

CERTIFICATE OF CONFORMITY



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

2. **Certificate No:** FM17US0300X
3. **Equipment:** Load Cells
(Type Reference and Name) Load Cell Summing Junctions

4. **Name of Listing Company:** Coti Global Sensors Mfg Inc

5. **Address of Listing Company:** 5699 Hwy 53
Harvest, AL 35749
United States

6. The examination and test results are recorded in confidential report number:
3026213 dated 15th January 2007

7. FM Approvals LLC, certifies that the equipment described has been found to comply with the following Approval standards and other documents:

Class 3600:2022, Class 3610:2021, Class 3810:2021, ANSI/ISA-60079-0:2013,
ANSI/ISA-60079-11:2012, ANSI/ISA-61010-1:2012

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.

Certificate issued by:

J.E. Marquedant

J.E. Marquedant
VP, Manager - Electrical Systems

1 April 2022
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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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:

See Annex

11. The marking of the equipment shall include:

See Annex

12. **Description of Equipment:**

General - The Load Cell is a transducer for the measurement of force or weight, based on a strain gauge bridge. This transducer converts a force into a differential electrical signal. The Load Cell Summing Junction is used for trimming/balancing the connection of multiple Load Cell transducers in multiple force or weight applications.

Construction - The strain gauge circuitry for the Load Cell is encapsulated into a steel or stainless-steel enclosure depending upon model. The circuitry of the Load Cell Summing Junction is enclosed in a plastic or stainless-steel enclosure depending upon model.

See Annex for model codes

Ratings – The Load Cell and Load Cell Summing Junction operate at voltages up to 15 volts applied to the strain gauge's bridge circuitry. The ambient operating temperature range of the Load Cell is -20 °C to 60 °C. Also see the Annex.

13. **Specific Conditions of Use:**

See Annex

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
15 th January 2007	Original Issue.
25 th June 2008 to 27 th June 2014	<u>Supplement 1 to 10:</u> Report Reference: – 3048686 dated 27 th June 2014. Description of the Change: Model extension
28 th September 2017	<u>Supplement 11:</u> Report Reference: – RR210824 dated 28 th September 2017. Description of the Change: Model extension
24 th August 2018	<u>Supplement 12:</u> Report Reference: – RR215276 dated 24 th August 2018. Description of the Change: Model extension
24 th July 2019	<u>Supplement 13:</u> Report Reference: – RR219410 dated 24 th July 2019. Description of the Change: Model extension and updated FM3600, FM3610 and FM3810
17 th July 2020	<u>Supplement 14:</u> Report Reference: – RR224206 dated 17 th July 2020. Description of the Change: Model extension Addition of CG-TWM, and CG-RLC to Canister Model a, Load Cells.
25 th August 2021	<u>Supplement 15:</u> Report Reference: – RR229178 dated 25 th August 2021. Description of the Change: Addition of load cell models CG-CP24 and Railline-CG-RXR. Minor drawing changes not affecting safety.
1 st April 2022	<u>Supplement 16:</u> Report Reference: - RR232118 dated 1 st April 2022. Description of the Change: Addition of S Beams Model CG-ITCM-1, CGSB-MT and CGSB-SS-MT load cells. Addition of ABS Summing Junction enclosure option. Minor drawing changes. Reformatted Certificate. FM Class 3600, 3610 and 3810 updated from 2018 to current edition.

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ANNEX

Model a-bc-d. Load Cell Summing Junctions

Equipment ratings

Intrinsically Safe for use in: Class I, Division 1, Groups A, B, C, D; T4 Ta = -20°C to +60°C; 1500-B-01 Entity.
Intrinsically Safe for use in: Class I, Division 1, Groups C, D; T4 Ta = -20°C to +60°C; 1500-B-01 System.
Intrinsically Safe for use in: Class I, Zone 0, AEx ia IIC; T4 Ta = -20°C to +60°C; 1500-B-01 Entity.
Intrinsically Safe for use in: Class I, Zone 0, AEx ia IIB; T4 Ta = -20°C to +60°C; 1500-B-01 System.

Equipment markings

Intrinsically Safe
Class I, Division 1, Groups A, B, C, D; T4 Ta = -20°C to +60°C; Entity
Class I, Zone 0, AEx ia IIC; T4 Ta = -20°C to +60°C; Entity
Refer to Control Drawing 1500-B-01

Intrinsically Safe
Class I, Division 1, Groups C, D; T4 Ta = -20°C to +60°C; System
Class I, Zone 0, AEx ia IIB; T4 Ta = -20°C to +60°C; System
Refer to Control Drawing 1500-B-01

Electrical Ratings

Load Cell Summing Junctions are powered by an intrinsically safe barrier with the following entity parameters:

$U_i = 15V_{dc}$, $I_i = 600\text{ mA}$, $P_i = 1.3\text{ W}$, $C_i = 0.0\text{ uF}$, $L_i = 0.0\text{mH}$

Load Cell Summing Junctions are supplied voltages up to 15 volts, with an ambient operating temperature range of -20 °C to 60 °C.

Model Code

- a = Enclosure: ABS, FP or SS
- b = Type: 10, 30, 34, 40, 45, 65 or 85
- c = Trim: AE or AS
- d = Suppression: SP or None

Specific Conditions of Use:

1. Potential Electrostatic Charging Hazard for enclosure constructed from plastic. To prevent the risk of electrostatic sparking the plastic surface should only be cleaned with a damp cloth.

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Canister Model a, Load Cells.

Equipment ratings

Intrinsically Safe for use in: Class I, II, III, Division 1, Groups A,B,C,D,E,F,G; T4 Ta = -20°C to +60°C; 1500-B-01 Entity.
Intrinsically Safe for use in: Class I, II, III, Division 1, Groups C,D,E,F,G; T4 Ta = -20°C to +60°C; 1500-B-01 System.
Intrinsically Safe for use in: Class I, Zone 0, AEx ia IIC; T4 Ta = -20°C to +60°C; 1500-B-01 Entity.
Intrinsically Safe for use in: Class I, Zone 0, AEx ia IIB; T4 Ta = -20°C to +60°C; 1500-B-01 System.

Equipment markings

Intrinsically Safe

Class I, II, III, Division 1, Groups A,B,C,D,E,F,G; T4 Ta = -20°C to +60°C; Entity

Class I, Zone 0, AEx ia IIC; T4 Ta = -20°C to +60°C; Entity

Refer to Control Drawing 1500-B-01 for Installation.

Intrinsically Safe

Class I, II, III, Division 1, Groups C,D,E,F,G; T4 Ta = -20°C to +60°C; System

Class I, Zone 0, AEx ia IIB; T4 Ta = -20°C to +60°C; System

Refer to Control Drawing 1500-B-01 for Installation.

Electrical Ratings

Canister Model a, Load Cells are powered by an intrinsically safe barrier with the following entity parameters:

$U_i = 15\text{Vdc}$, $I_i = 600\text{ mA}$, $P_i = 1.3\text{ W}$, $C_i = 0.0\text{ uF}$, $L_i = 0.0\text{mH}$

Canister Model a, Load Cells are supplied voltages up to 15 volts, with an ambient operating temperature range of -20 °C to 60 °C.

Model Code

a = Type: CG-21, CG-26S, CG-26S1, CG-26S1-65114, CG-26S2, CG-26S3, CG-26S3-10, CG-26S4, CG-26S5, CG-26S6, CG-26S7, CG-31, CG-33, CG-62, CG-63, CG-92, CG-93, CG-94, CG-94M, CG-175, CG-408M, CG-412, CG-412M, CG-1210, CG-1210-1, CG-1211, CG-CC22, CG-CP22, CG-CP24, CG-JRT, CG-SP9, CG-SP9M, CG-TC42 or CG-TC43, CG-TWM, or CG-RLC

Specific Conditions of Use:

None

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Double Ended Model a, Load Cells.

Equipment ratings

Intrinsically Safe for use in: Class I, II, III, Division 1, Groups A,B,C,D,E,F,G; T4 Ta = -20°C to +60°C; 1500-B-01 Entity.
Intrinsically Safe for use in: Class I, II, III, Division 1, Groups C,D,E,F,G; T4 Ta = -20°C to +60°C; 1500-B-01 System.
Intrinsically Safe for use in: Class I, Zone 0, AEx ia IIC; T4 Ta = -20°C to +60°C; 1500-B-01 Entity.
Intrinsically Safe for use in: Class I, Zone 0, AEx ia IIB; T4 Ta = -20°C to +60°C; 1500-B-01 System.

Equipment markings

Intrinsically Safe
Class I, II, III, Division 1, Groups A,B,C,D,E,F,G; T4 Ta = -20°C to +60°C; Entity
Class I, Zone 0, AEx ia IIC; T4 Ta = -20°C to +60°C; Entity
Refer to Control Drawing 1500-B-01 for Installation.

Intrinsically Safe
Class I, II, III, Division 1, Groups C,D,E,F,G; T4 Ta = -20°C to +60°C; System
Class I, Zone 0, AEx ia IIB; T4 Ta = -20°C to +60°C; System
Refer to Control Drawing 1500-B-01 for Installation.

Electrical Ratings

Double Ended Model a, Load Cells are powered by an intrinsically safe barrier with the following entity parameters:

$U_i = 15\text{Vdc}$, $I_i = 600\text{ mA}$, $P_i = 1.3\text{ W}$, $C_i = 0.0\text{ uF}$, $L_i = 0.0\text{mH}$

Double Ended Model a, Load Cells are supplied voltages up to 15 volts, with an ambient operating temperature range of -20 °C to 60 °C.

Model Code

a = Type: CG-03M, CG-16, CG-16M, CG-16-SSW, CG-58, CG-58-1, CG-408M, CG-5103, CG-5103-SSW, CG-5223, CG-5223M, CG-5223-SSW, CG-80210, CG-BE40, CG-BE40M, CG-BE40-SSW, CG-BLC-2, CG-DB5000S, CG-Lodec, CG-ML600-LP, CG-ML1200, CG-SLS, CG-SLS-SS, CG-STR, CG-STR-1, CG-STR-1-SSW, CG-STR-SSW, CG-TSA or CG-WBM(NONE, -W, -X, -Z), Railline-CG-RXR

Specific Conditions of Use:

None

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S Beams Model a, Load Cells.

Equipment ratings

Intrinsically Safe for use in:
Class I, II, III, Division 1, Groups A,B,C,D,E,F,G; T4 Ta = -20°C to +60°C; 1500-B-01 Entity.

Intrinsically Safe for use in:
Class I, II, III, Division 1, Groups C,D,E,F,G; T4 Ta = -20°C to +60°C; 1500-B-01 System.

Intrinsically Safe for use in:
Class I, Zone 0, AEx ia IIC; T4 Ta = -20°C to +60°C; 1500-B-01 Entity.

Intrinsically Safe for use in:
Class I, Zone 0, AEx ia IIB; T4 Ta = -20°C to +60°C; 1500-B-01 System.

Equipment markings

Intrinsically Safe

Class I, II, III, Division 1, Groups A,B,C,D,E,F,G; T4 Ta = -20°C to +60°C; Entity

Class I, Zone 0, AEx ia IIC; T4 Ta = -20°C to +60°C; Entity

Refer to Control Drawing 1500-B-01 for Installation.

Intrinsically Safe

Class I, II, III, Division 1, Groups C,D,E,F,G; T4 Ta = -20°C to +60°C; System

Class I, Zone 0, AEx ia IIB; T4 Ta = -20°C to +60°C; System

Refer to Control Drawing 1500-B-01 for Installation.

Electrical Ratings

S Beams Model a, Load Cells are powered by an intrinsically safe barrier with the following entity parameters:

$U_i = 15V_{dc}$, $I_i = 600\text{ mA}$, $P_i = 1.3\text{ W}$, $C_i = 0.0\text{ uF}$, $L_i = 0.0\text{mH}$

S Beams Model a, Load Cells are supplied voltages up to 15 volts, with an ambient operating temperature range of -20 °C to 60 °C.

Model Code

a = Type: CG-ITCM, CG-ITCM-1, CGSS, CGSB, CGSB-1, CGSB-SS, CGSB-SSW, CGSB-MT, CGSB-SS-MT, CSS10077, CSS10078 or CSS10079

Specific Conditions of Use:

None

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Single Ended Beams Model a, Load Cells.

Equipment ratings

Intrinsically Safe for use in:
Class I, II, III, Division 1, Groups A,B,C,D,E,F,G; T4 Ta = -20°C to +60°C; 1500-B-01 Entity.

Intrinsically Safe for use in:
Class I, II, III, Division 1, Groups C,D,E,F,G; T4 Ta = -20°C to +60°C; 1500-B-01 System.

Intrinsically Safe for use in:
Class I, Zone 0, AEx ia IIC; T4 Ta = -20°C to +60°C; 1500-B-01 Entity.

Intrinsically Safe for use in:
Class I, Zone 0, AEx ia IIB; T4 Ta = -20°C to +60°C; 1500-B-01 System.

Equipment markings

Intrinsically Safe

Class I, II, III, Division 1, Groups A,B,C,D,E,F,G; T4 Ta = -20°C to +60°C; Entity

Class I, Zone 0, AEx ia IIC; T4 Ta = -20°C to +60°C; Entity

Refer to Control Drawing 1500-B-01 for Installation.

Intrinsically Safe

Class I, II, III, Division 1, Groups C,D,E,F,G; T4 Ta = -20°C to +60°C; System

Class I, Zone 0, AEx ia IIB; T4 Ta = -20°C to +60°C; System

Refer to Control Drawing 1500-B-01 for Installation.

Electrical Ratings

Single Ended Beams Model a, Load Cells are powered by an intrinsically safe barrier with the following entity parameters: $U_i = 15V_{dc}$, $I_i = 600\text{ mA}$, $P_i = 1.3\text{ W}$, $C_i = 0.0\text{ uF}$, $L_i = 0.0\text{ mH}$

Single Ended Beams Model a, Load Cells are supplied voltages up to 15 volts, with an ambient operating temperature range of -20 °C to 60 °C.

Model Code

a = Type: CG-8HL, CG-23, CG-23-1, CG-23-LP, CG-23M, CG-23-SS, CG-23-SS-1, CG-23-SSW-XX, CG-59M, CG-82M, CG-30410, CG-60030, CG-60040, CG-743, CG-745, CG-BBS, CG-BLC-C, CG-BLC-T, CG-BLF, CG-F1, CG-HMT, CG-LC22, CG-MBB, CG-MK15, CG-RTM, CG-SB250, CG-SB2L, CG-SB2M, CG-SB3, CG-SB3-1, CG-SB4, CG-SBF, CG-SMB6, CG-SMB6-2, CG-SSB, CG-SSB-10, CG-TB2, CG-WBL-SS, CG-WB-SS, CG-WBM-W, CG-WBM-X, CG-WBM-Z, CG-Z6, CG-Z6M or CG-Z6-1

Specific Conditions of Use:

1. Enclosures containing aluminum constitute a potential risk of ignition by impact or friction. Care must be taken into account during installation and use to prevent impact or friction.

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Single Points Model a, Load Cells.

Equipment ratings

Intrinsically Safe for use in: Class I, II, III, Division 1, Groups A,B,C,D,E,F,G; T4 Ta = -20°C to +60°C; 1500-B-01 Entity.
Intrinsically Safe for use in: Class I, II, III, Division 1, Groups C,D,E,F,G; T4 Ta = -20°C to +60°C; 1500-B-01 System.
Intrinsically Safe for use in: Class I, Zone 0, AEx ia IIC; T4 Ta = -20°C to +60°C; 1500-B-01 Entity.
Intrinsically Safe for use in: Class I, Zone 0, AEx ia IIB; T4 Ta = -20°C to +60°C; 1500-B-01 System.

Equipment markings

Intrinsically Safe

Class I, II, III, Division 1, Groups A,B,C,D,E,F,G; T4 Ta = -20°C to +60°C; Entity

Class I, Zone 0, AEx ia IIC; T4 Ta = -20°C to +60°C; Entity

Refer to Control Drawing 1500-B-01 for Installation.

Intrinsically Safe

Class I, II, III, Division 1, Groups C,D,E,F,G; T4 Ta = -20°C to +60°C; System

Class I, Zone 0, AEx ia IIB; T4 Ta = -20°C to +60°C; System

Refer to Control Drawing 1500-B-01 for Installation.

Electrical Ratings

Single Points Model a, Load Cells are powered by an intrinsically safe barrier with the following entity parameters:

$U_i = 15\text{Vdc}$, $I_i = 600\text{ mA}$, $P_i = 1.3\text{ W}$, $C_i = 0.0\text{ uF}$, $L_i = 0.0\text{mH}$

Single Points Model a, Load Cells are supplied voltages up to 15 volts, with an ambient operating temperature range of -20 °C to 60 °C.

Model Code

a = Type: CG-22, CG-22-1, CG-22-2, CG-22-4, 3053177CG-40, CG-40-SS, CG-40-SS-1, CG-42, CG-42-1, CG-42-2, CG-50, CG-50-1, CG-50-SS, CG-50-SS-1, CG-50-2, CG-50-3, CG-51, CG-1010, CG-1130, CG-1130-1, CG-1240, CG-1240-SS, CG-1241, CG-1510, CG-60048, CG-60610, CG-65029, CG-FB, CG-FLS, CG-HPS, CG-MK21, CG-MK4, CG-MK5, CG-PB, CG-PB-1, CG-PWA, CG-PWA-1, CG-PWS, CG-SPL, CG-SPLM, CSS10115 or CSS10133

Specific Conditions of Use:

1. Enclosures containing aluminum constitute a potential risk of ignition by impact or friction. Care must be taken into account during installation and use to prevent impact or friction.

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