HAZARDOUS (CLASSIFIED) AREA

IECEx
FMG11.0024X
Ex d ia IIB T4 Gb
Ex ia IIC T60°C Db

ATEX
FM12ATEX0018X
[1] 2 G Ex d ia IIB T4 Gb
[1] 2 G Ex ia IIC T90°C Db

(SEN SING ELEMENTS ARE INTRINSICALLY SAFE FOR ABOVE CLASSIFICATIONS)

CABLE GLANDS SUPPLIED BY CUSTOMER SUITABLY CERTIFIED TO MEET THE APPLICATION

SEE SHEET 2 FOR CERTIFIED MODEL NUMBERS

NOTES:
1. EUROPEAN LOCAL CODES AND INSTALLATION STANDARDS SHALL BE FOLLOWED.
2. NO REVISION TO DRAWING WITHOUT PRIOR FM APPROVAL.
3. UNUSED OPENINGS MUST BE PROPERLY SEALED TO MAINTAIN ENCLOSURE ENVIRONMENTAL AND/OR HAZARDOUS LOCATION RATINGS.

AMETEK DREXELBROOK

ATEX - IECEx
CONTROL DRAWING FOR
UNIVERSAL (INTEGRAL)
FLAMEPROOF INSTALLATION
SPECIFIC CONDITIONS FOR USE:
THE APPARATUS ENCLOSURE CONTAINS ALUMINUM AND IS CONSIDERED TO CONSTITUTE A POTENTIAL RISK OF IGNITION BY IMPACT OR FRICTION. CARE MUST BE TAKEN INTO ACCOUNT DURING INSTALLATION AND USE TO PREVENT IMPACT OR FRICTION.

CERTIFIED MODELS
Lab100d000-e-f. Universal IV - Flameproof - Model Code
a = TYPE P, L, C, T, OR M
b = FREQUENCY AND PHASING 0, 1, 2, OR 3
c = APPROVAL 4 (ATEX), 6 (IECEx)
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
f = 24 CHARACTER NUMBERING SYSTEM THAT DOES NOT AFFECT SAFETY
(SENSING ELEMENTS ARE INTRINSICALLY SAFE FOR ABOVE CLASSIFICATIONS)

ENCLOSURE IP66

OPTIONAL FLANGE MOUNTING

SENSING ELEMENT

SEE SHEET 4 FOR CERTIFIED MODEL NUMBERS

NOTES:
1. EUROPEAN LOCAL CODES AND INSTALLATION STANDARDS SHALL BE FOLLOWED.
2. NO REVISION TO DRAWING WITHOUT PRIOR FM APPROVAL.
3. CONTROL EQUIPMENT CONNECTED TO ASSOCIATED APPARATUS MUST NOT USE OR GENERATE MORE Than 250 Vrms OR Vdc.
4. ASSOCIATED APPARATUS MANUFACTURER'S INSTALLATION DRAWING MUST BE FOLLOWED WHEN INSTALLING THIS EQUIPMENT.
5. WARNING - SUBSTITUTION OF COMPONENTS MAY IMPAIR INTRINSIC SAFETY.
6. UNUSED OPENINGS MUST BE PROPERLY SEALED TO MAINTAIN ENCLOSURE ENVIRONMENTAL AND/OR HAZARDOUS LOCATION RATINGS.

CERTIFIED by

7 7-15-103 SGA 7-9-15 COPYRIGHT 2015 AMETEK DREXELBROOK
6 2-15-122 SGA 5-6-15
5 11-14-107 SGA 11-25-14 SCALE: NONE UNLESS OTHERWISE STATED (DIMENSIONS IN INCHES mm)
4 7-13-129 SGA 7-29-13
3 12-12-109 SGA 5-21-13 CR. TDH 7-9-15

ISS. EDD/DSR NO. APP'D DATE CK. JEN 7-9-15

AMETEK DREXELBROOK

ATEX - IECEEx
CONTROL DRAWING FOR UNIVERSAL IV (INTEGRAL) IS ENTITY INSTALLATION

FM APPROVED ASSOCIATED APPARATUS

GND
- 2
+ 3

Voc ≤ 30V
Isc ≤ 140mA
Pv ≤ 1W
Ca ≥ 0.0uf + C CABLE
La ≥ Li + L CABLE

THE ENTITY CONCEPT ALLOWS INTERCONNECTION OF INTRINSICALLY SAFE APPARATUS WITH ASSOCIATED APPARATUS WHEN THE FOLLOWING IS TRUE:
Vmax OR Li ≥ Voc, Vf OR Uo;
Imax OR Li ≥ Isc, It OR I0;
Pmax OR Pi ≥ Pv;
Ca ≥ Ci + Ceable;
La ≥ Li + Lcable
SPECIFIC CONDITIONS FOR USE:
THE APPARATUS ENCLOSURE CONTAINS ALUMINUM AND IS CONSIDERED TO
CONSTITUTE A POTENTIAL RISK OF IGNITION BY IMPACT OR FRICTION. CARE
MUST BE TAKEN INTO ACCOUNT DURING INSTALLATION AND USE TO PREVENT
IMPACT OR FRICTION.

CERTIFIED MODELS

Uap11ode10-f-g. Universal IV - Integral Intrinsically Safe - Model Code

a = TYPE P, L, C, T, OR M
b = FREQUENCY AND PHASING 0, 1, 2, OR 3
c = APPROVAL 3 (ATEX), 5 (IECEX)
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, 350, 352, 353, 354,
   505, 506, 507, 508, 509, 510, 511, 512, 513, 601, 603, 604, 605,
   606, 607, 608, 609, 610, 611, 612, 703, 705, 706, 708, 709, 713,
   714, 715, 722, ZZZ

g = 24 CHARACTER NUMBERING SYSTEM THAT DOES NOT AFFECT SAFETY

ZZZ = SPECIAL SENSING ELEMENT
700- ANY 7 DIGIT NUMERIC COMBINATION

NOTES:
1. MAXIMUM PROCESS TEMPERATURE 290°C
2. MAXIMUM SENSOR CAPACITANCE < 1uF
3. MAXIMUM INSERTION LENGTH RIGID SENSOR 30 FEET (9.144 METERS)
4. MAXIMUM INSERTION LENGTH FLEXIBLE SENSOR 200 FEET (60.96 METERS)
5. SENSING ELEMENT ENCLOSURE IP66 (IP RATING DOES NOT APPLY TO
SPECIAL SENSORS SUPPLIED WITHOUT A 285- SERIES SENSING ELEMENT ENCLOSURE).

CERTIFIED by

AMETEK DREXEL BROOK

AtEx - IECEx
CONTROL DRAWING FOR
UNIVERSAL IV (INTEGRAL)
IS ENTITY INSTALLATION

No. 420-0004-424-CD
SHT 4 of 10
HAZARDOUS (CLASSIFIED) AREA

IECEx
FMG11.0024X
Ex d [ia] IIIB T4 Gb
Ex tb [ia] IIIIC T90°C Db

ATEX
FM12ATEX0018X
I 2 [I] G Ex d [ia] IIIB T4 Gb
I 2 [I] D Ex tb [ia] IIIIC T90°C Db

NON-HAZARDOUS AREA

IECEx
FMG11.0024X
Ex d [ia] IIIB T4 Gb
Ex tb [ia] IIIIC T90°C Db

ATEX
FM12ATEX0018X
I 2 [I] G Ex d [ia] IIIB T4 Gb
I 2 [I] D Ex tb [ia] IIIIC T90°C Db

SENSING ELEMENTS
IECEx - Ex ia IIIC T5...T2 Gb
IECEx - Ex ia IIIC T90°C...T300°C Da
ATEX - [I] G Ex ia IIIC T5...T2 Gb
ATEX - [I] D Ex ia IIIC T90°C...T300°C Da

380 SERIES CABLE
100 FT. (30.5 METERS) MAX.
NOTE: INTRINSICALLY SAFE

CABLE GLAND

FLAMEPROOF ENCLOSURE
IP66

CABLE GLAND

CABLE GLANDS SUPPLIED
BY CUSTOMER SUITABLY
CERTIFIED TO MEET
THE APPLICATION

13-30 VDC

UNIVERSAL IV REMOTE MOUNT SENSOR

TEMPERATURE CLASS PROCESS TEMPERATURE

T5 190°C ≤ 99°C
T4 115°C ≤ 130°C
T3 200°C ≤ 190°C
T2 230°C ≤ 280°C

SEE SHEET 6 FOR CERTIFIED MODEL NUMBERS

NOTES:
1. EUROPEAN LOCAL CODES AND INSTALLATION STANDARDS SHALL BE FOLLOWED.
2. NO REVISION TO DRAWING WITHOUT PRIOR FM APPROVAL.
3. UNUSED OPENINGS MUST BE PROPERLY SEALED TO MAINTAIN ENCLOSURE ENVIRONMENTAL
   AND/OR HAZARDOUS LOCATION RATINGS.
4. OPTIONAL FILTERS 401-0016-030 AND 401-0016-031 MAY BE INSTALLED IN SENSOR
   ENCLOSURE.
SPECIFIC CONDITIONS FOR USE:
The apparatus enclosure contains aluminum and is considered to constitute a potential risk of ignition by impact or friction. Care must be taken into account during installation and use to prevent impact or friction.

CERTIFIED MODELS
Uab10cdefl-g-h. Universal IV - Remote Flameproof - Model Code

a = TYPE P, L, OR C
b = FREQUENCY AND PHASING 0, 1, 2, OR 3
c = APPROVAL 4 (ATEX), 6 (IECEx)
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
h = 24 CHARACTER NUMBERING SYSTEM THAT DOES NOT AFFECT SAFETY.

ZZZ = SPECIAL SENSING ELEMENT
700- ANY 7 DIGIT NUMERIC COMBINATION

NOTES:
1. MAXIMUM PROCESS TEMPERATURE 290°C
2. MAXIMUM SENSOR CAPACITANCE < 1μF
3. MAXIMUM INSERTION LENGTH RIGID SENSOR 30 FEET (9.144 METERS)
4. MAXIMUM INSERTION LENGTH FLEXIBLE SENSOR 2000 FEET (609.6 METERS)
5. SENSING ELEMENT ENCLOSURE IP66 (IP RATING DOES NOT APPLY TO SPECIAL SENSORS SUPPLIED WITHOUT A 285- SERIES SENSING ELEMENT ENCLOSURE).

CERTIFIED by

PO #
ENG
USER

DE #
ISS. EDD/CSR NG APP'D DATE

AMETEK DREXELBROOK
205 Keith Valley Rd. Horsham, PA 19044-2985
215-674-1234
FAX 215-674-2231

ATEX - IECEx
CONTROL DRAWING FOR
UNIVERSAL IV (REMOTE)
FLAMEPROOF INSTALLATION

SER 420-0004-424-CD
SH. 6 of 10
SS 7 of 10
HAZARDOUS (CLASSIFIED) AREA

-40°C ≤ ~Tmb~ ≤ +75°C; IP66

OPTIONAL PROBE FILTER ASSEMBLY.
RFI AND SURGE PROTECTION

ENCLOSURE IP66

SEEN SHEET 8
FOR CERTIFIED
MODEL NUMBERS

mf approved
ASSOCIATED
APPARATUS

V<sub>oc</sub> ≤ 30V
I<sub>sc</sub> ≤ 140mA
P<sub>0</sub> = 1W
Da ≥ 0.06uF + C CABLE
L<sub>a</sub> ≥ Li + L CABLE

THE ENTITY CONCEPT ALLOWS
INTERCONNECTION OF
INTRINSICALLY SAFE APPARATUS
WITH ASSOCIATED APPARATUS.

WHEN THE FOLLOWING IS TRUE:
V<sub>max</sub> OR Vi ≥ V<sub>oc</sub> OR V<sub>a</sub>;
I<sub>max</sub> OR I<sub>sc</sub> ≥ I<sub>0</sub> OR I<sub>0</sub>;
P<sub>max</sub> OR P ≥ P<sub>0</sub>;
Ca ≥ Ci + C CABLE;
L<sub>a</sub> ≥ Li + L CABLE

NON-HAZARDOUS AREA

CERTIFIED

AMETEK
DREXELBROOK

UNIVERSAL IV REMOTE MOUNT SENSOR

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<td>135°C ≤ 130°C</td>
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<td>T3</td>
<td>200°C ≤ 190°C</td>
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<td>T2</td>
<td>300°C ≤ 290°C</td>
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NOTES:
1. EUROPEAN LOCAL CODES AND INSTALLATION STANDARDS SHALL BE FOLLOWED.
2. NO REVISION TO DRAWING WITHOUT PRIOR FM APPROVAL.
3. CONTROL EQUIPMENT CONNECTED TO ASSOCIATED APPARATUS MUST USE OR
   GENERATE MORE THAN 250 V<sub>rms</sub> OR V<sub>ac</sub>.
4. ASSOCIATED APPARATUS MANUFACTURER'S INSTALLATION DRAWING MUST BE FOLLOWED
   WHEN INSTALLING THIS EQUIPMENT.
5. WARNING - SUBSTITUTION OF COMPONENTS MAY IMPAIR INTRINSIC SAFETY.
6. UNUSED OPENINGS MUST BE PROPERLY SEALED TO MAINTAIN ENCLOSURE ENVIRONMENTAL
   AND/OR HAZARDOUS LOCATION RATINGS.
7. OPTIONAL FILTERS 401-0016-03D AND 401-0016-031 MAY BE INSTALLED IN SENSOR ENCLOSURE.
SPECIFIC CONDITIONS FOR USE:
THE APPARATUS ENCLOSURE CONTAINS ALUMINUM AND IS CONSIDERED TO
CONSTITUTE A POTENTIAL RISK OFignition BY IMPACT OR FRICTION. CARE
MUST BE TAKEN INTO ACCOUNT DURING INSTALLATION AND USE TO PREVENT
IMPACT OR FRICTION.

CERTIFIED MODELS

**Ua10 Codefl-g-h. Universal IV - Remote Intrinsically Safe - Model Code**

- **a** = TYPE P, L, OR C
- **b** = FREQUENCY AND PHASING 0, 1, 2, OR 3
- **c** = APPROVAL 3 (ATEX), 5 (IEEx)
- **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
- **h** = 24 CHARACTER NUMBERING SYSTEM THAT DOES NOT AFFECT SAFETY

**ZZZ = SPECIAL SENSING ELEMENT**

700- ANY 7 DIGIT NUMERIC COMBINATION

NOTES:

1. MAXIMUM PROCESS TEMPERATURE 290°C
2. MAXIMUM SENSOR CAPACITANCE < 1uF
3. MAXIMUM INSERTION LENGTH RIGID SENSOR 30 FEET (9.144 METERS)
4. MAXIMUM INSERTION LENGTH FLEXIBLE SENSOR 2000 FEET (609.6 METERS)
5. SENSING ELEMENT ENCLOSURE IP66 (IP RATING DOES NOT APPLY TO SPECIAL SENSORS SUPPLIED WITHOUT A
   285- SERIES SENSING ELEMENT ENCLOSURE).

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205 KEITH VALLEY RD
HORSESHOE, PA 19044-9996
215-674-1234
FAX 215-674-2731

420-0004-424-CD
SHT 8 | ISS. 7
HAZARDOUS (CLASSIFIED) AREA

UIV REMOTE COMMUNICATIONS MODULE

(SENSING ELEMENTS ARE INTRINSICALLY SAFE FOR ABOVE CLASSIFICATIONS)

NOTE: IF THE REMOTE COMMUNICATION MODULE IS INSTALLED IN A NON-HAZARDOUS AREA A BOUNDARY SEAL MUST BE USED TO THE HAZARDOUS AREA.

SEE SHEET 10 FOR CERTIFIED MODEL NUMBERS

NOTES:
1. EUROPEAN LOCAL CODES AND INSTALLATION STANDARDS SHALL BE FOLLOWED.
2. NO REVISION TO DRAWING WITHOUT PRIOR FM APPROVAL.
3. UNUSED OPENINGS MUST BE PROPERLY SEALED TO MAINTAIN ENCLOSURE ENVIRONMENTAL AND/OR HAZARDOUS LOCATION RATINGS.
SPECIFIC CONDITIONS FOR USE.
THE APPARATUS ENCLOSURE CONTAINS ALUMINUM AND IS CONSIDERED TO
CONSTITUTE A POTENTIAL RISK OF IGNITION BY IMPACT OR FRICTION. CARE
MUST BE TAKEN INTO ACCOUNT DURING INSTALLATION AND USE TO PREVENT
IMPACT OR FRICTION.

CERTIFIED MODELS
UDa10bc000-d-e. Universal IV - Flameproof - Model Code

\[
a = \text{FREQUENCY AND PHASING 0, or } \star R
\]
\[
b = \text{APPROVAL A (ATEX), B (IECEX)}
\]
\[
c = \text{ENTRIES 1 OR 2}
\]
\[
d = \text{SENSING ELEMENT 201, 202, 203, 204, 205, 206, 251, 252, 253, 254, 255,}
\]
\[
256, 257, 258, 259, 260, 261, 262
\]
\[
e = \text{24 CHARACTER NUMBERING SYSTEM THAT DOES NOT AFFECT SAFETY}
\]

\[
\star R = \text{Retrofit}
\]