



IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: **IECEx FMG 20.0016X**

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Certificate history:

Status: **Current**

Issue No: 6

[Issue 5 \(2023-12-17\)](#)

[Issue 4 \(2023-08-08\)](#)

[Issue 3 \(2022-09-27\)](#)

[Issue 2 \(2022-06-07\)](#)

[Issue 1 \(2021-08-06\)](#)

[Issue 0 \(2021-05-04\)](#)

Date of Issue: 2024-10-09

Applicant: **Ashcroft Inc**
250 East Main Street
Stratford
Connecticut 06614
USA
United States of America

Equipment: **E2 Pressure Sensors**

Optional accessory:

Type of Protection: **Ex ia, Ex ic, Ex db, Ex tb**

Marking: Ex ia IIC T4 Ga, $-40^{\circ}\text{C} \leq T_a \leq 80^{\circ}\text{C}$
Ex ia IIIC T135°C Da, $-40^{\circ}\text{C} \leq T_a \leq 40^{\circ}\text{C}$
Ex ic IIC T4 Gc, $-40^{\circ}\text{C} \leq T_a \leq 80^{\circ}\text{C}$
Ex ic IIIC T135°C Dc, $-40^{\circ}\text{C} \leq T_a \leq 80^{\circ}\text{C}$
Ex db IIC T4 Gb, $-40^{\circ}\text{C} \leq T_a \leq 80^{\circ}\text{C}$
Ex tb IIIC T135°C Db, $-40^{\circ}\text{C} \leq T_a \leq 80^{\circ}\text{C}$
IP67 (Models E2F and E2X)

Approved for issue on behalf of the IECEx
Certification Body:

J. E. Marquedant

Position:

VP, Manager - Electrical Systems

Signature:
(for printed version)

Date:
(for printed version)

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting www.iecex.com or use of this QR Code.



Certificate issued by:

FM Approvals LLC
One Technology Way
Norwood MA 02062
United States of America





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Manufacturer: **Ashcroft Inc**
250 East Main Street
Stratford
Connecticut 06614
USA
United States of America

Manufacturing
locations:

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended

STANDARDS :

The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

[IEC 60079-0:2017](#) Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

[IEC 60079-1:2014](#) Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
Edition:7.0

[IEC 60079-11:2011](#) Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:6.0

[IEC 60079-31:2013](#) Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
Edition:2

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Reports:

[US/FMG/ExTR20.0010/00](#)
[US/FMG/ExTR20.0010/03](#)
[US/FMG/ExTR20.0010/06](#)

[US/FMG/ExTR20.0010/01](#)
[US/FMG/ExTR20.0010/04](#)

[US/FMG/ExTR20.0010/02](#)
[US/FMG/ExTR20.0010/05](#)

Quality Assessment Reports:

[GB/SIR/QAR11.0010/10](#)

[GB/SIR/QAR11.0010/11](#)



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

E2Sabcdehijk, Pressure Transmitter

$U_i < 30V_{dc}$, $I_i < 100mA$, $P_i < 0.7W$, $L_i = L_i = 32.8\mu H$, $C_i = 36.2nF$ [if e= 24, 42, Cx]

$U_i < 28V_{dc}$, $I_i < 85mA$, $P_i < 0.7W$, $L_i = 36\mu H$, $C_i = 72.9nF$ [if e= 05, 10, 11, 12, 13, 15, 16, 45, Vx]

I.S. Installed versions of the E2Xabcdehijk, Pressure Transmitter

$U_i < 30V_{dc}$, $I_i < 100mA$, $P_i < 0.7W$, $L_i = L_i = 32.8\mu H$, $C_i = 36.2nF$ [if e= 24, 42, Cx]

$U_i < 28V_{dc}$, $I_i < 85mA$, $P_i < 0.7W$, $L_i = 36\mu H$, $C_i = 72.9nF$ [if e= 05, 10, 11, 12, 13, 15, 16, 45, Vx]

E2Fabcdehijk, Pressure Transmitter and Flameproof versions of the E2Xabcdehijk, Pressure Transmitter

9-36Vdc (4-20ma)

9-36Vdc (0-5V, 1-5V, 1-6V)

14-36Vdc (0-10Vdc)

Outputs

4-20ma (2wire)

1-5Vdc / 1-6Vdc / 0-5Vdc / 0-10Vdc

1-11Vdc / 0.1-5Vdc / 0.1-10Vdc

SPECIFIC CONDITIONS OF USE: YES as shown below:

Applies to models E2S

1. Parts of the enclosure are constructed of plastic. The risk of electrostatic discharge shall be minimized at installation, following the direction given in the instruction manual.

2. The Pressure Transmitter does not withstand a 500Vrms dielectric strength test between the circuits and the earth ground. This must be taken into account during installation.

Applies to models E2F

1. Flamepaths are not for repair.

2. The equipment has flying lead conductors that exit the enclosure. A suitably certified Ex d or Ex e terminal box is required to be connected to equipment enclosure for completing to external supply circuit.

Applies to models E2X

1. Flamepath joints are not for repair.

2. The Pressure Transmitter does not withstand a 500Vrms dielectric strength test between the circuits and the earth ground. This must be taken into account during installation.

3. The equipment has flying lead conductors that exit the enclosure. A suitably certified Ex d or Ex e terminal box is required to be connected to equipment enclosure for completing to external supply circuit.



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Equipment (continued):

E2Sabcdehijkl, Pressure Transmitter

a = Sensor Material; A, B, C, D

b = Accuracy: 1, 3, 5, 7, or any one digit or character

c = Cal. Chart: N, C or any one digit or character

d = Pressure Fitting: F01, F02, F04, F09, FRW, M01, M02, M04, M76, MEK, MG2, MG4, MGA MR1, MR2, MR4, FV2, MV2, S15, S20

e = Output Type: 24, 42, Cx for 2-wire 4-20mA; 05, 10, 11, 12, 13, 15, 16, 45, Vx for 3-wire Voltage Output, with x being any one digit or character representing the output scale

f = Electrical Termination: Any 2-character code listed, AP, B4, B6, CC, CF, CV, MC, MF, MV, DA, DC, DT, EW, FC, FV, GN, HM, RW

g = Mating Connector: M, X or any one digit or one character

h = Cable Length: 00, XX or any 2-digit or 2-character, with a maximum length of 9m for 3-wire Voltage Output and 30m for 2-wire 4-20mA Outputs.

i = Unit of Length: F, M, N, 0 or any one digit or one character

j = Pressure Range: 11-digit max alpha/numerical defining the pressure range and units of measure, with max pressure of 20,000psi (or other unit of equivalent measure)

k = Variations (which do not affect safety): X or # variations. Examples shown, but not limited to: 6B, 6W, UP, TU, NN, NH, MY, CK

E2Fabcdehijkl, Pressure Transducer

a = Sensor Material; A, B, C, D

b = Accuracy: 1, 3, 5, 7, or any one digit or character

c = Cal. Chart: N, C or any one digit or character

d = Pressure Fitting: F01, F02, F04, F09, FRW, M01, M02, M04, M76, MEK, MG2, MG4, MGA MR1, MR2, MR4, FV2, MV2, S15, S20.

e = Output Type: 24, 42, Cx for 2-wire 4-20mA; 05, 10, 11, 12, 13, 15, 16, 45, Vx for 3-wire Voltage Output, with x being any one digit or character representing the output scale.

f = Electrical Termination: CF, or MF.

g = Mating Connector: X

h = Cable Length: 00, XX or any 2-digit or 2-character

i = Unit of Length: F, M, N, 0 or any one digit or one character

j = Pressure Range: 11-digit max alpha/numerical defining the pressure range and units of measure, with max pressure of 20,000psi (or other unit of equivalent measure)

k = Variations (which do not affect safety): X or # variations.

E2Xabcdehijkl, Pressure Transducer

a = Sensor Material; A, B, C, D

b = Accuracy: 1, 3, 5, 7, or any one digit or character

c = Cal. Chart: N, C or any one digit or character

d = Pressure Fitting: F01, F02, F04, F09, FRW, M01, M02, M04, M76, MEK, MG2, MG4, MGA MR1, MR2, MR4, FV2, MV2, S15, S20.

e = Output Type: 24, 42, Cx for 2-wire 4-20mA; 05, 10, 11, 12, 13, 15, 16, 45, Vx for 3-wire Voltage Output, with x being any one digit or character representing the output scale.

f = Electrical Termination: CF, or MF

g = Mating Connector: X

h = Cable Length: 00, XX or any 2-digit or 2-character

i = Unit of Length: F, M, N, 0 or any one digit or one character

j = Pressure Range: 11-digit max alpha/numerical defining the pressure range and units of measure, with max pressure of 20,000psi (or other unit of equivalent measure)

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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

Conducted Thermal testing on size 0402 resistor