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 FMG 23.0026X**	Page 1 of 3	Certificate history:
Status:	**Current**	Issue No: 0	
Date of Issue:	2024-02-15		
Applicant:	**AMETEK Drexelbrook** 205 Keith Valley Rd, Horsham, Pennsylvania 19044, USA **United States of America**		
Equipment:	**Universal V Level Transmitter**		
Optional accessory:			
Type of Protection:	**Flameproof 'd', Intrinsic Safety 'i', Protection by enclosure 't'**		
Marking:	See Annex for Marking information		

Approved for issue on behalf of the IECEx Certification Body: **J. E. Marquedant**

Position: **VP, Manager - Electrical Systems**

Signature:
(for printed version)

Date:
(for printed version)

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Certificate issued by:

FM Approvals LLC
1151 Boston-Providence Turnpike
Norwood, MA 02062
United States of America

FM Approvals
Member of the FM Global Group

IECEx Certificate of Conformity

Certificate No.: **IECEx FMG 23.0026X**

Date of issue: 2024-02-15 Issue No: 0

Manufacturer: **AMETEK Drexelbrook**
205 Keith Valley Road, Horsham, PA 19044
United States of America

Manufacturing locations:

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 60079-31:2022 Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure "t"
Edition:3.0

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 Report:

US/FMG/ExTR23.0028/00

Quality Assessment Report:

NO/PRE/QAR16.0026/07

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

GENERAL - The model series Universal V Level Transmitter is a two-wire capacitance to current transmitter which provides a 4-20mA current output signal proportional to a change in capacitance at the probe terminals. It is designed to be used in conjunction with the AMETEK-Drexelbrook Series 700 Capacitance Probes. The transmitter circuitry is contained on five printed circuit boards and housed in an aluminium housing. Terminals are supplied, and appropriately marked, for power connections and also connection to the sensing probes. A majority of the board set is encapsulated in potting material. The electronic circuitry is contained in a combination of 5 circuit boards. One of these boards, the Probe Board, is mounted in the main housing and serves as the interface for the probe to the potted electronic module. The remaining 4 circuit boards are assembled in a plastic housing which is potted. The potted assembly contains a Terminal, Display, Power, and Bridge board. There are 3 variations of this potted assembly to service 3 different applications. For these three assemblies, the only differences are different component inclusion/exclusions on the Bridge board.

The enclosure provides an ingress protection rating of IP66.

Operation Temperature Ranges:

The ambient operating temperature range of the Universal V Level Transmitter is -40°C to +75°C.

Electrical data:

The transmitter electronics operate on a supply of 16 to 30 Vdc with an output range of 4-20 mA

See Annex for Marking information, Entity Parameters and Model Codes

SPECIFIC CONDITIONS OF USE: YES as shown below:
See Annex for Specific Conditions of Use

Annex:

Annex to IECEx FMG 23.0028X_1.pdf

Vab10cd000-e-f Universal V (Integral) Flameproof Transmitter

Markings:

Ex db ia IIB T4 Gb Ta = -40°C to +75°C
Ex ia tb IIIC T90°C Db Ta = -40°C to +75°C
IP66

Description of Equipment:

Vab10cd000-e-f Universal V (Integral) Flameproof Transmitter

a = Type: P, L, C, T or M
b = Frequency and Phasing: 0, 1, 2 or 3
c = Approval: 4 or 6
d = Entries: 1 or 2
e = Sensing Element: 201, 202, 203, 204, 205, 206, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, S12, S13, S14, S16, S18. S42, S43, S44, S46, S48
f = 24 character numbering system that does not affect safety

Specific Conditions of Use:

1. Consult the manufacturer if dimensional information on the flameproof joints is necessary
2. In locations requiring EPL Ga or Da equipment, care must be taken when installing the aluminum enclosure, that even in the event of rare incidents, an ignition source due to impact or friction between the enclosure and iron/steel is excluded.
3. The enclosure contains non-metallic enclosure parts. To prevent the risk of electrostatic sparking, the non- metallic surface should be cleaned with a damp cloth

Vab10cde00-f-g Universal V (Integral) Intrinsically Safe Transmitter

Markings:

Ex ia IIC T4 Ga Ta = -40°C to +75°C
IP66

Entity Parameters:
Ui = 30V, Ii = 140mA, Pi = 1W, Ci = 0.0µF, Li = 0.0µH

Description of Equipment:

Vab10cde00-f-g Universal V (Integral) Intrinsically Safe Transmitter

a = Type: P, L, C, T or M

b = Frequency and Phasing: 0, 1, 2 or 3

c = Approval: 3 or 5

d = Entries: 1 or 2

e = Surge Suppression: 0 or 1

f = Sensing Element: R00, R01, R02, R03, R04, R05, 201, 202, 203, 204, 205, 206, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 601, 603,604, 605, 606, 607, 608, 609, 610, 611, 613, 703, 705, 706, 708, 709, 713, 714, 715, 722, S12, S13, S14, S16, S18, S42, S43, S44, S46, S48 or ZZZ*

g = 24 character numbering system that does not affect safety

ZZZ* = Special Sensing Element

Specific Conditions of Use:

1. In locations requiring EPL Ga or Da equipment, care must be taken when installing the aluminum enclosure, that even in the event of rare incidents, an ignition source due to impact or friction between the enclosure and iron/steel is excluded.
2. The enclosure contains non-metallic enclosure parts. To prevent the risk of electrostatic sparking, the non-metallic surface should be cleaned with a damp cloth

Vab10cdef0-g-h Universal V (Remote) Flameproof Transmitter

Markings:

Ex db [ia Ga] IIB T4 Gb Ta = -40°C to +75°C
Ex tb [ia Da] IIIC T90°C Db Ta = -40°C to +75°C
IP66

Description of Equipment:

Vab10cdef0-g-h Universal V (Integral) Flameproof Transmitter

Vab10cdef0-g-h Universal V (Integral) Flameproof Transmitter

a = Type: P, L, or C

b = Frequency and Phasing: 0, 1, 2 or 3

c = Approval: 4 or 6

d = Entries: 1 or 2

e = Surge Suppression: 0, 4 or D

f = Remote Configuration: 1, 2, 3, 4, 5, 6, 7, 8, 9, A, B, C, D, E, F, G, H, J, K, L, M, N, P, R, S or Z

g = Sensing Element: R09, 000, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 513, 601, 603,604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, S02, S03, S04, S06, S08 or ZZZ*

h = 24 character numbering system that does not affect safety

ZZZ* = Special Sensing Element

Specific Conditions of Use:

1. Consult the manufacturer if dimensional information on the flameproof joints is necessary
2. In locations requiring EPL Ga or Da equipment, care must be taken when installing the aluminum enclosure, that even in the event of rare incidents, an ignition source due to impact or friction between the enclosure and iron/steel is excluded.
3. The enclosure contains non-metallic enclosure parts. To prevent the risk of electrostatic sparking, the non-metallic surface should be cleaned with a damp cloth

Vab10cdef0-g-h Universal V (Remote) Intrinsically Safe Transmitter

Markings:

Ex ia IIC T4 Ga Ta = -40°C to +75°C
Ex tb [ia Da] IIIC T90°C Db Ta = -40°C to +75°C
IP66

Entity Parameters:
Ui = 30V, Ii = 140mA, Pi = 1W, Ci = 0.0µF, Li = 0.0µH

Description of Equipment:

Vab10cdef0-g-h Universal V (Remote) Intrinsically Safe Transmitter

a = Type: P, L or C

b = Frequency and Phasing: 0, 1, 2 or 3

c = Approval: 3 or 5

d = Entries: 1 or 2

e = Surge Suppression: 0,1, 2, 3, 4, 5, 6, 7 or D

f = Remote Configuration: 1, 2, 3, 4, 5, 6, 7, 8, 9, A, B, C, D, E, F, G, H, J, K, L, M, N, P, R, S or Z

g = Sensing Element: R09, 000, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 513, 601, 603,604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, S02, S03, S04, S06, S08 or ZZZ*

h = 24 character numbering system that does not affect safety

ZZZ* = Special Sensing Element

Specific Conditions of Use:

1. In locations requiring EPL Ga or Da equipment, care must be taken when installing the aluminum enclosure, that even in the event of rare incidents, an ignition source due to impact or friction between the enclosure and iron/steel is excluded.
2. The enclosure contains non-metallic enclosure parts. To prevent the risk of electrostatic sparking, the non-metallic surface should be cleaned with a damp cloth

VDa10bc000-d-e Universal V Density Communication Module (Integral) Flameproof Transmitter

Markings:

Ex db ia IIB T4 Gb Ta = -40°C to +75°C
Ex ia tb IIIC T90°C Db Ta = -40°C to +75°C
IP66

Universal IV Remote Communications Module
Ex db IIB T4 Gb Ta = -40°C to +75°C
Ex tb IIIC T90°C Db Ta = -40°C to +75°C

Annex to IECEx FMG 23.0026X

Description of Equipment:

VDa10bc000-d-e Universal V Density Communication Module (Integral) Flameproof Transmitter

a = Frequency and Phasing: 0 or *R
b = Approval: A or B
c = Entries: 1 or 2
d = Sensing Element: 201, 202, 203, 204, 205, 206, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, S12, S13, S14, S16, S18. S42, S43, S44, S46, S48
e = 24 character numbering system that does not affect safety
*R = Retrofit

Specific Conditions of Use:

1. Consult the manufacturer if dimensional information on the flameproof joints is necessary
2. In locations requiring EPL Ga or Da equipment, care must be taken when installing the aluminum enclosure, that even in the event of rare incidents, an ignition source due to impact or friction between the enclosure and iron/steel is excluded.
3. The enclosure contains non-metallic enclosure parts. To prevent the risk of electrostatic sparking, the non-metallic surface should be cleaned with a damp cloth

700-a Sensor

Markings:

Ex ia IIC T2…T5 Ga Ta = -40°C to +75°C
Ex ia IIIC T90°C…T300°C Da Ta = -40°C to +75°C

Description of Equipment:

Model Code:
a = 1202-014, 1202-001, 1202-018, 1202-041, 0001-022, 0001-024, 0001-026, 0001-034, 0001-044, 0001-054, 0001-064, 0001-344, 0002-023, 0002-024, 0002-027, 0002-028, 0002-033, 0002-054, 0002-321, 0002-360, 0005-054, 0201-005, 0201-025, 0201-026, 0201-028, 0201-035, 1202-031, 1202-033, 1202-061, 1202-081, 0001-016, 0001-324, 0003-009, 0005-035, 0005-048, 0005-348, 0202-036, 0202-043, 0001-040, 0001-074, 0002-037, 0002-040, 0002-044, 0002-057, 0002-064, 0002-224, 0002-321, 0201-027, 0201-051, 0201-052, 0201-058, 0201-059, 0202-002, 0202-053, 0001-018, 0001-045, 0002-027, 0002-029, 0002-036, 0002-046, 0002-059, 0002-227, 0002-363, 0004-031, 0004-050, 0005-009, 0005-018, 0005-019, 0005-028, 0005-029, 0005-036, 0005-045, 0005-085, 0005-095, 0005-096, 0005-354, 0009-002, 0009-024, 0009-057, 0011-001, 0011-003, 011-015, 0021-001, 0021-002, 0021-003, 0021-007, 0202-054, 0202-056, 0203-003, 0203-004, 0204-002, 0204-022, 0204-024, 0204-038, 0204-048, 0204-049, 0205-005, 0205-015, 0205-018, 0205-075, 0205-078, 0205-079, 0209-002, 0209-024, 1202-010, 9100-403, 1202-061, 9100-195, 1202-051, 1230-002, 1230-003, 1230-004, 1230-006, 1230-008, 1230-102, 1230-103, 1230-104,1230-106, 1230-108, 1230-402, 1230-403, 1230-404, 1230-406, 1230-408
or any other 7 digit numeric combination maintaining the limits of 420-0004-651-CD.