

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

Certificate No:
MRA000004D

In accordance with Article 10.1 of EU Regulation 391/2009

This Certificate is issued to

Weidmüller Interface GmbH & Co. KG
Detmold, Germany

for
Sensors

with type designation(s)

**Programmable LED indicator ACT20D-LED-UI-AC-DC,
Programmable LED indicator ACT20D-LED-UI-AO-4RC-AC-DC,
Programmable frequency indicator ACT20D-LED-FI-AO-2RC-AC-DC**

The product is found to comply with
EU RO Mutual Recognition Technical Requirements for Sensors

Intended service

Indicators intended for a wide range of process and electrical connections; See product description on page 2.

Temperature [°C]: -25°C ~ +70°C
Vibration: ±1.0 mm / 0.7 g
EMC: All locations including bridge and open deck
IP Code: IP20 (according to IEC 60529)

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 **2028-11-01**.

Issued at **Høvik** on **2023-11-02**

DNV local unit: **Denmark CMC**

Approval Engineer: **Martin Skårværket**



for DNV

Digitally Signed By: Sneen, Ståle

Location: DNV Høvik, Norway

on behalf of

Frederik Tore Elter
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.



Form code: MRTA 201

Revision: 2022-12

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Page 1 of 4

Product description

Programmable LED indicator ACT20D-LED-UI-AC-DC

- 4-digit 14-segment LED indicator
- Input for mA, V, potentiometer, Ohm, RTD and TC
- 2 relays and analogue output
- Universal voltage supply; 21.5...253 VAC or 19.2...300 VDC
- Front key programmable
- Marine tested for 230 VAC supply voltage

Programmable LED indicator ACT20D-LED-UI-AO-4RC-AC-DC

- 4-digit 14-segment LED indicator
- Input for mA, V, potentiometer, Ohm, RTD and TC
- 4 relays and analogue output
- Universal voltage supply; 21.5...253 VAC or 19.2...300 VDC
- Front key programmable
- Marine tested for 230 VAC supply voltage

Programmable frequency indicator ACT20D-LED-FI-AO-2RC-AC-DC

- Measures NPN, PNP, Contact, NAMUR, SO, Tacho and TTL sensors
- Programmable frequency input span of 0.001 Hz to 50 kHz
- Easy to read 4 digit, 14 segment LED display with scrolling help text
- Universal voltage supply; 21.5...253 VAC or 19.2...300 VDC
- Marine tested for 24 VDC and 230 VAC supply voltage

Firmware revision numbers are listed in document named EU-RO FIRMWARE VERSIONS version V2R0 dated 2016-11-17.

Application/Limitation

The Type Approval covers hardware listed under type designation.

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

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

Type Approval documentation

Name	Number	Date
EU-RO Firmware Revisions	-	V2R0 / 2016-11-17
DELTA Test Report	DANAK-19/16687	2016-07-15
DELTA Test Report	DANAK-19/17341	2017-01-20
DELTA Test Report	DANAK-19/17342	2017-01-20
FORCE Dry Heat Test Report	121-28169-1	2021-06-23
FORCE EMC 1-6 GHz Test Report	121-23384-1	2021-06-01
Datasheet - ACT20D-LED-FI-AO-2RC-AC-DC	2983040000	00 / 2023-07
Datasheet - ACT20D-LED-UI-AC-DC / ACT20D-LED-UI-AO-4RC-AC-DC	2983030000	00 / 2023-07

EU RO MR Type Approval PQA scheme periodical assessment checklist 2023-08-09.

EU RO MR Type Approval PQA scheme periodical assessment checklist (Weidmüller) 2023-10-26

Marking of product

The products to be marked with:

- manufacturer name
- model name
- serial number
- power supply ratings

Other Conditions

The sensors have been verified for compliance with EU Mutual Recognition Technical Requirements for Sensors version 0.5, dated 2023-07-01.

Environmental test parameters	DNV location classes
Temperature: -25°C ~ +70°C	D
Vibration: ±1.0 mm / 0.7 g	A
Humidity: 95%RH @ 55°C	B
EMC: All locations including bridge and open deck	B
Enclosure: IP20 (according to IEC 60529)	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 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).

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)).