



CSA INTERNATIONAL

Certificate of Compliance

Certificate: 1336770

Master Contract: 200600

Project: 1932734

Date Issued: 2007/09/18

Issued to: Endress + Hauser Wetzler GmbH Co. KG

Obere Wank 1
Nesselwang, 87484
Germany
Attention: Ms. Susanne Meroth

The products listed below are eligible to bear the CSA Mark shown



Issued by: Edward Foo, C.E.T.

Authorized by: Patricia Pasemko, Operations
Manager

PRODUCTS

CLASS 2258 04 - PROCESS CONTROL EQUIPMENT - Intrinsically Safe, Entity - For Hazardous Locations

Class I, Groups A, B, C, and D:

· iTemp type TMT 182 Head transmitter. Device is intrinsically safe when installed per dwgs. 14 06 00 112 and 14 06 00 132, with entity parameters of $V_{max} = 30$ V, $I_{max} = 100$ mA, $C_i = 0$, $L_i = 0$. Temperature codes T6, $T_a = -40$ °C to 55 °C; T5, $T_a = -40$ °C to 70 °C; T4, $T_a = -40$ °C to 85 °C.

CLASS 2258 03 - PROCESS CONTROL EQUIPMENT - Intrinsically Safe and Non-Incendive Systems - For Hazardous Locations



Certificate: 1336770

Master Contract: 200600

Project: 1932734

Date Issued: 2007/09/18

Class I, Div. 2, Groups A, B, C, and D:

· iTemp type TMT 182 Head transmitter. Device is Non-incendive when installed per dwgs. 14 06 00 112 and 14 06 00 132, with entity parameters of $V_{max} = 30\text{ V}$, $I_{max} = 100\text{mA}$, $C_i = 0$, $L_i = 0$. Temperature codes T6, $T_a = -40\text{ °C}$ to 55 °C ; T5, $T_a = -40\text{ °C}$ to 70 °C ; T4, $T_a = -40\text{ °C}$ to 85 °C .

CLASS 2252 03 - PROCESS CONTROL EQUIPMENT

· Model TMT 182 temperature transmitters, SELV or Class 2 supply rated 11.5 - 35Vdc, 23mA with output loop current 4-20 mA. $T_a = -40$ to $+85\text{ °C}$.

Note: The above units are certified as a component for use within an enclosure where the suitability of the final combination is to be determined by authority having jurisdiction.

APPLICABLE REQUIREMENTS

CAN/CSA C22.2 No. 0-M91 (R2001) - General Requirements - Canadian Electrical Code, Part II

CSA Std C22.2 No. 142-M1987 - Process Control Equipment

CAN/CSA-C22.2 No. 157-92 - Intrinsically Safe and Non-Incendive Equipment for Use in Hazardous Locations

CSA Std C22.2 No. 213-M1987 - Non-Incendive Electrical Equipment for Use in Class I, Division 2 Hazardous Locations

CAN/CSA-C22.2 No. 1010.1-92. - Safety Requirements For Electrical Amends 1 and 2 Equipment For Measurement, Control and laboratory Use: PART 1 General requirements.

MARKINGS

- CSA Monogram
- Submitter Identification
- Model No.
- Serial Number, Date Code or Month and Year of Manufacture
- Hazardous Location Designation
- Entity Parameters
- Temperature Code
- Maximum Ambient Temperature



CSA INTERNATIONAL

Certificate: 1336770

Master Contract: 200600

Project: 1932734

Date Issued: 2007/09/18

- The symbol “Exia”
- Reference to Installation Instructions

Note: Jurisdictions in Canada may require these markings to be also in French. It is the responsibility of the Customer to provide bilingual marking, where applicable, in accordance with the requirements of the Provincial Regulatory Authorities.



Supplement to Certificate of Compliance

Certificate: 1336770

Master Contract: 200600

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
1932734	2007/09/18	Update to cover minor alterations
1853984	2006/11/22	Update to include installation dwg 14 06 00 132 and minor ratings revision.
1843836	2006/11/10	Update to cover alternative construction of advanced diagnostics option with FM revision reports
1782384	2006/05/09	Update to include N.I. Certification
1575108	2004/09/10	Update to report 1336770 to include C22.2 No. 1010.1-92 for installation in ordinary locations (similar to TMT 181), iTEMP Type TMT 182
1571426	2004/07/13	Update to Report 1336770 to cover drawings revision, per request dated June 7th, 2004, for installation in Ex ia II Haz
1496087	2003/11/12	Update to cover nameplate dwg revision.
1449158	2003/06/20	UPDATE TO REPORT 200600-11336770 TO COVER REPORT REVISION PER LETTER OF MAY 23RD FOR INSTALLATION IN HAZLOC.

History

1336770 Sept. 20/2002 Original Certification.



Descriptive Report and Test Results

MASTER CONTRACT: 200600

REPORT: 1336770

PROJECT: 1932734

Edition 1: September 20, 2002; Project 1336770 - Toronto
Issued by L. Candeloro

Edition 2: June 20, 2003; Project 1449158 - Toronto
Issued by E. Foo, C.E.T.

Report Reissued.

Edition 3: November 12, 2003; Project 1496087 - Toronto
Issued by E. Foo, C.E.T.

Report Reissued.

Edition 4: July 13, 2004; Project 1571426 - Toronto
Issued by E. Foo, C.E.T.

Report Reissued.

Edition 5: September 10, 2004; Project 1575108 - Toronto
Issued by E. Foo, C.E.T.

Report Reissued.

Edition 6: May 9, 2006; Project 1782384 - Toronto
Issued by E. Foo, C.E.T.

Report Reissued

Edition 7: November 10, 2006; Project 1843836 - Toronto
Issued by E. Foo, C.E.T.

Report Reissued

Edition 8: November 22, 2006; Project 1853984 - Toronto
Issued by E. Foo, C.E.T.

Report Reissued

This report shall not be reproduced, except in full, without the approval of CSA International.

178 Rexdale Boulevard, Toronto, ON, Canada M9W 1R3

Telephone: 416.747.4000 1.800.463.6727 Fax: 416.747.4149 www.csa-international.org

Edition 9: September 18, 2007; Project 1932734 - Toronto
Issued by E. Foo, C.E.T.

Report Reissued

Contents: Certificate of Compliance - Page 1 to 3
Supplement to Certificate of Compliance - Page 1
Description and Tests - Pages 1 to 13
Descriptive Documents - CSA Engineering files only.

PRODUCTS

CLASS 2258 04 - PROCESS CONTROL EQUIPMENT - Intrinsically Safe Entity – For Hazardous Locations

Class I, Groups A, B, C, and D:

- iTemp type TMT 182 Head transmitter. Device is intrinsically safe when installed per dwgs. 14 06 00 112 and 14 06 00 132, with entity parameters of $V_{max} = 30\text{ V}$, $I_{max} = 100\text{mA}$, $C_i = 0$, $L_i = 0$. Temperature codes T6, $T_a = -40\text{ }^\circ\text{C}$ to $55\text{ }^\circ\text{C}$; T5, $T_a = -40\text{ }^\circ\text{C}$ to $70\text{ }^\circ\text{C}$; T4, $T_a = -40\text{ }^\circ\text{C}$ to $85\text{ }^\circ\text{C}$.

CLASS 2258 03 - PROCESS CONTROL EQUIPMENT - Intrinsically Safe and Non-Incendive Systems - For Hazardous Locations

Class I, Div. 2, Groups A, B, C, and D:

- iTemp type TMT 182 Head transmitter. Device is Non-incendive when installed per dwgs. 14 06 00 112 and 14 06 00 132, with entity parameters of $V_{max} = 30\text{ V}$, $I_{max} = 100\text{mA}$, $C_i = 0$, $L_i = 0$. Temperature codes T6, $T_a = -40\text{ }^\circ\text{C}$ to $55\text{ }^\circ\text{C}$; T5, $T_a = -40\text{ }^\circ\text{C}$ to $70\text{ }^\circ\text{C}$; T4, $T_a = -40\text{ }^\circ\text{C}$ to $85\text{ }^\circ\text{C}$.

CLASS 2252 03 - PROCESS CONTROL EQUIPMENT

- Model TMT 182 temperature transmitters, SELV or Class 2 supply rated 11.5 to 35 Vdc, 23mA with output loop current 4-20 mA. $T_a = -40$ to $+85\text{ }^\circ\text{C}$.

Note: The above units are certified as a component for use within an enclosure where the suitability of the final combination is to be determined by authority having jurisdiction.

APPLICABLE REQUIREMENTS

- CAN/CSA C22.2 No. 0-M91 (R2001) - General Requirements - Canadian Electrical Code, Part II
- CSA Std C22.2 No. 142-M1987 - Process Control Equipment
- CAN/CSA-C22.2 No. 157-92 - Intrinsically Safe and Non-Incendive Equipment for Use in Hazardous Locations
- CSA Std C22.2 No. 213-M1987 - Non-Incendive Electrical Equipment for Use in Class I, Division 2 Hazardous Locations
- CAN/CSA-C22.2 No. 1010.1-92. - Safety Requirements For Electrical Equipment For
Amends 1 and 2 Measurement, Control and laboratory Use: PART 1 General requirements.

MARKINGS

Mfg. By 3M, Type 7384, certified in 200600-1022638. See drawing nos. 14 06 00 102 and 14 05 00 107 for details.

- CSA Monogram
- Submitter Identification
- Model No.
- Serial Number, Date Code or Month and Year of Manufacture
- Hazardous Location Designation
- Entity Parameters
- Temperature Code
- Maximum Ambient Temperature
- The symbol “Exia”
- Reference to Installation Instructions

Note: Jurisdictions in Canada may require these markings to be also in French. It is the responsibility of the Customer to provide bilingual marking, where applicable, in accordance with the requirements of the Provincial Regulatory Authorities.

ALTERATIONS

None

FACTORY TESTS

None, the device is operated from a Class 2 source.

FIELD SERVICE INSTRUCTION:

This report contains reference to certain construction and engineering documents that have been deemed critical to ensuring continued compliance with applicable construction and performance requirements. A list of these documents, with drawing numbers and the appropriate revision levels is summarized in this report. Documents detailed herein are subject to inspection by CSA International personnel and shall be made available in the manufacturing location upon request. Failure to produce these documents in a timely manner constitutes noncompliance and is subject to the actions outlined in the CSA Product Service Agreement.

DESCRIPTIVE DOCUMENTS

Note: Documents detailed herein are subject to inspection by CSA International personnel and shall be made available in the manufacturing location upon request.

PRODUCTS	DRAWING No.	REV. No.	DATE
Control Drawing CSA, iTemp TMT 182	14 06 00 112	B	2006-04-03
TMT 182 Nameplate, FM & CSA	14 05 00 107	A	2006-04-03
TMT182 Nameplate, CSA I.S.	14 06 00 102	B	2006-04-03
TMT 182 HART KPL, assembly	14 06 00 000	T03D01	08-12-03
TMT 182 EINSTEIN HART, schematic 1/2	14 06 01 010	T04101	19-01-04
TMT 182 EINSTEIN HART, schematic 2/2	14 06 01 010	T02406	30-04-02
TMT 182 components layout, Best Plan oben	14 06 01 010	T04101	19-01-04
TMT 182 components layout, Best Plan unten	14 06 01 010	T04101	19-01-04
TMT 182 components layout, Oben	14 06 01 010	T04101	19-01-04
TMT 182 components layout, Innen oben	14 06 01 010	T04101	19-01-04
TMT 182 components layout, Innen unten	14 06 01 010	T04101	19-01-04
TMT 182 components layout, Unten	14 06 01 010	T04101	19-01-04
TMT 182 components layout, Bohrplan	14 06 01 010	T04101	19-01-04
Signal Trafo/Specification TMT 18/X	14 06 01 030		2000-09-01
Power Trafo/Specification TMT 18X	14 06 01 031	T05901	2005-09-02
EMV-Platine fur Transmitter TMT182	14 06 01 020	T01403	11-04-01
EMV-Platine fur Transmitter TMT182, Best Plan unten	14 06 01 020	T02602	05-06-02
EMV-Platine fur Transmitter TMT182, Bohrplan	14 06 01 020	T02602	05-06-02
Control Drawing CSA, TMT 182-DxxxC/D/L (Advanced Diagnostic option)	14 06 00 132	W07247	2007-02-26
Nameplate, TMT 182 with Advanced Diagnostic option	14 06 00 122	-	2006-09-13
Construction Assembly	24 06 00 000	-	2004-08-09
Schematic	14 06 01 011	W07601	05.06.07
Pcb components layout, Best Plan oben	14 06 01 011	W07601	06.06.07
Pcb components layout, Best Plan unten	14 06 01 011	M06805	17.03.04
Pcb trace layout, Oben	14 06 01 011	M06805	17.03.04
Pcb trace layout, innen oben	14 06 01 011	M06805	17.03.04
Pcb trace layout, innen unten	14 06 01 011	M06805	17.03.04
Pcb trace layout, unten	14 06 01 011	M06805	17.03.04
Pcb trace layout, Bohrplan	14 06 01 011	M06805	17.03.04
TMT 182 Technical Information	51002073	-	06.05
TMT 182 Owner's Manual	510 04669	-	-
FM Report 3014531	-	-	June 24/02
Conformity Verification report IEC 61010-1*	1575108	-	-
ITemp TMT 182 Advanced Diagnostics Tech Description	-	-	09.15.2006
FM Revision Report for Advanced Diagnostics	09463-283	-	03/17/05

Note: The above asterisk "*" denotes documents filed at CSA (Toronto) Main File for internal reference only.

DESCRIPTION

Device: iTemp type TMT 182 Head transmitter

The Transmitter was evaluated and tested to CSA requirements by Factory Mutual Research, FM report 3014531. The FM report was reviewed in conjunction with E & H engineering drawings and was considered representative and acceptable for CSA Certification.

CAN/CSA-C22.2 No. 1010.1-92 with Amends 1 and 2:

Item No	Component (Drawing Reference)	Manufacturer; Type; Cat. No.; Ratings; Function	Approval Marks
	N.A.		

Optional Configuration: Advanced Diagnostics

Model TMT 182-***C/D/L:

The above transmitter TMT 182 may be provided with an optional circuit for Advanced Diagnostics feature. Construction assembly remained identical except for circuit schematic. The pcb is fully encapsulated inside the enclosure. This Advanced Diagnostics option is approved under FM Revision Report 09463-283 dated 3/17/05. Refer to E+H Technical Description dated 09/15/2006 for complete construction and assessments.

1. Infallible Components: Refer to schematic dwg 14 06 01 011.

Input Terminals X3, pins 1 and 2:

- i. Series Blocking Diodes, D1, D2 & D8: (INT) General Semiconductor, type LL 48, rated 350mA (I_F); 40V_{RRM}.
- ii. Duplicate Zener Diodes:
D7 and D10: (INT) Type BZX84C6V8S, rated 7.2V_Z max; 200mW.
D5 and D6: (INT) Fagor, Type Z2SMB6V8, rated 7.2V_Z max; 2W.

iii. Resistors:

R9, R10, metal film, rated 24.3K ohms, 100mW, 1%
R11, R15, metal film, rated 33.2K ohms, 100mW, 1%
R1, R3, R4, metal film, rated 931 ohms, 125mW, 1%

Output Terminals X3, pins 3 - 6:

i. Resistors:

R5, metal film, 5.62K ohms, 100mW, 1%
R6, R14, R44, R63, R67, metal film, rated 2K ohms, 100mW, 1%
R13, R60, R62, metal film, rated 10K ohms, 100mW, 1%

2. Transformers: U1 and U2, Dwgs 14 06 01 030 and 14 06 01 031. Same transformers used as in TMT 182.

TESTS

Representative tests were conducted by Factory Mutual Research, FM Report 3014531, and are considered representative.

The following analysis was conducted to establish the entity parameters for output terminals 3 to 6.

C22.2 No. 157-92, Clause 6.13

The maximum allowable current (Drawing no. 14 06 01 0100) at the output terminals was found to be 3 mA. (V_{ref}/R_{14}). V_{ref} was 6 V.

Capacitance

A comparison of the published charts show that 6 V with a 1.5 safety factor yields a C_a of 40 μ F for a Group A/B atmosphere, 1000 μ F for a Groups C and D.

Inductance

Using the energy formula, $E = 0.5LI^2$, the maximum allowable inductance for a Group A/B atmosphere was found to be 4.4 H (includes cable). The client wants to mark 100 mH for all groups. This is satisfactory.

Project No. 1496087: Update to report to cover nameplate revision (dwg. added 14 06 00 108).

Project No. 1575108:

Device Tested/Evaluated: iTEMP TMT 182 Temperature Head Transmitter connected to SELV or Class 2 power supply rated 8-35Vdc max, 4-20 mA.

Test Requirements: CSA C22.2 No. 1010.1/IEC 1010-1 plus Amend 2.

Note: **Checklist Location** in the following table refers to the form for test results found in the CSA 1010.1 Conformance Verification Report.

<u>Installation/Overvoltage Category</u> :	Category II
<u>Pollution Degree</u> :	2

CLAUSE	DESCRIPTION	Compliance			Checklist Location	COMMENTS
		Y	N	N/A		
4.4	Testing in SINGLE FAULT CONDITION			X	Form A.2	
4.4.1	Non-specific faults			X	Form A.2	
4.4.2.1	PROTECTIVE IMPEDANCE			X	Form A.2	
4.4.2.2	Protective conductor (Earth leakage current)			X	Form A.2	
4.4.2.3	Equipment or parts for short term or intermittent operations			X	Form A.2	
4.4.2.4	Motors			X	Forms A.2/A.25	
4.4.2.5	Capacitors			X	Form A.2	
4.4.2.6	Mains transformers			X	Forms A.2/A.27/A.28	
4.4.2.7	Outputs			X	Form A.2	
4.4.2.8	Equipment for more than one supply (also Cl. 14.5)			X	Form A.2	
4.4.2.9	Cooling			X	Form A.2	
4.4.2.10	Heating devices			X	Form A.2	
4.4.2.11	Insulation between circuits and parts			X	Form A.2	
4.4.2.12	Interlocks			X	Form A.2	

CLAUSE	DESCRIPTION	Compliance			Checklist Location	COMMENTS
		Y	N	N/A		
5.1.3	Mains Supply (Input)	X			Form A.3	
5.3	Durability of markings	X			Form A.4	
5.4	Documentation	X				
6.2	Determination of ACCESSIBLE parts:	X				
6.2.1	General examination	X			Form A.6	
6.2.2	Top openings			X	Form A.6	
6.2.3	Preset control openings			X	Form A.6	
6.3	Permissible limits for ACCESSIBLE parts:					
6.3.1	Values in NORMAL CONDITION:					
6.3.1.1	- Voltage	X			Form A.7	
6.3.1.2	- Current	X			Form A.7	
6.3.1.3	- Capacitance			X	Form A.7	
6.3.2	Values in SINGLE FAULT CONDITION:					
6.3.2.1	- Voltage			X	Form A.8	
6.3.2.2	- Current			X	Form A.8	
6.3.2.3	- Capacitance			X	Form A.8	
6.5.1	Protective Earthing:					
6.5.1.2	Bonding impedance, plug-connected equipment			X	Form A.9	
6.5.1.3	Bonding impedance, PERMANENTLY CONNECTED EQUIPMENT			X	Form A.9	
6.5.1.4	Indirect bonding from measuring and test equipment			X	Form A.9	
6.6.1	Separation of circuits - short circuits due to insufficient separation			X	Form A.2	
6.6.2 (6.1.1)	Terminals for external circuits - charge on capacitors			X	Forms A.6/A.8	

CLAUSE	DESCRIPTION	Compliance			Checklist Location	COMMENTS
		Y	N	N/A		
6.7	Creepage and clearance distances:					
	Working voltage			X	Form A.5	
	Comparative tracking index (CTI)			X	Form A.5	
	10 N on bare conductor			X	Form A.11	
	30 N on outside enclosure			X	Form A.11	
6.8	Voltage (dielectric strength) tests:					
	After humidity preconditioning			X	Form A.12	
	After enclosure tests (Cl. 8)			X	Form A.12	
	After resistance to heat (Cl. 9)			X	Form A.12	
	After SINGLE FAULTS (Cl. 4.4.4)			X	Form A.12	
	After cord entry (Cl. 6.10.2.1)			X	Form A.12	
	After protection against hazards from fluids (Cl. 11)			X	Form A.12	
6.10.2	Fitting of non-detachable mains supply cords:					
6.10.2.1	Cord entry			X	Form A.13	
6.10.2.2	Cord anchorage			X	Form A.13	
6.10.3	Capacitor discharge - NORMAL CONDITION			X	Form A.6	
6.11.1	Free strand test			X	6.11.1	
7.3	Stability:					
	10 deg tip			X	7.3	
	Horizontal force			X	7.3	
	Downward force			X	7.3	
7.4	Provisions for lifting and carrying			X	7.4	
8	Mechanical resistance to shock and impact:					
8.1	Rigidity			X	Form A.11A.20	
8.2	Impact hammer test			X	Form A.11/A.20	

CLAUSE	DESCRIPTION	Compliance			Checklist Location	COMMENTS
		Y	N	N/A		
8.4	Drop test:					
8.4.1	Equipment other than hand-held			X	Form A.11/A.20	
8.4.2	Hand-held equipment			X	Form A.1/A.20	
9.2	Temperature, general	X			Form A.18	Functional temperature.
9.2.1	Temperature, heating equipment			X	Form A.18	
9.2.2	Temperature, equipment intended for installation into a cabinet or wall			X	Form A.18	
9.3	Guards			X	Form A.18	
10.2	Resistance to heat of non-metallic ENCLOSURES	X			Form A.19	
10.3	VICAT softening test (ISO 306)			X	Form A.19	
11	Protection against hazards from fluids:					
11.2	Cleaning	X			Form A.20	
11.3	Spillage			X	Form A.20	
11.4	Overflow			X	Form A.20	
11.5	Battery electrolyte			X	Form A.24	
11.6	Specially protected equipment (IEC 529)			X	Form A.20	
11.7	Fluid pressure and leakage			X	Form A.21	
12.2.1	Ionizing Radiation (IEC 405)			X	Form A.22	
12.3	Ultra-violet radiation			X	N/A	
12.4	Microwave radiation			X	N/A	
12.5.1	Sound level			X	Form A.23	
12.5.2	Ultrasonic pressure (max. 22.4 kHz)			X	Form X	
12.6	Laser sources (IEC 825)			X	12.6	

CLAUSE	DESCRIPTION	Compliance			Checklist Location	COMMENTS
		Y	N	N/A		
13.1	Poisonous and injurious gases			X	attach data	
13.2.2	Batteries			X	Form A.24	
13.3	Implosion of high-vacuum devices (IEC 65)			X	13.3	
14.2.1	Motor temperatures (also 4.4.2.4)			X	Form A.25	
14.3	Over-temperature protection devices			X	Form A.26	
14.4	Fuseholder accessibility			X	14.4	
14.5	Mains voltage selecting devices (also 4.4.2.8)			X	Form A.2	
14.6	High integrity components (appropriate IEC publications)			X	Form A.10	
14.7.1	Mains transformers; short circuit			X	Form A.27	
14.7.2	Mains transformers; overload			X	Form A.27	
15	Interlocks			X	15	
Annex F	Protection against the spread of fire:					
F.2.1	Limited circuits			X	Form A.15	
F.4.3.3	Flammability			X	Form A.17	

CANADIAN and U.S. SUPPLEMENT TO IEC 1010-1

CLAUSE	DESCRIPTION	Compliance			Checklist Location	COMMENTS
		Y	N	N/A		
6.7	PCB Coatings			X		
6.10.4.5	Conduit Enclosure Entry Tests			X		
6.10.4.5.1	Conduit Pull-out			X		
6.10.4.5.2	Conduit Torque Test			X		
6.10.4.5.3	Bending			X		
6.10.4.5.4	Knockouts			X		
13.4	Fluid Pressure and Leakage			X		
13.4.1	Hydraulic Test Pressure			X		
13.4.2	Maximum Permissible Working Pressure			X		
13.4.3	Pressure Relief Devices			X		
13.4.4	Leakage Test			X		
14.8.1	Conductive Coatings			X		

Project 1782384: Inclusion of Non-Incendive certification based on same I.S. entity parameters installation. Device does not have any arching or sparking parts and is completely encapsulated inside the enclosure. No additional testing is required.

Project 1843836: Update to include Advanced Diagnostics option under model TMT 182***C/D/L. Circuitry is similar to TMT 182 under schematic dwg. 14 06 01 010.

Refer to Advanced Diagnostics schematic dwg. 14 06 01 011 and E+H's Technical Description dated 09/15/2006 for complete constructions and intrinsically safe assessments. Same option is FM approved under FM Revision Reports 09463-283 dated 03/17/05 and 08860-283 dated 1/27/05 provided by the submittor.

Evaluations provided by submittor and FM Approvals met the intend of the applicable CSA standards listed in this report and no further testing was deemed necessary.

Project 1853984: Update to include dwg 14 06 00 132 in the products listing and revised voltage rating from 8 - 35V to 11.5 - 35V.

Project 1932734: Update to cover minor drawings revisions as follows:

Drawing	Dwg Number / Revision	Revision
Control Dwg	14 06 00 132 / W07247	Changes to title not affecting I.S. installation
TMT 182 Schematic	14 06 01 011 / W07601	R31 781K → 1 M; C3 100nF → 2.2uF clamped by duplicate zeners D5/D6 R37 2K → 2.7K R69 0 → 1K
Component layout	14 06 01 011 / w07601 Best plan oben	Component layout revised per above schematic
Pwr Transformer Spec	14 06 01 031 / T05901	Pri. windings 91 → 87 turns; L 5.6mH → 5.3mH

The above changes to the affected drawings were evaluated to be acceptable without further testing. Testing and/or evaluation previously conducted in this report remained representative.

End of report.