



FM Approvals  
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# CERTIFICATE OF COMPLIANCE

## HAZARDOUS (CLASSIFIED) LOCATION ELECTRICAL EQUIPMENT

This certificate is issued for the following equipment:

**UFM3030 K/...-DIV1 Ultrasonic Compact Flowmeter (Altosonic III -K / Div 1 / Div 2)**

XP-AIS / I / 1 / ABCD Ta = 60°C; DIP / II, III / 1 / EFG Ta = 60°C; control drawing-8.30675.14; Type 4X, Type 6

The UFM3030K is the integration of the UFC 030 F Ultrasonic Flowmeter Signal Converter and the UFS 3000 F Flow Tube Primary Head

**UFS 3000 FI...-DIV1/DIV2, VN514abcdefgh00 (DN 25-65) Ultrasonic Primary Head**

IS / I, II, III / 1 / ABCDEFG Ta = 60°C – control drawing no.8.30675.14; Type 4X, Type 6

a = nominal diameter code...4 – 8

b = nominal pressure code...3, 5, 6, 7, A, B, D, E, M, N, W, X

c = design / protect. Class...1 – 5, A, B or C.

d = Ex approval.....3, or 4

e = cable connection.....1, 3

f = tube / flange material.....2

g = cable.....0 – 5

h = calibration.....not safety relevant

**UFS 3000 FI...-DIV1/DIV2, VN524abcdefgh00 (DN 80-300) Ultrasonic Primary Head**

IS / I, II, III / 1 / ABCDEFG Ta = 60°C – control drawing no.8.30675.14; Type 4X, Type 6

a = nominal diameter code...A – G

b = nominal pressure code...2 - 6, A, B, M, N

c = design / protect. Class...1 – 5, A, B or C

d = Ex approval.....3, or 4

e = cable connection.....1, 3

f = tube / flange material.....1, 2, A, B

g = cable.....0 – 5

h = calibration.....not safety relevant

**UFS 3000 FI...-DIV1/DIV2, VN534abcdefgh00 (DN 350-2000) Ultrasonic Primary Head**

IS / I, II, III / 1 / ABCDEFG Ta = 60°C – control drawing no.8.30675.14; Type 4X, Type 6

a = nominal diameter code...H, K, L, M, N, P, R, S, T, U, V, W, X, Y

b = nominal pressure code...1 - 6, A, B, M, N, W

c = design / protect. Class...1 – 3, A or B

d = Ex approval.....3, or 4



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e = cable connection.....1, 3 - 5  
f = tube / flange material.....3 -5, C, D, E  
g = cable.....0 – 5  
h = calibration.....not safety relevant

**UFS 3000 F/XT...-DIV1/DIV2 Ultrasonic Primary Head**

IS / I, II, III / 1 / ABCDEFG Ta = 60°C - 8.30675.73; Type 4X, Type 6  
VN514abcdefgh00 (DN 25-65) Ultrasonic Primary Head

a = nominal diameter code...4 – 8  
b = nominal pressure code...3, 5, 6, 7, A, B, D, E, M, N, Y, X  
c = design / protect. Class....1 – 5, A, B or C  
d = Ex approval.....3, or 4  
e = cable connection.....1, 3  
f = tube / flange material.....2  
g = cable.....0 – 5  
h = calibration.....not safety relevant

VN524abcdefgh00 (DN 80-300) Ultrasonic Primary Head

a = nominal diameter code...A – G  
b = nominal pressure code...2 - 6, A, B, M, N  
c = design / protect. Class....1 – 5, A, B or C  
d = Ex approval.....3, or 4  
e = cable connection.....1, 3  
f = tube / flange material.....1, 2, A, B  
g = cable.....0 – 5  
h = calibration.....not safety relevant

VN534abcdefgh00 (DN 350-2000) Ultrasonic Primary Head

a = nominal diameter code...H, K, L, M, N, P, R, S, T, U, V, W, X, Y  
b = nominal pressure code...1 - 6, A, B, M, N, W  
c = design / protect. Class....1 – 3, A, B or C  
d = Ex approval.....3, or 4  
e = cable connection.....1, 3 - 5  
f = tube / flange material.....3 -5, C, D, E  
g = cable.....0 – 5  
h = calibration.....not safety relevant

**UFS-III/F/-DIV1/DIV2, UFS-III/F/XT-DIV1/DIV2 VN564abcdefghijkl000 Altosonic Primary Head**

IS / I, II, III / 1 / ABCDEFG Ta = 60°C – 8.30675.14; Type 4X, Type 6

a = Nominal diameter code...7, A, B, D, E, F, G, H, K, L, M, N, P, R, S or T  
b = Nominal pressure code...2, 3, 4, 5, A, B, D, E, U, V, X or Y  
c = System design / cable connection....2 or A.  
d = Ex approval.....4 or 5  
e = Protection class.....0.  
f = Tube / flange material.....B  
g = cable length.....0, 1, 2, 3, 4 or 5  
h = calibration.....0, 1, 2, 3, 4 or 5  
i = Special.....0 or 1.  
j = Private label.....0 or 1.  
k = Finish.....1 or 3.  
l = Sensors.....0.

**UFC-III/F-DIV1/DIV2, VN554abcdefghi000 Altosonic Signal Converter**

XP-AIS / I / 1 / ABCD Ta = 60°C - 8.30675.14; DIP / II, III / 1 / EFG Ta = 60°C - 8.30675.14; Type 4X, Type 6

- a = type.....4 or H.
- b = power supply.....D or 4.
- c = Ex approval.....4 or 5
- d = Ex-I output.....0
- e = Instr. Manual language....1, 2, 3, 4, 5, 6 or 7.
- f = cable connection.....4
- g = converter housing.....2
- h = private label.....0 or 1
- i = Reynold's Curve.....0 or 1

**UFC 030 F-DIV1/DIV2 VN504abcdefghij. Ultrasonic Signal Converter.**

XP-AIS / I / 1 / ABCD Ta = 60°C - 8.30675.14 (3-beam) or 8.30675.87 (1 or 2-beam);  
 DIP / II, III / 1 / EFG Ta = 60°C - 8.30675.14 (3-beam) or 8.30675.87 (1 or 2-beam); Type 4X, Type 6

- a = type.....1, 2, 4, 5, 7, 8, A, B, D, E
- b = power supply.....D
- c = Ex approval.....3, 4
- d = Ex-I output.....0
- e = Instr. Manual language.....1 - 7
- f = cable connection.....2
- g = converter housing.....1, 2
- h = private label – not safety relevant
- i = custody transfer – not safety relevant
- j = output signal..... 0, 1

**UFC 030 F/i-DIV1/DIV2 VN504abcdefg000. Ultrasonic Signal Converter.**

XP-AIS / I / 1 / ABCD Ta = 60°C - 8.30675.73 (3-beam) or 8.30675.87 (1 or 2-beam);  
 DIP / II, III / 1 / EFG Ta = 60°C - 8.30675.73 (3-beam) or 8.30675.87 (1 or 2-beam); Type 4X, Type 6

- a = type.....1, 2, 4, 5, 7, 8, A, B, D, E
- b = power supply.....D or 4
- c = Ex approval.....3, or 4
- d = Ex-I output.....1, 2, B
- e = Instr. Manual language....1 - 7
- f = cable connection.....2
- g = converter housing.....1, 2
- h = private label – not safety relevant
- i = custody transfer – not safety relevant
- j = output signal.....0 or 1

**UFM3030 K/i...-DIV1/DIV2 Ultrasonic Compact Flowmeter**

XP-AIS / I / 1 / ABCD Ta = 60°C - 8.30675.73; DIP / II, III / 1 / EFG Ta = 60°C; - 8.30675.73; Type 4X, Type 6



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The UFM3030 K/i is the integration of the UFC 030i Ultrasonic Flowmeter Signal Converter and the UFS 3000 Flow Tube Primary Head

**UFM 530 K-DIV1. Ultrasonic Compact Flowmeter.**

XP-AIS / I / 1 / ABCD Ta = 60°C - 8.30675.14;  
DIP / II, III / 1 / EFG Ta = 60°C - 8.30675.14, Type 4X, 6

**VN504abcdefg000 + V39abcdeAfg or V39abcdeBfg**

Special Conditions for Use:

The UFM 530 K-DIV1 is the integration of UFC 030 Ultrasonic Flowmeter Signal Converter and the Flow Tube Primary Head Model UFS 500 (1 or 2-beam) products. The devices keep their respective model numbers as described above.

**UFM 530 K-DIV2. Ultrasonic Compact Flowmeter.**

XP-AIS / I / 1 / ABCD Ta = 60°C - 8.30675.14;  
DIP / II, III / 1 / EFG Ta = 60°C - 8.30675.14, Type 4X, 6

**VN504abcdefg000 + V39abcdeAfg or V39abcdeBfg**

Special Conditions for Use:

The UFM 530 K-DIV2 is the integration of UFC 030 Ultrasonic Flowmeter Signal Converter and the Flow Tube Primary Head Model UFS 500 (1 or 2-beam) products. The devices keep their respective model numbers as described above.

**UFM 530 K/i-DIV1. Ultrasonic Compact Flowmeter.**

XP-AIS / I / 1 / ABCD Ta = 60°C - 8.30675.73;  
DIP / II, III / 1 / EFG Ta = 60°C - 8.30675.73; Type 4X, 6

**VN504abcdefg000 + V39abcdeAfg or V39abcdeBfg**

Special Conditions for Use:

The UFM 530 K/i-DIV1 is the integration of UFC 030 F/i Ultrasonic Flowmeter Signal Converter and the Flow Tube Primary Head Model UFS 500 (1 or 2-beam) products. The devices keep their respective model numbers as described above.

**UFM 530 K/i-DIV2. Ultrasonic Compact Flowmeter.**

XP-AIS / I / 1 / ABCD Ta = 60°C - 8.30675.73;  
DIP / II, III / 1 / EFG Ta = 60°C - 8.30675.73; Type 4X, 6

**VN504abcdefg000 + V39abcdeAfg or V39abcdeBfg**

Special Conditions for Use:

The UFM 530 K/i-DIV2 is the integration of UFC 030 F/i Ultrasonic Flowmeter Signal Converter and the Flow Tube Primary Head Model UFS 500 (1 or 2-beam) products. The devices keep their respective model numbers as described above.

**UFS 500 F/HT V3944abcdefgh. Ultrasonic Flow Tube Primary Head.**

IS / I,II,III / 1 / ABCDEFG - 8.30488.03 (UFC 500) or 8.30675.87 (UFC 030); Entity;  
NI / I / 2 / ABCD; S / II,III / 2 / FG; Type 6

a = Size: 4, 5, 6, 7 or A.

b = Nom. pressure: 5, 6, 7, A, or B.

c = I & O manual: 0, 1, 2, 3 or 4.

d = Approval: 4.

e = Cable connection: 3, 4 or 5.

f = Flange material: D.

g = Special: 0.

h = Private label: 1.



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**UFS 500 F/HT V3954abcdefgh. Ultrasonic Flow Tube Primary Head.**

IS / I, II, III / 1 / ABCDEFG- 8.30488.03 (UFC 500) or 8.30675.87 (UFC 030); Entity;

NI / 1 / 2 / ABCD; S / II, III / 2 / FG

a = Size: B, C, D, E, F, or G.

b = Nom. pressure: 2, 3, 4, 5, 6, A, B or D.

c = I & O manual: 0, 1, 2, 3, or 4.

d = Approval: 4.

e = Cable connection: 3, 4 or 5.

f = Flange material: D.

g = Special: 0.

h = Private label: 1.

**Equipment Ratings:**

Explosionproof for use in Class I, Division 1, Groups A, B, C and D, Ta = 60°C with Intrinsically Safe sensor outputs in accordance with the applicable control drawing; Dust-Ignitionproof for use in Class II and III, Division 1, Groups E, F and G Ta = 60°C; indoor and outdoor, Type 4X Type 6 Hazardous (Classified) Locations

**FM Approved for:**

Krohne Inc.  
7 Dearborn Road  
Peabody MA 01960



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

Class 3600	1998
Class 3610	1999
Class 3611	2004
Class 3615	1989
Class 3810	1989
Including Supplement #1	1995
ANSI/NEMA 250	1991

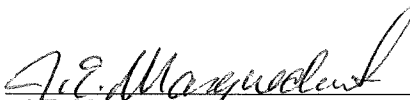
Original Project ID: 3016332

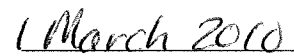
Approval Granted: June 6, 2003

Subsequent Revision Reports / Date Approval Amended

Report Number	Date	Report Number	Date
3018232	February 16, 2004		
3016332	May 20, 2004		
050207	March 31, 2005		
050415	May 17, 2005		
050502	May 20, 2005		
060116	February 17, 2006		
091013	March 1, 2010		

FM Approvals LLC

  
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J.E. Marquedant  
Group Manager, Electrical

  
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Date