

REL.44: Modbus-slave registers



The REL.44 is a 'Modbus slave' i/o module and can therefore be used to connect to any Modbus master, as a Modbus relay, but also as a P1 to Modbus and or pulse to Modbus interface. The list of Modbus registers can be found below.

1. General:

- Pre-activate the Belgian digital meters [on the Fluvius website](#) to open power and data to the P1 port.
- If no digital meter or digital meters with DSMR 4.x: connect the optional 15VDC power supply.
- The REL.44 as a Modbus slave module can serve as:
 - Relay module with 2x 10A/230V and 2x Solid-state relays
 - P1 port to Modbus interface
 - Pulse input to Modbus interface
- The baud rate is **fixed** at 9600 bad, no parity, 8 data bits, 1 stop bit.
- The retrieval speed is preferably >10 sec., the response time is approx. 100..200msec.
- The Modbus address, the P1 protocol, the function mode of the pulse inputs still need to be set via Modbus according to the protocol described below.

2.Modbus registers:

Format:

Address | function | index H | index L | 0 | length(word) | CRC L|CRC H |

Function codes:

Energy, address 1-254:

READ ENERGY: 4

WRITE COILS: 5

Programming, address 255

ASK FW VERSION: 16

ASK PARAMETERS: 20

WRITE PARAMETERS: 21

UPGRADE FW: 210

Programming:

Use these function codes in conjunction with the serial number of the module (44RxXXXX) to address the firmware version, Modbus,.. or to set the Modbus address.

Firmware Version Retrieval:

ASK FW VERSION : only read									
Adres	255								
Function	16								
Index	0	0							
Length	0	2				(xx = 0-9)			
Serial Nr	4	4	82	xx	xx	xx	xx	xx	xx
Checksum	CRC L	CRC H							
Answer:									
Adres	255								
Function code	16								
Length	4								
Data	FW1	FW2	FW3	FW4					
Checksum	CRC L	CRC H							

Requesting general information:

ASK PARAMETERS									
Adres	255								
Function	20								
Index	0	0							
Length	0	2				(xx = 0-9)			
Serial Nr	4	4	82	xx	xx	xx	xx	xx	xx
Checksum	CRC L	CRC H							
Answer:									
Adres	255								
Function code	20								
Length	4								
Para1	MB address			1-252					
Para2	P1 protocol								
Para3	Input1 Type								
Para4	Input2 Type								
CRC L	CRC H								

Setting parameters:

WRITE PARAMETERS									
Adres	255								
Function	21								
Index	0	0				(xx = 0-9)			
Length	0	2							
Serial Nr	4	4	82	xx	xx	xx	xx	xx	xx
Para1	MB address			range 1-254					
Para2	P1 protocol			0 = not used	2=DSMR2.0	4=DSMR4.0	5=DSMR5.0	6 = BE	
Para3	Input1 Type			0 = not used	1 = pulse	2 = timebase (seconds)			
Para4	Input2 Type			0 = not used	1 = pulse	2 = timebase (seconds)			
CRC L	CRC H								
Answer:									
Adres	255								
Function code	21								
Length	4								
Para1	MB address								
Para2	P1 protocol								
Para3	Input1 Type								
Para4	Input2 Type								
CRC L	CRC H				zelf berekenen				

Energy Register index

index DEC	Meter	parameter	unit	type	Remarks:
0	Import H+L	Voltage F1	V	FLOAT	READ ONLY
2		Current F1	A	FLOAT	READ ONLY
4		Power Total	W	FLOAT	READ ONLY
6		Status P1		FLOAT	READ ONLY
8		Energy counter	kWh	FLOAT	READ ONLY
10	Export H+L	Voltage F1	V	FLOAT	READ ONLY
12		Current F1	A	FLOAT	READ ONLY
14		Power Total	W	FLOAT	READ ONLY
16		Status P1		FLOAT	READ ONLY
18		Energy counter	kWh	FLOAT	READ ONLY
20	Gas			FLOAT	READ ONLY
22				FLOAT	READ ONLY
24				FLOAT	READ ONLY
26				FLOAT	READ ONLY
28		Energy counter	M3	FLOAT	READ ONLY
30	Water			FLOAT	READ ONLY
32				FLOAT	READ ONLY
34				FLOAT	READ ONLY
36				FLOAT	READ ONLY
38		Energy counter	M3	FLOAT	READ ONLY
40	Import H	Voltage F1	V	FLOAT	READ ONLY
42		Current F1	A	FLOAT	READ ONLY
44		Power Total	W	FLOAT	READ ONLY
46		Status P1		FLOAT	READ ONLY
48		Energy counter	kWh	FLOAT	READ ONLY
50	Import L	Voltage F1	V	FLOAT	READ ONLY
52		Current F1	A	FLOAT	READ ONLY
54		Power Total	W	FLOAT	READ ONLY
56		Status P1		FLOAT	READ ONLY
58		Energy counter	kWh	FLOAT	READ ONLY
60	Export H	Voltage F1	V	FLOAT	READ ONLY
62		Current F1	A	FLOAT	READ ONLY
64		Power Total	W	FLOAT	READ ONLY
66		Status P1		FLOAT	READ ONLY
68		Energy counter	kWh	FLOAT	READ ONLY
70	Export L	Voltage F1	V	FLOAT	READ ONLY
72		Current F1	A	FLOAT	READ ONLY
74		Power Total	W	FLOAT	READ ONLY
76		Status P1		FLOAT	READ ONLY
78		Energy counter	kWh	FLOAT	READ ONLY
80	Pulse input1	Power		FLOAT	READ ONLY
82	Pulse input1	Energy cnt	COUNTS	FLOAT	READ ONLY
84	Pulse input2	Power		FLOAT	READ ONLY
86	Pulse input2	Energy cnt	COUNTS	FLOAT	READ ONLY
90	Relay 1	Status	0,255	WORD	READ/WRITE 0 = OFF;255=ON;H byte always zero
91	Relay 2	Status	0,255	WORD	READ/WRITE 1 = OFF;255=ON;H byte always zero
92	Opto 1	Status	0,255	WORD	READ/WRITE 2 = OFF;255=ON;H byte always zero
93	Opto 2	Status	0,255	WORD	READ/WRITE 3 = OFF;255=ON;H byte always zero

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