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UNITED KINGDOM CONFORMITY ASSESSMENT
UK-TYPE EXAMINATION CERTIFICATE

[2]

**Product or Protective System Intended for use in Potentially Explosive Atmospheres
UKSI 2016:1107 (as amended by UKSI 2019:696) – Schedule 3A, Part 1**

[3] UK-Type Examination Certificate No.: **UL21UKEX2237X Rev. 0**
[4] Product: **Pressure and Temperature Switches, Types 120, 121, 122, 820 and 822**
[5] Manufacturer: **United Electric Controls**
[6] Address: **180 Dexter Ave., Watertown, MA 02472 USA**

[7] This product and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.

[8] UL International (UK) Ltd, Approved Body number 0843, in accordance with Regulation 44 of the Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2016, UKSI 2016:1107 (as amended by UKSI 2019:696), certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Schedule 1 of the Regulations.
The examination and test results are recorded in the confidential report **UKRCC-4789985906.4**

[9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN IEC 60079-0:2018

EN 60079-1:2014

EN 60079-31:2014

Except in respect of those requirements listed at section 19 of the schedule to this certificate.

[10] If the sign "X" is placed after the certificate number, it indicates that the product is subject to specific conditions of use specified in the schedule to this certificate.

[11] This UK-TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified product. Further requirements of the Regulations apply to the manufacturing process and supply of this product. These are not covered by this certificate.

[12] The marking of the product shall include the following:

 **II 2 G Ex db IIC T6 Gb**

 **II 2 D Ex tb IIIC T85°C Db IP66**

Certification Manager
Andrew Moffat



This is to certify that the sample(s) of the Product described herein ("Certified Product") has been investigated and found in compliance with the Standard(s) indicated on this Certificate, in accordance with the UKEx Product Certification Program Requirements. This certificate and test results obtained apply only to the product sample(s) submitted by the Manufacturer. UL did not select the sample(s) or determine whether the sample(s) provided were representative of other manufactured product. UL has not established Follow-Up Service or other surveillance of the product. The Manufacturer is solely and fully responsible for conformity of all product to all applicable Standards, specifications, requirements or Regulations. The test results may not be used, in whole or in part, in any other document without UL's prior written approval.

Date of issue: 2022-06-15

Approved Body

UL International (UK) Ltd Unit 1-3 Horizon Kingsland Business Park Wade
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Schedule

UK-TYPE EXAMINATION CERTIFICATE No.

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Description of Product

The pressure and temperature operated switches consist of a die-cast aluminium switch housing containing a single or dual snap switch, which is operated by an operating rod forming a joint with the enclosure. The electrical wires between the snap switch and the one or two sets of terminal blocks are permanently mounted by the manufacturer and cannot be replaced.

Nomenclature

Nomenclature for Type 120, 121 and 122 Pressure Switches:

Example:

Q	J	120	P	S164B	3000	XC007	12345
I	II	III	IV	V	VI	VII	VIII

I. End-User Destination

None - International/Domestic

Q - International/Domestic, Internal Reference Only

II. Device Calibration

H - Calibrated with External Adjustment

J - Uncalibrated

III. Type Designation

120 - Single Snap Switch

121 - Single Snap Switch with External Adjustment

122 - Two Snap Switches with External Adjustment

IV. Sensing Method

None - Straight Vacuum or Gauge Pressure Sensing

K - Differential Pressure Sensing

P - Common Adjustment

V. Pressure Sensor Designation

Two to five character/digit alphanumeric code indicating one of the pressure sensor models shown in the relevant Certification Drawing

VI. Internal Snap Switch Designation

Four-digit numeric code indicating one of the Internal Snap Switch models shown in the relevant Certification Drawing

VII. Miscellaneous Options

Four to five character/digit alphanumeric code not affecting electrical ratings or pressure ratings:

None – No options(s) employed

M210 – Mechanically operated pressure indicator

M430 – Cover lock option

M440 – Cover chain option

M540 – Viton diaphragm construction

M542 – AFLAS diaphragm construction

M550 – Alternate fitting

M913 – 1/4 in. NPT Stainless Steel pressure connection

M914 – 1/2 in. NPT Stainless Steel pressure connection

M915 – 1/4 in. NPT Monel pressure connection

M916 – 1/2 in. NPT Monel pressure connection

M917 – 1/4 in. NPT Hastelloy C pressure connection

M918 – 1/2 in. NPT Hastelloy C pressure connection

M919 – 1/4 in. NPT Aluminium pressure connection

M920 – 1/2 in. NPT Aluminium pressure connection

XC001 – Aluminium pressure connection with Viton diaphragm and Viton o-ring

XC002 – Aluminium pressure connection with Kapton diaphragm and Buna-N o-ring

XC003 – Aluminium pressure connection with Kapton diaphragm and Viton o-ring

XC004 – 316L Stainless Steel pressure connection with 316L Stainless Steel diaphragm and Viton o-ring

XC005 – 316L Stainless Steel pressure connection with Viton diaphragm and Viton o-ring

XC006 – 316L Stainless Steel pressure connection with Kapton diaphragm and Viton o-ring

XC007 – 316L Stainless Steel pressure connection with Teflon diaphragm and Viton o-ring

VIII. Customer Specification Number

Five character/digit alphanumeric code indicating pressure range and miscellaneous options; equivalent to a customer specification code



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Schedule

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Nomenclature for Type 120, 121, 122, 820 and 822 Temperature Switches:

Example:

Q	F	820	P	13611	3000	W10015	12345
I	II	III	IV	V	VI	VII	VIII

I. End-User Destination

None - International/Domestic

Q - International/Domestic, Internal Reference Only

II. Device Calibration

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

B - Calibrated Local Temperature Sensor

C - Uncalibrated Local Temperature Sensor

E - Calibrated Remote Temperature Sensor

F - Uncalibrated Remote Temperature Sensor

III. Type Designation

120 - Single Snap Switch with Internal Adjustment

121 - Single Snap Switch with External Adjustment

122 - Two Snap Switches with External Adjustment

820 - Single Snap Switch with External Temperature Indicator

822 - Two Snap Switches with External Temperature Indicator

IV. Sensing Method

None - Local or Remote Temperature Sensing

E - External Temperature Indicator

P - Common Adjustment

V. Temperature Sensor Designation

Two to five character/digit alphanumeric code indicating one of the temperature sensor models shown in the relevant Certification Drawing

VI. Internal Snap Switch Designation

Four-digit numeric code indicating one of the Internal Snap Switch models shown in the relevant Certification Drawing

VII. Miscellaneous Options

Four to five character/digit alphanumeric code not affecting electrical ratings or temperature ratings of the device

None – No options(s) employed

M430 – Cover lock option

M440 – Cover chain option

W Series - Followed by 097, 098, 099 or 100, followed by a number 1 through 15. Denotes separable well option

VIII. Customer Specification Number

Five character/digit alphanumeric code indicating temperature range and miscellaneous options; equivalent to a customer specification code

Temperature range

The ambient temperature range is -40 °C to +75 °C.

Electrical data

Supply 480 Vac max, 30 A

Routine tests

Routine tests according to EN 60079-1 cl. 16 are not required, as the enclosures have been successfully tested at four times the reference pressure.

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Test Report No. (associated with this certificate issue)

US/UL/ExTR15.0049/03

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Specific conditions of use:

- Dimensions of the flameproof joints are other than the relevant minimum or maximum specified in Tables 1 through 2 of EN 60079-1:2014. Pressure and temperature operated switches are to be marked with an "X" and manufacturer's installation instructions (Drawing Nos. IMT120 and IMP120) detail the dimensions of the flameproof joints.
- For Group III equipment, manufacturer's installation instructions (Drawing Nos. IMT120 and IMP120) provide guidance for the user to minimize the risk from electrostatic discharge.

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Conditions of certification:

None



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Essential Health and Safety Requirements (Regulations Schedule 1)

In addition to the Essential Health and Safety Requirements covered by the standards listed at item 9, all other requirements are demonstrated in the relevant reports.

Additional information

The Pressure and Temperature Operated Switches have in addition passed the tests for Ingress Protection to IP 66 in accordance with EN60529:1991+A1:2000+A2:2013.



The trademark will be used as the company identifier on the marking label.

The manufacturer shall inform the approved body concerning all modifications to the technical documentation as described in Annex III to UKSI 2016:1107 (as amended by UKSI 2019:696) – Schedule 3A, Part 1.

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Drawings and Documents

Title:	Drawing No.:	Rev. Level:	Date:
120 Series: General Construction Flamepath Joints & Optional Features Uncalibrated, Single Switch Controls	B-62174-22	E	2012-01-19
121/122 Series: General Construction Flamepath Joints & Optional Features Uncalibrated, Single/Dual Switch Controls	B-62174-23	E	2012-01-19
120/121/122 Series: Temperature Sensors	A-62174-25	A	2002-06-13
820E/822E Series: Temperature Sensors	A-62174-24	A	2002-06-13
120/121/122 Series: Pressure Sensors (2 sheets)	B-62174-26	B	2003-05-22
Internal Snap Switches	B-62174-21	F	2009-02-26
120 Nameplate Temperature No. E/R	A-6211-718	L	2020-07-20
120 Nameplate Pressure No. E/R	A-6211-719	K	2020-07-20
120 Temperature Installation Instructions (6 sheets)	IMT120	12	-
120 Pressure Installation Instructions (6 sheets)	IMP120	18	-
ADDENDUM for 120 SERIES (Ex db) OPTION UKCA (United Kingdom Conformity Assessed)	UKCA-120-01	-	2022-06-03
120 NAMEPLATE FORMAT PRESSURE UKCA OPTION: M462	6311-12	A	2022-06-03
120 NAMEPLATE FORMAT TEMPERATURE UKCA OPTION: M462	6311-13	A	2022-06-03