



Certificate of Compliance

Certificate: 70137829

Master Contract: 151079

Project: 70207457

Date Issued: 2019-02-14

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

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

Class I, Division 2, Groups A, B, C and D:

Product	<p>Microwave unit Micropilot type, series FMR6x-...</p> <p>FMR60-C2Acdeffgghhh-i</p> <p>FMR62-C2Acdeffgghhh-i</p> <p>FMR62-C5Acdeffgghhh-i</p> <p>FMR67-C2Acdeffgghhh-i</p> <p>Where</p> <p>c = A, C, E, L, M, N</p> <p>d = B, C</p> <p>e = B, C, D</p> <p>ff = GA, GE, GF, GM, GN, GP</p> <p>gg = A3, A4, A5, A6, B4, C1, C2, F5, F6</p> <p>hhh = alphanumeric characters (not relevant for safety)</p> <p>i = E*, NF; plus any number of additional alphanumeric character sets (not relevant for safety)</p> <p>Note: Some option codes may be restricted for certain model types.</p>
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Electrical Rating	35 Vdc, 22.5 mA
Enclosure Rating	Type 4X/6P
Temp. code and ambient temperature	T6...T3 with Ta of -40°C to + 80°C with process temperature (-40 to +200°C); refer to installation drawing for specific T-code and temperature ranges
Process temperature and MWP	<p>Max process temperature: up to + 200°C (dependent on model)</p> <p>Maximum Working Pressure (MWP):</p> <ul style="list-style-type: none"> FMR60; 3 bars; Single Seal* FMR62-aabcdeGEgghhh-i; 20 bars; Single Seal* FMR62-aabcdeGFgghhh-i; 20 bars; Single Seal* FMR62-aabcdeGMgghhh-i; 25 bars; Single Seal* FMR62-aabcdeGNgghhh-i; 25 bars; Single Seal* FMR67-aabcdeGAA3Ahh-i; 3 bars FMR67-aabcdeGAA3Chh-i; 3 bars FMR67-aabcdeGAA3Khh-i; 3 bars FMR67-aabcdeGAA3Xhh-i; 3 bars FMR67-aabcdeGAA3GGJ-i; 16 bars FMR67-aabcdeGAA3RGJ-i; 16 bars FMR67-aabcdeGPgghhh-i; 16 bars; Single Seal* <p>*Note: Restrictions apply to Process Seal rating, refer to control drawing XA01612F.</p>
Installation Drawing	XA01612F (HART)

Class II, Division 1, Groups E, F and G; Class III:

Product	<p>Microwave unit Micropilot type, series FMR6x-...</p> <p>FMR62-CDbcdeffhhh-i</p> <p>FMR67-CDbcdeffgghhh-i</p> <p>Where</p> <ul style="list-style-type: none"> b = A, B, C c = A, C, E, L, M, N d = B, C e = B, C, D ff = GA, GE, GF, GM, GN, GP gg = A3, A4, A5, A6, B4, C1, C2, F5, F6 hhh = alphanumeric characters (not relevant for safety) i = E*, NF; plus any number of additional alphanumeric character sets (not relevant for safety) <p>Note: Some option codes may be restricted for certain model types.</p>
Electrical Rating	dependent on power supply, option code 'b'; refer to installation drawing for specifics
Enclosure Rating	Type 4X/6P
Temp. code and ambient temperature	T6...T3 with Ta of -40°C to + 80°C with process temperature (-40 to +200°C); refer to installation drawing for specific T-code and temperature ranges
Process temperature and MWP	<p>Max process temperature: up to + 200°C (dependent on model)</p> <p>Maximum Working Pressure (MWP):</p> <ul style="list-style-type: none"> FMR62-aabcdeGEgghhh-i; 20 bars; Dual Seal FMR62-aabcdeGFgghhh-i; 20 bars; Dual Seal FMR62-aabcdeGMgghhh-i; 25 bars; Dual Seal FMR62-aabcdeGNgghhh-i; 25 bars; Dual Seal FMR67-aabcdeGAA3Ahh-i; 3 bars; Dual Seal



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	<p>FMR67-aabcdeGAA3Chh-i; 3 bars; Dual Seal FMR67-aabcdeGAA3Khh-i; 3 bars; Dual Seal FMR67-aabcdeGAA3Xhh-i; 3 bars; Dual Seal FMR67-aabcdeGAA3GGJ-i; 16 bars; Dual Seal FMR67-aabcdeGAA3RGJ-i; 16 bars; Dual Seal FMR67-aabcdeGPgghhh-i; 16 bars; Dual Seal</p>
Installation Drawing	XA01613F (HART)

CLASS 2258 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, Division 2, Groups A, B, C and D:

Product	<p>Microwave unit Micropilot type, series FMR6x-... FMR60-aabcdeffhhh-i FMR62-aabcdeffgghhh-i FMR67-aabcdeffhhh-i Where aa = C2, C5, C3 b = A, B, C c = A, C, E, L, M, N d = B, C e = B, C, D ff = GA, GE, GF, GM, GN, GP gg = A3, A4, A5, A6, B4, C1, C2, F5, F6 hhh = alphanumeric characters (not relevant for safety) i = E*, NF; plus any number of additional alphanumeric character sets (not relevant for safety)</p> <p>Note: Some option codes may be restricted for certain model types.</p>
Electrical Rating	dependent on power supply, option code 'b'; refer to installation drawing for specifics
Enclosure Rating	Type 4X/6P
Temp. code and ambient temperature	T6...T3 with Ta of -40°C to + 80°C with process temperature (-40 to +200°C); refer to installation drawing for specific T-code and temperature ranges
Process temperature and MWP	<p>Max process temperature: up to + 200°C (dependent on model) Maximum Working Pressure (MWP): FMR60; 3 bars; Single Seal* FMR62-aabcdeGEgghhh-i; 20 bars; Single or Dual Seal* FMR62-aabcdeGFgghhh-i; 20 bars; Single or Dual Seal* FMR62-aabcdeGMgghhh-i; 25 bars; Single or Dual Seal* FMR62-aabcdeGNgghhh-i; 25 bars; Single or Dual Seal* FMR67-aabcdeGAA3Ahh-i; 3 bars; Dual Seal (aa=C3 only) FMR67-aabcdeGAA3Chh-i; 3 bars; Dual Seal (aa=C3 only) FMR67-aabcdeGAA3Khh-i; 3 bars; Dual Seal (aa=C3 only) FMR67-aabcdeGAA3Xhh-i; 3 bars; Dual Seal (aa=C3 only) FMR67-aabcdeGAA3GGJ-i; 16 bars; Dual Seal (aa=C3 only) FMR67-aabcdeGAA3RGJ-i; 16 bars; Dual Seal (aa=C3 only)</p>



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	<p>FMR67-C2bcdeGPgghhh-i; 16 bars; Single Seal* FMR67-C3bcdeGPgghhh-i; 16 bars; Dual Seal*</p> <p>*Note: Restrictions apply to Process Seal rating, refer to control drawing XA01612F (aa=C2 or C5) and XA01613F (aa=C3).</p>
Installation Drawing	<p>aa = C2, C5: XA01612F (HART) aa = C3: XA01613F (HART)</p>
Special conditions	<p>- Integral antenna is intrinsically safe for Cl. I, II, III, Division 1 hazardous locations when Certification option code 'aa' = C3, or supply/output option code 'b' = B or C</p>

Ex ia/db [ia Ga] IIC T6...T3 Ga/Gb:
Class I, Zone 0/1, AEx ia/db [ia Ga] IIC T6... T3 Ga/Gb:
Class I, Division 1, Groups A, B, C and D; Class II, Groups E, F and G, Class III:

Product	<p>Microwave unit Micropilot type, series FMR6x-... FMR60-aabcdeffhhhh-i FMR62-aabcdeffgghhh-i FMR67-aabcdeffhhhh-i Where aa = CC, C3, 8A b = A, B, C c = A, C, E, L, M, N d = B, C e = B, C, D ff = GA, GE, GF, GM, GN, GP gg = A3, A4, A5, A6, B4, C1, C2, F5, F6 hhh = alphanumeric characters (not relevant for safety) i = E*, NF; plus any number of additional alphanumeric character sets (not relevant for safety)</p> <p>Note: Some option codes may be restricted for certain model types.</p>
Electrical Rating	dependent on power supply, option code 'b'; refer to installation drawing for specifics
Enclosure Rating	Type 4X/6P
Temp. code and ambient temperature	T6...T3 with Ta of -40°C to + 80°C with process temperature (-40 to +200°C); refer to installation drawing for specific T-code and temperature ranges
Process temperature and MWP	<p>Max process temperature: up to + 200°C (dependent on model) Maximum Working Pressure (MWP): FMR60; 3 bars; Single Seal* FMR62-aabcdeGEgghhh-i; 20 bars; Dual Seal FMR62-aabcdeGFgghhh-i; 20 bars; Dual Seal FMR62-aabcdeGMgghhh-i; 25 bars; Dual Seal FMR62-aabcdeGNgghhh-i; 25 bars; Dual Seal FMR67-aabcdeGAA3Ahh-i; 3 bars; Dual Seal FMR67-aabcdeGAA3Chh-i; 3 bars; Dual Seal FMR67-aabcdeGAA3Khh-i; 3 bars; Dual Seal FMR67-aabcdeGAA3Xhh-i; 3 bars; Dual Seal FMR67-aabcdeGAA3GGJ-i; 16 bars; Dual Seal FMR67-aabcdeGAA3RGJ-i; 16 bars; Dual Seal FMR67-aabcdeGPgghhh-i; 16 bars; Dual Seal</p>



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	*Note: Restrictions apply to Process Seal rating, refer to control drawing XA01613F.
Installation Drawing	XA01613F (HART)
Special conditions	<ul style="list-style-type: none"> - For option code 'aa' = CC, device rated for Class I locations only. - Devices are explosionproof with integral antenna intrinsically safe for Cl. I, II, III, Division 1 hazardous locations. - Explosionproof conduit "Seal Not Required" for terminal compartment.

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 T6...T3 Ga:

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

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

Product	<p>Microwave unit Micropilot type, series FMR6x-...</p> <p>FMR60-aabcdeffgghhh-i FMR62-aabcdeffgghhh-i FMR67-aabcdeffhhh-i</p> <p>Where</p> <ul style="list-style-type: none"> aa = CB, C2, C5, 8A b = A, B, C c = A, C, E, L, M, N d = A, B, C e = A, B, C, D, I, M ff = GA, GE, GF, GM, GN, GP gg = A3, A4, A5, A6, B4, C1, C2, F5, F6 hhh = alphanumeric characters (not relevant for safety) i = E*, NF; plus any number of additional alphanumeric character sets (not relevant for safety) <p>Note: Some option codes may be restricted for certain model types.</p>
Electrical Rating	dependent on power supply, option code 'b'; refer to installation drawing for specifics
Enclosure rating	Type 4X/6P
Temp. code and ambient temperature	T6...T3 with Ta of -40°C to + 80°C with process temperature (-40 to +200°C); refer to installation drawing for specific T-code and temperature ranges
Process temperature and MWP	<p>Max process temperature: up to + 200°C (dependent on model)</p> <p>Maximum Working Pressure (MWP):</p> <ul style="list-style-type: none"> FMR60; 3 bars; Single Seal* or Dual Seal (aa=8A) FMR62-aabcdeGEgghhh-i; 20 bars; Single Seal* or Dual Seal (aa=8A) FMR62-aabcdeGFgghhh-i; 20 bars; Single Seal* or Dual Seal (aa=8A) FMR62-aabcdeGMgghhh-i; 25 bars; Single Seal* or Dual Seal (aa=8A) FMR62-aabcdeGNgghhh-i; 25 bars; Single Seal* or Dual Seal (aa=8A) FMR67-aabcdeGAA3Ahh-i; 3 bars; Dual Seal (aa=8A only) FMR67-aabcdeGAA3Chh-i; 3 bars; Dual Seal (aa=8A only) FMR67-aabcdeGAA3Khh-i; 3 bars; Dual Seal (aa=8A only) FMR67-aabcdeGAA3Xhh-i; 3 bars; Dual Seal (aa=8A only) FMR67-aabcdeGAA3GGJ-i; 16 bars; Dual Seal (aa=8A only) FMR67-aabcdeGAA3RGJ-i; 16 bars; Dual Seal (aa=8A only)



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	FMR67-aabcdeGPgghhh-i; 16 bars; Single Seal* or Dual Seal (aa=8A) *Note: Restrictions apply to Process Seal rating, refer to control drawing XA01612F.
Installation Drawing	XA01612F (HART)
Special conditions	- For option code 'aa' = CB, C5 device rated for Class I locations only.

CLASS 2252 06 - PROCESS CONTROL EQUIPMENT
CLASS 2252 86 - PROCESS CONTROL EQUIPMENT – CERTIFIED TO U.S. STANDARDS

Product	Microwave unit Micropilot type, series FMR6x-... FMR60-aabcdeffgghhh-i FMR62-aabcdeffgghhh-i FMR67-aabcdeffhggg-i Where aa = CA b = A, B, C c = A, C, E, L, M, N d = A, B, C e = A, B, C, D, I, M ff = GA, GE, GF, GM, GN, GP gg = A3, A4, A5, A6, B4, C1, C2, F5, F6 hhh = alphanumeric characters (not relevant for safety) i = E*, NF; plus any number of additional alphanumeric character sets (not relevant for safety) Note: Some option codes may be restricted for certain model types.
Electrical Rating	For option code 'b' = A; 35 Vdc, 0.9 W B; 35 Vdc, 1.5 W C; 35 Vdc, 1.4 W
Enclosure rating	Type 4X/6P
Ambient temperature	-40°C to + 80°C
Special conditions	For option code 'b' = A,B,C: To be supplied by Class 2 or limited-energy source in accordance with CSA 61010-1-12.

Notes:

All the necessary Warnings and installation instructions shall be followed as stated in control drawings XA01612F and XA01613F



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APPLICABLE REQUIREMENTS

- CAN/CSA-C22.2 No. 0-10 (R2015) - General requirements - Canadian electrical code, part II
- CAN/CSA-C22.2 No. 25-1966 (R2014) - Enclosures for Use in Class II Groups E, F and G Hazardous Locations
- CAN/CSA-C22.2 No. 30-M1986 (R2012) - Explosion-Proof Enclosures for Use in Class I Hazardous Locations
- CAN/CSA-C22.2 No. 94-M91 (R2011) - Special Purpose Enclosures
- CSA C22.2 No. 213-17 / UL 121201- 2018 - Nonincendive electrical equipment for use in Class I and II, Division 2 and Class III, Divisions 1 and 2 hazardous (classified) locations
- ANSI/ISA-12.27.01-2011 - Requirements for Process Sealing Between Electrical System and Flammable or Combustible Process Fluids
- CAN/CSA-C22.2 No. 61010-1-12 / ANSI/ISA-61010-1-2012 - Safety requirements for electrical equipment for measurement, control, and laboratory use - Part 1: General requirements
- CAN/CSA-C22.2 No. 60529:16 / ANSI/IEC-60529-2004 (R2011) - Degrees of Protection Provided by Enclosures (IP Code)
- CAN/CSA-C22.2 No. 60079-0:15 / ANSI/ISA-60079-0 (12.00.01)-2013 - Explosive atmospheres – Part 0: Equipment - General Requirements
- CAN/CSA-C22.2 No. 60079-1:16 / ANSI/UL 60079-1- 2015 - Explosive Atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
- CAN/CSA-C22.2 No. 60079-11:14 / ANSI/ISA-60079-11 (12.02.01)-2014 - Explosive Atmospheres - Part 11: Equipment protection by intrinsic safety "i"
- CAN/CSA-C22.2 No. 60079-26:16 / ANSI/UL 60079-26 - 2017 - Explosive atmospheres - Part 26: Equipment for Use in Class I, Zone 0 Hazardous (Classified) Locations
- FM 3600- 2018 - Electrical Equipment for Use In Hazardous (Classified) Locations - General Requirements
- FM 3610- 2018 - Intrinsically Safe Apparatus and Associated Apparatus for Use in Class I, II & III, Division 1, Hazardous (Classified) Locations
- FM 3611- 2018 - Nonincendive Electrical Equipment for Use In Class I and II, Div. 2 & Class III, Divisions 1 & 2 Hazardous (Classified) Locations
- FM 3615- 2018 - Explosionproof Electrical Equipment General Requirements
- FM 3810- 2018 - Electrical and Electronic Test, Measuring and Process Control Equipment
- FM 3616-2011 - Dust-Ignitionproof Electrical Equipment for Use in Hazardous (Classified) Locations
- UL50 Ed. 3 - Enclosure for Electrical Equipment, non-environmental considerations



Supplement to Certificate of Compliance

Certificate: 70137829

Master Contract: 151079 (053988_C_000)

*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
70207457	2019-02-14	Update CSA report 70137829 to include modifications on Micropilot series FMR6x, that includes: Addition of Bluetooth option module TRC[44], Revise DSP-E and HF-E boards to version-2 and Documentation updates
70168147	2018-01-19	Update of CSA report 70137829 to revise some of the control documents for minor corrections.
70137829	2017-07-26	The scope of this project to issue a CSA report for the certification of microwave unit Micropilot, type FMR6x series. It is a new product based on ProToF components and remote display which are separately certified by CSA. The assessment is to certify the product for North American marking of; Class I, Div. 1, 2, Gr. A-D, Class II, Div 1, Gr E-G and General electrical safety.