

# Remote I/O

## Remote I/O IS1 Ethernet CPU module

### For Zone 1

9441/12-00-00 Art. No. 211045



- Suitable for “op is” 100 Mbit/s Ethernet with PROFINET, Modbus TCP or EtherNet/IP™
- Redundant operation with Modbus TCP possible
- CPU can be hot swapped in Zone 1 and Class I, Div. 1

WebCode 9441A



Modbus TCP

EtherNet/IP



The 9441/12 series CPU for Zone 1 and Class I, Div. 1 is used to communicate with the automation system via PROFINET, Modbus TCP or EtherNet/IP™. The connection is established by means of an optically inherently safe “op is” fibre optic, which can be connected and disconnected in Zone 1 and Class I, Div.1

IS1+ and connected HART devices are integrated into asset management systems using a DTM.

## Technical Data

### Explosion Protection

Application range (zones)	1 2
Ex interface zone	0 1 2 20 21 22
IECEX gas certificate	IECEX KEM 08.0035X
IECEX gas explosion protection	Ex d [ia Ga] [op is T6 Ga] IIC T4 Gb
IECEX dust certificate	IECEX KEM 08.0035X
IECEX dust explosion protection	[Ex ia Da] [Ex op is Da] IIIC
ATEX gas certificate	KEMA 08 ATEX 0155 X
ATEX gas explosion protection	⊕ II 2 (1) G Ex d [ia Ga] [op is T6 Ga] IIC T4 Gb
ATEX dust certificate	KEMA 08 ATEX 0155 X
ATEX dust explosion protection	⊕ II (1) D [Ex ia Da] [Ex op is Da] IIIC
Certificate FMus	FM17US0332X
Certificate cFM	FM16CA0134X
Marking cFMus	XP; Class I, Div. 1, Groups A,B,C,D; Class I, Zone 1, IIC AIS Class I,II,III, Div. 1, Groups A,B,C,D,E,F,G; Class I, Zone 0, [AEx ia] IIC; T4 at Ta = 65 °C; See Doc. 9441 6 031 001 1  XP; Class I, Div. 1, Groups A,B,C,D; Class I, Zone 1 per CEC 18-100 AIS Class I,II,III, Div. 1, Groups A,B,C,D,E,F,G; Class I, Zone 0, [Ex ia] IIC; T4 at Ta = 65 °C; See Doc. 9441 6 031 001 1
EAC certificate	TS RU S-DE.GB04.B.00448
EAC certificate valid until	2020-07-01

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#### Explosion Protection

EAC gas explosion protection	Ex 1 Ex d [ia Ga] [op is T6 Ga] IIC T4 Gb X
EAC dust explosion protection	Ex [Ex ia Da] [Ex op is Da] IIIC
Certificates	ATEX (DEK), Brazil (ULB), Canada (FM), EAC (STV), IECEx (DEK), International (FF), USA (FM)
Ship approval	EU RO MR
Notes	CCC certificate available from 2021 onward
Installation	Zone 1 / Division 1
Further information	see respective certificate and operating instructions

#### Safety Data

Safety-related maximum voltage	253 V AC
Max. FO radiant power	≤ 15 mW
Connection fibre optic	"Ex op is" acc.to IEC 60079-28

#### Electrical Data

Protocols	EtherNet/IP Modbus TCP PROFINET
Interface Ethernet	Fibre optic cable, 100BASE-FX, Ex op is (IEC 60079-28)
Transmission distance	2000 m
Transmission rate	max. 100 Mbit/s
Ethernet Connection	Multimode 62,5/125 µm (OM1) and 50/125 µm (OM2), plug LC

#### Auxiliary Power

Auxiliary power	via socket 9492/12-11-..
Nominal voltage	24 V DC
Auxiliary power voltage range	20 ... 35 V DC
Polarity reversal protection	Yes
Undervoltage monitoring	Yes
Current consumption (without I/O modules)	0.36 A at 24 V DC
Current consumption (with 8 I/O modules)	Approx. 2.6 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)	8.6 W
Power dissipation (8 I/O modules)	14 W

#### Galvanic Isolation

Auxiliary power/system components	1500 V AC
ServiceBus/system components	500 V AC

#### Device Specific Data

Software	IS1 devices DTM IS Wizard
LED status Ethernet	"LINK" LED, green
LED operating conditions	"RUN" LED, green
LED group error	"ERR" LED, red
LCD display	2 x16 characters
LCD Display	2 x16 characters (on the 9492/12-11-.. base)

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#### Device Specific Data

LCD settings	IP address Subnet mask Gateway address
Indications	IP address, alarms / faults, information (type, revision, etc.) for field station, modules and signals, values of the inputs and outputs
Diagnostics CPU & Power Module	Hardware error Configuration error
Diagnostics I/O Modules	Primary internal bus error Redundant internal bus error No response Configuration different from module Hardware error

#### Ambient Conditions

Ambient temperature	-20°C ... +65°C
Ambient temperature	-4°F ... +149°F
Storage temperature	-40°C ... +70°C
Storage temperature	-40°F ... +158°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 ... 13.2 Hz    Amplitude 1 mm (peak value) Frequency range 13.2 ... 100 Hz    Acceleration amplitude 0.7 g
Electromagnetic compatibility	Tested to the following standards and regulations: EN 61326-1 (1998) IEC 1000-4-1...6, NAMUR NE 21

#### Mechanical Data

Degree of protection IP (IEC 60529)	IP30
Module enclosure	Polyamide 6GF
Fire resistance (UL 94)	V2
Pollutant class	Corresponds to G3
Width	38 mm
Width inches	1.5 in
Depth	158 mm
Length	226 mm
Length inches	8.9 in
Mounting depth inches	6.22 in
Weight	1.3 kg
Weight	2.87 lb

#### Mounting / Installation

Mounting type	on socket 9492/12-11-..
Mounting position	Vertical

# Remote I/O

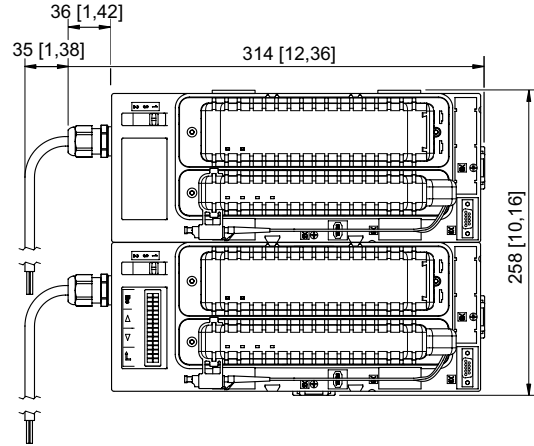
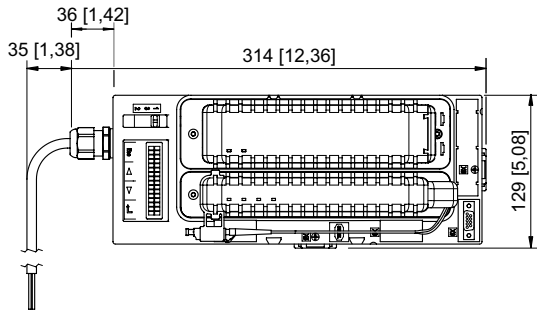
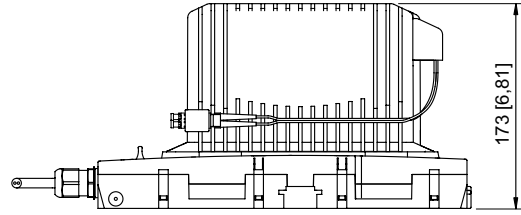
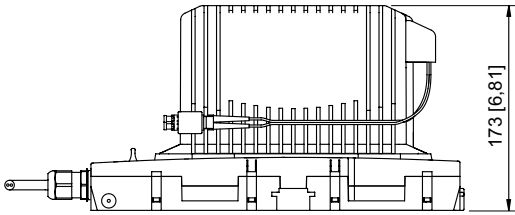
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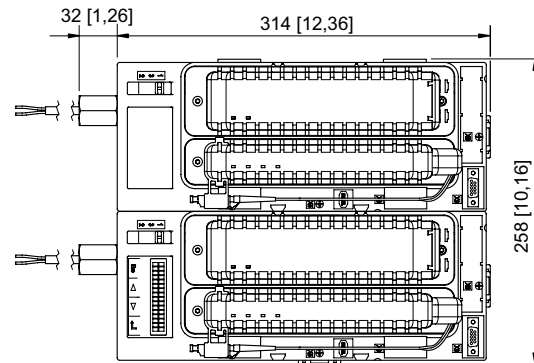
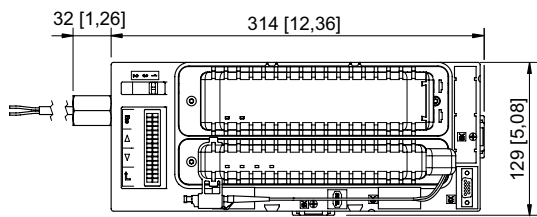
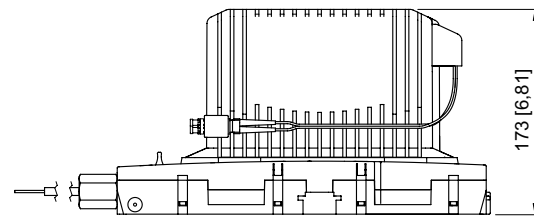
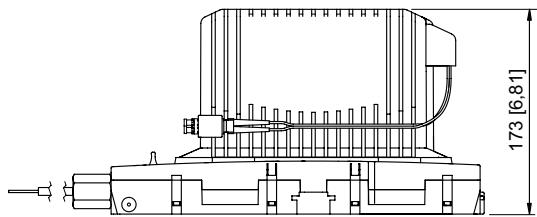


### Dimensional Drawings (All Dimensions in mm [inches]) – Subject to Alterations



Ethernet CPU Module & Power Module with Socket for Zone 1

Ethernet CPU Module & Power Module with redundant Socket for Zone 1



Ethernet CPU Module & Power Module with Socket for Div. 1

Ethernet CPU Module & Power Module with redundant Socket for Div. 1

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### Accessories


#### Series 9492/13 - Socket for CPU and Power Module

	Art. No.
	202098
	202099
	208875
	208876


#### Device DTM IS1 Series 9499

	Art. No.
 <ul style="list-style-type: none"> <li>- Parametrisation and configuration of the IS1+ system</li> <li>- Communication with HART-compatible field devices</li> <li>- Support for all common FDT frame applications (e.g. FieldCare, PactWare™)</li> <li>- Condition monitoring</li> <li>- Scan function for automatic topology generation</li> <li>- Download from r-stahl.com</li> </ul>	
 <p>9499/DTM-IS1-02 Com/Device/HART 30 Free-of-charge software licence for up to 30 HART devices</p>	251237
 <p>9499/DTM-IS1-04 Com/Device/HART 300 Software licence for up to 300 HART devices</p>	251239
 <p>9499/DTM-IS1-06 Com/Device/HART unlted. Software licence for an unlimited number of HART devices</p>	251240


#### AOI Tool

	Art. No.
 <p>Easy integration of IS1+ systems into Rockwell ControlLogix and CompactLogix via EtherNet/IP and AOI (Add On Instructions). Note: The DTM 9499/DTM-IS1 is additionally required. Download at r-stahl.com</p>	

#### IS1 PCS7 APL field device library

	Art. No.
 <p>Easy integration of IS1+ systems into SIEMENS PCS7 V9 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</p>	

#### Series 9492/12 - Socket for CPU and Power Module

	Art. No.
	Zone 1 166176
211045-02-01 V131 EN	Fieldbus: Modbus TCP, simplex R. STAHL Schaltgeräte GmbH   Am Bahnhof 30   74638 WALDENBURG 24 V DC Tel.: +49 7942 943 1711   +49 7942 943 1777   Email: sales.de@r-stahl.com   r-stahl.com
	Zone 1 166322

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