CERTIFICATE OF CONFORMITY

1. **HAZARDOUS LOCATION ELECTRICAL EQUIPMENT PER CANADIAN REQUIREMENTS**
2. **Certificate No:** **FM17CA0088**
3. **Equipment:** **NMT539 and NMT532 Temperature / Water Bottom Transmitter**
   (Type Reference and Name)
4. **Name of Listing Company:** **Endress+Hauser Yamanashi Co.,Ltd.**
5. **Address of Listing Company:** **862-1 Mitsukunugi Sakaigawa-cho**
   Fuefuki-shi Yamanashi Prefecture
   406-0846
   Japan
6. The examination and test results are recorded in confidential report number:

   3062007 dated 10th August 2017
7. FM Approvals LLC, certifies that the equipment described has been found to comply with the following Approval standards and other documents:

   CSA-C22.2 No. 0:R2001, CSA-C22.2 No. 157:R2012, CAN/CSA-C22.2 No. 60079-0:2015, CAN/CSA-C22.2 No. 60079-11:2014, CAN/CSA-C22.2 No. 61010-1:2012, CSA-C22.2 No. 94:2011
8. If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to specific conditions of use specified in the schedule to this certificate.
9. This certificate relates to the design, examination and testing of the products specified herein. The FM Approvals surveillance audit program has further determined that the manufacturing processes and quality control procedures in place are satisfactory to manufacture the product as examined, tested and Approved.
10. Equipment Ratings:

    Intrinsically Safe for Class I, Division 1, Groups C, D hazardous locations in accordance with drawing Ex462-711/Ex462-712/Ex462-875, Intrinsically Safe for Class I, Zone 0, Group IIB Ga, with a temperature class of T2….T6 with and ambient temperature range of -40°C < Ta < +60°C, +85°C, Type 4X.

Certificate issued by:

J.E. Marquedant

J.E. Marquedant
VP, Manager, Electrical Systems

15 August 2018
Date

To verify the availability of the Approved product, please refer to www.approvalguide.com

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SCHEDULE

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11. The marking of the equipment shall include:

Model *NMT 532 - 7bcde* and Model *NMT 539 - 7bcdefghij*

Class I Division 1, Groups C, D; T* Ta =**;

Class I, Zone 0 , Ex ia IIB T* Ga Ta = **,

Type 4X

*= See T-Code Ratings (See table in section 12)
** = Ta = -40°C to maximum temperature rating. (See table in section 12)

Model NMT 539 - 70cdefghij

Class I Division 1, Groups C, D; T4, -40°C ≤ Ta ≤ +85°C;

Class I, Zone 1 , Ex ia IIB T* Ga T4, -40°C ≤ Ta ≤ +85°C;

Type 4X

12. **Description of Equipment:**

General - The Prothermo series NMT 539 and NMT532 are average temperature measuring and/or water level measurement devices and/or level measurement devices of water at a tank bottom. The devices are available in four different configurations. A converter only configuration, an average temperature probe + converter configuration, a water bottom and converter configuration, and an average temperature probe + water bottom + and converter configuration.

Construction - The overall construction consists of a metal housing containing a potted electronics insert with a flexible metal tube that leads to the probe. The temperature sensor cable has an insulation material of PVC, PEX, ETFE, FEP, or PTFE.

Ratings:
Operation Temperature Ranges:
The ambient operating temperature ranges are as follows: Ta = -40°C to maximum ambient temperature.

Prothermo NMT 539

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
T4	<85°C	<100°C	<100°C
T3	<85°C	<175°C	<125°C
T2	<85°C	<235°C	-

Prothermo NMT 532

Temperature Class	Ambient Temperature	Process temperature (sensor)
		Temperature Measurement only
T6	< 60°C	< 60°C
T4	< 85°C	<100°C

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Electrical data:
The Prothermo NMT 539 and NMT 532 Transmitters have the following electrical ratings;

Intrinsic Safety Energy limitation parameters:
$U_i \leq 30Vdc$; $I_i \leq 120mA$; $P_i \leq 1W$; $C_i \leq 6.6nF$; $L_i = 48uH$

Only Model NMT 539-70
Terminals 3-22
Uo = 8.6V, Io = 71mA, Po = 153 mW, Co = 9.5 uF, 7.5 mH.

Listings:

Prothermo NMT 539 - 7bcdefghij Intelligent Temperature Transmitter
b = Measuring Function: 1, 2, 3, 4, 5, or 9.
c = Temp. Measuring Range: 0, 1, 2, 3, 4, or 9.
d = WB Measuring Range: 0, 1, 2, or 9.
e = Cable Entry: A, B, C, D, or Y.
f = Process Connection: 0, 1, 2, 3, 4, 5, or 9.
g = Number of temp. elements: A, B, C, D, E, F, G, H, J, K, L, M, N, O, P, Q, or Y.
h = Element spacing: 1, 2, 3, 4, 5, 6, or 9.
i = 1 to 99m temp. probe length: A, B, or Y.
j = Mounting Attachment: not safety relevant.

Prothermo NMT 539 - 7bcdefghij+V Varec Intelligent Temperature Transmitter
b = Measuring Function: 1, 2, 3, 4, 5, or 9.
c = Temp. Measuring Range: 0, 1, 2, 3, 4, or 9.
d = WB Measuring Range: 0, 1, 2, or 9.
e = Cable Entry: A, B, C, D, or Y.
f = Process Connection: 0, 1, 2, 3, 4, 5, or 9.
g = Number of temp. elements: A, B, C, D, E, F, G, H, J, K, L, M, N, O, P, Q, or Y.
h = Element spacing: 1, 2, 3, 4, 5, 6, or 9.
i = 1 to 99m temp. probe length: A, B, or Y.
j = Mounting Attachment: not safety relevant.

Prothermo NMT 539 - 70cdefghij Intelligent Temperature Transmitter
c = Temp. Measuring Range: 0, 1, 2, 3, 4, or 9.
d = WB Measuring Range: 0, 1, 2, or 9.
e = Cable Entry: A, B, C, D, or Y.
f = Process Connection: 0, 1, 2, 3, 4, 5, or 9.
g = Number of temp. elements: A, B, C, D, E, F, G, H, J, K, L, M, N, O, P, Q, or Y.
h = Element spacing: 1, 2, 3, 4, 5, 6, or 9.
i = 1 to 99m temp. probe length: A, B, or Y.
j = Mounting Attachment: not safety relevant.

Prothermo NMT 539 - 70cdefghij+V Varec Intelligent Temperature Transmitter
c = Temp. Measuring Range: 0, 1, 2, 3, 4, or 9.
d = WB Measuring Range: 0, 1, 2, or 9.
e = Cable Entry: A, B, C, D, or Y.
f = Process Connection: 0, 1, 2, 3, 4, 5, or 9.
g = Number of temp. elements: A, B, C, D, E, F, G, H, J, K, L, M, N, O, P, Q, or Y.

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h = Element spacing: 1, 2, 3, 4, 5, 6, or 9.
i = 1 to 99m temp. probe length: A, B, or Y.
j = Mounting Attachment: not safety relevant.

Prothermo NMT 532 - 7bcde Intelligent Temperature Transmitter.
b = Cable Entry: B, C, or D.
c = Process Connection: 1, 2, or 9.
d = Probe Length Element #, Interval, Probe Range: 022, 032, 042, 052, 062, 072, 082, 092, 102, 112, 122, 132, 142, 152, 162, 023, 033, 043, 053, 063, 073, 083, 093, 103, 113, 123, 133 or 999.
e = Mounting Attachment: A, B, C D or F: not safety relevant.

Prothermo NMT 532 - 7bcde+V Varec Intelligent Temperature Transmitter.
b = Cable Entry: B, C, or D.
c = Process Connection: 1, 2, or 9.
d = Probe Length Element #, Interval, Probe Range: 022, 032, 042, 052, 062, 072, 082, 092, 102, 112, 122, 132, 142, 152, 162, 023, 033, 043, 053, 063, 073, 083, 093, 103, 113, 123, 133 or 999.
e = Mounting Attachment: A, B, C D or F: not safety relevant.

13. **Specific Conditions of Use:**

None

14. **Test and Assessment Procedure and Conditions:**

This Certificate has been issued in accordance with FM Approvals Canadian Certification Scheme.

15. **Schedule Drawings**

A copy of the technical documentation has been kept by FM Approvals.

16. **Certificate History**

Details of the supplements to this certificate are described below:

Date	Description
10th August 2017	Original Issue.
15th August 2018	Supplement 1: Report Reference: – RR214529 dated 15th August 2018 Description of the Change: 1) Add Varec Trademark product listings.

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