



The ANTARES 8AIH Remote I/O Module is suitable for the direct linking of 8 intrinsically safe two-conductor transmitters. NAMUR sensors, optocouplers, wired and unwired mechanical contacts or other actuating elements can be connected with intrinsic safety. All of the I/O module's transmission channels are conductively connected to each other. The ANTARES 8AI Remote I/O Module is operated by and supplied with power by the ANTARES Rail Control Unit (RCU). A bus rail is not necessary. The hot-swap capability allows the electronic unit to be replaced without disconnecting from voltage even in an explosive atmosphere. Parameters can be set for each channel. Open circuit/short circuit monitoring can be programmed for each channel. See the system description for installation instructions.

Explosion protection

| | |
|--|---|
| Marking ATEX | |
| Certification | PTB 11 ATEX 2017 |
| Marking IECEx | Ex ib [ja IIC/IIB Ga] IIC T4 Gb [Ex ia Da] IIC |
| Certification | IECEx PTB 11.0059 |
| Marking CSA | Class I, Zone 1 |
| Certification | CSA 2567944 |
| Other approvals and certificates, see www.bartec.de | |
| Ambient temperature range | -20 °C to +50 °C -20 °C to +60 °C (in conjunction with a distance module) |

Safety data per transmission Channel

| Module | U_o/U_i | I_o/I_i | P_o | C_i | L_i |
|-----------|------------|------------|--------|------------|------------|
| 8AIH | 27.5 V | 87 mA | 598 mW | 6 nF | negligible |
| Ex ia IIC | C_o max. | L_o min. | | C_o min. | L_o max. |
| 8AIH | 79 nF | 0.2 mH | or | 37 nF | 1.7 mH |
| Ex ia IIB | C_o max. | L_o min. | | C_o min. | L_o max. |
| 8AIH | 666 nF | 0.1 mH | or | 264 nF | 16 mH |

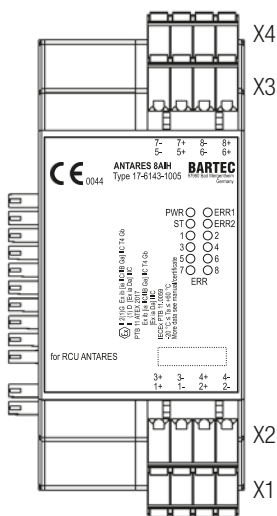
Technical data

| | |
|--|---|
| Enclosure material | PA |
| Protection class (EN 60529) | Enclosure: IP 30 in the ANTARES system construction |
| Electrical connections | plug-in tension spring-loaded clamps, 4-pole, up to 2.5 mm ² optional coding and numbering |
| Mounting rail | TH 35-15 DIN EN 60715 (steel, galvanised) |
| Device and terminal designation | see accessories |
| Dimensions (W x H x D) | 45 mm x 110 mm x 114.5 mm |
| Weight | approx. 390 g |
| Storage and transport temperature | -25 °C to +85 °C |
| Humidity | 5 to 95 %, non-condensing |
| Degree of contamination (IEN 60664-1) | 2 |
| Vibration (EN 60068-2-6) | 2 g/7 mm; 5 Hz to 200 Hz in all 3 axes |
| Shock (EN 60068-2-27) | 15 g, 11 ms, ± 3 shocks per direction |

Electrical data

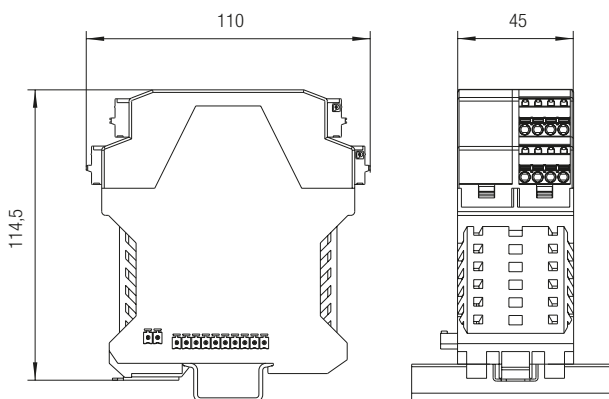
| | |
|---|--|
| Number of Channels | 8 analog inputs Ex i HART (short-circuit-proof) |
| Galvanic Isolation | between inputs and internal bus |
| Open circuit/short circuit | settable for each Channel with Software |
| Signal range | 4 to 20 mA |
| Signal | min. 0 mA max. 20.5 mA |
| Short-circuit current | max. 21 mA |
| Input resistance | $R_i = 10 \Omega$ |
| Resolution | 16 bit (15 bit + prefix) |
| Tolerance | ± 0.1 % of the measuring range at +25 °C |
| Influence of the ambient temperature | ± 0.01 %/K of the measuring range |
| Minimum voltage at 20 mA | 16 V |
| Displays | LEDs in enclosure front: Status: PWR, ST, ERR1, ERR2 Inputs: per Channel 1 LED ERR |

Wiring diagram/terminal assignment



| Terminal block | Terminal | Description | |
|----------------|----------|----------------|-----------|
| X4 | 7- | Minus terminal | Channel 7 |
| | 7+ | Plus terminal | Channel 7 |
| | 8- | Minus terminal | Channel 8 |
| | 8+ | Plus terminal | Channel 8 |
| X3 | 5- | Minus terminal | Channel 5 |
| | 5+ | Plus terminal | Channel 5 |
| | 6- | Minus terminal | Channel 6 |
| | 6+ | Plus terminal | Channel 6 |
| X2 | 3+ | Plus terminal | Channel 3 |
| | 3- | Minus terminal | Channel 3 |
| | 4+ | Plus terminal | Channel 4 |
| | 4- | Minus terminal | Channel 4 |
| X1 | 1+ | Plus terminal | Channel 1 |
| | 1- | Minus terminal | Channel 1 |
| | 2+ | Plus terminal | Channel 2 |
| | 2- | Minus terminal | Channel 2 |

Dimensions



| LED | Colour | Meaning |
|---------|--------|---|
| PWR | GN | Power OK, goes out in the event of undervoltage |
| ST | GN | Data exchange active |
| ERR1 | RT | Communication error |
| ERR2 | RT | Error in the module |
| ERR 1-8 | RT | Channel error line break/short circuit |

Ordering information

ANTARES Remote I/O Module 8AIH **17-6143-1005/0000**

Technical data subject to change without notice.

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