

TYPE APPROVAL CERTIFICATE

Certificate No:
TAA000019C
Revision No:
2

This is to certify:

That the Peripheral Equipment

with type designation(s)
Signal conditioning units ACT20X

Issued to

Weidmüller Interface GmbH & Co. KG
Detmold, Germany

is found to comply with
DNV GL rules for classification – Ships, offshore units, and high speed and light craft

Application :

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.

Location classes:

Temperature D
Humidity B
Vibration A
EMC B

Enclosure required protection according to relevant rules shall be provided upon installation on board

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

for **DNV**

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

DNV local station: **Magdeburg**

Approval Engineer: **Dariusz Lesniewski**

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.



Form code: TA 251

Revision: 2021-03

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Product description

Signal conditioning units and power control unit as listed below:

Order No.	Model	Description	Function
8965340000	ACT20X-HDI-SDO-RNO-S	NAMUR isolator – relay NO	NAMUR in (from Ex) to relay out
2456050000	ACT20X-HDI-SDO-RNO-P		
8965350000	ACT20X-HDI-SDO-RNC-S	NAMUR isolator – relay NC	NAMUR in (from Ex) to relay out
2456060000	ACT20X-HDI-SDO-RNC-P		
8965360000	ACT20X-HDI-SDO-S	NAMUR isolator	NAMUR in (from Ex) to digital out
2456070000	ACT20X-HDI-SDO-P		
8965370000	ACT20X-2HDI-2SDO-RNO-S	2 Ch. NAMUR isolator – relay NO	2x NAMUR in (from Ex) to 2x relays out
2456080000	ACT20X-2HDI-2SDO-RNO-P		
8965380000	ACT20X-2HDI-2SDO-RNC-S	2 Ch. NAMUR isolator – relay NC	2x NAMUR in (from Ex) to 2x relays out
2456090000	ACT20X-2HDI-2SDO-RNC-P		
8965390000	ACT20X-2HDI-2SDO-S	2 Ch. NAMUR isolator	2x NAMUR in (from Ex) to 2x digital out
2456100000	ACT20X-2HDI-2SDO-P		
8965400000	ACT20X-SDI-HDO-L-S	Solenoid/alarm driver L	digital in to safe digital out (to Ex IIC)
2456110000	ACT20X-SDI-HDO-L-P		
8965410000	ACT20X-SDI-HDO-H-S	Solenoid/alarm driver H	digital in to safe digital out (to Ex IIB)
2456120000	ACT20X-SDI-HDO-H-P		
8965420000	ACT20X-2SDI-2HDO-S	2 Ch. Solenoid/alarm driver	2x digital in to 2x safe digital out (to Ex)
2456130000	ACT20X-2SDI-2HDO-P		
8965430000	ACT20X-HAI-SAO-S	HART-transparent repeater	mA in (from Ex) to mA out with HART transparency
2456140000	ACT20X-HAI-SAO-P		
8965440000	ACT20X-2HAI-2SAO-S	2 Ch. HART-transparent repeater	2x mA in (from Ex) to 2x mA out with HART transparency
2456150000	ACT20X-2HAI-2SAO-P		
8965450000	ACT20X-SAI-HAO-S	HART-transparent driver	mA in to mA out (to Ex) with HART transparency
2456160000	ACT20X-SAI-HAO-P		
8965460000	ACT20X-2SAI-2HAO-S	2 Ch. HART-transparent driver	2x mA in to 2x mA out (to Ex) with HART transparency
2456170000	ACT20X-2SAI-2HAO-P		
8965470000	ACT20X-HTI-SAO-S	Temperature/mA converter	temperature in (from Ex) to mA out
2456180000	ACT20X-HTI-SAO-P		
8965480000	ACT20X-2HTI-2SAO-S	2 Ch. temperature/mA Converter	2x temperature in (from Ex) to 2x mA out
2456190000	ACT20X-2HTI-2SAO-P		
8965490000	ACT20X-HUI-SAO-S	Universal converter	universal analog in (from Ex) to analog (V/mA) + trip relay out
2456200000	ACT20X-HUI-SAO-P		

Connection type:

- Screw (indicated by -S)
- PUSH-IN (indicated by -P)

Units tested for power supply voltage 24 Vdc +30% and 24 Vdc -20%.

Approval conditions

The Type Approval covers hardware listed under Product description. When the hardware is used in applications to be classed by DNV, documentation for the actual application is to be submitted for approval by the manufacturer of the application system in each case. Reference is made to DNV rules for classification of ships Pt.4 Ch.9 Control and monitoring systems.

Type Approval documentation

Drawings / data sheets:

Data sheet Frontplate with interface for 4501, dated 2011-09-18

Drawing PB 5000 F31, dated 2010-06-07

Data sheet 9000 Transmitter enclosure, dated 2011-09-18

Drawing PB 9000 HUS, drawing no. PB9000S1-UL, dated 2010-09-06

Label for System 9000, drawing no. 9000-S101, dated 2011-09-18

9000-ACT20X-listing.pdf, dated 2012-03-27

Printing layout ACT20X-2HAI-sSAO-S, drawing no. 451517 issue 0

Layout drawings:

Schematic Layout 9106W-1-06, dated 2011-07-15
Schematic Layout 9107W-1-03, dated 2011-08-01
Schematic Layout 9113W-1-05, dated 2009-11-12
Schematic Layout 9116W-1-03, dated 2010-02-09
Schematic Layout 9202W-1-05, dated 2009-08-04
Schematic Layout 9203W-1-06, dated 2010-01-12

Manual:

ACT20X Handbuch Version 7.0 (06/2016)

Test Reports:

4511 Acceptance Test Report, V2R0 dated 2013-07-12
9000 DNV Test Record, V0R1 dated 2012-03-23
9000 Marine Test Report, V2R0 dated 2012-06-01
9106 Acceptance Test Report, V4R0 dated 2012-02-23
9107 Acceptance Test Report, V3R0 dated 2012-02-23
9113 Acceptance Test Report, V11R0 dated 2012-02-28
9116 Acceptance Test Report, V6R0 dated 2012-03-07
9202 Acceptance Test Report, V9R0 dated 2011-12-02
9203 Acceptance Test Report, V9R0 dated 2011-09-22
9410 Acceptance Test Report, V2R0 dated 2012-02-16
DELTA Vibration Test Report No. DANAK-1910183, dated 2008-06-03
DELTA Vibration Test Report No. DANAK-1911457, dated 2011-07-06
DELTA Vibration Test Report No. DANAK-19/13166, dated 2013-06-18
FORCE Test Report No. 121-27927-1 Rev. A, dated 2021-07-07

Tests carried out

Applicable tests according to class guideline DNV-CG-0339, August 2021.

Marking of product

The products to be marked with model name, manufacturer name and serial number.

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 after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of the certificate.

END OF CERTIFICATE