PERFORMANCE MADE SMARTER



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 4500).
- Selection of direct or inverted function for each channel via PR 45xx and the possibility of reducing the output current to suit the application.
- Optional monitoring of the output current by way of PR 4500.
- Optional redundant supply via power rail and/or separate supply.

Application

- The 9203A can be mounted in the safe area and in zone 2 / Class 1, Division 2, Group A, B, C, D.
- 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.
- Suitable for the use in systems up to Performance Level “d” according to ISO-13849.

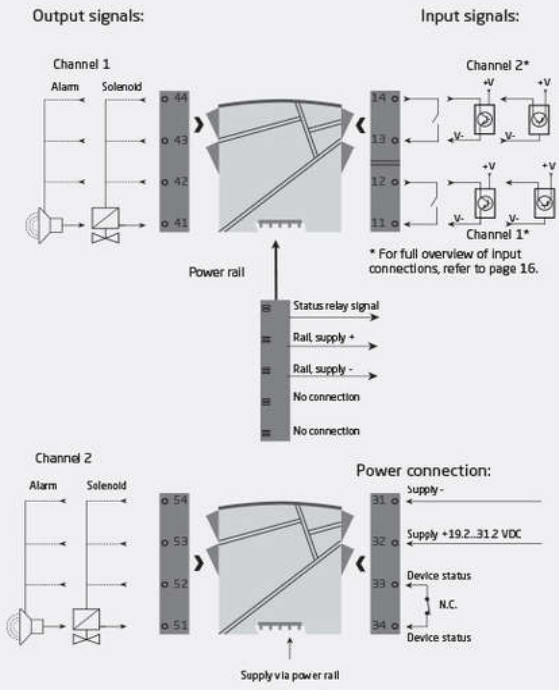
Technical characteristics

- 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.

Applications



Zone 2 & Cl. 1, Div. 2, gr. A-D or Safe Area

This page is automatically generated on the basis of information provided on www.prelectronics.com and affiliated websites. It is provided to you as a service and for information purpose only. While we have attempted to maintain the information as accurately as possible, the page may contain errors or omissions for which we disclaim any and all liability

Order:

Type	Output	Channels	Input	I.S. / Ex approvals
9203A	Low current : 1	Single : A Double : B	Opto / switch : - PNP : 1 NPN : 2	ATEX, IECEx, FM, INMETRO, CCC, EAC-Ex, UKEX : - UL 913, ATEX, IECEx, FM, INMETRO, CCC, EAC-Ex, UKEX : -U9 KCs, ATEX, IECEx, FM, INMETRO, CCC, EAC-Ex, UKEX : -KCs
	High current : 2	Single : A		

Output loads:

	9203A1Axx (1 channel) / 9203A1Bxx (2 channels)		
Terminal	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

	9203A2Axx (1 channel)					
Terminal	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

Operating temperature..... -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 & meas. / overvoltage cat. II

Mechanical specifications

Dimensions (HxWxD)..... 109 x 23.5 x 104 mm
Dimensions (HxWxD) w/ PR 4500..... 109 x 23.5 x 131 mm
Weight approx..... 170 g
Weight incl. 4501 / 451x (approx.)..... 185 g / 200 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
2...13.2 Hz..... ±1 mm
13.2...100 Hz..... ±0.7 g

Common specifications

Supply

Supply voltage..... 19.2...31.2 VDC
Fuse..... 1.25 A SB / 250 VAC
Max. required power..... ≤ 1.9 W / ≤ 3.1 W (1 / 2 ch.) - low current
Max. required power..... ≤ 2.5 W (1 ch.) - high current
Max. power dissipation, 1 / 2 ch..... ≤ 1.1 W / ≤ 2.0 W (1 / 2 ch.) - low current
Max. power dissipation..... ≤ 1.7 W (1 ch.) - high current

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

Programming..... PR 4500 communication interfaces
EMC immunity influence..... < ±0.5% of span
Extended EMC immunity: NAMUR NE21, 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..... 125 VAC / 110 VDC
Max. current..... 0.5 AAC / 0.3 ADC
Max. AC power..... 62.5 VA / 32 W

Output ripple..... < 40 mVRMS

Observed authority requirements

EMC..... 2014/30/EU & UK SI 2016/1091
LVD..... 2014/35/EU & UK SI 2016/1101
ATEX..... 2014/34/EU & UK SI 2016/1107
RoHS..... 2011/65/EU & UK SI 2012/3032
EAC..... TR-CU 020/2011
EAC LVD..... TR-CU 004/2011
EAC Ex..... TR-CU 012/2011

Approvals

ATEX..... KEMA 07ATEX0147 X
IECEx..... KEM 09.0001X
UKEX..... DEKRA 21UKEX0181X
c FM us..... FM19US0057X / FM19CA0030X
c UL us, UL 61010-1..... E314307
CCC..... 2020322304003423
KCs..... 21_AV4BO_0184X (only 9203Axxx-KCs)
c UL us, UL 913..... E233311 (only 9203xxxx-U9)
DNV Marine..... TAA00000JD
ClassNK..... TA18527M
EAC Ex..... RU C-DK.HA65.B.00355/19
SIL..... SIL 2 certified & fully assessed acc. to IEC 61508