

# Certificate of Compliance

**Certificate:** 1519878 (LR 053988)

**Master Contract:** 224001

**Project:** 1717460

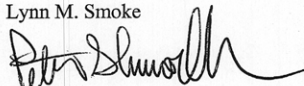
**Date Issued:** October 7, 2005

**Issued to:** Varec, Inc.  
5834 Peachtree Corners East  
Norcross, GA 30092  
USA  
**Attention:** Mr. Steven Jackson

*The products listed below are eligible to bear the CSA Mark shown*



**Issued by:** Lynn M. Smoke



**Authorized by:** Peter Schimmoeller  
Manager Certification Services

## **PRODUCTS**

### **2258-02 - PROCESS CONTROL EQUIPMENT – For Hazardous Locations**

Ex nA IIC: Class I, Zone 2:

Class I, Division 2, Groups A, B, C and D; Class II, Division 1, Groups E, F and G; Class III; Type 4X:

- 7500 Series Radar Tank Gauge, Model N7530-UbccdCfg (Horn Antenna), N7531-UbccccCfg (Rod Antenna), N7532-UbccccCfg (Planar Antenna) and N7533-UbccccCfg (Parabolic Antenna), rated 4-20mA, 30V. Suitable for Div. 2/Zone 2 with Temperature Codes and Maximum Ambient Temperatures per Control Drawings No 960397-7045.

Note: Antennas have a Type 6P rating.

Ex nC IIC: Class I, Zone 2:

Class I, Division 2, Groups A, B, C and D; Class II, Division 1, Groups E, F and G; Class III; Type 4X:

- 7200 Series Radar Tank Gauge, (Intrinsically Safe) Model N7230-Ubccccdefgh (Horn Antenna, 5.8-6.3GHz), N7231-Ubccccdefgh (Rod Antenna), N7232-Ubccccdefg (Planar Antenna), N7233-Ubccccdefg (Parabolic Antenna), N7240-Ubccccdefghi (Horn Antenna, >20GHz), N7244-Ubccccdefgh (compact antenna with high chemical resistance) and N7245-Ubccccdefg (compact antenna, highly resistant and easy to clean), rated 4-20mA, 30V. Temperature Codes and Maximum

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Ambient Temperatures per Control Drawing Nos. 960417-2065 (F12/IS-HART), 960417-2066 (F12/FISCO-PA/FF), 960417-2069 (F23/IS-HART), 960417-2070 (F23/IS- FISCO – PA/FF), 960417-2071 (F23/IS- ENTITY – PA/FF), 960417-2072 (T12-OVP / IS-HART), 960417-2073 (T12-OVP - FISCO – PA/FF), 960417-2074 (T12-OVP - ENTITY – PA/FF) and 960417-2087 (F12/IS-ENTITY-PA/FF).

- 7200 Series Radar Tank Gauge, (Explosion-proof) Model N7230-Vbcccdefgh (Horn Antenna, 5.8-6.3GHz), N7231-Vbcccdefgh (Rod Antenna), N7232-Vbcccdefg (Planar Antenna), N7233-Vbcccdefg (Parabolic Antenna), N7240-Vbcdeefghi (Horn Antenna, >20GHz), N7244-Vbcccdefgh (compact antenna with high chemical resistance) and N7245-Vbcccdefg (compact antenna, highly resistant and easy to clean), rated 4-20mA, 30V. Temperature Codes and Maximum Ambient Temperatures per Control Drawing No. 960417-2067B.

**SPECIAL CONDITIONS FOR SAFE USE (X)**

1. The units must be installed in accordance with the applicable referenced Control Drawings.
2. Some of the sensors are made of plastic and as such, present a possible electrostatic hazard. They are intended for use in zone 0, 1, 2 hazardous locations, gases vapours or mists. If sensors are to be cleaned, a damp cloth should be used. The applicable equipment bears a metallic warning label which is fixed with a key ring with the following wording:

“AVOID ELECTROSTATIC CHARGING OF THE ANTENNA”.

**CLASS 2258 03 - PROCESS CONTROL EQUIPMENT - Intrinsically Safe and Non-Incendive Systems - For Hazardous Locations**

Ex d [ia] IIC: Class I, Zone 1/0:

Class I, Division 1, Groups A, B, C and D; Class II, Division 1, Groups E, F and G; Class III; Type 4X:

- 7200 Series Radar Tank Gauge, (Explosion-proof) Model N7230-Vbcccdefgh (Horn Antenna, 5.8-6.3GHz), N7231-Vbcccdefgh (Rod Antenna), N7232-Vbcccdefg (Planar Antenna), N7233-Vbcccdefg (Parabolic Antenna), N7240-Vbcdeefghi (Horn Antenna, >20GHz), N7244-Vbcccdefgh (compact antenna with high chemical resistance) and N7245-Vbcccdefg (compact antenna, highly resistant and easy to clean), rated 4-20mA, 30V. Explosion-Proof with Intrinsically Safe electronics and antenna. Temperature Codes and Maximum Ambient Temperatures per Control Drawing No. 960417-2067. Factory Sealed.

**SPECIAL CONDITIONS FOR SAFE USE (X)**

1. The units must be installed in accordance with the applicable referenced Control Drawings.
2. Some of the sensors are made of plastic and as such, present a possible electrostatic hazard. They are intended for use in zone 0, 1, 2 hazardous locations, gases vapours or mists. If sensors are to be cleaned,

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a damp cloth should be used. The applicable equipment bears a metallic warning label which is fixed with a key ring with the following wording:

“AVOID ELECTROSTATIC CHARGING OF THE ANTENNA”.

Ex nC IIC: Class I, Zone 2;

Class I, Division 2, Group A, B, C and D; Type 4X Enclosure:

- N4400 Display, rated 5.6V, 1mA. Non-Incendive per Control Drawing No. 960411-7006. Temperature Code T5. Maximum Ambient Temperature 75°C.

#### **2258-04 - PROCESS CONTROL EQUIPMENT – Intrinsically Safe Entity – For Hazardous Locations**

Ex ia IIC: Class I, Zone 0:

Class I, Groups A, B, C and D; Class II, Groups E, F and G; Class III, Type 4X:

- 7500 Series Radar Tank Gauge, Model N7530-UbccccCfG (Horn Antenna), N7531-UbccccCfG (Rod Antenna), N7532-UbccccCfG (Planar Antenna), and N7533-UbccccCfG (Parabolic Antenna), rated 4-20mA, 30V. Intrinsically Safe with Temperature Codes and Maximum Ambient Temperatures with Entity Parameters per Control Drawing No. 960397-7045.

Note: Antennas have a Type 6P rating.

Ex ia IIC: Class I, Zone 0:

Class I, Division 1, Groups A, B, C and D; Class II, Division 1, Groups E, F and G; Class III; Type 4X:

- - 7200 Series Radar Tank Gauge, (Intrinsically Safe) Model N7230-Ubccccdefgh (Horn Antenna, 5.8-6.3GHz), N7231-Ubccccdefgh (Rod Antenna), N7232-Ubccccdefg (Planar Antenna), N7233-Ubccccdefg (Parabolic Antenna), N7240-Ubccccdefghi (Horn Antenna, >20GHz), N7244-Ubccccdefgh (compact antenna with high chemical resistance) and N7245-Ubccccdefg (compact antenna, highly resistant and easy to clean), rated 4-20mA, 30V. Intrinsically Safe with Temperature Codes and Maximum Ambient Temperatures with Entity Parameters per Control Drawing Nos. 960417-2065 (F12/IS-HART), 960417-2066 (F12/FISCO-PA/FF), 960417-2069 (F23/IS-HART), 960417-2070 (F23/IS- FISCO – PA/FF), 960417-2071 (F23/IS- ENTITY – PA/FF), 960417-2072 (T12-OVP / IS-HART), 960417-2073B (T12-OVP - FISCO – PA/FF), 960417-2074 (T12-OVP - ENTITY – PA/FF) and 960417-2087 (F12/IS- ENTITY-PA/FF).

Note: All 7200 Series Radar Tank Gauge N72xx-U.... with Profibus PA or Foundation Fieldbus (model code for “Output and Operation” = C,D or E,F) can be installed according to the FISCO Model (per Control Drawing 960417-2066, 960417-2070 or 960417-2073) or Entity Concept (per Control Drawing 960417-2071, 960417-2074 or 960417-2087).

#### **SPECIAL CONDITIONS FOR SAFE USE (X)**

1. The units must be installed in accordance with the applicable referenced Control Drawings.

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2. Some of the sensors are made of plastic and as such, present a possible electrostatic hazard. They are intended for use in zone 0, 1, 2 hazardous locations, gases vapours or mists. If sensors are to be cleaned, a damp cloth should be used. The applicable equipment bears a metallic warning label which is fixed with a key ring with the following wording:

“AVOID ELECTROSTATIC CHARGING OF THE ANTENNA”.

Class I, Zone 0, Group IIC:

Class I, Groups A, B, C and D; Class II, Groups E, F and G; Class III; Type 4X:

- 4590 Series Tank Side Monitor, Model N-4590, rated 12-55V dc, 12W max., 52-250V ac, 50/60Hz, 12VA; explosion-proof for Class I, Div. 1, Groups A, B, C, D, Class II, Div. 1, Groups E, F, G, Class III; Class I, Zone 1, Group IIC (Seals Not Required) or suitable for use in Class I, Div. 2, Groups A, B, C, D; Class I, Zone 2, Group IIC (temp. code T3C). Provides intrinsically safe circuits with entity parameters per connection drawing 960522-7050 and 960522-7051; maximum ambient 70C.

Ex ia IIC: Class I, Zone 0;

Class I, Division 1, Group A, B, C and D; Type 4X Enclosure:

- N4400 Display, rated 5.6V, 1mA. Intrinsically Safe with entity parameters per Control Drawing No. 960411-7006. Temperature Code T5. Maximum Ambient Temperature 75°C.

## CLASS 2252 01 - PROCESS CONTROL EQUIPMENT

Type 4X Enclosure:

- 7200 Series Radar Tank Gauge, Model N7230-Nbccccdefgh (Horn Antenna, 5.8-6.3GHz), N7231-Nbccccdefgh (Rod Antenna), N7232-Nbccccdefg (Planar Antenna), N7233-Nbccccdefg (Parabolic Antenna), N7240-Nbccccdefghi (Horn Antenna, >20GHz), N7244-Nbccccdefgh (compact antenna with high chemical resistance) and N7245-Nbccccdefg (compact antenna, highly resistant and easy to clean), rated 4-20mA, 36V.

## APPLICABLE REQUIREMENTS

CSA Std C22.2 No.	25-1966	- Enclosures for Use in Class II Groups E, F, and G Hazardous Locations
CSA Std C22.2 No.	30-M1986	- Explosion-Proof Enclosures for Use in Class I Hazardous Locations
CAN/CSA C22.2 No.	94-M91	- Special Purpose Enclosures
CSA Std C22.2 No.	142-M1987	- Process Control Equipment
CAN/CSA C22.2 No.	157-92	- Intrinsically Safe and Non-Incendive Equipment for Use in Hazardous Locations
CSA Std C22.2 No.	213-M1987	- Non-incendive Electric Equipment for Use in Class I, Division 2 Hazardous Locations
CAN/CSA-E79-0-95		- Electrical Apparatus for Explosive Gas Atmospheres—Part 0: General Requirements
CAN/CSA-E79-11-95		- Electrical Apparatus for Explosive Gas Atmospheres—Part 11: Intrinsic Safety “i”
CAN/CSA-E79-15-95		- Electrical Apparatus for Explosive Gas Atmospheres—Part 15: Electrical Apparatus with Type of Protection “n”

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|----------------------|---|
| CAN/CSA-E60079-0:02  | - Electrical Apparatus for Explosive Gas Atmospheres--Part 0: General Requirements  |
| CAN/CSA-E60079-1:02  | - Electrical Apparatus for Explosive Gas Atmospheres--Part 1: Construction and Verification Test of Flameproof Enclosures of Electrical Apparatus |
| CAN/CSA-E60079-11:02 | - Electrical Apparatus for Explosive Gas Atmospheres--Part 11: Intrinsic Safety "i"   |
| CAN/CSA-E60079-15:02 | - Electrical Apparatus for Explosive Gas Atmospheres--Part 15: Electrical Apparatus with Type of Protection "n"                                   |

## Supplement to Certificate of Compliance

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*The products listed, including the latest revision described below,  
are eligible to be marked in accordance with the referenced Certificate.*

### Product Certification History

Project	Date	Description
1717460	2005-10-07	Submittal of Drawing changes to the already Certified N4590.
1533095	2004-03-26	Model comparison for Endress + Hauser GmbH + Co. KG. Report Nos. 151079-1399801.
1533094	2004-03-26	Model comparison for Endress + Hauser GmbH + Co. KG. Report Nos. 151079-1039154.
1519878	2004-01-29	Original Certification. Model comparison for Endress + Hauser GmbH + Co. KG. Report Nos. 151079-1141880 and 151079-1308795.

Endress + Hauser GmbH + Co. KG	Varec, Inc.
<b>Project 1519878</b>	
FMR530	N7530
FMR531	N7531
FMR532	N7532
FMR533	N7533
NRF590	N4590
<b>Project 1533094</b>	
FMR230	N7230
FMR231	N7231
FMR232	N7232
FMR233	N7233
FMR240	N7240
FMR244	N7244
FMR245	N7245
<b>Project 1533095</b>	
FHX40	N4400
<b>Project 1717460 (Drawing update for)</b>	
FMR53x	N753x
NRF590	N4590

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