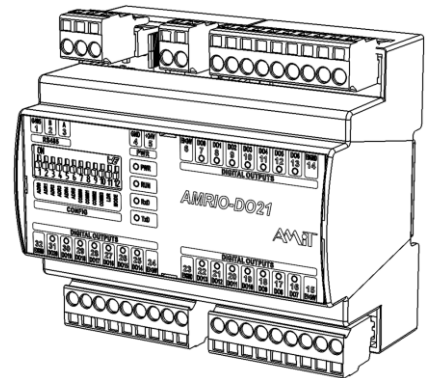


AMRIO-DO21

Extension module for digital outputs

- **Module with 21 digital outputs 24 V DC**
- **Option of DO working in PWM mode**
- **Outputs with galvanic isolation in sets of seven**
- **MODBUS RTU / ARION (RS485) communication**
- **Possibility of user programming**
- **DIN rail mounting**
- **Power supply 24 V DC**



TECHNICAL DATA

Outputs	3 × 7
Switching element	MOS
Nominal switching voltage Ex+24V ¹⁾	24 V DC
Maximum switching voltage Ex+24V ¹⁾	40 V DC
Switching element voltage drop	0.9 V DC
Switching current (permanent)	500 mA DC
Max. current of the current protection	0.7 A to 1.9 A DC
Max. current through common terminal	4.9 A DC
Make time / Break time	22 μs / 40 μs
Short-circuit protection	Yes
Inductive load treatment	Yes
Galvanically isolated outputs	Yes ²⁾
Communication	RS485
Galvanically isolated line	Yes ²⁾
Line overvoltage protection	Transil 600 W
Communication speeds	9,600 bps to 115,200 bps
Number of modules in the network / segment	63
Power supply	19.2 V DC to 28.8 V DC
Consumption (without outputs)	Max. 24 mA at 24 V DC
Other	
Connection	Spring-loaded connectors WAGO 231
Ingress protection rate	IP20
Operating temperature range	-20 °C to 70 °C
Maximum ambient humidity	< 95 % non-condensing
Mounting	On a 35 mm DIN rail
Weight	0.22 kg
Dimensions (w × h × d)	(106 × 101 × 62) mm
Programming	DetStudio / EsiDet

¹⁾ The letter X represents the number of the output group (0, 1 and 2).

²⁾ Isolation strength 500 V AC, galvanic isolation must not be used for separation of safe parts from dangerous parts.

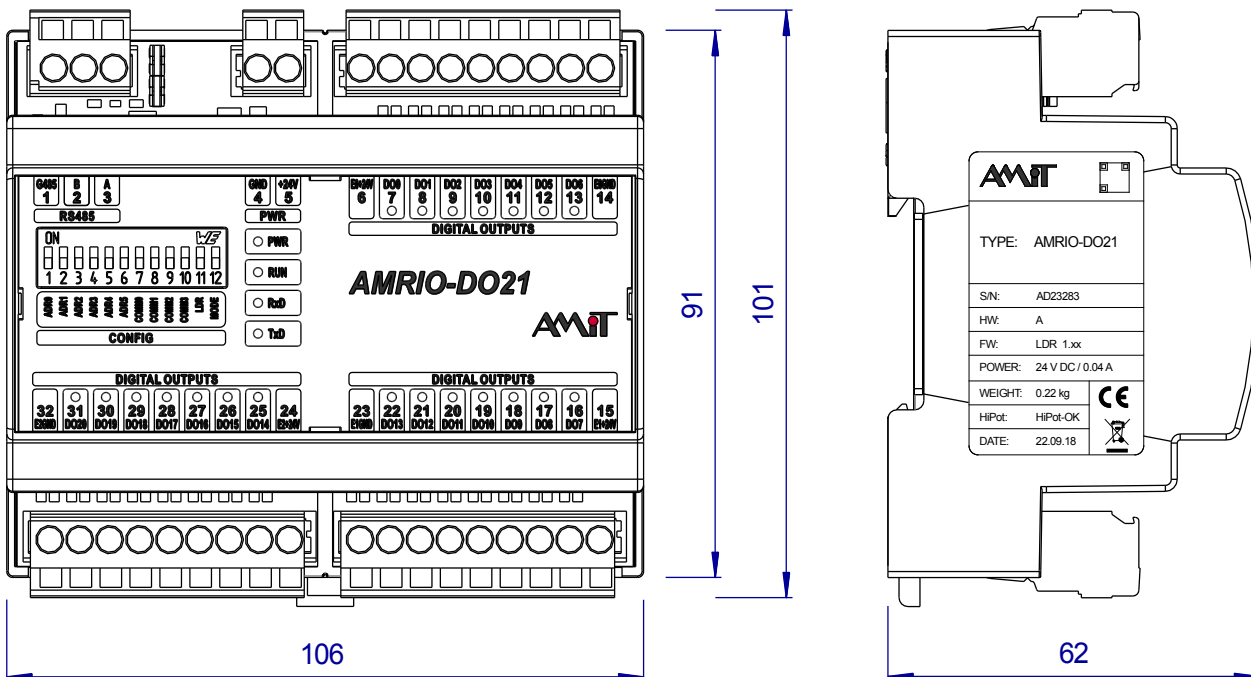
ORDERING INFORMATION

AMRIO-DO21	Module 21 digital outputs, WAGO connectors
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RECOMMENDED DRAWING SYMBOL

AMRIO-DO21			
AMIT			
DO2		RS485	
32	E2GND	G485	1
31	DO20	B	2
30	DO19	A	3
29	DO18		
28	DO17		
27	DO16		
26	DO15		
25	DO14		
24	E2+24V		
DO1		PWR	
23	E1GND	GND	4
22	DO13	+24V	5
21	DO12		
20	DO11		
19	DO10		
18	DO9		
17	DO8		
16	DO7		
15	E1+24V		
		DO0	
		E0+24V	6
		DO0	7
		DO1	8
		DO2	9
		DO3	10
		DO4	11
		DO5	12
		DO6	13
		E0GND	14

MECHANICAL DIMENSIONS



AMRIO-DO21

Extension module for digital outputs

DESCRIPTION OF TERMINALS

Terminal	Signal	Significance	Terminal	Signal	Significance
1	G485	RS485, ground	17	DO8	Output 8
2	B	RS485, signal B	18	DO9	Output 9
3	A	RS485, signal A	19	DO10	Output 10
4	GND	Power supply, ground	20	DO11	Output 11
5	+24V	Power supply, +24 V DC	21	DO12	Output 12
6	E0+24V	Switching voltage DO0 to DO6	22	DO13	Output 13
7	DO0	Output 0	23	E1GND	External GND for DO7 to DO13
8	DO1	Output 1	24	E2+24V	Switching voltage DO14 to DO20
9	DO2	Output 2	25	DO14	Output 14
10	DO3	Output 3	26	DO15	Output 15
11	DO4	Output 4	27	DO16	Output 16
12	DO5	Output 5	28	DO17	Output 17
13	DO6	Output 6	29	DO18	Output 18
14	E0GND	External GND for DO0 to DO6	30	DO19	Output 19
15	E1+24V	Switching voltage DO7 to DO13	31	DO20	Output 20
16	DO7	Output 7	32	E2GND	External GND for DO14 to DO20

RS485 JUMPERS

Jumpers	Significance
Fitted	Terminal station – idle states and terminations are active.
Not fitted	Intermediate station – idle states and terminations are inactive.

Note: Jumpers are always fitted simultaneously.

Procedures of setting communication parameters, including the list of supported MODBUS functions and mapping of signals in the ARION protocol, are included in the operation manual for this module ([amrio-do21_g_en_xxx.pdf](#)).

Module **AMRIO-DO21** with preloaded application can be used as a fully compatible substitute for modules **DM-DO18** and **DMM-DO18**, however, it is necessary to observe the difference in significance of terminals (see the table Description of terminals).

Data in this datasheet is informative only. Binding detailed information can be found in the operation manual ([amrio-do21_g_en_xxx.pdf](#)). Documentation and examples are available at amitautomation.com.