DDACM | DIN RAIL MOUNTED MODBUS TO ANALOGUE CONVERTER

Modbus register map

MODBUS REGISTER MAP

INPUT REGISTERS

		Data type	Description	Raw data range	Values
1	Output 1	unsigned integer	Output value channel 1	0—1.000	100 = 10,0 %
2	Output type 1	unsigned integer	Analogue / modulating output type channel 1	1—3	1 = 0—10 VDC 2 = 0—20 mA 3 = PWM
3	Output 2	unsigned integer	Output value channel 2	0—1.000	100 = 10,0 %
4	Output type 2	unsigned integer	Analogue / modulating output type channel 2	1—3	1 = 0—10 VDC 2 = 0—20 mA 3 = PWM
5	Output 3	unsigned integer	Output value channel 3	0—1.000	100 = 10,0 %
6	Output type 3	unsigned integer	Analogue / modulating output type channel 3	1—3	1 = 0—10 VDC 2 = 0—20 mA 3 = PWM
7—10			Reserved, return 0		

Note: The input registers can be read via the Modbus command: “Read input registers”.

HOLDING REGISTERS

		Data type	Description	Raw data range	Values	Factory default values
1	Device slave address	unsigned integer	Modbus device address	1—247		1
2	Modbus baud rate	unsigned integer	Modbus communication baud rate	0—6	0 = 4.800 1 = 9.600 2 = 19.200 3 = 38.400 4 = 57.600 5 = 115.200 6 = 230.400	2
3	Modbus parity	unsigned integer	Parity check mode	0—2	0 = 8N1 1 = 8E1 2 = 8O1	1
4	Device type	unsigned integer	Device type. Read only	2.404—2.405	2.404 = DDACM-03 2.405 = DDACM-I3	
5	HW version	unsigned integer	Hardware version of the device. Read only	XXXX	0x0100 = HW version 1.0	
6	FW version	unsigned integer	Firmware version of the device. Read only	XXXX	0x0100 = FW version 1.0	
7			Reserved, returns 0			
8	Modbus safety timeout	unsigned integer	Timeout setting for no Modbus communication. After time runs out, output(s) is set to 0	0—60	0 = no timeout 60 = 60 minutes	0
9	Modbus network resistor termination (NBT)	unsigned integer	Set device as end device of the line / or not by connecting NBT	0—1	0 = NBT disconnected 1 = NBT connected	0
10	Modbus registers reset	unsigned integer	Resets Modbus Holding registers to default values. When finished this register is automatically reset to 0	0—1	0 = Idle 1 = Reset Modbus Registers	0
11	Output type 1	unsigned integer	Select analogue / modulating output type channel 1	1—3	1 = 0—10 VDC 2 = 0—20 mA 3 = PWM	1
12	Output value 1	unsigned integer	Value for output channel 1	0—1.000	0 = 0 % 1.000 = 100 %	0

HOLDING REGISTERS

		Data type	Description	Raw data range	Values	Factory default values
13	PWM output frequency 1	unsigned integer	Selection of PWM output frequency channel 1	1—8	1 = 1 kHz 8 = 8 kHz	1
14	PWM output 1	unsigned integer	Selection of PWM output type channel 1: Open collector (OC) / Pull-up +12 VDC	0—1	0 = Open collector 1 = Pull-up + 12 VDC	0
15	Output type 2	unsigned integer	Select analogue / modulating output type channel 2	1—3	1 = 0—10 VDC 2 = 0—20 mA 3 = PWM	1
16	Output value 2	unsigned integer	Value for output channel 2	0—1.000	0 = 0 % 1.000 = 100 %	0
17	PWM output frequency 2	unsigned integer	Selection of PWM output frequency channel 2	1—8	1 = 1 kHz 8 = 8 kHz	1
18	PWM output 2	unsigned integer	Selection of PWM output type channel 2: Open collector (OC) / Pull-up +12 VDC	0—1	0 = Open collector 1 = Pull-up + 12 VDC	0
19	Output type 3	unsigned integer	Select analogue / modulating output type channel 3	1—3	1 = 0—10 VDC 2 = 0—20 mA 3 = PWM	1
20	Output value 3	unsigned integer	Value for output channel 3	0—1.000	0 = 0 % 1.000 = 100 %	0
21	PWM output frequency 3	unsigned integer	Selection of PWM output frequency channel 3	1—8	1 = 1 kHz 8 = 8 kHz	1
22	PWM output 3	unsigned integer	Selection of PWM output type channel 3: Open collector (OC) / Pull-up +12 VDC	0—1	0 = Open collector 1 = Pull-up + 12 VDC	0
23—30			Reserved, return 0			

Note: The holding registers can be managed via the following Modbus commands: “Read Holding Registers”, “Write Single Register” or “Write Multiple Registers”.

The free Sentera configuration and monitoring software 3SModbus can be downloaded via: *https://www.sentera.eu/en/3SMCenter*