

# CERTIFICATE OF CONFORMITY



1. **HAZARDOUS (CLASSIFIED) LOCATION ELECTRICAL EQUIPMENT PER US REQUIREMENTS**
2. **Certificate No:** FM18US0177
3. **Equipment:** Load Cells  
**(Type Reference and Name)**
4. **Name of Listing Company:** National Scale Technology
5. **Address of Listing Company:** 160 West Park Loop NW  
Huntsville, AL 35806  
United States
6. The examination and test results are recorded in confidential report number:  
  
3005609 dated 27<sup>th</sup> July 2001
7. FM Approvals LLC, certifies that the equipment described has been found to comply with the following Approval standards and other documents:  
  
FM Class 3600:2018, FM Class 3610:2010, FM Class 3810:2005, ANSI/NEMA 250:1991  
ANSI/ISA 60079-0:2009, ANSI/ISA 60079-11:2009, ANSI/ISA 61010-1:2004
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.
10. **Equipment Ratings:**  
  
Intrinsically Safe for use in Class I, II and III, Division 1, Groups A, B, C, D, E, F and G; nonincendive for use in Class I, Division 2, Groups A, B, C and D; suitable for Class II, III, Division 2, Groups F and G; Hazardous (Classified) Locations when installed in accordance with Entity requirements and National Scale Technology Control Drawing Number 0090030 indoor/outdoor Type 4X.

**Certificate issued by:**

J.E. Marquedant  
VP, Manager - Electrical Systems

October 26, 2020  
Date

To verify the availability of the Approved product, please refer to [www.approvalguide.com](http://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  
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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11. The marking of the equipment shall include:

Class I,II,III, Division 1, Groups A, B, C, D, E, F and G; T4 Ta = -18°C to +40°C; Type 4X

Class I, Division 2, Groups A, B, C, D, T6 Ta = -18°C to +40°C; Type 4X

Class II,III, Division 2, Groups F, G, T6 Gb Ta = -18°C to +40°C; Type 4X

12. **Description of Equipment:**

**General** - The load cells produce an output signal proportional to the applied weight of force. The conversion of load measurements to electrical signals is made through the use of strain gauges. These are arranged in a balanced bridge configuration so that the deflection of the strain gauges causes a change in their resistance and unbalances the bridge circuit. For a given input voltage, the output voltage of the bridge will vary with the applied load or pressure.

**Ratings** - The load cells maintain a maximum operating temperature range of -18 °C to 40 °C and a maximum operating voltage of 21.1 V de. The manufacturer has made available all necessary component information, system specification and test procedures, which have been examined.

**Load Cells**

IS / I,II,III / 1 / ABCDEFG / T4; Entity

NI / I / 2 / ABCD / T6

S / II,III / 2 / FG / T6

Entity parameters:

Vmax = 21.1 V, I<sub>max</sub> = 400 mA, C<sub>i</sub> = 0 μF, L<sub>i</sub> = 0 mH P<sub>i</sub> = 1.3 W

The following are the Load Cell Models and Capacities listed:

Model Name	Capacity
S8000	1K-1000K lb
S8000L	50K-100K lb
S8000P	1k-1000K lb
TI8000	5K-250K lb
TI8000L	50K-100K lb
H5000	1K-150K lb
R5000	0.25K-40K lb
R5000R	0.05K-10K lb
M5000B/P	1K-100K lb
B3000	0.5K-500K lb
C3000	50K lb

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R3000	0.5K-10000K lb
R3000LP	0.025K-2500K lb
TI3000	5K-200K lb
T3000/U3000	0.5K-50K lb
T3000C	50K-100K lb
TI2000	0.2K-50K lb
TL2000	5K-500K lb
R2000	0.2K-300K lb
B2000	0.25K-300K lb
N408	0.1K-5K lb
LP8000	0.5K-1000K

13. **Specific Conditions of Use:**

None

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
27 <sup>th</sup> July 2001	Original Issue.
27 <sup>th</sup> June 2018	<u>Supplement 2:</u> Report Reference: – RR213450 dated 27 <sup>th</sup> June 2018. Description of the Change: Transfer certificate to new format. Change Pi to 1.3W. Correct R3000LP capacity to 0.025K-1250K lb.
9 <sup>th</sup> April 2019	<u>Supplement 3:</u> Report Reference: – RR218449 dated 9 <sup>th</sup> April 2019. Description of the Change: Correct R3000LP capacity to 0.025K-2500K lb.
26 <sup>th</sup> October 2020	<u>Supplement 4:</u> Report Reference: – RR225556 dated 26 <sup>th</sup> October 2020. Description of the Change: Correct R3000 capacity to 0.5K-10000K lb. Update FM3600:2010 to 2018. Add references to ANSI/ISA 60079-0:2009, ANSI/ISA 60079-11:2009, and ANSI/ISA 61010-1:2004

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