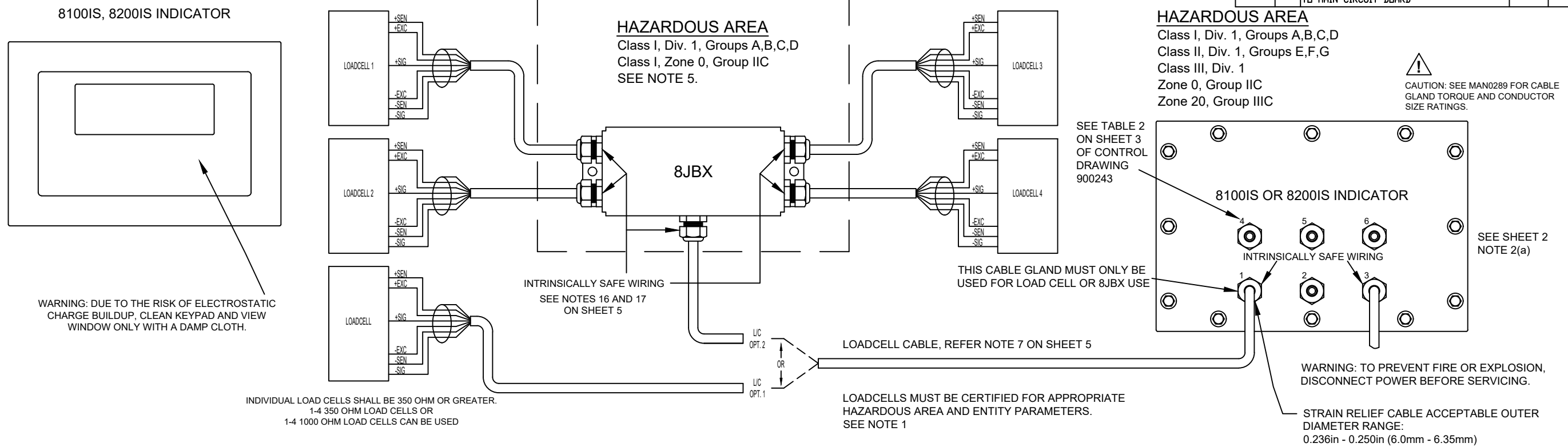
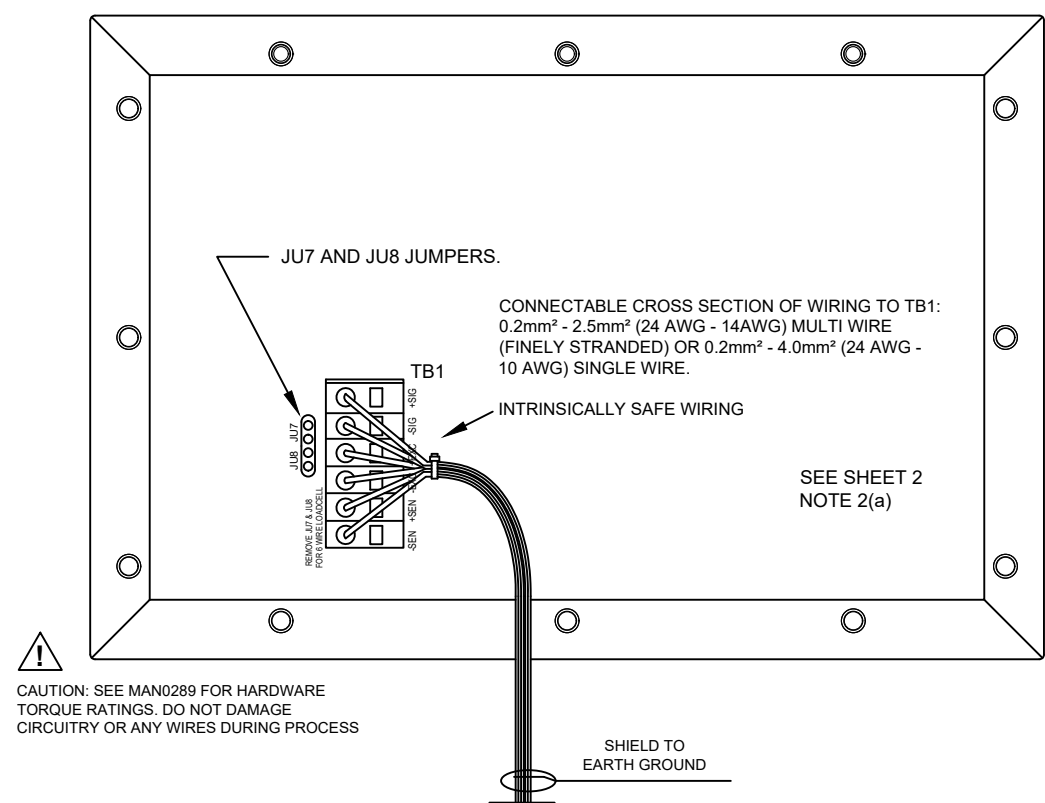


ECD #	REV	REVISIONS	DATE	APP
18-037	01	BLOCK CHANGED/ABBREVIATIONS/NOTES	5/7/18	J.T
18-073	02	UL MARKUPS	11/5/18	J.T
19-006	03	MORE UL MARKUPS	01/11/19	J.T
19-008	04	STANDARD CONFIGURATION	01/23/19	J.T
19-011	05	TABLE 2 INTRODUCTION	02/06/19	J.T
19-020	06	FINAL UL MARKUPS	03/01/19	J.T
20-010	07	PCA0368 R9 UPDATE FIBER OPTIC MOVE TO MAIN CIRCUIT BOARD	11/31/20	M.P

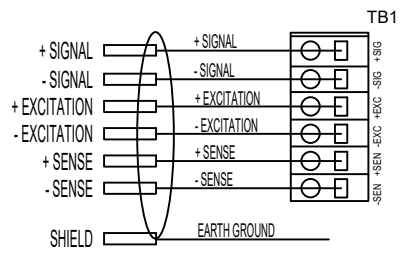
LOAD CELL AND SUMMING BOARD INSTALLATION DIAGRAM



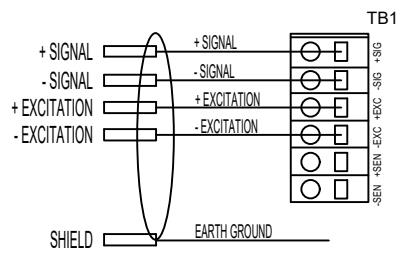
8100IS, 8200IS INDICATOR INTRINSICALLY SAFE OUTPUT WIRING AND LOADCELL CONFIGURATION JUMPERS



6-WIRE LOADCELL CONNECTION (REMOVE JU7 AND JU8)



4-WIRE LOADCELL CONNECTION (INSERT JU7 AND JU8)



OUTPUT ENTITY PARAMETERS					
DESCRIPTION (LOCATION)	U _o	I _o	P _o	C _o	L _o
LOADCELL (TB1)	7.14 V	0.7076 A	0.895 W	10.8 uF	71 uH

- THESE OUTPUTS MAY ALSO BE CONNECTED TO SIMPLE APPARATUS AS DEFINED IN ARTICLE 504.2 AND INSTALLED AND TEMPERATURE CLASSIFIED IN ACCORDANCE WITH ARTICLE 504.10(D) OF THE NATIONAL ELECTRICAL CODE (ANSI/NFPA 70), OR OTHER LOCAL CODES, AS APPLICABLE.
- SELECTED INTRINSICALLY SAFE EQUIPMENT/LOADCELLS (FOR USE WITH THESE INTRINSICALLY SAFE DORAN OUTPUTS) MUST BE THIRD PARTY LISTED AS INTRINSICALLY SAFE FOR THE APPLICATION (UNLESS DEEMED SIMPLE APPARATUS PER NOTE 1), AND HAVE INTRINSICALLY SAFE ENTITY PARAMETERS CONFORMING WITH TABLE 1 BELOW

TABLE 1	
I.S. Equipment/Loadcells	I.S. Doran Outputs
V max (or U _i)	≥ Voc or Vt (or U _o)
I max (or I _i)	≥ Isc or It (or I _o)
P max, P _i	≥ Po
C _i + C _{able}	≤ Ca (or Co)
L _i + L _{able}	≤ La (or Lo)

- SEE PAGE 5 (NOTES FOR PAGE 1 OF CONTROL DRAWING No. 900243)

WARNING

READ AND UNDERSTAND COMPLETELY USER MANUAL NO. MAN0289 FOR THESE DEVICES BEFORE INSTALLATION OR OPERATION

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SYSTEM CONTROL DRAWING

DATE:	DRAWN BY:	DRAWING NUMBER	SHEET NUMBER	REV
11/31/20	J.TORRES	900243	SHEET 1 OF 5	07

ECD #	REV	REVISIONS	DATE	APP
18-037	01	BLOCK CHANGED/ABBREVIATIONS/NOTES	5/7/18	J.T
18-073	02	UL MARKUPS	11/5/18	J.T
19-006	03	MORE UL MARKUPS	01/11/19	J.T
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19-011	05	TABLE 2 INTRODUCTION	02/06/19	J.T
19-020	06	FINAL UL MARKUPS	03/01/19	J.T
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POWER SUPPLY INSTALLATION DIAGRAM

UNCLASSIFIED (NON-HAZARDOUS AREA)
OR HAZARDOUS AREA

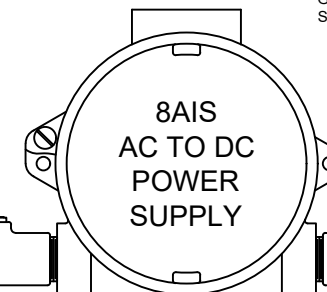
Class I, Div 1, Groups B,C,D
Class II, Div 1, Groups E,F,G
Class III, Div. 1
Class I, Zone 1, Group IIC
Zone 21, Group IIIC

UNCLASSIFIED
(NON-HAZARDOUS)
AREA

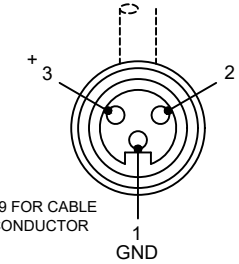
AC MAINS
120VAC
50/60Hz
NOTE 3.

BLK: L
WHT: N
GRN: GND

CONDUIT, SEE NOTE 1.



CAUTION: SEE MAN0289 FOR CABLE GLAND TORQUE AND CONDUCTOR SIZE RATINGS.



PIN 1: GREEN/YELLOW
PIN 2: BROWN
PIN 3: BLUE

INTRINSICALLY SAFE WIRING

INTRINSICALLY SAFE WIRING, NOTE 2
SEE NOTE 2(a)

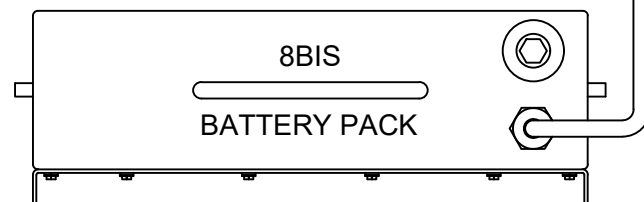
LG. 1m MAX.

OPTIONAL POWER EXTENSION CABLE.
WCB0234; 3m,
WCB0235; 6m.

8CHG
BATTERY CHARGER



8BIS
BATTERY PACK

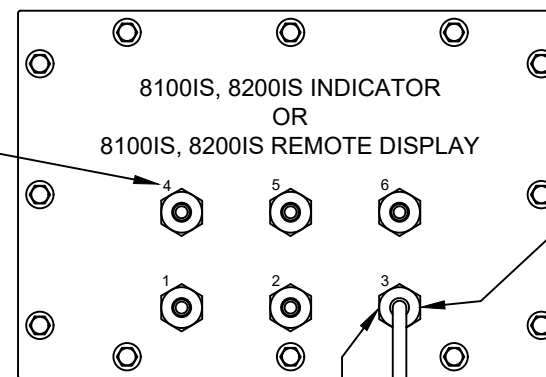


CHARGE BATTERY IN AN UNCLASSIFIED (NON-HAZARDOUS) AREA ONLY

HAZARDOUS AREA

Class I, Div 1, Groups A,B,C,D
Class II, Div 1, Groups E,F,G
Class III, Div. 1
Zone 0, Group IIC
Zone 20, Group IIIC

SEE TABLE 2 ON
SHEET 3 OF
CONTROL
DRAWING
900243



ELECTRICAL CONNECTION ONLY. DO NOT USE THIS PORT FOR ANY FIBER OPTIC CONNECTION



CAUTION: SEE MAN0289 FOR CABLE GLAND TORQUE AND CONDUCTOR SIZE RATINGS.

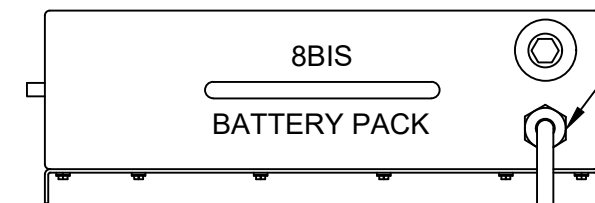
INTRINSICALLY SAFE WIRING

SEE NOTE 2(a)

HAZARDOUS AREA

Class I, Div 1, Groups A,B,C,D
Class II, Div 1, Groups E,F,G
Class III, Div. 1
Zone 0, Group IIC
Zone 20, Group IIIC

INTRINSICALLY SAFE WIRING



CAUTION: SEE MAN0289 FOR CABLE GLAND TORQUE AND CONDUCTOR SIZE RATINGS.

LG. 1M MAX.

PWR.

OPT. 2

OR

PWR.

OPT. 1

WARNING: POWER DOWN INDICATOR/REMOTE DISPLAY BEFORE REMOVING BATTERY PACK. BATTERY PACK MUST BE CHARGED IN AN UNCLASSIFIED (NON-HAZARDOUS) AREA ONLY

NOTES:

- CONDUIT, FIELD WIRING AND SEALS SHALL COMPLY WITH NATIONAL AND LOCAL CODES OF THE AUTHORITY HAVING JURISDICTION (AHJ)
- INTRINSICALLY SAFE WIRING BETWEEN POWER SUPPLY AND INDICATOR/REMOTE DISPLAY SHALL USE ONLY FACTORY SUPPLIED CABLES.
- 2.a. BEFORE INSTALLATION, AND BEFORE CONNECTING/DISCONNECTING ANY FACTORY SUPPLIED CABLES, OR ANY FIELD WIRING FOR THE 8100IS/8200IS INDICATOR/REMOTE DISPLAY, ENSURE CONNECTORS ARE FREE OF DUST/DEBRIS AND ENSURE NO POTENTIALLY IGNITABLE DUST ATMOSPHERES ARE PRESENT.
- MAXIMUM NON-HAZARDOUS LOCATION VOLTAGE (Um) MUST NOT EXCEED 120V AND MUST BE AC ONLY.
- ALL GROUNDING CONNECTIONS MUST BE LESS THAN 1 OHM RESISTANCE TO EARTH GROUND.
- OPERATING AMBIENT TEMPERATURE RANGE: -10°C TO +40°C
- BATTERY CHARGER RATED AMBIENT IS -10°C TO +30°C
- INTRINSICALLY SAFE WIRING SHALL BE IDENTIFIED AS SUCH WITH LABELS PLACED NO MORE THAN 7.62M (25FT) APART. THE COLOR LIGHT BLUE IS INTERNATIONALLY RECOGNIZED AS IDENTIFYING INTRINSICALLY SAFE WIRING.
- SEE PAGE 5 (NOTES FOR PAGE 2 OF CONTROL DRAWING No. 900243)

WARNING

READ AND UNDERSTAND COMPLETELY USER MANUAL NO. MAN0289 FOR THESE DEVICES BEFORE INSTALLATION OR OPERATION

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SYSTEM CONTROL DRAWING

DATE:	DRAWN BY:	DRAWING NUMBER	SHEET NUMBER	REV
11/31/20	J.TORRES	900243	SHEET 2 OF 5	07

ECD #	REV	REVISIONS	DATE	APP
18-037	01	BLOCK CHANGED/ABBREVIATIONS/NOTES	5/7/18	J.T
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FIBER OPTIC INTERFACE



CAUTION: SEE MAN0289 FOR CABLE CLAND TORQUE AND CONDUCTOR SIZE RATINGS.

HAZARDOUS AREA

Class I, Div 1, Groups A,B,C,D
 Class II, Div 1, Groups E,F,G
 Class III, Div. 1
 Zone 0, Group IIC
 Zone 20, Group IIIC

**UNCLASSIFIED
(NON-HAZARDOUS
AREA)**

8FB
FIBER OPTIC
CONVERTOR

8FB
FIBER OPTIC
CONVERTOR

FIBER OPTIC CABLES MUST BE PROVIDED DURING THE FIELD INSTALLATION
 FIBER OPTIC CABLE, PORT #2 SEE NOTE 3

FIBER OPTIC CABLE TO SAFE AREA EQUIPMENT

FIBER OPTIC CABLE, PORT #1 SEE NOTE 3

SEE TABLE 2

8100IS OR 8200IS INDICATOR

SEE TABLE 2

8100IS OR 8200IS
REMOTE DISPLAY

SEE SHEET 2
NOTE 2(a)

SEE PAGE 2 FOR
POWER CONNECTION

SEE PAGE 2 FOR
POWER CONNECTION

FIBER OPTIC CONNECTION ONLY. DO NOT USE
THESE PORTS FOR ANY ELECTRICAL CONNECTION

FIBER
OPT. 1

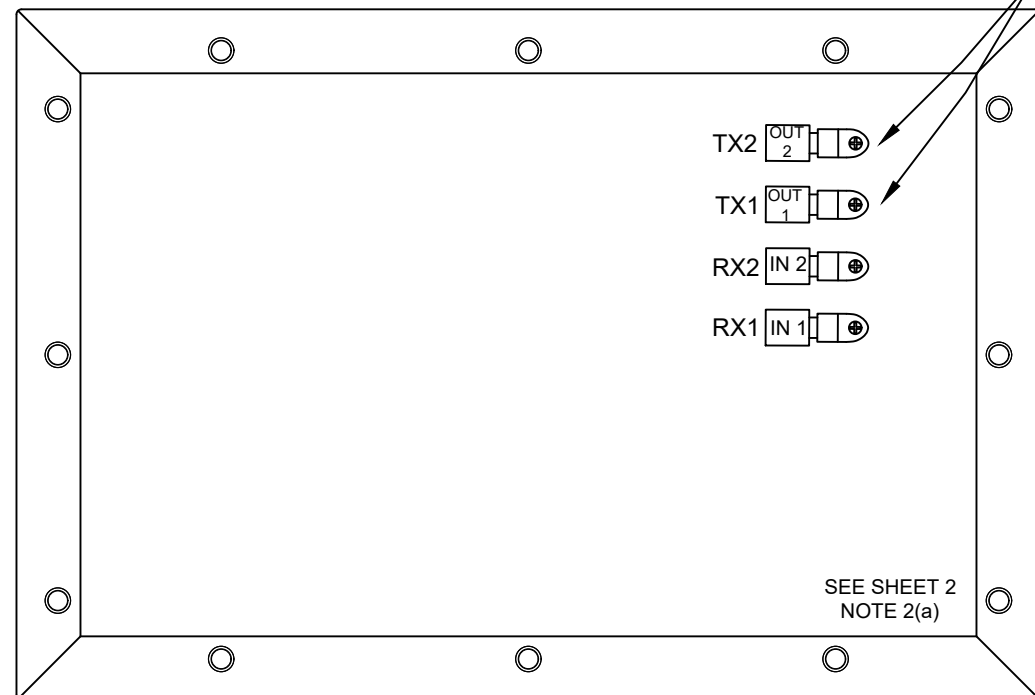
OR

FIBER
OPT. 2

NOTES:

1. OPERATING AMBIENT TEMPERATURE RANGE: -10°C TO +40°C (EXCEPT 8CHG RANGE: -10°C TO +30°C)
2. NOTE: THE 8100IS OR 8200IS REMOTE DISPLAY REQUIRES A SEPARATE POWER SUPPLY OR BATTERY PACK.
3. ANY FIBER OPTIC CABLES SHALL BE INSTALLED IN ACCORDANCE WITH ARTICLES 500.8, 501.10, 501.15, 502.10, 502.15, 503, 505.15, 505.16, 506.9, AND 506.15 OF THE NATIONAL ELECTRICAL CODE (ANSI/NFPA 70) OR OTHER LOCAL CODES, AS APPLICABLE
4. MODEL 8FB WAS EVALUATED AS OPEN EQUIPMENT. OPEN EQUIPMENT IS INTENDED TO BE FIELD INSTALLED WITHIN A SEPARATE OVERALL ENCLOSURE OR END-PRODUCT EQUIPMENT ENCLOSURE.
5. RUN EACH CABLE PAIRS THRU GLAND TO THE DEVICES FIBER OPTIC PORTS. INSERT MARKED CABLE TO RX(IN) PORT AND THE UNMARKED TO TX(OUT) PORT.

8100IS OR 8200IS INDICATOR/REMOTE DISPLAY (INTERNAL VIEW)



INSERT DOTTED FIBER
CABLE INTO BLACK
CONNECTOR AT TX2, TX1.

SEE SHEET 2
NOTE 2(a)

TABLE 2

I/O Port Number	8100IS Indicator	8200IS Indicator	8100IS Remote Display	8200IS Remote Display
1	L	L	(SS)	(SS)
2	F	F	F	F
3	P	P	P	P
4	F	F	(SS)	(SS)
5	RS	RS	(SS)	(SS)
6	RS	RS	(SS)	(SS)

KEY:

L - LOAD CELL OR 8JBX CONNECTION
 F - FIBER OPTIC ONLY
 P - I.S. POWER INPUT ONLY
 RS - REMOTE SWITCH OUTPUT ONLY
 (SS) - STAINLESS STEEL PLUG



CAUTION: SEE MAN0289 FOR HARDWARE
TORQUE RATINGS. DO NOT DAMAGE
CIRCUITRY OR ANY WIRES DURING PROCESS

WARNING

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FOR THESE DEVICES BEFORE INSTALLATION OR OPERATION

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SYSTEM CONTROL DRAWING

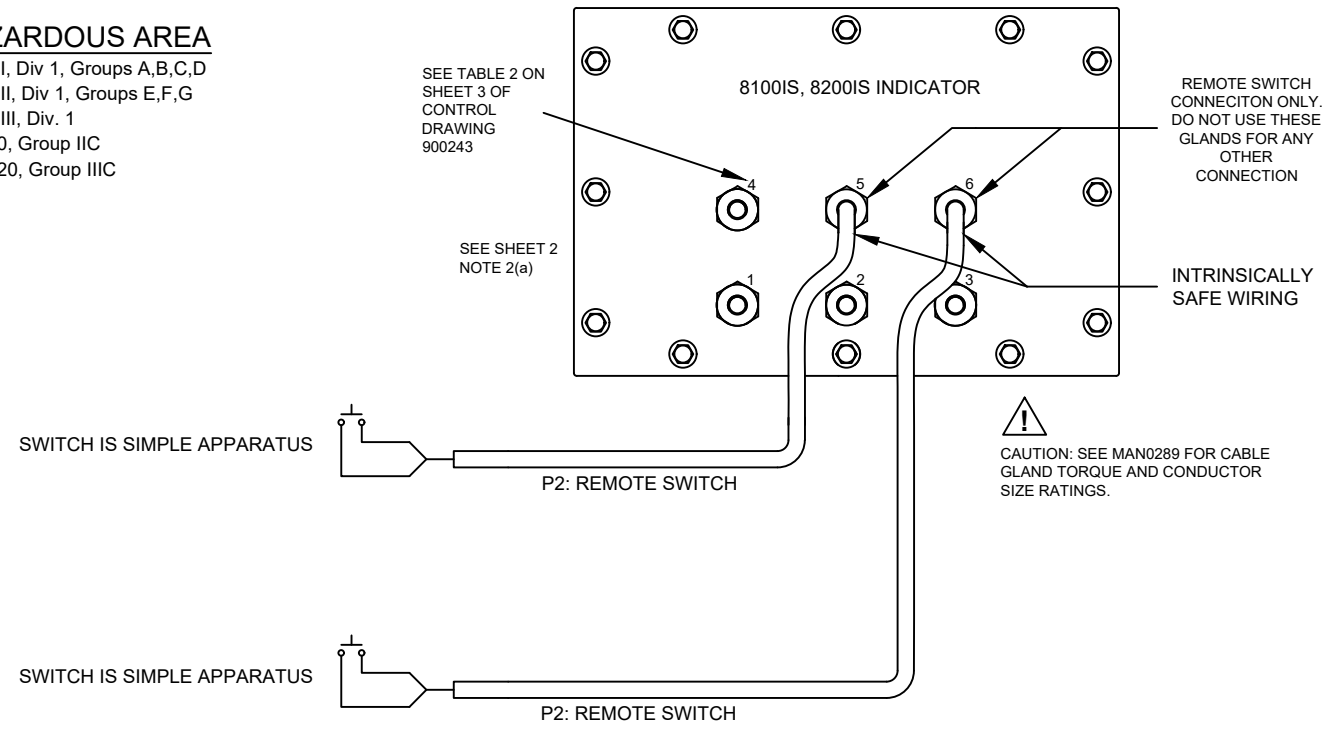
DATE:	DRAWN BY:	DRAWING NUMBER	SHEET NUMBER	REV
06/14/21	J.TORRES	900243	SHEET 3 OF 5	07

ECD #	REV	REVISIONS	DATE	APP
18-037	01	BLOCK CHANGED/ABBREVIATIONS/TABLE MADE	5/7/18	J.T
18-073	02	UL MARKUPS	11/5/18	J.T
19-006	03	MORE UL MARKUPS	01/11/19	J.T
19-008	04	STANDARD CONFIGURATION	01/23/19	J.T
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19-020	06	FINAL UL MARKUPS	03/01/19	J.T
20-010	07	PCA0368 R9 UPDATE FIBER OPTIC MOVE TO MAIN CIRCUIT BOARD	11/31/20	M.P

REMOTE SWITCH WIRING

HAZARDOUS AREA

Class I, Div 1, Groups A,B,C,D
 Class II, Div 1, Groups E,F,G
 Class III, Div. 1
 Zone 0, Group IIC
 Zone 20, Group IIIC

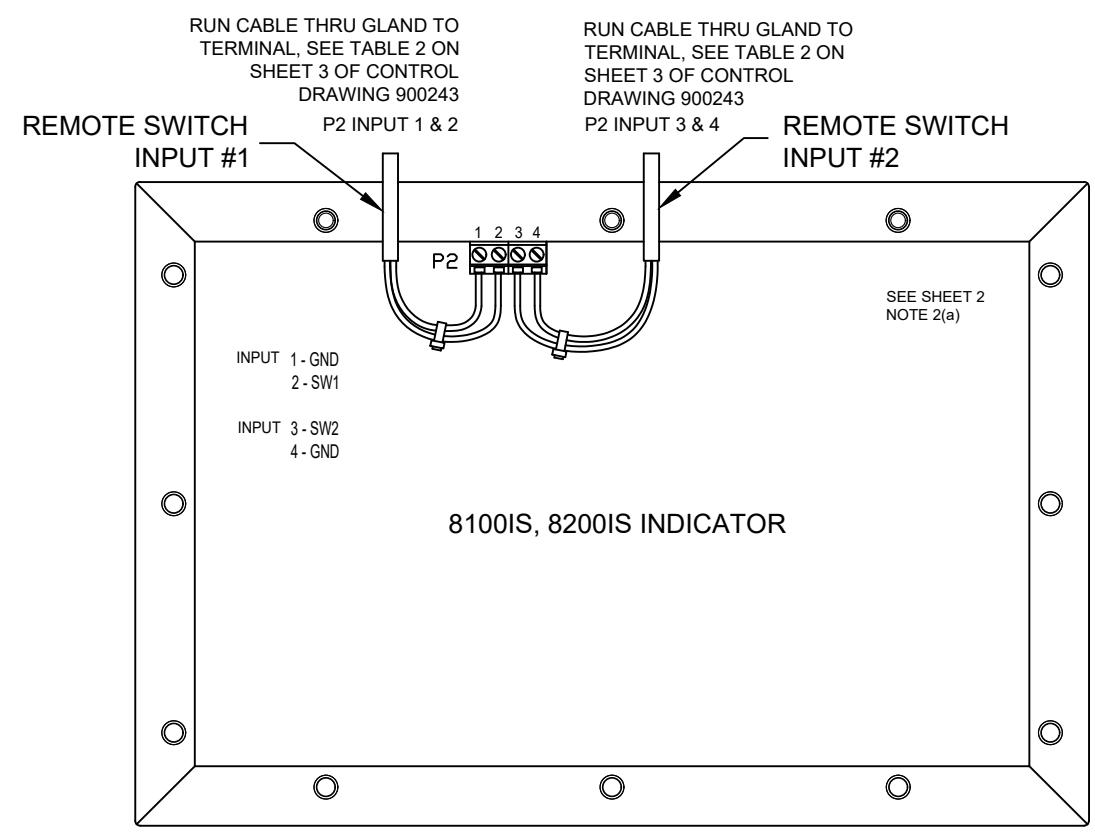


OUTPUT ENTITY PARAMETERS					
DESCRIPTION (LOCATION)	U _o	I _o	P _o	C _o	L _o
REMOTE SWITCH #1 & #2	7.14 V	0.133 A	0.217 W	13.5 uF	2.02 mH

NOTES:

1. THE DORAN I.S. OUTPUT CABLE MUST BE CONNECTED TO A SUITABLE GROUND ELECTRODE PER THE NATIONAL ELECTRICAL CODE (ANSI/NFPA 70), THE CANADIAN ELECTRICAL CODE OR OTHER LOCAL INSTALLATION CODES, AS APPLICABLE. THE RESISTANCE OF THE GROUND PATH MUST BE LESS THAN 1 OHM.
2. OPERATING AMBIENT TEMPERATURE RANGE: -10°C TO +40°C (EXCEPT 8CHG RANGE: -10°C TO +30°C)
3. INTRINSICALLY SAFE WIRING SHALL BE IDENTIFIED AS SUCH WITH LABELS PLACED NO MORE THAN 7.62M (25FT) APART. THE COLOR LIGHT BLUE IS INTERNATIONALLY RECOGNIZED AS IDENTIFYING INTRINSICALLY SAFE WIRING.
4. THE OUTPUT CURRENT OF THESE INTRINSICALLY SAFE DORAN OUTPUTS IS LIMITED BY A RESISTOR SUCH THAT THE OUTPUT VOLTAGE-CURRENT PLOT IS A STRAIGHT LINE DRAWN BETWEEN OPEN-CIRCUIT VOLTAGE AND SHORT-CIRCUIT CURRENT.
5. SELECTED INTRINSICALLY SAFE EQUIPMENT/SWITCHES (FOR USE WITH THESE INTRINSICALLY SAFE DORAN OUTPUTS) MUST BE THIRD PARTY LISTED AS INTRINSICALLY SAFE FOR THE APPLICATION (UNLESS DEEMED SIMPLE APPARATUS PER NOTE 11 ON SHEET 4, AND HAVE INTRINSICALLY SAFE ENTITY PARAMETERS CONFORMING WITH TABLE 1 BELOW.

TABLE 1		
I.S. Equipment/Switches		I.S. Doran Outputs
V max (or U _i)	≥	V _{oc} or V _t (or U _o)
I max (or I _i)	≥	I _{sc} or I _t (or I _o)
P max, P _i	≥	P _o
C _i + C _{cable}	≤	C _a (or C _o)
L _i + L _{cable}	≤	L _a (or L _o)



6. CAPACITANCE AND INDUCTANCE OF THE FIELD WIRING FROM THE INTRINSICALLY SAFE EQUIPMENT/SWITCHES TO THESE INTRINSICALLY SAFE DORAN OUTPUTS SHALL BE CALCULATED AND MUST BE INCLUDED IN THE SYSTEM CALCULATIONS AS SHOWN IN TABLE 1. CABLE CAPACITANCE, C_{cable}, PLUS INTRINSICALLY SAFE EQUIPMENT CAPACITANCE, C_i MUST BE LESS THAN THE MARKED CAPACITANCE, C_a (OR C_o), SHOWN ON ANY I.S. DORAN OUTPUTS USED. THE SAME APPLIES FOR INDUCTANCE (L_{cable}, L_i AND L_a OR L_o, RESPECTIVELY). WHERE THE CABLE CAPACITANCE AND INDUCTANCE PER FOOT ARE NOT KNOWN, THE FOLLOWING VALUES SHALL BE USED: C_{cable} = 60 pF/ft., L_{cable} = 0.2 μH/ft.
7. WHERE MULTIPLE CIRCUITS EXTEND FROM THE SAME PIECE OF ASSOCIATED APPARATUS OR INTRINSICALLY SAFE DEVICE (WHERE ALL PINS ARE NOT STATED AS COMBINED AND/OR DIFFERENT ENTITY PARAMETERS ASSIGNED), THEY MUST BE INSTALLED IN SEPARATE CABLES OR IN ONE CABLE HAVING SUITABLE INSULATION. REFER TO ARTICLE 504.30(B) OF THE NATIONAL ELECTRICAL CODE (ANSI/NFPA 70) AND INSTRUMENT SOCIETY OF AMERICA RECOMMENDED PRACTICE ISA RP12.06 FOR INSTALLING INTRINSICALLY SAFE EQUIPMENT.
8. INTRINSICALLY SAFE CIRCUITS MUST BE WIRED AND SEPARATED IN ACCORDANCE WITH ARTICLE 504.20 OF THE NATIONAL ELECTRICAL CODE (ANSI/NFPA 70) OR OTHER LOCAL CODES, AS APPLICABLE.
9. THESE INTRINSICALLY SAFE DORAN OUTPUTS HAVE NOT BEEN EVALUATED FOR USE IN COMBINATION WITH ANOTHER DEVICE WITH ANY OUTPUTS.
10. FOR INSTALLATIONS IN WHICH BOTH THE C_i AND L_i OF THE INTRINSICALLY SAFE APPARATUS/SWITCHES EXCEEDS 1% OF THE C_a (OR C_o) AND L_a (OR L_o) PARAMETERS OF THESE INTRINSICALLY SAFE DORAN OUTPUTS (EXCLUDING THE CABLE), THEN 50% OF C_a (OR C_o) AND L_a (OR L_o) PARAMETERS ARE APPLICABLE AND SHALL NOT BE EXCEEDED. THE REDUCED CAPACITANCE SHALL NOT BE GREATER THAN 1 μF FOR GROUPS C AND/OR D, AND 600 nF FOR GROUPS A AND B. THE VALUES OF C_a (OR C_o) AND L_a (OR L_o) DETERMINED BY THIS METHOD SHALL NOT BE EXCEEDED BY THE SUM OF ALL OF C_i PLUS CABLE CAPACITANCES AND THE SUM OF ALL OF THE L_i PLUS CABLE INDUCTANCES IN THE CIRCUIT RESPECTIVELY.
11. THESE INTRINSICALLY SAFE DORAN OUTPUTS MAY ALSO BE CONNECTED TO SIMPLE APPARATUS AS DEFINED IN ARTICLE 504.2 AND INSTALLED AND TEMPERATURE CLASSIFIED IN ACCORDANCE WITH ARTICLE 504.10(D) OF THE NATIONAL ELECTRICAL CODE (ANSI/NFPA 70), OR OTHER LOCAL CODES, AS APPLICABLE.

CAUTION: SEE MAN0289 FOR HARDWARE TORQUE RATINGS. DO NOT DAMAGE CIRCUITRY OR ANY WIRES DURING PROCESS

WARNING
 READ AND UNDERSTAND COMPLETELY USER MANUAL NO. MAN0289 FOR THESE DEVICES BEFORE INSTALLATION OR OPERATION

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SYSTEM CONTROL DRAWING

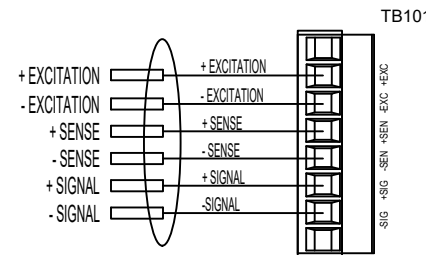
DATE: 11/31/20	DRAWN BY: J.TORRES	DRAWING NUMBER 900243	SHEET NUMBER SHEET 4 OF 5	REV 07
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NOTES FOR PAGE 1 OF CONTROL DRAWING No. 900243

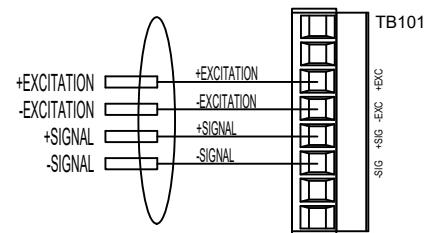
NOTES:

- SEE PAGE 1
- SEE PAGE 1
- SEE PAGE 1
- CONNECT THE LOADCELL CABLE SHIELD WIRE TO THE THREADED STUD ADJACENT TO SEALING GLAND. TO ASSURE PROPER GROUNDING, TEST FOR CONTINUITY BETWEEN PLATFORM(LOAD CELL) AND SHIELD. THE PLATFORM SHOULD BE PROPERLY GROUNDED TO EARTH.
- THE DORAN I.S. OUTPUT CABLE MUST BE CONNECTED TO A SUITABLE GROUND ELECTRODE PER THE NATIONAL ELECTRICAL CODE (ANSI/NFPA 70), THE CANADIAN ELECTRICAL CODE OR OTHER LOCAL INSTALLATION CODES, AS APPLICABLE. THE RESISTANCE OF THE GROUND PATH MUST BE LESS THAN 1 OHM.
- OPERATING AMBIENT TEMPERATURE RANGE: -10°C TO +40°C
- LOADCELL CABLE LENGTH: 75 FEET MAX FOR THE 4-WIRE LOADCELLS, AND 50 FEET MAX FOR THE 6-WIRE LOADCELLS. THESE MUST INCLUDE TOTAL LENGTH OF CABLE STARTING AT INDICATOR AND ENDING AT EACH LOADCELL (ALL COMBINED).
- 8JBX JUNCTION BOX IS TYPE 1, IP20 FOR DRY INDOOR LOCATIONS.
- THE OUTPUT CURRENT OF THESE INTRINSICALLY SAFE DORAN OUTPUTS IS LIMITED BY A RESISTOR SUCH THAT THE OUTPUT VOLTAGE-CURRENT PLOT IS A STRAIGHT LINE DRAWN BETWEEN OPEN-CIRCUIT VOLTAGE AND SHORT-CIRCUIT CURRENT.
- SELECTED INTRINSICALLY SAFE EQUIPMENT/LOADCELLS (FOR USE WITH THESE INTRINSICALLY SAFE DORAN OUTPUTS) MUST BE THIRD PARTY LISTED AS INTRINSICALLY SAFE FOR THE APPLICATION (UNLESS DEEMED SIMPLE APPARATUS PER NOTE 1 ON SHEET 1), AND HAVE INTRINSICALLY SAFE ENTITY PARAMETERS CONFORMING WITH TABLE 1 ON SHEET 1.
- CAPACITANCE AND INDUCTANCE OF THE FIELD WIRING FROM THE INTRINSICALLY SAFE EQUIPMENT/LOADCELLS TO THESE INTRINSICALLY SAFE DORAN OUTPUTS SHALL BE CALCULATED AND MUST BE INCLUDED IN THE SYSTEM CALCULATIONS AS SHOWN IN TABLE 1 ON SHEET 1. CABLE CAPACITANCE, C_{cable} , PLUS INTRINSICALLY SAFE EQUIPMENT CAPACITANCE, C_i MUST BE LESS THAN MARKED CAPACITANCE, C_a (OR C_o), SHOWN ON ANY I.S. DORAN OUTPUTS USED. THE SAME APPLIES FOR INDUCTANCE (L_{cable} , L_i AND L_a OR L_o , RESPECTIVELY). WHERE THE CABLE CAPACITANCE AND INDUCTANCE PER FOOT ARE NOT KNOWN, THE FOLLOWING VALUES SHALL BE USED: $C_{cable} = 60$ pF/ft., $L_{cable} = 0.2$ μ H/ft.
- WHERE MULTIPLE CIRCUITS EXTEND FROM THE SAME PIECE OF ASSOCIATED APPARATUS OR INTRINSICALLY SAFE DEVICE (WHERE ALL PINS ARE NOT STATED AS COMBINED AND/OR DIFFERENT ENTITY PARAMETERS ASSIGNED), THEY MUST BE INSTALLED IN SEPARATE CABLES OR IN ONE CABLE HAVING SUITABLE INSULATION. REFER TO ARTICLE 504.30(B) OF THE NATIONAL ELECTRICAL CODE (ANSI/NFPA 70) AND INSTRUMENT SOCIETY OF AMERICA RECOMMENDED PRACTICE ISA RP12.06 FOR INSTALLING INTRINSICALLY SAFE EQUIPMENT.
- INTRINSICALLY SAFE CIRCUITS MUST BE WIRED AND SEPARATED IN ACCORDANCE WITH ARTICLE 504.20 OF THE NATIONAL ELECTRICAL CODE (ANSI/NFPA 70) OR OTHER LOCAL CODES, AS APPLICABLE.
- THESE INTRINSICALLY SAFE DORAN OUTPUTS HAVE NOT BEEN EVALUATED FOR USE IN COMBINATION WITH ANOTHER DEVICE WITH ANY OUTPUTS.
- FOR INSTALLATIONS IN WHICH BOTH THE C_i AND L_i OF THE INTRINSICALLY SAFE APPARATUS/LOADCELLS EXCEEDS 1% OF THE C_a (OR C_o) AND L_a (OR L_o) PARAMETERS OF THESE INTRINSICALLY SAFE DORAN OUTPUTS (EXCLUDING THE CABLE), THEN 50% OF C_a (OR C_o) AND L_a (OR L_o) PARAMETERS ARE APPLICABLE AND SHALL NOT BE EXCEEDED. THE REDUCED CAPACITANCE SHALL NOT BE GREATER THAN 1 μ F FOR GROUPS C AND/OR D, AND 600 nF FOR GROUPS A AND B. THE VALUES OF C_a (OR C_o) AND L_a (OR L_o) DETERMINED BY THIS METHOD SHALL NOT BE EXCEEDED BY THE SUM OF ALL OF C_i PLUS CABLE CAPACITANCES AND THE SUM OF ALL OF THE L_i PLUS CABLE INDUCTANCES IN THE CIRCUIT RESPECTIVELY.
- 8JBX LOAD CELL I.S. WIRING BELOW
- 8JBX OUTPUT ENTITY PARAMETERS BELOW

6-WIRE LOADCELL CONNECTION
8JBX BOARD INSIDE BOX

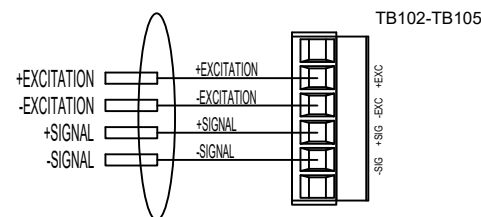


4-WIRE LOADCELL CONNECTION
8JBX BOARD INSIDE BOX



OUTPUT ENTITY PARAMETERS					
DESCRIPTION (LOCATION)	U_o	I_o	P_o	C_o	L_o
LOADCELL (TB102-TB105)	7.14 V	0.7076 A	0.895 W	10.8 μ F*	71 μ H**

* C_o (subtract) $C_{loadcell_cable_from_indicator}$
** L_o (subtract) $L_{loadcell_cable_from_indicator}$



ECD #	REV	REVISIONS	DATE	APP
19-011	05	TABLE 2 INTRODUCTION	02/06/19	J.T
19-020	06	FINAL UL MARKUPS	03/01/19	J.T
20-010	07	PCAO368 R9 UPDATE FIBER OPTIC MOVE TO MAIN CIRCUIT BOARD	11/31/20	M.P

NOTES FOR PAGE 2 OF CONTROL DRAWING No. 900243

NOTES:

- NOTES 1-8 SEE PAGE 2
- THE ELECTRONICS LOCATED IN THE BARRIER CIRCUIT OF MODEL 8A1S FORMS AN INTRINSICALLY SAFE SYSTEM WHEN ONE INDICATOR/REMOTE DISPLAY MODEL 8100IS/8200IS IS CONNECTED TO ITS INTRINSICALLY SAFE OUTPUT CABLE AS SHOWN ON SHEET 2, AND THE INDICATOR/REMOTE DISPLAY MODELS 8100IS/8200IS ARE SUITABLE FOR USE IN HAZARDOUS AREAS AS SHOWN ON THIS CONTROL DRAWING NO. 900243. NO OTHER DEVICES ARE SUITABLE FOR DIRECT CONNECTION TO THE INTRINSICALLY SAFE OUTPUT CABLE OF MODEL 8A1S, AND THE ONLY ADDITIONAL DEVICES/CONFIGURATIONS THAT MAY BE CONNECTED TO THE INDICATOR/REMOTE DISPLAY MODELS 8100IS/8200IS ARE SHOWN ON THIS CONTROL DRAWING NO. 900243
- THE OUTPUT CURRENT OF THE MODEL 8A1S ASSOCIATED APPARATUS IS LIMITED BY A RESISTOR SUCH THAT THE OUTPUT-VOLTAGE PLOT IS A STRAIGHT LINE DRAWN BETWEEN OPEN-CIRCUIT VOLTAGE AND SHORT-CIRCUIT CURRENT.
- ASSOCIATED APPARATUS MODEL 8A1S MUST BE INSTALLED IN AN ENCLOSURE SUITABLE FOR THE APPLICATION IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE (ANSI/NFPA 70) FOR INSTALLATION IN THE UNITED STATES, THE CANADIAN ELECTRICAL CODE FOR INSTALLATIONS IN CANADA, OR OTHER LOCAL CODES, AS APPLICABLE.
- THE ASSOCIATED APPARATUS MODEL 8A1S MUST BE CONNECTED TO A SUITABLE GROUND ELECTRODE PER THE NATIONAL ELECTRICAL CODE (ANSI/NFPA 70), THE CANADIAN ELECTRICAL CODE OR OTHER LOCAL INSTALLATION CODES, AS APPLICABLE. THE RESISTANCE OF THE GROUND PATH MUST BE LESS THAN 1 OHM.
- INTRINSICALLY SAFE CIRCUITS MUST BE WIRED AND SEPARATED IN ACCORDANCE WITH ARTICLE 504.20 OF THE NATIONAL ELECTRICAL CODE (ANSI/NFPA 70) OR OTHER LOCAL CODES, AS APPLICABLE.
- THIS ASSOCIATED APPARATUS MODEL 8A1S HAS NOT BEEN EVALUATED FOR USE IN COMBINATION WITH ANOTHER ASSOCIATED APPARATUS.
- THE ELECTRONICS LOCATED IN THE MODEL 8B1S BATTERY PACK FORMS AN INTRINSICALLY SAFE SYSTEM WHEN ONE INDICATOR/REMOTE DISPLAY MODELS 8100IS/8200IS IS CONNECTED TO ITS INTRINSICALLY SAFE OUTPUT CABLE AS SHOWN ABOVE, AND THE INDICATOR/REMOTE DISPLAY MODELS 8100IS/8200IS ARE SUITABLE FOR USE IN HAZARDOUS AREAS AS SHOWN ON THIS CONTROL DRAWING NO. 900243. NO OTHER DEVICES ARE SUITABLE FOR DIRECT CONNECTION TO THE INTRINSICALLY SAFE OUTPUT CABLE OF MODEL 8B1S, AND THE ONLY ADDITIONAL DEVICES/CONFIGURATIONS THAT MAY BE CONNECTED TO THE INDICATOR/REMOTE DISPLAY MODELS 8100IS/8200IS ARE SHOWN ON THIS CONTROL DRAWING NO. 900243.
- THE OUTPUT CURRENT OF THE MODEL 8B1S IS LIMITED BY A RESISTOR SUCH THAT THE OUTPUT VOLTAGE-CURRENT PLOT IS A STRAIGHT LINE DRAWN BETWEEN OPEN-CIRCUIT VOLTAGE AND SHORT-CIRCUIT CURRENT.
- MODEL 8JBX MUST BE INSTALLED IN AN ENCLOSURE SUITABLE FOR THE APPLICATION IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE (ANSI/NFPA 70) FOR INSTALLATION IN THE UNITED STATES, THE CANADIAN ELECTRICAL CODE FOR INSTALLATIONS IN CANADA, OR OTHER LOCAL CODES, AS APPLICABLE.
- INTRINSICALLY SAFE CIRCUITS MUST BE WIRED AND SEPARATED IN ACCORDANCE WITH ARTICLE 504.20 OF THE NATIONAL ELECTRICAL CODE (ANSI/NFPA 70) OR OTHER LOCAL CODES, AS APPLICABLE.
- THIS BATTERY PACK MODEL 8B1S HAS NOT BEEN EVALUATED FOR USE IN COMBINATION WITH ANOTHER POWER SOURCE OR ASSOCIATED APPARATUS.
- THE INDICATOR/REMOTE DISPLAY MODEL 8100IS/8200IS IS PROVIDED WITH A PERMANENTLY CONNECTED CABLE HAVING THE FOLLOWING CHARACTERISTICS:
TURCK PART NO. RSM 30-2M UL/C-UL LISTED (E141522)
RATED 300 V, 9 A, 105C
3 WIRES, 18 AWG
IP67 INGRESS PROTECTION
MAXIMUM CAPACITANCE PER FOOT: 23.6 pF/ft
MAXIMUM INDUCTANCE PER FOOT: 41.985 μ H/ft
MINIMUM CABLE JACKET INSULATION: 1.806 mm
- THE MODEL 8B1S IS PROVIDED WITH A PERMANENTLY CONNECTED CABLE HAVING THE FOLLOWING CHARACTERISTICS:
TURCK PART NO. RKM 30-2M UL/C-UL LISTED (E141522)
RATED 300 V, 9 A, 105C
3 WIRES, 18 AWG
IP67 INGRESS PROTECTION
MAXIMUM CAPACITANCE PER FOOT: 23.6 pF/ft
MAXIMUM INDUCTANCE PER FOOT: 41.985 μ H/ft
MINIMUM CABLE JACKET INSULATION: 1.806 mm
- THE MODEL 8A1S IS PROVIDED WITH A PERMANENTLY CONNECTED CABLE HAVING THE FOLLOWING CHARACTERISTICS:
TURCK PART NO. RKM 30-2M UL/C-UL LISTED (E141522)
RATED 300 V, 9 A, 105C
3 WIRES, 18 AWG
IP67 INGRESS PROTECTION
MAXIMUM CAPACITANCE PER FOOT: 23.6 pF/ft
MAXIMUM INDUCTANCE PER FOOT: 41.985 μ H/ft
MINIMUM CABLE JACKET INSULATION: 1.806 mm
- SUITABILITY FOR INSTALLATION IN PARTICULAR APPLICATIONS IS AT THE DISCRETION OF THE AUTHORITY HAVING JURISDICTION (AHJ).
- THE OPTIONAL POWER EXTENSION CABLES WCB0234 AND WCB0235 MAY ONLY BE THE FOLLOWING TYPES IF USED:
TURCK PART NO. P-RSM RKM 30-026-3M OR P-RSM RKM 30-026-6M
UL/C-UL LISTED (E141522)
RATED 300 V, 9 A, 105C
3 WIRES, 18 AWG; AND 1 FOIL SHIELD, 20 AWG
IP67 INGRESS PROTECTION
MAXIMUM CAPACITANCE PER FOOT: 76.8 pF/ft
MAXIMUM INDUCTANCE PER FOOT: 41.985 μ H/ft
MINIMUM CABLE JACKET INSULATION: 1.806 mm
- SUITABILITY FOR INSTALLATION IN PARTICULAR APPLICATIONS IS AT THE DISCRETION OF THE AUTHORITY HAVING JURISDICTION (AHJ).

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WARNING

READ AND UNDERSTAND COMPLETELY USER MANUAL NO. MAN0289 FOR THESE DEVICES BEFORE INSTALLATION OR OPERATION

SYSTEM CONTROL DRAWING

DATE: 11/31/20	DRAWN BY: J.TORRES	DRAWING NUMBER 900243	SHEET NUMBER SHEET 5 OF 5	REV 07
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