

SERIAL COMMUNICATION - MNO

Protocol: **MODBUS RTU**;

Baud Rate: 2.400 a 57.600 bps;

Data bits: **8**;

Parity: **none**;

Stop Bits: **1**;

Variable Type: **Holding Register (40.000)**;

ADDRESS MODBUS	READING RANGE	BITS INDEX	STATE	POINT NAME	WRITING READING	SCALE
1	1 – 999	-	-	High Level Alarm;	W / R	1:10
2	1 – 999	-	-	Low Level Alarm;	W / R	1:10
3	1 – 999	-	-	High Level Shutdown;	W / R	1:10
4	1 – 999	-	-	Low Level Shutdown;	W / R	1:10
5	0 – 300	-	-	Alarm Shutdown Hysteresis;	W / R	1:10
6	0 – 20	-	-	Shutdown Delay Time.	W / R	1:1
7	0 - 3	-	-	Logger – Shutdown function time.	-	
		-	0	Disables the Shutdown function;	W / R	-
		-	1	Enables the Low-Level Shutdown function;	W / R	-
		-	2	Enables the high-level shutdown function;	W / R	-
		-	3	Enables the low- and high-level shutdown function;	W / R	-
8	0 – 4	-	-	Register - Analog Output Type.	-	
		-	0	Defines Analog Output from 0 to 1 mA;	W / R	-
		-	1	Defines Analog Output from 0 to 5 mA;	W / R	-
		-	2	Defines Analog Output from 0 to 10 mA;	W / R	-
		-	3	Defines Analog Output from 0 to 20 mA;	W / R	-
		-	4	Defines Analog Output from 4 to 20 mA;	W / R	-

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9	-	-		Register – Commands.	-	
		0	1	Resets Maximum Level values;	W	-
		1	1	Resets Minimum Level values;	W	-
		2	1	Reset CPU;	W	-
10	0 - 49999	-	-	Initial Resistance of the Float;	W / R	1:10
11	0 - 49999	-	-	Final Resistance of the Float;	W / R	1:10
12	-	-		Register – Relay Trigger Logic.	-	
		0	0	Relay 1 Trigger Logic (High Level) – Normal;	W / R	-
			1	Relay 1 Trigger Logic (Low Level) – Inverse;	W / R	-
		1	0	Relay 2 Trigger Logic (High Level) – Normal;	W / R	-
			1	Relay 2 Trigger Logic (Low Level) – Inverse;	W / R	-
		2	0	Relay 3 Trigger Logic (High Level) – Normal;	W / R	-
			1	Relay 3 Trigger Logic (Low Level) – Inverse;	W / R	-
		3	0	Relay 4 Trigger Logic (High Level) – Normal;	W / R	-
			1	Relay 4 Trigger Logic (Low Level) – Inverse;	W / R	-
15	500 – 2000	-	-	Buoy Level;	R	-1000:10
16	500 – 2000	-	-	Maximum Level Reached;	R	-1000:10
17	500 – 2000	-	-	Minimum Level Reached;	R	-1000:10
18	-	-		Recorder – Alarm Conditions.	-	
		0	1	Maximum Level Alarm;	R	-
		1	1	Minimum Level Alarm;	R	-

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19	-	-		Logger – Shutdown Conditions.	-	
		0	1	Time Count for Shutdown by Maximum Level;	R	-
		1	1	Time Count for Shutdown by Minimum Level;	R	-
		2	1	Maximum Level Shutdown;	R	-
		3	1	Shutdown by Minimum Level;	R	-
		4	1	Shutdown Triggered;	R	-
20	-	-		Registration – Sensor Status.	-	
		-	1	Sensor Read Failure;	R	-
21	0 - 1	-		Register – Serial Communication Speed.	-	
		-	0	Disable write protection via RS485	W / R	-
		-	1	Enable write protection via RS485	W / R	-
22	-	-		Register – Serial Communication Speed.	-	
		-	0	Automatically Detect Communication Speed;	R	-
		-	1	Fixed speed at 2400 bps;	R	-
		-	2	Fixed speed at 4800 bps;	R	-
		-	3	Fixed speed at 9600 bps;	R	-
		-	4	Fixed speed at 19,200 bps;	R	-
		-	5	Fixed speed at 38,400 bps;	R	-
		-	6	Fixed speed at 57,600 bps;	R	-
23	0 – 2	-		Register – Communication Parity Type.	-	
		-	0	No Parity;	R	-
		-	1	Even Parity;	R	-
		-	2	Odd Parity;	R	-

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ADDRESS MODBUS	READING RANGE	BITS INDEX	STATE	POINT NAME	WRITING READING	SCALE
24	0 - 1	-		Register – Type of Communication Protocol.		-
		-	0	Communication Protocol – DNP3;	R	-
		-	1	Communication Protocol – MODBUS RTU;	R	-
25	1 – 254	-		Serial Network Address;	R	-
30	1 – 31	-		Calibration Day;	R	-
31	1 – 12	-		Calibration Month;	R	-
32	2017 – 2099	-		Year of Calibration;	R	-
35	0 – 65535	-		Equipment Serial Number – LSB;	R	-
36	0 – 255	-		Equipment Serial Number – MSB;	R	-
38	0 – 9999	-		Password Reminder;	R	-
40		-		Firmware Version	R	-