- Suitable for Modbus RTU
- Supporting system redundancy and optical rings
- Integration in plant asset management systems via ServiceBus and FDT/DTM

WebCode 9440B

Modbus RTU · HART COMMUNICATION PROTOCOL · FDT TECHNOLOGY

9440/15 series CPU & power modules (CPM) for Zone 2, Cl. I, II, Div 2 are used for the intrinsically safe supply of power to up to 16 IS1+ I/O modules and to field circuits. RS485 with Modbus RTU is used for communicating with the automation system. The CPMs support system redundancy and optical rings. A DTM and process bus or service bus are used for asset management integration.

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

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

IECEx / ATEX						
Zone	0	1	2	20	21	22
Ex interface			•		•	•
Installation in			•		•	•

Selection Table

Installation	Zone 2 / Cl. I, II, Div. 2			
Protocols	Redundancy	Product Type	Art. No.	Weight lb
Modbus RTU	full redundancy	**9440/15-01-11-C1198**	162188	1.34

Technical Data

Explosion Protection	
Certificate FMus	FM17US0332X
Certificate cFM	FM16CA0134X
Marking FMus	NI; Class I, Div. 2, Groups A,B,C,D; Cl. I, Zone 2, IIC; ANI; Class I,II,III, Div. 2, Class A,B,C,D,E,F,G; Class I, Zone 2, IIC; T4 at Ta = 65 °C; See Doc. 9440 6 031 002 1
Marking cFM	NI; Class I, Div. 2, Groups A,B,C,D; Class I, Zone 2 per CEC 18-150 ANI; Class I,II,III, Div. 2, Groups A,B,C,D,E,F,G; T4 at Ta = 65 °C; See Doc. 9440 6 031 002 1
IECEx gas explosion protection	Ex ec [ia, ib Gb] IIC T4 Gc
Certificates	ATEX (PTB), Brazil (ULB), Canada (FM), EAC (STV), IECEx (PTB), Korea (KTL), USA (FM)
Ship approval	DNVGL, RINA
Electrical Data	
Transmission distance/rate for copper RS485	1200 m at 9.6...93,75 kbit/s 1000 m at 187.5 kbit/s 400 m at 500 kbit/s 200 m at 1.5 Mbit/s
Connection Fieldbus RS485	Sub-D socket 9-pole

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Technical Data

Electrical Data	
Connection ServiceBus RS485	Sub-D socket 9-pole
Auxiliary Power	
Auxiliary power voltage range	20 ... 35 V DC
Current consumption (without I/O modules)	0.3 A (24 V DC)
Current consumption (with 8 I/O modules)	Approx. 2.5 A at 24 V DC
Current consumption (with 16 I/O modules)	Approx. 4.9 A at 24 V DC
Power dissipation (without I/O modules)	7.2 W
Power dissipation (per I/O module)	1 W
Ambient Conditions	
Ambient temperature °F	-4°F ... +149°F
Ambient temperature °C	-20°C ... +65°C
Mechanical Data	
Degree of protection IP (IEC 60529)	IP20 connections IP30 modules
Width inches	3.78 in
Width	96.5 mm
Mounting depth inches	4.21 in
Depth	107 mm
Length inches	5.83 in
Length	148 mm

Accessories

Figure	Description		Product Type	Art. No.	Weight lb
Cable for PROFIBUS DP, RS 485, RS485-IS					
	Cable type:	BUS 4000-C-PE 2x0,64mm 02YS(St) CY2Y	O2Y(ST)CY2Y	105444	0.66
	Color (sheath):	black			
	Application area:	Outdoor			
	Installation outdoors and directly in the ground, UV-resistant				
Cable for PROFIBUS DP, RS485					
	Cable type:	02YS(St) CHSH	02YS(ST)CHSH ProfibusDP	209430	–
	Color (sheath):	violet			
	Application area:	Offshore			
	Halogen-free, steel wire braid armored cable				
	Cable type:	BUS 4000-C-PVC 2x0,64mm 02YS(St) CY	O2Y(ST)CY	105438	0.66
	Color (sheath):	violet			
	Application area:	Indoor			
	Standard type for indoor installation				
Sub-D plug + PG interface					
	9-pin for connection of the fieldbus or ServiceBus to the CPU & power module Series 9440/15 and fieldbus-isolating repeater 9185. Integrated terminator can be switched on or off. For non-intrinsically safe RS-485.		–	105715	–
Fieldbus Isolating Repeater Series 9185/12					
	Equipment for installation in safe areas or Zone 2 / Div. 2 For fieldbuses with RS-485 interface. Suitable for PROFIBUS DP, Modbus, R. STAHL service bus. RS-232, RS-422, RS-485 interface with the automation system Transmission rate automatically set with PROFIBUS DP Adjustable transmission rate (1.2 kbit/s to 1.5 Mbit/s) 24 V AC/DC auxiliary power For further information, see data sheet for 9185/12 series		9185/12-45-10s	227600	0.77

Accessories

Figure	Description	Product Type	Art. No.	Weight lb
Optical Fieldbus Isolating Repeater, Zone 2 / Div. 2				
	Isolating repeater for installation in Zone 2 / Div. 2 For fieldbus via fibre optic intrinsically safe cables "ex op is" into Zone 1 / Div. 1 Optical ring possible Extensive diagnostic function and fault-contact Suitable for Profibus DP up to 1.5 MBit/s Further versions and information see data sheet of Series 9186 optical fieldbus-isolating repeater	9186/15-12-11	160624	0.54
Device DTM IS1+ for PROFIBUS DP and Ethernet				
DTM	Parameterization and configuration of the IS1+ system Communicating with HART-compatible field devices Supports all common FDT frame applications (e.g. FieldCare, PactWare™) Condition Monitoring Scan function for automatic topology generation Download at r-stahl.com	–	–	–
IS1 PCS7 APL field device library				
CFC SIEMENS	Easy connection of IS1+ modules to the SIEMENS control system PCS7 via PROFIBUS DP. The library contains CFC driver modules created in conformance with PCS7 modules, and documentation in English. HOTLINE support inclusive. Order, processing and support are carried out directly via SIEMENS: function.blocks.industry@siemens.com Hardware/software requirements: SIEMENS PCS7 V7.1 to 8 SP2 and IS1+ CPM 9440/…C1455 from V03.45 and GSD from V03.05	–	–	–

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

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