

# Ex SOLENOID / ALARM DRIVER



- 1- or 2-channel version
- Solenoid driver for Ex area
- 3- / 5-port 3.75 kVAC galvanic isolation
- Digitally controlled voltage supply for Ex area
- Universal supply by AC or DC



**Application:**

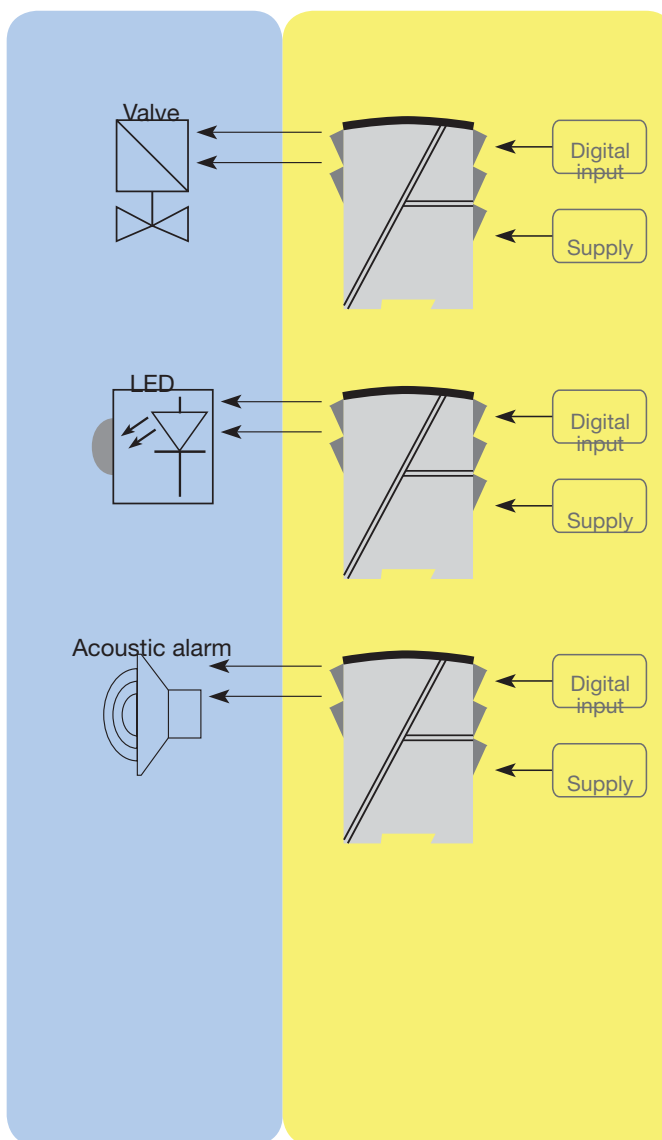
- Driver with safety barrier for the control of ON / OFF solenoids mounted in hazardous area.
- Driver with safety barrier for the supply of LEDs and acoustic alarms mounted in hazardous area.
- Voltage supply with ON / OFF control of other equipment.

**Technical characteristics:**

- PR5203B has a digital input per channel for the control of the Ex output voltage.
- Supply, inputs, and outputs are floating and galvanically separated.

**Mounting / installation:**

- Mounted vertically or horizontally on a DIN rail. By way of the 2-channel version up to 84 channels can be mounted per metre.



For pricing information contact Omni Instruments by phone on +44 845 9000 601 or via email at [info@omni.uk.com](mailto:info@omni.uk.com)



UK / Europe Office  
 Tel: +44 (0)845 9000 601  
 Fax: +44 (0)845 9000 602  
[info@omniinstruments.co.uk](mailto:info@omniinstruments.co.uk)  
[www.omniinstruments.co.uk](http://www.omniinstruments.co.uk)

Australia / Asia Pacific Office  
 Tel +61 (0)282 442 363  
 Fax +61 (0)294 751 278  
[info@omniinstruments.com.au](mailto:info@omniinstruments.com.au)  
[www.omniinstruments.com.au](http://www.omniinstruments.com.au)

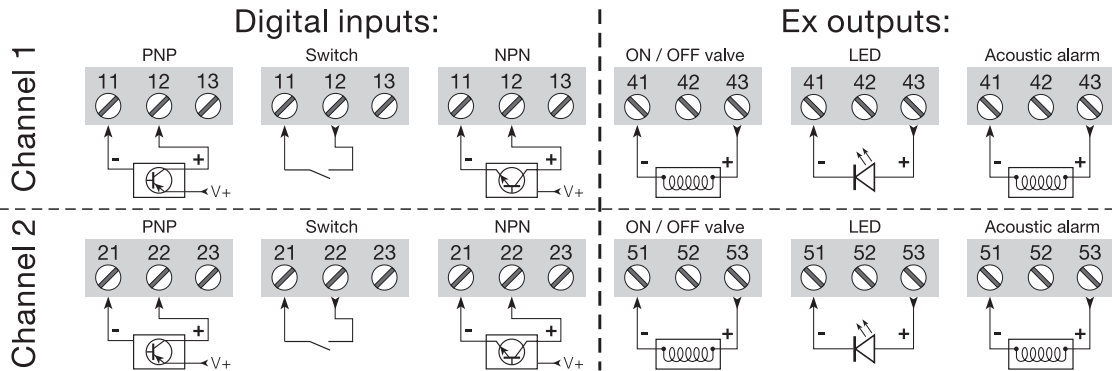
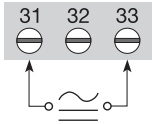
USA / Canada Office  
 Tel +1-866-849-3441  
 Fax +1-866-628-8055  
[info@omniinstruments.net](mailto:info@omniinstruments.net)  
[www.omniinstruments.net](http://www.omniinstruments.net)

Order: 5203B

Type	Input	Ex barrier	Channels
5203B	PNP : 1 Switch : 2 NPN : 3	[EEx ia] type : F	Single : 1
		[EEx ia] type : H [EEx ia] type : I	Single : 1 Double : 2

**Connections:**

Supply:



**Electrical specifications:**

**Specifications range:**

-20°C to +60°C

**Common specifications:**

Supply voltage, universal ..... 21.6...253 VAC, 50...60 Hz  
 19.2...300 VDC  
 Internal consumption..... ≤ 2 W (2 channels)  
 Max. consumption..... ≤ 4 W (2 channels)  
 Fuse..... 400 mA SB / 250 VAC  
 Isolation voltage, test / operation..... 3.75 kVAC / 250 VAC  
 Max. frequency..... 20 Hz  
 Calibration temperature..... 20...28°C

EMC immunity influence ..... < ±0.5% of span  
 Extended EMC immunity:  
 NAMUR NE 21, A criterion, burst..... < ±1% of span

Max. wire size..... 1 x 2.5 mm<sup>2</sup> stranded wire  
 Screw terminal torsion..... 0.5 Nm  
 Relative humidity ..... < 95% RH (non-cond.)  
 Dimensions (HxWxD)..... 109 x 23.5 x 130 mm  
 DIN rail type..... DIN 46277  
 Protection degree..... IP20  
 Weight ..... 230 g

**Inputs:**

**NPN and mechanical switch:**

Trig level LOW ..... ≤ 4.0 VDC  
 Trig level HIGH..... ≥ 7.0 VDC  
 Max. external voltage ..... 28 VDC  
 Input impedance ..... 3.48 kΩ

**PNP:**

Trig level LOW ..... ≤ 4.0 V  
 Trig level HIGH..... ≥ 7.0 V  
 Max. external voltage ..... 28 VDC  
 Input impedance ..... 3.48 kΩ

**Outputs:**

Output voltage..... See Ex data below  
 Output current ..... See Ex data below  
 Output ripple ..... < 40 mVRMS

**EEx / I.S. approvals:**

DEMKO 99ATEX126257 ..... II (1) GD  
 [EEx ia] IIC  
 Applicable for zone..... 0, 1, 2, 20, 21 or 22  
 UL..... IS, Cl. I, Div. 1, Gr. A, B, C, D  
 IS, Cl. I, zone 0 and 1, Gr. IIC  
 IS, Cl. II, Div. 1, Gr. E, F, G  
 UL Control Drawing No..... 5203QU01

**GOST R approval:**

VNIIFTRI, Cert. No..... See homepage

**Observed authority requirements:**

**Standard:**  
 EMC 2004/108/EC ..... EN 61326-1  
 LVD 2006/95/EC ..... EN 61010-1  
 PELV/SELV..... IEC 364-4-41  
 and EN 60742  
 ATEX 94/9/EC..... EN 50014, EN 50020 and  
 EN 50281-1-1  
 UL..... UL 913, UL 508

**Of span** = of the presently selected range

**Ex data:**

Ex barrier type:	F	H	I		
EEx approval:	[EEx ia] IIC	[EEx ia] IIC	[EEx ia] IIC		
ATEX approval:	II (1) GD	II (1) GD	II (1) GD		
U <sub>m</sub> :	250 V	250 V	250 V		
U <sub>o</sub> :	28 VDC	28 VDC	28 VDC		
I <sub>o</sub> :	115 mADC	110 mADC	93 mADC		
P <sub>o</sub> :	0.81 W	0.77 W	0.65 W		
L <sub>o</sub> :	2 mH	2.6 mH	3 mH		
C <sub>o</sub> :	0.08 μF	0.08 μF	0.08 μF		
V <sub>output</sub> , unloaded min.:	22.0 VDC	22.0 VDC	22.0 VDC		
V <sub>output</sub> , loaded min.:	13.0 VDC	14.0 VDC	10.0 VDC		
Output current, max.:	50.0 mADC	35.0 mADC	35.0 mADC		