

FM Approvals
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CERTIFICATE OF COMPLIANCE

HAZARDOUS (CLASSIFIED) LOCATION ELECTRICAL EQUIPMENT

This certificate is issued for the following equipment:

FTL50-abcdef+g. Liquiphant M Level Limit Switch (compact version).

IS/I,II,III/1/ABCDEFGH/T5 Ta = +70 °C; I/O/AEx ia IIC T5; Entity – 960392-1060 (FEL5x without FEL50A) or 960009203 (FEL50A), Type 4X/6P/IP65/IP66/IP67/IP68

NI/I/2/ABCD/T5 Ta = +70 °C; S/II,III/2/FG/T5 Ta = +70 °C; Type 4X/6P/IP65/IP66/IP67/IP68

FEL50A Insert:

Profibus PA/Foundation Fieldbus (Entity Parameters)

Vmax = 24 V, Imax = 250 mA, Pi ≤ 1.2 W, Ci ≤ 5 nF, Li ≤ 10 µH

Profibus PA/Foundation Fieldbus FISCO Parameters

Vmax = 17.5 V, Imax = 500 mA, Pi ≤ 5.5 W, Ci ≤ 5 nF, Li ≤ 10 µH

FEL50D Insert:

Vmax = 27.6 V, Imax = 93 mA, Pi = 640 mW, Ci ≤ 2 nF, Li ≤ 0.133 mH

FEL55 Insert:

Vmax = 36 V, Imax = 100 mA, Pi = 1.0 W, Ci = 0, Li = 0

FEL56, FEL 58 Insert and Housing Compact NAMUR:

Vmax = 16 V, Imax = 52 mA, Pi = 169 mW, Ci = 0, Li = 0

FEL57 Insert:

Vmax = 16.7 V, Imax = 150 mA, Pi = 1.0 W, Ci = 0, Li = 0

- a = FM Approval: P = IS (Div. 1) or R = NI (Div. 2).
- b = Process connection and material: Three alphanumeric code representing industry (DIN, ANSI, JIS) standard process connection and material type.
- c = Sensor Type/length code: AA (Standard), IA (+temperature spacer), QA (+gas/pressure tight bushing (Second Line of Defense)).
- d = Electronic inserts: for Div. 1 (a=P); 5 (FEL55), 6 (FEL56), 7 (FEL57), 8 (FEL58), A (FEL50A) or D (FEL50D).
- d = Electronic inserts: for Div. 2 (a=R); 1 (FEL51), 2 (FEL52); 4 (FEL 54), 5 (FEL55), 6 (FEL56), 7 (FEL57), 8 (FEL 58), A (FEL50A) or D (FEL50D).
- e = Enclosure and cable entry: E1 (F27 stainless steel NPT1/2, NPT3/4), E4 (plastic, NPT 1/2), E5 (F17 Alum, NPT 3/4), E6 (F15 stainless steel, NPT 1/2) or E7 (T13 Alu, NPT 1/2, NPT 3/4), E3 (Housing Compact NAMUR 316L NPT1/2"-plug), C3 (Housing Compact NAMUR 316L 5m cable), D3 (Housing Compact NAMUR 316L PG11-plug) or N3 (Housing Compact NAMUR 316L M12x1-plug).
- f = Additional Options: A (Standard), B (cleaned for LABS application), C (Material Certificate 3.1), K (Calibration Density for H2O), L (Calibration Density for H2O+ Material Certificate), N (Material Certificate NACE), S (Shipbuilding certificate) (not evaluated by FM)) or Y (Other Material Certification (not evaluated

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- by FM)).
- g = Test Certificate: (not mandatory, multiple selection possible); Two alpha-numeric code representing different production verification tests, as Helium leak test, Pressure test, PMI also (When selected added by '+').

FTL50H-abcdef+g. Liquiphant M Level Limit Switch (compact version hygienic).

IS/I,II,III/1/ABCDEFGH/T5 Ta = +70 °C; I/O/AEx ia IIC T5; Entity – 960392-1060 (FEL5x without FEL50A) or 960009203 (FEL50A), Type 4X/6P/IP65/IP66/IP67/IP68
 NI/I/2/ABCD/T5 Ta = +70 °C; S/II,III/2/FG/T5 Ta = +70 °C; Type 4X/6P/IP65/IP66/IP67/IP68

FEL50A Insert:

Profibus PA/Foundation Fieldbus (Entity Parameters)
 Vmax = 24 V, Imax = 250 mA, Pi ≤ 1.2 W, Ci ≤ 5 nF, Li ≤ 10 µH
 Profibus PA/Foundation Fieldbus FISCO Parameters
 Vmax = 17.5 V, Imax = 500 mA, Pi ≤ 5.5 W, Ci ≤ 5 nF, Li ≤ 10 µH

FEL50D Insert:

Vmax = 27.6 V, Imax = 93 mA, Pi = 640 mW, Ci ≤ 2 nF, Li ≤ 0.133 mH

FEL55 Insert:

Vmax = 36 V, Imax = 100 mA, Pi = 1.0 W, Ci = 0, Li = 0

FEL56, FEL 58 Insert and Housing Compact NAMUR:

Vmax = 16 V, Imax = 52 mA, Pi = 169 mW, Ci = 0, Li = 0

FEL57 Insert:

Vmax = 16.7 V, Imax = 150 mA, Pi = 1.0 W, Ci = 0, Li = 0

- a = FM Approval: P = IS (Div. 1) or R = NI (Div. 2).
- b = Process connection and material: Three alphanumeric code representing industry (DIN, ANSI, JIS) standard process connection and material type.
- c = Sensor Type/length code: Two alpha-numeric code representing Sensor surface as well as version with temperature spacer or version with gas/pressure tight bushing (Second Line of Defense).
- d = Electronic inserts: for Div. 1 (a=P); 5 (FEL55), 6 (FEL56), 7 (FEL57), 8 (FEL58), A (FEL50A) or D (FEL50D).
- d = Electronic inserts: for Div. 2 (a=R); 1 (FEL51), 2 (FEL52); 4 (FEL 54), 5 (FEL55), 6 (FEL56), 7 (FEL57), 8 (FEL 58), A (FEL50A) or D (FEL50D).
- e = Enclosure and cable entry: E1 (F27 stainless steel NPT1/2, NPT3/4), E4 (F16 plastic, NPT 1/2), E5 (F17 Alum, NPT 3/4), E6 (F15 stainless steel, NPT 1/2) or E7 (T13 Alu, NPT 1/2, NPT 3/4), E3 (Housing Compact NAMUR 316L NPT1/2"-plug), C3 (Housing Compact NAMUR 316L 5 m cable), D3 (Housing Compact NAMUR 316L PG11-plug) or N3 (Housing Compact NAMUR 316L M12x1-plug).
- f = Additional Options: Additional Options: A (Standard), B (Pharma CoC+Material Certificate 3.1 (not evaluated by FM)), C (Material Certificate 3.1), K (Calibration Density for H2O), L (Calibration Density for H2O+ Material Certificate 3.1), N (Material Certificate NACE), S (Shipbuilding Certification (not evaluated by FM)) or Y (Other Material Certificate (not evaluated by FM)).
- g = Test Certificate: (not mandatory, multiple selection possible); Two alpha-numeric code representing different production verification tests, as Helium leak test, Pressure test, PMI also (When selected added by '+').

FTL51-abcdef+g. Liquiphant M Level Limit Switch (extended version with lengthening tube up to 6 m).

IS/I,II,III/1/ABCDEFGH/T5 Ta = +70 °C; I/O/AEx ia IIC T5; Entity – 960392-1060 (FEL5x without FEL50A) or 960009203 (FEL50A), Type 4X/6P/IP65/IP66/IP67/IP68
 NI/I/2/ABCD/T5 Ta = +70 °C; S/II,III/2/FG/T5 Ta = +70 °C; Type 4X/6P/IP65/IP66/IP67/IP68

FEL50A Insert:

Profibus PA/Foundation Fieldbus (Entity Parameters)
 Vmax = 24 V, Imax = 250 mA, Pi ≤ 1.2 W, Ci ≤ 5 nF, Li ≤ 10 µH
 Profibus PA/Foundation Fieldbus FISCO Parameters
 Vmax = 17.5 V, Imax = 500 mA, Pi ≤ 5.5 W, Ci ≤ 5 nF, Li ≤ 10 µH

FEL50D Insert:

Vmax = 27.6 V, Imax = 93 mA, Pi = 640 mW, Ci ≤ 2 nF, Li ≤ 0.133 mH

FEL55 Insert:

Vmax = 36 V, Imax = 100 mA, Pi = 1.0 W, Ci = 0, Li = 0

FEL56, FEL 58 Insert and Housing Compact NAMUR:

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V_{max} = 16 V, I_{max} = 52 mA, P_i = 169 mW, C_i = 0, L_i = 0

FEL57 Insert:

V_{max} = 16.7 V, I_{max} = 150 mA, P_i = 1.0 W, C_i = 0, L_i = 0

- a = FM Approval: P = IS (Div. 1) or R = NI (Div. 2).
- b = Process connection and material: Three alphanumeric code representing industry (DIN, ANSI, JIS) standard process connection and material type.
- c = Sensor Type/length code: Two alphanumeric code representing length and material of sensor tube (up to 6,000 mm). as well as version with temperature spacer or version with gas/pressure tight bushing (Second Line of Defense).
- d = Electronic inserts: for Div. 1 (a=P); 5 (FEL55), 6 (FEL56), 7 (FEL57), 8 (FEL58), A (FEL50A) or D (FEL50D).
- d = Electronic inserts: for Div. 2 (a=R); 1 (FEL51), 2 (FEL52); 4 (FEL 54), 5 (FEL55), 6 (FEL56), 7 (FEL57), 8 (FEL 58), A (FEL50A) or D (FEL50D).
- e = Enclosure and cable entry: E1 (F27 stainless steel NPT1/2, NPT3/4), E4 (F16 plastic, NPT 1/2), E5 (F17 Alum, NPT 3/4), E6 (F15 stainless steel, NPT 1/2) or E7 (T13 Alu, NPT 1/2, NPT 3/4), E3 (Housing Compact NAMUR 316L NPT1/2"-plug), C3 (Housing Compact NAMUR 316L 5 m cable), D3 (Housing Compact NAMUR 316L PG11-plug) or N3 (Housing Compact NAMUR 316L M12x1-plug).
- f = Additional Options: A (Standard), B (cleaned for LABS application), C (Material Certificate 3.1), K (Calibration Density for H₂O), L (Calibration Density for H₂O+ Material Certificate), N (Material Certificate 3.1+NACE), P (100bar process pressure), R (100 bar process pressure+ Material Certificate 3.1+NACE), S (Shipbuilding certificate (not evaluated by FM)) or Y (Other Material Certificate (not evaluated by FM)).
- g = Test Certificate: (not mandatory, multiple selection possible); Two alpha-numeric code representing different production verification tests, as Helium leak test, Pressure test, PMI also (When selected added by '+').

FTL51C-abcdefg+h. Liquiphant M Level Limit Switch (coated extended version with lengthening tube up to 6 m).

IS/I,II,III/1/ABCDEFGH/T5 Ta = +70 °C; I/O/AEx ia IIC T5; Entity – 960392-1060 (FEL5x without FEL50A) or 960009203 (FEL50A), Type 4X/6P/IP65/IP66/IP67/IP68
 NI/II/2/ABCD/T5 Ta = +70 °C; S/II,III/2/FG/T5 Ta = +70 °C; Type 4X/6P/IP65/IP66/IP67/IP68

FEL50A Insert:

Profibus PA/Foundation Fieldbus (Entity Parameters)

V_{max} = 24 V, I_{max} = 250 mA, P_i ≤ 1.2 W, C_i ≤ 5 nF, L_i ≤ 10 μH

Profibus PA/Foundation Fieldbus FISCO Parameters

V_{max} = 17.5 V, I_{max} = 500 mA, P_i ≤ 5.5 W, C_i ≤ 5 nF, L_i ≤ 10 μH

FEL50D Insert:

V_{max} = 27.6 V, I_{max} = 93 mA, P_i = 640 mW, C_i ≤ 2 nF, L_i ≤ 0.133 mH

FEL55 Insert:

V_{max} = 36 V, I_{max} = 100 mA, P_i = 1.0 W, C_i = 0, L_i = 0

FEL56, FEL 58 Insert and Housing Compact NAMUR:

V_{max} = 16 V, I_{max} = 52 mA, P_i = 169 mW, C_i = 0, L_i = 0

FEL57 Insert:

V_{max} = 16.7 V, I_{max} = 150 mA, P_i = 1.0 W, C_i = 0, L_i = 0

- a = FM Approval: P = IS (Div. 1) or R = NI (Div. 2).
- b = Process connection and material: Three alphanumeric code representing industry (DIN, ANSI, JIS) standard process connection and material type of coating.
- c = Sensor Type/length code: Sensor length, Type: Two alphanumeric code representing length and material of sensor coating (up to 6,000 mm).
- d = Electronic inserts: for Div. 1 (a=P); 5 (FEL55), 6 (FEL56), 7 (FEL57), 8 (FEL58), A (FEL50A) or D (FEL50D).
- d = Electronic inserts: for Div. 2 (a=R); 1 (FEL51), 2 (FEL52); 4 (FEL 54), 5 (FEL55), 6 (FEL56), 7 (FEL57), 8 (FEL 58), A (FEL50A) or D (FEL50D).
- e = Enclosure and cable entry: E1 (F27 stainless steel NPT1/2, NPT3/4), E4 (F16 plastic, NPT 1/2), E5 (F17 Alum, NPT 3/4), E6 (F15 stainless steel, NPT 1/2) or E7 (T13 Alu, NPT 1/2, NPT 3/4), E3 (Housing Compact NAMUR 316L NPT1/2"-plug), C3 (Housing Compact NAMUR 316L 5 m cable), D3 (Housing Compact NAMUR 316L PG11-plug) or N3 (Housing Compact NAMUR 316L M12x1-plug).
- f = Additional Options1: A (Standard), K (Calibration Density for H₂O), S (Shipbuilding Certification (not

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- evaluated by FM)) or Y (Other Material Certificate like NACE).
- g = Additional Options2: A (Standard), B (Temperature spacer), C (gastight feed through) or Y (Other Material Certificate like NACE, and or cleaned for LABS application (not evaluated by FM)).
- h = Test Certificate: (not mandatory, multiple selection possible); Two alpha-numeric code representing different production verification tests, as Helium leak test, Pressure test, PMI also (When selected added by '+').

FTL51H-abcdef+g. Liquiphant M Level Limit Switch (extended version with lengthening tube up to 6 m).

IS/I,II,III/1/ABCDEFGH/T5 Ta = +70 °C; I/O/AEx ia IIC T5; Entity – 960392-1060 (FEL5x without FEL50A) or 960009203 (FEL50A), Type 4X/6P/IP65/IP66/IP67/IP68
 NI/II/2/ABCD/T5 Ta = +70 °C; S/II,III/2/FG/T5 Ta = +70 °C; Type 4X/6P/IP65/IP66/IP67/IP68

FEL50A Insert:

Profibus PA/Foundation Fieldbus (Entity Parameters)
 Vmax = 24 V, Imax = 250 mA, Pi ≤ 1.2 W, Ci ≤ 5 nF, Li ≤ 10 µH
 Profibus PA/Foundation Fieldbus FISCO Parameters
 Vmax = 17.5 V, Imax = 500 mA, Pi ≤ 5.5 W, Ci ≤ 5 nF, Li ≤ 10 µH

FEL50D Insert:

Vmax = 27.6 V, Imax = 93 mA, Pi = 640 mW, Ci ≤ 2 nF, Li ≤ 0.133 mH

FEL55 Insert:

Vmax = 36 V, Imax = 100 mA, Pi = 1.0 W, Ci = 0, Li = 0

FEL56, FEL 58 Insert and Housing Compact NAMUR:

Vmax = 16 V, Imax = 52 mA, Pi = 169 mW, Ci = 0, Li = 0

FEL57 Insert:

Vmax = 16.7 V, Imax = 150 mA, Pi = 1.0 W, Ci = 0, Li = 0

- a = FM Approval: P = IS (Div. 1) or R = NI (Div. 2).
- b = Process connection and material: Three alphanumeric code representing industry (DIN, ANSI, JIS) standard process connection and material type.
- c = Sensor Type/length code: Two alphanumeric code representing length and material of sensor tube (up to 6,000 mm). Sensor surface as well as version with temperature spacer or version with gas/pressure tight bushing (Second Line of Defense).
- d = Electronic inserts: for Div. 1 (a=P); 5 (FEL55), 6 (FEL56), 7 (FEL57), 8 (FEL58), A (FEL50A) or D (FEL50D).
- d = Electronic inserts: for Div. 2 (a=R); 1 (FEL51), 2 (FEL52); 4 (FEL 54), 5 (FEL55), 6 (FEL56), 7 (FEL57), 8 (FEL 58), A (FEL50A) or D (FEL50D).
- e = Enclosure and cable entry: E1 (F27 stainless steel NPT1/2, NPT3/4), E4 (F16 plastic, NPT 1/2), E5 (F17 Alum, NPT 3/4), E6 (F15 stainless steel, NPT 1/2) or E7 (T13 Alu, NPT 1/2, NPT 3/4), E3 (Housing Compact NAMUR 316L NPT1/2"-plug), C3 (Housing Compact NAMUR 316L 5m cable), D3 (Housing Compact NAMUR 316L PG11-plug) or N3 (Housing Compact NAMUR 316L M12x1-plug).
- f = Additional Options: A (Standard), B (Pharma CoC+Material Certificate 3.1 (not evaluated by FM)), C (Material Certificate 3.1), K (Calibration Density for H2O), L (Calibration Density for H2O+ Material Certificate 3.1), S (Shipbuilding Certification (not evaluated by FM)) or Y (Other Material Certificate like NACE, and or cleaned for LABS application (not evaluated by FM)).
- g = Test Certificate: (not mandatory, multiple selection possible); Two alpha-numeric code representing different production verification tests, as Helium leak test, Pressure test, PMI also (When selected added by '+').

FTL70-abcdefg+h. Liquiphant S Level Limit Switch (High temperature compact version).

IS/I,II,III/1/ABCDEFGH/T5 Ta = +70 °C; I/O/AEx ia IIC T5; Entity – 960392-1060 (FEL5x without FEL50A) or 960009203 (FEL50A), Type 4X/6P/IP65/IP66/IP67/IP68
 NI/II/2/ABCD/T5 Ta = +70 °C; S/II,III/2/FG/T5 Ta = +70 °C; Type 4X/6P/IP65/IP66/IP67/IP68

FEL50A Insert:

Profibus PA/Foundation Fieldbus (Entity Parameters)
 Vmax = 24 V, Imax = 250 mA, Pi ≤ 1.2 W, Ci ≤ 5 nF, Li ≤ 10 µH
 Profibus PA/Foundation Fieldbus FISCO Parameters
 Vmax = 17.5 V, Imax = 500 mA, Pi ≤ 5.5 W, Ci ≤ 5 nF, Li ≤ 10 µH

FEL50D Insert:

Vmax = 27.6 V, Imax = 93 mA, Pi = 640 mW, Ci ≤ 2 nF, Li ≤ 0.133 mH

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FEL55 Insert:

V_{max} = 36 V, I_{max} = 100 mA, P_i = 1.0 W, C_i = 0, L_i = 0

FEL56 and FEL 58 Insert and Housing Compact NAMUR :

V_{max} = 16 V, I_{max} = 52 mA, P_i = 169 mW, C_i = 0, L_i = 0

FEL57 Insert:

V_{max} = 16.7 V, I_{max} = 150 mA, P_i = 1.0 W, C_i = 0, L_i = 0

- a = FM Approval: P = IS (Div. 1) or R = NI (Div. 2).
- b = Process connection and material: Three alphanumeric code representing industry (DIN, ANSI, JIS) standard process connection and material.
- c = Sensor Type/length code: AB (compact version stainless steel), AE (compact version hastelloy)
- d = Electronic inserts: for Div. 1 (a=P); 5 (FEL55), 6 (FEL56), 7 (FEL57), 8 (FEL58), A (FEL50A) or D (FEL50D).
- d = Electronic inserts: for Div. 2 (a=R); 1 (FEL51), 2 (FEL52); 4 (FEL 54), 5 (FEL55), 6 (FEL56), 7 (FEL57), 8 (FEL 58), A (FEL50A) or D (FEL50D).
- e = Enclosure and cable entry: E1 (F27 stainless steel NPT1/2, NPT3/4), E4 (F16 plastic, NPT 1/2), E5 (F17 Alum, NPT 3/4), E6 (F15 stainless steel, NPT 1/2) or E7 (T13 Alu, NPT 1/2, NPT 3/4), E3 (Housing Compact NAMUR 316L NPT1/2"-plug), C3 (Housing Compact NAMUR 316L 5 m cable), D3 (Housing Compact NAMUR 316L PG11-plug) or N3 (Housing Compact NAMUR 316L M12x1-plug).
- f = Additional Option: A (Standard), C (Material Certificate 3.1), K (Calibration Density for H₂O), L (Calibration Density for H₂O+ Material Certificate 3.1), N (Material Certificate 3.1+NACE) S (Shipbuilding Certification (not evaluated by FM)) or Y (Other Material Certificate, and or cleaned for LABS application (not evaluated by FM)).
- g = Application: L (+230 °C), N (+280 °C) or Y (+300 °C).
- h = Test Certificate: (not mandatory, multiple selection possible); Two alpha-numeric code representing different production verification tests, as Helium leak test, Pressure test, PMI also (When selected added by '+').

FTL71-abcdefg+h. Liquiphant S Level Limit Switch (High temperature with lengthening tube up to 6 m).

IS/I,II,III/1/ABCDEFGH/T5 Ta = +70 °C; I/O/AEx ia IIC T5; Entity – 960392-1060 (FEL5x without FEL50A) or 960009203 (FEL50A), Type 4X/6P/IP65/IP66/IP67/IP68

NI/I,II/2/ABCD/T5 Ta = +70 °C; S/II,III/2/FG/T5 Ta = +70 °C; Type 4X/6P/IP65/IP66/IP67/IP68

FEL50A Insert:

Profibus PA/Foundation Fieldbus (Entity Parameters)

V_{max} = 24 V, I_{max} = 250 mA, P_i ≤ 1.2 W, C_i ≤ 5 nF, L_i ≤ 10 μH

Profibus PA/Foundation Fieldbus FISCO Parameters

V_{max} = 17.5 V, I_{max} = 500 mA, P_i ≤ 5.5 W, C_i ≤ 5 nF, L_i ≤ 10 μH

FEL50D Insert:

V_{max} = 27.6 V, I_{max} = 93 mA, P_i = 640 mW, C_i ≤ 2 nF, L_i ≤ 0.133 mH

FEL55 Insert:

V_{max} = 36 V, I_{max} = 100 mA, P_i = 1.0 W, C_i = 0, L_i = 0

FEL56 and FEL 58 Insert and Housing Compact NAMUR:

V_{max} = 16 V, I_{max} = 52 mA, P_i = 169 mW, C_i = 0, L_i = 0

FEL57 Insert:

V_{max} = 16.7 V, I_{max} = 150 mA, P_i = 1.0 W, C_i = 0, L_i = 0

- a = FM Approval: P = IS (Div. 1) or R = NI (Div. 2).
- b = Process connection and material: Three alphanumeric code representing industry (DIN, ANSI, JIS) standard process connection and material.
- c = Sensor Type/length code: Double alphanumeric code representing industry (DIN, ANSI, JIS) standard process connection and material.
- d = Electronic inserts: for Div. 1 (a=P); 5 (FEL55), 6 (FEL56), 7 (FEL57), 8 (FEL58), A (FEL50A) or D (FEL50D).
- d = Electronic inserts: for Div. 2 (a=R); 1 (FEL51), 2 (FEL52); 4 (FEL 54), 5 (FEL55), 6 (FEL56), 7 (FEL57), 8 (FEL 58), A (FEL50A) or D (FEL50D).
- e = Enclosure and cable entry: E1 (F27 stainless steel NPT1/2, NPT3/4), E4 (F16 plastic, NPT 1/2), E5 (F17 Alum, NPT 3/4), E6 (F15 stainless steel, NPT 1/2) or E7 (T13 Alu, NPT 1/2, NPT 3/4), E3 (Housing Compact NAMUR 316L NPT1/2"-plug), C3 (Housing Compact NAMUR 316L 5 m cable), D3 (Housing Compact NAMUR 316L PG11-plug) or N3 (Housing Compact NAMUR 316L M12x1-plug).
- f = Additional Option: A (Standard), C (Material Certificate 3.1), K (Calibration Density for H₂O), L (Calibration

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Density for H₂O+ Material Certificate 3.1), N (Material Certificate 3.1+NACE) S (Shipbuilding Certification, (not evaluated by FM)) or Y (Other Material Certificate, and or cleaned for LABS application (not evaluated by FM)).

g = Application: L (+230 °C), N (+280 °C) or Y (+300 °C).

h = Test Certificate: (not mandatory, multiple selection possible); Two alpha-numeric code representing different production verification tests, as Helium leak test, Pressure test, PMI also (When selected added by '+').

Equipment Ratings:

Intrinsically safe for Class I, II & III, Division 1, Group A, B, C, D, E, F & G, T5 Ta = +70 °C; alternatively intrinsically safe for Class I, Zone 0, Group IIC T5 Ta = +70 °C in accordance with entity requirements when installed per Installation Drawing 960392-1060 (FEL5x without FEL50A) or 960009203 (FEL50A), Nonincendive for Class I, Division 2, Group A, B, C & D, T5 Ta = +70 °C; Suitable for Class II & III, Division 2, Group F & G, T5 Ta = +70 °C hazardous (classified) outdoor (Type 4X/6P/IP65/IP66/IP67/IP68) locations.

FM Approved for:

Endress+Hauser GmbH+ Co KG
Hauptstrasse 1
D-79689 Maulburg
Germany

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This certifies that the equipment described has been found to comply with the following Approval Standards and other documents:

Class 3600	2011
Class 3810	2005
Class 3610	2010
Class 3611	2004
ANSI/ISA 60079-0	2009
ANSI/ISA 60079-11	2010

Original Project ID: 3009430

Approval Granted: March 22, 2001

Subsequent Revision Reports / Date Approval Amended

Report Number	Date	Report Number	Date
3010717	September 4, 2001		
3013676	March 25, 2002		
3019243	February 12, 2004		
3031019	November 13, 2007		
3032266	May 12, 2008		
3036763	October 6, 2009		
3043369	August 19, 2011		
RR202872	October 30, 2015		

FM Approvals LLC



J.E. Marquedant
Manager, Electrical Systems

30 October 2015

Date

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