

Yamatake Corporation

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FM Approvals  
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# CERTIFICATE OF COMPLIANCE

## HAZARDOUS (CLASSIFIED) LOCATION ELECTRICAL EQUIPMENT

This certificate is issued for the following equipment:

**Model MGG14C-ab4c-defg-h, Magnew 3000 Converter**

NI/II/2/ABCD/T5 Ta = 60°C; S/II/2/FG/T5 Ta = 60°C;  
S/III/2/T5 Ta = 60°C; TYPE 4X

a = Power supply voltage A, B, C, D, E, F, G or H  
b = Output/Communication A, B, C, F, or H  
c = Mount/Wiring diagram A, B, C, D, E, F, G, H, J, K, or X  
d = Finish 1, 2, 3, 4, 5 or X  
e = Display A, B, C, or X  
f = Contact I/O 1, 2, 3, 4, 5, or X  
g = Calibration A - Z  
h = Options not affecting safety A, B, C, D, E, F, G, H, J, K, L, M, P, R, S, W, X, and Y (one or more)

**Special Condition for Use:**

1. When used with nonflammable process

**Model MGM14C-ab4c-defg-h, Magnew 3000 Converter**

NI/II/2/ABCD/T5 Ta = 60°C; S/II/2/FG/T5 Ta = 60°C;  
S/III/2/T5 Ta = 60°C; TYPE 4X

a = Power supply voltage A, B, C, D, E, F, G or H  
b = Output/Communication A, B or C  
c = Installation/Wiring direction A, B, C, D, E, F, G, H, J, K, or X  
d = Finish 1, 2, 3, 4, 5 or X  
e = Display A, B, C, or X  
f = Contact I/O 1, 2, 3, 4, 5, or X  
g = Calibration A - Z  
h = Options not affecting safety A, B, C, D, E, F, G, H, J, K, L, M, P, R, S, W, X, and Y (one or more)

**Special Condition for Use:**

1. When used with nonflammable process

**Model MGG18D-abcdefghi-jk-l, Magnew 3000 Flowmeter Detector**

NI/II/2/ABCD/T5 Ta = \*; S/II/2/FG/T5 Ta = \*;  
S/III/2/T5 Ta = \*; TYPE 4X

a = Flowmeter size 002, 005, 010, 015, 025, 040, 050, 065, 080, 100, 125, 150 or 200  
b = Lining C, E, P, or Q  
c = Type/Flange rating 11, 12, 13, 14, 15, 16, 21, 22, 31, 41, 42, 43, 44, 45, 61 or 62  
d = Electrodes A - Z  
e = Ground rings A - Z  
f = Wiring Connection 1 or 5  
g = Face to face length A - Z  
h = Wiring Direction H, A, B, C, or D  
i = Calibration A - Z  
j = Finish 1, 2, 3, 4, 5, or X  
k = Bolts/Nuts 1, 2, 3, 4, or X  
l = Options not affecting safety A, B, C, D, E, F, G, H, J, K, L, M, P, R, S, W, X, and Y (one or more)

\* Refer to Drawing 80390331 Table 1

**Special Condition for Use:**

1. When used with nonflammable process



**Model MGM18D-abcdefghi-jk-l, Magnew 3000 Flowmeter Detector**

- NI/I/2/ABCD/T5 Ta = \*; S/II/2/FG/T5 Ta = \*;  
S/III/2/T5 Ta = \*; TYPE 4X  
a = Flowmeter size 040, 050, 065, 080, 100, 125, 150 or 200  
b = Lining E or P  
c = Pipe connection 11, 12, 13, 21, 22, 41, 42, 43, 44, 61 or 62  
d = Electrodes A - Z  
e = Ground rings A - Z  
f = Wiring Connection 1  
g = Face to face length A - Z  
h = Wiring Direction H  
i = Calibration A - Z  
j = Finish 1, 2, 3, 4, or X  
k = Bolts/Nuts 1, 2, 3, 4, or X  
l = Options not affecting safety A, B, C, D, E, F, G, H, J, K, L, M, P, R, S, V, W, X and Y (one or more)  
\* Refer to Drawing 80390331 Table 1  
**Special Condition for Use:**  
1. When used with nonflammable process

**Model MGG18F-abcdefghij-k-l, Magnew 3000 Flowmeter Detector.**

- NI/I/2/ABCD/T5 Ta = \*; S/II/2/FG/T5 Ta = \*;  
S/III/2/T5 Ta = \*; TYPE 4X  
a = Flowmeter size 002, 005, 010, 015, 025, 040, 050, 065, 080, 100, 125, 150, 200, 250, 300, 350, 400, 450, 500 or 600  
b = Lining E, P, Q or R  
c = Type/Flange rating J1, J2, J3, J4, J5, J6, A1, A2, G1, D1, D2, D3, D4, D5 or D6  
d = Flange material 1, 2, 3 or 4  
e = Electrodes A, B, C, D, E, F, H, J, K, L, M, N, P, S, T or W  
f = Ground rings A - Z  
g = Wiring Connection 1 or 5  
h = Face to face length A - Z  
i = Wiring Direction H, A, B, C, or D  
j = Calibration A - Z  
k = Finish 1, 2, 3, 4, 5, or X  
l = Options not affecting safety A, B, C, D, E, F, G, H, J, K, L, M, P, R, S, V, W, X and Y (one or more)  
\* Refer to Drawing 80390331 Table 1  
**Special Condition for Use:**  
1. When used with nonflammable process

**MGM18F-abcdefghij-k-l, Magnew 3000 Flowmeter Detector.**

- NI / I / 2 / ABCD / T5 Ta = \*; S / II / 2 / FG / T5 Ta = \*;  
S / III / 2 / T5 Ta = \*; Type 4X  
a = Flowmeter size 002, 005, 010, 015, 025, 040, 050, 065, 080, 100, 125, 150, 200, 250, 300, 350, 400, 450, 500 or 600.  
b = Lining E or P.  
c = Pipe connection J1, J2, J3, J4, J5, J6, A1, A2, G1, D1, D2, D3 or D4  
d = Flange material 1, 2, 3 or 4.  
e = Electrodes A - Z.  
f = Ground rings A - Z.  
g = Wiring Connection 1.  
h = Face to face length A - Z.  
i = Wiring Direction H.  
j = Calibration A - Z.  
k = Finish 1, 2, 3, 4 or X.  
l = Options not affecting safety A, B, C, D, E, F, G, H, J, K, L, M, P, R, S, V, W, X and Y (one or more).  
\* Refer to Drawing 80390331 Table 1.  
**Special Condition for Use:**  
1. When used with nonflammable process.

**Model MGG18U-abcdefAgh-I-j, Magnew 3000 Flowmeter Detector.**

- NI/I/2/ABCD/T5 Ta = \*; S/II/2/FG/T5 Ta = \*;  
S/III/2/T5 Ta = \*; TYPE 4X  
a = Flowmeter size 002, 005, 010 or 015  
b = Lining E, P, or Q  
c = Type/Flange rating U1, U2, U3, U4, H1, C1 or C2  
d = Electrodes A, B, C, D, E, F, H, J, K, L, M, N, P, S, T or W  
e = Ground rings A - Z  
f = Wiring Connection 1 or 5  
g = Wiring Direction H, A, B, C, or D  
h = Calibration A - Z  
i = Finish 1, 2, 3, 4, 5, or X  
j = Options not affecting safety A, B, C, D, E, F, G, H, J, K, L, M, P, R, S, W, X, and Y (one or more)  
\* Refer to Drawing 80390331 Table 1  
**Special Condition for Use:**  
1. When used with nonflammable process

**Model MGS18U-abcdefgh-I-j, Magnew 3000 Flowmeter Detector.**

- NI/I/2/ABCD/T5 Ta=\*; S/II/2/FG/T5 Ta=\*; S/III/2/T5 Ta=\*; TYPE 4X  
a = Flowmeter size 015, 025, 040, 050, 080, 100 or 125  
b = Lining P  
c = Pipe connection C1, C2  
d = Electrodes A - Z  
e = Ferrules A - Z  
f = Wiring Connection 1 or 5  
g = Wiring Direction H, A, B, C or D  
h = Calibration A - Z  
i = Finish 1, 2, 3, 4 or X  
j = Options not affecting safety A, B, C, D, E, F, G, H, J, K, L, M, P, R, S, V, W, X and Y (one or more)  
\* Refer to Drawing 80390331 Table 1  
**Special Condition for Use:**  
1. When used with nonflammable process



**Model MGG19D-abcdefghi-Xj-k, Magnew 3000 Flowmeter Detector.**

NI/II/2/ABCD/T5 Ta = \*; S/II/2/FG/T5 Ta = \*;  
S/III/2/T5 Ta = \*; TYPE 6P  
a = Flowmeter size 002, 005, 010, 015, 025, 040, 050, 065, 080, 100, 125, 150 or 200  
b = Lining E, P, or Q  
c = Type/Flange rating 11, 12, 13, 14, 15, 21, 22, 31, 41, 42, 43, 44, 45, 61 or 62  
d = Electrodes A, B, C, D, E, F, H, J, K, L, M, N, P, S, T or W  
e = Ground rings A - Z  
f = Connection 3 or 8  
g = Face to face length A - Z  
h = Wiring direction A, B, C or D  
i = Calibration A - Z  
j = Bolts/Nuts 1, 2, or X  
k = Options not affecting safety A, B, C, D, E, F, G, H, J, K, L, M, P, R, S, W, X, and Y (one or more)

\* Refer to Drawing 80390331 Table 1

**Special Condition for Use:**

1. When used with nonflammable process

**Model MGG19U-abcdefAgh-X-i, Magnew 3000 Flowmeter Detector.**

NI/II/2/ABCD/T5 Ta = \*; S/II/2/FG/T5 Ta = \*;  
S/III/2/T5 Ta = \*; TYPE 6P  
a = Flowmeter size 002, 005, 010 or 015  
b = Lining E, P, or Q  
c = Type/Flange rating U1, U2, U3, U4, H1, C1 or C2  
d = Electrodes A, B, C, D, E, F, H, J, K, L, M, N, P, S, T or W  
e = Ground rings A - Z  
f = Connection 3 or 8  
g = Wiring direction A, B, C or D  
h = Calibration A - Z  
i = Options not affecting safety A, B, C, D, E, F, G, H, J, K, L, M, P, R, S, W, X, and Y (one or more)

\* Refer to Drawing 80390331 Table 1

**Special Condition for Use:**

1. When used with nonflammable process

**Model MGG17D-abcde5fgh-ij-k, Magnew 3000 Flowmeter Detector.**

XP-IS-DIP/I,II,III/1/BCDEFG/\* Ta = 60°C; TYPE 4X  
a = Flowmeter size 002, 005, 010, 015, 025, 040, 050, 065, 080, 100, 125, 150 or 200  
b = Lining E, P or Q  
c = Type/Flange rating 11, 12, 13, 14, 15, 21, 22, 31, 41, 42, 43, 44, 45, 61 or 62  
d = Electrodes A, B, C, D, E, F, H, J, K, L, M, N, P, S, T or W  
e = Ground rings A - Z  
f = Face to face length A - Z  
g = Wiring direction A, B, C or D  
h = Calibration A - Z  
i = Finish 1, 2, 3, 4, 5 or X  
j = Bolts/Nuts 1, 2, or X  
k = Options not affecting safety A, B, C, D, E, F, G, H, J, K, L, M, P, R, S, W, X, and Y (one or more)

\* Refer to Drawing 80390309 for T-code

**Model MGG19F-abcdefghij-X-k, Magnew 3000 Flowmeter Detector**

NI/II/2/ABCD/T5 Ta = \*; S/II/2/FG/T5 Ta = \*; S/III/2/T5 Ta = \*;  
TYPE 6P

a = Flowmeter size 002, 005, 010, 015, 025, 040, 050, 065, 080, 100, 125, 150, 200, 250, 300, 350, 400, 450, 500 or 600  
b = Lining E, P, Q, or R  
c = Type/Flange rating J1, J2, J3, J4, J5, J6, A1, A2, G1, D1, D2, D3, D4, D5 or D6  
d = Flange material 1, 2, 3 or 4  
e = Electrodes A, B, C, D, E, F, H, J, K, L, M, N, P, S, T or W  
f = Ground rings A - Z  
g = Connection 3 or 8  
h = Face to face length A - Z  
i = Wiring direction A, B, C or D  
j = Calibration A - Z  
k = Options not affecting safety A, B, C, D, E, F, G, H, J, K, L, M, P, R, S, W, X, and Y (one or more)

\* Refer to Drawing 80390331 Table 1

**Special Condition for Use:**

1. When used with nonflammable process

**Model MGG17F-abcdef5ghi-j-k, Magnew 3000 Detector.**

XP-IS-DIP/I,II,III/1/BCDEFG/\* Ta = 60°C; TYPE 4X

a = Flowmeter size 002, 005, 010, 015, 025, 040, 050, 065, 080, 100, 125, 150, 200, 250, 300, 350 or 400  
b = Lining E, P, Q or R  
c = Type/Flange rating J1, J2, J3, J4, J5, J6, A1, A2, G1, D1, D2, D3, D4, D5 or D6  
d = Flange material 1, 2, 3 or 4  
e = Electrodes A, B, C, D, E, F, H, J, K, L, M, N, P, S, T or W  
f = Ground rings A - Z  
g = Face to face length A - Z  
h = Wiring direction A, B, C or D  
i = Calibration A - Z  
j = Finish 1, 2, 3, 4, 5 or X  
k = Options not affecting safety A, B, C, D, E, F, G, H, J, K, L, M, P, R, S, W, X, and Y (one or more)

\* Refer to Drawing 80390309 for T-code

**Model MGG17U-abcde5Afg-h-i, Magnew 3000 Flowmeter Detector.**

XP-IS-DIP/I,II,III/1/BCDEFG/\* Ta = 60°C; TYPE 4X

a = Flowmeter size 002, 005, 010 or 015  
b = Lining E, P or Q  
c = Type/Flange rating U1, U2, U3, U4, H1, C1 or C2  
d = Electrodes A, B, C, D, E, F, H, J, K, L, M, N, P, S, T or W  
e = Ground rings A - Z  
f = Wiring direction A, B, C or D  
g = Calibration A - Z  
h = Finish 1, 2, 3, 4, 5 or X  
i = Options not affecting safety A, B, C, D, E, F, G, H, J, K, L, M, P, R, S, W, X, and Y (one or more)

\* Refer to Drawing 80390309 for T-code





## Equipment Ratings:

Explosionproof, with intrinsically safe electrodes, for use in Class I, Division 1, Groups B, C and D  
Dust-ignitionproof for Class II and III, Division 1, Groups E, F and G  
Nonincendive for use in Class I, Division 2, Groups A, B, C and D;  
Special Protection for use in Class II and III, Division 2, Groups F and G  
indoor and outdoor (TYPE 4X) hazardous (classified) locations

## Approved for:

Yamatake Corporation, Shonan Factory  
Samukawa-Machi, Kohza-Gun, Kanagawa-Ken, Japan



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

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

Original Project ID: 3B7A4.AX

FM Approval Granted: June 10, 1997

Subsequent Revision Reports / Date FM Approval Amended

Report Number	Date	Report Number	Date
3006158	March 9, 2001		
3012984	July 14, 2001		
3017668	July 15, 2003		

FM Global Technologies LLC

David W. Styracula  
Technical Team Manager

1/27/04  
Date (Re-Issued)

