Certificate of Compliance

Certificate: 1345550 **Master Contract:** 152423

Project: 80136348 **Date Issued:** March 29 2023

Issued to: Eaton Electric Ltd
Great Marlings Butterfield
Luton, Bedfordshire LU2 8DL
UNITED KINGDOM

Attention: James A. Cooke

The products listed below are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US or with adjacent indicator 'US' for US only or without either indicator for Canada only

Jeremy Lim

Issued by:

PRODUCTS

CLASS 2258 04 - PROCESS CONTROL EQUIPMENT - Intrinsically Safe, Entity - For Hazardous Locations
CLASS 2258 84 - PROCESS CONTROL EQUIPMENT - Intrinsically Safe, Entity - For Hazardous Locations to U.S. Requirements

IS associated apparatus for supply to Class I, Division 1, Groups A, B, C, D; Class II, Division 1, Groups E, F, G; Class III, Div.1;

or Class I, Division 2, Groups A, B, C, D T4 with IS connections to Class I, Division 1, Groups A, B, C, D; Class II, Division 1, Groups E, F, G; Class III, Div.1;

[A/Ex ia Ga] IIC;
[A/Ex ia Da] IIIC;

IS associated apparatus when connected as per Drawing SCI-969. Entity parameters as follows.

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Single channel barrier to one device with ground return

Model	Term	Voc, Uo (V)	Isc, Io (mA)	Po (W)	Ca, Co (uF) AB(IIC)/CE(IIB) /DFG(IIA)	La, Lo (mH) AB(IIC)/CE(IIB) /DFG(IIA)	Div 2 / Zone 2 T-Code
MTL7706+	3-4	28	93	0.65	0.083/0.65/2.15	4.2/12.6/33.6	T4 @ 60°C
MTL7710+/-	3-4	10	200	0.5	3.0/20/100	0.91/2.72/7.25	T4 @ 60°C
MTL7715+/-	3-4	15	150	0.56	0.58/3.55/14	1.45/7.22/14	T4 @ 60°C
MTL7715P+/-	3-4	15	291	1.09	0.58/3.55/14	0.33/0.99/2.64	T4 @ 60°C
MTL7722+/-	3-4	22	147	0.81	0.165/1.14/4.2	1.45/7.22/14	T4 @ 60°C
MTL7728+/-/ac	3-4	28	93	0.65	0.083/0.65/2.15	4.2/12.6/33.6	T4 @ 60°C
MTL7728P+/-	3-4	28	119	0.83	0.083/0.65/2.15	2.51/7.53/20	T4 @ 60°C

Dual, three or four channel barrier, each channel to separate devices, with separate ground returns

Model	Term	Voc, Uo (V)	Isc, Io (mA)	Po (W)	Ca, Co (uF) AB(IIC)/CE(IIB) /DFG(IIA)	La, Lo (mH) AB(IIC)/CE(IIB) /DFG(IIA)	Div 2 / Zone 2 T-Code
MTL7707+	3-gnd	28	93	0.65	0.083/0.65/2.15	4.2/12.6/33.6	T4 @ 60°C
MTL7707+	4-gnd	28	0	-	0.083/0.65/2.15	-	T4 @ 60°C
MTL7707P+	4-gnd	28	0	-	0.083/0.65/2.15	-	T4 @ 60°C
MTL7755ac	3-gnd 4-gnd	3	300	0.225	100/1000/1000	0.46/1.37/3.66	T4 @ 65°C
MTL7756ac	3-gnd 4-gnd 7-gnd	3	300	0.225	100/1000/1000	0.46/1.37/3.66	T4 @ 65°C
MTL7758+/-	3-gnd 4-gnd	7.5	750	1.4	11.1/174/1000	0.07/0.20/0.54	T4 @ 60°C
MTL7760ac	3-gnd 4-gnd	10	200	0.5	3.0/20.2/100	0.91/2.72/7.25	T4 @ 60°C
MTL 7761 ac	3-gnd 4-gnd	9	100	0.225	4.9/40/500	3.72/15/500	T4 @ 60°C
MTL 7761Pac	3-gnd 4-gnd	9	26	0.058	4.9/40/500	56/208/419	T4 @ 60°C
MTL7764+/-	3-gnd 4-gnd	12	12	0.036	1.41/9/36	240/932/1000	T4 @ 60°C
MTL7764ac	3-gnd 4-gnd	12	12	0.036	1.41/9/36	240/932/1000	T4 @ 60°C
MTL7765ac	3-gnd 4-gnd	15	150	0.56	0.58/3.55/14.0	1.45/7.22/14.0	T4 @ 60°C
MTL7766ac	3-gnd 4-gnd	12	80	0.24	1.41/9/36	5.8/23/48	T4 @ 60°C
MTL7766Pac	3-gnd 4-gnd	12	157	0.471	1.41/9/36	1.47/4.4/11	T4 @ 60°C
MTL7767+/-	3-gnd 4-gnd	15	150	0.56	0.58/3.55/14	1.45/7.22/14	T4 @ 60°C
MTL7778ac	3-gnd 4-gnd	28	47	0.33	0.083/0.65/2.15	16/62/130	T4 @ 60°C
MTL7779+/-	3-gnd 4-gnd	28	93	0.65	0.083/0.65/2.15	4.2/12.6/33.6	T4 @ 60°C
MTL7787+/-	3-gnd	28	93	0.65	0.083/0.65/2.15	4.2/12.6/33.6	T4 @ 60°C
MTL7787+/-	4-gnd	28	0	-	0.083/0.65/2.15	-	T4 @ 60°C
MTL7787P+/-	3-gnd	28	119	0.83	0.083/0.65/2.15	2.51/7.53/20	T4 @ 60°C
MTL7787P+/-	4-gnd	28	0	-	0.083/0.65/2.15	-	T4 @ 60°C
MTL7788+/-	3-gnd	28	93	0.65	0.083/0.65/2.15	4.2/12.6/33.6	T4 @ 60°C

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Model	Term	Voc, Uo (V)	Isc, Io (mA)	Po (W)	Ca, Co (uF) AB(IIC)/CE(IIB) /DFG(IIA)	La, Lo (mH) AB(IIC)/CE(IIB) /DFG(IIA)	Div 2 / Zone 2 T-Code
MTL7788+/-	4-gnd	10	200	0.5	3.0/20/100	0.91/2.72/7.25	T4 @ 60°C
MTL7788R+/-	3-gnd	28	93	0.65	0.083/0.65/2.15	4.2/12.6/33.6	T4 @ 60°C
MTL7788R+/-	4-gnd	10	200	0.5	3.0/20/100	0.91/2.72/7.25	T4 @ 60°C
MTL7789+/-	3-gnd 7-gnd	28	46.5	0.33	0.083/0.65/2.15	16/63/133	T4 @ 60°C
MTL7789+/-	4-gnd 8-gnd	28	0	-	0.083/0.65/2.15	-	T4 @ 60°C
MTL7796+/-	3-gnd	26	87	0.56	0.1/0.77/2.6	4.91/20/40	T4 @ 60°C
MTL7796+/-	4-gnd	20	51	0.26	0.22/1.41/5.5	13/51/108	T4 @ 60°C

Dual, three or four channel barrier, two channels to same device, with or without ground returns

Model	Term	Voc, Uo (V)	Isc, Io (mA)	Po (W)	Ca, Co (uF) AB(IIC)/CE(IIB) /DFG(IIA)	La, Lo (mH) AB(IIC)/CE(IIB) /DFG(IIA)	Div 2 / Zone 2 T-Code
MTL7707+	3-4	29.4	93	0.65	0.071/0.58/1.91	4.2/12.6/33.6	T4 @ 60°C
MTL7741	3-4	10	19	0.039	2.86/20/100	96/365/696	T4 @ 60°C
MTL7742	3-4	10	19	0.039	2.86/20/100	96/365/696	T4 @ 60°C
MTL7743	3-4 7-8	10	19	0.039	2.86/20/100	96/365/696	T4 @ 60°C
MTL7744	3-4 7-8	10	19	0.039	2.86/20/100	96/365/696	T4 @ 60°C
MTL7745	3-4	10	19	0.039	2.86/20/100	96/365/696	T4 @ 60°C
MTL7755ac	3-4	6	600	0.45	40/1000/1000	0.13/0.39/1.03	T4 @ 65°C
MTL7756ac	3-4 4-7 3-7	6	600	0.45	40/1000/1000	0.13/0.39/1.03	T4 @ 65°C
MTL7758+/-	3-4	7.9	1500	2.8	8.8/115/1000	0.02/0.05/0.14	T4 @ 60°C
MTL7760ac	3-4	10	400	1.0	3.0/20.2/100	0.2/1.0/1.8	T4 @ 60°C
MTL7761ac	3-4	18	200	0.45	0.31/1.78/7.6	0.91/2.72/7.2	T4 @ 60°C
MTL7761Pac	3-4	18	52	0.115	0.31/1.78/7.6	14/55/116	T4 @ 60°C
MTL7764+/-	3-4	13	24	0.072	1.0/6.2/22.5	61/226/452	T4 @ 60°C
MTL7764ac	3-4	24	24	0.072	0.125/0.93/3.35	61/226/452	T4 @ 60°C
MTL7765ac	3-4	15	300	1.12	0.58/3.55/14	0.32/0.95/2.54	T4 @ 60°C
MTL7766ac	3-4	24	160	0.48	0.125/0.93/3.35	1.47/4.4/11	T4 @ 60°C
MTL7766Pac	3-4	24	314	0.942	0.125/0.93/3.35	0.34/1.02/2.71	T4 @ 60°C
MTL7767+/-	3-4	15	300	1.125	0.58/3.55/14	0.32/0.95/2.54	T4 @ 60°C
MTL7778ac	3-4	28	93	0.654	0.083/0.65/2.15	4.2/12.6/33.6	T4 @ 60°C
MTL7787+/-	3-4	29.4	93	0.65	0.071/0.58/1.91	4.2/12.6/33.6	T4 @ 60°C
MTL7787P+/-	3-4	28.5	119	0.835	0.078/0.627/2.05	2.51/7.53/20	T4 @ 60°C
MTL7788+/-	3-4	28	294	0.92	0.083/0.65/2.15	0.33/0.99/2.64	T4 @ 60°C
MTL7788R+/-	3-4	28	294	0.92	0.083/0.65/2.15	0.33/0.99/2.64	T4 @ 60°C
MTL7789+/-	3-4 7-8	28	46.5	0.33	0.083/0.65/2.15	16/63/133	T4 @ 60°C
MTL7796+/-	3-4	26.4	138	0.81	0.096/0.74/2.48	1.94/8.5/16	T4 @ 60°C

Three channel barrier, three channel to same device, with or without ground returns

Model	Term	Voc, Uo (V)	Isc, Io (mA)	Po (W)	Ca, Co (uF) AB(IIC)/CE(IIB) /DFG(IIA)	La, Lo (mH) AB(IIC)/CE(IIB) /DFG(IIA)	Div 2 / Zone 2 T-Code

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MTL7756ac	3-4-7	6	900	0.675	40/1000/1000	0.06/0.19/0.49	T4 @ 65°C

Four channel barrier, four channel to same device, with or without ground returns

Model	Term	Voc, Uo (V)	Isc, Io (mA)	Po (W)	Ca, Co (uF) AB(IIC)/CE(IIB) /DFG(IIA)	La, Lo (mH) AB(IIC)/CE(IIB) /DFG(IIA)	Div 2 / Zone 2 T-Code
MTL7743	3-4-7-8	10	38	0.078	2.73/19.9/100	25/91/193	T4 @ 60°C
MTL7744	3-4-7-8	10	38	0.078	2.73/19.9/100	25/91/193	T4 @ 60°C
MTL7789+/-	3-4-7-8	28	93	0.65	0.083/0.65/2.15	4.2/12.6/33.6	T4 @ 60°C

IS associated apparatus for supply to Class I, Division 1, Groups C, D; Class II, Division 1, Groups F, G; Class III, Div.1;

or Class I, Division 2, Groups A, B, C, D T4 with IS connections to Class I, Division 1, Groups C, D; Class II, Division 1, Groups F, G; Class III, Div.1;

[A/Ex ia Ga] IIB;
[A/Ex ia Da] IIIB;

IS associated apparatus when connected as per Drawing SCI-969. Entity parameters as follows.

Single channel barrier to one device with ground return

Model	Term	Voc, Uo (V)	Isc, Io (mA)	Po (W)	Ca, Co (uF) CE(IIB) /DFG(IIA)	La, Lo (mH) CE(IIB) /DFG(IIA)	Div 2 / Zone 2 T-Code
MTL7729P+/-	3-4	28	170	1.19	0.65/2.15	5.65/11.34	T4 @ 60°C

Dual, three or four channel barrier, each channel to separate devices, with separate ground returns

Model	Term	Voc, Uo (V)	Isc, Io (mA)	Po (W)	Ca, Co (uF) CE(IIB) /DFG(IIA)	La, Lo (mH) CE(IIB) /DFG(IIA)	Div 2 / Zone 2 T-Code
MTL7707P+	3-gnd	28	171	1.2	0.65/2.15	5.34/10.73	T4 @ 60°C

Dual, three or four channel barrier, two channels to same device, with or without ground returns

Model	Term	Voc, Uo (V)	Isc, Io (mA)	Po (W)	Ca, Co (uF) CE(IIB) /DFG(IIA)	La, Lo (mH) CE(IIB) /DFG(IIA)	Div 2 / Zone 2 T-Code
MTL7707P+	3-4	29.4	171	1.2	0.587/1.91	5.34/10.73	T4 @ 60°C
MTL7779+/-	3-4	28.3	186	1.3	0.636/2.09	4.1/7.9	T4 @ 60°C

Class I, Division 2, Groups A, B, C, D T4;
Class I, Zone 2, Group IIC T4 (US only)

MTL 7798 Power Feed Module; rated 26Vdc max, 800mA max; Maximum Ambient 60°C; Temperature Code T4.

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Note: The Model 7700 Series I.S. barriers and Model 7798 Power Feed Module are for rail mounting in a suitable protective enclosure in a Class I, Div 2 or Zone 2 Hazardous Location, or a non-hazardous location and must be installed in accordance with the manufacturer's instructions. Terminals provide Intrinsically Safe circuits for switches, thermocouples, LED's and non-inductive resistive devices or Certified (Entity) Equipment.

APPLICABLE REQUIREMENTS

CAN/CSA C22.2 No. 60079-0:19	Explosive atmospheres – Part 0: Equipment – General requirements
CAN/CSA C22.2 No. 60079-11:14 (R2018)	Explosive atmospheres – Part 11: Equipment protection by intrinsic safety "i".
CAN/CSA C22.2 No. 61010-1-12, UPD1: 2015, UPD2: 2016, AMD1: 2018	Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use, Part 1: General Requirements
ANSI/UL 60079-0-2020, Seventh Edition	Explosive Atmospheres – Part 0: Equipment – General requirements
ANSI/UL 60079-11-2018, Sixth Edition	Explosive Atmospheres – Part 11: Equipment Protection by Intrinsic Safety "i"
UL 61010-1 3rd edition (2012), AMD1: 2018	Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use, Part 1: General Requirements
ANSI/UL 121201-2021	Nonincendive Electrical Equipment for Use in Class I and II, Division 2 and Class III, Divisions 1 and 2 Hazardous (Classified) Locations.
C22.2 No 213-17, UPD1, UPD2, UPD3 (R2022)	Nonincendive electrical equipment for use in Class I and II, Division 2 and Class III, Divisions 1 and 2 hazardous (classified) locations.
CAN/CSA C22.2 No. 60079-0:19	Explosive atmospheres – Part 0: Equipment – General requirements
CAN/CSA C22.2 No. 60079-11:14 (R2018)	Explosive atmospheres – Part 11: Equipment protection by intrinsic safety "i".

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MARKINGS

The manufacturer is required to apply the following markings:

- Products shall be marked with the markings specified by the particular product standard.
- Products certified for Canada shall have all Caution and Warning markings in both English and French.

Additional bilingual markings not covered by the product standard(s) may be required by the Authorities Having Jurisdiction. It is the responsibility of the manufacturer to provide and apply these additional markings, where applicable, in accordance with the requirements of those authorities.

The products listed are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US (indicating that products have been manufactured to the requirements of both Canadian and U.S. Standards) or with adjacent indicator 'US' for US only or without either indicator for Canada only.

The marking includes the following:

- Manufacturer's name, logo and CSA Master Contract Number, adjacent to the CSA Mark in lieu of manufacturer's name.
- Model designation: As specified in the PRODUCTS section, above.
- Electrical ratings: As specified in the PRODUCTS section, above.
- Ambient temperature rating: As specified in the PRODUCTS section, above.
- The CSA Mark, with or without the "C" and "US" indicators, as shown on the Certificate of Conformity.
- Hazardous Location designation: As specified in the PRODUCTS section, above. The word "Class" may be abbreviated "CL", the word "Division" may be abbreviated "DIV", and the word "Groups" may be abbreviated "GRP" or "GP".
- Method of Protection markings (Ex – markings): As specified in the PRODUCTS section, above. The word "Class" may be abbreviated "CL", the word "Zone" may be abbreviated "ZN".
- Temperature code: As specified in the PRODUCTS section, above.
- The manufacturing location shall be identified if the equipment can be produced in more than one facility.
- Hazardous Location Method of Protection markings (Ex markings): "ASSOCIATED EQUIPMENT FOR CLASS I, DIVISION 1, GROUPS A, B, C, AND D; [Ex ia Ga] IIC". The following abbreviations may be used: "CL" for "Class", "DIV" or "DV" for "Division", and "GRP" or "GP" for "Group", or "Groups".
- The following words:
  - "ASSOCIATED EQUIPMENT", "ASSOCIATED APPARATUS", "ASSOCIATED DEVICE", or the symbol "[Ex ia]"
  - "WARNING: SUBSTITUTION OF COMPONENTS MAY IMPAIR INTRINSIC SAFETY", and "AVERTISSEMENT : LA SUBSTITUTION DE COMPOSANTS PEUT COMPROMETTRE LA SECURITE INTRINSEQUE"
  - For Canada: "INTRINSICALLY SAFE" and "SECURITE INTRINSEQUE", or "IS" or "I.S." or the symbol "Ex ia"
  - "WARNING: SUBSTITUTION OF COMPONENTS MAY IMPAIR INTRINSIC SAFETY", and "AVERTISSEMENT : LA SUBSTITUTION DE COMPOSANTS PEUT COMPROMETTRE LA SECURITE INTRINSEQUE"

Method of Marking

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The marking shall be permanent, such as a 0.5-mm thick metal nameplate secured by drive pins or screws in bottomed holes, cast, etched, engraved, or CSA Accepted self adhesive nameplate material.

Note - Jurisdictions in Canada may require these markings to also be provided in French language. It is the responsibility of the manufacturer to provide bilingual marking, where applicable, in accordance with the requirements of the Provincial Regulatory Authorities. It is the responsibility of the manufacturer to determine this requirement and have bilingual wording added to the "Markings".

Additional marking for Ord Loc

Mark	Symbol	Reference	Title
√		ISO 7000-0434A	Caution

Supplement to Certificate of Compliance

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The products listed, including the latest revision described below, are eligible to be marked in accordance with the referenced Certificate.

Product Certification History

Project	Date	Description
80136348	March 29, 2023	Update of CSA report 1345550 to update the standards to the latest editions. Refer to the main report of this certificate.
70094932	Dec 15, 2016	Update report 1345550 to change the company name from Measurement Technology Ltd to Eaton Electric Ltd.
2326530	Jul 15, 2010	Update report 1345550 to include the addition of Capacitors C19, C20 and C21.
2168255	Apr 28, 2009	Update to report 1345550 to remove entity parameter markings requirement on the label. Report in Documentum
History		
1345550	2003/03/18	7700 Series I.S. Barriers for hazardous locations.