ElectroSoul Technologies - Remote IO Module

Date: 01/ November /2020 **Model: ES - RIO - 0040 - R**

Modebus RTU Register Addresses					
Parameters	**Address**		**R/W**	**Value**	**Description**
	Decimal	**Hex**			
Ch1 current	0	0	R	0-20ma	Get Raw Current measure by our system.
Ch2 current	2	2	R		
Ch3 current	4	4	R		
Ch4 current	6	6	R		
Ch1 processed map value	8	8	R	Between -32768 to 32767	Get mapped value between set High and Low value from software or RS485 for the raw current (address 36 to 43).
Ch2 processed map value	10	A	R		
Ch3 processed map value	12	C	R		
Ch4 processed map value	14	E	R		
Ch1 voltage	16	10	R	0-3.3v	Get Raw Voltage measure by our system.
Ch2 voltage	18	12	R		
Ch3 voltage	20	14	R		
Ch4 voltage	22	16	R		
Alarm1 Status	24	18	R		Get/Gives you a alarm status in monitoring software as well as on RS485 when you read these registers.
Alarm2 Status	26	1A	R		
Alarm3 Status	28	1C	R		
Alarm4 Status	30	1E	R		
Ch1 mode select	32	20	RW	0x01 = 4-20ma 0x02 = 0-20ma	Set/Get your Analog Input Mode for each individual channel
Ch2 mode select	33	21	RW		
Ch3 mode select	34	22	RW		
Ch4 mode select	35	23	RW		
Ch 1 lower map value	36	24	RW	Between -32768 to 32767	Lower Mapped value Set/Get by user from Software or RS485
Ch1 high map value	37	25	RW		Higher Mapped value Set/Get by user from Software or RS485
Ch2 lower map value	38	26	RW		Lower Mapped value set by user from Software or RS485
Ch2 high map value	39	27	RW		Higher Mapped value set by user from Software or RS485
Ch3 lower map value	40	28	RW		Lower Mapped value set by user from Software or RS485
Ch3 high map value	41	29	RW		Higher Mapped value set by user from Software or RS485
Ch4 lower map value	42	2A	RW		Lower Mapped value set by user from Software or RS485
Ch4 high map value	43	2B	RW		Higher Mapped value set by user from Software or RS485

Ch1 resolution	44	2C	RW	0 - 1 1 - 0.1 2 - 0.01 3 - 0.001 4 - 0.0001 5 - 0.00001 6 - 0.000001	Set/Get each individual channel resolution for mapped value from raw value.
Ch2 resolution	45	2D	RW		
Ch3 resolution	46	2E	RW		
Ch4 resolution	47	2F	RW		
Alarm1 type	48	30	RW	0x00 None 0x01 process low 0x02 process high	Set/Get individual channel alarm type.
Alarm2 type	49	31	RW		
Alarm3 type	50	32	RW		
Alarm4 type	51	33	RW		
Alarm1 Ch1 setpoint	52	34	RW	Between -32767 to 32766	Set/Get individual channel and individual alarm setpoint.
Alarm1 Ch2 setpoint	53	35	RW		
Alarm1 Ch3 setpoint	54	36	RW		
Alarm1 Ch4 setpoint	55	37	RW		
Alarm2 Ch1 setpoint	56	38	RW		
Alarm2 Ch2 setpoint	57	39	RW		
Alarm2 Ch3 setpoint	58	3A	RW		
Alarm2 Ch4 setpoint	59	3B	RW		
Alarm3 Ch1 setpoint	60	3C	RW		
Alarm3 Ch2 setpoint	61	3D	RW		
Alarm3 Ch3 setpoint	62	3E	RW		
Alarm3 Ch4 setpoint	63	3F	RW		
Alarm4 Ch1 setpoint	64	40	RW		
Alarm4 Ch2 setpoint	65	41	RW		
Alarm4 Ch3 setpoint	66	42	RW		
Alarm4 Ch4 setpoint	67	43	RW		
Alarm1 Ch1 hysteresis	68	44	RW	0 to 32767 (default 10)	Set/Get individual channel and individual alarm hysteresis.
Alarm1 Ch2 hysteresis	69	45	RW		
Alarm1 Ch3 hysteresis	70	46	RW		
Alarm1 Ch4 hysteresis	71	47	RW		
Alarm2 Ch1 hysteresis	72	48	RW		
Alarm2 Ch2 hysteresis	73	49	RW		
Alarm2 Ch3 hysteresis	74	4A	RW		
Alarm2 Ch4 hysteresis	75	4B	RW		
Alarm3 Ch1 hysteresis	76	4C	RW		
Alarm3 Ch2 hysteresis	77	4D	RW		
Alarm3 Ch3 hysteresis	78	4E	RW		
Alarm3 Ch4 hysteresis	79	4F	RW		
Alarm4 Ch1 hysteresis	80	50	RW		
Alarm4 Ch2 hysteresis	81	51	RW		
Alarm4 Ch3 hysteresis	82	52	RW		
Alarm4 Ch4 hysteresis	83	53	RW		
Average value	84	54	RW	1 to 100 (default 30)	Set/Get average value for analog reading.
Slave ID	85	55	RW	1 to 255 (default 1)	Set/Get RS485 Slave address.
Baud Rate	86	56	RW	0x00 = 1200 0x01 = 2400 0x02 = 4800 0x03 = 9600 0x04 = 14400 0x05 = 19200	Set/Get baud rate for RS485 Communication.

				0x06 = 38400 0x07 = 57600 0x08 = 115200 (0x03 = 9600 default)	
Parity	87	57	RW	0x00 = none 0x01 = even 0x02 = odd (0x00 = none default)	Set/Get parity for RS485 Communication.

Note:

1. Address are given with -1 value. You have to use those address directly.
2. Default baud Rate for RS485 is 9600.
3. Default Parity for RS485 is None.