



EUROPEAN UNION RECOGNISED ORGANISATION (EU RO) MUTUAL RECOGNITION TYPE APPROVAL CERTIFICATE

Certificate No:
MRA000000U
Revision No:
3

In accordance with Article 10.1 of EU Regulation 391/2009

This Certificate is issued to

R. STAHL Schaltgeräte GmbH
Waldenburg, Germany

for

Computers and Programmable Logic Controllers

with type designation(s)

Remote I/O System Type IS1 and IS1+

The product is found to comply with

EU RO Mutual Recognition Technical Requirements for Computers and Programmable Logic Controllers

Intended service

Application of the control, monitoring, alarm, and safety systems are subject for approval of the individual RO classing the vessel.

Temperature [°C]: -25 and 70
Vibration: ±1mm / 0.7g
EMC: General power distribution zone.
IP Code: IP20

This is to certify:

that the Product referred to herein has been inspected for the Manufacturer, pursuant to the relevant requirements of the European Union Recognised Organisation Mutual Recognition procedure, required by Article 10.1 of EU Regulation 391/2009, and has been found in accordance with those requirements.

This Certificate is valid until **2026-10-20**.

Issued at **Hamburg** on **2021-10-21**

DNV local station: **Augsburg**

for **DNV**

Approval Engineer: **Dariusz Lesniewski**

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Joannis Papanuskas
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid. The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



Product description

Remote I/O System Type IS1 and IS1+, Series 94**, consisting of the following units:

Type	Designation	Zone
CPU & Power Modules (for Zone 1 or Zone 2)		
9440/15-01-*1	CPU & Power module for up to 16 I/O modules, with Display	2
9440/22-01-*1 (*1 = 11 or 21)	CPU & Power module for up to 8 I/O modules, with Display	1
9490/1*-12	Socket	1
9442/32-10-00	CPU module	1
9442/35-10-00	CPU module	2
9445/32-12	Power module for up to 16 I/O modules + Power supply set	1
9445/35-12	Power module for up to 16 I/O modules + Power supply set	2
9496/32-03-00	Socket 3 Slots	1
9496/35-03-00	Socket 3 Slots	2
9496/32-04-00	Socket 4 Slots	1
9496/35-04-00	Socket 4 slots	2
I/O modules with IS field circuits (Ex ib or ia)		
9462/12-0*-11	Analog Input Module 6/8x AI for HART transmitters, 0/4...20mA, line monitoring, FS	1
9468/32-08-1*	Analog Universal Module HART 8x AI/AO for HART transmitter/valves, 0/4...20mA, line monitoring	1
9468/33-08-1*	Analog Universal Module HART 8x AI/AO for HART transmitter/valves, 0/4...20mA, line monitoring	2
9470/32-16-1*	Digital Input Output Module 16x DI/DO, for volt-free contacts and low energy valves, 2 frequency input up to 20kHz, line monitoring	1
9470/33-16-1*	Digital Input Output Module 16x DI/DO, for volt-free contacts and low energy valves, 2 frequency input up to 20kHz, line monitoring	2
9475/32-04-**	Digital Output Module 4x DO, line monitoring	1
9475/32-08-**	Digital Output Module 8x DO, line monitoring	1
9475/33-04-**	Digital Output Module 4x DO, line monitoring	2
9475/33-08-**	Digital Output Module 8x DO, line monitoring	2
9482/32-08-1*	Temperature Input Module 8x Temperature Input, RTD's and thermocouples	1
9482/33-08-1*	Temperature Input Module 8x Temperature Input, RTD's and thermocouples	2
I/O modules for Non-IS field circuits		
9469/35-08-1*	Universal Module HART 8x AI/AO or 4x AI/AO + 4 DI/DO for transmitters, control valves, PNP proximity switches, solenoids	2
9471/35-16-1*	Digital Input Output Module NAMUR 16x DI or DO, for NAMUR proximity switches, solenoid valves, frequency signals	2
9472/35-16-1*	Digital Input Output Module 24 V 16x DI or DO, for PNP/NAMUR proximity switches, solenoid valves, frequency signals	2
9477/12-06-12	Relay Module 6x relay output, 250V AC or 30-220V DC, 0.12-2A, NO	1
9477/12-08-12	Relay Module 8x relay output, 60V DC, 2A, NO	1
9490/11-3*	Socket for Relay modules 9477/12	1
9477/15-08-12	Relay Module 8x relay output, 250V AC or 30-220V DC, 0.12-2A, NO	2
Accessories		
9185/1*-**-10	Fieldbus Isolating Repeater	2
9494/*1-**-	BusRail for IS1 / IS1+ system	1
Terminals	Terminals for I/O Modules listed in the instruction manual (spring / screw)	1 / 2
SUB D connector	RS 485-IS (162693)	1

Type	Designation	Zone
9721/13-11-*4	Media Converter FXopis/TX SC SM/MM Ex op is	2
9721/13-42-**	Unmanaged Switch FX op is SC / TX RJ45	2
9787/15-11-11	USB RS485 Converter	2
Enclosure	A housing is required to fulfil the EMC requirements	1 / 2

I/O modules with reduced environment conditions

9478/22-08-51	8x valves, Digital output module with valve for compressed air Ambient temperature: 0°C ... 60°C	1
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Manufactured by

R. STAHL Schaltgeräte GmbH
 Am Bahnhof 30
 74638 Waldenburg
 Germany

Application/Limitation

This approval covers hardware only. This excludes firmware, application software, and hardware designed for specific applications subject to classification. Firmware, system software, and application software are subject to additional separate approval, according to UR E22 and the rules of the classing RO (FAT and on-board review / tests).

Ex-certification is not covered by this certificate. Application in hazardous area to be approved in each case according to the Rules and Ex-Certification/ Special Condition for Safe Use listed in valid Ex-certificate issued by a notified/recognized Certification Body.

Required protection according to the Recognised Organisation's Rules shall be provided upon installation on board.

EMC Emission and Immunity:

- Hardware installed in metal cabinet
- EMC-Cable gland or separate screen rails inside the enclosure or
- Cabinet to connect the screen of the signal cables
- Shielded signal cables

Type Approval documentation

Marking of product

Manufacturer's name: R. STAHL Schaltgeräte GmbH
Type No.: Refer to product description
Unique serial No.
Date of manufacture:
Power supply ratings:

Other Conditions

The units have been verified for compliance with EU Mutual Recognition Technical Requirements for Computers and programmable logic controllers (PLC) version 0.6.

Environmental test parameters

Temperature: -25°C and 70°C
Vibration: ±1mm / 0.7g
EMC: General power distribution zone.
Enclosure: IP20

Periodical assessment

The scope of the periodical assessment is to verify that the conditions stipulated for the type are complied with, and that no alterations are made to the product design or choice of systems, software versions, components and/or materials.

The main elements of the assessment are:

- Ensure that type approved documentation is available
- Inspection of factory samples, selected at random from the production line (where practicable)
- Review of production and inspection routines, including test records from product sample tests and control routines
- Ensuring that systems, software versions, components and/or materials used comply with type approved documents and/or referenced system, software, component and material specifications
- Review of possible changes in design of systems, software versions, components, materials and/or performance, and make sure that such changes do not affect the type approval given
- Ensuring traceability between manufacturer's product type marking and the type approval certificate

Periodical assessment is to be performed annually and at renewal of this certificate.

END OF CERTIFICATE

Generic Statement for EU RO MR Type Approval Certificate

When a product is presented with this EU RO MR Type Approval Certificate for given application, its acceptability with regards to the limitations stated in the certificate conditions defined in 1b, 1c and 1d of the applied Technical Requirement will be evaluated by the EU RO in charge of classing the ship or being in charge of the unit/system certification.

In accordance with Article 10 of Regulation (EC) No 391/2009 of the European Parliament and of the Council of 23 April 2009 "on common rules and standards for ship inspection and survey organizations", the following organizations, recognized by the EU on this date, have agreed on the technical and procedural conditions under which they will mutually recognize this certificate:

- American Bureau of Shipping (ABS);
- Bureau Veritas (BV);
- China Classification Society (CCS);
- Croatian Register of Shipping (CRS);
- DNV;
- Indian Register of Shipping (IRS);
- Korean Register (KR);
- Lloyd's Register Group Ltd. (LR);
- Nippon Kaiji Kyokai General Incorporated Foundation (ClassNK);
- Polish Register of Shipping (PRS);
- RINA Services S.p.A. (RINA);
- Russian Maritime Register of Shipping (RS).

The scheme for the mutual recognition of class certificates for materials, equipment and components laid down by Article 10(1) of Regulation (EC) No 391/2009 is only enforceable within the Union in respect of ships flying the flag of a Member State. As far as foreign vessels are concerned, the acceptance of relevant certificates remains at the discretion of relevant non-EU flag States in the exercise of their exclusive jurisdiction, notably under the United Nations Convention on the Law of the Sea (UNCLOS). (In accordance with COMMISSION IMPLEMENTING REGULATION (EU) No 1355/2014 amending Regulation (EC) No 391/2009 - recital (25)).