



Certificate of Compliance

Certificate: 1921239

Master Contract: 150323

Project: 80179349

Date Issued: 2024-05-22

Issued To: Banner Engineering Corporation
9714 Tenth Ave N
Minneapolis, Minnesota, 55441
United States

Attention: Mike Carlson

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.



Issued by: Ronald (Ron) Bell
Ronald (Ron) Bell

PRODUCTS

- CLASS 2258 02 - PROCESS CONTROL EQUIPMENT - For Hazardous Locations
- CLASS 2258 82 - PROCESS CONTROL EQUIPMENT - For Hazardous Locations - CERTIFIED TO U.S. STANDARDS

PART A:

Class I, Div. 2, Groups A, B, C and D T3A

Ambient Temperature range: -40°C to +80°C.

- Wireless Network Controller Model Nos. DX91*9**6W*** (900MHz Radio, Internal Antenna), DX91*9**6S*** (900MHz Radio, External Antenna), DX91*2**6W*** (2.4GHz Radio, Internal Antenna), DX91*2**6S*** (2.4GHz Radio, External Antenna), DX90*9**6W*** (900MHz Radio, Internal Antenna), DX90*9**6S*** (900MHz Radio, External Antenna), DX90*2**6W*** (2.4GHz Radio, Internal Antenna), DX90*2**6S*** (2.4GHz Radio, External Antenna) and DX95**** (No Radio, No Antenna). Supply rated 30Vdc, 1.1Amax. Install per Control Document 134217. **BANNER P/N**

1566 REV. J



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Notes:

1. “*” in the model number may be a letter representing the specific Trim Level. “**” in the model number may be letters or numbers representing the Network Responsibility. “***” in the model number may be letters or numbers representing the I/O Configuration.
2. The Wireless Network Controllers must be installed in a suitable enclosure with provision for connection of Division 2 wiring methods in accordance with local codes as acceptable to the local inspection authority having jurisdiction.

PART B:

Ex/AEx nA IIC T4

Class I, Div. 2, Groups A, B, C and D T4

Ambient Temperature range: -40°C to +80°C.

- Wireless Network Controller Model Nos. DX80*9*6S-*** (1 Watt 900MHz Radio, 10-30V Power, External Antenna), DX80*2*6S-*** (2.4GHz Radio, 10-30V Power, External Antenna), DX80*9*6S-P***C (1 Watt 900MHz Radio, 10-30V Power, External Antenna, Plug Connect), DX80*2*6S-P***C (2.4GHz Radio, 10-30V Power, External Antenna, Plug Connect), DX80*R9M-H** (Data Radio, 1Watt 900MHz Radio, 10-30V Power, External Antenna), DX80*R2M-H** (Data Radio, 2.4GHz Radio, 10-30V Power, External Antenna), DX80*R9M-H*C (Data Radio, 1Watt 900MHz Radio, 10-30V Power, External Antenna, Plug Connect), DX80*R2M-H*C (Data Radio, 2.4GHz Radio, 10-30V Power, External Antenna, Plug Connect), DX80G2M6-QC (Gateway, 10-30V Power, External Antenna, Plug Connect), DX80*9*6S*****C (900MHz Radio, 10-30V Power, External Antenna, Plug Connect), DX80*9*6W*****C (900MHz Radio, 10-30V Power, Internal Antenna, Plug Connect), DX80*2*6S*****C (2.4GHz Radio, 10-30V Power, External Antenna, Plug Connect), DX80*2*6W*****C (2.4GHz Radio, 10-30V Power, Internal Antenna, Plug Connect), DX70*9*6S*****C (900MHz Radio, 10-30V Power, External Antenna, Plug Connect), DX70*9*6W*****C (900MHz Radio, 10-30V Power, Internal Antenna, Plug Connect), DX70*2*6S*****C (2.4GHz Radio, 10-30V Power, External Antenna, Plug Connect), DX70*2*6W*****C (2.4GHz Radio, 10-30V Power, Internal Antenna, Plug Connect) and DX85*****C (No Radio, No Antenna, Plug Connect). Supply rated 30Vdc, 1.1Amax. Install per Control Document 143086.

Notes/Special Condition for Safe Use:

1. “*” in the model number may be a letter, number or blank representing specific options.
2. The Wireless Network Controllers must be installed in a suitable enclosure per Control Document 143086 with provision for connection of Division 2 / Zone 2 wiring methods in accordance with local codes as acceptable to the local inspection authority having jurisdiction.

- Wireless Network Controller Model Nos. DX80G9M2S (Gateway, 1Watt 900MHz Radio, Flex Power, External Antenna), DX80G2M2S (Gateway, 2.4GHz Radio, Flex Power, External Antenna),



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DX80DR9M (Data Radio, 1Watt 900MHz Radio, Flex Power, External Antenna), DX80DR2M (Data Radio, 2.4GHz Radio, Flex Power, External Antenna), DX80*9*2S-P*** (1Watt 900MHz Radio, Flex Power, External Antenna), DX80*2*2S-P*** (2.4GHz Radio, Flex Power, External Antenna), DX80*9*2S-P***C (1Watt 900MHz Radio, Flex Power, External Antenna, Plug Connect), DX80*2*2S-P***C (2.4GHz Radio, Flex Power, External Antenna, Plug Connect), DX80*R9M-H** (Data Radio, 1Watt 900MHz Radio, Flex Power, External Antenna), DX80*R2M-H** (Data Radio, 2.4GHz Radio, Flex Power, External Antenna), DX80*R9M-H**C (Data Radio, 1Watt 900MHz Radio, Flex Power, External Antenna, Plug Connect), DX80*R2M-H**C (Data Radio, 2.4GHz Radio, Flex Power, External Antenna, Plug Connect), DX80N9*2S*****C (Node, 900MHz Radio, Flex Power, External Antenna, Plug Connect), DX80N9*2W*****C (Node, 900MHz Radio, Flex Power, Internal Antenna, Plug Connect), DX80N2*2S*****C (Node, 2.4GHz Radio, Flex Power, External Antenna, Plug Connect) and DX80N2*2W*****C (Node, 2.4GHz Radio, Flex Power, Internal Antenna, Plug Connect). Supply rated 30Vdc, 1.1Amax or powered by DX81 FlexPower Battery Supply (which uses one user-replaceable XENO XL-205F lithium cell). Install per Control Document 143086.

Notes/Special Condition for Safe Use:

1. “*” in the model number may be a letter, number or blank representing specific options.
 2. The Wireless Network Controllers and FlexPower Battery Supply must be installed in a suitable enclosure per Control Document 143086 with provision for connection of Division 2 / Zone 2 wiring methods in accordance with local codes as acceptable to the local inspection authority having jurisdiction.
- Wireless Network Controller Model Nos. DX80N9X1S-P**E (Node, 1Watt 900MHz Radio, Flex Power or Internal Battery Power, External Antenna), DX80N2X1S-P**E (Node, 2.4GHz Radio, Flex Power or Internal Battery Power, External Antenna), DX80DR9M-H**E (Data Radio, 1Watt 900MHz Radio, Flex Power or Internal Battery Power, External Antenna), and DX80DR2M-H**E (Data Radio, 2.4GHz Radio, Flex Power or Internal Battery Power, External Antenna). Supply rated 30Vdc, 1.1Amax, or supply rated 5Vdc, or powered by one user-replaceable XENO XL-205F lithium cell. Install per Control Document 143086.

Notes/Special Condition for Safe Use:

1. “*” in the model number may be a letter, number or blank representing specific options.
 2. The Wireless Network Controllers must be installed in a suitable enclosure per Control Document 143086 with provision for connection of Division 2 / Zone 2 wiring methods in accordance with local codes as acceptable to the local inspection authority having jurisdiction.
- Wireless Network Controller Model Nos. DX80N9X1S-P6 (Node, 1Watt 900MHz Radio, Internal Battery Power, External Antenna), DX80N2X1S-P6 (Node, 2.4GHz Radio, Internal Battery Power, External Antenna), DX80DR9M-H6 (Data Radio, 1Watt 900MHz Radio, Internal Battery Power, External Antenna), DX80DR2M-H6 (Data Radio, 2.4GHz Radio, Internal Battery Power, External



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Antenna), DX80N9*1S**** (Node, 900MHz Radio, Internal Battery Power, External Antenna), DX80N9*1W**** (Node, 900MHz Radio, Internal Battery Power, Internal Antenna), DX80N2*1S**** (Node, 2.4GHz Radio, Internal Battery Power, External Antenna) and DX80N2*1W**** (Node, 2.4GHz Radio, Internal Battery Power, Internal Antenna) powered by one user-replaceable XENO XL-205F lithium cell. Install per Control Document 143086.

Notes/Special Condition for Safe Use:

1. “*” in the model number may be a letter, number or blank representing specific options.
2. The Wireless Network Controllers must be installed in a suitable enclosure per Control Document 143086 with provision for connection of Division 2 / Zone 2 wiring methods in accordance with local codes as acceptable to the local inspection authority having jurisdiction.

Class I, Div. 2, Groups A, B, C and D T4

Ambient Temperature range: -40°C to +80°C.

- Serial Sensors Model Nos. M12FTH3Q (Modbus RS485 Communications, 3.6-5.5V or 12-24V Power) and M12FTH4Q (Single Wire Serial Communications, 3.6-5.5V Power). Install per Control Document 143086.

Notes/Special Condition for Safe Use:

1. The Serial Sensor’s connection end must be installed in a suitable enclosure per Control Document 143086. Sensing end may be installed outside of suitable enclosure if ingress protection rating is maintained.

Ex/AEx nA IIC T4

Class I, Div. 2, Groups A, B, C and D T4; Class II, Groups E, F and G T4; Class III T4; Type 4X

Enclosure:

Ambient Temperature range: -40°C to +80°C.

- Wireless Network Controller Model Nos. DX80*9*6S*****B (900MHz Radio, 10-30V Power, External Antenna, Limatherm) DX80*9*6W*****B (900MHz Radio, 10-30V Power, Internal Antenna, Limatherm) DX80*2*6S*****B (2.4GHz Radio, 10-30V Power, External Antenna, Limatherm) DX80*2*6W*****B (2.4GHz Radio, 10-30V Power, Internal Antenna, Limatherm). Supply rated 30Vdc, 1.1Amax. Install per Control Document 143086.

Notes/Special Condition for Safe Use:

1. “*” in the model number may be a letter, number or blank representing specific options.



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APPLICABLE REQUIREMENTS

CSA Std. C22.2 No. 142-M1987	-	Process Control Equipment
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. 60079-0-07	-	Electrical Apparatus for Explosive Gas Atmospheres - Part 0: General Requirements
CAN/CSA-E60079-15-02 (R2006)	-	Electrical Apparatus for Explosive Gas Atmospheres - Part 15: Type of Protection "n"
CSA Std. C22.2 No. 25-1966	-	Enclosures for Use in Class II Groups E, F, and G Hazardous Locations
CAN/CSA-C22.2 No. 94-M91	-	Special Purpose Enclosures
UL Std. No. 916:1998	-	Energy Management Equipment
ANSI/ISA-12.12.01-2007	-	Nonincendive Electrical Equipment for Use in Class I and Class II, Division 2 and Class III, Divisions 1 and 2 Hazardous (Classified) Locations
UL 60079-0:2005	-	Electrical Apparatus for Explosive Gas Atmospheres - Part 0: General Requirements
UL 60079-15:2002	-	Electrical Apparatus for Explosive Gas Atmospheres - Part 15: Electrical Apparatus with Type of Protection "n"
UL 1203:2006	-	Explosion-Proof and Dust-Ignition-Proof Electrical Equipment for Use in Hazardous (Classified) Locations
UL 50E 2 nd Ed:2007	-	Enclosures for Electrical Equipment, -Environmental Considerations

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.

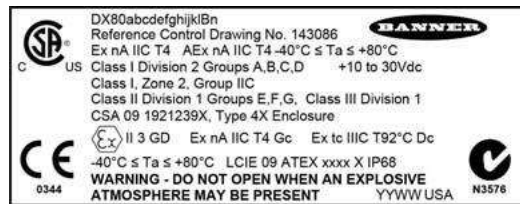
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DX80 Metal Enclosure Label

Ink printed onto an Aluminum plate that is 25mm X 65mm and 0.5mm thick. This plate will then be screwed onto the housing using 2 blind screws represented here with the two crossed circles on either side of the plate.

See page 3 for a description of the abcdefghijklBn suffix Model numbering scheme. 900MHz models will not display the C-Tick symbol.



Markings are located on CSA accepted labels (plastic enclosure versions) or a 0.5mm ink printed aluminum plate secured with blind screws (metallic enclosure versions) as per label drawing 134430.

- CSA Monogram with “C/US” Indicator
- CSA certificate number (where applicable)
- Company name
- Model number
- Serial number
- Electrical ratings
- Ex nA IIC / AEx nA IIC (where applicable)
- Hazardous locations designation
- Temperature code rating
- Ambient temperature range

Warning

- Warning - Potential Electrostatic Charging Hazard, Clean only with a damp Cloth (where applicable)
- Warning - Explosion Hazard- Substitution of components may impair suitability for Class I, Division 2
- Warning - Explosion Hazard- Do not disconnect equipment unless power has been switched off or the area is known to be non hazardous
- CSA 09 CA1921239 X

Note: The last two warnings appear on the control drawing 134217 and 143086.

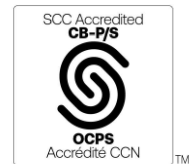


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Notes:

Products certified under Class C225802, C225882 have been certified under CSA's ISO/IEC 17065 accreditation with the Standards Council of Canada (SCC). www.scc.ca





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
80179349	2024-05-22	Update of Certificate 1921239 to address issues noted in FC# 226070, FIR dated May 31, 2023, and FIR dated Dec. 6, 2023, and FIR dated March 19, 2024. Marking needs review, revised descriptive drawing required.
80153555	2023-02-10	Update report 1921239 for addition of alternate equivalent component enclosure material Tristar PC-10FRN. This project assumes there will be a follow up project to perform mandatory standard updates.
80121014	2022-06-17	Update report 1921239 to address FIR's dated March 17, 2021, Aug. 24, 2020, June 18, 2020 and Dec. 4, 2019.
70192069	2018-07-31	Correction of errors in report and profile under project 70180491
70180491	2018-04-26	To review and add alternate plastic material for enclosure base in the report 1921239.
70012202	2015-03-20	Update of Report 150323-1921239 to cover Minor document updates, New models similar to previously certified models, addition of New models.
2562697	2012-12-10	Update to report to cover use of alternate connector glue types and to replace drawings with latest revision.
2406567	2011-03-31	Update to cover minor alternative constructions and drawing revisions.
2095494	2009-03-11	Update to add new models DX70, DX80 and DX85
1966858	2007-10-23	Wireless Network Controllers. Update to Report 150323-1921239 to cover minor change to Control Drg
1921239	2007-06-28	Original Certification