



- Sixteen channels can be used in pairs as inputs or outputs
- Intrinsically safe Ex ia IIC inputs/outputs with line fault monitoring and LED error and status indication for each channel
- Module in Zone 1, Cl. I, II, Div. 1 can be hot swapped

06 b

WebCode 9470C



The 9470/32 series digital input/output module for Zone 1, Cl. I, II, Div. 1 has 16 channels, which can be used in pairs for Ex i operation as inputs for contacts and NAMUR proximity sensors (EN 60947-5-6) or as outputs for indicator lamps and low-power solenoid valves. Eight inputs can be used for frequencies of up to 20 kHz, and four can be used for detecting the direction of rotation.

All inputs/outputs are short-circuit proof and galvanically separated from the system.

| | NEC® 500 CEC Appendix J | | | | | |
|-----------------|----------------------------|---|----------|---|-----------|---|
| | Class I | | Class II | | Class III | |
| Division | 1 | 2 | 1 | 2 | 1 | 2 |
| Ex interface | • | • | • | • | • | • |
| Installation in | • | • | • | • | • | • |

| | CEC Section 18 NEC® 505 NEC® 506 | | | | | |
|-----------------|---------------------------------------|---|---|----|----|----|
| | Class I | | | | | |
| Zone | 0 | 1 | 2 | 20 | 21 | 22 |
| Ex interface | • | • | • | • | • | • |
| Installation in | | • | • | | • | • |

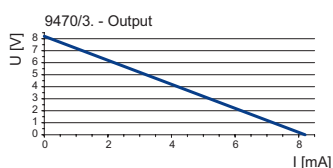
| | IECEX / ATEX | | | | | |
|-----------------|--------------|---|---|---|----|----|
| | Zone | 0 | 1 | 2 | 20 | 21 |
| Ex interface | • | • | • | • | • | • |
| Installation in | | • | • | | • | • |

| Selection Table | | | |
|---|---|----------|-----------|
| Installation | in Zone 1, Zone 2, Zone 21, Zone 22, Cl. I, II, Div. 1, 2 and in safe areas | | |
| Number of channels | Product Type | Art. No. | Weight lb |
| (adjustable parameters in pairs) 16 Ex i inputs/outputs | 9470/32-16-11 | 210447 ▲ | 0.61 |
| Please order 2 terminals separately - see accessories and spare parts | | | |

| Technical Data | |
|---------------------------------|---|
| Explosion Protection | |
| Certificate FMus | FM17US0332X |
| Certificate cFM | FM16CA0134X |
| Marking FMus | IS; Class I,II,III, Div. 1, Groups A,B,C,D,E,F,G; AIS; Class I,II,III, Div. 1, Groups A,B,C,D,E,F,G; Class I, Zone 1, AEx ia [ia] IIC; T4 at Ta = 75 °C; See Doc. 9470 6 031 001 1 |
| Marking cFM | IS; Class I,II,III, Div. 1, Groups A,B,C,D,E,F,G; AIS; Class I,II,III, Div. 1, Groups A,B,C,D,E,F,G; Class I, Zone 1, Ex ia [ia] IIC; T4 at Ta = 75 °C; See Doc. 9470 6 031 001 1 |
| IECEX gas explosion protection | Ex ia [ia Ga] IIC T4 Gb |
| IECEX dust explosion protection | [Ex ia Da] IIIC |
| Certificates | ATEX (DEK), Brazil (ULB), Canada (FM), EAC (STV), IECEX (DEK), India (PESO), Korea (KTL), USA (FM) |
| Ship approval | DNVGL, RINA |

| Technical Data | |
|--------------------------------|--|
| Safety Data | |
| Max. voltage U_i/V_{oc} | 9.8 V |
| Max. current I_o (Ex ia) | 10.4 mA |
| Max. power P_o (Ex ia) | 25.5 mW |
| Auxiliary Power | |
| Current consumption | 120 mA |
| Max. power consumption | 2.5 W |
| Max. power dissipation outputs | 2.5 W |
| Input | |
| Supply voltage | 8.2 V |
| Function | Up/down counter Frequency with direction |
| Signal input | EN 60947 input (NAMUR) |
| Notes | IEC 60947-5-6-1999 (NAMUR), 3-conductor PNP proximity switches and active 24 V signals with and without 47 kΩ resistance connected in parallel |
| Output | |
| Output rated operation | 6 V / 2 mA |
| Notes | Output characteristic, see data sheet on the Internet r-stahl.com (WebCode 9470C) |
| Ambient Conditions | |
| Ambient temperature °F | -40°F ... +167°F |
| Ambient temperature °C | -40°C ... +75°C |


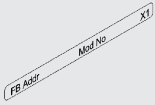



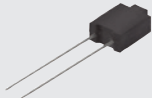
Technical Drawings – Subject to Alterations



Output characteristic

Accessories

| Figure | Description | Product Type | Art. No. | Weight lb |
|---------------------------|---|--------------|----------|-----------|
| Pluggable terminal | | | | |
| | 2.5 mm ² with lock, 16-pole, screw connector, blue, for connecting the field signals to I/O modules, for intrinsically safe field circuits Labelling: 1 ... 16 Attention: An additional terminal is necessary for I/O module Series 9470 and 9482. Labelling: 17 ... 32 | - | 162702 ▲ | 0.06 |
| | 2.5 mm ² with lock, 16-pole, screw connector, blue for connecting the field signals to I/O modules, for intrinsically safe field circuits Labelling: 17 ... 32 | - | 162718 ▲ | 0.06 |
| | 2.5 mm ² with lock, 16-pole, spring clamp connection, blue, for connecting the field signals to I/O modules, for intrinsically safe field circuits, incl. test jacks Labelling: 1 ... 16 Attention: An additional terminal is necessary for I/O module Series 9470 and 9482. Labelling: 17 ... 32 | - | 162695 | 0.06 |
| | 2.5 mm ² with lock, 16-pole, spring clamp connection, blue for connecting the field signals to I/O modules, for intrinsically safe field circuits, incl. test jacks Labelling: 17 ... 32 | - | 162716 | 0.06 |

| Accessories | | | | |
|---|--|--------------|----------|-----------|
| Figure | Description | Product Type | Art. No. | Weight lb |
| Indicator lamp | | | | |
|  | Single electrical equipment for intrinsically safe circuits according to EN 60079-11 | 8010/C1661 | 228026 | 0.08 |
| Labelling strips | | | | |
|  | "FB Addr ... Mod No ..." for pluggable terminal, 26 pieces on the sheet | - | 162788 | - |
| DIN A4 sheet | | | | |
|  | For the label plate on I/O modules, 6 labels per sheet Print IS Wizard, packaging unit = 20 sheets | - | 162832 | - |
| Partition | | | | |
|  | For mounting between intrinsically safe and non-intrinsically safe connections of the I/O modules, in order to adhere to the required 50 mm distance | - | 220101 | 0.02 |
| Warning sign | | | | |
|  | "Clean modules only with a damp cloth." | - | 162796 | - |
| Resistor error message suppression | | | | |
|  | The resistors are used to suppress error messages for unused I/O channels Resistance value: 5K6 / 0.5 W Suitable for: AIM 9468; DIOM 9470; DIOM 9471; DIOM 9472; DOM 9475 For intrinsically safe circuits (simple apparatus according to EN 60079-11) | - | 244911 | - |

Dimensional Drawings (All Dimensions in mm [inches]) – Subject to Alterations

