DNV·GL

Certificate No:
TAA00001DM

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Peripheral Equipment

with type designation(s)
Current Monitor ACT20C and ACT20P

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 / B**
EMC	**A**
Enclosure	**A**

Issued at **Hamburg** on **2017-09-19**
This Certificate is valid until **2022-09-18**.
DNV GL local station: **Magdeburg**

Approval Engineer: **Klaus-Peter Schröder**

for **DNV GL**

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.

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Product description

The ACT20C and ACT20P current transducers convert currents up to 60 A to standard voltage / current signals.
The ACT20P is a stand-alone product.
The ACT20C gateway provides communication from / to one or more ACT20C current transducers.
The communicative devices enable continuous monitoring of the diagnosis, device and process information ("status monitoring").
The ACT20C Station consists of one gateway, current monitor(s), DIN rail bus bar, bus termination and end bracket.

General technical data

Rated input voltage	24V DC
Number of bus participants (ACT20C)	1 ACT20C-GTW-100-MTCP-x max. 16 current monitor modules 1 ACT20C-LBT-10
Connection type	Screw (indicated by -S) PUSH IN (indicated by -P)

Gateway Modules

Part no.	Part name		HVN
1510370000	ACT20C-GTW-100-MTCP-S	Ethernet gateway, 24 V DC	1.0.x
2456780000	ACT20C-GTW-100-MTCP-P	Ethernet gateway, 24 V DC	1.0.x

ACT20C Current Monitor Modules

Part no.	Part name		HVN
2044840000	ACT20C-CML-10-AO-RC-S	1 / 5 / 10 A, 24 V DC	1.0.x
2489900000	ACT20C-CML-10-AO-RC-P	1 / 5 / 10 A, 24 V DC	1.0.x
1510240000	ACT20C-CMT-10-AO-RC-S	5 / 10 A, 24 V DC	2.0.x
1549990000	ACT20C-CMT-10-AO-RC-P	5 / 10 A, 24 V DC	1.0.x
1550030000	ACT20C-CMT-30-AO-RC-S	20 / 25 / 30 A, 24 V DC	1.0.x
1550040000	ACT20C-CMT-30-AO-RC-P	20 / 25 / 30 A, 24 V DC	1.0.x
1510420000	ACT20C-CMT-60-AO-RC-S	40 / 50 / 60 A, 24 V DC	2.1.x
1550020000	ACT20C-CMT-60-AO-RC-P	40 / 50 / 60 A, 24 V DC	1.1.x

ACT20P Current Monitor Modules

Part no.	Part name		HVN
2044850000	ACT20P-CML-10-AO-RC-S	1 / 5 / 10 A, 24 V DC	1.0.x
2489910000	ACT20P-CML-10-AO-RC-P	1 / 5 / 10 A, 24 V DC	1.0.x
1510470000	ACT20P-CMT-10-AO-RC-S	5 / 10 A, 24 V DC	2.0.x
1510330000	ACT20P-CMT-10-AO-RC-P	5 / 10 A, 24 V DC	1.0.x
1510540000	ACT20P-CMT-30-AO-RC-S	20 / 25 / 30 A, 24 V DC	2.0.x
1510320000	ACT20P-CMT-30-AO-RC-P	20 / 25 / 30 A, 24 V DC	1.0.x
1510440000	ACT20P-CMT-60-AO-RC-S	40 / 50 / 60 A, 24 V DC	2.1.x
1510290000	ACT20P-CMT-60-AO-RC-P	40 / 50 / 60 A, 24 V DC	1.0.x
1510390000	ACT20P-CMT-60-RC-S	40 / 50 / 60 A, 24 V DC	2.1.x
1510280000	ACT20P-CMT-60-RC-P	40 / 50 / 60 A, 24 V DC	1.0.x

Accessories

Part no.	Part name	Drawing No. / Doc No.	HVN
1248220000	CH20M BUS 4.50/05 AU/250	1854972 2	-
1248230000	CH20M BUS 4.50/05 AU/500	1854972 2	-
1248240000	CH20M BUS 4.50/05 AU/750	1854972 2	-
1510340000	ACT20C-LBT-10	60082 0	-

1478990000	WEW 35/1 V0 GF SW	12113 11	-
1193160000	CH20M BUS-AP LI TS 35X7.5 & 15	1854972 2	-
1193170000	CH20M BUS-AP RE TS 35X7.5 & 15	1854972 2	-
1248150000	CH20M BUS-PROFIL TS 35X7.5/250	1854972 2	-
1248160000	CH20M BUS-PROFIL TS 35X7.5/500	1854972 2	-
1248170000	CH20M BUS-PROFIL TS 35X7.5/750	1854972 2	-
1248180000	CH20M BUS-PROFIL TS 35X15/250	1854972 2	-
1248190000	CH20M BUS-PROFIL TS 35X15/500	1854972 2	-
1248210000	CH20M BUS-PROFIL TS 35X15/750	1854972 2	-

Application/Limitation

The Type Approval covers hardware listed under Product description.
When the hardware is used in applications to be classed by DNV GL, 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 GL RU SHIP Pt.4 Ch.9 Sec. 1.

Vibration location class **A** for modules starting with ACT20C*, CH20M*
Vibration location class **B** for modules starting with ACT20P*, WEW35/1 V0GF SW

Minimum Standard-Magnetic-Compass safe distance: 5m.
Minimum Steering-Magnetic-Compass safe distance: 5m.

The installation instructions are to be observed.

Product certificate
If specified in the Rules, ref. Pt.4 Ch.9 Sec.1, the control and monitoring system in which the above listed hardware is used shall be delivered with a product certificate. For each such delivery the certification test is to be performed at the manufacturer of the application system before the system is shipped to the yard. The test shall be done according to an approved test program. After the certification the clause for application software control will be put into force.

Clause for application software control
All changes in software are to be recorded as long as the system is in use on board. The records of all changes are to be forwarded to DNV for evaluation and approval. Major changes in the software are to be approved before being installed in the computer.

Type Approval documentation

Tests carried out

Applicable tests according to Class Guideline DNVGL-CG-0339, Edition November 2016.

Acoustic Noise and Signal test: Not tested – Current Monitor Modules have no acoustic signals and have no audible components.

Marking of product

The products to be marked with:

- manufacturer name
- part name / part no.
- serial no.
- HVN no.

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 at least every second year and at renewal of this certificate.
END OF CERTIFICATE