

DADCM-44 | DIN RAIL MOUNTED ANALOGUE TO DIGITAL (MODBUS RTU) CONVERTER

Modbus register map



MODBUS REGISTER MAP

INPUT REGISTERS					
		Data type	Description	Raw data range	Values
1	Analogue / digital sensor type (Ai1)	unsigned integer	Analogue / digital sensor type (Ai1)	0–3	0 = Not in use 1 = Voltage 2 = Current 3 = PWM
2	Analogue / digital input level (Ai1)	signed integer	Analogue / digital input level (Ai1)	0–1.000	300 = 3,0 VDC = 6 mA = 30 %
3	PWM frequency (Ai1)	unsigned integer	PWM frequency (Ai1) (If Ai1 type is PWM)	1.000–5.000	1.000 = 1.000 Hz
4	Analogue / digital sensor type (Ai2)	unsigned integer	Analogue / digital sensor type (Ai2)	0–3	0 = Not in use 1 = Voltage 2 = Current 3 = PWM
5	Analogue / digital input level (Ai2)	signed integer	Analogue / digital input level (Ai2)	0–1.000	300 = 3,0 VDC = 6 mA = 30 %
6	PWM frequency (Ai2)	unsigned integer	PWM frequency (Ai2) (If Ai2 type is PWM)	1.000–5.000	1.000 = 1.000 Hz
7	Analogue / digital sensor type (Ai3)	unsigned integer	Analogue / digital sensor type (Ai3)	0–3	0 = Not in use 1 = Voltage 2 = Current 3 = PWM
8	Analogue / digital input level (Ai3)	signed integer	Analogue / digital input level (Ai3)	0–1.000	300 = 3,0 VDC = 6 mA = 30 %
9	PWM frequency (Ai3)	unsigned integer	PWM frequency (Ai3) (If Ai3 type is PWM)	1.000–5.000	1.000 = 1.000 Hz

INPUT REGISTERS

		Data type	Description	Raw data range	Values
10	Analogue / digital sensor type (Ai4)	unsigned integer	Analogue / digital sensor type (Ai4)	0–3	<ul style="list-style-type: none"> 0 = Not in use 1 = Voltage 2 = Current 3 = PWM
11	Analogue / digital input level (Ai4)	signed integer	Analogue / digital input level (Ai4)	0–1.000	300 = 3,0 VDC = 6 mA = 30 %
12	PWM frequency (Ai4)	unsigned integer	PWM frequency (Ai4) (If Ai4 type is PWM)	1.000–5.000	1.000 = 1.000 Hz
13–20			Reserved. Return 0		
21	Temperature sensor type (Ti1)	unsigned integer	Current sensor type connected to Ti1	0–3	<ul style="list-style-type: none"> 0 = PT500 1 = PT1000 2 = Disconnected 3 = Shorted
22	Temperature level (Ti1)	signed integer	Temperature level (Ti1)	0x8000, -1.000, -300–700	<ul style="list-style-type: none"> 0x8000 = Not connected -1.000 = Shorted 500 = 50,0 °C
23	Temperature sensor type (Ti2)	unsigned integer	Current sensor type connected to Ti2	0–3	<ul style="list-style-type: none"> 0 = PT500 1 = PT1000 2 = Disconnected 3 = Shorted
24	Temperature level (Ti2)	signed integer	Temperature level (Ti2)	0x8000, -1.000, -300–700	<ul style="list-style-type: none"> 0x8000 = Not connected -1.000 = Shorted 500 = 50,0 °C
25	Temperature sensor type (Ti3)	unsigned integer	Current sensor type connected to Ti3	0–3	<ul style="list-style-type: none"> 0 = PT500 1 = PT1000 2 = Disconnected 3 = Shorted
26	Temperature level (Ti3)	signed integer	Temperature level (Ti3)	0x8000, -1.000, -300–700	<ul style="list-style-type: none"> 0x8000 = Not connected -1.000 = Shorted 500 = 50,0 °C

INPUT REGISTERS

		Data type	Description	Raw data range	Values
27	Temperature sensor type (Ti4)	unsigned integer	Current sensor type connected to Ti4	0–3	0 = PT500 1 = PT1000 2 = Disconnected 3 = Shorted
28	Temperature level (Ti4)	signed integer	Temperature level (Ti4)	0x8000, -1.000, -300–700	0x8000 = Not connected -1.000 = Shorted 500 = 50,0 °C
29–30			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 3 = 38.400 6 = 230.400 1 = 9.600 4 = 57.600 2 = 19.200 5 = 115.200	2
3	Modbus parity	unsigned integer	Parity check mode	0–2	0 = None 1 = Even 2 = Odd	1
4	Device type	unsigned integer	Device type. Read only	2.402	DADCM/44 = 2.402	
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	
7–10			Reserved, return 0			

HOLDING REGISTERS

		Data type	Description	Raw data range	Values	Factory default values
11	Analogue / Digital input type (Ai1)	unsigned integer	Disable or select analogue / digital input type for (Ai1)	0–3	0 = Not in use 1 = Voltage 2 = Current 3 = PWM	1
12	Analogue / Digital input type (Ai2)	unsigned integer	Disable or select analogue / digital input type for (Ai2)	0–3	0 = Not in use 1 = Voltage 2 = Current 3 = PWM	1
13	Analogue / Digital input type (Ai3)	unsigned integer	Disable or select analogue / digital input type for (Ai3)	0–3	0 = Not in use 1 = Voltage 2 = Current 3 = PWM	1
14	Analogue / Digital input type (Ai4)	unsigned integer	Disable or select analogue / digital input type for (Ai4)	0–3	0 = Not in use 1 = Voltage 2 = Current 3 = PWM	1
15–18			Reserved. Return 0			
19	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
20	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

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>