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

Certificate No:
MRE000001T

In accordance with Article 10.1 of EU Regulation 391/2009

This Certificate is issued to
Siemens AG GWA
Amberg, Bayern, Germany

for
Electrical/Electronic Relays

with type designation(s)
3UG5 Series

The product is found to comply with
EU RO Mutual Recognition Technical Requirements for Electrical/Electronic Relays

Intended service
Electrical/Electronic relays for use onboard ships

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 **2031-02-18**.

Issued at **Hamburg** on **2026-02-19**

DNV local unit: **Augsburg** for **DNV**

Approval Engineer: **Dariusz Lesniewski**

Product description

Monitoring Relay and Accessories

NOMENCLATURE BREAKDOWN

3UG5	x	x	x	-	x	x	x	x	x
I	II	III	IV		V	VI	VII	VIII	IX

I. Generation
3UG5 – Monitoring Relay

II. Model
5 – Analog setting
6 – Digital setting
7 – Wireless communication
8 – Digital setting, IO-Link Interface

III. / IV. Function
01 – Level Monitoring, over- undershoot
11 – Phase monitoring
12 – Phase monitoring, phase loss, asymmetry
14 – Phase monitoring, phase loss, undervoltage, asymmetry
16 – Phase monitoring, phase and neutral loss, over-undervoltage
18 – Phase monitoring, phase and neutral loss, over-undervoltage, asymmetry, phase sequence correction
22 – Over- under current monitoring
25 – Current fault relay for special current transformer
32 – Measuring and supply voltage separated
33 – Self powered voltage relay
42 – Load Monitoring, external powered
43 – Load Monitoring, internal powered
51 – Speed and Frequency monitoring

V. Terminal
1 – Screw Terminals
2 – Spring Force Terminals

VI. Type of switching element
A – one change-over contact relay
B – two change-over contact relay
C – two relays, each one change-over contact

VII. Supply Voltage
A – 24 V
L – 17…275 V
R – 160…690 V
S – 90…600 V

VIII. Kind of Supply Voltage
2 – 50/60Hz, ac
3 – 50/60Hz, ac/dc
4 – dc

IX. Model Type
0 – Standard type
1 – 2021 type

Accessories:

3ZY1440-1AA00	Coding Pin
3ZY1122-1BA00	Screw terminal
3ZY1122-2BA00	Push-in terminal
3ZY1311-0AA00	Push-in lug

Monitoring Relay 3UG5 Series Main Technical Data:

Rated supply voltage	24 V dc, 90 - 690 V ac, 50/60Hz
Rated operational voltage	up to 690V

Rated insulation voltage	690V
Rated impulse withstand voltage	4kV
Rated Output, auxiliary contacts	Relay: Ith = 8 A, free air
Method of device mounting	Screw or rail mounting on 35mm DIN rail
Auxiliary and main terminals	Screw-or Spring loaded terminals
Cross section auxiliary terminals	1x (0.5 ... 4.0 mm²), 2x (0.5 ... 2.5 mm²) 1x (0.5 ... 4 mm²), 2x (0.5 ... 2.5 mm²)
Degree of protection	IP 20

Manufactured by

Siemens AG
SI EP
Werner-von-Siemens-Straße 48
92220 Amberg, Germany

Application/Limitation

Applicable for a ship as defined in Mutual Recognition Provisions Article 10 Regulation on Common Rules and standards For Ship Inspection and Survey Organizations.

Type Approval documentation

Marking of product

- manufacturer name
- serial number
- type designation
- range
- power supply ratings

Other Conditions

Environmental test parameters:	DNV location classes:
Temperature: 5°C / +70°C	B
Vibration: ±1mm / 0.7g	A
Humidity: 95%RH @ 55°C, damp heat cyclic	B
EMC: All locations including bridge and open deck	B
Enclosure: IP20	A

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 will be performed annually and at renewal of the 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);

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)).