



- Suitable for Ex i V0/V1 HART PROFIBUS DP, Modbus RTU
- Supporting system redundancy and optical rings
- CPM in Zone 1 and Cl. I, Div. 1 can be hot swapped
- Integration in plant asset management systems via ServiceBus and FDT/DTM
- Integrated Ex i power supply for up to 8 I/O modules

06 b

WebCode **9440A**



Modbus RTU



9440/22 series CPU & power modules (CPM) for Zone 1, Cl. I, Div. 1 are used for the intrinsically safe supply of power to up to eight IS1+ I/O modules and to field circuits. Intrinsically safe RS485-IS with PROFIBUS DP or Modbus RTU is used for communicating with the automation system. These CPMs support system and optical rings and can be replaced while the system is in operation (i.e. hot swapped) in Zone 1/Division 1. A DTM and process bus or service bus are used for asset management integration.

	NEC® 500 CE Code Appendix J					
	Class I		Class II		Class III	
Division	1	2	1	2	1	2
Ex interface	•	•	•	•	•	•
Installation in	•	•				

	CE Code Section 18					
	NEC® 505			NEC® 506		
	Class I					
Zone	0	1	2	20	21	22
Ex interface	•	•	•			
Installation in		•	•			

	IECEx / ATEX					
		0	1	2	20	21
Zone						
Ex interface	•	•	•		•	•
Installation in		•	•			






Selection Table					
Installation Zone 1 / Cl. I, Div. 1					
Nominal voltage V _{nom}	Protocols	Redundancy	Product Type	Art. No.	Weight
24 V DC	Modbus RTU	Full redundancy	9440/22-01-11-C1202	162221	2.96 kg
	Profibus DP V0	Full redundancy	9440/22-01-11-C1243	162218 ▲	2.96 kg
	Profibus DP V1 Profibus DP V1 HART	According to PNO Full redundancy	9440/22-01-11-C1455	203585	2.96 kg
120 V / 230 V AC	Modbus RTU	Full redundancy	9440/22-01-21-C1202	162214	2.96 kg
	Profibus DP V0	Full redundancy	9440/22-01-21-C1243	162211	2.96 kg
	Profibus DP V1 Profibus DP V1 HART	According to PNO Full redundancy	9440/22-01-21-C1455	203586	2.96 kg

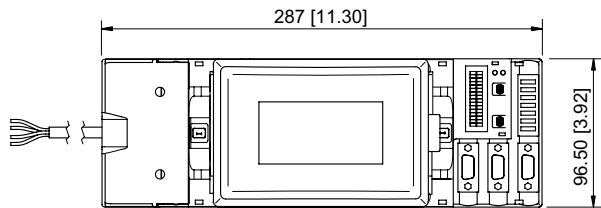
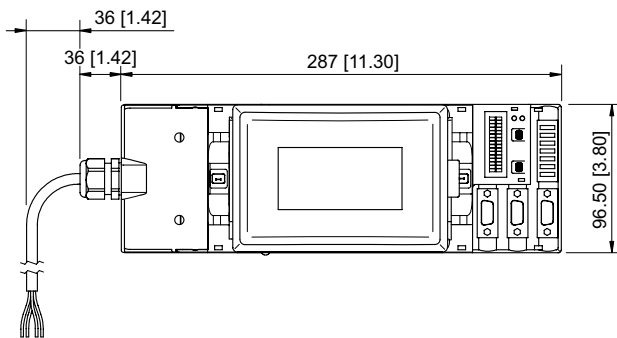
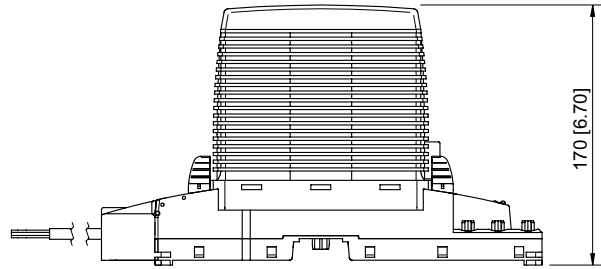
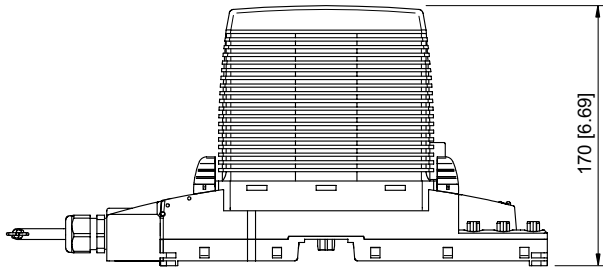
Please order the 9490 socket separately (see accessories).

Technical Data		
Variant	24 V DC	120 V / 230 V AC
Explosion Protection		
FMus certificate	FM17US0332X	FM17US0332X
cFM certificate	FM16CA0134X	FM16CA0134X
cCSA certificate	1519624	1519624

Technical Data		
Variant	24 V DC	120 V / 230 V AC
Explosion Protection		
Marking cFMus	XP, Class I, Div. 1, Groups A,B,C,D; Class I, Zone 1, Group IIC AIS Class I,II,III, Div. 1, Groups A,B,C,D,E,F,G; Class I, Zone 1, [AEx ia, ib]/[Ex ia, ib] IIC T4 at Ta = 65 °C See Doc. 9440 6 031 001 1	XP, Class I, Div. 1, Groups A,B,C,D; Class I, Zone 1, Group IIC AIS Class I,II,III, Div. 1, Groups A,B,C,D,E,F,G; Class I, Zone 1, [AEx ia, ib]/[Ex ia, ib] IIC T4 at Ta = 65 °C See Doc. 9440 6 031 001 1
Marking cCSA	Class I, Zone 1, Ex e d ib [ia/ib] IIC T4 Class I,II,III, Div. 1, Groups A,B,C,D,E,F,G; T4 at Ta = 65 °C See Doc. 94 006 01 31 2	Class I, Zone 1, Ex e d ib [ia/ib] IIC T4 Class I,II,III, Div. 1, Groups A,B,C,D,E,F,G; T4 at Ta = 65 °C See Doc. 94 006 01 31 2
IECEX gas explosion protection	Ex d [ia] [ib] IIC T4 Gb	Ex d [ia] [ib] IIC T4 Gb
Certificates	ATEX (DEK), Brazil (ULB), Canada (FM), China (NEPSI), IECEX (DEK), Korea (KTL), USA (FM)	ATEX (DEK), Brazil (ULB), Canada (FM), China (NEPSI), IECEX (DEK), Korea (KTL), USA (FM)
Ship approval	ABS, BVIS, EU RO MR (DNV), KR, LR	ABS, BVIS, EU RO MR (DNV), KR, LR
Electrical Data		
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	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
Fieldbus RS485 connection	Sub-D socket, 9-pole	Sub-D socket, 9-pole
ServiceBus RS485 connection	Sub-D socket, 9-pole	Sub-D socket, 9-pole
Auxiliary Power		
Auxiliary power voltage range	20 to 35 V DC	90 to 253 V AC
Current consumption (without I/O modules)	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. 2.5 A at 24 V DC	Approx. 0.4 A at 230 V AC Approx. 0.8 A at 120 V AC
Power dissipation (without I/O modules)	5 W	8.4 W
Power dissipation (per I/O module)	1.4 W	1 W
Ambient Conditions		
Ambient temperature °F	-4°F ... +149°F	-4°F ... +149°F
Ambient temperature °C	-20°C ... +65°C	-20°C ... +65°C
Mechanical Data		
Degree of protection (IP) (IEC 60529)	IP20 connections IP30 modules	IP20 connections IP30 modules
Width, inches	3.78 in	3.78 in
Width	96.5 mm	96.5 mm
Mounting depth, inches	6.69 in	6.69 in
Depth	170 mm	170 mm
Length, inches	9.96 in	9.96 in

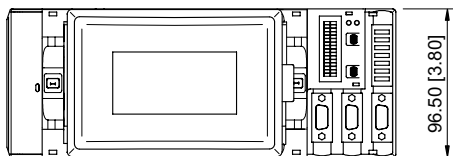
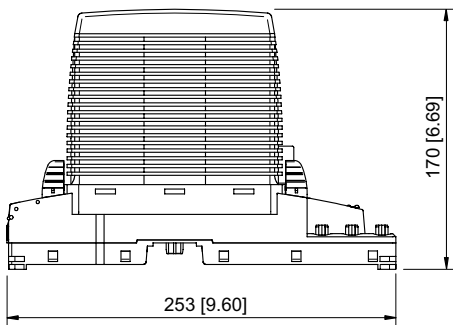
Accessories				
Figure	Description	Product Type	Art. No.	Weight
Series 9490/11 socket for CPU & power module				
	Zone 1, connection by means of Ex e terminals, 24 V DC, 120/230 V AC	9490/11-12	162707	482 g
Series 9490/13 socket for CPU & power module				
	Zone 1, connection by means of an unconnected cable end, 24 V DC, 120/230 V AC	9490/13-12	162711	900 g

Accessories				
Figure	Description	Product Type	Art. No.	Weight
Series 9490/12 socket for CPU & power module				
	Division 1, connection via conduit 24 V DC, 120 / 230 V AC 9491/00-13-70 conduit hub is required and needs to be ordered separately	9490/12-12	162715	900 g
Sub-D plug, RS-485 IS, angled				
	9-pin for connecting fieldbus or ServiceBus to CPU & power module Series 9440/22, 9185 fieldbus isolating repeater and 9786/12-11 media converter. The end-of-line resistor is installed and switchable. For RS 485 IS (according to Profibus standard). Ambient temperature: -40 °C to +70 °C	-	162693 ▲	100 g
FO fieldbus isolating repeater, Zone 2/Div. 2				
	Isolating repeater for installation in Zone 2/Div. 2 For fieldbuses using optical intrinsically safe "Ex op is" fibre optic in Zone 1/Div. 1 Compatible with Series 9186 devices Optical ring possible Comprehensive diagnostics function and fault message contact Suitable for PROFIBUS DP to 1.5 Mbps For further information, see the data sheet for Series 9186 FO fieldbus isolating repeaters	9186/15-12-11	160624	244 g
Fieldbus Isolating Repeater Series 9185/11				
	Equipment for installation in safe areas or Zone 2/Div. 2 For fieldbuses with RS485-IS interface – Zone 1/Class I, II, III Division 1 and Class I, II, III Zone 1 Suitable for PROFIBUS DP, Modbus, R. STAHL ServiceBus RS 232, RS 422, RS 485 interface with the automation system Transmission rate automatically set with PROFIBUS DP Adjustable transmission rate (1.2 kbps to 1.5 Mbps) 24 V AC/DC auxiliary power For further information, see the Series 9185/11 data sheet	9185/11-35-10s	227598	350 g
DTM IS1+ devices for PROFIBUS DP and Ethernet				
	Parameterisation and configuration of the IS1+ system Communication with HART-capable field devices Supports all common FDT frame applications (e.g. FieldCare, PactWare™) Condition monitoring Scan function for automatic topology generation Download from r-stahl.com	-	-	-
IS1 PCS7 APL field device library				
	Easy integration of IS1+ systems into SIEMENS PCS7 (V9 SP2 ... V9.1 SP2): - PROFIBUS DP with CPM 9440 starting with GSD 3.12; CPU 9442 starting with GSD 5.14 - PROFINET with CPU 9441 starting with GSDML-V2.3-Stahl-RIO-20140206; CPU 9442 starting with GSDML-V2.34-Stahl-RIO9442-20200427 Further information and order processing exclusively through company Siemens: www.siemens.com/mvdi	-	-	-



CPU & Power Module for Division 1 with connection by means of a conduit

CPU & Power Module for Zone 1 with connection by means of a pig tail



CPU & Power Module for Zone 1 with connection by means of Ex e terminals