CSA INTERNATIONAL

Certificate of Compliance

Certificate: 1146812 **Master Contract:** 176935

Project: 1836570 **Date Issued:** 2006/10/18

Issued to: **ABB Automation Inc.**

ABB Instrumentation Division
125 East County Line Rd
Warminster, PA 18974-4995
USA
Attention: Dave Madden

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

Issued by: Joe da Silva, C.E.T.

Authorized by: Patricia Pasemko, Operations Manager

PRODUCTS

CLASS 2258 02 - PROCESS CONTROL EQUIPMENT - For Hazardous Locations

Class I, Div. 1, Groups B, C and D; Class II, Div. 1, Group E, F and G; Encl. Type 4X:

Class I, Div. 2, Groups A, B, C and D; Encl. Type 4X:

Series AM5443 and AM5447 flowmeters, rated 10 to 46 Vdc, 4-20 mA; operating ambient 60 C for Div. 1 version (for series AM5443 and AM5447) and 70 C for Div. 2 version with a temperature code of T4 (for series AM5443 only); MWP 740 psi.

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

Class I, Div. 1, Groups A, B, C and D; Class II, Div. 1, Group E, F and G; Encl. Type 4X:

Series AM5443 and AM5447 flowmeters, intrinsically safe with entity parameters as per installation drawing SD-10-4074, operating ambient 70 C for series AM5443 and 60 C for series AM5447; temperature code T4 for series AM5443 only; MWP 740 psi.

APPLICABLE REQUIREMENTS

CSA Std C22.2 No. 25-1966 - Enclosures for Use in Class II, Groups E, F and G Hazardous Locations

CSA Std C22.2 No. 30-M1986 - Explosion-Proof Enclosures for Use in Class I Hazardous Locations

CAN/CSA-C22.2 No. 94-M91 - Special Purpose Enclosures

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

MARKINGS

- Submittor's name
- Model number
- Serial number or date code
- Electrical rating
- Hazardous location designation
- Special purpose enclosure designation , " Type 4X"
- CSA Monogram
- Temperature Code
- Maximum operating temperature
- The symbol "Exia"
- The words "INTRINSICALLY SAFE"

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- Reference to installation instructions

- A caution in regards to open circuit before removing cover or to keep cover tight while circuits are alive

- A caution in regards to substitution of components and impairing suitability for use as I.S or Div. 2 (Note - This caution may appear in the wiring instructions)

- A caution to not disconnect equipment unless power has been switched off or the area is known to be non- hazardous (Note - This caution may appear in the wiring instructions)

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Supplement to Certificate of Compliance

Certificate: 1146812 **Master Contract:** 176935

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

Product Certification History

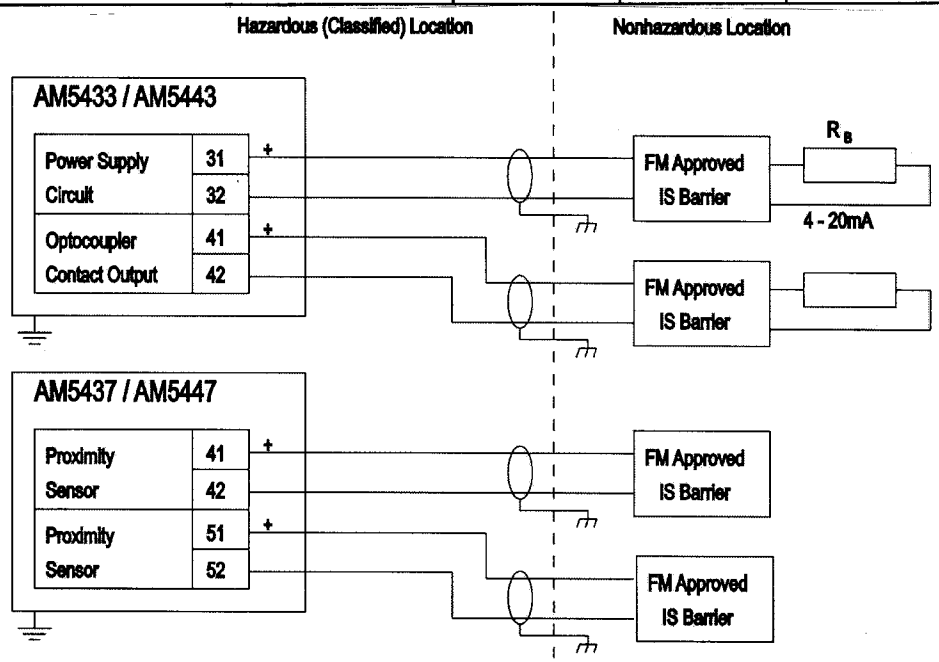
Project	Date	Description
1836570	2006/10/18	Alternate construction of flowmeter to evaluate alternate meter tube material

History

1336783 July 18, 2002 Update report drawings and omit conducting factory dielectric test.

1146812 April 15, 2002 Original Certification.

REV	AUTHORITY	REVISION DESCRIPTION	DWN BY	CHKD BY	APVD BY
1	0689948	NOTES UPDATED WITH CSA INFO.	HAMPTON 15APR05	—	DW Madden 15APR05



THIS DOCUMENT IS CONTROLLED FOR PRODUCT SAFETY

DO NOT CHANGE

WITHOUT PRIOR APPROVAL OF THE CERTIFICATIONS ADMINISTRATOR

Intrinsic Safety
Class I, Div 1, Groups A, B, C and D
Class II, Div 1, Groups E, F and G and Class III

Entity Parameters:

Models AM5433 / AM5443 Ambient Temperature Range: -55°C to +70°C
31/32 Vmax = 28V Imax = 110mA Pmax = 770mW Ci = 6nF Li = 204uH
41/42 Vmax = 15V Imax = 30mA Pmax = 115mW Ci = 3.6nF Li = 102uH

Models AM5437 / AM5447 Ambient Temperature Range: IS -55°C to +60°C, NI -55°C to +40°C
41/42, 51/52 Vmax = 16V Imax = 20mA Ci = 80nF Li = 500uH

CAUTION:
SUBSTITUTION OF COMPONENTS MAY IMPAIR INTRINSIC SAFETY.
DO NOT DISCONNECT EQUIPMENT UNLESS POWER HAS BEEN SWITCHED OFF OR THE AREA IS KNOWN TO BE NON-HAZARDOUS.

Notes:
1. The Intrinsic Safety Entity concept allows the interconnection of two FM and CSA Approved Intrinsically safe devices with entity parameters not specifically examined in combination as a system when:
   Uo or Voc or Vt ≤ Vmax, Io or Isc or It ≤ Imax, Ca or Co ≥ Ci + Ccable, La or Lo ≥ Li + Lcable, Po ≤ Pi.
2. Dust-tight conduit seal must be used when installed in Class II and Class III environments.
3. Control equipment connected to the Associated Apparatus must not use or generate more than 250 Vrms or Vdc.
4. Installation should be in accordance with ANSI/ISA RP12.6 "Installation of Intrinsically Safe Systems for Hazardous (Classified) Locations" and the National Electrical Code® (ANSI/NFPA 70) Sections 504, 505 and CEC.
5. The configuration of associated Apparatus must be Factory Mutual Research and CSA Approved under Entity Concept.
6. Associated Apparatus manufacturer's installation drawing must be followed when installing this equipment.
7. No revision to drawing without prior Factory Mutual Research and CSA Approval.
8. Use shielded twisted pair cable ONLY (as shown above).

I. S. CONTROL DRAWING AM54

ABB
WARMINSTER, PA 18974 USA

DWN	E. HAMPTON 10 JULY 03	ENGR		Q/E		PART NUMBER		REV
CHKD		MOD	AM54	M/E		SD-10-4074		1
SUPV		AUTH	DP1020-15-02					
REF DWG		B/M		SCALE- NONE		DRAWING NUMBER		