

Certificate of Compliance

Certificate: 2208699

Master Contract: 151079

Project: 2276677

Date Issued: March 29, 2010

Issued to: Endress & Hauser
Hauptstrasse 1
79689 Maulburg
GERMANY

Attention: Mr Andreas Steffan

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



Issued by: E. Giusti

Authorized by: M.H.J Hoendervangers
Area Director Europe



PRODUCTS

CLASS 2258 04 - PROCESS CONTROL EQUIPMENT - Intrinsically Safe Entity - For Hazardous Locations

**Class I, Division 1 and 2 Groups A, B, C and D; Class II, Groups E, F and G; Class III;
Class I, Zone 0; Ex ia IIC Tx:**

SOLICAP S Models FTI77-LxxxxxxxHxxxx Capacitive Level transmitters with FEI50H Electronic insert (with or without display); Input rated 4-20mA, 30Vdc (max); Intrinsically Safe per Control Drawing No 960009465-B; Type 4X Enclosure, IP65/66/67; MWP150 psi; $-50^{\circ}\text{C} \leq \text{Process Temp.} \leq +400^{\circ}\text{C}$; $-50^{\circ}\text{C} \leq \text{Electronic Temp} \leq +70^{\circ}\text{C}$.

SOLICAP S Models FTI77-Lxxxxxxx5xxxx, Capacitive Level transmitters with FEI55 Electronic insert; Input rated 36Vdc, 100 mA (8/16mA); Intrinsically Safe per Control Drawing No 960009465-B; Type 4X Enclosure, IP65/66/67; MWP 150 psi; $-50^{\circ}\text{C} \leq \text{Process Temp.} \leq +400^{\circ}\text{C}$; $-50^{\circ}\text{C} \leq \text{Electronic Temp} \leq +70^{\circ}\text{C}$.

SOLICAP S Models FTI77-Lxxxxxxx7xxxx, Capacitive Level transmitters with FEI57S Electronic insert; Input rated 16,1Vdc, 100 mA (PFM); Intrinsically Safe per Control Drawing No 960009465-B; Type 4X Enclosure, IP65/66/67; MWP 150 psi; $-50^{\circ}\text{C} \leq \text{Process Temp.} \leq +400^{\circ}\text{C}$; $-50^{\circ}\text{C} \leq \text{Electronic Temp} \leq +70^{\circ}\text{C}$.

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SOLICAP S Models FTI77-Lxxxxxxx8xxxx, Capacitive Level transmitters with FEI58 Electronic insert; Input rated 18,0Vdc, 52 mA; Intrinsically Safe per Control Drawing No 960009465-B; Type 4X Enclosure, IP65/66/67; MWP 150 psi; $-50^{\circ}\text{C} \leq \text{Process Temp.} \leq +400^{\circ}\text{C}$; $-50^{\circ}\text{C} \leq \text{Electronic Temp} \leq +70^{\circ}\text{C}$.

**Class II, Division 1, Groups E, F, and G;
DIP**

SOLICAP S FTI77-NxxxxxxxHxxxx Capacitive Level transmitters with FEI50H Electronic insert; Input rated 14,4-30Vdc, 4-20mA; Explosion-Proof and Dust-Tight with intrinsically safe probe; Type 4X/Type 6P Enclosure, IP65/66/68.

SOLICAP S FTI77-Nxxxxxxx1xxxx Capacitive Level transmitters with FEI51 Electronic insert; Input rated 19-253Vac, 40mA; Explosion-Proof and Dust-Tight with intrinsically safe probe; Type 4X/Type 6P Enclosure, IP65/66/68.

SOLICAP S FTI77-Nxxxxxxx2xxxx Capacitive Level transmitters with FEI52 Electronic insert; Input rated 10-55Vdc, 0,1mA/Imax 350mA, Pmax=1,6W; Explosion-Proof and Dust-Tight with intrinsically safe probe; Type 4X/Type 6P Enclosure, IP65/66/68.

SOLICAP S FTI77-Nxxxxxxx4xxxx Capacitive Level transmitters with FEI54 Electronic insert; Input rated :19-253Vac or 19-55Vdc ; 30 Vdc/4A ; 125 Vdc/0,2A; 253 Vac/4A; Pmax=1,6W; Explosion-Proof and Dust-Tight with intrinsically safe probe; Type 4X/Type 6P Enclosure, IP65/66/68.

SOLICAP S FTI77-Nxxxxxxx5xxxx Capacitive Level transmitters with FEI55 Electronic insert; Input rated 14,4-30Vdc, 8 – 16mA; Explosion-Proof and Dust-Tight with intrinsically safe probe; Type 4X/Type 6P Enclosure, IP65/66/68.

SOLICAP S Models FTI77-Nxxxxxxx7xxxx, Capacitive Level transmitters with FEI57S Electronic insert; Input rated 16,1Vdc, 100 mA (PFM); Type 4X Enclosure, IP65/66/67; MWP 150 psi; $-50^{\circ}\text{C} \leq \text{Process Temp.} \leq +400^{\circ}\text{C}$; $-50^{\circ}\text{C} \leq \text{Electronic Temp} \leq +70^{\circ}\text{C}$.

SOLICAP S Models FTI77-Nxxxxxxx8xxxx, Capacitive Level transmitters with FEI58 Electronic insert; Input rated 18,0Vdc, 52 mA; Type 4X Enclosure, IP65/66/67; MWP 150 psi; $-50^{\circ}\text{C} \leq \text{Process Temp.} \leq +400^{\circ}\text{C}$; $-50^{\circ}\text{C} \leq \text{Electronic Temp} \leq +70^{\circ}\text{C}$.

**Class I, Division 1, Groups A, B, C and D; Class II, Div. 1, Groups E, F, G; Class III;
Class I, Zone 0/1; Ex d[ia] IIC Tx:**

SOLICAP S FTI77-MxxxxxxxHxxxx Capacitive Level transmitters with FEI50H Electronic insert; Input rated 14,4-30Vdc, 4-20mA; Explosion-Proof and Dust-Tight with intrinsically safe probe; Type 4X/Type 6P Enclosure, IP65/66/68.

SOLICAP S FTI77-Mxxxxxxx1xxxx Capacitive Level transmitters with FEI51 Electronic insert; Input rated 19-253Vac, 40mA; Explosion-Proof and Dust-Tight with intrinsically safe probe; Type 4X/Type 6P Enclosure, IP65/66/68.

SOLICAP S FTI77-Mxxxxxxx2xxxx Capacitive Level transmitters with FEI52 Electronic insert; Input rated 10-55Vdc, 0,1mA/Imax 350mA, Pmax=1,6W; Explosion-Proof and Dust-Tight with intrinsically safe probe; Type 4X/Type 6P Enclosure, IP65/66/68.

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SOLICAP S FTI77-Mxxxxxxx4xxxx Capacitive Level transmitters with FEI54 Electronic insert; Input rated :19-253Vac or 19-55Vdc ; 30 Vdc/4A ; 125 Vdc/0,2A; 253 Vac/4A; Pmax=1,6W;
Explosion-Proof and Dust-Tight with intrinsically safe probe; Type 4X/Type 6P Enclosure, IP65/66/68.

SOLICAP S FTI77-Mxxxxxxx5xxxx Capacitive Level transmitters with FEI55 Electronic insert; Input rated 14,4-30Vdc, 8 – 16mA; Explosion-Proof and Dust-Tight with intrinsically safe probe; Type 4X/Type 6P Enclosure, IP65/66/68.

CLASS 2252 03 - PROCESS CONTROL EQUIPMENT

SOLICAP S FTI77-NxxxxxxxHxxxx Capacitive Level transmitters with FEI50H Electronic insert; Input rated 14,4-30Vdc, 4-20mA; Type 4X/Type 6P Enclosure, IP65/66/68.

SOLICAP S FTI77-Nxxxxxxx1xxxx Capacitive Level transmitters with FEI51 Electronic insert; Input rated 19-253Vac, 40mA; Type 4X/Type 6P Enclosure, IP65/66/68.

SOLICAP S FTI77-Nxxxxxxx2xxxx Capacitive Level transmitters with FEI52 Electronic insert; Input rated 10-55Vdc, 0,1mA/Imax 350mA, Pmax=1,6W; Type 4X/Type 6P Enclosure, IP65/66/68.

SOLICAP S FTI77-Nxxxxxxx4xxxx Capacitive Level transmitters with FEI54 Electronic insert; Input rated :19-253Vac or 19-55Vdc ; 30 Vdc/4A ; 125 Vdc/0,2A; 253 Vac/4A; Pmax=1,6W; Type 4X/Type 6P Enclosure, IP65/66/68.

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SOLICAP S Models FTI77-Nxxxxxxx7xxxx, Capacitive Level transmitters with FEI57S Electronic insert; Input rated 16,1Vdc, 100 mA (PFM); Type 4X Enclosure, IP65/66/67; MWP 150 psi; -50°C ≤ Process Temp. ≤ +400°C; -50°C ≤ Electronic Temp ≤ +70°C.

SOLICAP S FTI77-Nxxxxxxx8xxxx Capacitive Level transmitters with FEI58 Electronic insert; Input rated 18,0Vdc, 52mA; Type 4X/Type 6P Enclosure, IP65/66/68.

APPLICABLE REQUIREMENTS

CSA C22.2 No. 0-M91-General Requirements - Canadian Electrical Code, Part II

CSA C22.2 No. 25-1966-Enclosure for Use in Class II, Groups E, F and G hazardous Locations

CAN/CSA C22.2 No. 61010-1-04 - Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use - Part 1: General Requirements - Second Edition

CSA C22.2 No. 157-M1992 - Intrinsically Safe and Non-Incendive Equipment for Use in Hazardous Locations

CSA C22.2 No. 213-M1987 - Non-Incendive Electrical Equipment for Use in Class I, Division 2 Hazardous Locations

CSA C22.2 No 60079-0:07 -Electrical Apparatus for Explosive Gas Atmospheres- Part 0:General Requirements

CSA C22.2 No 60079-1:07 -Electrical Apparatus for Explosive Gas Atmospheres- Part 1:Flameproof enclosures "d"

CAN/CSA E60079-11:02 - Electrical Apparatus for Explosive Gas Atmospheres - Part 11: Intrinsic Safety "i"

CSA E60079-15:02 - Electrical Apparatus for Explosive Gas Atmospheres - Part 15: Type of Protection "n"

CAN/CSA-C22.2 No. 94-M91 – Special purpose enclosure

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MARKINGS

The following marking appears on the nameplate respectively in the nameplate drawings; "960009467 and 960009466".

- CSA Monogram
- Submitter Identification (Company Name or CSA File Number)
- Model Number
- Serial Number, Date Code or Month and Year of Manufacture
- Electrical Rating
- Hazardous Location Designation
- Certificate number: CSA 09.xxxxxx
- Entity Parameters when applicable
- Temperature Code
- Maximum Ambient Temperature
- Minimum and Maximum process temperature
- Special Purpose Enclosure Designation
- The words INTRINSICALLY SAFE/SECURITE INTRINSEQUE
- The Symbol Exia
- Reference to Installation Instructions

The specifications on the nameplates are printed, embossed, engraved or written using a laser technique. The material used for the nameplate is aluminum (Mg < 6%), stainless steel or brass. The nameplate is fixed with screws or rivets.

Warnings

For Explosion proof and Dust tight products:

The window cover is marked with "Do not remove cover while circuits are alive!" (see dwg. 960007055 and 960007057).

For Intrinsically safe products:

"Substitution of components may impair intrinsic safety"

For Non Incendive Products:

"Substitution of components may impair suitability for Class I, Division 2"

For Class I, Division 2 products:

"Do not disconnect equipment unless power has been switched off or the area is known to be non hazardous".

These warnings can be presented on the installation drawing 960009465-B.

Installation drawing

The installation drawing 960009465-B is supplied with each capacitive level transmitter.

Note - Jurisdictions in Canada may require these markings to also be provided in French language. It is the responsibility of the manufacturer to provide bilingual marking, where applicable, in accordance with the requirements of the Provincial Regulatory Authorities. It is the responsibility of the manufacturer to determine this requirement and have bilingual wording added to the "Markings".

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
2276677	March 29, 2010	Update to report 2208699 to include new electronic insert FEI58.
2208699	August 13, 2009	Original CSA Certification for Solicap S.