Electron

SERIAL COMMUNICATION - MNO

Protocolo: Modbus RTU**;**

Transmission Rate: 2,400 to 57,600 bps;

Data Bits: **8;**

Stop Bits: **1;**

Parity: **None** / **Even** / **Odd**;

Variable Type: Read Holding Register (40,000)

Address	Reading range	Bit Index	Status	Description	Read Write	Scale
1	0.1 – 100.0	-	-	High Level Alarm;	R/W	-1000:10
2	0.1 – 100.0	-	-	Low Level Alarm;	R/W	-1000:10
3	0.1 – 100.0	-	-	Dismissal by High Level;	R/W	-1000:10
4	0.1 – 100.0	-	-	Low Level Dismissal;	R/W	-1000:10
5	0.1 – 30.0	-	-	Alarm Shutdown Hysteresis;	R/W	1:10
6	0 - 20	-	-	Shutdown Delay Time	R/W	1:1
7	0 - 3	0	0	Disables Shutdown function by low level	R/W	-
		0	1	Enables the Shutdown function by low level;	R/W	-
		1	0	Disables the Shutdown function by high level;	R/W	-
		1	1	Enables the High Level Shutdown function;	R/W	-
8	0 - 4	-	-	Register – Analog Output Range:	R/W	-
		-	-	0 - Analog output from 0 to 1 mA;	R/W	-
		-	-	1- Analog output from 0 to 5 mA;	R/W	-
		-	-	2 - Analog output from 0 to 10 mA;	R/W	-
		-	-	3 - Analog output from 0 to 20 mA;	R/W	-
		-	-	4 - Analog output from 4 to 20 mA;	R/W	-
9	-	-	-	Registrar – Commands:	In	-
		1	1	Minimum Level Reset reached;	In	-
		2	1	Maximum Level Reset reached;	In	-

Address	Reading range	Bit Index	Status	Description	Read Write	Scale
		3	1	Restarts equipment;	In	-

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Address	Reading range	Bit Index	Status	Description	Read Write	Scale
10	0.0 – 999.9	-	-	Initial Buoy Resistance;	R/W	-1000:10
11	0.0 – 1000.0	-	-	Buoy's Final Resistance;	R/W	-1000:10
12	-	0	0	Relay 1 activation logic – Normal;	R/W	-
		0	1	Relay 1 activation logic – Inverse;	R/W	-
		1	0	Relay 2 activation logic – Normal;	R/W	-
		1	1	Relay 2 activation logic – Inverse;	R/W	-
		2	0	Relay 3 activation logic – Normal;	R/W	-
		2	1	Relay 3 activation logic – Inverse;	R/W	-
		3	0	Relay 4 activation logic – Normal;	R/W	-
		3	1	Relay 4 activation logic – Inverse;	R/W	-
13	-10.0 - 10.0	-	-	Of7 Sensor reading "Level";	R/W	-1000:10
14	0 - 1	-	-	Recorder – Type of Signal Reading;	R/W	-
		-	0	Resistive reading signal;	R/W	-
		-	1	Reading signal 4 to 20 mA;	R/W	-
15	-10.0 - 10.0	-	-	Buoy Level;	R/W	-1000:10
16	-50.0 – 250.0	-	-	Maximum Level Reached	R/W	-1000:10
17	-50.0 – 250.0	-	-	Minimum Level Reached	R/W	-1000:10
18	-	-		Log – Alarm Status:		-
		0	1	Minimum Level Alarm;	R	-
		1	1	Maximum Level Alarm;	R	-

		2	1	Alarm triggered;	R	-

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Address	Reading range	Bit Index	Status	Description	Read Write	Scale
19	-	-	-	Registration – Shutdown Status:		-
		0	1	In Counting for Shutdown - Minimum Level;	R	-
		1	1	Counting for Shutdown - Maximum Level;	R	-
		2	1	Dismissal by Minimum Level;	R	-
		3	1	Dismissal by Maximum Level;	R	-
		4	1	Shutdown triggered;	R	-
20	-	-	-	Registration – Sensor Status:		-
		0	1	Sensor Reading Failure;	R	-
21	0 - 1	-	-	Registrar – RS485 Write Protection Status:		-
		-	0	Written by RS485 – Enabled;	R/W	-
		-	1	Written by RS485 – disabled;	R/W	-
22	0 - 6	-	-	Recorder – Serial Communication Speed.		-
		-	0	0 - Automatically Detects Serial Communication Speed;	R	-
		-	1	Fixed speed at 2,400 bps;	R	-
		-	2	Fixed speed at 4,800 bps;	R	-
		-	3	Fixed speed at 9,600 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	-	-	Registrar – Communication Parity.		-
		-	0	No Parity;	R	-
		-	1	Parity Parity;	R	-
		-	2	Impar's birth;	R	-
24	0 - 1	-	-	Registrar – Communication Protocol.		-
		-	0	0 - DNP 3 L1;	R	-

			-	1	1 - Modbus RTU;	R	-

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Address	Reading range	Bit Index	Status	Description	Read Write	Scale
25	1 - 254	-	-	Serial Network Address;	R	1:1
27	-1.00 - 1.00	-	-	Correction of Current Output deviation;	R/W	-1000:100
28	0.0 - 1000.0	-	-	Current resistance read;	R	1:10
30	1 - 31	-	-	Calibration Day;	R	-
31	1 - 12	-	-	Calibration Month	R	-
32	0 - 99	-	-	Year of Calibration;	R	-
35	0x0 - 0xFFFFFFFFF	-	-	Equipment Serial Number – 32 to 47 bits;	R	-
36		-	-	Number of Equipment Series – 16 to 31 bits;	R	-
37		-	-	Number of Equipment Serial – 0 to 15 bits;	R	-
38	0 – 9999	-	-	Password Reminder	R	1:1