Class I, DIV 2 / Zone 2 Installation for connection to I/O Modules located in Class I, II, III, Division 2, Group A-G, or Class I, Zone 2, Group IIC/IIB Hazardous (Classified) Locations



Connection allocation

CPU & Power Module for Division 2 or Zone 2, type 9440/15-01-11



Power supply (X5)

Description	Function	Connector	Terminal						
		number	3-pin name						
	24 V DC (+)	X5	L+						
	0 V	X5	L-						
	Ground	X5	GND						
Fieldbus (X1, X2) and Service Bus (X3)									
Description	Function	Connector number	Sub-D 9 pin number						
Data B (+)	RxD/TxD (+)	X1, X2, X3	3						
Reference potential for the interface	GND	X1, X2, X3	5						
(out of the equipment)									
Supply voltage	5 V (+)	X1, X2, X3	6						
Data A (-)	RxD/TxD (-)	X1, X2, X3	8						
-	Not connected	X1, X2, X3	1,2,4,7						

X1

The Type 9440/15-01-11 CPU & Power Module is an nonincendive module for installation in Class I, Division 2, Group A-D or Class I, Zone 2, Group IIC/IIB hazardous location; Providing intrinsically safe BusRail and nonincendive RS485 interfaces according to NEC Article 504/505 or Canadian Electrical Code, CSA C22.

Safety data for wiring configurations to the left are as follows:

Power Supply (input/primary)

Data interfaces RS 485

(primary) Data circuits as per I/O Standard

Nonincendive connections

V_{max} = 250 V V_{OC} = 13.2 V, I_{SC} = 110 mA $\begin{array}{l} C_i = 0.12 \ \mu\text{F}, \ L_i = 0 \ \text{mH} \\ U_{\text{max}} = 13.2 \ \text{V}, \ I_{\text{max}} = 110 \ \text{mA} \end{array}$

 $C_a = 5 \ \mu F, \ L_a = 6.5 \ mH$

Connectors X1, X2, X3

U_{in} = 24 V DC (20 V ... 35 V DC)

Connector X5

 $I_{in} = 5.2 \text{ A}$ $U_{max} = 250 V$

RS 485

Module 1-16 over BusRail:

CL I, DIV 1, A-D / CL I Zone 1, GP IIC/IIB:

Power Supply (output/secondary):

With intrinsically safe type of protection:

Maximum value: V_{oc} = 26.2 V The circuit requires external current limitation which is provided by the system

Address and data bus (secondary):

With intrinsically safe type of protection: Maximum values:

$$V_{\rm OC} = 6.6 V$$

$$I_{SC} = 105 \text{ m/}$$

 $V_{max} = 6.6 \text{ V}$

Linear characteristic curve, the effective internal capacitance and inductance are negligibly small.

Notes:

For Entity concept use the appropriate parameters from above to 1. ensure the following:

 $V_{OC} \text{ or } V_t \ \leq \ V_{max}$ $C_a \ \geq \ C_i \ + \ C_{\text{leads}}$ I_{SC} or $I_t \leq I_{max}$ $L_a \ge L_i + L_{leads}$

- 2. Electrical Apparatus connected to an intrinsically safe system must not use or generate voltages > 250 V (Umax)
- 3. Do not connect or disconnect non I.S. power supply to X5 unless area is known to be non-hazardous.
- Do not detach from or plug the CPU & Power Module to the 4. BusRail when energized, unless area is known to be nonhazardous.
- 5. General Notes see Certification drawing for IS1 resp. IS1+ Remote I/O System No. 9400 6 031 004 1

WARNING:

Do not disconnect equipment when a flammable or combustable atmosphere is present. AVERTISSEMENT: Ne pas débrancher l'équipement en présence d'atmosphère inflammable ou combustible.

		2 D	2016 Drawn by	Date 03.03.	Name Bagusch	Certification drawing CPU & Power Module	scale none
			Checked		Kaiser	Туре 9440/15-01-11	Sheet 1 of 1
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Version	Date	Name				Rep. f. Rep. t.	A4

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