

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Temperature Transmitter

with type designation(s)
TA21xx, TA23xx, TA24xx, TA26xx

Issued to

IFM Electronic GmbH
Essen, 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	B
EMC	B
Enclosure	C

Issued at **Hamburg** on **2017-09-11**

for **DNV GL**

This Certificate is valid until **2022-07-19**.

DNV GL local station: **Augsburg**

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.



Job Id: **262.1-024449-1**
 Certificate No: **TAA00001AW**
 Revision No: **1**

Product description

2, 3 or 4-wire temperature transmitter

product family	article number	operating voltage	output function OU1	output function OU2	process connection	installation length	measuring range
TA21xx	TA2105	18...32	IO-Link	4...20 mA	G 1/4"	25 mm	-50...150 °C
	TA2115	18...32	IO-Link	4...20 mA	G 1/4"	50 mm	-50...150 °C
	TA2135	18...32	IO-Link	4...20 mA	G 1/4"	100 mm	-50...150 °C
	TA2145	18...32	IO-Link	4...20 mA	G 1/4"	150 mm	-50...150 °C
TA24xx	TA2405	18...32	IO-Link	4...20 mA	G 1/2"	30 mm	-50...150 °C
	TA2415	18...32	IO-Link	4...20 mA	G 1/2"	50 mm	-50...150 °C
	TA2417	18...32	IO-Link	4...20 mA	G 1/2"	50 mm	-50...150 °C
	TA2435	18...32	IO-Link	4...20 mA	G 1/2"	30 mm	-50...150 °C
	TA2437	18...32	IO-Link	4...20 mA	G 1/2"	100 mm	-50...150 °C
	TA2445	18...32	IO-Link	4...20 mA	G 1/2"	150 mm	-50...150 °C
	TA2447	18...32	IO-Link	4...20 mA	G 1/2"	150 mm	-50...150 °C
TA23xx	TA2303	18...32	IO-Link	4...20 mA	1/2" NPT	30 mm	-58...302 °F
	TA2313	18...32	IO-Link	4...20 mA	1/2" NPT	50 mm	-58...302 °F
	TA2333	18...32	IO-Link	4...20 mA	1/2" NPT	100 mm	-58...302 °F
	TA2343	18...32	IO-Link	4...20 mA	1/2" NPT	150 mm	-58...302 °F
TA26xx	TA2603	18...32	IO-Link	4...20 mA	1/4" NPT	25 mm	-58...302 °F
	TA2613	18...32	IO-Link	4...20 mA	1/4" NPT	50 mm	-58...302 °F
	TA2633	18...32	IO-Link	4...20 mA	1/4" NPT	100 mm	-58...302 °F
	TA2643	18...32	IO-Link	4...20 mA	1/4" NPT	150 mm	-58...302 °F

Suitable connectors for operation are ifm-connectors of the EVM-Family designated as follows:

X	XX	X	X	XX	X	XX	X	XXXX	X	XX
[1]	[2;3]	[4]	[5]	[6;7]	[8]	[9;10]	[11]	[12;13;14;15]	[16]	[17;18]

[1]	A	= cable with connector
[2;3]	DO	= socket
[4]	A	= angled
	G	= straight
[5]	H	= M12 (A-coded)
[6;7]	04	= four contacts
	05	= five contacts
[8]	0	= no LEDs
[9;10]	VA	= stainless steel nut
[11]	S	= Standard
[12;13;14;15]		= length in m, 5m max. (filled with leading 0's if required, e.g. "0002"; "02,5"; "0,25")
[16]	H	= PUR, free from halogen
[17;18]	04	= four cores
	05	= five cores

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Revision No: **1**

Place of manufacture

ifm prover USA, Inc.
420 Lapp Road, Malvern
19355 Pennsylvania, USA

Approval conditions

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 rules for classification of ships Pt.4 Ch.9 Control and monitoring systems.

Application/Limitation

The operating voltage of the sensor must be protected against surge.

Type Approval documentation

Technical Data Sheets TA2xxx
Technical Data Sheets EVMxxx
Drawing: 4_SLP_11039856 REV 00
Part List: 80011138
Test Report: EMCE No.IMO20_01 (13.06.2017)
Test Report: imf Witness Test Report TA2xxx (19.06.2017)
Test Report: AUCOTEAM No. 12735.01/17 (19.04.2017)
Test Report: AUCOTEAM No. 12735.02/17 (19.04.2017)
Test Report: AUCOTEAM No. 12735.03/17 (19.04.2017)
Test Report: AUCOTEAM No. 12735.04/17 (19.04.2017)
Type Approval Assessment Report issued at Malvern, PA on 2017-05-26

Tests carried out

Applicable tests according to class guideline DNVGL-CG-0339, November 2016.

Marking of product

The products to be marked with:

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

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