

420-0004-396		Sht. 1 of 4	APP'D BY SGA
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3	3-11-100	SGA	3/4/11
4	4-12-100	SGA	4-6-12



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CERTIFICATE OF COMPLIANCE

HAZARDOUS (CLASSIFIED) LOCATION ELECTRICAL EQUIPMENT

This certificate is issued for the following equipment:

Impulse Ta10b/GWe Series 2-wire TDR Level Measurement System

IS/I, II, III /1/CDEFG/T4 Ta = -40°C to 70°C; 420-0004-384-CD; Entity; I/O/AEx ia IIB -420-0004-384-CD;
 Entity; NI/II/2/ABCD/T4 Ta = -40°C to 70°C; Type 4, 4X; IP67;

Entity Parameters:

$V_{Max} = 30\text{ V}$, $I_{Max} = 140\text{ mA}$, $P_i = 1\text{ W}$, $C_i = 0$, $L_i = 0$

a = 1 or 2 (Signal Connection)

b = 0 or 1 (Electrical Connection)

e = 16 character numbering system which does not affect safety

Specific Condition of Use:

The apparatus enclosure contains aluminum and is considered to constitute a potential risk of ignition by impact or friction. Care must be taken during installation and use to prevent impact or friction.

Impulse Ta20b/GWe Series 2-wire TDR Level Measurement System

XP-IS/I, /1/CD/T4 Ta = 70°C; 420-0004-384-CD; XP-IS/II/1/IIB/T4 Ta = -40°C to 70°C; 420-0004-384-CD;
 I/II/AEx d ia IIB T4; DIP-IS/III/III/1/1EFG/T4 Ta = -40°C to 70°C; NI/II/2/ABCD/T4 Ta = -40°C to 70°C; Type 4, 4X; IP67

a = 1, 2 or 3 (Signal Connection)

b = 0 or 1 (Electrical Connection)

e = 16 character numbering system which does not affect safety

Specific Conditions of Use:

- 1. The apparatus enclosure contains aluminum and is considered to constitute a potential risk of ignition by impact or friction. Care must be taken during installation and use to prevent impact or friction.*
- 2. Consult the manufacturer if dimensional information on the flameproof joints is necessary.*



Impulse Ta60b/GWe Series 2-wire TDR Level Measurement System with Dual-Seal

IS/I, II, III /I/CDEFG/T4 Ta = -40°C to 70°C; 420-0004-384-CD & 285-0003-030-CD; Entity; I/O/AEx ia IIB - 420-0004-384-CD; Entity; NI/II/2/ABCD/T4 Ta = -40°C to 70°C; Type 4, 4X; IP67;

Entity Parameters:

$V_{Max} = 30\text{ V}$, $I_{Max} = 140\text{ mA}$, $P_1 = 1\text{ W}$, $C_i = 0$, $L_i = 0$

a = 1 or 2 (Signal Connection)

b = 0 or 1 (Electrical Connection)

e = 16 character numbering system which does not affect safety

Specific Condition of Use:

The apparatus enclosure contains aluminum and is considered to constitute a potential risk of ignition by impact or friction. Care must be taken during installation and use to prevent impact or friction.

Impulse Ta70b/GWe Series 2-wire TDR Level Measurement System with Dual Seal

XP-IS/I, I/CD/T4 Ta = -40°C to 70°C; 420-0004-384-CD & 285-0003-030-CD; XP-IS/II/1/IIB/T4 Ta = 70°C; 420-0004-384-CD; I/O/AEx d ia IIB T4; DIP-IS/III/III/1/1EFG/T4 Ta = -40°C to 70°C; NI/II/2/ABCD/T4 Ta = -40°C to 70°C; Type 4, 4X; IP67

a = 1, 2 or 3 (Signal Connection)

b = 0 or 1 (Electrical Connection)

e = 16 character numbering system which does not affect safety

Specific Conditions of Use:

- 1. The apparatus enclosure contains aluminum and is considered to constitute a potential risk of ignition by impact or friction. Care must be taken during installation and use to prevent impact or friction.*
- 2. Consult the manufacturer if dimensional information on the flameproof joints is necessary.*

Equipment Ratings:

Impulse Ta10b

Intrinsically Safe Apparatus with entity parameters per installation drawing 420-0004-384-CD suitable for use in Class I, II & III Division 1 Groups C, D, E, F & G hazardous (classified) locations and Class I Zone 0 Group IIB and Nonincendive Electrical Apparatus suitable for use in Class I, Division 2 Groups A, B, C, D indoors and outdoor hazardous (classified) locations (Type 4, 4X & IP67) T-Class is T4 when the maximum ambient is 70°C.

Impulse Ta20b

Explosionproof – Intrinsically Safe Apparatus per installation drawing 420-0004-384-CD suitable for use in Class I, Division 1 Groups C & D hazardous (classified) locations; and Explosionproof – Intrinsically Safe Apparatus for Class I Zone 0 Group IIB; Dust-Ignitionproof – Intrinsically Safe for Class II/III, Division 1, Groups E, F and G hazardous (classified) locations and Nonincendive Electrical Apparatus suitable for use in Class I, Division 2 Groups A, B, C, D indoors and outdoor hazardous (classified) locations (Type 4, 4X & IP67) T-Class is T4 when the maximum ambient is 70°C.

Impulse Ta60b (with Dual Seal per ANSI/ISA 12.27.01:2003)

Intrinsically Safe Apparatus with entity parameters per installation drawing 420-0004-384-CD suitable for use in Class I, II & III Division 1 Groups C, D, E, F & G hazardous (classified) locations and Class I Zone 0 Group IIB and Nonincendive Electrical Apparatus suitable for use in Class I, Division 2 Groups A, B, C, D indoors and outdoor hazardous (classified) locations (Type 4, 4X & IP67) T-Class is T4 when the maximum ambient is 70°C.



Impulse Ta70b (with Dual Seal per ANSI/ISA 12.27.01:2003)

Explosionproof – Intrinsically Safe Apparatus per installation drawing 420-0004-384-CD suitable for use in Class I, Division 1 Groups C & D hazardous (classified) locations; and Explosionproof – Intrinsically Safe Apparatus for Class I Zone 0 Group IIB; Dust-Ignitionproof – Intrinsically Safe for Class II/III, Division 1, Groups E, F and G hazardous (classified) locations and Nonincendive Electrical Apparatus suitable for use in Class I, Division 2 Groups A, B, C, D indoors and outdoor hazardous (classified) locations (Type 4, 4X & IP67) T-Class is T4 when the maximum ambient is 70°C.

FM Approved for:

Ametek Drexelbrook.
205 Keith Valley Rd
Horsham, PA, 19044 USA



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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	1998
Class 3610	2010
Class 3611	2004
Class 3615	2006
Class 3810	2005
ANSI/IEC 60529	2004
NEMA Pub. 250	2003
ANSI/ISA 60079-0	2009
ANSI/ISA 60079-1	2009
ANSI/ISA 12.27.01	2003


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Subsequent Revision Reports / Date Approval Amended

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3040236	June 11, 2010		
101026	February 10, 2011		
120103	March 20, 2012		

FM Approvals LLC


 J.E. Marquardt
 Group Manager, Electrical

20 March 2012
 Date