



The ANTARES 8DO Remote I/O Module is suitable for capturing 8 intrinsically safe binary signals in hazardous areas. 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 8DO 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	Ex II 2(1) G Ex ib [Ia IIC/IIB Ga] IIC T4 Gb Ex II (1) D [Ex ia Da] IIIC
Certification	PTB 11 ATEX 2015
Marking IECEx	Ex ib [Ia IIC/IIB Ga] IIC T4 Gb [Ex ia Da] IIIC
Certification	IECEx PTB 11.0055
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)

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 digital outputs Ex i (short-circuit-proof)
Galvanic Isolation	between outputs and internal bus
Open circuit/short circuit	settable for each Channel with Software
No-load voltage	DC 24 V
Total current of all 8 Channels	max. 160 mA (limited)
Output current	max. 40 mA per Channel
Internal resistance	271 Ω
Rated output current	$I_N = 20 \text{ mA}$ ($U_N = 18.5 \text{ V}$)

Safety data per transmission Channel

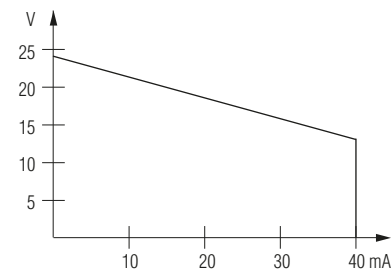
Module	U_o/U_i	I_o/I_i	P_o	C_i	L_i
8DO	27.5 V	104 mA	715 mW	6 nF	negligible
Ex ia IIC	$C_o \text{ max.}$	$L_o \text{ min.}$		$C_o \text{ min.}$	$L_o \text{ max.}$
8DO	80 nF	0.2 mH	or	60 nF	0.53 mH
Ex ia IIB	$C_o \text{ max.}$	$L_o \text{ min.}$		$C_o \text{ min.}$	$L_o \text{ max.}$
8DO	666 nF	0.1 mH	or	244 nF	11 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

Output level

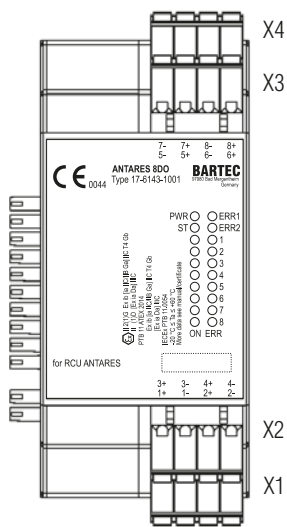
Currents between 40 mA and 70 mA can also be supplied to each channel. For this purpose, the short-circuit monitoring for the channel concerned must be switched off in the Antares Designer. This must, however, be checked in each case against the relevant requirement. The total current of 160 mA for the module continues to apply in each case. Accordingly, if the channel current is high, the number of available outputs per module will be reduced.



Displays

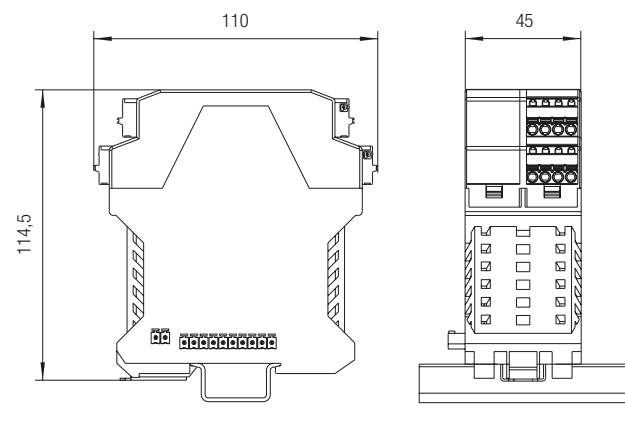
LEDs in enclosure front:
 Status: PWR, ST, ERR1, ERR2
 Outputs: 2 LEDs per Channel
 1 x LED yellow Channel active
 1 x LED red Channel error

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
ON 1-8	GE	Channel switched on
ERR 1-8	RT	Channel error line break/short circuit

Ordering information

ANTARES Remote I/O Module 8DO

17-6143-1001/0000

Technical data subject to change without notice.

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