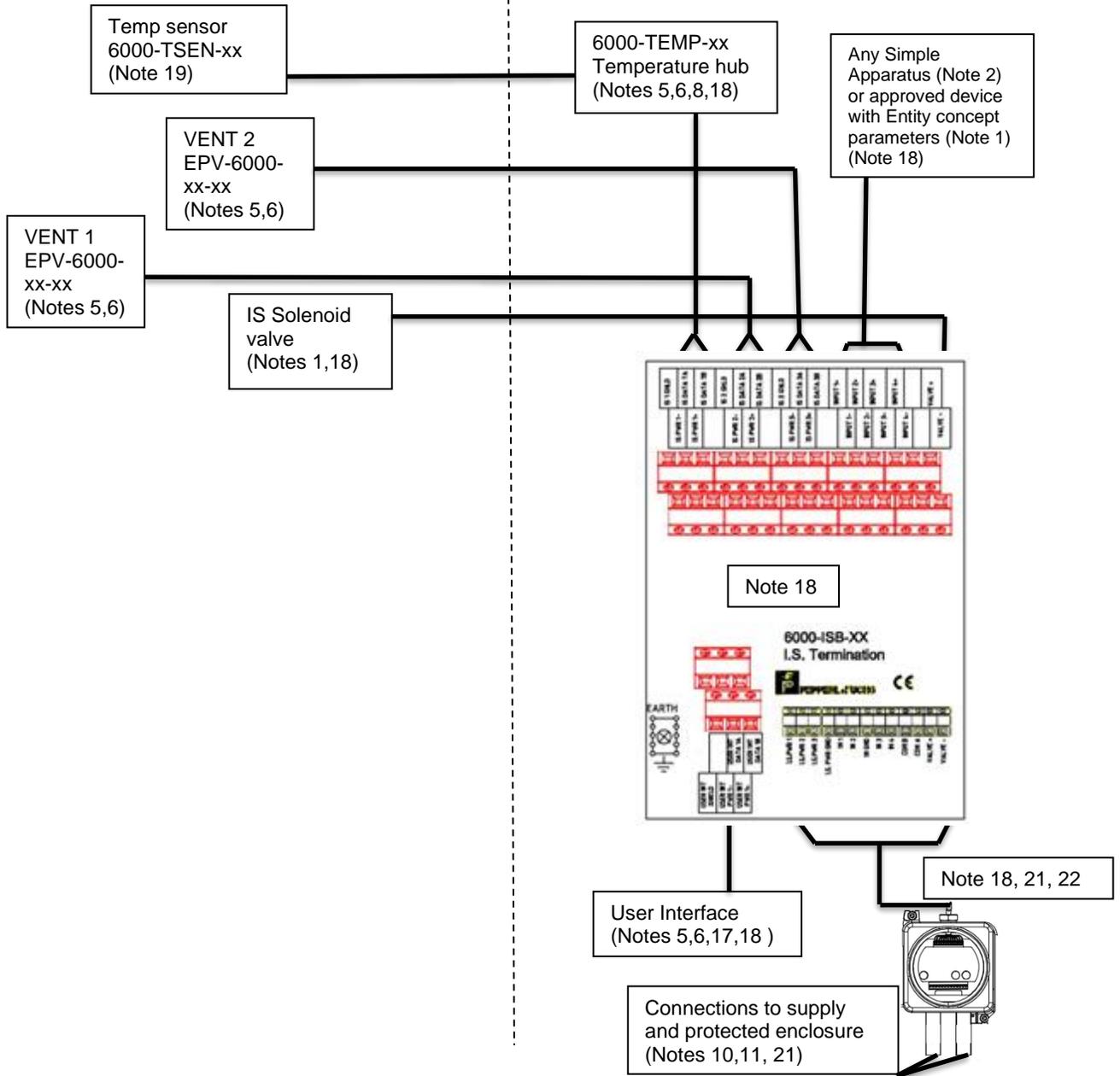
Class I Division 1, Group A, B, C, D
 Class II Division 1, Group E, F, G
 Class III

Zone 1, Group IIC
 Zone 21 Group IIIC

HAZARDOUS (CLASSIFIED) LOCATION

Class I Division 1, Group A, B, C, D

Zone 1, Group IIC



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■ Connections (Alternate housing system, 6000-EXKIT-xx-xx-GD)

HAZARDOUS (CLASSIFIED) LOCATION

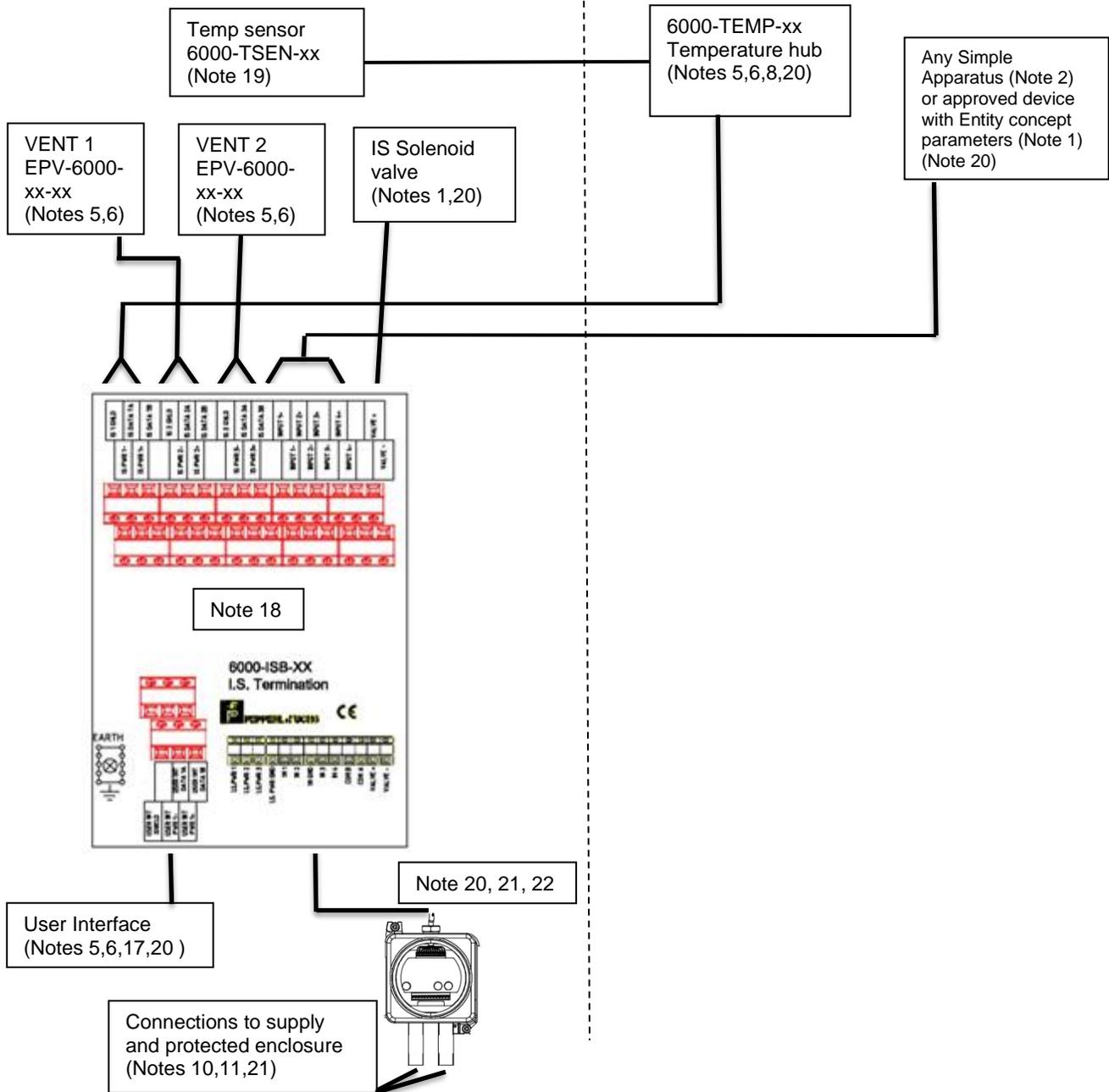
Class I Division 1, Group A, B, C, D
 Class II Division 1, Group E, F, G
 Class III

Zone 1, Group IIC
 Zone 21 Group IIIC

HAZARDOUS (CLASSIFIED) LOCATION

Class I Division 1, Group A, B, C, D

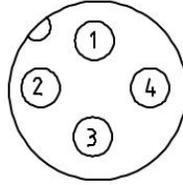
Zone 1, Group IIC



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■ EPV-6000-xx-xx connection information

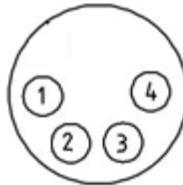
Wire	assignment	Pin #
BRN	IS PWR +	1
BLU	IS PWR -	3
WHT	IS DATA A	2
BLK	IS DATA B	4



M12 (V1) connector pinout
Looking into vent connector

■ 6000-UIC-xx connection information

Wire	assignment	Pin #
BRN	IS PWR +	4
BLU	IS PWR -	1
WHT	IS DATA A	3
BLK	IS DATA B	2

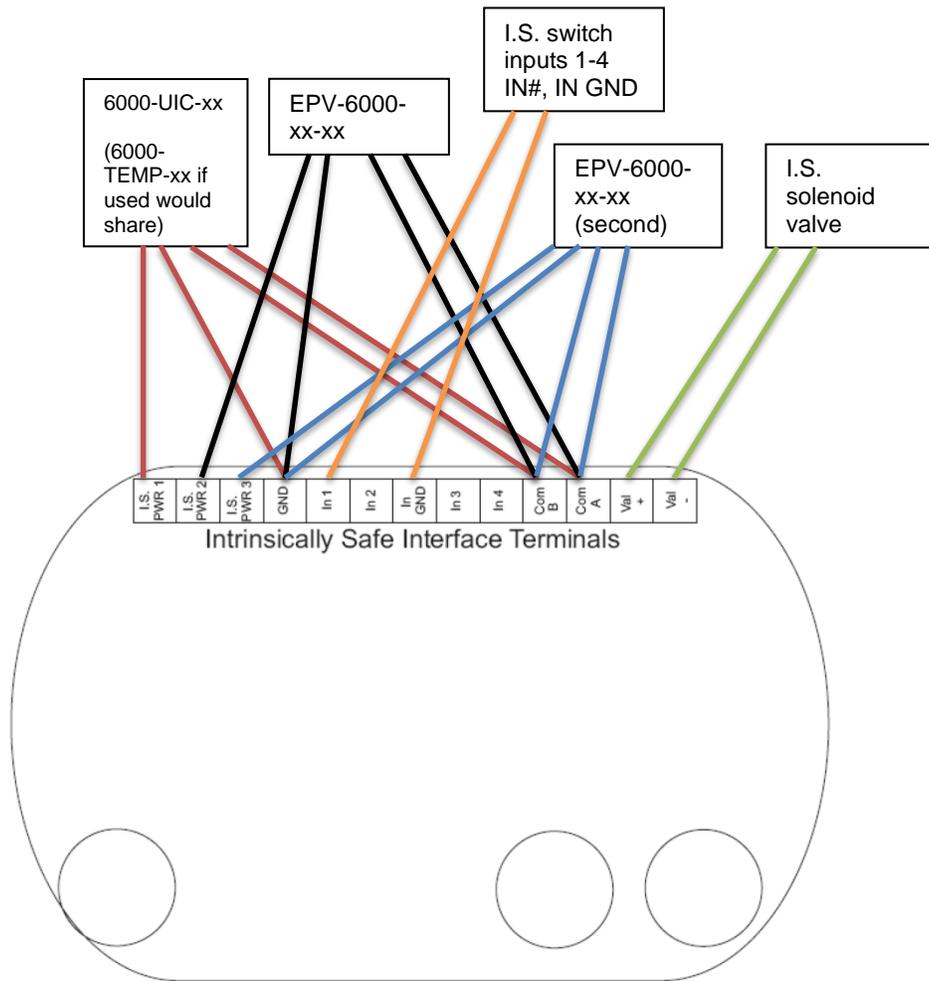


M8 (V31) connector pinout
Looking into UIC connector

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6000-EPCU-xx-xx connections

(Can be used for 6000-xx-S2-UN-CK-xx versions without 6000-ISB-xx board)



AC TERMINALS



DC TERMINALS

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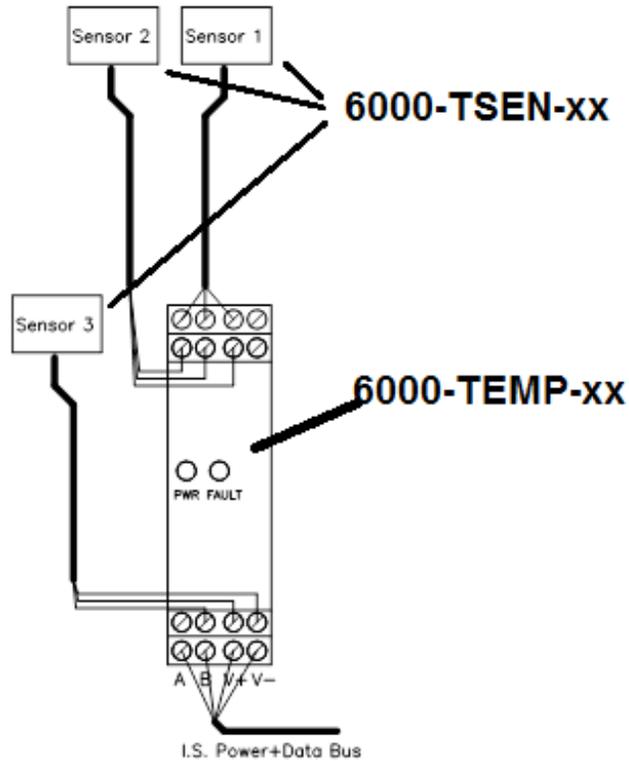
■ **6000-TEMP-xx and 6000-TSEN-xx connection information**

Wire	Assignment	Description
BROWN	V+	IS Power +
BLUE	V-	IS Power -
WHITE	1A	IS Data A
BLACK	1B	IS Data B

IS interface connection

Wire	Assignment
RED	+
BLACK	-
WHITE	SIG

IS remote sensor connection



■ **Notes**

1. The Entity Concept allows interconnection of intrinsically safe devices 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 devices 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 $C_{cable} = 60pF/ft$ (197pF/m) if unknown
Where $L_{cable} = 0.20\mu H/ft$ (0.66 $\mu H/m$) 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 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 county 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. For IECEx/ATEX this is IEC/EN 60079-14.
4. Warning: Substitution of components may impair intrinsic safety and suitability for hazardous (classified) locations.

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

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5. The outputs for the IS peripherals (IS PWR 1, ISPWR2, ISPWR 3) must not be connected in parallel except for COM A, COM B. The User interface, vents and temperature hub also share the same return path.
6. Attention: The maximum cable length between the Vent, UIC, or Temperature hub and the control unit is 245ft (74.6m). This is based on worst case cable capacitance (C_{cable}) of 60pf/ft (197pf/m) and worst case cable inductance of 0.2 μ H/ft (0.66 μ H/m). Further operational reductions may apply. See manual.
7. The IS interface board that is secured in the housing that is part of 6000-xx-S2-UN-xx-xx cannot be removed from the housing.
8. For the 6000-TEMP-xx IS temperature hub, it must be mounted in a minimum IP54 enclosure. For dust applications, this device cannot be mounted in the hazardous dust atmosphere unless it is protected by another enclosure that is certified for the area classification. The pressurized enclosure does not apply for protection against dust because power to this device is required before safe operation. Accessory housing 6000-DPE-01-xxxx satisfies the requirements for IP54 and for dust applications.
9. The User interface cannot be removed from the housing of the 6000-xx-S2-UN-xx-xx versions.
10. Um = 250V. Voltages supplied to or controlled by the 6000 system must not exceed this value.
11. If conduit is used, proper conduit seals must be installed within 18 inches (450 mm) for the explosion proof / Ex d housing for Class/Division applications. For Zone applications, seals must be installed directly at the entry of the explosion proof housing or directly on the conduit extensions provided with the 6000-xx-S2-UN-WH-xx version.
12. For the 6000-ISB-xx IS interface board DIN rail mount version, it must be mounted in a minimum IP54 enclosure. For dust applications, this device cannot be mounted in the hazardous dust atmosphere unless it is protected by another enclosure that is certified for the area classification. The pressurized enclosure does not apply for protection against dust because power to this device is required before safe operation. Accessory housing 6000-DPE-01-xxxx satisfies the requirements for IP54 and for dust applications.
13. For the 6000-UIC-xx IS user interface, it must be mounted in a minimum IP54 enclosure. For dust applications, this device cannot be mounted in the hazardous dust atmosphere unless it is protected by another enclosure that is certified for the area classification. The pressurized enclosure does not apply for protection against dust because power to this device is required before safe operation. It is permitted for the face of the device to be exposed to the hazardous atmosphere through a cutout in the IP54 enclosure as long as the UIC mounting gasket is used to seal the perimeter and it is mounted according the instructions in the manual.
14. The 6000-ISB-xx IS interface board DIN rail mount version can be replaced with terminal blocks for the IS field wiring. The terminal blocks must comply with the 6mm spacing between separate intrinsically safe circuits and indicated in IEC/EN 60079-11 and article 504.30(B) of the NEC. See details for 6000-EPCU-xx-xx connections above.
15. Warning: to prevent ignition of explosive atmospheres, disconnect power before servicing.
16. This product complies with the dielectric strength requirements as described in IEC/EN 60079-11
17. The 6000-UIC-xx User interface cannot be removed from the housing of the 6000-EXKIT-xx-xx-YY versions.
18. The explosion proof/Ex db housing containing the 6000-EPCU-xx-xx, the 6000-UIC-xx and the 6000-ISB-xx will be contained in the alternate housing of a 6000-EXKIT-xx-xx-YY at a minimum.
The IS solenoid valve, 6000-TEMP-xx temperature hub and any simple apparatus may be included in the alternate housing construction of a 6000-EXKIT-xx-xx-YY version.
In the event that the solenoid valve is contained in the alternate housing, then it should be understood that the IS solenoid valve would move to the right side of the connection diagram to be with the other components of the system.
19. Attention: The maximum cable length between the 6000-TEMP-xx temperature hub and the 6000-TSEN-xx temperature sensor is 245ft (74.6m). This is based on worst case cable capacitance (C_{cable}) of 60pf/ft (197pf/m) and worst-case cable inductance of 0.2 μ H/ft (0.66 μ H/m) Further operational reductions may apply. See manual.
20. The explosion proof/Ex d housing containing the 6000-EPCU-xx-xx, the 6000-UIC-xx and the 6000-ISB-xx will be contained in the alternate housing of a 6000-EXKIT-xx-xx-GD at a minimum.

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The IS solenoid valve, 6000-TEMP-xx temperature hub and any simple apparatus may be included in the alternate housing construction of a 6000-EXKIT-xx-xx-GD version.

In the event that the solenoid valve is contained in the alternate housing, then it should be understood that the IS solenoid valve would move to the right side of the connection diagram to be with the other components of the system.

If the 6000-TEMP-xx is included in the alternate housing, this will fulfill the IP54 requirement of note 12 above, and in the image for 6000-EXKIT-xx-xx-GD, would move to the right side.

21. The entries/fittings used to interface to the explosion/flame proof enclosure shall be properly rated for the area of installation.
22. The cable seal fitting for IS connections that is available from P+F is not certified to complete the explosion/flame proof enclosure for zone 21 areas, and in all applications needs to be protected by a minimum IP20 enclosure. If used, the explosion/flame proof housing and fitting need to be placed into a minimum IP20 enclosure for all applications; the purged enclosure meets this requirement. For dust applications, the explosion/flame proof housing and fitting needs to be in a properly rated ATEX/IECEX enclosure for zone 21; the purged enclosure does not meet this requirement because power to this device is required before safe operation.

Entity Parameters

Model Number	Terminals	Notes	U _o (V _{oc}), V	I _o (I _{sc}), mA	P _o , mW	C _o (C _a), μF		L _o (L _a), mH	
						GRP A, B (IIC)	GRP C, D (IIB)	GRP A, B (IIC)	GRP C, D (IIB)
6000 system	Input 1-4	Per input	8.61	5	11	0.6	1.0	50	150
6000 system	IS valve +/-		28	110	770	0.041	0.32	0.5	1.5

Note: Entity values above already consider combination circuits.

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