

Modbus RTU Description

General description

supported functioncodes

0x04	read input registers
0x03	read holding registers
0x06	write single holding register
0x10	write multiple holding registers

Communication parameters

Device address	0x01
baudrate	115200 baud
parity	1 even
start bits	1
stop bits	1

Holding Registers (for configuration)

register	address	name	R/W	scale	units	type	default	description
30001	0	AI1 U/I	R/W	\	\	uint	0	defines the analog input AI1 as voltage (0-10V) or current (0-20mA) sensor 0: voltage 1: current
30002	1	AI2 U/I	R/W	\	\	uint	0	defines the analog input AI2 as voltage (0-10V) or current (0-20mA) sensor 0: voltage 1: current
30003	2	reset counter	R/W	\	\	uint	0	0: 1: reset operating hours, operating hours, energy consumption
30015	14	Device ID	R/W	\	\	uint	0	proprietary ID for own use

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Input Registers (input and calculated values)

register	address	name	R/W	scale	units	type	description
40001	0	rms of current A	R	1	A	half precision float	Effective value of current through U1
40002	1	rms of current B	R	1	A	half precision float	Effective value of current through V1
40003	2	rms of current C	R	1	A	half precision float	Effective value of current through W1
40004	3	rms of voltage A	R	1	V	half precision float	Effective value of voltage between U1 and V1
40005	4	rms of voltage B	R	1	V	half precision float	Effective value of voltage between V1 and W1
40006	5	rms of voltage C	R	1	V	half precision float	Effective value of voltage between W1 and U1
40007	6	rms of voltage D	R	1	V	half precision float	Effective value of voltage between U1 and U2
40008	7	electric frequency	R	1	Hz	half precision float	Base frequency of voltage between U1 and V1
40009	8	phase angle current A	R	1	deg	half precision float	Phase shift of the current through U1 in relation to the voltage between U1 and V1
40010	9	phase angle current B	R	1	deg	half precision float	Phase shift of the current through V1 in relation to the voltage between U1 and V1
40011	10	phase angle current C	R	1	deg	half precision float	Phase shift of the current through W1 in relation to the voltage between U1 and V1
40012	11	phase angle voltage B	R	1	deg	half precision float	Phase shift of the voltage between V1 and W1 in relation to the voltage between U1 and V1
40013	12	phase angle voltage C	R	1	deg	half precision float	Phase shift of the voltage between W1 and U1 in relation to the voltage between U1 and V1
40014	13	phase angle voltage D	R	1	deg	half precision float	Phase shift of the voltage between U1 and U2 in relation to the voltage between U1 and V1
40015	14	internal temperature	R	1	°C	half precision float	Inner temperature
40016	15	overall energy consumption	R	1	kWh	half precision float	Energy consumption
40017	16	overall power consumption	R	1	kW	half precision float	Active power consumption
40018	17	operating hours	R	1	h	half precision float	Operating hours
40019	18	switching operations	R	1	n	half precision float	On-off cycles of the consumer
40020	19	analog in 1	R	1	\	half precision float	Analog input 1: for current 0-20 (in mA); for voltage 0-10 (in V)
40021	20	analog in 2	R	1	\	half precision float	Analog input 2: for current 0-20 (in mA); for voltage 0-10 (in V)
40022	21	digital in 1+2	R	\	\	half precision float	0:di1=0+di2=0; 1:di1=1+di2=0; 2:di1=0+di2=1; 3:di1=1+di2=1
40023	22	start up current	R	1	A	half precision float	max. current (peak) while the last start-up phase
40024	23	start up time	R	1	ms	half precision float	Start-up time of the last start-up (starting at 0,2 A up to steady state; 5 % tolerances)