

Remote I/O

Remote I/O IS1 Socket f. CPU and power module

for Zone 1

9490/11-12 Art. No. 162707



- For simple or redundant installation of the 9440/22 CPM in Zone 1
- LCD for local display of diagnostics data, input and output values
- Passive design with high availability

MY R. STAHL 9490A



The 9490 socket is used to install Series 9440/22 IS1+ CPM in Zone 1 and for Ex i fieldbus connection. Single and redundant systems are possible. The socket contains an LCD for assistance during commissioning and troubleshooting to signal level. An innovative mechanism enables the CPM to be connected and disconnected (i.e. hot-swapped) during operation in Zone 1.

Technical Data

Explosion Protection

| | |
|--------------------------------|---|
| Application range (zones) | 1, 2, 21, 22 |
| Ex interface zone | 1, 2, 21, 22 |
| IECEX gas certificate | IECEX KEM 08.0038X |
| IECEX gas explosion protection | Ex d e [ia] [ib] IIC T4 Gb |
| ATEX gas certificate | KEMA 02 ATEX 1333 X |
| ATEX gas explosion protection | Ex II 2 G Ex d e [ia] [ib] IIC T4 Gb |
| Certificates | ATEX (DEK), ATEX (PTB), Brazil (ULB), Canada (FM), China (NEPSI), IECEX (DEK), IECEX (PTB), Korea (KTL), USA (FM) |
| Ship approval | ABS, BVIS, EU RO MR (DNV), KR, LR |

Safety Data

| | |
|---|--|
| Connection to intrinsically safe RS-485-IS fieldbus | Global (IECEX) PTB 11.0027 Ex ib IIC T4 Europe (ATEX) PTB 04 ATEX 2089 Ex II 2 G Ex ib IIC T4 |
| Max. voltage U_o (RS485-IS) | 3.7 V |
| Max. voltage U_i (RS485-IS) | +/- 4.2 V |
| Max. current I_o (RS485-IS) | 134 mA |
| Max. power P_o (RS485-IS) | 124 mW |
| Max. capacitance C_o for IIC | 1000 μ F |
| Max. inductance L_o for IIC | 1.9 mH |

Electrical Data

| | |
|-----------------------------|--|
| Redundancy | Full redundancy Line redundancy |
| Fieldbus RS485 connection | Sub-D socket, 9-pole |
| ServiceBus RS485 connection | Sub-D socket, 9-pole |
| RS485 interface | As per PROFIBUS specification RS 485-IS |
| RS485 address setting | 0 – 127 |

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| | |
|--|---|
| Copper RS485 transmission length/rate | 1200 m at 9.6 to 93.75 kbps 1000 m at 187.5 kbps 400 m at 500 kbps 200 m at 1.5 Mbps |
| Transfer length/rate FO RS485 | Approx. 2000 m at 1.5 Mbit/s |
| Transmission length/rate service bus RS485 | 1200 m at 9.6 kbps |
| Line termination | Powered resistor (end-of-line resistor in the Sub-D plug, see accessories) |
| Frequency range | 45 – 66 Hz |
| BusRail voltage range | 22.5 to 26.2 V DC |
| Max. BusRail current | 2 A |
| Max. number of I/O modules on BusRail | 8 |
| Redundant BusRail supply | Yes (coupled with diodes) |
| BusRail undervoltage monitoring | Yes |

Auxiliary Power

| | |
|---|---|
| Nominal voltage | 24 V DC, 120 / 230 V AC |
| Auxiliary power voltage range | 20 to 35 V DC 90 to 253 V AC |
| Voltage range auxiliary power note | The 20 to 35 V DC auxiliary power may only be connected for the 9440/22-01-11 CPM or the 90 to 253 V AC auxiliary power for the 9440/22-01-21 CPM. The two auxiliary power supplies must not under any circumstances be connected at the same time. |
| Mains frequency | 50/60 Hz |
| Polarity reversal protection | not applicable for AC yes for DC |
| Undervoltage monitoring | Yes |
| Current consumption (without I/O modules) | Approx. 0.21 A at 24 V DC Approx. 25 mA at 230 V AC Approx. 48 mA at 120 V AC |
| Current consumption (8 I/O modules) | Approx. 0.4 A at 230 V AC Approx. 0.8 A at 120 V AC Approx. 2.5 A at 24 V DC |

Galvanic Isolation

| | |
|-----------------------------------|-----------|
| Auxiliary power/system components | 1500 V AC |
|-----------------------------------|-----------|

Device Specific Data

| | |
|--------------------------|---|
| Software | IS1 device DTM IS Wizard |
| LED operating conditions | "RUN" LED, green |
| LCD display | 2 x 16 characters |
| Settings on the LCD | Bus address |
| Indications | Bus address, alarms/errors, information (type, version, etc.) for the levels of field station, modules and signals, and values for inputs and outputs |

Diagnostics

| | |
|-----------------|----------------|
| LED group error | "ERR" LED, red |
|-----------------|----------------|

Ambient Conditions

| | |
|---------------------|-----------------|
| Ambient temperature | -20°C ... +65°C |
| Ambient temperature | -4°F ... +149°F |
| Storage temperature | -40°C ... +70°C |

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Ambient Conditions

| | |
|-------------------------------|---|
| Max. operating altitude | < 2000 m |
| Max. relative humidity | 95% (without condensation) |
| Shock (semi-sinusoidal) | (IEC EN 60068-2-27) 15 g (3 shocks per axis and direction) |
| Vibration (sinusoidal) | (IEC EN 60068-2-6) Frequency range 2 to 13.2 Hz Amplitude 1 mm (peak value) Frequency range 13.2 to 100 Hz Acceleration amplitude 0.7 g |
| Electromagnetic compatibility | Tested to the following standards and regulations: EN 61326- 1 (1998) IEC 1000-4-1 to 1000-4-1-6, NAMUR NE 21 |

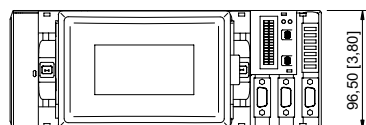
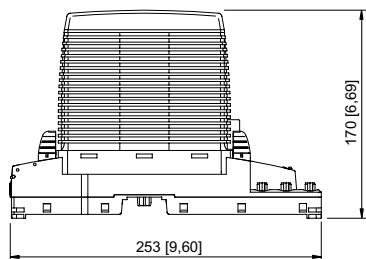
Mechanical Data

| | |
|---------------------------------------|----------------------------------|
| Connection auxiliary power | Ex e terminals 4 mm ₂ |
| Degree of protection (IP) (IEC 60529) | IP20 connections IP30 modules |
| Module enclosure | Polyamide 6GF |
| Fire resistance (UL 94) | HB |
| Pollutant class | Corresponds to G3 |
| Width | 96.5 mm |
| Length | 253 mm |
| Weight | 482 g |
| Weight | 1.06 lb |

Mounting / Installation

| | |
|----------------------|-------------------------------------|
| Mounting type | on NS 35/15 DIN rail (DIN EN 60715) |
| Mounting orientation | Horizontal Vertical |

Dimensional Drawings (All Dimensions in mm [inches]) – Subject to Alterations



CPU & power module for Zone 1 with connection by means of Ex e terminals

Accessories

CPU & power module 20 to 35 V DC

Art. No.



| | |
|--|--------|
| | 162218 |
| | 162221 |
| | 203585 |

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CPU & power module 90 to 253 V AC

Art. No.



162211

162214

203586

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