IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification Scheme for Explosive Atmospheres

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

Certificate No.: IECEx UL 14.0075X issue No.:0

Certificate history:

Status: **Current**

Date of Issue: **2014-07-31** Page 1 of 3

Applicant: **United Electric Controls Co.**
180 Dexter Ave
PO Box 9143
Watertown, MA 02472-4202
United States of America

Electrical Apparatus: **Intrinsically Safe Pressure or Temperature Switches**
Optional accessory:

Type of Protection: **Intrinsic Safety "ia"**

Marking: Ex ia IIC T6 Ga

Approved for issue on behalf of the IECEx Certification Body: Paul T.Kelly

Position: Principal Engineer, Global Hazardous Locations

Signature: (for printed version)

Date: 2014-07-31

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 the Official IECEx Website.

Certificate issued by:

UL LLC
333 Pfingsten Road
Northbrook IL 60062-2096
United States of America

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Date of Issue: **2014-07-31** Issue No.: **0**

Manufacturer: **United Electric Controls Co.**
180 Dexter Ave
PO Box 9143
Watertown, MA 02472-4202
United States of America

Additional Manufacturing location (s):

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 electrical apparatus 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 : 2011 Edition: 6.0	Explosive atmospheres - Part 0: General requirements
IEC 60079-11 : 2011 Edition: 6.0	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
IEC 60079-26 : 2006 Edition: 2	Explosive atmospheres - Part 26: Equipment with equipment protection level (EPL) Ga

*This Certificate **does not** indicate compliance with electrical 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 Report:
US/UL/ExTR14.0105/00

Quality Assessment Report:

US/UL/QAR07.0002/07

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Schedule

EQUIPMENT:
Equipment and systems covered by this certificate are as follows:

6 Series, 10 Series, 12 Series, 21K Series, 100 Series, 117 Series, 120 Series and 400 Series pressure and temperature operated switches which consist of a stainless steel or aluminium housing containing a single or dual micro switch which can be operated by an operating rod ensuring an internal joint with the enclosure. The electrical wires are permanently mounted by the manufacturer and cannot be replaced.
Please see Annex for additional details.

CONDITIONS OF CERTIFICATION: YES as shown below:

- Warning: Enclosure contains aluminium. Care must be taken to avoid ignition hazard due to impact or friction.

Annex: Annex to IECEx UL 14.0075X.pdf

Annex to IECEx UL 14.0075X

6 Series

J	6D	12345	2200	M123
I	II	III	IV	V

I. Type Designation

J Uncalibrated

II. Series and Model Designation

6 Non-adjustable differential pressure sensor switch

6D Adjustable differential pressure sensor switch

III. Model Designation

May be three to five digit numerical or alphabetical suffix indicating pressure range and sensing element not to exceed 6000 psi, not affecting electrical ratings of the device; equivalent to a customer specification number

IV. Internal Switch Designation

May be a four digit number indicating switch designation

V. Option Designation

May be a four digit numerical or alphabetical suffix not affecting electrical ratings or pressure ratings of the device

10 Series

10	A	10	12345	1100	M123
I	II	III	IV	V	VI

I. Series Designation

10	Cylindrical pressure sensor switch

II. Electrical Connection Designation

A	0.11 in push-on terminals
B	0.25 in push-on terminals
C	½ NPTM, 18 in. leads
D	18 in. leads
E	½ NPTF, 5 ft. cord
F	DIN male connector
G	5 ft. cord

III. Pressure Range Designation

Diaphragm	10 - 4 - 50 psi
	11 - 10 - 150 psi
	12 - 30 - 600 psi
Piston	13 - 100 - 1500 psi
	14 - 180 - 3000 psi
	15 - 400 - 4700 psi
	16 - 4000 - 7500 psi

IV. Model Designation

May be a three to five digit numerical or alphabetical suffix indicating pressure range and sensing element not to exceed 7500 psi, not affecting electrical ratings of the device; equivalent to a customer

specification number

V. Internal Switch Designation

May be a four digit number indicating switch designation

VI. Option Designation

May be a four digit numerical or alphabetical suffix not affecting electrical ratings or pressure ratings of the device

12 Series

12	SH	DM	IA	12345	M123
I	II	III	IV	V	VI

I. Series Designation

12 Pressure sensor switch

II. Sensor Type and Switch Rating Designation

SH Stainless Steel housing material

SL Stainless Steel housing material

III. Switch Type and Electrical Connection Designation

DM DPDT (double-pole, double throw) M20 metric thread electrical connection

DN DPDT (double-pole, double throw) ½ NPT electrical connection

SM SPDT (single-pole, double throw) M20 metric thread electrical connection

SN SPDT (single-pole, double throw) ½ NPT electrical connection

IV. Model Designation

May be a two digit numerical or alphabetical suffix indicating pressure range and sensing element not to exceed 6000 psi, not affecting electrical ratings of the

device; equivalent to a customer specification number

V. Customer Specification Number Designation

May be a five digit number not affecting electrical ratings or pressure ratings of the device

VI. Option Designation

May be a four digit numerical or alphabetical suffix not affecting electrical ratings or pressure ratings of the device

12	SH	DM	IA	12345	M123
I	II	III	IV	V	VI

I. Series Designation

12 Temperature sensor switch

II. Sensor Type and Switch Rating Designation

SH Stainless Steel housing material

SL Stainless Steel housing material

III. Switch Type and Electrical Connection Designation

DM DPDT (double-pole, double throw) M20 metric thread electrical connection

DN DPDT (double-pole, double throw) ½ NPT electrical connection

SM SPDT (single-pole, double throw) M20 metric thread electrical connection

SN SPDT (single-pole, double throw) ½ NPT electrical connection

IV. Model Designation

May be a two digit numerical or alphabetical suffix indicating temperature range and sensing element not to exceed 343˚C (650˚F), not affecting electrical ratings of the device.

V. Customer Specification Number Designation

May be a five digit number not affecting electrical ratings or temperature ratings of the device

VI. Option Designation

May be a four digit numerical or alphabetical suffix not affecting electrical ratings or temperature ratings of the device

21K Series

J	21K	12345	2200	M123
I	II	III	IV	V

I. Type Designation

J Uncalibrated

II. Series and Model Designation

21K Adjustable differential pressure sensor switch

III. Model Designation

May be three to five digit numerical or alphabetical suffix indicating pressure range and sensing element not to exceed 300 psi, not affecting electrical ratings of the device; equivalent to a customer specification number

IV. Internal Switch Designation

May be a four digit number indicating switch designation

V. Option Designation

May be a four digit numerical or alphabetical suffix not affecting electrical ratings or pressure ratings of the device

100 Series

B	100	12345	3000	M123
I	II	III	IV	V

I. Sensor Type and Adjustment Designation

- B Local temperature sensor, internal knob adjustment
- C Local temperature sensor, internal plunger adjustment
- E Remote temperature sensor, internal knob adjustment
- F Remote temperature sensor, internal plunger adjustment

II. Series Designation

- 100 Temperature sensor switch

III. Model Designation

May be three to five digit numerical or alphabetical suffix indicating temperature range and sensing element not to exceed 538˚C (1000˚F), not affecting electrical ratings of the device; equivalent to a customer specification number

IV. Internal Switch Designation

May be a four digit number indicating switch designation

V. Option Designation

May be a four digit numerical or alphabetical suffix not affecting electrical ratings or temperature ratings of the device

H	100K	12345	3000	M123
I	II	III	IV	V

I. Type Designation

H Uncalibrated

II. Series and Model Designation

100 Pressure sensor switch

100K Differential pressure sensor switch

III. Model Designation

May be three to five digit numerical or alphabetical suffix indicating pressure range and sensing element not to exceed 5000 psi, not affecting electrical ratings of the device; equivalent to a customer specification number

IV. Internal Switch Designation

May be a four digit number indicating switch designation

V. Option Designation

May be a four digit numerical or alphabetical suffix not affecting electrical ratings or pressure ratings of the device

117 Series

H	117K	12345	1100	M123
I	II	III	IV	V

I. Type Designation

H	Pressure-operated, uncalibrated

II. Series and Model Designation

117	Pressure sensor switch with one snap switch provided
117K	Differential pressure sensor switch with one snap switch provided

III. Model Designation

May be a three to five digit numerical or alphabetical suffix indicating pressure range and sensing element not to exceed 3500 psi, not affecting electrical ratings of the device; equivalent to a customer specification number

IV. Internal Switch Designation

May be a four digit number indicating switch designation

V. Option Designation

May be a four digit numerical or alphabetical suffix not affecting electrical ratings or pressure ratings of the device

B	117	12345	1100	M123
I	II	III	IV	V

I. Type Designation

B Local temperature sensor, calibrated

E Remote temperature sensor, calibrated

II. Series and Model Designation

117 Temperature sensor switch with one snap switch provided

III. Model Designation

May be three to five digit numerical or alphabetical suffix indicating temperature range and sensing element not to exceed 566˚C (1050˚F), not affecting electrical ratings of the device; equivalent to a customer specification number

IV. Internal Switch Designation

May be a four digit number indicating switch designation

V. Option Designation

May be a four digit numerical or alphabetical suffix not affecting electrical ratings or temperature ratings of the device

120 Series

H	120	K	12345	3000	M123
I	II	III	IV	V	VI

I. Type Designation

- H — Pressure-operated, calibrated
- J — Pressure-operated, uncalibrated
- QH — Pressure-operated, calibrated, equipped with a cover lock, external bonding terminal, enclosure vent holes and a nameplate and may also have a second conduit connection
- QJ — Pressure-operated, uncalibrated, equipped with a cover lock, external bonding terminal, enclosure vent holes and a nameplate and may also have a second conduit connection

II. Series and Model Designation

- 120 — Pressure sensor switch with one snap switch provided
- 121 — Pressure sensor switch with one snap switch provided
- 122 — Pressure sensor switch with two snap switches provided

III. Type of Switch and Designation

K	Differential pressure sensing provided
P	Common adjustment provided
None	Individual adjustment provided

IV. Model Designation

May be three to five digit numerical or alphabetical suffix indicating pressure range and sensing element not to exceed 6000 psi, not affecting electrical ratings of the device; equivalent to a customer specification number

V. Internal Switch Designation

May be a four digit number indicating switch designation

VI. Option Designation

May be a four digit numerical or alphabetical suffix not affecting electrical ratings or pressure ratings of the device

B	120	P	12345	3000	M123
I	II	III	IV	V	VI

I. Type Designation

B	Local temperature sensor, calibrated
C	Local temperature sensor, uncalibrated
E	Remote temperature sensor, calibrated
F	Remote temperature sensor, uncalibrated
QB	Local temperature sensor, calibrated, equipped with a cover lock, external bonding terminal, enclosure vent holes and a nameplate and may also have a second conduit connection
QC	Local temperature sensor, uncalibrated, equipped with a cover lock, external bonding terminal, enclosure vent holes and a nameplate and may also have a second conduit connection
QE	Remote temperature sensor, calibrated, equipped with a cover lock, external bonding terminal, enclosure vent holes and a nameplate and may also have a second conduit connection
QF	Remote temperature sensor, uncalibrated, equipped with a cover lock, external bonding terminal, enclosure vent holes and a nameplate and may also have a second conduit connection
None	Remote temperature sensor with temperature setting adjustment and temperature indication in a separate enclosure from the explosion-proof enclosure containing the snap-switch and associated wiring

II. Series and Model Designation

120	Temperature sensor switch with one snap switch provided
121	Temperature sensor switch with one snap switch provided
122	Temperature sensor switch with two snap switches provided

III. Type of Switch Designation

P Common adjustment provided

None Individual adjustment provided

IV. Model Designation

May be three to five digit numerical or alphabetical suffix indicating temperature range and sensing element not to exceed 538˚C (1000˚F), not affecting electrical ratings of the device; equivalent to a customer specification number

V. Internal Switch Designation

May be a four digit number indicating switch designation

VI. Option Designation

May be a four digit numerical or alphabetical suffix not affecting electrical ratings or temperature ratings of the device