IS1+ power module for zone 2
Series 9445/35

19754E00

- 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 required
- Support of FDT/DTM and web server for integration in asset management systems
- Extended ambient temperature range -40 to +75 °C

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 an 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 to the 9442/35 CPU module and the I/O modules. The 9445/35 power module monitors itself and report 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.

Together with the 9442 CPU and 9496 base as a function replacement for 9444/15 IS1 Ethernet power module and 9440/15 IS1 fieldbus CPM.

	ATEX / IECEx					
Zone	0	1	2	20	21	22
For use in			x			

WebCode 9445A

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Selection Table

Versions	Installation in	Nominal voltage	Order number
Power module	Zone 2 and safe area	24 V DC	**9445/35-12**

Explosion Protection	
Global (IECEx)	
Gas	IECEx PTB 17.0042 X Ex ec [ia Ga, ib Gb] IIC T4 Gc
Europe (ATEX)	
Gas	PTB 17 ATEX 2026 X Ⓔx II 3 (1,2) G Ex ec [ia Ga, ib Gb] IIC T4 Gc
Certifications and certificates	
Certificates	IECEx, ATEX
Ship approval	In progress
Further parameters	
Installation in	Zone 2 and safe area
Further information	see operating instructions and certificates

Technical Data

Electrical data

Auxiliary power

Nominal voltage U_N	24 V DC
Voltage range	19 to 32 V DC
Disconnection when there is undervoltage	< 18 V DC
Start-up current:	75 A at < 2 ms

Max. current consumption at a nominal voltage [24 V DC]

	1 x CPU + 1 x PM + base	2 x CPU + 1 x PM + base	1 x CPU + 2 x PM + base
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 a nominal voltage [24 V DC]

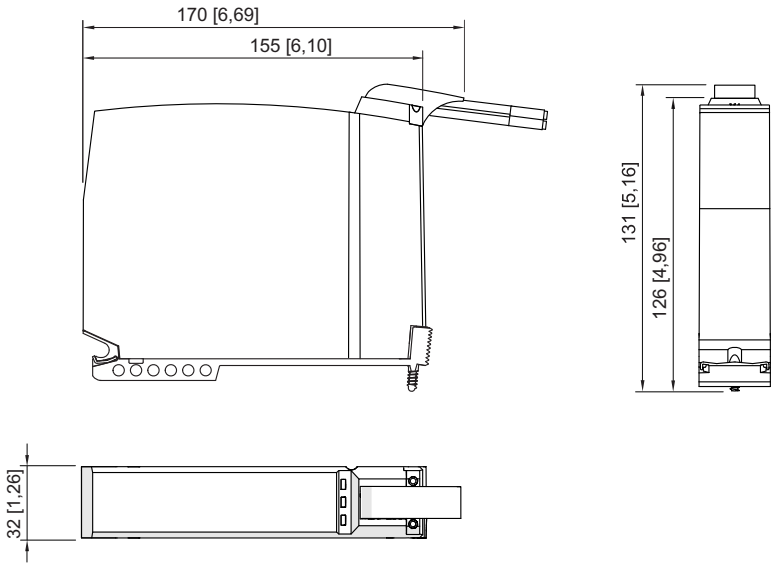
	1 x CPU + 1 x PM + base	2 x CPU + 1 x PM + base	1 x CPU + 2 x PM + base
Without modules	12 W	16.5 W	19 W
With 8 modules	13.2 W	17.7 W	20.2 W
With 16 modules	15 W	19.5 W	22 W

Polarity reversal protection	Yes
Max. voltage U_m	60 V DC
Redundancy	Yes (by using two power modules)
Galvanic separation	
Test voltage	
acc. to standard	EN 60079-11
Between the auxiliary power and BusRail / CPU / base	1500 V AC
Electromagnetic compatibility	Tested to the following standards and regulations: EN 61326-1 (2013) IEC 61000-4-1 to 61000-4-6, NAMUR NE 21
Electrical connection	
Connection of auxiliary power	2-pole via a pluggable terminal with a 3 m single core
System plug connection	To 9496/35 base

Technical Data

Ambient conditions	
Ambient temperature	-40 to +75 °C (Observe the operating instructions of the 9496/35 base!)
Storage temperature	-40 to +80 °C
Maximum relative humidity	95 % (without condensation)
Maximum operating height	< 2000 m
Semi-sinusoidal shock (IEC EN 60068-2-27)	15 g (3 shocks per axis and direction)
Sinusoidal vibration (IEC EN 60068-2-6)	1 g in the frequency range from 10 to 500 Hz 2 g in the frequency range from 45 to 100 Hz
Mechanical data	
Degree of protection (IEC 60529)	IP20
Material	
Enclosure	6GF polyamide / seawater-resistant aluminium
Fire resistance (UL-94)	V2
Pollutant class	corresponds to G3
Dimensions	
Power module	L = 155 mm, W = 32 mm, H = 126 mm
Power module with 9496 base	L = 181 mm, W = 96 mm, H = 160 mm
Indication	
LED indication	
Operation indication for external supply	"PWR IN" LED, green
Module requires maintenance	"M/S" LED, blue
Operation indication for supply to CPU and I/O modules	"PWR OUT" LED, green
Error indication	
Module status and alarms	• Overload of the power module • Excess temperature • Power module requires maintenance • Internal hardware error
Status message	Acyclically to control systems and asset management systems over FDT/DTM and the web server
Mounting / Installation	
Installation conditions	
Mounting type	Only connect the 9445/35 power module to the 9496/35 base
Mounting position	Horizontal or vertical (observe operating instructions for the 9496/35 base)
Screw version	Torx 20

Dimensional drawings (all dimensions in mm [inches]) – Subject to modification



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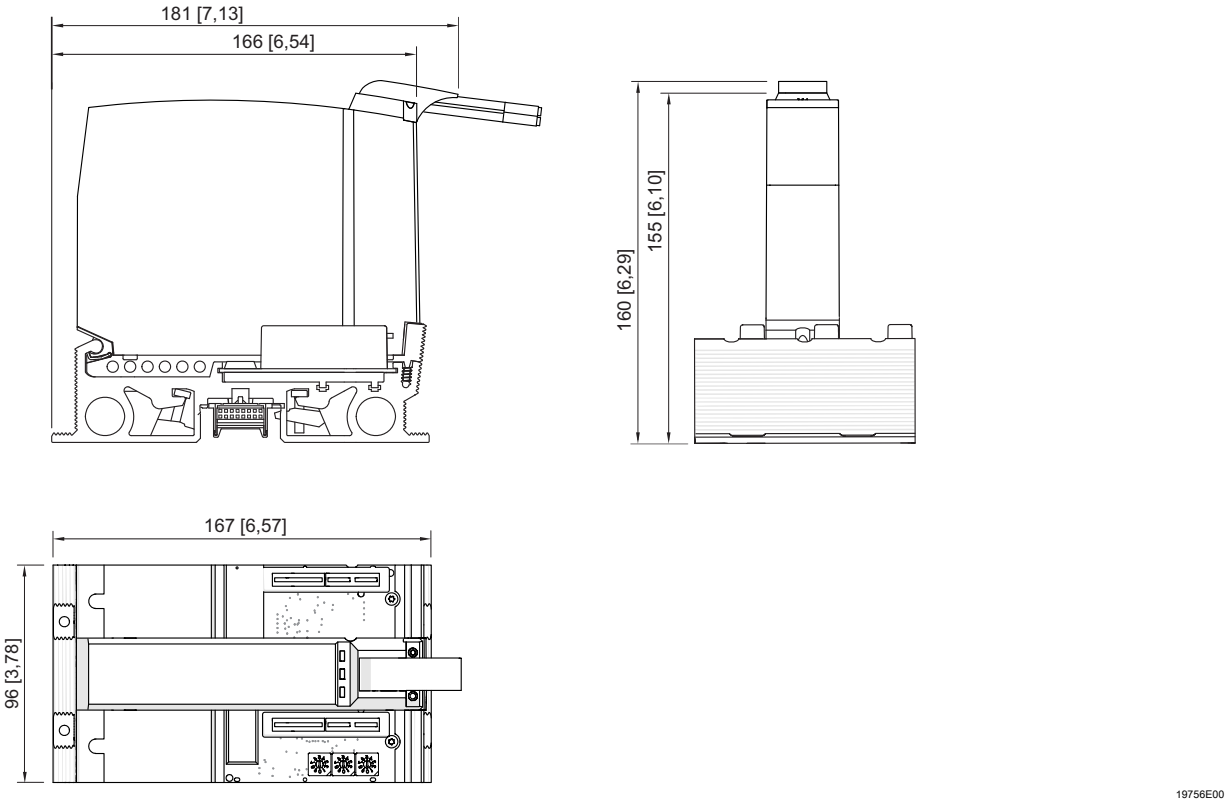
Dimensional drawings (all dimensions in mm [inches]) – Subject to modification

9445/35 power modules



9445/35 power modules with 9496/35 base

Accessories and Spare Parts

Designation	Figure	Description	Art. no.	Weight kg
IS1+ CPU module	 19621A	Communication / Gateway module for IS1+ remote I/O station Webcode: 9442A	**246854**	1.3
Base for CPU and power modules	 19048E00	Backplane for storing IS1+ 9442/35 CPU and 9445/35 power module (3 slots) Webcode: 9496A	**246871**	0.4
9445 auxiliary set 24 V (3 m)	 20149A	Set with plug connector, 3 m, 2-wire line and terminal blocks for connecting the power module to the 24 V DC	**261232**	

We reserve the right to make alterations to the technical data, dimensions, weights, designs and products available without notice. The illustrations cannot be considered binding.