



CSA INTERNATIONAL

Certificate of Compliance

Certificate: 1145207 (95764)

Master Contract: 155943

Project: 2192792

Date Issued: 2009/08/21

Issued to: Delta M Corporation

Bethel Valley Industrial Park
1003 Larsen Dr.
Oak Ridge, TN 37830
USA
Attention: Julie Hebble

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



Issued by: Scott Wallace

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, Groups E, F and G; Class III, Div 1; Type 4:

- Microtuf Series Thermal Differential Point Level Switch, Models LS32CS-aaa-bb-ccc.cc-ddd-LE-ee (with integral Probe); or Remote version, Model LS32CS-000-00-000.00-ddd-RE-ee with Remote Probe, Model LS32CS-aaa-bb-ccc.cc-000-RP-ee; input rated 24/110/220V ac, 50/60Hz, 200/85/42mA; 24V dc, 100mA; relay contact rating 250V ac, 5A max; Temp Code T4A @ Max ambient 40 Deg C; MWP 3000 psi.

Model Code:

LS32CS - Level Switch series

aaa= Mounting/Process fitting (any alpha/numeric character, not relevant to certification)



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bb= Wetted Process Material (S4=304 stainless steel, SL=304L stainless steel, S6=316L stainless steel, A2=alloy 20, HB=hastelloy B, HC=hastelloy C, IO=inconel 600, MN=monel, SM=special material, or TI=titanium)

ccc.cc= Insertion Length (from 000.50 (12.7mm) to 120.00 (3048mm))

ddd= Electronics input power (24D=24Vdc, 24A=24Vac, 110=110Vac or 220=220Vac)

ee= Special Options (HT= high temperature sensor, LT= live tap, MT, medium temperature sensor, RT= RTD output, SW= stainless steel housing w/window, TO thermocouple output, XW= explosion proof window cover; other allowed markings but not relevant to certification: CA, CB, CE, CO, EN, SH, SHF, SPL, TC, TEE, TG and VI).

Zeros in the part number are just place holders with no options available

- Microtuf Series Thermal Differential Mass Flow Switch, Models FS42CS-aaa-bb-ccc.cc-ddd-LE-ee (with integral Probe); or Remote version, Model FS42CS-000-00-000.00-ddd-RE-ee with Remote Probe, Model FS42CS- aaa-bb-ccc.cc -000-RP-ee; input rated 24/110/220V ac, 50/60Hz, 200/85/42mA; 24V dc, 100mA; relay contact rating 250V ac, 5A max; Temp Code T4A @ Max ambient 40 Deg C; MWP 3000 psi.

Model Code:

FS42CS - Flow Switch series

aaa= Mounting/Process fitting (any alpha/numeric character, not relevant to certification)

bb= Wetted Process Material (S4=304 stainless steel, SL=304L stainless steel, S6=316L stainless steel, A2=alloy 20, HB=hastelloy B, HC=hastelloy C, IO=inconel 600, MN=monel, SM=special material, or TI=titanium)

ccc.cc= Insertion Length (from 000.50 (12.7mm) to 120.00 (3048mm))

ddd= Electronics input power (24D=24Vdc, 24A=24Vac, 110=110Vac or 220=220Vac)

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Zeros in the part number are just place holders with no options available

Notes:

1. If the process fluid temperature exceeds 40 °C, the device can not be used in a process atmosphere that has an ignition temperature of 120 °C increased by the difference of the fluid temperature and 40°C.



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APPLICABLE REQUIREMENTS

| | | |
|-------------------------------------|---|---|
| CSA Std C22.2 No 25-1966 Locations | - | Enclosures for Use in Class II, Groups E, F and G Hazardous Locations |
| CSA Std C22.2 No 30-M1986 Locations | - | 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 |

MARKINGS

The Markings appear on painted and stamped aluminum nameplate, which is a min. of 0.02 in thick and secured to the enclosure with screws or drive pins, in bottomed holes. The Certified enclosure nameplate (Killark, Adalet, or Akron) which bears all of the hazardous locations designations will remain fastened to the enclosure.

- CSA Monogram
- Company name: "Delta M Corporation" and/or file number "LR95764"
- Model designation: per the product section
- Date code/serial number or equivalent;
- Electrical ratings: per the product section
- Hazardous locations designations: "Class I, Div 1, Groups BCD; Class II, Div 1, Groups EFG; Class III, Div 1"
- Temperature Code Rating: "T4A"
- Maximum process pressure; "3000psi"
- Enclosure: "Type 4"
- WARNINGS
 - "CONDUIT SEALS MUST BE INSTALLED WITHIN 18 INCHES OF THE ENCLOSURE" or equivalent and
 - "DISCONNECT ALL SUPPLY CIRCUITS, AND INSURE THE AREA IS NON-HAZARDOUS BEFORE OPENING", 'KEEP COVER TIGHTLY CLOSED WHEN IN OPERATION', or equivalent and
 -



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The following warning may be located on the field wiring connector plate.

- "USE A SUPPLY WIRE SUITABLE FOR 10°C ABOVE AMBIENT"

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".



CERTIFICATE ADDENDUM

Issued by :
CSA INTERNATIONAL

Note: *This Addendum supplements the descriptive details pertaining to the following Certificate and is a part thereof. It is to be attached to the Certificate identified below.*

SUBMITTOR : Delta M Corporation

MASTER CONTRACT : 155943

FACTORY CONTRACT : 155944

CERTIFICATE/REPORT NO. : 1145207
(95764)

PROJECT NO. : 2192792

PRODUCT: Microtuf – Series Level &
Flow Switches

MODEL: ALL

INITIATED BY: **FIR DATE :** July 28, 1020

**ASSOCIATED
INSPECTION OFFICE :** Nashville

COPY TO : A.D. White <awhite@deltamcorp.com>; J.A. Hebble<jhebble@deltamcorp.com>

AUTHORIZED CHANGE : Class 2258-02

Report may be modified to include Panasonic Relay Part Numbers - JW1FSN-DC24V and - JW2SN-DC24V.

**ISSUE DATE OF
ADDENDUM :**

March 8, 2011

FQPH NAME :

Note: *Submittor is responsible for providing copies of this Addendum to the applicable factories.*