



CSA INTERNATIONAL

Certificate of Compliance

Certificate: 1497596 (LR 43394)

Master Contract: 159930

Project: 1534094

Date Issued: 2004/03/10

Issued to: **R. Stahl, Incorporated**
45 Northwestern Dr
Salem, New Hampshire 03079-4809
USA
Attention: Mr. Winni Faulring

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



Issued by: Ron Wildish

Authorized by: Nick Alfano, Operations
Manager

PRODUCTS

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

Ex nA [ib] IIC:

Intrinsic Safety Barriers, Type 9004; provides intrinsically safe circuits (non-linear) with entity parameters as listed below, when connected per installation drawing 9004611312. These devices must be mounted in a suitable enclosure in non-hazardous locations, Class I, Div. 2 or Class I, Zone 2 hazardous locations (temperature code T4 at Tamb = 60C). Maximum safe area voltage (Um) must not exceed 250Vrms.

Model 9004/0a-086-030-001; with output Entity Parameters $U_o = 8.6V$, $I_o = 30 \text{ mA}$; $P_o = 258 \text{ mW}$.

Model 9004/0a-086-050-001; with output Entity Parameters $U_o = 8.6V$, $I_o = 50 \text{ mA}$; $P_o = 430 \text{ mW}$.



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Model 9004/0a-086-100-001; with output Entity Parameters $U_o = 8.6V$, $I_o = 100 \text{ mA}$; $P_o = 860 \text{ mW}$.

Model 9004/0a-086-150-001; with output Entity Parameters $U_o = 8.6V$, $I_o = 150 \text{ mA}$; $P_o = 1290 \text{ mW}$.

Model 9004/0a-168-030-001; with output Entity Parameters $U_o = 16.8V$, $I_o = 30 \text{ mA}$; $P_o = 504 \text{ mW}$.

Model 9004/0a-168-050-001; with output Entity Parameters $U_o = 16.8V$, $I_o = 50 \text{ mA}$; $P_o = 840 \text{ mW}$.

Model 9004/0a-200-030-001; with output Entity Parameters $U_o = 20V$, $I_o = 30 \text{ mA}$; $P_o = 600 \text{ mW}$.

Model 9004/0a-263-025-001; with output Entity Parameters $U_o = 26.3V$, $I_o = 25 \text{ mA}$; $P_o = 657.5 \text{ mW}$.

Model 9004/5a-206-030-001; with output Entity Parameters $U_o = 20.6V$, $I_o = 30 \text{ mA}$; $P_o = 618 \text{ mW}$.

Model 9004/5a-220-030-001; with output Entity Parameters $U_o = 22V$, $I_o = 30 \text{ mA}$; $P_o = 660 \text{ mW}$.

Note: 1. $a = 0$ for negative; 1 for positive polarity type

2. For further details on Certification parameters, see Descriptive and Test Report.

Ex nA [ib] IIB:

Intrinsic Safety Barriers, Type 9004; provides intrinsically safe circuits (non-linear) with entity parameters as listed below, when connected per installation drawing 9004611312. These devices must be mounted in a suitable enclosure in non-hazardous locations, Class I, Div. 2 or Class I, Zone 2 hazardous locations (temperature code T4 at $T_{amb} = 60C$). Maximum safe area voltage (U_m) must not exceed 250Vrms.

Model 9004/0a-168-100-001; with output Entity Parameters $U_o = 16.8V$, $I_o = 100 \text{ mA}$; $P_o = 1680 \text{ mW}$.

Model 9004/0a-172-140-001; with output Entity Parameters $U_o = 17.2V$, $I_o = 140 \text{ mA}$; $P_o = 2408 \text{ mW}$.

Model 9004/0a-200-050-001; with output Entity Parameters $U_o = 20V$, $I_o = 50 \text{ mA}$; $P_o = 1000 \text{ mW}$.

Model 9004/0a-200-095-001; with output Entity Parameters $U_o = 20V$, $I_o = 95 \text{ mA}$; $P_o = 1900 \text{ mW}$.

Model 9004/0a-263-030-001; with output Entity Parameters $U_o = 26.3V$, $I_o = 30 \text{ mA}$; $P_o = 789 \text{ mW}$.

Model 9004/0a-263-050-001; with output Entity Parameters $U_o = 26.3V$, $I_o = 50 \text{ mA}$; $P_o = 1315 \text{ mW}$.

Model 9004/0a-280-025-001; with output Entity Parameters $U_o = 28V$, $I_o = 25 \text{ mA}$; $P_o = 700 \text{ mW}$.

Model 9004/0a-280-045-001; with output Entity Parameters $U_o = 28V$, $I_o = 45 \text{ mA}$; $P_o = 1260 \text{ mW}$.

Model 9004/0a-315-022-001; with output Entity Parameters $U_o = 31.5V$, $I_o = 22 \text{ mA}$; $P_o = 693 \text{ mW}$.

Model 9004/0a-315-025-001; with output Entity Parameters $U_o = 31.5V$, $I_o = 25 \text{ mA}$; $P_o = 787.5 \text{ mW}$.



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Model 9004/5a-206-050-001; with output Entity Parameters $U_o = 20.6V$, $I_o = 50 \text{ mA}$; $P_o = 1030 \text{ mW}$.

Model 9004/5a-206-085-001; with output Entity Parameters $U_o = 20.6V$, $I_o = 85 \text{ mA}$; $P_o = 1751 \text{ mW}$.

Notes: 1. $a = 0$ for negative; 1 for positive polarity type

2. For further details on Certification parameters, see Descriptive and Test Report.

Ex nA [ib] IIC:

Class I, Groups A, B, C and D; Class II, Groups E, F and G; Class III:

Intrinsic Safety Barriers, Type 9004; provides intrinsically safe circuits with entity parameters as listed below, when connected per installation drawing 9004611312. These devices must be mounted in a suitable enclosure in non-hazardous locations, Class I, Div. 2 or Class I, Zone 2 hazardous locations (temperature code T4 at $T_{amb} = 60C$). Maximum safe area voltage (U_m) must not exceed 250Vrms.

Model 9004/61-220-035-001; with output Entity Parameters $U_o = 22V$, $I_o = 35 \text{ mA}$; $P_o = 770 \text{ mW}$.

Model 9004/61-232-028-041; with output Entity Parameters $U_o = 23.2V$, $I_o = 28 \text{ mA}$; $P_o = 649.6 \text{ mW}$.

Note: For further details on Certification parameters, see Descriptive and Test Report.

APPLICABLE REQUIREMENTS

CAN/CSA-E60079-0:02 - Electrical Apparatus for Explosive Gas Atmospheres??Part 0: General Requirements

CAN/CSA- E60079-11:02 - Electrical apparatus for explosive gas atmospheres, Part 11: Intrinsic safety "i"

CAN/CSA-E60079-15:02 - Electrical apparatus for explosive gas atmospheres, Part 15: Electrical apparatus with type of protection "n"

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

CAN/CSA- No. 157-92 - Intrinsically Safe and Non-incendive Electrical Equipment for Use in Hazardous Locations



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
1534094	2004/03/10	Update of Report 1497596 to Cover Report Corrections
1497596	2004/01/09	Original Certification. New Generation of Safety Barriers for Hazardous Locations