Modbus Register Map: Easy Rack PDU 1P Metered

990-91440

Notes:
1. 16-bit registers (INT16, UINT16, ENUM) are transmitted MSB first (i.e., big-endian).
2. INT32 and UINT32 are most-significant word in n+0, least significant word in n+1 (i.e. big-endian).
3. Reads can be performed with function codes 3, or 4. Writes can be performed with function code 16, or with function code 6 to registers with length 1.
4. Modbus over TCP is supported.
5. Signed numbers (INT16, INT32, ENUM) are twos-compliment
6. Status bits are atomic within a single Modbus register. User should not look for consistency across multiple registers, only within a single register.
7. Strings are two characters per register, first character in high-order byte, second character in low-order byte. Printable ASCII only.
8. When writing an ASCII string the null terminator must be included.
9. Single-register reads of reserved or undefined registers will return an error. Block reads which begin with a valid register will not return an error but will return zeros for undefined registers.
10. Data Type column:
    "INT16" = signed 16-bit integer,
    "UINT16" = unsigned 16-bit integer,
    "INT32" = signed 32-bit integer,
    "UINT32" = unsigned 32-bit integer,
    "ENUM" = signed 16-bit integer which maps to a defined list of states,
    "ASCII" = the printable ASCII subset from 0x20 - 0x7E,
    "STREAM" = raw data ranging from 0x00 - 0xFF.
11. "Absolute Starting Register Address" = 0 (the column heading used in this table) is equivalent to "Register 40001" in Modicon terminology, which is address zero when transmitted over the wire.

Modicon Standard Register Number	Absolute Starting Register Number (Hexadecimal)	Absolute Starting Register Number (Decimal)	Data Point	R/W	Length	Data Type	Valid Response
Input Registers							
30001	0000	0	Version	R	1	UINT16	Version: High 1 byte for FW version, low 1 byte for HW version
30002	0001	1	Voltage	R	1	UINT16	(Tenths) V
30003	0002	2	Current	R	1	UINT16	(Hundredths) A
30004	0003	3	Active Power	R	1	UINT16	W
30005	0004	4	Power Factor	R	1	UINT16	(Thousandths) %
30006	0005	5	Energy	R	2	UINT32	(Thousandths) kWH
30008	0007	7	Frequency	R	1	UINT16	(Thousandths) %
30009	0008	8	Temperature	R	1	UINT16	(Tenths) C
30010	0009	9	Humidity	R	1	UINT16	(Tenths) %RH
30011	000A	10	Voltage Alarm Status	R	1	ENUM	0 = Normal; 1 = Higher than high threshold; 2 = Lower than low threshold
30012	000B	11	Current Alarm Status	R	1	ENUM	0 = Normal; 1 = Higher than high threshold; 2 = Lower than low threshold
30013	000C	12	Temperature Alarm Status	R	1	ENUM	0 = Normal; 1 = Higher than high threshold; 2 = Lower than low threshold
30014	000D	13	Humidity Alarm Status	R	1	ENUM	0 = Normal; 1 = Higher than high threshold; 2 = Lower than low threshold
30015	000E	14	Hardware Status	R	1	ENUM	BIT0: Eeprom status; BIT1: W25Q status; BIT2: Reserved; BIT3: Network status;
Holding Registers							
40001	0000	0	Beep Alarm	R/W	1	UINT16	0 = Beep OFF; 1 = Beep ON
40002	0001	1	Voltage High Threshold	R/W	1	UINT16	(Tenths) V
40003	0002	2	Voltage Low Threshold	R/W	1	UINT16	(Tenths) V
40004	0003	3	Current High Threshold	R/W	1	UINT16	(Hundredths) A
40005	0004	4	Current Low Threshold	R/W	1	UINT16	(Hundredths) A
40006	0005	5	Temperature High Threshold	R/W	1	UINT16	(Tenths) C
40007	0006	6	Temperature Low Threshold	R/W	1	UINT16	(Tenths) C
40008	0007	7	Humidity High Threshold	R/W	1	UINT16	(Tenths) %RH
40009	0008	8	Humidity Low Threshold	R/W	1	UINT16	(Tenths) %RH
40010	0009	9	Device Reboot	W	1	UINT16	Unitless
40011	000A	10	Energy Reset	W	1	UINT16	Unitless
40012	000B	11	Reserved	R	1	UINT16	N/A
40013	000C	12	Reserved	R	1	UINT16	N/A
40014	000D	13	Reserved	R	1	UINT16	N/A
40015	000E	14	Reserved	R	1	UINT16	N/A

Modicon Standard Register Number	Absolute Starting Register Number (Hexadecimal)	Absolute Starting Register Number (Decimal)	Data Point	R/W	Length	Data Type	Valid Response
40016	000F	15	Reserved	R	1	UINT16	N/A
40017	0010	16	Reserved	R	1	UINT16	N/A
40018	0011	17	Reserved	R	1	UINT16	N/A
40019	0012	18	MAC_H	R	1	UINT16	Unitless
40020	0013	19	MAC_M	R	1	UINT16	Unitless
40021	0014	20	MAC_L	R	1	UINT16	Unitless

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