

CERTIFICATE OF CONFORMITY



1. HAZARDOUS (CLASSIFIED) LOCATION ELECTRICAL EQUIPMENT PER US REQUIREMENTS

2. Certificate No: **FM18US0307X**
3. Equipment:
(Type Reference and Name) **Load cell, models RL260FD, RL42018A, RL1218A, RL26018A, RL9018SS, RL32018, RL32018S, RL32018S-HE, RL32018S-P, RL32218S-HE, RL32019S-HE, RL32018S-T, RL32022, RL32022-S, RL72019SS, RL75058-LP, RL75058S-LP, RL72020, RL72020SS, RL77032, RL77032SS, RL77032SS-HE**
4. Name of Listing Company: **Rice Lake Weighing Systems**
5. Address of Listing Company: **230 West Coleman Street, Rice Lake, Wisconsin 54868, United States of America**

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

PR452242 dated 20th December 2018

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 3610:2018, FM 3810:2018, ANSI/UL60079-0:2013, ANSI/UL60079-11:2014, ANSI/IEC 60529:2004

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 Class I, II and III, Division 1, Groups A, B, C, D, E, F and G hazardous (classified) locations, indoors and outdoors, with an ambient temperature rating of T4 for $-25^{\circ}\text{C} \leq T_a \leq +60^{\circ}\text{C}$, IP66, IP67 or IP68, depending on the model.

Certificate issued by:

J.E. Marquedant
VP, Manager - Electrical Systems

16 July 2024

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. One Technology Way, Norwood, MA 02062 USA

T: +1 (1) 781 762 4300 F: +1 (1) 781 762 9375 E-mail: information@fmaprovals.com www.fmaprovals.com

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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 for $-25^{\circ}\text{C} \leq T_a \leq +60^{\circ}\text{C}$;

12. Description of Equipment:

General – All of the load cells are transducers that create an electrical signal whose magnitude is directly proportional to the force applied. Electrical components are inside the load cell, protected using different systems: silicone coating, welded or screwed housing. The degree of protection against the ingress of foreign objects depends on the model and variant, and can be IP66, IP67 or IP68. The operating principle of the load cells is by strain gauges glued onto an elastic body. The load cells work by bending beam, shear beam, or compression, depending on the model. The strain gauges form a full Wheatstone bridge. Models with IP66 or IP67 rating are protected with a silicone coating. Models with IP68 rating are welded.

Construction – The construction material can be aluminum, alloy steel or stainless steel.

Ratings – $U_i = 15\text{V}$, $I_i = 0.288\text{A}$, $P_i = 1.08\text{W}$;
 $U_i = 13\text{V}$, $I_i = 0.332\text{A}$, $P_i = 1.08\text{W}$.

See Annex.

13. Specific Conditions of Use:

Models RL1218A, RL26018A, RL42018A: See Annex.

All other models: 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:

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Date	Description
h-20-December 2018	Original Issue.
3 October 2019	<u>Supplement 1:</u> Report Reference: PR454507 dated 3rd October 2019. Description of the change: Addition of Load Cell Models RL260FD and RL72019SS
1 June 2020	<u>Supplement 2:</u> Report Reference: PR457128 dated 1st June 2020. Description of the change: Addition of load cell models RL75058-LP and RL75058S-LP.
10 June 2021	<u>Supplement 3:</u> Report Reference: PR459853 dated 10th June 2021. Description of the change: Addition of models RL72020, RL72020P, and RL72020SS.
26 April 2022	<u>Supplement 4:</u> Report Reference: PR462667 dated 26th April 2022. Description of the change: Addition of models RL32022 and RL32022-S. Removed the IP ratings from all models in section 11 Marking.
16 July 2024	<u>Supplement 5:</u> Report Reference: PR469472 dated 16 July 2024. Description of the Change(s): Addition of variants RL77032, RL77032SS and RL77032SS-HE. Some re-wording of the Description in section 12. The model RL72020P is delisted.

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ANNEX

RL1218A

Description of Equipment:

RL1218A Load cell
IP67

Specific Conditions of Use:

The load cell model RL1218A contains aluminum and is considered to constitute a potential risk of ignition by impact or friction. Care must be taken into account during installation to prevent impact or friction.

RL26018A

Description of Equipment:

RL26018A Load cell
IP67

Specific Conditions of Use:

The load cell model RL26018A contains aluminum and is considered to constitute a potential risk of ignition by impact or friction. Care must be taken into account during installation to prevent impact or friction.

RL260FD

Description of Equipment:

RL260FD Load cell
IP68

RL32018

Description of Equipment:

RL32018 Load cell
IP67

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RL32018S

Description of Equipment:

RL32018S Load cell
IP67

RL32018S-HE

Description of Equipment:

RL32018S-HE Load cell
IP68

RL32018S-P

Description of Equipment:

RL32018S-P Load cell
IP68

RL32018S-T

Description of Equipment:

RL32018S-T Load cell
IP68

RL32019S-HE

Description of Equipment:

RL32019S-HE Load cell
IP68

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RL32022

Description of Equipment:

RL32022 Load cell
IP67

RL32022-S

Description of Equipment:

RL32022-S Load cell
IP68

RL32218S-HE

Description of Equipment:

RL32218S-HE Load cell
IP68

RL42018A

Description of Equipment:

RL42018A Load cell
IP66

Specific Conditions of Use:

The load cell model RL42018A contains aluminum and is considered to constitute a potential risk of ignition by impact or friction. Care must be taken into account during installation to prevent impact or friction.

RL72019SS

Description of Equipment:

RL72019SS Load cell
IP68

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RL72020

Description of Equipment:

RL72020 Load cell
IP67

RL72020SS

Description of Equipment:

RL72020SS Load cell
IP67

RL75058-LP

Description of Equipment:

RL75058-LP Load cell
IP67

RL75058S-LP

Description of Equipment:

RL75058S-LP Load cell
IP68

RL77032

Description of Equipment:

RL77032 Load cell
IP67

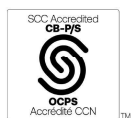
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RL77032SS

Description of Equipment:

RL77032SS Load cell
IP67

RL77032SS-HE

Description of Equipment:

RL77032SS-HE Load cell
IP68

RL9018SS

Description of Equipment:

RL9018SS Load cell
IP68

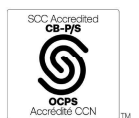
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