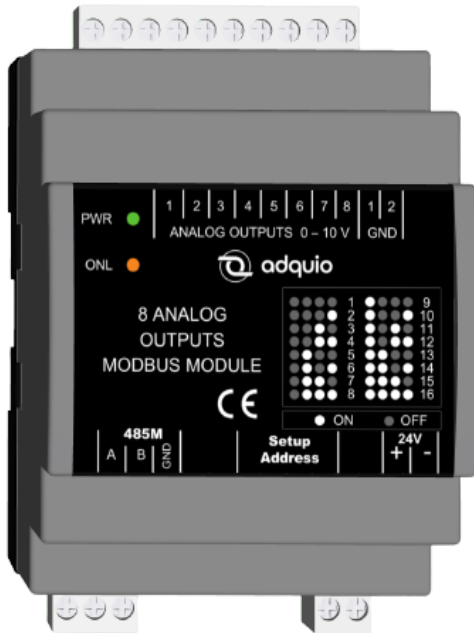


DATASHEET

ADQUIO 8 ANALOG OUTPUTS MODBUS MODULE

Modbus module with 8 analog outputs (0-10 V)



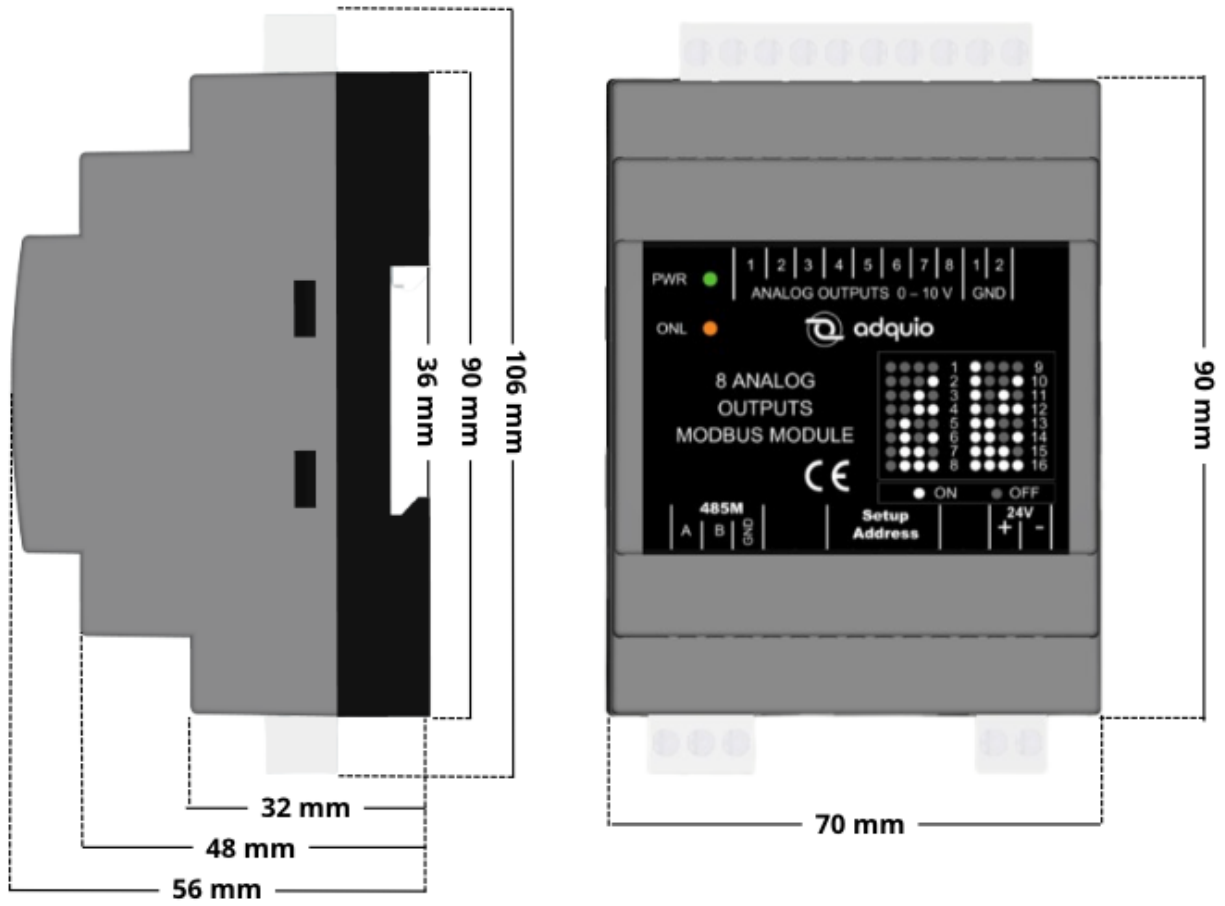
1 Ordering information

Reference	Description	Lifecycle *
ADQ-SA-8A0	Adquio 8 analog outputs Modbus module, module with 8 analog outputs, 1 485 slave	Active



* For planning and commissioning of new installations, use modules in Active status only

2 Dimensions



3 Technical data

Parameter	Value
Process voltage	
Connections	Removable terminal block 5.08 Pitch 2 contacts
Nominal value	24 VDC
Maximum supported	28 VDC
Voltage reversal protection	Yes
Fuse protection rated up to	3 A
Consumption	
From a 24V power supply	15 mA
Maximum consumption	20 mA
Maximum consumption peak at startup	15 mA

! CAUTION!
Exceeding the maximum power supply voltage for process or supply voltages could result in unrecoverable damage to the system. The system could be destroyed.

! CAUTION!
Inadequate connection cables cause over temperature in the terminals. I purchased 8 analog outputs, they can be destroyed if the wrong cable type, cable size, or cable temperature rating is used.

3.1 Technical data of the analog outputs

Parameter	Value
Number of outputs	8
Connections	Removable terminal block 5.08 Pitch 10 contacts
Range	0-10V
Resolution	12 bits
Output signal indicator	No

4 System data

4.1 Environmental conditions

Parameter	Value
Temperature	
Operation	0 °C...+60 °C (Horizontal DIN rail mounting)
Storage	-40 °C...+70 °C
Transport	-40 °C...+70 °C
Humidity	Max. 95% no condensation
Air pressure	
Operation	> 800 hPa / < 2000 m
Storage	> 600 hPa / < 3500 m
Isolation	IP20

4.2 Mechanical data

Parameter	Value
Mounting	Horizontal
Protection level	IP20
Case material	ABS UL-94-HB Dark grey
Mounting alternatives	
DIN rail according to DIN EN 50022	35 mm, depth 7.5 mm or 15 mm
Screw mounting	Screws with a diameter of 4 mm
tightening torque	1.2 Nm

4.4 Communications

Parameter	Value
485 slave	
Number	1
Protocol	Modbus RTU

4.5 Modbus register configuration table

Modbus positions						
Function	Address	Description	Reading	Writing	Type	Size
03/06	0	Power Led (0-1)	Yes	Yes	Holding Register	16 Bits
03/06	1	Analog output 1 RAW	Yes	Yes	Holding Register	16 Bits
03/06	2	Analog output 2 RAW	Yes	Yes	Holding Register	16 Bits
03/06	3	Analog output 3 RAW	Yes	Yes	Holding Register	16 Bits
03/06	4	4 RAW analog output	Yes	Yes	Holding Register	16 Bits
03/06	5	Analog output 5 RAW	Yes	Yes	Holding Register	16 Bits
03/06	6	Analog output 6 RAW	Yes	Yes	Holding Register	16 Bits
03/06	7	Analog output 7 RAW	Yes	Yes	Holding Register	16 Bits
03/06	8	8 RAW analog output	Yes	Yes	Holding Register	16 Bits
03/06	9	Analog output 1 (0-10V)	Yes	Yes	Holding Register	16 Bits
03/06	10	Analog output 2 (0-10 V)	Yes	Yes	Holding Register	16 Bits
03/06	11	Analog output 3 (0-10V)	Yes	Yes	Holding Register	16 Bits
03/06	12	Analog output 4 (0-10V)	Yes	Yes	Holding Register	16 Bits
03/06	13	Analog output 5 (0-10V)	Yes	Yes	Holding Register	16 Bits
03/06	14	Analog output 6 (0-10V)	Yes	Yes	Holding Register	16 Bits
03/06	15	Analog output 7 (0-10V)	Yes	Yes	Holding Register	16 Bits
03/06	16	Analog output 8 (0-10V)	Yes	Yes	Holding Register	16 Bits
03/06	17	Error LED (0-1)	Yes	Yes	Holding Register	16 Bits
03/06	18	Modbus Address	Yes	No	Holding Register	16 Bits



- The voltage registers must be multiplied by 100 to write them, that is, for 5 V we must enter 500.
- RAW values vary between 0 and 4096 and are measured over a range of 0 to 10 V.
- Address 18 shows the currently configured Modbus address. It is useful to see its value before restarting the device, and to be able to access it again after changing the configuration microswitches for said address.

4.6 Modbus address configuration table with micro switches

Switch 1	Switch 2	Switch 3	Switch 4	Switch 5	Switch 6	Modbus Address
Off	Off	Off	Off	Off	Off	01
Off	Off	Off	Off	Off	On	02
Off	Off	Off	Off	On	Off	03
Off	Off	Off	Off	On	On	04
Off	Off	Off	On	Off	Off	05
Off	Off	Off	On	Off	On	06
Off	Off	Off	On	On	Off	07
Off	Off	Off	On	On	On	08
Off	Off	On	Off	Off	Off	09
Off	Off	On	Off	Off	On	10
Off	Off	On	Off	On	Off	11
Off	Off	On	Off	On	On	12
Off	Off	On	On	Off	Off	13
Off	Off	On	On	Off	On	14
Off	Off	On	On	On	Off	15
Off	Off	On	On	On	On	16
Off	On	Off	Off	Off	Off	17
Off	On	Off	Off	Off	On	18
Off	On	Off	Off	On	Off	19
Off	On	Off	Off	On	On	20
Off	On	Off	On	Off	Off	21
Off	On	Off	On	Off	On	22
Off	On	Off	On	On	Off	23
Off	On	Off	On	On	On	24

Off	On	On	Off	Off	Off	25
Off	On	On	Off	Off	On	26
Off	On	On	Off	On	Off	27
Off	On	On	Off	On	On	28
Off	On	On	On	Off	Off	29
Off	On	On	On	Off	On	30
Off	On	On	On	On	Off	31
Off	On	On	On	On	On	32
On	Off	Off	Off	Off	Off	33
On	Off	Off	Off	Off	On	34
On	Off	Off	Off	On	Off	35
On	Off	Off	Off	On	On	36
On	Off	Off	On	Off	Off	37
On	Off	Off	On	Off	On	38
On	Off	Off	On	On	Off	39
On	Off	Off	On	On	On	40
On	Off	On	Off	Off	Off	41
On	Off	On	Off	Off	On	42
On	Off	On	Off	On	Off	43
On	Off	On	Off	On	On	44
On	Off	On	On	Off	Off	45
On	Off	On	On	Off	On	46
On	Off	On	On	On	Off	47
On	Off	On	On	On	On	48
On	On	Off	Off	Off	Off	49
On	On	Off	Off	Off	On	50
On	On	Off	Off	On	Off	51

On	On	Off	Off	On	On	52
On	On	Off	On	Off	Off	53
On	On	Off	On	Off	On	54
On	On	Off	On	On	Off	55
On	On	Off	On	On	On	56
On	On	On	Off	Off	Off	57
On	On	On	Off	Off	On	58
On	On	On	Off	On	Off	59
On	On	On	Off	On	On	60
On	On	On	On	Off	Off	61
On	On	On	On	Off	On	62
On	On	On	On	On	Off	63
On	On	On	On	On	On	64

4.7 Certifications

Parameter	Value
Safety and Health	EN ISO 13849-1: 2015 EN ISO 13849-2: 2012 EN 62061:2005 + A1:2013 + A2:2015 EN 60950-1:2006 EN 62311:2008
EMC	EN 61000-6-4:2007 + A1:2011 EN 61000-6-2:2005 ETSI EN 301 489-1 v2.2.0 ETSI EN 301 489-17 v3.2.0
RoHS	EN 50581:2012

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