



Member of the FM Global Group

FM Approvals  
1151 Boston Providence Turnpike  
P.O. Box 9102 Norwood, MA 02062 USA  
T: 781 762 4300 F: 781-762-9375 www.fmaprovals.com

# CERTIFICATE OF COMPLIANCE

## HAZARDOUS (CLASSIFIED) LOCATION ELECTRICAL EQUIPMENT

This certificate is issued for the following equipment:

### Series PX5 and PXM5 Pressure Transmitters

#### PX5a-bcde. Pressure Transmitter

IS / I,II,III / 1 / ABCDEFG / T4, Ta = -40°C to +75°C – Drawing #A031432; Entity;  
NI / I / 2 / ABCD / T4, Ta = -40°C to +75°C - Only applicable for a = 09C and 09CW  
I / 0 / AEx ia / IIC / T4, Ta = -40°C to +75°C – Drawing #A031432; Entity;  
IP65

Entity parameters: Ui = 28V, li = 110 mA, Pi = 0.77W, Ci = 48 nF, Li = 0

a = electrical connections: 09, 09C, 09CP, 09CW, 09CWP, 19, 29, 39, 49, 59

b = pressure range: 10W, 001, 2.5, 005, 015, 030, 050, 100, 150, 250, 500, 750, 1.0K, 1.5K, 2.5K, 3.5K, 32, 16, 26

c = pressure type: G, A, B, HB, V, CG, SG

d = output type: C2, BC2

e = Approvals: IS

#### Special Conditions of Use

1. *The Ingress Protection rating of all customer-supplied connectors must match the requirements of the site where the Transmitter is to be installed. If hosedown cleaning is required the connector hardware must be rated IPX5; alternately, if dust protection is required, IP6X is required. Lower levels of ingress protection may cause a reduction in Classification for the entire transmitter, and the customer's process control engineer must properly account for this.*
2. *The equipment may present a risk of electrostatic sparking. Cleaning shall only be performed with a damp cloth.*

#### PXM5a-bcde. Pressure Transmitter

IS / I,II,III / 1 / ABCDEFG / T4, Ta = -40°C to +75°C – Drawing #A031432; Entity;  
NI / I / 2 / ABCD / T4, Ta = -40°C to +75°C - Only applicable for a = 09C and 09CW  
I / 0 / AEx ia / IIC / T4, Ta = -40°C to +75°C – Drawing #A031432; Entity;  
IP65

Entity parameters: Ui = 28V, li = 110 mA, Pi = 0.77W, Ci = 48 nF, Li = 0

To verify the availability of the Approved product, please refer to [www.approvalguide.com](http://www.approvalguide.com)

a = electrical connections: 09, 09C, 09CP, 09CW, 09CWP, 19, 29, 39, 49, 59  
b = pressure range: 025H, 070H, 170H, 350H, 001B, 002B, 3.5B, 007B, 010B, 17.5B, 035B, 050B, 070B, 100B, 175B, 245B, 1100, 550, 880  
c = pressure type: G, A, B, HB, V, CG, SG  
d = output type: C2, BC2  
e = Approvals: IS

**Special Conditions of Use**

1. *The Ingress Protection rating of all customer-supplied connectors must match the requirements of the site where the Transmitter is to be installed. If hosedown cleaning is required the connector hardware must be rated IPX5; alternately, if dust protection is required, IP6X is required. Lower levels of ingress protection may cause a reduction in Classification for the entire transmitter, and the customer's process control engineer must properly account for this.*
2. *The equipment may present a risk of electrostatic sparking. Cleaning shall only be performed with a damp cloth.*

**Series PX51 and PXM51 Pressure Transmitters**

**PX51ab-cdefg. Pressure Transmitter**

IS / I,II,III / 1 / ABCDEFG / T4, Ta = -40°C to +75°C – Drawing #A031432; Entity;  
NI / I / 2 / ABCD / T4, Ta = -40°C to +75°C - Only applicable for b = 0, GW  
I / 0 / AEx ia / IIC / T4, Ta = -40°C to +75°C – Drawing #A031432; Entity;  
IP65  
Entity parameters: Ui = 28V, li = 110 mA, Pi = 0.77W, Ci = 48 nF, Li = 0

a = pressure connection: T, C, D, K, J, S  
b = electrical connections: 0, GW, 1, 5, 6  
c = pressure range: 10, 15, 25, 30, 50, 75, 100, 200, 300, 500, 750, 1.0K, 1.5K, 2K, 2.5K, 3.0K, 3.5K, 5K, 7.5K, 10K, 15K, 20K, 30K  
d = pressure type: G, A, SG  
e = output type: C2  
f = Approvals: IS  
g = options not affecting safety: BLANK, NP, ZXX

**Special Conditions of Use**

1. *The Ingress Protection rating of all customer-supplied connectors must match the requirements of the site where the Transmitter is to be installed. If hosedown cleaning is required the connector hardware must be rated IPX5; alternately, if dust protection is required, IP6X is required. Lower levels of ingress protection may cause a reduction in Classification for the entire transmitter, and the customer's process control engineer must properly account for this.*
2. *The equipment may present a risk of electrostatic sparking. Cleaning shall only be performed with a damp cloth.*

**PXM51ab-cdefg. Pressure Transmitter**

IS / I,II,III / 1 / ABCDEFG / T4, Ta = -40°C to +75°C – Drawing #A031432; Entity;  
NI / I / 2 / ABCD / T4, Ta = -40°C to +75°C - Only applicable for b = 0, GW  
I / 0 / AEx ia / IIC / T4, Ta = -40°C to +75°C – Drawing #A031432; Entity;  
IP65  
Entity parameters: Ui = 28V, li = 110 mA, Pi = 0.77W, Ci = 48 nF, Li = 0

To verify the availability of the Approved product, please refer to [www.approvalguide.com](http://www.approvalguide.com)

a = pressure connection: MA, MB, MC, MD  
 b = electrical connections: 0, GW, 1, 5, 6  
 c = pressure range: 0.7, 001, 1.60, 2.50, 004, 006, 010, 016, 025, 040, 060, 100, 160, 250, 400  
 d = pressure type: G, A, SG  
 e = output type: C2  
 f = Approvals: IS  
 g = options not affecting safety: BLANK, NP, ZXX

**Special Conditions of Use**

1. *The Ingress Protection rating of all customer-supplied connectors must match the requirements of the site where the Transmitter is to be installed. If hosedown cleaning is required the connector hardware must be rated IPX5; alternately, if dust protection is required, IP6X is required. Lower levels of ingress protection may cause a reduction in Classification for the entire transmitter, and the customer's process control engineer must properly account for this.*
2. *The equipment may present a risk of electrostatic sparking. Cleaning shall only be performed with a damp cloth.*

**Series FMM and CFMM Pressure Transmitters**

**FMMabcdehijkl. Pressure Transmitter**

IS / I,II,III / 1 / ABCDEFG / T4, Ta = -40°C to +75°C – Drawing #A031432; Entity;  
 NI / I / 2 / ABCD / T4, Ta = -40°C to +75°C - Only applicable for h = 2, 4, 8, 9  
 I / 0 / AEx ia / IIC / T4, Ta = -40°C to +75°C – Drawing #A031432; Entity;  
 IP65  
 Entity parameters: Ui = 28V, li = 110 mA, Pi = 0.77W, Ci = 48 nF, Li = 0

a = pressure type: A, G, SG, CG, B, V  
 b = pressure range: 10W, 001, 2.5, 005, 015, 030, 050, 100, 150, 250, 500, 750, 1.0K, 1.5K, 2.5K, 3.5K, 32, 16, 26  
 c = output type: C2, BC2  
 d = Approvals: IS  
 e = units: P, B, H, K, W, M, T, F  
 f = static accuracy: 1, 2, 3, 4, 5  
 g = pressure port: A, B, C, D, J, K, L, M, MA, MB, MC, MD, ME, MF  
 h = electrical connector backend: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9  
 i = compensated temperature range: T1, T2, T3, T4  
 j = thermal temperature shift: A1, A2, A3, A4, A5, A6, A7, A8  
 k = options not affecting safety: BLANK, NP

**Special Conditions of Use**

1. *The Ingress Protection rating of all customer-supplied connectors must match the requirements of the site where the Transmitter is to be installed. If hosedown cleaning is required the connector hardware must be rated IPX5; alternately, if dust protection is required, IP6X is required. Lower levels of ingress protection may cause a reduction in Classification for the entire transmitter, and the customer's process control engineer must properly account for this.*
2. *The equipment may present a risk of electrostatic sparking. Cleaning shall only be performed with a damp cloth.*

**CFMMabcdehijkl. Pressure Transmitter**

To verify the availability of the Approved product, please refer to [www.approvalguide.com](http://www.approvalguide.com)

IS / I,II,III / 1 / ABCDEFG / T4, Ta = -40°C to +75°C – Drawing #A031432; Entity;  
NI / I / 2 / ABCD / T4, Ta = -40°C to +75°C - Only applicable for h = 2, 4, 8, 9  
I / 0 / AEx ia / IIC / T4, Ta = -40°C to +75°C – Drawing #A031432; Entity;  
IP65

Entity parameters: Ui = 28V, Ii = 110 mA, Pi = 0.77W, Ci = 48 nF, Li = 0

a = pressure type: A, G, SG, CG, B, V

b = pressure range: 10W, 001, 2.5, 005, 015, 030, 050, 100, 150, 250, 500, 750, 1.0K, 1.5K, 2.5K, 3.5K, 32, 16, 26

c = output type: C2, BC2

d = Approvals: IS

e = units: P, B, H, K, W, M, T, F

f = static accuracy: 1, 2, 3, 4, 5

g = pressure port: A, B, C, D, J, K, L, M, MA, MB, MC, MD, ME, MF

h = electrical connector backend: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9

i = compensated temperature range: T1, T2, T3, T4

j = thermal temperature shift: A1, A2, A3, A4, A5, A6, A7, A8

k = options not affecting safety: BLANK, NP, ZXX

#### Special Conditions of Use

1. *The Ingress Protection rating of all customer-supplied connectors must match the requirements of the site where the Transmitter is to be installed. If hosedown cleaning is required the connector hardware must be rated IPX5; alternately, if dust protection is required, IP6X is required. Lower levels of ingress protection may cause a reduction in Classification for the entire transmitter, and the customer's process control engineer must properly account for this.*
2. *The equipment may present a risk of electrostatic sparking. Cleaning shall only be performed with a damp cloth.*

### Series LC412 series and Series LCM412 Load Cells

#### LC412-abcde. Load Cell

IS / I,II,III / 1 / ABCDEFG / T4, Ta = -40°C to +75°C – Drawing #A031432; Entity;  
NI / I / 2 / ABCD / T4, Ta = -40°C to +75°C - Only applicable for b = 0, GW  
I / 0 / AEx ia / IIC / T4, Ta = -40°C to +75°C – Drawing #A031432; Entity;  
IP65

Entity parameters: Ui = 28V, Ii = 110 mA, Pi = 0.77W, Ci = 48 nF, Li = 0

a = load range: 50, 100, 250, 500, 1K, 2K, 3K, 5K, 10K, 15K, 20K, 25K, 50K, 75K, 100K, 200K, 300K, 400K, 500K, 750K

b = electrical connections: 0, 1, GW, 5, 6

c = output type: C2, BC2

d = Approvals: IS

e = Options not affecting safety: BLANK, NP, ZXX

#### Special Conditions of Use

1. *The Ingress Protection rating of all customer-supplied connectors must match the requirements of the site where the Transmitter is to be installed. If hosedown cleaning is required the connector hardware must be rated IPX5; alternately, if dust protection is required, IP6X is required. Lower levels of ingress protection may cause a reduction in Classification for the entire transmitter, and the customer's process control engineer must properly account for this.*

To verify the availability of the Approved product, please refer to [www.approvalguide.com](http://www.approvalguide.com)

2. *The equipment may present a risk of electrostatic sparking. Cleaning shall only be performed with a damp cloth.*

#### **LCM412-abcde. Load Cell**

IS / I,II,III / 1 / ABCDEFG / T4, Ta = -40°C to +75°C – Drawing #A031432; Entity;  
NI / I / 2 / ABCD / T4, Ta = -40°C to +75°C - Only applicable for b = 0, GW  
I / 0 / AEx ia / IIC / T4, Ta = -40°C to +75°C – Drawing #A031432; Entity;  
IP65

Entity parameters: Ui = 28V, Ii = 110 mA, Pi = 0.77W, Ci = 48 nF, Li = 0

a = load range: 25, 50, 100, 250, 500, 1K, 1.5K, 2.5K, 5K, 7.5K, 10K

b = electrical connections: 0, 1, GW, 5, 6

c = output type: C2, BC2

d = Approvals: IS

e = Options not affecting safety: BLANK, NP, ZXX

#### **Special Conditions of Use**

1. *The Ingress Protection rating of all customer-supplied connectors must match the requirements of the site where the Transmitter is to be installed. If hosedown cleaning is required the connector hardware must be rated IPX5; alternately, if dust protection is required, IP6X is required. Lower levels of ingress protection may cause a reduction in Classification for the entire transmitter, and the customer's process control engineer must properly account for this.*
2. *The equipment may present a risk of electrostatic sparking. Cleaning shall only be performed with a damp cloth.*

#### **Series LCHD and Series LCMHD Load Cells**

##### **LCHD-abcde. Load Cell**

IS / I,II,III / 1 / ABCDEFG / T4, Ta = -40°C to +75°C – Drawing #A031432; Entity;  
NI / I / 2 / ABCD / T4, Ta = -40°C to +75°C - Only applicable for b = 0, GW  
I / 0 / AEx ia / IIC / T4, Ta = -40°C to +75°C – Drawing #A031432; Entity;  
IP65

Entity parameters: Ui = 28V, Ii = 110 mA, Pi = 0.77W, Ci = 48 nF, Li = 0

a = load range: 7.5K, 10K, 15K, 20K, 30K, 50K, 75K, 100K, 150K, 200K, 300K, 400K, 500K

b = electrical connections: 0, 1, GW, 5, 6

c = output type: C2, BC2

d = Approvals: IS

e = options not affecting safety: BLANK, NP, ZXX

#### **Special Conditions of Use**

1. *The Ingress Protection rating of all customer-supplied connectors must match the requirements of the site where the Transmitter is to be installed. If hosedown cleaning is required the connector hardware must be rated IPX5; alternately, if dust protection is required, IP6X is required. Lower levels of ingress protection may cause a reduction in Classification for the entire transmitter, and the customer's process control engineer must properly account for this.*
2. *The equipment may present a risk of electrostatic sparking. Cleaning shall only be performed with a damp cloth.*

To verify the availability of the Approved product, please refer to [www.approvalguide.com](http://www.approvalguide.com)

### LCMHD-abcde. Load Cell

IS / I,II,III / 1 / ABCDEFG / T4, Ta = -40°C to +75°C – Drawing #A031432; Entity;  
NI / I / 2 / ABCD / T4, Ta = -40°C to +75°C - Only applicable for b = 0, GW  
I / 0 / AEx ia / IIC / T4, Ta = -40°C to +75°C – Drawing #A031432; Entity;  
IP65

Entity parameters: Ui = 28V, Ii = 110 mA, Pi = 0.77W, Ci = 48 nF, Li = 0

a = load range: 5K, 7.5K, 10K

b = electrical connections: 0, 1, GW, 5, 6

c = output type: C2, BC2

d = Approvals: IS

e = options not affecting safety: BLANK, NP, ZXX

#### Special Conditions of Use

1. *The Ingress Protection rating of all customer-supplied connectors must match the requirements of the site where the Transmitter is to be installed. If hosedown cleaning is required the connector hardware must be rated IPX5; alternately, if dust protection is required, IP6X is required. Lower levels of ingress protection may cause a reduction in Classification for the entire transmitter, and the customer's process control engineer must properly account for this.*
2. *The equipment may present a risk of electrostatic sparking. Cleaning shall only be performed with a damp cloth.*

### Equipment Ratings:

The PX5 series, PXM5 series, PX51 series, PXM51 series, FMM series, and CFMM series pressure transmitters, and the LC412 series, LCM412 series, LCHD series, and LCMHD series load cells are rated as Intrinsically Safe for Class I, II and III, Division 1, Groups A, B, C, D, E, F and G; AEx ia for Class I, Zone 0, Group IIC, T4, for  $-40^{\circ}\text{C} \leq T_a \leq +75^{\circ}\text{C}$ ; Nonincendive for Class I, Division 2, Groups A, B, C, D, T4, for  $40^{\circ}\text{C} \leq T_a \leq +75^{\circ}\text{C}$  - Only applicable for specific model variants which have provision for conduit connections, as defined above; IP65.

### FM Approved for:

Omega Engineering Inc.  
Sunbury, OH  
USA

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

FM 3600

2011

To verify the availability of the Approved product, please refer to [www.approvalguide.com](http://www.approvalguide.com)



FM 3610	2010
FM 3611	2004
FM 3810	2005
ANSI/ISA 60079-0	2013
ANSI/ISA 60079-11	2013
ANSI/IEC 60529	2004

Original Project ID: 3047973

Approval Granted: August 20, 2014

Subsequent Revision Reports / Date Approval Amended

Report Number	Date	Report Number	Date
RR201067	May 13, 2015		

FM Approvals LLC

---

J. E. Marquedant  
Manager, Electrical Systems

---

13 May 2015  
Date

To verify the availability of the Approved product, please refer to [www.approvalguide.com](http://www.approvalguide.com)