IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: **IECEx FME 17.0001X**

Page 1 of 4

Status: **Current**

Issue No: 15

Date of Issue: 2024-01-11

Applicant: **ABB AG**
Anna-Vandenhoeck-Ring 5
37081, Göttingen
Germany

Equipment: **FEP63 - ProcessMaster / FEW63 - ProcessMaster/ FEH63 - HygienicMaster / FET63 - Transmitter**

Optional accessory:

Type of Protection: **Flameproof 'd'; increased safety 'e'; intrinsic safety 'i'; encapsulation 'm'; and protection by enclosure 't'**

Marking: See attachment

Certificate history:

Issue 14 (2023-07-01)
Issue 13 (2023-04-21)
Issue 12 (2022-09-16)
Issue 11 (2022-09-16)
Issue 10 (2022-04-04)
Issue 9 (2022-02-27)
Issue 8 (2021-07-20)
Issue 7 (2021-04-12)
Issue 6 (2021-01-19)
Issue 5 (2020-03-17)

Approved for issue on behalf of the IECEx Certification Body: **Andrew Was**

Position: **Certification Manager**

Signature:
(for printed version)

Date:
(for printed version)

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Certificate issued by:

FM Approvals Ltd
Voyager Place
Maidenhead
Berkshire
SL6 2PJ
United Kingdom

IECEx Certificate of Conformity

Manufacturer: **ABB AG**
Anna-Vandenhoeck-Ring 5
37081, Göttingen
Germany

Manufacturing locations:

ABB Engineering (Shanghai) Limited
No. 4528, KangXin Road
Pudong New District
Shanghai
201319
China

ABB Limited
Oldends Lane
Stonehouse
GL10 3TA
United Kingdom

ABB India Limited
Process Automation - Measurement Products
Plot No. 5 & 6, 2nd Phase, Peenya Industrial Area
Bangalore - 560058
India
India

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements.This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended

STANDARDS :
The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

IEC 60079-0:2017 Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

IEC 60079-1:2014 Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
Edition:7.0

IEC 60079-11:2011 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:6.0

IEC 60079-18:2017 Explosive atmospheres - Part 18: Protection by encapsulation "m"
Edition:4.1

IEC 60079-31:2013 Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
Edition:2

IEC 60079-7:2017 Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
Edition:5.1

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:
A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Reports:

GB/FME/ExTR17.0002/00
GB/FME/ExTR17.0002/01
GB/FME/ExTR17.0002/02
GB/FME/ExTR17.0002/03
GB/FME/ExTR17.0002/04
GB/FME/ExTR17.0002/05
GB/FME/ExTR17.0002/06
GB/FME/ExTR17.0002/07
GB/FME/ExTR17.0002/08
GB/FME/ExTR17.0002/09
GB/FME/ExTR17.0002/10
GB/FME/ExTR17.0002/11
GB/FME/ExTR17.0002/12
GB/FME/ExTR17.0002/13
GB/FME/ExTR17.0002/14
GB/FME/ExTR17.0002/15

Quality Assessment Reports:

DE/TUN/QAR06.0010/09
GB/BAS/QAR08.0001/09
GB/FME/QAR10.0007/13
GB/ITS/QAR16.0002/03

IECEx Certificate of Conformity

EQUIPMENT:
Equipment and systems covered by this Certificate are as follows:

The FEP6_ _ ProcessMaster, FEW6_ _ ProcessMaster, and FEH6_ _ HygienicMaster are series of electromagnetic flowmeters. The electronics enclosure is a cylindrical enclosure identified as a dual compartment Type 3, or a single compartment rectangular housing identified as a Type 4.

The FEP6_ _ ProcessMaster, FEW6_ _ ProcessMaster, and FEH6_ _ HygienicMaster are both available as integral and remote designs. A high process temperature version is available and uses a 40 mm or a 100 mm stand-offs between the Primary and the electronics or remote connection facilities.

The sensor is available in two different versions: Process Sensor and Hygienic Sensor. The Process Sensor is available in meter size DN3 to DN3000, the Hygienic Sensor is available in meter size DN3 to DN100. The medium temperature range for the Hygienic Sensor and the medium temperature range for the Process Sensor are -40°C to 130°C for the normal temperature version and -40°C to +180°C for the high temperature version. The medium temperature range for sensors identified as Design Level B is -40°C to 100°C

Enclosure rating IP65, IP67 or IP68 depending on the option selected.

See Attachment for model code breakdown.

SPECIFIC CONDITIONS OF USE: YES as shown below:
See Attachment

IECEx Certificate of Conformity

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)
Addition of FEW630 Series

Annex:

Annex to IECEx FME17_0001X Iss 15.pdf

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FEH631A1fghijklmnopqrA-t.u.v – Hygienic Integral Transmitter

Markings:

Ex db eb ib mb [ia Ga] IIC T6…T1 Gb Ta = * to +60°C

Ex tb [ia Da] IIIC T80°C…Tmedium Db Ta = * to +60°C

FISCO (when r = P1 or t = DRP)

* -20°C or -40°C depending on options chosen

Description of Equipment:

f = Housing Type/Housing Material/ Cable entry: D1, D2, D3, D4, D6, or D8
g = Meter Size representing DN3 to DN100: 4-digit code – not relevant for safety
h = Process Connection Type: 2-digit code – not relevant for safety
i = Liner Material: T1 or P1
j = Process connection material: Single digit – not relevant for safety
k = Electrode design: 1, or 5
l = Measuring electrode material: Single digit code – not relevant for safety
m = Grounding electrode/Full pipe detection: 0 or 2
n = Grounding accessories: A, B or C
o = Protection class transmitter/protection class sensor: 70 or 91
p = Power supply: A, D, C or E
q = Display: 0, 1 or 2
r = Outputs: G0, G1, G2, G3, G4, G5, G6, G7, G8, G9, M1, D1, P1 or Y0

Additional Codes
t = Option card 1: DR0, DRN, DRG, DRT, DRA, DRM, DRD, or DRP
u = Option card 2: DR0, DS0, DSA, DSN or DSG
v = Temperature range of installation/Ambient temperature range: TK1, TK4, TKH or TKK

Specific Conditions of Use:

1. The painted surface of the FE*6, ProcessMaster and HygenicMaster may store electrostatic charge and become a source of ignition in applications with a low relative humidity <~30% relative humidity where the painted surface is relatively free of surface contamination such as dirt, dust, or oil. Guidance on protection against the risk of ignition due to electrostatic discharge can be found in IEC TR60079-32-2 Cleaning of the painted surface should only be done with a damp cloth.
2. For installations in flammable dust, the cable entries shall be fitted with an appropriate cable entry device meeting the requirements of IP6x fitted with a gasket or seal between the cable entry device and the wall of the enclosure.
3. For Integral and Remote versions FE*63*A1 EPL Db having exposed electrodes in the process shall be used in a non-flammable liquid process only.
4. Contact the manufacturer for specific flamepath joint during repair of flameproof Ex d apparatus.
5. The ABB Instruction Manual for the ProcessMaster and HygenicMaster the permitted Temperature Classification and Ambient Temperature ratings as influenced by the Process Medium temperature.

FEH632A1fghijklmnopqY0A-t.u.v – Hygienic Remote Sensor

Markings:

Ex eb ib mb IIC T6…T1 Gb Ta = * to +60°C

Ex tb IIIC T80°C…Tmedium Db Ta = * to +60°C

* -20°C or -40°C depending on options chosen

Description of Equipment:

f = Housing Type/Housing Material/ Cable entry: A1, A2, U1, or U2
g = Meter Size representing DN3 to DN100: 4-digit code – not relevant for safety
h = Process Connection Type: 2-digit code – not relevant for safety
i = Liner material: T1 or P1
j = Process connection material: Single digit – not relevant for safety
k = Electrode design: 1, or 5
l = Measuring electrode material: Single digit code – not relevant for safety
m = Grounding electrode/Full pipe detection: 0 or 2
n = Grounding accessories: A, B or C
o = Protection class transmitter/protection class sensor: 70, 76, 77 or 91
p = Power supply: Y or W
q = Display: 0 or 8

Additional Codes
t = Option card 1: DR0
u = Option card 2: DR0, DS0
v = Temperature range of installation/Ambient temperature range: TK1, TK4, TKH or TKK

Specific Conditions of Use:

1. The painted surface of the FE*6, ProcessMaster and HygenicMaster may store electrostatic charge and become a source of ignition in applications with a low relative humidity <~30% relative humidity where the painted surface is relatively free of surface contamination such as dirt, dust, or oil. Guidance on protection against the risk of ignition due to electrostatic discharge can be found in IEC TR60079-32-2 Cleaning of the painted surface should only be done with a damp cloth.
2. For installations in flammable dust, the cable entries shall be fitted with an appropriate cable entry device meeting the requirements of IP6x fitted with a gasket or seal between the cable entry device and the wall of the enclosure.
3. For Integral and Remote versions FE*63*A1 EPL Db having exposed electrodes in the process shall be used in a non-flammable liquid process only.
4. Contact the manufacturer for specific flamepath joint during repair of flameproof Ex d apparatus.
5. The ABB Instruction Manual for the ProcessMaster and HygenicMaster the permitted Temperature Classification and Ambient Temperature ratings as influenced by the Process Medium temperature.

FEP631A1fghijklmnopqrA-t.u.v.w – Process Integral Transmitter – Design Level A

Markings:

Ex db eb ib mb [ia Ga] IIC T6…T1 Gb Ta = * to 60°C IP65/67
Ex tb [ia Da] IIIC T80°C…Tmedium Db Ta = * to 60°C IP65/67

FISCO (when r = P1 or t = DRP)

* -20°C or -40°C depending on options chosen

Description of Equipment:

f = Housing Type/Housing Material/ Cable entry: D1, D2, D3, D4, D6 or D8
g = Meter Size representing DN3 to DN300: 4-digit code – not relevant for safety
h = Process Connection Type: 2-digit code – not relevant for safety
i = Liner Material: R2, R3, R4, E1, T1, T3, T2, P1, C1, E2 or P2
j = Process connection material: Single digit – not relevant for safety
k = Electrode design: 1, or 5
l = Measuring electrode material: Single digit code – not relevant for safety
m = Grounding electrode/Full pipe detection: 0, 1, 2, or 3
n = Grounding accessories: A, B, C, D or E
o = Protection class transmitter/protection class sensor: 70 or 91
p = Power supply: A, D, C, or E
q = Display: 0, 1 or 2
r = Outputs: G0, G1, G2, G3, G4, G5, G6, G7, G8, G9, M1, D1, P1 or Y0

Additional Codes
t = Option card 1: DR0, DRN, DRG, DRT, DRA, DRM, DRD or DRP
u = Option card 2: DR0, DS0, DSA, DSN, or DSG
v = Temperature range of installation/Ambient temperature range: TK1, TK4, TKH or TKK
w = Sensor housing material: SMA or SMS
x = Sensor length: J6 or JH

Specific Conditions of Use:

1. The painted surface of the FE*6, ProcessMaster and HygenicMaster may store electrostatic charge and become a source of ignition in applications with a low relative humidity <~30% relative humidity where the painted surface is relatively free of surface contamination such as dirt, dust, or oil. Guidance on protection against the risk of ignition due to electrostatic discharge can be found in IEC TR60079-32-2 Cleaning of the painted surface should only be done with a damp cloth.
2. For installations in flammable dust, the cable entries shall be fitted with an appropriate cable entry device meeting the requirements of IP6x fitted with a gasket or seal between the cable entry device and the wall of the enclosure.
3. For Integral and Remote versions FE*63*A1 EPL Db having exposed electrodes in the process shall be used in a non-flammable liquid process only.
4. Contact the manufacturer for specific flamepath joint during repair of flameproof Ex d apparatus.
5. The ABB Instruction Manual for the ProcessMaster and HygenicMaster the permitted Temperature Classification and Ambient Temperature ratings as influenced by the Process Medium temperature.

FEP631A1fghijklmnopqrA-t.u.v.w – Process Integral Transmitter – Design Level A

Markings:

Ex db eb ib [ia Ga] IIC T6…T1 Gb Ta = * to 60°C IP65/67
Ex tb [ia Da] IIIC T80°C…Tmedium Db Ta = * to 60°C IP65/67

FISCO (when r = P1 or t = DRP)

* -20°C or -40°C depending on options chosen

Description of Equipment:

f = Housing Type/Housing Material/ Cable entry: D1, D2, D3, D4, D6 or D8
g = Meter Size representing DN350 to DN3000: 4-digit code – not relevant for safety
h = Process Connection Type: 2-digit code – not relevant for safety
i = Liner Material: R2, R3, R4, E1, T1, T3, T2, P1, C1, E2 or P2

j = Process connection material: Single digit – not relevant for safety
k = Electrode design: 1, or 5
l = Measuring electrode material: Single digit code – not relevant for safety
m = Grounding electrode/Full pipe detection: 0, 1, 2, or 3
n = Grounding accessories: A, B, C, D or E
o = Protection class transmitter/protection class sensor: 70 or 91
p = Power supply: A, D, C, or E
q = Display: 0, 1 or 2
r = Outputs: G0, G1, G2, G3, G4, G5, G6, G7, G8, G9, M1, D1, P1 or Y0

Additional Codes
t = Option card 1: DR0, DRN, DRG, DRT, DRA, DRM, DRD or DRP
u = Option card 2: DR0, DS0, DSA, DSN, or DSG
v = Temperature range of installation/Ambient temperature range: TK1, TK4, TKH or TKK
w = Sensor housing material: SMA or SMS
x = Sensor length: J6 or JH

Specific Conditions of Use:

1. The painted surface of the FE*6, ProcessMaster and HygenicMaster may store electrostatic charge and become a source of ignition in applications with a low relative humidity <~30% relative humidity where the painted surface is relatively free of surface contamination such as dirt, dust, or oil. Guidance on protection against the risk of ignition due to electrostatic discharge can be found in IEC TR60079-32-2 Cleaning of the painted surface should only be done with a damp cloth.
2. For installations in flammable dust, the cable entries shall be fitted with an appropriate cable entry device meeting the requirements of IP6x fitted with a gasket or seal between the cable entry device and the wall of the enclosure.
3. For Integral and Remote versions FE*63*A1 EPL Db having exposed electrodes in the process shall be used in a non-flammable liquid process only.
4. Contact the manufacturer for specific flamepath joint during repair of flameproof Ex d apparatus.
5. The ABB Instruction Manual for the ProcessMaster and HygenicMaster the permitted Temperature Classification and Ambient Temperature ratings as influenced by the Process Medium temperature.

FEP632A1fghijklmnopqY0A-t.u.v.w – Process Remote Sensor – Design Level A

Markings:

Ex eb ib mb IIC T6…T1 Gb Ta = * to 60°C IP65/67/68
Ex tb IIIC T80°C…Tmedium Db Ta = * to 60°C IP65/67/68

* -20°C or -40°C depending on options chosen

Description of Equipment:

f = Housing Type/Housing Material/ Cable entry: A1, A2, U1, or U2
g = Meter Size representing DN3 to DN300: 4-digit code – not relevant for safety
h = Process Connection Type: 2-digit code – not relevant for safety
i = Liner material: R2, R3, R4, E1, T1, T3, T2, P1, C1, E2 or P2
j = Process connection material: Single digit – not relevant for safety
k = Electrode design: 1, or 5
l = Measuring electrode material: Single digit code – not relevant for safety
m = Grounding electrode/Full pipe detection: 0, 1, 2 or 3
n = Grounding accessories: A, B, C, D or E
o = Protection class transmitter/protection class sensor: 70, 76, 77 or 91
p = Power supply: Y or W

q = Display 0 or 8

Additional Codes
t = Option card 1: DR0
u = Option card 2: DR0, DS0
v = Temperature range of installation/Ambient temperature range: TK1, TK4, TKH or TKK
w = Sensor housing material: SMA or SMS
x = Sensor length: J6 or JH

Specific Conditions of Use:

1. The painted surface of the FE*6, ProcessMaster and HygenicMaster may store electrostatic charge and become a source of ignition in applications with a low relative humidity <~30% relative humidity where the painted surface is relatively free of surface contamination such as dirt, dust, or oil. Guidance on protection against the risk of ignition due to electrostatic discharge can be found in IEC TR60079-32-2 Cleaning of the painted surface should only be done with a damp cloth.
2. For installations in flammable dust, the cable entries shall be fitted with an appropriate cable entry device meeting the requirements of IP6x fitted with a gasket or seal between the cable entry device and the wall of the enclosure.
3. For Integral and Remote versions FE*63*A1 EPL Db having exposed electrodes in the process shall be used in a non-flammable liquid process only.
4. Contact the manufacturer for specific flamepath joint during repair of flameproof Ex d apparatus.
5. The ABB Instruction Manual for the ProcessMaster and HygenicMaster the permitted Temperature Classification and Ambient Temperature ratings as influenced by the Process Medium temperature.

FEP632A1fghijklmnopqY0A-t.u.v.w – Process Remote Sensor – Design Level A

Markings:

Ex eb ib IIC T6…T1 Gb Ta = * to 60°C IP65/67/68
Ex tb IIIC T80°C…Tmedium Db Ta = * to 60°C IP65/67/68

* -20°C or -40°C depending on options chosen

Description of Equipment:

f = Housing Type/Housing Material/ Cable entry: A1, A2, U1, or U2
g = Meter Size representing DN350 to DN3000: 4-digit code – not relevant for safety
h = Process Connection Type: 2-digit code – not relevant for safety
i = Liner material: R2, R3, R4, E1, T1, T3, T2, P1, C1, E2 or P2
j = Process connection material: Single digit – not relevant for safety
k = Electrode design: 1, or 5
l = Measuring electrode material: Single digit code – not relevant for safety
m = Grounding electrode/Full pipe detection: 0, 1, 2 or 3
n = Grounding accessories: A, B, C, D or E
o = Protection class transmitter/protection class sensor: 70, 76, 77 or 91
p = Power supply: Y or W
q = Display 0 or 8

Additional Codes
t = Option card 1: DR0
u = Option card 2: DR0, DS0
v = Temperature range of installation/Ambient temperature range: TK1, TK4, TKH or TKK

w = Sensor housing material: SMA or SMS
x = Sensor length: J6 or JH

Specific Conditions of Use:

1. The painted surface of the FE*6, ProcessMaster and HygenicMaster may store electrostatic charge and become a source of ignition in applications with a low relative humidity <~30% relative humidity where the painted surface is relatively free of surface contamination such as dirt, dust, or oil. Guidance on protection against the risk of ignition due to electrostatic discharge can be found in IEC TR60079-32-2 Cleaning of the painted surface should only be done with a damp cloth.
2. For installations in flammable dust, the cable entries shall be fitted with an appropriate cable entry device meeting the requirements of IP6x fitted with a gasket or seal between the cable entry device and the wall of the enclosure.
3. For Integral and Remote versions FE*63*A1 EPL Db having exposed electrodes in the process shall be used in a non-flammable liquid process only.
4. Contact the manufacturer for specific flamepath joint during repair of flameproof Ex d apparatus.
5. The ABB Instruction Manual for the ProcessMaster and HygenicMaster the permitted Temperature Classification and Ambient Temperature ratings as influenced by the Process Medium temperature.

FET632A1fopqrA - t.u.v – Remote Transmitter - ‘d’ wall bracket

Markings:

Ex db [ia Ga] IIB + H_2 T6 Gb Ta = * to 60°C IP65/67
Ex tb [ia Da] IIIC T80°C Db Ta = * to 60°C IP65/67

* -20°C or -40°C depending on options chosen

FISCO (when r = P1 or t = DRP)

Description of Equipment:

f = Housing Type/Housing Material/ Cable entry: W5 or W7
o = Protection class transmitter/protection class sensor: 70 or 91
p = Power supply: A, D, C or E
q = Display: 0, 1 or 2
r = Outputs: G0, G1, G2, G3, G4, G5, G6, G7, G8, G9, M1, D1, P1 or Y0

Additional Codes
t = Option card 1: DR0, DRN, DRG, DRT, DRA, DRM, DRP or DRD
u = Option card 2: DR0, DS0, DSA, DSN or DSG
v = Temperature range of installation/Ambient temperature range: TK1, TK4, TKH or TKK

Specific Conditions of Use:

1. The painted surface of the FE*6, ProcessMaster and HygenicMaster may store electrostatic charge and become a source of ignition in applications with a low relative humidity <~30% relative humidity where the painted surface is relatively free of surface contamination such as dirt, dust, or oil. Guidance on protection against the risk of ignition due to electrostatic discharge can be found in IEC TR60079-32-2 Cleaning of the painted surface should only be done with a damp cloth.
2. For installations in flammable dust, the cable entries shall be fitted with an appropriate cable entry device meeting the requirements of IP6x fitted with a gasket or seal between the cable entry device and the wall of the enclosure.

3. For Integral and Remote versions FE*63*A1 EPL Db having exposed electrodes in the process shall be used in a non-flammable liquid process only.
4. Contact the manufacturer for specific flamepath joint during repair of flameproof Ex d apparatus.

FET632A1fopqrA - t.u.v – Remote Transmitter – 'e' wallbracket

Markings:

Ex db eb mb [ia Ga] IIC T6 Gb Ta = * to 60°C IP65/67
Ex tb [ia Da] IIIC T80°C Db Ta = * to 60°C IP65/67

* -20°C or -40°C depending on options chosen

FISCO (when r = P1 or t = DRP)

Description of Equipment:

f = Housing Type/Housing Material/ Cable entry: W1, W2, W3, or W4
o = Protection class transmitter/protection class sensor: 70 or 91
p = Power supply: A, D, C or E
q = Display: 0, 1 or 2
r = Outputs: G0, G1, G2, G3, G4, G5, G6, G7, G8, G9, M1, D1, P1 or Y0

Additional Codes
t = Option card 1: DR0, DRN, DRG, DRT, DRA, DRM, DRP or DRD
u = Option card 2: DR0, DS0, DSA, DSN or DSG
v = Temperature range of installation/Ambient temperature range: TK1, TK4, TKH or TKK

Specific Conditions of Use:

1. The painted surface of the FE*6, ProcessMaster and HygenicMaster may store electrostatic charge and become a source of ignition in applications with a low relative humidity <~30% relative humidity where the painted surface is relatively free of surface contamination such as dirt, dust, or oil. Guidance on protection against the risk of ignition due to electrostatic discharge can be found in IEC TR60079-32-2 Cleaning of the painted surface should only be done with a damp cloth.
2. For installations in flammable dust, the cable entries shall be fitted with an appropriate cable entry device meeting the requirements of IP6x fitted with a gasket or seal between the cable entry device and the wall of the enclosure.
3. For Integral and Remote versions FE*63*A1 EPL Db having exposed electrodes in the process shall be used in a non-flammable liquid process only.
4. Contact the manufacturer for specific flamepath joint during repair of flameproof Ex d apparatus.

FEW631A1fghijklmnopqrA-t.u.v.w – Process Integral Transmitter – Design Level A

Markings:

Ex db eb ib mb [ia Ga] IIC T6…T1 Gb Ta = * to 60°C IP65/67
Ex tb [ia Da] IIIC T80°C…Tmedium Db Ta = * to 60°C IP65/67

FISCO (when r = P1 or t = DRP)

* -20°C or -40°C depending on options chosen

Description of Equipment:

f = Housing Type/Housing Material/ Cable entry: D1, D2, D3, D4, D6 or D8
g = Meter Size representing DN3 to DN300: 4-digit code – not relevant for safety
h = Process Connection Type: 2-digit code – not relevant for safety
i = Liner Material: R2, R3, R4 or E2
j = Process connection material: Single digit – not relevant for safety
k = Electrode design: 1 or 5
l = Measuring electrode material: Single digit code – not relevant for safety
m = Grounding electrode/Full pipe detection: 0, 1, 2, or 3
n = Grounding accessories: A, B, C, D or E
o = Protection class transmitter/protection class sensor: 70 or 91
p = Power supply: A, D, C, or E
q = Display: 0, 1 or 2
r = Outputs: G0, G1, G2, G3, G4, G5, G6, G7, G8, G9, M1, D1, P1 or Y0

Additional Codes
t = Option card 1: DR0, DRN, DRG, DRT, DRA, DRM, DRD or DRP
u = Option card 2: DR0, DS0, DSA, DSN, or DSG
v = Temperature range of installation/Ambient temperature range: TK1 or TK4
w = Sensor housing material: SMA or SMS
x = Sensor length: J6 or JH

Specific Conditions of Use:

1. The painted surface of the FE*6, ProcessMaster and HygenicMaster may store electrostatic charge and become a source of ignition in applications with a low relative humidity <~30% relative humidity where the painted surface is relatively free of surface contamination such as dirt, dust, or oil. Guidance on protection against the risk of ignition due to electrostatic discharge can be found in IEC TR60079-32-2 Cleaning of the painted surface should only be done with a damp cloth.
2. For installations in flammable dust, the cable entries shall be fitted with an appropriate cable entry device meeting the requirements of IP6x fitted with a gasket or seal between the cable entry device and the wall of the enclosure.
3. For Integral and Remote versions FE*63*A1 EPL Db having exposed electrodes in the process shall be used in a non-flammable liquid process only.
4. Contact the manufacturer for specific flamepath joint during repair of flameproof Ex d apparatus.
5. The ABB Instruction Manual for the ProcessMaster and HygenicMaster the permitted Temperature Classification and Ambient Temperature ratings as influenced by the Process Medium temperature.

FEW631A1fghijklmnopqrA-t.u.v.w – Process Integral Transmitter – Design Level A

Markings:

Ex db eb ib [ia Ga] IIC T6…T1 Gb Ta = * to 60°C IP65/67
Ex tb [ia Da] IIIC T80°C…Tmedium Db Ta = * to 60°C IP65/67

FISCO (when r = P1 or t = DRP)

* -20°C or -40°C depending on options chosen

Description of Equipment:

f = Housing Type/Housing Material/ Cable entry: D1, D2, D3, D4, D6 or D8
g = Meter Size representing DN350 to DN3000: 4-digit code – not relevant for safety
h = Process Connection Type: 2-digit code – not relevant for safety
i = Liner Material: R2, R3, R4 or E2
j = Process connection material: Single digit – not relevant for safety
k = Electrode design: 1, or 5

l = Measuring electrode material: Single digit code – not relevant for safety
m = Grounding electrode/Full pipe detection: 0, 1, 2, or 3
n = Grounding accessories: A, B, C, D or E
o = Protection class transmitter/protection class sensor: 70 or 91
p = Power supply: A, D, C, or E
q = Display: 0, 1 or 2
r = Outputs: G0, G1, G2, G3, G4, G5, G6, G7, G8, G9, M1, D1, P1 or Y0

Additional Codes
t = Option card 1: DR0, DRN, DRG, DRT, DRA, DRM, DRD or DRP
u = Option card 2: DR0, DS0, DSA, DSN, or DSG
v = Temperature range of installation/Ambient temperature range: TK1 or TK4
w = Sensor housing material: SMA or SMS
x = Sensor length: J6 or JH

Specific Conditions of Use:

1. The painted surface of the FE*6, ProcessMaster and HygenicMaster may store electrostatic charge and become a source of ignition in applications with a low relative humidity <~30% relative humidity where the painted surface is relatively free of surface contamination such as dirt, dust, or oil. Guidance on protection against the risk of ignition due to electrostatic discharge can be found in IEC TR60079-32-2 Cleaning of the painted surface should only be done with a damp cloth.
2. For installations in flammable dust, the cable entries shall be fitted with an appropriate cable entry device meeting the requirements of IP6x fitted with a gasket or seal between the cable entry device and the wall of the enclosure.
3. For Integral and Remote versions FE*63*A1 EPL Db having exposed electrodes in the process shall be used in a non-flammable liquid process only.
4. Contact the manufacturer for specific flamepath joint during repair of flameproof Ex d apparatus.
5. The ABB Instruction Manual for the ProcessMaster and HygenicMaster the permitted Temperature Classification and Ambient Temperature ratings as influenced by the Process Medium temperature.

FEW632A1fghijklmnopqY0A-t.u.v.w – Process Remote Sensor – Design Level A

Markings:

Ex eb ib mb IIC T6…T1 Gb Ta = * to 60°C IP65/67/68
Ex tb IIIC T80°C…Tmedium Db Ta = * to 60°C IP65/67/68

* -20°C or -40°C depending on options chosen

Description of Equipment:

f = Housing Type/Housing Material/ Cable entry: A1, A2, U1, or U2
g = Meter Size representing DN3 to DN300: 4-digit code – not relevant for safety
h = Process Connection Type: 2-digit code – not relevant for safety
i = Liner material: R2, R3, R4 or E2
j = Process connection material: Single digit – not relevant for safety
k = Electrode design: 1, or 5
l = Measuring electrode material: Single digit code – not relevant for safety
m = Grounding electrode/Full pipe detection: 0, 1, 2 or 3
n = Grounding accessories: A, B, C, D or E
o = Protection class transmitter/protection class sensor: 70, 76, 77 or 91
p = Power supply: Y or W
q = Display 0 or 8

Additional Codes
t = Option card 1: DR0
u = Option card 2: DR0, DS0
v = Temperature range of installation/Ambient temperature range: TK1 or TK4
w = Sensor housing material: SMA or SMS
x = Sensor length: J6 or JH

Specific Conditions of Use:

1. The painted surface of the FE*6, ProcessMaster and HygenicMaster may store electrostatic charge and become a source of ignition in applications with a low relative humidity <~30% relative humidity where the painted surface is relatively free of surface contamination such as dirt, dust, or oil. Guidance on protection against the risk of ignition due to electrostatic discharge can be found in IEC TR60079-32-2 Cleaning of the painted surface should only be done with a damp cloth.
2. For installations in flammable dust, the cable entries shall be fitted with an appropriate cable entry device meeting the requirements of IP6x fitted with a gasket or seal between the cable entry device and the wall of the enclosure.
3. For Integral and Remote versions FE*63*A1 EPL Db having exposed electrodes in the process shall be used in a non-flammable liquid process only.
4. Contact the manufacturer for specific flamepath joint during repair of flameproof Ex d apparatus.
5. The ABB Instruction Manual for the ProcessMaster and HygenicMaster the permitted Temperature Classification and Ambient Temperature ratings as influenced by the Process Medium temperature.

FEW632A1fghijklmnopqY0A-t.u.v.w – Process Remote Sensor – Design Level A

Markings:

Ex eb ib IIC T6…T1 Gb Ta = * to 60°C IP65/67/68
Ex tb IIIC T80°C…Tmedium Db Ta = * to 60°C IP65/67/68

* -20°C or -40°C depending on options chosen

Description of Equipment:

f = Housing Type/Housing Material/ Cable entry: A1, A2, U1, or U2
g = Meter Size representing DN350 to DN3000: 4-digit code – not relevant for safety
h = Process Connection Type: 2-digit code – not relevant for safety
i = Liner material: R2, R3, R4 or E2
j = Process connection material: Single digit – not relevant for safety
k = Electrode design: 1, or 5
l = Measuring electrode material: Single digit code – not relevant for safety
m = Grounding electrode/Full pipe detection: 0, 1, 2 or 3
n = Grounding accessories: A, B, C, D or E
o = Protection class transmitter/protection class sensor: 70, 76, 77 or 91
p = Power supply: Y or W
q = Display 0 or 8

Additional Codes
t = Option card 1: DR0
u = Option card 2: DR0, DS0
v = Temperature range of installation/Ambient temperature range: TK1 or TK4
w = Sensor housing material: SMA or SMS
x = Sensor length: J6 or JH

Specific Conditions of Use:

1. The painted surface of the FE*6, ProcessMaster and HygenicMaster may store electrostatic charge and become a source of ignition in applications with a low relative humidity <~30% relative humidity where the painted surface is relatively free of surface contamination such as dirt, dust, or oil. Guidance on protection against the risk of ignition due to electrostatic discharge can be found in IEC TR60079-32-2 Cleaning of the painted surface should only be done with a damp cloth.
2. For installations in flammable dust, the cable entries shall be fitted with an appropriate cable entry device meeting the requirements of IP6x fitted with a gasket or seal between the cable entry device and the wall of the enclosure.
3. For Integral and Remote versions FE*63*A1 EPL Db having exposed electrodes in the process shall be used in a non-flammable liquid process only.
4. Contact the manufacturer for specific flamepath joint during repair of flameproof Ex d apparatus.
5. The ABB Instruction Manual for the ProcessMaster and HygenicMaster the permitted Temperature Classification and Ambient Temperature ratings as influenced by the Process Medium temperature.

FEH631A2fghijklmnopqrA-t.u.v.y – Hygienic Integral

Markings:

Ex ec IIC T**…T1 Gc Ta = * to 60°C IP65/67
Ex tc IIIC T80°C…Tmedium Dc Ta = * to 60°C IP65/67

* -20°C or -40°C depending on options chosen
**T6…T1 for all options except t = DR6 and u = DS8 when this is T4…T1

FISCO (when r = P1 or t = DRP)

Description of Equipment:

f = Housing Type/Housing Material/ Cable entry: S1, S2, D1, D2, D3, D4, D6, or D8
g = Meter Size representing DN3 to DN100: 4-digit code – not relevant for safety
h = Process Connection Type: 2-digit code – not relevant for safety
i = Liner material: T1 or P1
j = Process connection material: Single digit – not relevant for safety
k = Electrode design: 1, or 5
l = Measuring electrode material: Single digit code – not relevant for safety
m = Grounding electrode/Full pipe detection: 0 or 2
n = Grounding accessories: A, B or C
o = Protection class transmitter/protection class sensor: 70 or 91
p = Power supply: A, D, C or E
q = Display: 0, 1 or 2
r = Outputs: G0, G1, G2, G3, G4, G5, G6, G7, G8, G9, M1, D1, P1, E2, E3, E4 or Y0

Additional Codes
t = Option card 1: DR0, DRN, DRG, DRT, DRA, DRM, DRD, DRP or DR6
u = Option card 2: DR0, DS0, DSA, DSN, DSG or DS8
v = Temperature range of installation/Ambient temperature range: TK1, TK4, TKH or TKK
y = Connector type: U0, UE, UF, UG, U5, UB, UC, U6, UD, UH, U7, UJ, UK, U8, UN, UP

Specific Conditions of Use:

1. Sensors having exposed electrodes in the process shall be used in a non-flammable liquid process only.
2. The ABB Instruction Manual for the ProcessMaster and HygenicMaster details the permitted Temperature Classification and Ambient Temperature ratings as influenced by the Process Medium temperature.

3. The painted surface of the ProcessMaster and HygenicMaster may store electrostatic charge and become a source of ignition in applications with a low relative humidity <~30% relative humidity where the painted surface is relatively free of surface contamination such as dirt, dust, or oil. Guidance on protection against the risk of ignition due to electrostatic discharge can be found in IEC TR60079-32-2 Cleaning of the painted surface should only be done with a damp cloth.

FEH632A2fghijklmnopqY0A-t.u.v – Hygienic Remote Sensor

Markings:

Ex ec IIC T6…T1 Gc Ta = * to 60°C IP65/67/68
Ex tc IIIC T80°C…Tmedium Dc Ta = * to 60°C IP65/67/68
* -20°C or -40°C depending on options chosen

Description of Equipment:

f = Housing Type/Housing Material/ Cable entry: A1, A2, U1, or U2
g = Meter Size representing DN3 to DN100: 4-digit code – not relevant for safety
h = Process Connection Type: 2-digit code – not relevant for safety
i = Liner material: T1 or P1
j = Process connection material: Single digit – not relevant for safety
k = Electrode design: 1, or 5
l = Measuring electrode material: Single digit code – not relevant for safety
m = Grounding electrode/Full pipe detection: 0 or 2
n = Grounding accessories: A, B or C
o = Protection class transmitter/protection class sensor: 70, 76, 77 or 91
p = Power supply: Y or W
q = Display: 0 or 8

Additional Codes
t = Option card 1: DR0
u = Option card 2: DR0, DS0
v = Temperature range of installation/Ambient temperature range: TK1, TK4, TKH or TKK

Specific Conditions of Use:

1. Sensors having exposed electrodes in the process shall be used in a non-flammable liquid process only.
2. The ABB Instruction Manual for the ProcessMaster and HygenicMaster details the permitted Temperature Classification and Ambient Temperature ratings as influenced by the Process Medium temperature.
3. The painted surface of the ProcessMaster and HygenicMaster may store electrostatic charge and become a source of ignition in applications with a low relative humidity <~30% relative humidity where the painted surface is relatively free of surface contamination such as dirt, dust, or oil. Guidance on protection against the risk of ignition due to electrostatic discharge can be found in IEC TR60079-32-2 Cleaning of the painted surface should only be done with a damp cloth.

FEP631A2fghijklmnopqrA-t.u.v.w.x.y – Process Integral – Design Level A

Markings:

Ex ec IIC T**…T1 Gc Ta = * to 60°C IP65/67
Ex tc IIIC T80°C…Tmedium Dc Ta = * to 60°C IP65/67

* -20°C or -40°C depending on options chosen
**T6…T1 for all options except t = DR6 and u = DS8 when this is T4…T1

FISCO (when r = P1 or t = DRP)

Description of Equipment:

f = Housing Type/Housing Material/ Cable entry: S1, S2, D1, D2, D3, D4, D6, or D8
g = Meter Size representing DN3 to DN3000: 4-digit code – not relevant for safety
h = Process Connection Type: 2-digit code – not relevant for safety
i = Liner material: R2, R3, R4, E1, T1, T3, T2, P1, C1, E2, or P2
j = Process connection material: Single digit – not relevant for safety
k = Electrode design: 1, or 5
l = Measuring electrode material: Single digit code – not relevant for safety
m = Grounding electrode/Full pipe detection: 0, 1, 2, or 3
n = Grounding accessories: A, B, C, D, E
o = Protection class transmitter/protection class sensor: 70 or 91
p = Power supply: A, D, C or E
q = Display: 0, 1 or 2
r = Outputs: G0, G1, G2, G3, G4, G5, G6, G7, G8, G9, M1, D1, P1, E2, E3, E4 or Y0

Additional Codes
t = Option card 1: DR0, DRN, DRG, DRT, DRA, DRM, DRD, DRP or DR6
u = Option card 2: DR0, DS0, DSA, DSN, DSG or DS8
v = Temperature range of installation/Ambient temperature range: TK1, TK4, TKH or TKK
w = Sensor housing material: SMA, SMS
x = Sensor length: J6 or JH
y = Connector type: U0, UE, UF, UG, U5, UB, UC, U6, UD, UH, U7, UJ, UK, U8, UN, or UP

Specific Conditions of Use:

1. Sensors having exposed electrodes in the process shall be used in a non-flammable liquid process only.
2. The ABB Instruction Manual for the ProcessMaster and HygenicMaster details the permitted Temperature Classification and Ambient Temperature ratings as influenced by the Process Medium temperature.
3. The painted surface of the ProcessMaster and HygenicMaster may store electrostatic charge and become a source of ignition in applications with a low relative humidity <~30% relative humidity where the painted surface is relatively free of surface contamination such as dirt, dust, or oil. Guidance on protection against the risk of ignition due to electrostatic discharge can be found in IEC TR60079-32-2 Cleaning of the painted surface should only be done with a damp cloth.

FEP631A2fghT1jklmnopqrB-t.u.v.y.SMA – Process Integral – Design Level B

Markings:

Ex ec IIC T**…T1 Gc Ta = * to 60°C IP65/67
Ex tc IIIC T80°C…Tmedium Dc Ta = * to 60°C IP65/67

* -20°C or -40°C depending on options chosen
**T6…T1 for all options except t = DR6 and u = DS8 when this is T4…T1

FISCO (when r = P1 or t = DRP)

Description of Equipment:

f = Housing Type/Housing Material/ Cable entry: S1, S2, D1, D2, D3, or D4
g = Meter Size representing DN25 to DN600: 4-digit code – not relevant for safety
h = Process Connection Type: 2-digit code – not relevant for safety

j = Process connection material: Single digit – not relevant for safety
k = Electrode design: 1, or 5
l = Measuring electrode material: Single digit code – not relevant for safety
m = Grounding electrode/Full pipe detection: 0, 1, 2, or 3
n = Grounding accessories: A, B, C, D, E
o = Protection class transmitter/protection class sensor: 70 or 91
p = Power supply: A, D, C or E
q = Display: 0, 1 or 2
r = Outputs: G0, G1, G2, G3, G4, G5, G6, G7, G8, G9, M1, D1, P1, E2, E3, E4 or Y0

Additional Codes
t = Option card 1: DR0, DRN, DRG, DRT, DRA, DRM, DRD, DRP or DR6
u = Option card 2: DR0, DS0, DSA, DSN, DSG or DS8
v = Temperature range of installation/Ambient temperature range: TK1 or TK4
y = Connector type: U0, UE, UF, UG, U5, UB, UC, U6, UD, UH, U7, UJ, UK, U8, UN, or UP

Specific Conditions of Use:

1. Sensors having exposed electrodes in the process shall be used in a non-flammable liquid process only.
2. The ABB Instruction Manual for the ProcessMaster and HygenicMaster details the permitted Temperature Classification and Ambient Temperature ratings as influenced by the Process Medium temperature.
3. The painted surface of the ProcessMaster and HygenicMaster may store electrostatic charge and become a source of ignition in applications with a low relative humidity <~30% relative humidity where the painted surface is relatively free of surface contamination such as dirt, dust, or oil. Guidance on protection against the risk of ignition due to electrostatic discharge can be found in IEC TR60079-32-2 Cleaning of the painted surface should only be done with a damp cloth.

FEP632A2fghijklmnopqY0A-t.u.v.w – Process Remote Sensor – Design Level A

Markings:

Ex ec IIC T6…T1 Gc Ta = * to 60°C IP65/67/68
Ex tc IIIC T80°C…Tmedium Dc Ta = * to 60°C IP65/67/68
* -20°C or -40°C depending on options chosen

Description of Equipment:

f = Housing Type/Housing Material/ Cable entry: A1, A2, U1, or U2
g = Meter Size representing DN3 to DN3000: 4-digit code – not relevant for safety
h = Process Connection Type: 2-digit code – not relevant for safety
i = Liner material: R2, R3, R4, E1, T1, T3, T2, P1, C1, E2 or P2
j = Process connection material: Single digit – not relevant for safety
k = Electrode design: 1, or 5
l = Measuring electrode material: Single digit code – not relevant for safety
m = Grounding electrode/Full pipe detection: 0, 1, 2 or 3
n = Grounding accessories: A, B, C, D or E
o = Protection class transmitter/protection class sensor: 70, 76, 77 or 91
p = Power supply: Y or W
q = Display: 0 or 8

Additional Codes
t = Option card 1: DR0
u = Option card 2: DR0, DS0

v = Temperature range of installation/Ambient temperature range: TK1, TK4, TKH or TKK
w = Sensor housing material: SMA or SMS
x = Sensor length: J6 or JH

Specific Conditions of Use:

1. Sensors having exposed electrodes in the process shall be used in a non-flammable liquid process only.
2. The ABB Instruction Manual for the ProcessMaster and HygenicMaster details the permitted Temperature Classification and Ambient Temperature ratings as influenced by the Process Medium temperature.
3. The painted surface of the ProcessMaster and HygenicMaster may store electrostatic charge and become a source of ignition in applications with a low relative humidity <~30% relative humidity where the painted surface is relatively free of surface contamination such as dirt, dust, or oil. Guidance on protection against the risk of ignition due to electrostatic discharge can be found in IEC TR60079-32-2 Cleaning of the painted surface should only be done with a damp cloth.

FEP632A2fghT1jklmnopqY0B-t.u.v.SMA – Process Remote Sensor – Design Level B

Markings:

Ex ec IIC T6…T1 Gc Ta = * to 60°C IP65/67/68
Ex tc IIIC T80°C…Tmedium Dc Ta = * to 60°C IP65/67/68
* -20°C or -40°C depending on options chosen

Description of Equipment:

f = Housing Type/Housing Material/ Cable entry: A1, A2, U1, or U2
g = Meter Size representing DN25 to DN600: 4-digit code – not relevant for safety
h = Process Connection Type: 2-digit code – not relevant for safety
j = Process connection material: Single digit – not relevant for safety
k = Electrode design: 1, or 5
l = Measuring electrode material: Single digit code – not relevant for safety
m = Grounding electrode/Full pipe detection: 0, 1, 2 or 3
n = Grounding accessories: A, B, C, D or E
o = Protection class transmitter/protection class sensor: 70, 76, 77 or 91
p = Power supply: Y or W
q = Display: 0 or 8

Additional Codes
t = Option card 1: DR0
u = Option card 2: DR0, DS0
v = Temperature range of installation/Ambient temperature range: TK1 or TK4

Specific Conditions of Use:

1. Sensors having exposed electrodes in the process shall be used in a non-flammable liquid process only.
2. The ABB Instruction Manual for the ProcessMaster and HygenicMaster details the permitted Temperature Classification and Ambient Temperature ratings as influenced by the Process Medium temperature.
3. The painted surface of the ProcessMaster and HygenicMaster may store electrostatic charge and become a source of ignition in applications with a low relative humidity <~30% relative humidity where the painted surface is relatively free of surface contamination such as dirt, dust, or oil. Guidance on protection against the risk of ignition due to electrostatic discharge

can be found in IEC TR60079-32-2 Cleaning of the painted surface should only be done with a damp cloth.

FET632A2fopqrA - t.u.v.y – Remote Transmitter

Markings:

Ex ec IIC T** Gc Ta = * to 60°C IP65/67
Ex tc IIIC T80°C Dc Ta = * to 60°C IP65/67

* -20°C or -40°C depending on options chosen
**T6 for all options except t = DR6 and u = DS8 when this is T4

FISCO (when r = P1 or t = DRP)

Description of Equipment:

f = Housing Type/Housing Material/ Cable entry: F1, F2, W1, W2, W3 or W4
o = Protection class transmitter/protection class sensor: 70 or 91
p = Power supply: A, D, C or E
q = Display: 0, 1 or 2
r = Outputs: G0, G1, G2, G3, G4, G5, G6, G7, G8, G9, M1, D1, E2, E3, E4 or Y0

Additional Codes
t = Option card 1: DR0, DRN, DRG, DRT, DRA, DRM, DRD, DRP or DR6
u = Option card 2: DR0, DS0, DSA, DSN, DSG or DS8
v = Temperature range of installation/Ambient temperature range: TK1, TK4, TKH or TKK
y = Connector type: U0, UE, UF, UG, U5, UB, UC, U6, UD, UH, U7, UJ, UK, U8, UN, or UP

Specific Conditions of Use:

1. Sensors having exposed electrodes in the process shall be used in a non-flammable liquid process only.
2. The ABB Instruction Manual for the ProcessMaster and HygenicMaster details the permitted Temperature Classification and Ambient Temperature ratings as influenced by the Process Medium temperature.
3. The painted surface of the ProcessMaster and HygenicMaster may store electrostatic charge and become a source of ignition in applications with a low relative humidity <~30% relative humidity where the painted surface is relatively free of surface contamination such as dirt, dust, or oil. Guidance on protection against the risk of ignition due to electrostatic discharge can be found in IEC TR60079-32-2 Cleaning of the painted surface should only be done with a damp cloth.

FEW631A2fghijklmnopqrA-t.u.v.w.x.y – Process Integral – Design Level A

Markings:

Ex ec IIC T**…T1 Gc Ta = * to 60°C IP65/67
Ex tc IIIC T80°C…Tmedium Dc Ta = * to 60°C IP65/67

* -20°C or -40°C depending on options chosen
**T6…T1 for all options except t = DR6 and u = DS8 when this is T4…T1

FISCO (when r = P1 or t = DRP)

Description of Equipment:

f = Housing Type/Housing Material/ Cable entry: S1, S2, D1, D2, D3, D4, D6, or D8
g = Meter Size representing DN3 to DN3000: 4-digit code – not relevant for safety
h = Process Connection Type: 2-digit code – not relevant for safety

i = Liner material: R2, R3, R4 or E2
j = Process connection material: Single digit – not relevant for safety
k = Electrode design: 1, or 5
l = Measuring electrode material: Single digit code – not relevant for safety
m = Grounding electrode/Full pipe detection: 0, 1, 2, or 3
n = Grounding accessories: A, B, C, D, E
o = Protection class transmitter/protection class sensor: 70 or 91
p = Power supply: A, D, C or E
q = Display: 0, 1 or 8
r = Outputs: G0, G1, G2, G3, G4, G5, G6, G7, G8, G9, M1, D1, P1, E2, E3, E4 or Y0

Additional Codes
t = Option card 1: DR0, DRN, DRG, DRT, DRA, DRM, DRD, DRP or DR6
u = Option card 2: DR0, DS0, DSA, DSN, DSG or DS8
v = Temperature range of installation/Ambient temperature range: TK1 or TK4
w = Sensor housing material: SMA
x = Sensor length: J6 or JH
y = Connector type: U0, UE, UF, UG, U5, UB, UC, U6, UD, UH, U7, UJ, UK, U8, UN, or UP

Specific Conditions of Use:

1. Sensors having exposed electrodes in the process shall be used in a non-flammable liquid process only.
2. The ABB Instruction Manual for the ProcessMaster and HygenicMaster details the permitted Temperature Classification and Ambient Temperature ratings as influenced by the Process Medium temperature.
3. The painted surface of the ProcessMaster and HygenicMaster may store electrostatic charge and become a source of ignition in applications with a low relative humidity <~30% relative humidity where the painted surface is relatively free of surface contamination such as dirt, dust, or oil. Guidance on protection against the risk of ignition due to electrostatic discharge can be found in IEC TR60079-32-2 Cleaning of the painted surface should only be done with a damp cloth.

FEW632A2fghijklmnopqY0A-t.u.v.w – Process Remote Sensor – Design Level A

Markings:

Ex ec IIC T6…T1 Gc Ta = * to 60°C IP65/67/68
Ex tc IIIC T80°C…Tmedium Dc Ta = * to 60°C IP65/67/68
* -20°C or -40°C depending on options chosen

Description of Equipment:

f = Housing Type/Housing Material/ Cable entry: A1, A2, U1, or U2
g = Meter Size representing DN3 to DN3000: 4-digit code – not relevant for safety
h = Process Connection Type: 2-digit code – not relevant for safety
i = Liner material: R2, R3, R4 or E2
j = Process connection material: Single digit – not relevant for safety
k = Electrode design: 1, or 5
l = Measuring electrode material: Single digit code – not relevant for safety
m = Grounding electrode/Full pipe detection: 0, 1, 2 or 3
n = Grounding accessories: A, B, C, D or E
o = Protection class transmitter/protection class sensor: 70, 76, 77 or 91
p = Power supply: Y or W
q = Display: 0 or 8

Additional Codes
t = Option card 1: DR0
u = Option card 2: DR0, DS0
v = Temperature range of installation/Ambient temperature range: TK1 or TK4
w = Sensor housing material: SMA
x = Sensor length: J6 or JH

Specific Conditions of Use:

1. Sensors having exposed electrodes in the process shall be used in a non-flammable liquid process only.
2. The ABB Instruction Manual for the ProcessMaster and HygenicMaster details the permitted Temperature Classification and Ambient Temperature ratings as influenced by the Process Medium temperature.
3. The painted surface of the ProcessMaster and HygenicMaster may store electrostatic charge and become a source of ignition in applications with a low relative humidity <~30% relative humidity where the painted surface is relatively free of surface contamination such as dirt, dust, or oil. Guidance on protection against the risk of ignition due to electrostatic discharge can be found in IEC TR60079-32-2 Cleaning of the painted surface should only be done with a damp cloth.