

# CERTIFICATE OF CONFORMITY



- HAZARDOUS (CLASSIFIED) LOCATION ELECTRICAL EQUIPMENT PER US REQUIREMENTS**
- Certificate No:** FM21US0049X
- Equipment:** 101, 102, 106, 107, 108, 110, 112, 202, 247, 266, 276, 296,  
(Type Reference and Name) 363, 535, 563, 651 series Load Cells,  
J04, J06, J08, J12 series Junction Boxes
- Name of Listing Company:** Anyload Weigh & Measure Inc.
- Address of Listing Company:** 6855 Antrim Avenue  
Burnaby, British Columbia V5J 4M5  
Canada
- The examination and test results are recorded in confidential report number:  

PR456856 dated 16<sup>th</sup> August 2022
- FM Approvals LLC, certifies that the equipment described has been found to comply with the following Approval standards and other documents:  

FM 3600:2022, FM 3610:2021, FM 3611:2021, FM 3810:2021,  
ANSI/ISA 60079-0:2020, ANSI/UL 60079-11:2014, ANSI/UL 121201:2019, ANSI/IEC 60529:2004
- 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.
- This certificate relates to the design, examination and testing of the products specified herein. The FM Approvals surveillance audit program has further determined that the manufacturing processes and quality control procedures in place are satisfactory to manufacture the product as examined, tested and Approved.
- Equipment Ratings:**  

Intrinsically safe for Class I, II and III, Division 1, Groups A, B, C, D, E, F and G; T6;  $-40^{\circ}\text{C} \leq T_a \leq +60^{\circ}\text{C}$   
(for installations with single load cells only);  
Intrinsically safe for Class I, Division 1, Groups A, B, C and D; T4;  $-40^{\circ}\text{C} \leq T_a \leq +60^{\circ}\text{C}$  (for installations with multiple load cells only);

**Certificate issued by:**

J.E. Marquedant  
VP, Manager - Electrical Systems

16 August 2022

Date

To verify the availability of the Approved product, please refer to [www.approvalguide.com](http://www.approvalguide.com)

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FM Approvals LLC. 1151 Boston-Providence Turnpike, Norwood, MA 02062 USA  
T: +1 (1) 781 762 4300 F: +1 (1) 781 762 9375 E-mail: [information@fmapprovals.com](mailto:information@fmapprovals.com) [www.fmapprovals.com](http://www.fmapprovals.com)

# SCHEDULE



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US Certificate Of Conformity No: FM21US0049X

Nonincendive with nonincendive field wiring for Class I, II and III, Division 2, Groups A, B, C, D, E, F and G; T6;  $-40^{\circ}\text{C} \leq T_a \leq +60^{\circ}\text{C}$  (for installations with single load cells only);

Nonincendive with nonincendive field wiring for Class I, Division 2, Groups A, B, C and D; T4;  $-40^{\circ}\text{C} \leq T_a \leq +60^{\circ}\text{C}$  (for installations with multiple load cells only);

AEx ia for Class I, Zone 0, Group IIC, T\*;  $-40^{\circ}\text{C} \leq T_a \leq +60^{\circ}\text{C}$ ;

AEx ia for Zone 20, Group IIIC, T83°C;  $-40^{\circ}\text{C} \leq T_a \leq +60^{\circ}\text{C}$ \*\*;

IP65-IP68, depending on the model and variant.

\*T6 for installations with single load cells; T4 for installations with multiple load cells, which include junction boxes.

\*\*Group IIIC approval for installations with single load cells only.

## 11. The marking of the equipment shall include:

### Installations with single load cells (no junction boxes)

IS CL I II III DIV 1, GP ABCDEFG T6

NI CL I II III DIV 2, GP A-G T6, NIFW

ZN 0 AEx ia IIC T6

ZN 20 AEx ia IIIC T83°C

$T_a = -40^{\circ}\text{C}$  to  $+60^{\circ}\text{C}$ ;

IP6x

### Installations with multiple load cells

IS CL I DIV 1, GP ABCD T4

NI CL I DIV 2, GP ABCD T4, NIFW

ZN 0 AEx ia IIC T4

$T_a = -40^{\circ}\text{C}$  to  $+60^{\circ}\text{C}$ ;

IP6x

## 12. Description of Equipment:

**General** – The 101 – 651 series are load cells, and the J04 – J12 series are junction boxes. The load cells can be powered directly from intrinsically safe barriers, or they can be powered from the barriers through junction boxes. A single load cell can be connected directly to the barriers while as many as 12 load cells can be connected to a single junction box or a combination of junction boxes. The Control Drawing shows the details for the allowed number of load cells to be connected through a junction box or boxes. In all cases, a maximum of two barriers can be connected to the load cell(s) or junction box(es). The first barrier will be connected at the input(s) to supply power, while the second barrier is connected to the output(s). The second barrier is not connected to any supply voltage.

**Construction** – The enclosures are made of stainless steel, aluminum, or alloy steel.

**Ratings** -  $U_i = 15\text{V}$ ,  $I_i = 306\text{ mA}$ ,  $P_i = 1.15\text{W}$  (for multiple load cells);

$U_i = 15\text{V}$ ,  $I_i = 44\text{ mA}$ ,  $P_i = 165\text{ mW}$  (for single load cells).

### **abcde-f-g-h-Ex. Load Cell.**

abc: Model series

101, 102, 106, 107, 108, 110, 112, 202, 247, 266, 276, 296, 363, 535, 563 or 651;

d: Structural code

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- A to Z (minor differences in enclosure shape, not affecting the interfaces);
- e: Enclosure material  
A (aluminum), H (alloy steel), S (stainless steel);
- f: Structural variations  
including seal type, threading, shape, size or dimensions, load cell sensitivity, equipped with lightning/surge protection  
101: LE, GS, AK, LS, LK  
102: EL, GT, 02  
106: 20, 02, CP, F, FB, ES  
107: 02, 20, 30  
108: 3MUN, TD, UN, AD, AL, YM, 01, LL, MT, FL, ST, VS, LP  
110: BL  
112: blank  
202: blank  
247: LH, UN, WM, LL, 01, 02, 03  
266: PT  
276: blank  
296: blank  
363: AN  
535: blank  
563: 30, RS, SB, MT, WBL, 23, 23SE, 23LE, FK, RT, MS, LB, LF, GS, AS, BK, UN  
651: 22, 55, UN, 66, BC, UN, CS, GS
- g: Capacity code:  
101: 1kg-20t  
102: 100kg-200t  
106: 100kg-600t  
107: 1t-20t  
108: 100g-2t  
110: 1t-120t  
112: 0.14Nm-11.3Nm  
202: 3.75kg-275kg  
247: 1kg-10t  
266: 25kg-100t  
276: 5t-100t  
296: 5kg-10t  
363: 500kg-300t  
535: 2t-100t  
563: 5kg-20t  
651: 6kg-1t
- h: Other variations  
signifying parameters not affecting the electrical circuitry, interfaces, or the main structural design, such as cable length, cable type, connector type, labeling, etc.  
101: YZ, xxm (xx can be any number) or blank  
102: YZ, xxm (xx can be any number) or blank  
106: YZ, xxm (xx can be any number) or blank  
107: YZ, xxm (xx can be any number) or blank  
108: YZ, xxm (xx can be any number) or blank  
110: YZ, xxm (xx can be any number) or blank  
112: xxm (xx can be any number) or blank  
202: xxm (xx can be any number) or blank

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- 247: YZ, xxm (xx can be any number) or blank
- 266: YZ, xxm (xx can be any number) or blank
- 276: xxm (xx can be any number) or blank
- 296: YZ, xxm (xx can be any number) or blank
- 363: YZ, xxm (xx can be any number) or blank
- 535: YZ, xxm (xx can be any number) or blank
- 563: YZ, xxm (xx can be any number) or blank
- 651: YZ, xxm (xx can be any number) or blank

## **abcde-f-Ex. Junction Box.**

abc: Model series

J04, J06, J08 or J12;

d: Trimming code

E (excitation trimming), S (signal trimming);

e: Enclosure material

A (aluminum), S (stainless steel);

f: Variations

16 (year 2016 released version), E (expansion port), FS (smaller in size), I (no section trimming and lightning protection), II (no section trimming but with lightning protection), III (with section trimming and lightning protection)

## **13. Specific Conditions of Use:**

1. The enclosure contains aluminum and is considered a potential risk of ignition by impact or friction. Care must be taken during installation to prevent impact or friction.
2. When two barriers are used, both barriers shall be connected to the same ground reference.

## **14. Test and Assessment Procedure and Conditions:**

This Certificate has been issued in accordance with FM Approvals US Certification Requirements.

## **15. Schedule Drawings**

A copy of the technical documentation has been kept by FM Approvals.

## **16. Certificate History**

Details of the supplements to this certificate are described below:

Date	Description
16 <sup>th</sup> August 2022	Original Issue.

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