

1 EC-TYPE EXAMINATION CERTIFICATE



2 **Component intended for use in Potentially Explosive Atmospheres - Directive 94/9/EC**

3 EC-Type Examination Certificate No: **FM09ATEX0073U**

4 Component:
(Type Reference and Name) **XJIH and XJIHD Series Instrument Enclosures
XJAT Series Junction Box Enclosure
XJCT Series Control Enclosure**

5 Name of Applicant: **Akron Electric, Inc.**

6 Address of Applicant: **1025 Eagon Street
Barberton, Ohio 44203
USA**

7 This component and any acceptable variation thereto is specified in the schedule to this certificate and documents therein referred to.

8 FM Approvals Ltd, notified body number 1725 in accordance with Article 9 of Directive 94/9/EC of 23 March 1994, certifies that this component 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:

3034935EC dated 17th November, 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:

EN 60079-0:2006, EN 60079-1:2007, EN 61241-0:2006, EN 61241-1:2004 and
EN 60529:1999 +A1:2001

10 The sign 'U' placed after the certificate number indicates that the component is subject to a schedule of limitations specified in the schedule to this certificate.

11 This EC-Type Examination Certificate relates only to the design, examination and tests of the specified component in accordance to the directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this component. These are not covered by this certificate.

12 The marking of the component shall include:



II 2 G Ex d IIC Ta = -20°C to +60°C, IP66
II 2 D Ex tD A21 IP66 Ta = -20°C to +60°C

Nicholas Ludlam
Deputy Certification Manager, FM Approvals Ltd.

Issue date: 17th November, 2010

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SCHEDULE



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to EC-Type Examination Certificate No. FM09ATEX0073U

13 Description of Component:

Construction - The XJIH and XJIHD Series Instrument Enclosures, XJAT Series Junction Box Enclosures, and XJCT Series Control Enclosure consist of a cylindrical assembly of a threaded solid or window covers and bases. The enclosures are provided with internal and external grounding facilities. An o-ring is provided between the cover and base for environmental protection.

XJIH Series Instrument Enclosures – The enclosures consist of either a 3-½ inch or 4 inch diameter base and various covers in either 3-½ inch or 4 inch diameter and standard or deep version, with and without window. The base has two ¾ - 14 NPT conduit opening and provisions for additional non-model coded ½ inch-14 NPT, ¾ inch-14 NPT, M20 or M25 openings. The covers are either solid or window cover with glass lens cemented in place and mechanically secured with a threaded retaining ring. The covers and bases are constructed aluminium alloy 357 with less than 6% magnesium.

XJIHD Series Instrument Enclosures – The enclosures are identical to the XJIH Series Instrument Enclosures except the XJIHD Series Instrument Enclosures are dual compartment enclosures separated by a solid wall. The solid wall can be drilled for RS232 or other similar pass through up to a maximum diameter of 1-½ inches.

XJCT/XJAT Series Enclosures – The enclosures are available in sizes 0 through 14 are basically a box shape varying in outside dimension of length, width and height from 4-¾ inch by 4-¾ inch by 4-¾ inch (size 0) through 13-¾ inch x 12-¾ inch x 9-¾ inch (size 10) covering the smallest to largest volumes and provided with an opening on top with female threads for attachment of cover. Sizes 1 through 14 are provided with solid covers. Size 0 is available with either a solid or window cover. The window cover has a glass lens cemented in place and mechanically secured with a threaded retaining ring. The XJAT is identical to the XJCT except in the descriptive name and intended use. The XJCT is marketed as Control Enclosure and the XJAT is marketed as a Junction Box Enclosure. As supplied by the manufacturer the side walls are either blank or may be drilled and tapped for conduit openings ranging in size from ½ inch to 4 inches (M20 to M90) in various combinations. This information is outlined in the manufacturer's Conduit Separation Chart in drawing no. 1065. The covers and bases are constructed aluminium alloy 357 with less than 6% magnesium.

XJIHDa-b-c. Dual Instrument Enclosure.

a = Instrument side cover style S05, S1, S15, S2, S4, S5, G1, G15, G2, G4 or G5.

b = Power side cover style Blank, A, B, C, D, E or F.

c = Options CEN, E1, E2, E5, E8, E9, MS, MSR, MSD, K* (*= No. of T.B.), N1, N2, N3, N6, N7, N8, RP* (* = size of hole).

Non-model code options consist of ½ NPT, ¾ NPT, M20 and M25 threaded entries into side base of enclosure.

*See Schedule of limitations.

XJIHAb-c. Instrument Enclosure.

a = Cover G or S.

b = Dimension 05, 15, 1, 2, 4, or 5.

c = Options CEN, E1, E2, E5, E8, E9, MS, MSR, MSD, K* (*= No. of T.B.), N1, N2, N3, N6, N7, N8, RP* (* = size of hole).

Non-model code options consist of ½ NPT, ¾ NPT, M20 and M25 threaded entries into side base of enclosure.

*See Schedule of limitations.

XJATa-b. Junction Box Enclosure.

a = Cover S0, S1, S2, S3, S4, S5, S6, S7, S8, S9, S10, S11, S12, S14, G02.38, or G02.75.

b = Options CEN, E1, E2, E5, E8, E9, MS, MSR, MSD, K* (*=No. of T.B.), N1, N2, N3, N6, N7, N8, RP* (* = size of hole), R3.

*See Schedule of limitations.

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XJCTa-b. Control Enclosure.

a = Cover S0, S1, S2, S3, S4, S5, S6, S7, S8, S9, S10, S11, S12, S14, G02.38, or G02.75.

b = Options CEN, E1, E2, E5, E8, E9, MS, MSR, MSD, K* (*=No. of T.B.), N1, N2, N3, N6, N7, N8, RP* (* = size of hole), R3.

*See Schedule of limitations.

14 Schedule of Limitations:

1. *Where necessary for safety, the contents of the enclosure shall comply with the appropriate requirements of relevant standards for electrical apparatus.*
2. *Rotating machines, or other devices which create turbulence, shall not be incorporated.*
3. *Primary and secondary cells and batteries shall only be used in accordance with Annex E of EN 60079-1.*
4. *Enclosures which can be opened more quickly than the time necessary for the discharge of incorporated capacitors or the cooling of hot components shall be labelled in accordance with the requirements of EN 60079-0.*
5. *Oil-filled circuit-breakers and contactors shall not be used.*
6. *All entry or closure devices when fitted shall satisfy the requirements of Clause 5 of EN 60079-1, or be specifically evaluated with the apparatus and be suitable for the conditions of use. Threads interrupted by the set screw shall not be counted in satisfying the requirements of Clause 5 of EN 60079-1. A thread of engagement of ≥ 5 threads is required and depth of engagement ≥ 8 mm is required.*
7. *For Group IIA and IIB enclosures, the content of the enclosure apparatus may be placed in any arrangement, provided that an area of at least 20 % of each cross-sectional area remains free to permit an unimpeded gas flow and, therefore, unrestricted development of an explosion.*

For Group IIC enclosures, the content of the enclosure apparatus may be placed in any arrangement provided that an area of at least 40 % of each cross-sectional area remains free to permit unimpeded gas flow and, therefore, unrestricted development of an explosion.

For the purpose of both of the above, separate relief areas may be aggregated provided that each area has a minimum dimension in any direction of 12.5 mm.

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.

16 Test and Assessment Procedure and Conditions:

This EC-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, FM Approvals Ltd accepts no responsibility for the compliance of the component against all applicable Directives in all applications.

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

17 Approved Drawings

Details of the approved drawings and documents are identified in the confidential report identified in item 8.

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