

Remote I/O

Remote I/O IS1+ Zone 2 power module



9445/35-12 Art. No. 315833



- 24 V DC supply module for IS1+ CPU modules and 16 I/O modules
- Redundancy of the power module with load sharing possible
- Integrated polarity reversal protection
- Error messages in accordance with NE 107 (overload, excess temperature, maintenance requirements)
- Support of FDT/DTM, OPC UA and Webserver for integration in asset management systems
- Extended ambient temperature range -40 °C to +75 °C (-40 °F to +167 °F)

MY R. STAHL 9445A



The 9445/35 power module is used for intrinsically safe power supply to the 9442/35 CPU and up to 16 I/O modules. The auxiliary power connection is established using an extendable terminal with unconnected cable end (accessories). Up to two 9445/35 power modules can be connected to a 9496/35 base to provide a redundant power supply for the 9442/35 CPU and the I/O modules. The 9445/35 power module monitors itself and reports notifications to the control system and asset management systems when there is an overload, the ambient temperatures are too high or the end of the service life has been reached

Technical Data

Explosion Protection

| | |
|--------------------------------|--|
| Application range (zones) | 2 |
| Application range (Zone) note | Zone 22 is only permissible if a suitable enclosure is used! |
| Ex interface zone | 2 |
| IECEX gas certificate | IECEX PTB 17.0042X |
| IECEX gas explosion protection | Ex ec [ia Ga, ib Gb] IIC T4 Gc |
| ATEX gas certificate | PTB 17 ATEX 2026 X |
| ATEX gas explosion protection | Ⓔ II 3 (1,2) G Ex ec [ia Ga, ib Gb] IIC T4 Gc |
| FMus certificate | FM17US0332X |
| cFM certificate | FM16CA0134X |
| Marking cFMus | NI, Class I, Div. 2, Groups A,B,C,D; Class I, Zone 2, AEx/Ex ec [ia Ga, ib Gb] IIC T4 Gc Ta = -40°C ... +75°C See Doc. 9442 6 031 022 1 |
| Certificates | ATEX (PTB), Brazil (ULB), Canada (FM), China (NEPSI), IECEX (PTB), USA (FM) |
| Ship approval | BVIS, EU RO MR (DNV), KR, LR |
| Declaration of conformity | ATEX (EUK), China (CCC) |
| Installation | Zone 2 |

Safety Data

| | |
|-----------------------------|-----------|
| Safety-related max. voltage | ≤ 60 V DC |
|-----------------------------|-----------|

Electrical Data

| | |
|------------------|----------------|
| Start-up current | 75 A at ≤ 2 ms |
|------------------|----------------|

Auxiliary Power

| | |
|---------------------------------|----------------|
| Auxiliary power nominal voltage | 24 V DC |
| Auxiliary power voltage range | 19 ... 32 V DC |
| Polarity reversal protection | Yes |

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Auxiliary Power

| | | | | |
|---|---|---------------------------------|---------------------------------|---------------------------------|
| Undervoltage monitoring | ≤ 18 V DC | | | |
| Auxiliary power | Connection: 2-pin via a pluggable terminal with a 3 m single core | | | |
| Redundancy | Yes (by using two power modules) | | | |
| System plug connection | Via socket 9496/35 | | | |
| Max. current consumption at nominal voltage [24 V DC] | 1 x CPU + 1 x PM + socket | 2 x CPU + 1 x PM + socket | 1 x CPU + 2 x PM + socket | 2 x CPU + 2 x PM + socket |
| | without modules | 0.5 A | 0.7 A | 0.8 A |
| | with 8 modules | 2.55 A | 2.75 A | 2.85 A |
| | with 16 modules | 4.6 A | 4.8 A | 4.9 A |
| Power dissipation at nominal voltage [24 V DC] | 1 x CPU + 1 x PM + socket | 2 x CPU + 1 x PM + socket | 1 x CPU + 2 x PM + socket | 2 x CPU + 2 x PM + socket |
| | without modules | 12 W | 16.5 W | 19 W |
| | with 8 modules | 13.2 W | 17.7 W | 20.2 W |
| | with 16 modules | 15 W | 19.5 W | 22 W |

Galvanic Isolation

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

Device Specific Data

| | |
|---------------------------------|--|
| LED module requires maintenance | "M/S" LED, blue |
| Auxiliary power LED | "PWR IN" LED, green |
| LED output | "PWR OUT" LED, green |
| Module status and alarms | Power module overload Overtemperature Power module requires maintenance Internal hardware error |
| Status message | Acyclically to control systems and asset management systems over FDT/DTM and the web server |

Ambient Conditions

| | |
|-------------------------|---|
| Ambient temperature °C | -40°C ... +65°C (without mounting plate) |
| | -40°C ... +70°C (With 3 mm sheet steel mounting plate) |
| | -40°C ... +75°C (With 6 mm aluminium mounting plate) |
| Ambient temperature °F | -40°F ... +149°F (without mounting plate) |
| | -40°F ... +158°F (With 3 mm sheet steel mounting plate) |
| | -40°F ... +167°F (With 6 mm aluminium mounting plate) |
| Storage temperature °C | -40°C ... +80°C |
| Storage temperature °F | -40°F ... +176°F |
| 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 |

Mechanical Data

| | |
|---------------------------------------|---|
| Degree of protection (IP) (IEC 60529) | IP30 |
| Module enclosure | Seawater-resistant aluminium Polyamide 6GF |

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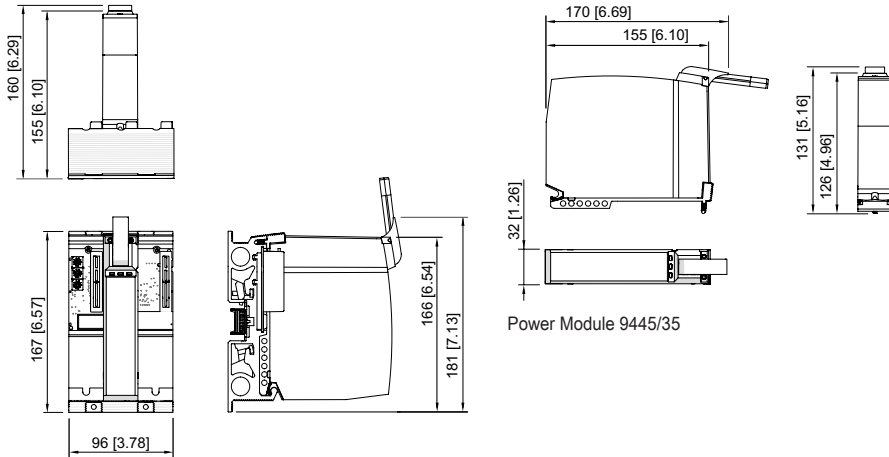
Mechanical Data

| | |
|--------------------------|-------------------|
| Fire resistance (UL 94) | V2 |
| Pollutant class | Corresponds to G3 |
| Width | 31 mm |
| Width, inches | 1.22 in |
| Depth | 110 mm |
| Length | 152 mm |
| Length in inches | 5.98 in |
| Mounting depth in inches | 4.33 in |
| Weight | 1 kg |
| Weight | 2.2 lb |

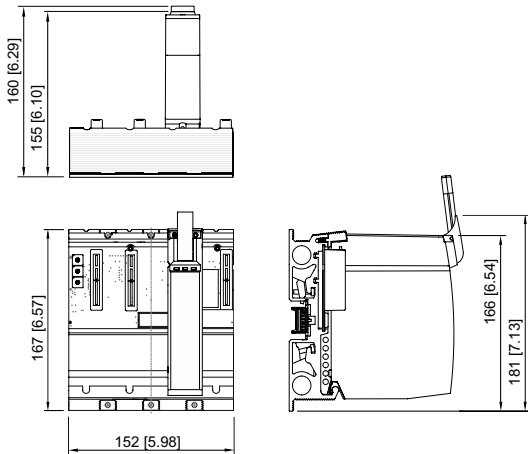
Mounting / Installation

| | |
|----------------------|---|
| Mounting orientation | Vertical Horizontal |
| Module fuse | Torx T20 screws |
| Note | Only connect the 9445/35 power module to the 9496/35 socket |

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



9445/32, 9445/35 power modules and 9496 socket (3 slots)



9445/32, 9445/35 power modules and 9496 socket (4 slots)

Accessories

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9445/35-12 Art. No. 315833

| Connection set | | Art. No. |
|---|---|----------|
| | Auxiliary power set, 24 V (3 m) | 261232 |
| Series 9496/35 – socket for CPU & power modules | | Art. No. |
| | Zone 2 / Div. 2 3 slots for mounting / installing 1 x CPU and 2 x power module or 2 x CPU und 1 x power module Dimensions: approx. L = 167 mm, W = 96 mm, H = 50.6 mm | 246871 |
| | Zone 2 / Div. 2 4 slots for mounting / installing 2 x CPU and 2 x power module Dimensions: approx. L = 167 mm, W = 152 mm, H = 50.6 mm | 262392 |

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