

# 1 EU-TYPE EXAMINATION CERTIFICATE



2 **Equipment or Protective systems intended for use in Potentially Explosive Atmospheres - Directive 2014/34/EU**

3 **EU-Type Examination Certificate No:** FM09ATEX0028X

4 **Equipment or protective system:** ICOT 5000 Series Digital Positioner  
(Type Reference and Name)

5 **Name of Applicant:** Westlock Controls Corporation

6 **Address of Applicant:** 280 North Midland Avenue  
Saddle Brook, NJ 07663  
United States of America

7 This equipment or protective system and any acceptable variation thereto is specified in the schedule to this certificate and documents therein referred to.

8 FM Approvals Europe Ltd, notified body number 2809 in accordance with Article 17 of Directive 2014/34/EU of 26 February 2014, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in confidential report number:

3033803EC dated 18<sup>th</sup> February 2010

9 Compliance with the Essential Health and Safety Requirements, with the exception of those identified in item 15 of the schedule to this certificate, has been assessed by compliance with the following documents:

EN60079-0:2012+A11:2013, EN60079-11:2012 and EN60529:1991+A1:2000+A2:2013

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

11 This EU-Type Examination certificate relates only to the design, examination and tests of the specified equipment or protective system in accordance to the directive 2014/34/EU. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this certificate.

12 The marking of the equipment or protective system shall include:



II 1 G Ex ia IIC T4 Ta = -40°C to 80°C

 Digitally signed by  
Richard Zammitt  
DN: cn=Richard  
Zammitt, o=FM  
Approvals Europe  
Limited, ou,  
email=richard.zammitt  
@fmapprovals.com,  
c=E

**Richard Zammitt**  
Certification Manager, FM Approvals Europe Ltd.

Issue date: 24<sup>th</sup> April 2019

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# SCHEDULE



Member of the FM Global Group

to EU-Type Examination Certificate No. FM09ATEX0028X

## 13 Description of Equipment or Protective System:

The ICoT valve positioner is an electro-pneumatic servo system that continuously controls the position of a valve based upon a 4 to 20 mA input signal. The ICoT is a looped powered device that derives its power directly from the input current loop. The instrument measures valve position via a non-contact Hall Effect sensor and controls the valve through a current to pressure transducer. The 5200 and 5300 ICoT outputs a 4 to 20 mA signal proportional to the position measured. The 5400 and 5500 communicates via digital communications. The ICoT valve positioner has an ingress rating of IP66.

### ICOT 5 a b c AI E d e f 0 g h. Valve Positioner.

a = Base Model: 2, 3.  
b = Actuator types: 1, 3  
c = Mounting Style: 0, 5, 7, 8.  
d = Supply Pressures: H, L, V.  
e = Calibration/Communication: K, B.  
f = Conduit Entries: A, B.  
g = Position Transmitter Output: A, B.  
h = Pneumatic Connection: B, N.

### Energy Limitation Parameters:

Inputs (+) and (-):  $U_i = 30\text{ V}$ ,  $I_i = 100\text{ mA}$ ,  $P_i = 0.75\text{ W}$ ,  $C_i = 0$ ,  $L_i = 17.25\text{ }\mu\text{H}$ .  
Outputs 5 and 6:  $U_i = 30\text{ V}$ ,  $I_i = 100\text{ mA}$ ,  $P_i = 0.75\text{ W}$ ,  $C_i = 0$ ,  $L_i = 17.25\text{ }\mu\text{H}$ .

### ICOT 5 a b c AI E d e f 0 g h. Valve Positioner.

a = model 4, 5  
b = Actuator types: 1, 3  
c = Mounting Style: 0, 5, 7, 8.  
d = Supply Pressures: H, L, V.  
e = Calibration/Communication F, P  
f = Conduit Entries: A, B.  
g = Position Transmitter Output: A.  
h = Pneumatic Connection: B, N.

### Energy Limitation Parameters:

$U_i = 30\text{ V}$ ,  $I_i = 100\text{ mA}$ ,  $P_i = 0.75\text{ W}$ ,  $C_i = 120\text{ pF}$ ,  $L_i = 0$ .  
FISCO Parameters:  $U_i = 17.5\text{ V}$ ,  $I_i = 380\text{ mA}$ ,  $P_i = 5.32\text{ W}$ ,  $C_i = 5\text{ nF}$ ,  $L_i = 10\text{ }\mu\text{H}$ .

## 14 Specific Conditions of Use:

The powder coated surface of the ICOT Series Valve Positioner may store electrostatic charge and become a source of ignition in applications with a low relative humidity  $< \sim 30\%$  relative humidity where the painted surface is relatively free of surface contamination such as dirt, dust, or oil. Cleaning of the painted surface should only be done with a damp cloth.

## 15 Essential Health and Safety Requirements:

The relevant EHSRs that have not been addressed by the standards listed in this certificate have been identified and assessed in the confidential report identified in item 8.

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## 16 Test and Assessment Procedure and Conditions:

This EU-Type Examination Certificate is the result of testing of a sample of the product submitted, in accordance with the provisions of the relevant specific standard(s), and assessment of supporting documentation. It does not imply an assessment of the whole production.

Whilst this certificate may be used in support of a manufacturer's claim for CE Marking, FM Approvals Europe Ltd accepts no responsibility for the compliance of the equipment against all applicable Directives in all applications.

This Certificate has been issued in accordance with FM Approvals Europe Ltd's ATEX Certification Scheme.

## 17 Schedule Drawings

A list of the significant parts of the technical documentation is annexed to this certificate and a copy has been kept by the Notified Body.

## 18 Certificate History

Details of the supplements to this certificate are described below:

Date	Description
18 <sup>th</sup> February 2010	Original Issue.
29 <sup>th</sup> July 2010	<u>Supplement 1:</u> Report Reference: – Report 3033803EC Supplement 1 dated 29 <sup>th</sup> July 2010. Description of the Change: Addition of Group IIB variant of the ICoT2 and AVID Smartcall Positioners
15 <sup>th</sup> January 2014	<u>Supplement 2:</u> Report Reference: – Report number 3033803rev110526 dated 5 <sup>th</sup> December 2012 Description of the Change: Alternate electronic module, correction of typographical errors and update EN 60079-0.
19 <sup>th</sup> December 2014	<u>Supplement 3:</u> Report Reference: – Report numbers 3033803rev130722 dated 27 <sup>th</sup> September 2013 and 3033803rev140422 dated 12 <sup>th</sup> December 2014. Description of the Change: Drawing and model code update.
31 <sup>st</sup> October 2016	<u>Supplement 4:</u> Report Reference: – Report number RR203254 dated 26 <sup>th</sup> October 2016. Description of the Change: Update of standards to the latest editions; documentation and marking update.
16 October 2018	<u>Supplement 5:</u> Report Reference: - RR214496 dated 24 <sup>th</sup> August 2018. Description of the Change: Minor changes to installation manual and update to certificate product listing.
19 October 2018	<u>Supplement 6:</u> Report Reference: - RR214496 dated 24 <sup>th</sup> August 2018. Description of the Change: Drawing & history update not included in Supplement 5.
24 <sup>th</sup> April 2019	<u>Supplement 7:</u> Report Reference: - RR216555 dated 18 <sup>th</sup> February 2019. Description of the Change: Minor documentation changes. Certificate transferred from FM Approvals Ltd., notified body no. 1725, to FM Approvals Europe Ltd., notified body no. 2809.

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# Blueprint Report

**Westlock Controls Corp (100004327)**

**Class No 3610**

**Original Project I.D. 3033803**

**Certificate I.D. FM09ATEX0028X**

<u>Drawing No.</u>	<u>Revision Level</u>	<u>Drawing Title</u>	<u>Last Report</u>
AS-10085	A	Assembly, ICoT	FM09ATEX0028
EL-20517	B	Component Side Silkscreen Foundation Fieldbus ICOT Power and Bus In Board	FM09ATEX0028
EL-20518	D	Fabrication Drawing Foundation Fieldbus ICOT I/O	FM09ATEX0028
EL-20679	-	Fabrication Drawing Foundation ICOT LCD Board	FM09ATEX0028
EL-20704	B	Artwork ICOT2 Main BOARD	FM09ATEX0028
EL-20705	B	Artwork ICOTII 4-20mA+	FM09ATEX0028
EL-20745 Sheet 1	E	Fabrication Drawing ICOT2 FF/PA	RR216555
EL-20745 Sheet 2	E	Fabrication Drawing ICOT2 FF/PA	RR216555
EL-20745	E	Icot2 FF/PA	RR216555
EL-30117	A	ICoT gnd cable	FM09ATEX0028
EL-30118	2/26/1997	Positioner assy w/ground cable harness	FM09ATEX0028
EL-30266	F	PCB Assembly Hall effect Sensor	RR203254
EL-30491	-	Assembly Drawing Fieldbus ICOT LCD Board	FM09ATEX0028
EL-30512-001	G	Assembly Drawing ICOT2 Main BOARD (HART Version)	RR210823
EL-30513-001	B	Assembly Drawing ICOTII 4-20mA+ Non-HART BOARD	FM09ATEX0028
EL-30513-002	B	Assembly Drawing ICOTII 4-20mA+HART BOARD	FM09ATEX0028
EL-30549 Sheet 1	F	Assembly Drawing ICOT2 FF/PA	RR216555
EL-30549 Sheet 2	F	Assembly Drawing ICOT2 FF/PA	RR216555
EL-30549 Sheet 3	F	Assembly Drawing ICOT2 FF/PA	RR216555
EL-30549 Sheet 4	F	Assembly Drawing ICOT2 FF/PA	RR216555
EL-40138	D	FF CAN Asy (W/Potting Detail)	FM09ATEX0028
EL-40215-094	1	Icot2 4-20 mA	FM09ATEX0028
EL-40216-XXY-ZZZ	E	Icot2 4-20 mA Hart CAN Asy	RR210823
EL30530	26C	Parts List	4-21-10
EL30531	-	Assembly Drawing ICOT II 4-20 mA+ Hart Board Exia IIB	4-21-10
EL30549	F	Assembly Drawing ICOT FF/PA	RR216555
EL40225-XXXY-ZZZ	F	ICOT2 FF/PA Can ASY	RR216555
EN-10120	G	POSITIONER HOUSING MOLDING	FM09ATEX0028
EN-10121	F	POSITIONER COVER MOLDING	FM09ATEX0028
EN-10148	D	POSITIONER THREADED COVER	FM09ATEX0028
EN-10308	M	POSITIONER HOUSING MACHINED	FM09ATEX0028
EN-10309	2/17/95	POSITIONER COVER MACHINED	FM09ATEX0028
EN-10871-001	B	Housing Insert Spec	FM09ATEX0028
EN-10871-002	B	Housing Insert Spec	FM09ATEX0028
EN-10871	P	Housing Mold	FM09ATEX0028
EN-30105	-	POSITIONER HOUSING COVER ASSY	7/22/13
EII-40220-094	-	ICOT2 4-20 mA Hart CAN ASY Exia IIB	4-21-10
LB-11286-XXX	D	ID LBL ICoT 500 ATEX / IECEx Ex ia FM	RR214496
LB-11292-XXX	E	ID LBL SMARTCAL ATEX/IECEx Ex ia FM	3062727
MS-10179	B	3/4 NPT Plug	FM09ATEX0028
MS-10654	-	Assembly, ICOT 5000	7/22/13
MS-10704	A	FM PRIVATE LABEL DWG ICOT FF/SMARTCAL FF	3062727
PD-10128	-	DESIGN MODIFICATIONS, HOUSING & COVER	7/22/13
PR-30008	C	I/S transducer coil assy	FM09ATEX0028
PR-30009	F	Positioner transducer	FM09ATEX0028
SC-10137	M	Foundation Fieldbus ICOT Power and Bus In	FM09ATEX0028
SC-10202	02A	Fieldbus ICOT NEW LCD Board	FM09ATEX0028
SC-10214	F	ICOTII MCU, SENSORS, LCD AND KEYPAD BOARD	RR203254
SC-10215	D	ICOTII 4-20mA+HART BOARD	RR203254
SC-10238	F	Foundation Fieldbus ICOT Analog	RR216555
SC10222	26C	ICOTII 4-20mA+HART BOARD GroupIIB	4-21-10
Tech-439	F	ICOT 2 SMART VALVE POSITIONER OPERATING MANUAL	RR214496
Tech-440	A	AVID SMARTCAL VALVE POSITIONER OPERATING MANUAL	3062727
Tech-469	C	ICOT-FF intelligent valve positioner installation & operation manual	RR214496