# Analog Universal Module HART for Zone 2

Series 9468/33



- Eight channels can be used individually as inputs or outputs
- Intrinsically safe Ex ia IIC inputs/outputs with line fault monitoring
- Module in Zone 2 can be hot swapped

WebCode **9468B**

The 9468/33 series HART Analog Universal Module for Zone 2 has eight channels that can be used individually for Ex i operating two-/three-conductor HART transmitters, four-conductor transmitters or control valves/positioners with 0/4 to 20 mA signals. HART communication is bidirectional. All inputs/outputs are short-circuit proof, galvanically separated from the system and individually monitored to check for line faults.

| | ATEX / IECEx | | | | | |
|---|---|---|---|---|---|---|
| **Zone** | 0 | 1 | 2 | 20 | 21 | 22 |
| **Ex interface** | • | • | • | • | • | • |
| **Installation in** | | | • | | | • |

| | NEC 505 Class I | | | NEC 506 | | |
|---|---|---|---|---|---|---|
| **Zone** | 0 | 1 | 2 | 20 | 21 | 22 |
| **Ex interface** | • | • | • | • | • | • |
| **Installation in** | | | • | | | • |

| | NEC 500 | | | | | |
|---|---|---|---|---|---|---|
| | Class I | | Class II | | Class III | |
| **Division** | 1 | 2 | 1 | 2 | 1 | 2 |
| **Ex interface** | • | • | • | • | • | • |
| **Installation in** | | • | | • | | • |

| Selection Table | | | | |
|---|---|---|---|---|
| Installation | Zone 2, Zone 21, Zone 22 and in the safe area | | | |
| Number of channels | Product Type | Art. No. | PS | Weight kg |
| 8 Ex i inputs/outputs | 9468/33-08-10 | 210660 ▲ | 22 | 0.275 |

| Technical Data | |
|---|---|
| Explosion Protection | |
| Gas explosion protection IECEx | Ex nA ia [ia Ga] IIC T4 Gc |
| Gas explosion protection ATEX | Ⓔx II 3 (1) G Ex nA ia [ia Ga] IIC T4 Gc |
| Gas explosion protection EAC | 2 Ex nA ia [ia Ga] IIC T4 Gc X |
| Dust explosion protection IECEx | [Ex ia Da] IIIC |
| Dust explosion protection ATEX | Ⓔx II (1) D [Ex ia Da] IIIC |
| Dust explosion protection EAC | [Ex ia Da] IIIC |
| Certificates | ATEX (DEK), Brazil (ULB), Canada (FM), EAC (STV), IECEx (DEK), India (PESO), Korea (KTL), Russia (Meteorological certificate), USA (FM) |
| Ship approval | ABS, CCS, ClassNK, DNVGL, RINA |
| Safety Data | |
| Max. voltage $U_o$ | 24.4 V |
| Max. current $I_o$ (2-conductor) | 80 mA |
| Max. current $I_o$ (3-conductor) | 81.8 mA |
| Max. power $P_o$ (2-conductor) | 488 mW |
| Max. power $P_o$ (3-conductor) | 499 mW |



▲ Preferred products – in stock or available at short notice

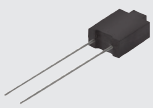
# Analog Universal Module HART for Zone 2
Series 9468/33



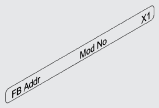
## Technical Data

| | |
|---|---|
| **Electrical Data** | |
| Number of channels | 8 Ex i inputs/outputs |
| Channels | each with adjustable parameters as input or output<br>(3-wire, 4-wire transmitters, or active mA-sources occupy 2 channels) |
| Nominal signal | 4 ... 20 mA<br>0 ... 20 mA |
| Supply voltage | 16 V, at 20 mA for 2-wire transmitters |
| Communication signal | HART protocol |
| Connection Ex i field signals | Pluggable, blue terminals, 16-pole, 2.5 mm², screw- or spring-type versions with lock |
| Notes | In order to operate an active 4-wire HART transmitter, a 9164 must be connected between each channel. 9164 is not required when operating 4-wire transmitter without HART communication. |
| **Auxiliary Power** | |
| Current consumption | 220 mA (at 20 mA per channel) |
| Max. power consumption | 5.3 W (at 20 mA / channel) |
| Max. power dissipation outputs | 3.7 W (at 20 mA, 500 Ohm / channel) |
| Max. power dissipation inputs | 2.7 W (at 20 mA / channel) |
| **Input** | |
| Max. input resistance | 14.1 ohms per channel |
| **Output** | |
| Output load resistance max. | 750 ohms at 20 mA<br>700 ohms at 21.8 mA |
| Output step response (10 … 90 %) | 40 ms |
| **Mechanical Data** | |
| Degree of protection IP (IEC 60529) | IP20 |

## Accessories and Spare Parts

| Figure | Description | Art. No. | Weight kg |
|---|---|---|---|
| **Pluggable terminal** | | | |
|  | 2.5 mm² with lock, 16-pole, screw connector, blue, for connecting the field signals to I/O modules, for intrinsically safe field circuits<br>Labelling: 1 ... 16<br>Attention: An additional terminal is necessary for I/O module Series 9470 and 9482.<br>Labelling: 17 ... 32 | 162702 | 0.028 |
|  | 2.5 mm² with lock, 16-pole, spring clamp connection, blue, for connecting the field signals to I/O modules,<br>for intrinsically safe field circuits, incl. test jacks<br>Labelling: 1 ... 16<br>Attention: An additional terminal is necessary for I/O module Series 9470 and 9482.<br>Labelling: 17 ... 32 | 162695 ▲ | 0.028 |
| **mA-Isolating repeater** | | | |
|  | The mA isolating repeaters are used for the connection of 4-wire transmitters to active 2-wire inputs and for the galvanic separation.<br>Input: sink, Ex e<br>Output: sink, Ex i | 224365 | 0.140 |
|  | The mA isolating repeaters are used for the connection of 4-wire transmitters to active 2-wire inputs and for the galvanic separation.<br>Input: sink, Ex i<br>Output: sink, Ex i | 224364 | 0.090 |
| **Resistor error message suppression** | | | |
|  | The resistors are used to suppress error messages for unused I/O channels<br>Resistance value: 5K6 / 0.5 W<br>Suitable for: AIM 9468; DIOM 9470; DIOM 9471; DIOM 9472; DOM 9475<br>For intrinsically safe circuits (simple apparatus according to EN 60079-11) | 244911 | – |
| | The resistors are used to suppress error messages for unused I/O channels<br>Resistance value: 62R / 0.5 W<br>Suitable for: AOM 9468; TIM 9482 | 244912 | – |

## Accessories and Spare Parts

| Figure | Description | Art. No. | Weight kg |
|---|---|---|---|
| **Labelling strips** | | | |
|   | "FB Addr ... Mod No ..." for pluggable terminal, sheet with 26 strips | 162788 | 0.001 |
| **DIN A4 sheet** | | | |
|  | For label plate on I/O modules; 6 labels on each sheet; print-out using IS Wizard; packaging unit = 20 sheets | 162832 | 0.001 |
| **Warning sign** | | | |
|  | "Clean modules only with a damp cloth." | 162796 | 0.001 |
| **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 ▲ | 0.010 |