



CSA INTERNATIONAL

Certificate of Compliance

Certificate: 1718106

Master Contract: 151079

Project: 2479358

Date Issued: December 2, 2011

Issued to: Endress + Hauser GmbH + Co. KG
Hauptstrasse 1
Maulburg, Baden-Wurttemberg 79690
Germany
Attention: Arno Götz

The products listed below are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US or with adjacent indicator 'US' for US only or without either indicator for Canada only.



Ron Wildish

Issued by: Ron Wildish

PRODUCTS

CLASS 2258 02 - PROCESS CONTROL EQUIPMENT - For Hazardous Locations

CLASS 2258 82 - PROCESS CONTROL EQUIPMENT - For Hazardous Locations -
Certified to US Standards

Class II, Groups E, F and G, Class III:

SOLIPHANT M, Level Limit Switch, Types FTM50-D FTM51- D and FTM52- D; rated as follows, with FEM51 insert, 19...253Vac, 350mA, with FEM52 insert, 10...55Vdc, 350mA, with FEM54 insert, 19...55Vdc or 19...253Vac, 6 A, with FEM55 insert. 11...36VDC, 8/16mA, max. ambient 70C, max.process temperature up to +300C; MWP 360 psi/25 bar (FTM50, FTM51); MWP 30 psi/2 bar (FTM52); Type 4X; IP65/66/67; Single Seal; connected per installation drawing 960008854.

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

SOLIPHANT M, Level Limit Switch, Types FTM50-H FTM51- H and FTM52- H; rated as follows, with FEM51 insert, 19...253Vac, 350mA, with FEM52 insert, 10...55Vdc, 350mA, with FEM54 insert, 19...55Vdc or 19...253Vac, 6 A, with FEM55 insert. 11...36VDC, 8/16mA, max. ambient 70C, max.process temperature up to +300C; MWP 360 psi/25 bar (FTM50, FTM51); MWP 30 psi/2 bar (FTM52); Type 4X; IP65/66/67; Single Seal; connected per installation drawing 960008854.



Certificate: 1718106

Master Contract: 151079

Project: 2479358

Date Issued: December 2, 2011

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

SOLIPHANT M, Level Limit Switch, Types FTM50-H , FTM51- H and FTM52- H ; rated as follows, with FEM51 insert, 19...253Vac, 350mA, with FEM52 insert, 10...55Vdc, 350mA, with FEM54 insert, 19...55Vdc or 19...253Vac, 6 A, with FEM55 insert. 11...36VDC, 8/16mA, max. ambient 70C, max.process temperature up to +300C; MWP 360 psi/25 bar (FTM50, FTM51); MWP 30 psi/2 bar (FTM52) ; Type 4X; IP65/66/67; Single Seal; connected per installation drawing 960008854.

CLASS2258 03 - PROCESS CONTROL EQUIPMENT - Intrinsically Safe and Non-Incendive Systems - For Hazardous Locations

CLASS 2258 83 - PROCESS CONTROL EQUIPMENT - Intrinsically Safe and Non-Incendive Systems - For Hazardous Locations - CERTIFIED TO U.S. STANDARDS

Class I, Div. 2, Groups A, B, C and D:

SOLIPHANT M, Level Limit Switch, Types FTM50-F , FTM51- F and FTM52- F ; rated as follows: with FEM55 insert, 11-36 Vdc, 4-20 mA; with FEM57 insert, 9.5-12.5 Vdc, 10-13 mA; with FEM58 insert, 8.2 Vdc + 20%, 0.4-4.8 mA; , non-incendive with field wiring parameters as follows: with FEM55 insert. $V_{max}= 36\text{ V}$, $P_{max} = 1\text{ W}$, $C_i = 0\text{ nF}$, $L_i = 0\text{ }\mu\text{H}$, with FEM57 insert (2 wire PFM), $V_{max}= 16.7\text{ V}$, $P_{max} = 1\text{ W}$, $C_i = 0\text{ nF}$, $L_i = 0\text{ }\mu\text{H}$; with FEM58 insert (2 wire NAMUR), $V_{max}= 18\text{ V}$, $P_{max} = 170\text{ mW}$, $C_i = 0\text{ nF}$, $L_i = 0\text{ }\mu\text{H}$; when connected per installation drawing no. 960007419; max. ambient 70 Deg. C; max. process temperature up to +300C; MWP 360 psi/25 bar (FTM50, FTM51); MWP 30 psi/2 bar (FTM52) ; Type 4X; IP65/66/67; Single Seal.

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

CLASS 2258 84 - PROCESS CONTROL EQUIPMENT - Intrinsically Safe Entity - For Hazardous Locations – Certified to U.S. Standards

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

Ex ia IIC: Class I, Zone 0, Group IIC T3...T6

AEx ia IIC: Class I, Zone 0, Group IIC T3...T6

SOLIPHANT M, Level Limit Switch, Types FTM50-F , FTM51- F and FTM52- F ; rated as follows: with FEM55 insert, 11-36 Vdc, 4-20 mA; with FEM57 insert, 9.5-12.5 Vdc, 10-13 mA; with FEM58 insert, 8.2 Vdc + 20%, 0.4-4.8 mA; intrinsically safe with Entity parameters as follows: with FEM55 insert: $V_{max}/U_i= 36\text{ V}$, $I_{max}/I_i= 100\text{ mA}$, $P_{max}/P_i = 1\text{ W}$, $C_i = 0\text{ nF}$, $L_i = 0\text{ }\mu\text{H}$, with FEM57 insert (2 wire PFM), $V_{max}/U_i= 16.7\text{ V}$, $I_{max}/I_i= 150\text{ mA}$, $P_{max}/P_i = 1\text{ W}$, $C_i = 0\text{ nF}$, $L_i = 0\text{ }\mu\text{H}$; with FEM58 insert (2 wire NAMUR), $V_{max}/U_i= 18\text{ V}$, $I_{max}/I_i= 52\text{ mA}$, $P_{max}/P_i = 170\text{ mW}$, $C_i = 0\text{ nF}$, $L_i = 0\text{ }\mu\text{H}$; when connected per installation drawing no. 960007419; max. ambient 70 Deg. C; max. process temperature up to +300C; MWP 360 psi/25 bar (FTM50, FTM51); MWP 30 psi/2 bar (FTM52); Type 4X; IP65/66/67; Single Seal.

Notes:



Certificate: 1718106

Master Contract: 151079

Project: 2479358

Date Issued: December 2, 2011

APPLICABLE REQUIREMENTS

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

C22.2 No. 25-1966 - Enclosures for Use in Class II, Groups E, F and G Hazardous Locations

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

CAN/CSA-C22.2 No. 1010.1-92 - Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use, Part 1: General Requirements

CAN/CSA-C22.2 No. 157-92 - Intrinsically Safe and Non-Incendive Equipment for Use in Hazardous Locations

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

CAN/CSA-C22.2 No. 60079-0:07 - Electrical apparatus for explosive gas atmospheres - Part 0: General requirements

CAN/CSA-E60079-11:02 - Electrical apparatus for explosive gas atmospheres - Part 11: Intrinsic Safety "i"

CAN/CSA-C22.2 No. 60529:05 - Degrees of protection provided by enclosures (IP Code)

FMRC 3600 – 1998- Electrical Equipment for Use in Hazardous (Classified) Locations, General Requirements

FMRC 3610 – 1999- Intrinsically Safe Apparatus for Use in Class I, II & III, Division 1, and Class I, Zone 0 & 1 Hazardous (Classified) Locations

FMRC 3611 – 1999 - Nonincendive Electrical Equipment for Use in Class I and Class II, Division 2, and Class III, Division 1 and 2 Hazardous (Classified) Locations

FMRC 3615 – 2006- Explosionproof Electrical Equipment, General Requirements

FMRC 3810 – 1995- Electrical and Electronic Test, Measuring, and Process Control Equipment

ISA-82.02.01 – 2004- Process Control Equipment

ANSI/NEMA 250 – 1991- Enclosures for Electrical Equipment

ANSI/IEC 60529:2004- Degrees of Protection Provided by Enclosures (IP Code)



Supplement to Certificate of Compliance

Certificate: 1718106

Master Contract: 151079

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 |
|----------------|------------------|--|
| 2479358 | December 2, 2011 | Update to cover addition of F27 enclosure; addition of Single Seal rating and related drawings. |
| 2039915 | February 2, 2009 | Update to cover revisions to marking and control drawings, addition of alternative adhesive nameplate types and addition of MWP ratings. |

History

| | | |
|---------|----------------|---|
| 2112714 | Dec. 22, 2008 | Update to cover electronic modifications to inserts (FEM5x) |
| 1895827 | April 2, 2007 | Update to cover addition of hermetically sealed and welded sensors. |
| 1828726 | Jan. 30, 2007 | Update to include: new insert FEM55; glass window on covers; remote housing version; and minor correction to temperature ratings. |
| 1718106 | Sept. 23, 2005 | Original cCSAus Certification for Soliphant M, Types FTM50, FTM51 and FTM52. |