

Technical Parameters

Name	Comment
Modbus Type	RTU
Interface	Isolated RS-485 1/8 load (256 nodes) 120 Ohm termination

Communication Parameters

Following values are changed in RPCS parameter P2, P3 and P4.
They will only be visible if RPCS is connected to an MB10.

Configuration	Value		RPCS Parameter
	Range	Default	
Address	1 to 127	1	2
Baud	9600, 19200, 38400, 57600	9600	3
Parity	None, Even, Odd	None	4

Supported function codes

Function Codes (FC)	Comment
02	Read Discrete Registers
03	Read Holding Registers
04	Read Input Registers
06	Write Holding Register

Supported Exception codes

Exception code	Comment
01	Illegal Function
02	Illegal Data Address

Data Types

Format	Comment
U16	Unsigned 16-bit integer. 0 to 65535
S16	Signed 16-bit integer. -32768 to 32767
BOOL	Single True (1) or False (0) value
BITFIELD	16 packed bit values

Description of register table columns

Column	Description
Register	Register Address x0001 to x9999 With x0001 being the first address (sometimes referred to offset 0).
Name	Name of register.
Access	Read Only, Read Write or Write Only.
FC	Modbus Function Code.
Format	See Data Types on Page 1.
Range	The register will contain only values within this range.
Res.	Resolution. Since all registers are either unsigned or signed 16-bit integers this represents fractional or limited resolution of the value. Resolution equal to 1: No scaling. Resolution less than 1: Value is scaled by 1/resolution Resolution greater than 1: Value is not scaled and resolution represents the smallest change in the value.
Unit	Unit of the value.

Register	Name	Access	FC	Format	Range		Res.	Unit	Comment
					Min	Max			
10001	Door status	Read	02	BOOL	0	1	1		0 = door closed 1 = door open
10002	Alarm Led Low	Read	02	BOOL	0	1	1		0 = no alarm 1 = alarm
10003	Alarm Led High	Read	02	BOOL	0	1	1		0 = no alarm 1 = alarm
10004	Alarm Door Open	Read	02	BOOL	0	1	1		0 = no alarm 1 = alarm
10005	Alarm External	Read	02	BOOL	0	1	1		0 = no alarm 1 = alarm
10006	Alarm RPCS contact	Read	02	BOOL	0	1	1		0 = no alarm 1 = alarm (lost contact with RPCS)

Register	Name	Access	FC	Format	Range		Res.	Unit	Comment
					Min	Max			
30001	Protocol version	Read	04	U16	0000	FFFF	1	hex	High byte = Major version Low byte = Minor version Example: 257 = version 1.01 512 = version 2.00
30002	MB10 version	Read	04	U16	0000	FFFF	1	hex	High byte = Major version Low byte = Minor version Example: 257 = version 1.01 512 = version 2.00
30003	RPCS version	Read	04	U16	0000	FFFF	1	hex	High byte = Major version Low byte = Minor version Example: 257 = version 1.01 512 = version 2.00
30004	Display version	Read	04	U16	0000	FFFF	1	hex	Display version is only updated after an intraction with the display (button press). High byte = Major version Low byte = Minor version Example: 257 = version 1.01 512 = version 2.00
30005	Pressure	Read	04	S16	-100	300	1	Pa	Current pressure in Pascal.
30006	Control mode	Read	04	U16	0	3	1		0 = OFF/start delay 1 = Using setpoint 1 2 = Using setpoint 2 3 = Using external setpoint
30007	Setpoint	Read	04	S16	-99	300	1	Pa	Value of current setpoint. 300 = OFF (setpoint not used)
30008	Output (VDC) Terminal 6	Read	04	U16	0	100	1	%	100% = 10V
30009	Output (mA) Terminal 7	Read	04	U16	0	100	1	%	100% = 20mA
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30017	Input (MB10) Terminal 10	Read	04	U16	0	100	1	%	100% = 10V or 20mA Voltage or current is set by jumper in MB10.
30018	Input (MB10) Terminal 11	Read	04	U16	0	100	1	%	100% = 10V or 20mA Voltage or current is set by jumper in MB10.
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30029	RPCS uptime seconds	Read	04	U16	0	60	1	s	RPCS power on time, seconds
30030	RPCS uptime minutes	Read	04	U16	0	60	1	s	RPCS power on time, minutes
30031	RPCS uptime hours	Read	04	U16	0	24	1	s	RPCS power on time, hours
30032	RPCS uptime days	Read	04	U16	0	65535	1	s	RPCS power on time, days

Register	Name	Access	FC	Format	Range		Res.	Unit	Comment
					Min	Max			
40001	Setpoint 1	Read Write	03, 06	S16	-99	300	1	Pa	Setpoint in Pascal 300 = OFF (not used)
40002	Setpoint 2	Read Write	03, 06	S16	-99	300	1	Pa	Setpoint in Pascal 300 = OFF (not used)
40003	Alarm level 1 low	Read Write	03, 06	S16	-99	300	1	Pa	Alarm level 1 low in Pascal 300 = OFF (not used)
40004	Alarm level 1 high	Read Write	03, 06	S16	-99	300	1	Pa	Alarm level 1 high in Pascal 300 = OFF (not used)
40005	Alarm level 2 low	Read Write	03, 06	S16	-99	300	1	Pa	Alarm level 2 low in Pascal 300 = OFF (not used)
40006	Alarm level 2 high	Read Write	03, 06	S16	-99	300	1	Pa	Alarm level 2 high in Pascal 300 = OFF (not used)
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40017	Output (MB10) Terminal 12	Read Write	03, 06	U16	0	100	1	%	100% = 10V

Compatibility

Date	Note
15-09-2021	MB10 v1.3 compatible with RPCS v2.01 or higher and protocol version 1.2.
06-05-2020	MB10 v1.2 compatible with RPCS v2.01 or higher and protocol version 1.2.
08-11-2017	MB10 v1.1 compatible with RPCS v2.00, v1.19, v0.20 and protocol version 1.1.