

MODBUS TABLE ORGANIZATION

Starting Address of the Group Registers (Dec)	Starting Address of the Group Registers (Hex)	System Version (Release)	System Version (Build)	Group Name (Text)	Group Code (Hex)	Group Complexity (Hex)	Group Version (Hex)
0	0			Measures			
17	11			Measures			
37	25			Measures			
33	21			Date & Time			
42	2A			Settings			

MODBUS PROTOCOL DETAILS

Function Code (Dec)	Exception Codes (Dec)	Data Encoding
3	1, 2, 3	"Big Endian" (most significant byte first)
16	1, 2, 3	

MODBUS OVER SERIAL DETAILS

Physical Layer	Trasmission Modes	Device Addressing	Baud Rates (bit/s)	Data Bits	Data bits trasmission sequence	Parity	Stop Bits
standard EIA/TIA 485 (RS-485) two-wire configuration	RTU	1÷247	programmable	8	Least significant bit first	no	1

MASTER/SLAVE COMMUNICATION TIMING

Timer Description	Timer Value (msec)
Inter-character time-out	25
Response delay (from master request)	25÷100
Delay Time (between two master trasmissions)	>25

REFER ALSO TO: www.modbus.org - MODBUS over serial line specification and implementation guide V1.02
 - MODBUS APPLICATION PROTOCOL SPECIFICATION V1.1b

NOTE: File and printed copies of this document are not subject to document change control.

Register Number	Register Address (Dec)	Register Address (Hex)	Dimension [bit]	Description	Note	Read Function Codes (Dec)	Data Storing (2)
				(no DISCRETE INPUTS available)			

Register Number	Register Address (Dec)	Register Address (Hex)	Dimension [bit]	Description	Note	Read Function Codes (Dec)	Write Function Codes (Dec)	Data Storing (2)
				(no COILS available)				

Register Number	Register Address (Dec)	Register Address (Hex)	Dimension [word]	Bit Position	Description	Type	Scale	Unit	Range	Note	Read Function Code (Dec)	Data Storing (2)
1	0	0	9		Measures							
1	0	0	1		Voltage	unsigned integer	0,1	V			3	
2	1	1	1		Current	unsigned integer	0,1	A			3	
3	2	2	1		Frequency	unsigned integer	0,1	Hz			3	
4	3	3	1		Active power	unsigned integer	1	W			3	
5	4	4	1		Reactive power	unsigned integer	1	var			3	
6	5	5	1		Apparent power	unsigned integer	1	VA			3	
7	6	6	1		Power factor	unsigned integer	0,001	-			3	
8	7	7	2		Positive active energy	unsigned integer	10	Wh			3	
18	17	11	2		Measures							
18	17	11	2		Positive reactive energy	unsigned integer	10	varh			3	
38	37	25	1		Measures							
38	37	25	1		Internal temperature	unsigned integer	1	°C			3	

Register Number	Register Address (Dec)	Register Address (Hex)	Dimension [word]	Bit Position	Description	Type	Scale	Unit	Range	Note	Read Function Codes (Dec)	Write Function Codes (Hex)	Data Storing (2)
34	33	21	4		Date & Time								
34	33	21	4		Date, Day of week & Time	unsigned integer	1	-		See Note 1	3	10	
43	42	2A	2		Settings								
43	42	2A	1		Baudrate	unsigned integer	1	bps	1, 2, 3, 4	1: 1200 2: 2400 3: 4800 4: 9600	3	10	
44	43	2B	1		Modbus Address	unsigned integer	1	-	1 ÷ 247		3	10	

Note 1 - Write parameters
 The device returns current data, day of the week & time (it is not necessary perform any conversion).
 ex. 22th Decmber 2015, Tuesday, 08:43:03
 Tx: ADDR 03 0021 0004
 Rx: ADDR 03 08 20 15 12 22 02 08 43 03

Write a parameters
 To write the parameters (ex. Baudrate):
 Tx: ADDR 10 002A 0001 02 0002
 Rx: ADDR 10 0001 0002