



# Certificate of Compliance

Certificate: 2581013

Master Contract: 151079

Project: 70182739

Date Issued: 2018-07-04

Issued to: Endress+Hauser SE+Co. KG  
Hauptstrasse 1  
Maulburg, Baden-Württemberg 79689  
GERMANY  
Attention: Burkhard Lutterbeck

*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.*



Issued by: Anil Sodhi  
Anil Sodhi

## PRODUCTS

- CLASS 2258 02** - PROCESS CONTROL EQUIPMENT - For Hazardous Locations  
**CLASS 2258 82** - PROCESS CONTROL EQUIPMENT - For Hazardous Locations – Certified to U.S. Standards

**Ex d IIC T6 Gb:**

**AEx d IIC T6 Gb:**

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

LIQUIPHANT Failsafe, Level Limit Switch, Types FTL80-abcdefghij+xx (a = CD or 8A); CSA Encl Type 4X/6P, IP66/68; rated 30Vdc, 4-20 mA; Ambient -60 Deg. C to + 70 Deg. C, Temperature code, T6; Single Seal, MWP 928 psi (64 bar), -50 Deg. C  $\leq$  Process Temp.  $\leq$  +150°C (f = A); Dual Seal, MWP 1450 psi (100 bar) -60 Deg. C  $\leq$  Process Temp.  $\leq$  +230°C (f = C), +280°C (f = D) or +300°C (f = Y); additional suffixes in model code denote options such as Certification, output, housing, electrical connections, application, sensor materials, process connection.

LIQUIPHANT Failsafe, Level Limit Switch, Types FTL81-abcdefghij+xx (a = CD or 8A); CSA Encl Type 4X/6P, IP66/68; rated 30Vdc, 4-20 mA; Ambient -60 Deg. C to + 70 Deg. C, Temperature code, T6; Single Seal, MWP 928 psi (64 bar) (f = A) or MWP 1450 psi (100 bar) (f = B), -50 Deg. C  $\leq$  Process Temp.  $\leq$  +150°C; Dual Seal, MWP 1450 psi (100 bar) -60 Deg. C  $\leq$  Process Temp.  $\leq$  +230°C (f = C), +280°C (f = D) or +300°C (f = Y);



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additional suffixes in model code denote options such as Certification, output, housing, electrical connections, application, sensor materials, process connection.

LIQUIPHANT Failsafe, Level Limit Switch, Types FTL85-abcdefghij+xx (a = CD or 8A); CSA Encl Type 4X/6P, IP66/68; rated 30Vdc, 4-20 mA; Ambient -60 Deg. C to + 70 Deg. C, Temperature code, T6; Single Seal, MWP 580 psi (40 bar), -50 Deg. C  $\leq$  Process Temp.  $\leq$  +120°C (f = N), MWP 580 psi (40 bar) -50 Deg. C  $\leq$  Process Temp.  $\leq$  +150°C (f = P), or MWP 362 psi (25 bar) -50 Deg. C  $\leq$  Process Temp.  $\leq$  +150°C (f = T); additional suffixes in model code denote options such as Certification, output, housing, electrical connections, application, sensor materials, process connection.

**Ex nA IIC T6 Gc:**

**AEx nA IIC T6 Gc:**

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

LIQUIPHANT Failsafe, Level Limit Switch, Types FTL80-abcdefghij+xx (a = CC or CD); CSA Encl Type 4X/6P, IP66/68; rated 30Vdc, 4-20 mA; Ambient -60 Deg. C to + 70 Deg. C, Temperature code, T6; Single Seal, MWP 928 psi (64 bar), -50 Deg. C  $\leq$  Process Temp.  $\leq$  +150°C (f = A); Dual Seal, MWP 1450 psi (100 bar) -60 Deg. C  $\leq$  Process Temp.  $\leq$  +230°C (f = C), +280°C (f = D) or +300°C (f = Y); additional suffixes in model code denote options such as Certification, output, housing, electrical connections, application, sensor materials, process connection.

LIQUIPHANT Failsafe, Level Limit Switch, Types FTL81-abcdefghij+xx (a = CC or CD); CSA Encl Type 4X/6P, IP66/68; rated 30Vdc, 4-20 mA; Ambient -60 Deg. C to + 70 Deg. C, Temperature code, T6; Single Seal, MWP 928 psi (64 bar) (f = A) or MWP 1450 psi (100 bar) (f = B), -50 Deg. C  $\leq$  Process Temp.  $\leq$  +150°C; Dual Seal, MWP 1450 psi (100 bar) -60 Deg. C  $\leq$  Process Temp.  $\leq$  +230°C (f = C), +280°C (f = D) or +300°C (f = Y); additional suffixes in model code denote options such as Certification, output, housing, electrical connections, application, sensor materials, process connection.

LIQUIPHANT Failsafe, Level Limit Switch, Types FTL85-abcdefghij+xx (a = CC or CD); CSA Encl Type 4X/6P, IP66/68; rated 30Vdc, 4-20 mA; Ambient -60 Deg. C to + 70 Deg. C, Temperature code, T6; Single Seal, MWP 580 psi (40 bar), -50 Deg. C  $\leq$  Process Temp.  $\leq$  +120°C (f = N), MWP 580 psi (40 bar) -50 Deg. C  $\leq$  Process Temp.  $\leq$  +150°C (f = P), or MWP 362 psi (25 bar) -50 Deg. C  $\leq$  Process Temp.  $\leq$  +150°C (f = T); additional suffixes in model code denote options such as Certification, output, housing, electrical connections, application, sensor materials, process connection.

- 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

**Ex ia IIC Ga:**

**AEx ia IIC Ga:**

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



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LIQUIPHANT Failsafe, Level Limit Switch, Types FTL80-abcdefghij+xx (a = CB or 8A); CSA Encl Type 4X/6P, IP66/68; rated 30Vdc, 4-20 mA; intrinsically safe with entity parameters  $U_i = 30V$ ,  $I_i = 170mA$ ,  $P_i = 1W$ ,  $C_i = 16nF$ ,  $L_i = 0$  when installed per Control Dwg XA00604F or XA00657F; Ambient -60 Deg. C to + 60 Deg. C, Temperature code, T6; Single Seal, MWP 928 psi (64 bar), -50 Deg. C  $\leq$  Process Temp.  $\leq$  +150°C (f = A); Dual Seal, MWP 1450 psi (100 bar) -60 Deg. C  $\leq$  Process Temp.  $\leq$  +230°C (f = C), +280°C (f = D) or +300°C (f = Y); additional suffixes in model code denote options such as Certification, output, housing, electrical connections, application, sensor materials, process connection.

LIQUIPHANT Failsafe, Level Limit Switch, Types FTL81-abcdefghij+xx (a = CB or 8A); CSA Encl Type 4X/6P, IP66/68; rated 30Vdc, 4-20 mA; intrinsically safe with entity parameters  $U_i = 30V$ ,  $I_i = 170mA$ ,  $P_i = 1W$ ,  $C_i = 16nF$ ,  $L_i = 0$  when installed per Control Dwg XA00604F or XA00657F; Ambient -60 Deg. C to + 60 Deg. C, Temperature code, T6; Single Seal, MWP 928 psi (64 bar) (f = A) or MWP 1450 psi (100 bar) (f = B), -50 Deg. C  $\leq$  Process Temp.  $\leq$  +150°C; Dual Seal, MWP 1450 psi (100 bar) -60 Deg. C  $\leq$  Process Temp.  $\leq$  +230°C (f = C), +280°C (f = D) or +300°C (f = Y); additional suffixes in model code denote options such as Certification, output, housing, electrical connections, application, sensor materials, process connection.

LIQUIPHANT Failsafe, Level Limit Switch, Types FTL85-abcdefghij+xx (a = CB or 8A); CSA Encl Type 4X/6P, IP66/68; rated 30Vdc, 4-20 mA; intrinsically safe with entity parameters  $U_i = 30V$ ,  $I_i = 170mA$ ,  $P_i = 1W$ ,  $C_i = 16nF$ ,  $L_i = 0$  when installed per Control Dwg XA00604F or XA00657F; Ambient -60 Deg. C to + 70 Deg. C, Temperature code, T6; Single Seal, MWP 580 psi (40 bar), -50 Deg. C  $\leq$  Process Temp.  $\leq$  +120°C (f = N), MWP 580 psi (40 bar) -50 Deg. C  $\leq$  Process Temp.  $\leq$  +150°C (f = P), or MWP 362 psi (25 bar) -50 Deg. C  $\leq$  Process Temp.  $\leq$  +150°C (f = T); additional suffixes in model code denote options such as Certification, output, housing, electrical connections, application, sensor materials, process connection.

**CLASS 2252 06** - PROCESS CONTROL EQUIPMENT  
**CLASS 2252 86** - PROCESS CONTROL EQUIPMENT (Certified to U.S. Standards)

LIQUIPHANT Failsafe, Level Limit Switch, Types FTL80/81/85-abcdefghij+xx (a = CA); CSA Encl Type 4X/6P, IP66/68; rated 30Vdc, 4-20 mA; Ambient -60 Deg. C to + 70 Deg. C; additional suffixes in model code denote options such as Certification, output, housing, electrical connections, application, sensor materials, process connection.

Notes:

1. The above model shall be connected to a source with isolation for the working voltage suitable for the application. Pollution Degree 2, Overvoltage Category II.
2. Mode of operation: Continuous
3. Environmental Conditions: 2000 m max



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### APPLICABLE REQUIREMENTS

CAN/CSA C22.2 No. 0-91	- General Requirements - Canadian Electrical Code, Part II
CSA C22.2 No. 25-1966 (R2009)	- Enclosures for Use in Class II, Groups E, F & G Hazardous Locations
CSA C22.2 No. 30-M1986 (R2007)	- Explosion-Proof Enclosures for Use in Class I Hazardous Locations
CAN/CSA C22.2 No. 94-M91	- Special Purpose Enclosures
CSA C22.2 No. 157-92 (R2006)	- Intrinsically Safe and Non-Incendive Equipment for Use in Hazardous Locations
CSA Std C22.2 No. 213-M1987 (R2008)	- Non-Incendive Electrical Equipment for Use in Class I, Division 2 Hazardous Locations
CAN/CSA C22.2 No. 61010-1-12	- Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use - Part 1: General Requirements - Third Edition
CAN/CSA C22.2 No. 60079-0:11	- Explosive Atmospheres - Part 0: Equipment – General Requirements
CAN/CSA C22.2 No. 60079-1:11	- Explosive Atmospheres - Part 1: Equipment protection by flameproof "d"
CAN/CSA C22.2 No. 60079-11:11	- Explosive Atmospheres - Part 11: Equipment protection by intrinsic safety "i"
CAN/CSA C22.2 No. 60079-15:12	- Electrical apparatus for explosive gas atmospheres - Part 15: Construction, test and marking of type of protection "n"
FM3600 – 1998	- Electrical Equipment for Use in Hazardous (Classified) Locations, General Requirements
FM3610 – 2010	- Intrinsically Safe Apparatus for Use in Class I, II & III, Division 1, and Class I, Zone 0 & 1 Hazardous (Classified) Locations
FM3611- 2004	- Nonincendive Electrical Equipment for Use in Class I and Class II, Division 2, and Class III, Division 1 and 2 Hazardous (Classified) Locations
FM3615 – 2006	- Explosionproof Electrical Equipment, General Requirements
ANSI/ISA-61010-1 Third Edition	- Safety Requirements For Electrical Equipment For Measurement, Control, and Laboratory Use - Part 1: General Requirements
ANSI/ISA 60079-0 (12.00.01) -2009	- Explosive atmospheres – Part 0: Equipment - General Requirements
ANSI/ISA 60079-1 (12.22.01) -2009	- Explosive Atmospheres - Part 1: Equipment Protection by Flameproof Enclosures "d"
ANSI/ISA 60079-11 (12.02.01) -2011	- Explosive Atmospheres - Part 11: Equipment Protection by intrinsic safety "i"
ANSI/ISA 60079-15 (12.12.02) -2009	- Electrical Apparatus for Use in Class I, Zone 2 Hazardous (Classified) Locations: Type of Protection "n"
ANSI/ISA–12.27.01–2011	- Requirements for Process Sealing Between Electrical Systems and Flammable or Combustible Process Fluids