IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.:	IECEx KEM 10.0058X	Issue No: 3	Certificate history:
			Issue No. 3 (2015-07-29)
Status:	**Current**	Page 1 of 4	Issue No. 2 (2014-09-11)
			Issue No. 1 (2013-11-04)
Date of Issue:	**2015-07-29**		Issue No. 0 (2010-07-27)

Applicant: **Endress+Hauser Yamanashi Co., Ltd.**
862-1 Mitsukunugi Sakaigawa-cho,
Fuefuki-shi Yamanashi Pref. 406-0846
Japan

Electrical Apparatus: **Transmitters Prothermo Types NMT539-F and NMT532-F**

Optional accessory:

Type of Protection: **Ex i**

Marking: Ex ia IIB T2 ... T6 Ga/Gb or
Ex ia IIB T2 ... T6 Gb

Approved for issue on behalf of the IECEx Certification Body: R. Schuller

Position: Certification Manager

Signature:
(for printed version)

Date:

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website.

Certificate issued by:

DEKRA Certification B.V.
Meander 1051
6825 MJ Arnhem
The Netherlands

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Manufacturer: **Endress+Hauser Yamanashi Co., Ltd.**
862-1 Mitsukunugi Sakaigawa-cho,
Fuefuki-shi Yamanashi Pref. 406-0846
Japan

Additional Manufacturing location(s):

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

STANDARDS:

The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2011 Edition:6.0	Explosive atmospheres - Part 0: General requirements
IEC 60079-11 : 2011 Edition:6.0	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
IEC 60079-26 : 2006 Edition:2	Explosive atmospheres - Part 26: Equipment with equipment protection level (EPL) Ga

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

Test Report:

NL/KEM/ExTR10.0061/01 NL/KEM/ExTR10.0061/02

Quality Assessment Report:

DE/TUN/QAR06.0003/04

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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

Prothermo NMT 539-F Series Converters, Temperature and Water Level Detectors and Prothermo NMT 532-F Series Average Temperature Transmitters are used either for average temperature measurement, using a separate or an integral temperature probe, or for the measurement of the water interface level at the bottom of a tank, or for combinations of these measurements. The maximum lengths of measurement probes are 99999 mm for NMT 539-F series, and 40000 mm for NMT 532-F series, respectively. The output signal is a 4 - 20 mA current with digital communication (HART).

For temperature range and electrical data refer to the Annex.

CONDITIONS OF CERTIFICATION: YES as shown below:

In order to exclude ignition sources due to impact and friction sparks, even in the event of rare incidents, the temperature sensor tube shall not be subject to environmental stress, such as impact from moving parts, and the bottom part shall be secured.

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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

Maximum probe length of NMT 539-F:
Change from 40000 mm to 99999 mm.

Marking plates for NMT 539-F:
Correct Io according to certificate.

Annex:

218218100-Annex1-IECEx KEM 10.0058X Iss3.pdf

Annex 1 to Certificate of Conformity IECEx KEM 10.0058X, Iss 3
Annex 1 to IECEx TEST REPORT NL/KEM/ExTR10.0061/02

Description

Prothermo NMT 539-F Series Converters, Temperature and Water Level Detectors and Prothermo NMT 532-F Series Average Temperature Transmitters are used either for average temperature measurement, using a separate or an integral temperature probe, or for the measurement of the water interface level at the bottom of a tank, or for combinations of these measurements.
The maximum lengths of measurement probes are 99999 mm for NMT 539-F series, and 40000 mm for NMT 532-F series, respectively.
The output signal is a 4 - 20 mA current with digital communication (HART).

Ambient temperature range -40 °C to +85 °C.

The relation between the ambient temperature, the process temperature and the temperature class is shown in the following table:

Temperature class	Ambient temperature	Process temperature (sensor)	
		Temperature measurement only	Temperature measurement and water level or water level only
T6	≤ 60 °C	≤ 60 °C	≤ 60 °C
T5	≤ 85 °C	≤ 80 °C	≤ 80 °C
T4	≤ 85 °C	≤ 100 °C	≤ 100 °C
T3*	≤ 85 °C	≤ 175 °C	≤ 125 °C
T2*	≤ 85 °C	≤ 235 °C	---

Note: * is applicable to Prothermo NMT 539 only.

Electrical Data

All versions:
Supply and output circuit (terminals H1+ and H1-):
in type of protection intrinsic safety Ex ia IIB, only for connection to a certified intrinsically safe circuit, with the following maximum values:
U_i = 30 V; I_i = 120 mA; P_i = 1 W; C_i = 7.9 nF; L_i = 48 µH.

Converter only:
Temperature sensor circuit (connectors CN4 and CN5, module 3):
in type of protection intrinsic safety Ex ia IIB, for connection to an external temperature probe, with following maximum values (trapezoidal characteristic):
U_o = 8.6 V; I_o = 71 mA; P_o = 153 mW; C_o = 9.5 µF; L_o = 7.5 mH.

The level sensor circuit is connected to ground and is infallibly galvanically isolated from the supply and output circuit and from the temperature measurement circuit.

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