



The ANTARES 8DO-SCL Remote I/O Module (single channel limitation) is operated and supplied with power by the Rail Control Unit (RCU) ANTARES. This module is suitable for the direct control of up to 8 intrinsically safe solenoid valves in the explosion hazardous area. The hot swap capability allows the electronic unit to be replaced without disconnecting from voltage even in an explosive atmosphere. The internal and galvanically isolated bus connection is established by simply plugging the modules to the RCU. A bus rail is not necessary. Open circuit/short circuit monitoring can be programmed for each channel. The bus status messages and individual messages per channel are displayed by the LEDs. This also enables diagnostics on the module. The Software ANTARES Designer allows the module to be programmed and the output load to be calculated automatically. See the system description for installation instructions. Note: Further approvals and data can be found at [www.bartec.de](http://www.bartec.de)

**Explosion protection**

Marking ATEX	Ex ib [ja IIC/IIB Ga] IIC T4 Gb [Ex ia Da] IIC
Certification	PTB 11 ATEX 2014
Marking IECEx	Ex ib [ja IIC/IIB Ga] IIC T4 Gb [Ex ia Da] IIC
Certification	IECEx PTB 11.0054
Marking CSA	Class I, Zone 1
Certification	CSA 2567944
Other approvals and certificates, see <a href="http://www.bartec.de">www.bartec.de</a>	
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	$U_o/U_i$	$I_o/I_i$	$P_o$	$C_i$	$L_i$
8DO-SCL	27.5 V	104 mA	715 mW	6 nF	negligible
Ex ia IIC	$C_o$ max.	$L_o$ min.		$C_o$ min.	$L_o$ max.
8DO-SCL	80 nF	0.2 mH	or	60 nF	0.53 mH
Ex ia IIB	$C_o$ max.	$L_o$ min.		$C_o$ min.	$L_o$ max.
8DO-SCL	666 nF	0.1 mH	or	244 nF	11 mH

**Technical data**

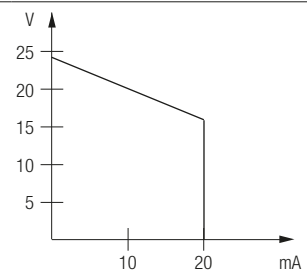
Enclosure material	PA
Protection class (EN 60529)	Enclosure: IP 30 in the ANTARES system construction
Electrical connections	plug-in tension spring-loaded clamps, 4-pole, up to 2.5 mm <sup>2</sup> optional coding and numbering
Mounting rail	TH 35-15 DIN EN 60715 (steel, galvanised)
Device and terminal 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 (EN 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
Output current	max. 20.5 mA per Channel (limited)
Internal resistance	271 Ω
Rated output current	$I_N = 20$ mA ( $U_N = 18.5$ V)

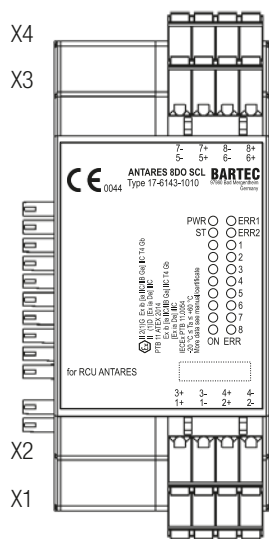
Output level



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

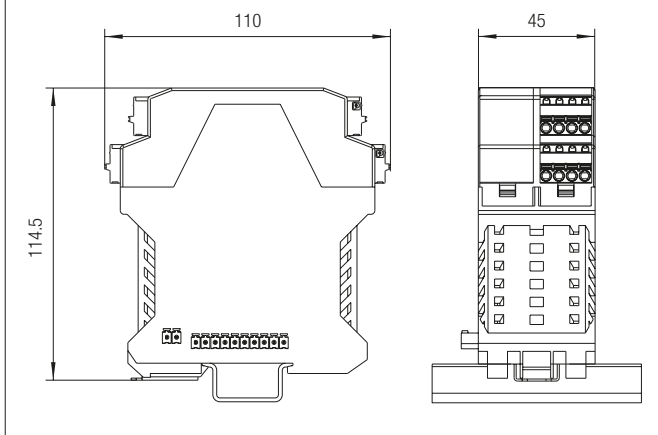
Wiring diagram/terminal assignment



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

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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-SCL **17-6143-1010/0000**

Technical data subject to change without notice.