

DRE | DIGITAL FAN SPEED CONTROLLER

Modbus register map



MODBUS REGISTER MAP

INPUT REGISTERS		Data type	Description	Raw data	Values
1	Output value	unsigned integer	Current output value	0, 30–100	0 = 0 % (0 VAC nominal), 30 = 30 % (70 VAC nominal), 100 = 100 % (230 VAC nominal)
2	Current output step	unsigned integer	Current output step	0–9	0 = step 0, 9 = step 9
3	Umin	unsigned integer	Minimum output value	30–65	30 = 30 % (70 VAC nominal), 65 = 65 % (150 VAC nominal)
4	Umax	unsigned integer	Maximum output value	75–100	75 = 75 % (170 VAC nominal), 100 = 100 % (230 VAC nominal)
5	Regulation type	unsigned integer	Regulation type (Normal / Inverse)	0, 1	0 = Normal, 1 = Inverse
6	Startup type	unsigned integer	Startup type	0, 1	0 = Kickstart, 1 = Softstart
7	Kickstart time	unsigned integer	Kickstart duration	3–9	5 = 5 s
8	Unregulated output state	unsigned integer	Unregulated output state	0, 1	0 = Off, 1 = On
9			Reserved, returns 0		
10	Unit status		Current controller working state	0–2	0 = Off (Decimal point visible), 1 = On (Current output step visible) 2 = Modbus controlled ('d' visible)

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

HOLDING REGISTERS						
		Data type	Description	Raw data	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	1–4	1 = 9.600, 2 = 19.200, 3 = 38.400, 4 = 57.600	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	3008	3008 = DRE-1-25-DT	
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	0x0140 = FW version 1.4	
7	Operating mode	unsigned integer	Enable Modbus control	0, 1	0 = Standalone Mode, 1 = Modbus Mode	0
8	Output overwrite	unsigned integer	Enable direct control over the output. Active only if holding register 7 is set to 1	0, 1	0 = Disabled, 1 = Enabled	0
9	Run/Stand-by	unsigned integer	Run or put the unit in stand-by mode. Active only if holding register 7 is set to 1	0, 1	0 = Stand-by, 1 = Run	0
10	Umin	unsigned integer	Minimum output value selection. Active only if holding register 7 is set to 1	30–65	30 = 30 % (70 VAC nominal), 65 = 65 % (150 VAC nominal)	30
11	Umax	unsigned integer	Maximum output value selection. Active only if holding register 7 is set to 1	75–100	75 = 75 % (170 VAC nominal), 100 = 100 % (230 VAC nominal)	100
12	Output step	unsigned integer	Select output voltage step value. Active only if holding register 7 is set to 1 and holding register 8 is set to 0	0–9	0 = step 0, 9 = step 9	5

HOLDING REGISTERS						
		Data type	Description	Raw data	Values	Factory default values
13	Regulation type	unsigned integer	Regulation type (Normal / Inverse) selection. Active only if holding register 7 is set to 1	0, 1	0 = Normal, 1 = Inverse	0
14	Startup type	unsigned integer	Startup type selection. Active only if holding register 7 is set to 1	0, 1	0 = Kickstart, 1 = Softstart	0
15	Kickstart time	unsigned integer	Kickstart duration selection. Active only if holding register 14 is set to 0	3–9	5 = 5 s	5
16	NBT	unsigned integer	Set network bus termination resistor. Active only if holding register 7 is set to 1	0, 1	0 = Disconnected, 1 = Connected	0
17–20			Reserved, return 0			
21	Output overwrite value	unsigned integer	Output overwrite value. Active only if holding registers 7 and 8 are set to 1	30–100	30 = 30 % (70 VAC nominal), 100 = 100 % (230 VAC nominal)	100
22–30			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/3SModbus>

COILS						
		Data type	Description	Raw data	Values	Factory default values
1	L1 output relay	bit.	Unregulated output relay control. Active only if holding registers 7 and 8 are set to 1	0, 1	1 = On, 0 = Off	1