

XRYYY XXXXFXXX XXX

CONNECTOR OPTION CODE LOCATION FOR: XR56A, XR56S, XR67A, XR85A, XR115, XR850, XR125, XR485, XR685
 CONNECTOR OPTION CODE LOCATION FOR: XR45, XR47, XR4F
 LINE DRIVER OPTION CODE LOCATION FOR: XR56A, XR56S, XR67A, XR85A, XR115, XR45, XR47, XR4F, XR850, XR125, XR485, XR685
 MODEL # CODES: 56A, 56S, 67A, 85A, 115, 45, 47, 4F, 850, 125, 485, 685
 HAZARDOUS LOCATION CODE
 CONNECTOR OPTION CODES = A, B, C, D, E, F, G, H, J, K, L, M, N, P, R, S, T, U, V, W, Y, Z, 2, 3, 4, 5, 6, 7, 8
 LINE DRIVER OPTION CODE = F FOR CLASS I DIVISION 1 AND ZONE 0

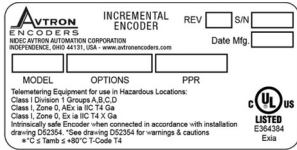
XRYY F X X XXX

CONNECTOR OPTION CODE LOCATION FOR: XR5, XR12, XR97
 LINE DRIVER OPTION CODE LOCATION FOR: XR5, XR12, XR97
 MODEL # CODES: 5, 12, 97
 HAZARDOUS LOCATION CODE
 CONNECTOR OPTION CODES = A, B, C, D, E, F, G, H, J, K, L, M, N, P, R, S, T, U, V, W, Y, Z, 2, 3, 4, 5, 6, 7, 8
 LINE DRIVER OPTION CODE = F FOR CLASS I DIVISION 1 AND ZONE 0
 ALL OTHER CODE LOCATIONS ARE NOT RELEVANT TO INTRINSIC SAFETY
 SEE INSTRUCTION SHEETS FOR DEFINITIONS

TABLE 1

THE XR --- FAMILY OF ENCODERS HAS BEEN EVALUATED AS INTRINSICALLY SAFE (SECURITE INTRINSEQUE) AND COMPLIANT WITH:

- UL913 8TH EDITION
- UL 60079-0 6TH EDITION
- UL 60079-11 6TH EDITION
- CSA/CAN C22.2 No. 157 REAFFIRMED 2012
- CSA/CAN C22.2 No. 60079-0:11
- CSA/CAN C22.2 No. 60079-11:14



* -20°C OR -40°C SEE PRODUCT MARKING

1. INTRINSICALLY SAFE DEVICE INPUT ENTITY PARAMETERS (TERMINALS V(in) & COM):

| TERMINAL NUMBERS | U _i (V) | I _i (mA) | P _i (W) | GAS GROUP | C _i (uF) | L _i (mH) |
|------------------|--------------------|---------------------|--------------------|------------------|---------------------|---------------------|
| V(in) & COM | 7.14 | 416 | 1.41 | A, B, C, D (IIC) | 11.88 | 0 |

THESE DEVICES HAVE THE FOLLOWING OUTPUT ENTITY PARAMETERS:

| TERMINAL NUMBERS | U _o (V) | I _o (mA) | P _o (W) | GAS GROUP | C _o (uF) | L _o (uH) |
|----------------------------|--------------------|---------------------|--------------------|----------------------------|---------------------|---------------------|
| A & A/ B & B/ Z & Z/ | 7.14 | 416 | 1.41 | A & B (IIC) C & D (IIB) | 11.89 11.91 | 2 100 |

2. CAPACITANCE AND INDUCTANCE CONNECTED TO THE OUTPUT TERMINALS MUST BE ADDED TO C_i AND L_i OF THE INPUT TERMINALS. WHERE THE CABLE CAPACITANCE AND INDUCTANCE APPARENT AT THE INPUT TERMINALS, 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 uH/ft. WHEN MAKING CONNECTIONS TO A SUITABLE ASSOCIATED APPARATUS, THE FOLLOWING GUIDELINES MUST BE FOLLOWED:

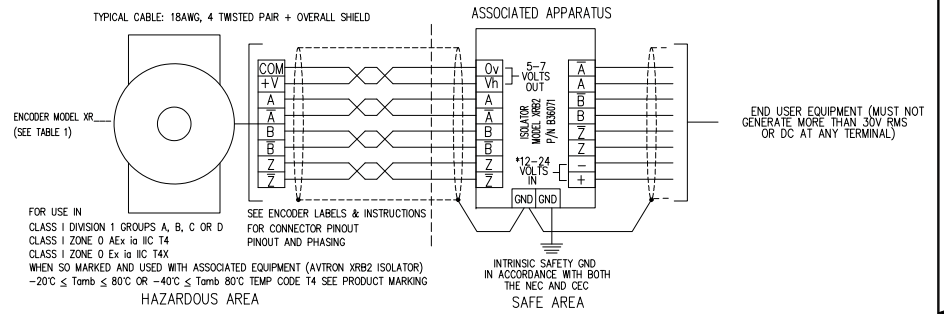
| I.S. EQUIPMENT | ASSOCIATED APPARATUS |
|-------------------------------------|--|
| U _i | ≥ Voc OR V _t (OR U _o) |
| I _i | ≥ I _{sc} OR I _t (OR I _o) |
| P _i | ≥ P _o |
| C _i + C _{cable} | ≥ C _o (OR C _o) |
| L _i + L _{cable} | ≥ L _o (OR L _o) |

IF P_o OF THE ASSOCIATED APPARATUS IS NOT KNOWN, IT MAY BE CALCULATED USING THE FORMULA P_o = (Voc * I_{sc})/4 = (U_o * I_o)/4

THIS DRAWING IDENTIFIES CHARACTERISTICS REQUIRED FOR EQUIPMENT USED IN HAZARDOUS LOCATIONS AND MAY NOT BE CHANGED WITHOUT THIRD PARTY APPROVAL. THIRD PARTIES MUST BE IDENTIFIED FROM ID LABELS.

UNLESS OTHERWISE SPECIFIED THE ABOVE NOTES APPLY

| ECN NO. | REV | DESCRIPTION | DATE | APPROVED |
|---------|-----|---|-----------------|----------|
| EA0759 | A | IS "XXX" 2X WAS "000" 2X REMOVED 5, 12, 97 FROM MODEL CODES, IS XR5, XR12 & XR97, WAS XR45 FOR CONNECTOR OPTION CODE LOCATION | 8/27/14 NICKOLI | SHADDUCK |



- SPECIAL CONDITIONS FOR SAFE USE (X MARKING FOR CUL): THIS EQUIPMENT IS INTENDED FOR A FIXED INSTALLATION AND SHOULD BE MOUNTED SO AS TO AVOID ELECTROSTATIC CHARGING. CLEAN ONLY WITH A DAMP CLOTH. THE CONSTRUCTION MATERIALS DO NOT INCLUDE ALUMINUM. AS SUCH, CARE SHOULD BE TAKEN TO AVOID THE POSSIBILITY OF IGNITION FROM IMPACT OR FRICTION. FOR EXAMPLE, WHEN IN CONTACT WITH SHAFTS MADE FROM IRON OR STEEL IT IS THE RESPONSIBILITY OF THE END USER TO ENSURE THAT THE ENCODER IS SELECTED CORRECTLY FOR THE POTENTIALLY EXPLOSIVE ATMOSPHERE IN WHICH THE EQUIPMENT IS TO BE PUT IN SERVICE.
- WARNING - INSTALLATION SHOULD BE PERFORMED ONLY BY QUALIFIED PERSONNEL. SAFETY PRECAUTIONS MUST BE TAKEN TO ENSURE MACHINERY CANNOT ROTATE AND ALL SOURCES OF POWER ARE REMOVED DURING INSTALLATION.
- THIS EQUIPMENT IS AVAILABLE AS A SYSTEM CONSISTING OF 1 MODEL XR... ENCODER AND ONE ISOLATOR MODULE MODEL XR2 (P/N B36071) PER OUTPUT. THAT IS 2 ISOLATOR MODULES REQUIRED FOR A DUAL OUTPUT ENCODER. MULTIPLE ISOLATORS (ASSOCIATED APPARATUS) SHALL NOT BE CONNECTED TO A SINGLE ENCODER OUTPUT.
- WARNING - EXPLOSION HAZARD: SUBSTITUTION OF COMPONENTS MAY IMPAIR INTRINSIC SAFETY. AVERTISSEMENT - RISQUE D'EXPLOSION Le substitution de composants peut altérer l'aptitude de Securite Intrinseque.
- THIS EQUIPMENT HAS BEEN EVALUATED FOR USE IN A MAXIMUM AMBIENT TEMPERATURE OF 80°C. CONSIDERATION MUST BE GIVEN TO ENSURE FIELD WIRING IS SUITABLY RATED. Cet équipement a été évalué pour une utilisation dans une température ambiante maximale de 80 °C. Il faut tenir compte pour assurer le câblage est convenablement évalué.
- ISOLATORS, ENCODERS AND CABLE MUST BE SELECTED AND INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF ARTICLE 504 OF THE NATIONAL ELECTRICAL CODE AS WELL AS THE CANADIAN ELECTRICAL CODE. CABLE CHARACTERISTICS MUST COMPLY WITH THE NATIONAL ELECTRICAL CODE. THE ISOLATOR MUST BE INSTALLED IN ACCORDANCE WITH DRAWING D52463.
- WHEN AN ENCODER CONTAINS MULTIPLE ELECTRICALLY ISOLATED SENSOR MODULES, THE WIRING MUST BE IN SEPARATE CABLES TO SEPARATE ISOLATOR MODULES.
- INTERCONNECTION CABLES MUST BE SELECTED AND INSTALLED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE AND CANADIAN ELECTRICAL CODE.
- PERMANENTLY INSTALLED EXTERNAL CABLE, WHEN FACTORY SUPPLIED, HAS THE FOLLOWING CHARACTERISTICS: UL AWM STYLE 2464, 80°C MAXIMUM RATED TEMP., 300V, 2.1A @ 25°C, INDIVIDUAL 22 AWG CONDUCTORS WITH PVC INSULATION THICKNESS = .011", COVERED BY AN OVERALL FOIL SHIELD AND AN OUTER PVC JACKET WHICH IS 0.035" THICK. SUITABILITY FOR INSTALLATION IN PARTICULAR APPLICATIONS IS AT THE DISCRETION OF THE AUTHORITY HAVING JURISDICTION.

| UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES | | DRAWN | DATE | Nidec Avtron Automation 8901 E.PLEASANT VALLEY ROAD INDEPENDENCE, OH 44131-5529 |
|---|------------|-----------|---------|---|
| TOLERANCES: DECIMALS .XXX .015 | ANGLES ±1° | NICKOLI | 7/28/14 | |
| FINISH | ENG APPR | SHADDUCK | 7/28/14 | |
| PAINT PER PS | APD PRD | SHADDUCK | 7/28/14 | |
| PLATE PER | | | | |
| COAT PER PS | | | | |
| USED ON | | | | |
| ANODIZED PER | | | | |
| OTHER | | | | |
| APPLICATION | | SCALE 1/1 | | MODEL N/A |

| SIZE | CAGE NO. | DWG. NO. | REV |
|--------------|----------|----------|-----|
| D | 0FMV7 | D52354 | A |
| SHEET 1 OF 1 | | | |