

CERTIFICATE OF CONFORMITY



1. **HAZARDOUS (CLASSIFIED) LOCATION ELECTRICAL EQUIPMENT PER US REQUIREMENTS**
2. **Certificate No:** FM21US0002X
3. **Equipment:**
(Type Reference and Name) BK2-a, CC1-d, CPB-e, DSB2-h, DSB5-h, HM1-g, PBx-e, PC1-b, PC22-b, PC2-g, PC30-b, PC3-b, PC4-b, PC42-b, PC46-g, PC60-g, PC6-b, PC7-b, PCBB-g, PCBC-g, PCB-g, Q50-h, RC1-d, RC2-d, RC3-d, SB14-a, SB15-a, SB4-a, SB5-a, SB6-b, SB7-b, SB8-b, SB9-e, SLB-f, ZLB-b, and SB2-d Load Cells.
UB1-a, UB5-a, UB6-b, UB7-b, ULB-a, and ULG-i Force Transducers.
XT50. Extensometer.
4. **Name of Listing Company:** Flintec Inc.
5. **Address of Listing Company:** 18A Kane Industrial Avenue
Hudson, MA 01749
USA
6. The examination and test results are recorded in confidential report number:
0Z6A4.AX dated 30th December 1995
7. FM Approvals LLC, certifies that the equipment described has been found to comply with the following Approval standards and other documents:
FM 3600:2018, FM 3610:2021, FM Class 3810:2021,
ANSI/UL 60079-0:2020, ANSI/UL 60079-11:2014, ANSI/ISA 61010-1:2015
8. 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.
9. 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.

Certificate issued by:


J.E. Marquedant

VP, Manager - Electrical Systems

22 December 2021

Date

To verify the availability of the Approved product, please refer to www.approvalguide.com

THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE

FM Approvals LLC. 1151 Boston-Providence Turnpike, Norwood, MA 02062 USA

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SCHEDULE



US Certificate Of Conformity No: FM21US0002X

10. Equipment Ratings:

Intrinsically Safe for Class I, II, III, Division 1, Groups A, B, C, D, E, F and G T4 in accordance with drawing 3-21457, hazardous (classified) locations. Ambient temperature range is -40°C to 40°C .

11. The marking of the equipment shall include:

IS for Class I, II, III, Division 1, Groups A, B, C, D, E, F and G; T4 Ta = -40°C to $+40^{\circ}\text{C}$; Entity per 3-21457

Entity Parameters: $V_{\text{Max}} (U_i) = 29.9\text{V}$, $I_{\text{Max}} (I_i) = 450\text{mA}$, $C_i = 0$, $L_i = 0$

12. **Description of Equipment:**

General – This family of products includes Beam Load Cells, Single Point Load Cells, Compression Load Cells, Tension Load Cell Force Transducers, Extensometer Load Cells and Planar Beam Load cells. These products are available with different maximum capacities and are designed to be used in various kinds of industrial scales.

Construction – These products are of various construction for different applications. All products act as electro-mechanical sensors used to measure force or weight by transferring the applied force to a flow of electricity using strain gauges that are tightly bonded to the body of the equipment and connected in a bridge configuration. These products are made of high-grade steel or aluminum, to ensure predictable and uniform strain distribution. Enclosures are sealed by welding or improved potting. The electrical connection is by a permanently connected, 4-wire (standard) cable or a 6-wire (optional) cable.

Ratings – These products are intrinsically safe and powered by approved safety barriers. Entity parameters are as follows: $V_{\text{Max}} (U_i) = 29.9\text{V}$, $I_{\text{Max}} (I_i) = 450\text{mA}$, $C_i = 0$, $L_i = 0$

BK2-a, CC1-d, CPB-e, DSB2-h, DSB5-h, HM1-g, PBx-e, PC1-b, PC22-b, PC2-g, PC30-b, PC3-b, PC4-b, PC42-b, PC46-g, PC60-g, PC6-b, PC7-b, PCBB-g, PCBC-g, PCB-g, Q50-h, RC1-d, RC2-d, RC3-d, SB14-a, SB15-a, SB4-a, SB5-a, SB6-b, SB7-b, SB8-b, SB9-e, SLB-f, ZLB-b, and SB2-d Load Cells.

UB1-a, UB5-a, UB6-b, UB7-b, ULB-a and ULG-i Force Transducers.

XT50 Extensometer.

a = Capacity: between 100kg and 10T; 200lb and 20klb; 1kN and 100kN.

b = Capacity: between 5kg and 500kg; 10lb and 1klb; 50N and 5kN.

d = Capacity: between 5 klb and 500 klb; 2 ton and 300 ton; 20 kN and 2.5 MN.

e = Capacity: any between 0.5 kg and 2500 kg; 1 lb and 5 klb; 5 N and 25 kN.

f = Capacity: between 200lb and 20klb; 100kg and 10000kg; 1kN and 100kN.

g = Capacity: between 20kg and 1000kg; 50lb and 2000lb; 200N and 10kN.

h = Capacity between 100kg and 100T; 200lb and 200klb; 1kN and 1MN.

i = Capacity between 100lbs and 10klbs.

x = Customer: F, M, N or W.

13. **Specific Conditions of Use:**

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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@fmaprovals.com www.fmaprovals.com

SCHEDULE



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1. The load cells type PC22, PC42, PC46, PC60 and ZLB have an aluminum enclosure. Avoid an ignition hazard due to impact or friction.
2. The load cells type BK2, PC1, PC22, PC42, PC46, PC60, SB5, SLB, UB5, ULB and ZLB have a plastic surface larger than 4cm². Avoid risk from electrostatic discharge.
3. The connection cables must be installed in a way that a risk from electrostatic discharge is avoided.

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
30 th December 1995	Original Issue.
22 nd December 2021	<u>Supplement 12:</u> Report Reference: – PR458790 dated 22 nd December 2021. Description of the Change: Standards are updated as follows: FM 3600 is updated to 2018. FM 3610 is updated to 2021. FM 3810 is updated to 2021. ANSI/UL 60079-0:2020, ANSI/UL 60079-11:2014 and ANSI/ISA 61010-1:2015 are added.

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