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 Module 9442/35-10-00 and Power Module 9445/35-12
for Division 2 / Zone 2 with Socket type 9496/35-0d-00 (d=3,4)

Power Module 9445/35-12
X1 PM: Power supply input

Supply	Description	Wire Color
24 V DC	+	For the polarity
(19 V … 32 V DC)	GND	and the color
I_{max} = 6.5 A at U_{min}		coding see label
U_m = 60 V DC		of the wires

CPU Module 9442/35-10-00
X1 CPU: RS485 interface
d-Sub connector
e.g. for PLC/DCS communication (see datasheet)

Signal	Description	Pin
B+; RXD /TXD-P	Received / transmitted data P, wire B	3
U-	Bus termination ground	5
U+	Bus termination plus	6
A-; RXD / TXD-N	Received / transmitted data N, wire A	8
U_m = 30 V DC	Not connected	1, 2, 4, 7, 9

X2 CPU P1 and P2: Ethernet Interface
100Base TX, 10/100 Mbit/s, auto negotiation
e.g. for PLC/DCS communication (see datasheet)
U_m = 30 V DC

X3 CPU: USB interface
USB 2.0 Type A connector
e.g. for configuration, parameters, etc. (see datasheet)
U_N = 5 V ± 0.25 V I_{max} = 250 mA
U_m = 30 V DC

The CPU Module Type 9442/35-10-00 and Power Module 9445/35-12 with the Socket 9496/35-0d-00 (d=3,4) are for installation in Class I, Division 2, Group A-D or Class I, Zone 2, Group IIC/IIB hazardous locations; Providing intrinsically safe BusRail and Backplane interfaces according to NEC Article 504/505 or Canadian Electrical Code, CSA C22. Power Supply input, RS485, Ethernet interfaces as well as the USB interface are Class I, Division 2 or Ex ec for Zone 2.

While explosive atmosphere is present, external power supply shall be switched off to
- plug or unplug the socket from the BusRail
- plug or unplug the Power Module from the socket
- plug or unplug the CPU from the socket
- plug or unplug the RS485, Ethernet interfaces as well as the USB interface from or to the CPU

The power supply connector of the Power Module may be unplugged and the Power Module may be removed from the socket while explosive atmosphere is present and power supply is switched off.

Follow the procedure to plug the Power Module onto the Socket:
- Plug the Power Module onto the Socket
- Tighten the Power Modules screw to the Socket (Tightening torque 1.7 ± 0.2 Nm)
- Plug the unpowered power supply connector into the Power Module
- Secure the power supply connector by tighten both screws to the Power Module
- Switch on the power supply

Follow the procedure to unplug the Power Module from the Socket:
- Switch off all poles of the power supply connector
- Unscrew both power supply connector screws
- Unlock and unplug the power supply connector
- Unscrew the Power Modules screw to the socket
- Unplug the Power Module from the Socket

Socket 9496/35-0d-00 (d=3,4)
Module supply over BusRail (BusRail Connector):
CL I, DIV 1, A-D / CL I Zone 1, GP IIC/IIB:
Power Supply:
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
BusRail Address and data bus:
System internal intrinsically safe circuit for up to 16 I/O Modules via BusRail.

Module supply over Backplane (Slot Connectors):
CL I, DIV 1, A-D / CL I Zone 1, GP IIC/IIB:
Power Supply:
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

Notes:
1. Electrical Apparatus connected to the Power Module 9445 should not use or generate voltages > 60 V DC (U_m).
2. Electrical Apparatus connected to the CPU Module 9442 should not use or generate voltages > 30 V DC (U_m).
3. Follow requirements of IEC 60079-14 or NEC 504.10 for devices with U_m < 250 VAC.
4. Exceeding the sum of 2 Power Modules 9445 in one system is not allowed.
5. Exceeding the sum of 2 CPU Modules 9442 in one system is not allowed.
6. The Socket is installed on a DIN rail and can be screwed onto a metal mounting plate for increased ambient loads (vibrations, temperatures).
7. For ambient temperatures up to +65°C, Mounting on a BusRail (DIN mounting rail) without mounting plate.
8. For ambient temperatures up to +70°C, Mounting on a BusRail (DIN mounting rail) and on a galvanised, sheet steel mounting plate of at least 3 mm using four or six additional safety screws.
9. For ambient temperatures up to +75°C, Mounting on a BusRail (DIN mounting rail) and on a coated, aluminium mounting plate of at least 6 mm (EN-AW6082 or comparable heat conductivity) using four or six additional safety screws
10. A distance of at least 50 mm must be maintained for intrinsically safe and non-intrinsicallysafe electrical circuits. If a Power Module is placed in between the CPU Module and the I/O Modules on the BusRail, the requirements is fulfilled.
11. General Notes see Certification drawing for IS1 resp. IS1+ Remote I/O System No. 9400 6 031 006 1 and the operating instruction.
12. For installation in Zone 2 locations, the IS1+ system shall be installed within an enclosure which has a minimum rating of IP54 in accordance with ANSI/UL 60079-0 (or CAN/CSA-C22.2 No. 60079-0 for Canada), with a pollution degree of 1 or 2.

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.

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CPU Module, Type 9442/35-10-00
Power Module, Type 9445/35-12
Socket 9496/35-0d-00 (d = 3,4)

9442 6 031 002 1

Rep. f. | Rep. t.

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