



Solenoid / alarm driver

9203A



- Universal driver for solenoids, acoustic alarms and LEDs
- Extended self-diagnostics
- 1 or 2 channels
- Can be supplied separately or installed on power rail, PR 9400
- SIL 2-certified via Full Assessment



Advanced features

- Universal driver for the control of solenoids etc.
- Two hardware versions make it possible to choose either Low (35 mA) or High (60 mA) current output.
- Configuration and monitoring by way of detachable display front (PR 4511/4501).
- Selection of direct or inverted function for each channel via PR 4511/4501 and the possibility of reducing the output current to suit the application.
- Optional monitoring of the output current by way of PR 4511/4501.
- Optional redundant supply via power rail and/or separate supply.

Application

- The device can be mounted in and transmit signals to non-classified area and zone 2.
- Control of ON / OFF solenoids, acoustic alarms and LEDs.
- The 9203A is controlled by an NPN/PNP signal or a switch signal.
- Monitoring of internal error events via the individual status relay and/or a collective electronic signal via the power rail.
- The 9203A has been designed, developed and certified for use in SIL 2 applications according to the requirements of IEC 61508.

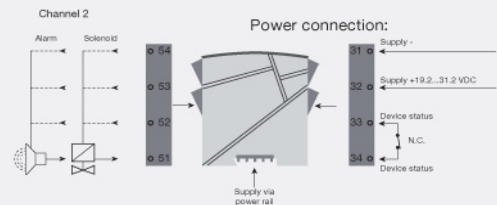
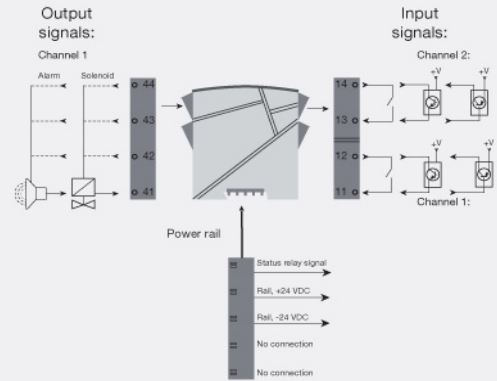
Technical characteristics

- 1 green and 2 yellow/red front LEDs indicate operation status and malfunction.
- 2.6 kVAC galvanic isolation between input, output and supply.

Mounting

- The devices can be mounted vertically or horizontally without distance between neighbouring units.

Connections



Order:

Type	Current output	Channels	Input
9203A	Low current : 1	Single : A Double : B	Standard : - PNP : 1
	High current : 2	Single : A	NPN : 2

Output loads:

Terminal	9203A1Ax (1 channel) / 9203A1Bx (2 channels)		
	41-42 / 51-52	41-43 / 51-53	41-44 / 51-54
Vout. no load	Min. 24 V	Min. 24 V	Min. 24 V
Vout. with load	Min. 12.5 V	Min. 13.5 V	Min. 14.5 V
Iout. max	35 mA	35 mA	35 mA

Terminal	9203A2Ax (1 channel)					
	41-42		41-43		41-44	
Vout. no load	Min. 24 V		Min. 24 V		Min. 24 V	
Vout. with load	Min. 11.5 V	Min. 9 V	Min. 12.5 V	Min. 10 V	Min. 13.5 V	Min. 11 V
Iout. max	50 mA	60 mA	50 mA	60 mA	50 mA	60 mA

Environmental Conditions

Specifications range.....	-20°C to +60°C
Storage temperature.....	-20°C to +85°C
Calibration temperature.....	20...28°C
Relative humidity.....	< 95% RH (non-cond.)
Protection degree.....	IP20
Installation in.....	Pollution degree 2 & measurement / overvoltage cat. II

Mechanical specifications

Dimensions (HxWxD).....	109 x 23.5 x 104 mm
Dimensions (HxWxD) w/ 4501 / 4511.....	109 x 23.5 x 116 / 131 mm
Weight approx.....	170 g
Weight incl. 4501 / 4511 (approx.).....	185 g / 270 g
DIN rail type.....	DIN EN 60715/35 mm
Wire size.....	0.13...2.08 mm ² AWG 26...14 stranded wire
Screw terminal torque.....	0.5 Nm
Vibration.....	IEC 60068-2-6 : 2007
Vibration: 2...13.2 Hz.....	±1 mm
Vibration: 13.2...100 Hz.....	±0.7 g

Common specifications

Supply	
Supply voltage.....	19.2...31.2 VDC
Isolation voltage	
Test /working: Input to any.....	2.6 kVAC / 300 VAC reinforced isolation
Output 1 to output 2.....	1.5 kVAC / 150 VAC reinforced isolation
Status relay to supply.....	1.5 kVAC / 150 VAC reinforced isolation
Fuse.....	1.25 A SB / 250 VAC
Max. required power.....	≤ 3.5 W (2 channels)
Programming.....	Communication enabler 4511 / Programming front 4501
EMC immunity influence.....	< ±0.5% of span
Extended EMC immunity: NAMUR	
NE 21, A criterion, burst.....	< ±1% of span

Input specifications

NPN and mechanical switch

Trig level LOW.....	≤ 2.0 VDC
Trig level HIGH.....	≥ 4.0 VDC
Max. external voltage.....	28 VDC
Input impedance.....	3.5 kΩ

PNP

Trig level LOW.....	≤ 8.0 VDC
Trig level HIGH.....	≥ 10.0 VDC
Max. external voltage.....	28 VDC
Input impedance.....	3.5 kΩ

Output specifications

Status relay	
Max. voltage.....	110 VDC / 125 VAC
Max. current.....	0.3 ADC / 0.5 AAC
Max. AC power.....	62.5 VA / 32 W
Output ripple.....	< 40 mVRMS

Observed authority requirements

EMC.....	2014/30/EU
LVD.....	2014/35/EU

Approvals

UL.....	UL 61010-1
DNV-GL Marine.....	Stand. f. Certific. No. 2.4
SIL.....	SIL 2 certified & fully assessed acc. to IEC 61508

Whilst every effort has been made to ensure the accuracy of this specification, we cannot accept responsibility for damage, injury, loss or expense from errors or omissions. In the interest of technical improvement, this specification may be altered without notice.

For pricing or any further information, please contact Omni Instruments Ltd.

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