

## EMRXX Register table

✓	is used for available for this
○	is used for not available for
○	is used for optional with IO

		START ADDRESS	FINISH ADDRESS	REGISTER COUNTS
1	<a href="#">MEASUREMENTS</a>	0	0149	150
2	<a href="#">READ_ONLY ENERGIES</a>	200	0243	44
3	<a href="#">WRITEABLE ENERGIES</a>	1500	1539	40
4	<a href="#">MIN_MAX_MAXDEMAND_DEMAND</a>	800	1335	536
5	<a href="#">THD</a>	2000	2023	24
6	<a href="#">ALARM STATUS</a>	20000	20025	26
7	<a href="#">ALARM DYNAMIC</a>	20500	20531	32
8	<a href="#">LOAD PROFILE RECORD</a>	23000	23061	62
9	<a href="#">15_MINUTE ENERGY RECORD</a>	23200	23261	62
10	<a href="#">1_HOUR ENERGY RECORD</a>	23400	23461	62
11	<a href="#">1_DAY ENERGY RECORD</a>	23600	23661	62
12	<a href="#">VOLTAGE RECORD</a>	25000	25059	60
13	<a href="#">CURRENT RECORD</a>	24000	24035	36
14	<a href="#">POWER RECORD</a>	26000	26119	120
15	<a href="#">THD RECORD</a>	27000	27065	66
	<a href="#">ANALOG TEMPERATURE RECORD</a>	28000	28029	30
16				
17	<a href="#">EVENT RECORDS</a>	8016	8041	26
18	<a href="#">NETWORK SETTINGS</a>	16384	16415	32
19	<a href="#">SETUP</a>	17000	17373	374
20	<a href="#">CALENDER SETUP</a>	6000	6035	36
21	<a href="#">INPUT_COIL_CONTROLS</a>	17950	17957	8
22	<a href="#">OUTPUT_COIL_CONTROLS</a>	17958	17965	8
23	<a href="#">RELAYS_COIL_CONTROLS</a>	17966	17973	8
24	<a href="#">LOG_SETUP</a>	21000	21023	24
25	<a href="#">LOG_INDEX_SETUP</a>	21200	21221	22
26	<a href="#">LOG_TIME_STAMP_SETUP</a>	21400	21421	22
27	<a href="#">DEVICE IDENTIFICATION</a>	60416	60455	40
28	<a href="#">RESET REGISTER</a>	19968	19968	1
29	<a href="#">ENTES.NET</a>	65000	65007	8
30	<a href="#">ENTES ID</a>	65032	65047	16

### Measurements

Supported Functions		Start Address	Register Counts											
Read holding registers		0	150											
Address (Dec)	Address (Hex)	Format	Words count	Bitm	Description	Multiplier	R/W	Range	EMR-53CS	EMR-53S	EMR-07S	EMR-04S		
0000	0000	float	2	V	Voltage L1-N	1	R		✓	✓	✓			
0002	0002	float	2	V	Voltage L2-N	1	R		✓	✓	✓			
0004	0004	float	2	V	Voltage L3-N	1	R		✓	✓	✓			
0006	0006	float	2	-	N / A	1	R							
0008	0008	float	2	V	Voltage L1-L2	1	R		✓	✓	✓			
0010	000A	float	2	V	Voltage L2-L3	1	R		✓	✓	✓			
0012	000C	float	2	V	Voltage L3-L1	1	R		✓	✓	✓			
0014	000E	float	2	mA	Current L1	1	R		✓	✓	✓			
0016	0010	float	2	mA	Current L2	1	R		✓	✓	✓			
0018	0012	float	2	mA	Current L3	1	R		✓	✓	✓			
0020	0014	float	2	-	N / A	1	R							
0022	0016	float	2	mA	Neutral Current = I(L1)+I(L2)+I(L3)	1	R		✓	✓	✓			
0024	0018	float	2	Hz	Measured frequency	1	R		✓	✓	✓			
0026	001A	float	2	W	Active power L1-N	1	R		✓	✓	✓	✓		
0028	001C	float	2	W	Active power L2-N	1	R		✓	✓	✓	✓		
0030	001E	float	2	W	Active power L3-N	1	R		✓	✓	✓	✓		
0032	0020	float	2	-	N / A	1	R							
0034	0022	float	2	W	Total import active power	1	R		✓	✓	✓	✓		
0036	0024	float	2	W	Total export active power	1	R		✓	✓	✓	✓		
0038	0026	float	2	W	Total Active power	1	R		✓	✓	✓	✓		
0040	0028	float	2	VAr	Reactive power L1	1	R		✓	✓	✓	✓		
0042	002A	float	2	VAr	Reactive power L2	1	R		✓	✓	✓	✓		
0044	002C	float	2	VAr	Reactive power L3	1	R		✓	✓	✓	✓		
0046	002E	float	2	-	N / A	1	R							
0048	0030	float	2	VAr	Quadrant 1 total reactive power	1	R		✓	✓	✓	✓		
0050	0032	float	2	VAr	Quadrant 2 total reactive power	1	R		✓	✓	✓	✓		
0052	0034	float	2	VAr	Quadrant 3 total reactive power	1	R		✓	✓	✓	✓		
0054	0036	float	2	VAr	Quadrant 4 total reactive power	1	R		✓	✓	✓	✓		
0056	0038	float	2	VAr	Total reactive power	1	R		✓	✓	✓	✓		
0058	003A	float	2	VAr	Apperant power L1-N	1	R		✓	✓	✓	✓		
0060	003C	float	2	VAr	Apperant power L2-N	1	R		✓	✓	✓	✓		
0062	003E	float	2	VAr	Apperant power L3-N	1	R		✓	✓	✓	✓		
0064	0040	float	2	-	N / A	1	R							
0066	0042	float	2	VA	Total import apperant power	1	R		✓	✓	✓	✓		
0068	0044	float	2	VA	Total export apperant power	1	R		✓	✓	✓	✓		
0070	0046	float	2	VA	Total Apperant Power	1	R		✓	✓	✓	✓		
0072	0048	float	2	-	Power Factor L1	1	R		✓	✓	✓	✓		
0074	004A	float	2	-	Power Factor L2	1	R		✓	✓	✓	✓		
0076	004C	float	2	-	Power Factor L3	1	R		✓	✓	✓	✓		
0078	004E	uint	2	-	N / A	1	R							
0080	0050	float	2	-	Power Factor Total Import	1	R		✓	✓	✓	✓		
0082	0052	float	2	-	Power Factor Total Export	1	R		✓	✓	✓	✓		
0084	0054	float	2	-	Power Factor Total	1	R		✓	✓	✓	✓		
0086	0056	float	2	-	CosPhi L1	1	R		✓	✓	✓	✓		
0088	0058	float	2	-	CosPhi L2	1	R		✓	✓	✓	✓		
0090	005A	float	2	-	CosPhi L3	1	R		✓	✓	✓	✓		
0092	005C	uint	2	-	N / A	1	R							
0094	005E	uint	2	-	N / A	1	R							
0096	0060	uint	2	-	N / A	1	R							
0098	0062	float	2	-	ΣCos Phi = COS_L1 + COS_L2 +	1	R		✓	✓	✓	✓		
0100	0064	float	2	-	Rotation field: 1=right, 0=none, -1=left	1	R		✓	✓	✓	✓		
0102	0066	float	2	%	Voltage Unbalance	1	R		✓	✓	✓	✓		
0104	0068	uint	2	-	N / A	1	R							
0106	006A	float	2	Angle	L1 Phase Voltage Angle	1	R		✓	✓	✓	✓		
0108	006C	float	2	Angle	L2 Phase Voltage Angle	1	R		✓	✓	✓	✓		
0110	006E	float	2	Angle	L3 Phase Voltage Angle	1	R		✓	✓	✓	✓		
0112	0070	uint	2	-	N / A	1	R							
0114	0072	float	2	Angle	L1 Phase Current Angle	1	R		✓	✓	✓	✓		
0116	0074	float	2	Angle	L2 Phase Current Angle	1	R		✓	✓	✓	✓		
0118	0076	float	2	Angle	L3 Phase Current Angle	1	R		✓	✓	✓	✓		
0120	0078	uint	2	-	N / A	1	R							
0122	007A	uint	2	-	N / A	1	R							
0124	007C	uint	2	-	N / A	1	R							
0126	007E	uint	2	-	N / A	1	R							
0128	0080	float	2	°C	Internal Temp	1	R		✓	✓	✓	✓		
0130	0082	uint	2	h/1000	Hour Meter (Non Resetable)	1	R		✓	✓	✓	✓		
0132	0084	uint	2	h/1000	Working Hour Counter	1	R		✓	✓	✓	✓		
0134	0086	uint	2	-	Pulse Counter 1	1	R		✓	✓	✓	✓		
0136	0088	uint	2	-	Pulse Counter 2	1	R		✓	✓	✓	✓		
0138	008A	uint	2	-	Pulse Counter 3	1	R		✓	✓	✓	✓		
0140	008C	uint	2	-	Pulse Counter 4	1	R		✓	✓	✓	✓		
0142	008E	uint	2	-	Pulse Counter 5	1	R		✓	✓	✓	✓		
0144	0090	uint	2	-	Pulse Counter 6	1	R		✓	✓	✓	✓		
0146	0092	uint	2	-	Pulse Counter 7	1	R		✓	✓	✓	✓		
0148	0094	uint	2	-	Pulse Counter 8	1	R		✓	✓	✓	✓		

### Read Only Energies

Supported Functions			Register Counts									
			Start Address	Register Counts								
Read holding registers			200	44								
Address (Dec)	Address (Hex)	Format		Bit/m	Description	Multiplier	Range	EMR-53CS	EMR-53S	EMR-07S	EMR-04S	
0200	00C8	ulong	4	Wh	Import Active Energy	1		✓	✓	✓	✓	
0204	00CC	ulong	4	Wh	Export Active Energy	1		✓	✓	✓	✓	
0208	00D0	ulong	4	Varh	Import Inductive Reactive Energy	1		✓	✓	✓	✓	
0212	00D4	ulong	4	Varh	Import Capacitive Reactive Energy	1		✓	✓	✓	✓	
0216	00D8	ulong	4	Varh	Export Inductive Reactive Energy	1		✓	✓	✓	✓	
0220	00DC	ulong	4	Varh	Export Capacitive Reactive Energy	1		✓	✓	✓	✓	
0224	0E+0	ulong	4	VAh	Import Apparent Energy	1		✓	✓	✓	✓	
0228	0E+0	ulong	4	VAh	Export Apparent Energy	1		✓	✓	✓	✓	
0232	0E+0	ulong	4	Wh	Generator Import Active Energy	1		✓	✓	✓	✓	
0236	00EC	ulong	4	Wh	Generator Export Active Energy	1		✓	✓	✓	✓	
0240	00F0	uint	2	-	N/A	-						
0242	00F2	uint	2	-	N/A	-						

**Writeable Energies**

Supported Functions			Register Counts									
			Start Address	Register Counts								
Read holding registers			156	40								
Write Single registers												
Write Multiple registers												
Address (Dec)	Address (Hex)	Format		Bit/m	Description	Multiplier	R/W	Range	EMR-53CS	EMR-53S	EMR-07S	EMR-04S
1500	05DC	ulong	4	Wh	Import Active Energy	1	R/W		✓	✓	✓	✓
1504	5E+0	ulong	4	Wh	Export Active Energy	1	R/W		✓	✓	✓	✓
1508	5E+4	ulong	4	Varh	Import Inductive Reactive Energy	1	R/W		✓	✓	✓	✓
1512	5E+8	ulong	4	Varh	Import Capacitive Reactive Energy	1	R/W		✓	✓	✓	✓
1516	05EC	ulong	4	Varh	Export Inductive Reactive Energy	1	R/W		✓	✓	✓	✓
1520	05F0	ulong	4	Varh	Export Capacitive Reactive Energy	1	R/W		✓	✓	✓	✓
1524	05F4	ulong	4	VAh	Import Apparent Energy	1	R/W		✓	✓	✓	✓
1528	05F8	ulong	4	VAh	Export Apparent Energy	1	R/W		✓	✓	✓	✓
1532	05FC	ulong	4	Wh	Generator Import Active Energy	1	R/W		✓	✓	✓	✓
1536	0600	ulong	4	Wh	Generator Export Active Energy	1	R/W		✓	✓	✓	✓

**Min-Max, Max Demand, Demand**

Supported Functions			Register Counts									
			Start Address	Register Counts								
Read holding registers			800	536								
Address (Dec)	Address (Hex)	Format		Bit/m	Description	Multiplier	Range	EMR-53CS	EMR-53S	EMR-07S	EMR-04S	
0800	0320	float	2	V	L1 Phase Max Voltage	1		✓	✓	✓		
0802	0322	uint	2	Time	L1 Phase Max Voltage Time	Unix Time Stamp		✓	✓	✓		
0804	0324	float	2	V	L2 Phase Max Voltage	1		✓	✓	✓		
0806	0326	uint	2	Time	L2 Phase Max Voltage Time	Unix Time Stamp		✓	✓	✓		
0808	0328	float	2	V	L3 Phase Max Voltage	1		✓	✓	✓		

0810	032A	uint	2	Time	L3 Phase Max Voltage Time	Unix Time Stamp			✓		✓		✓	
0812	032C	uint	2	-	N/A	1								
0814	032E	uint	2	-	N/A	Unix Time Stamp								
0816	0330	float	2	V	L1-L2 Max Voltage	1			✓		✓		✓	
0818	0332	uint	2	Time	L1-L2 Max Voltage Time	Unix Time Stamp			✓		✓		✓	
0820	0334	float	2	V	L2-L3 Max Voltage	1			✓		✓		✓	
0822	0336	uint	2	Time	L2-L3 Max Voltage Time	Unix Time Stamp			✓		✓		✓	
0824	0338	float	2	V	L3-L1 Max Voltage	1			✓		✓		✓	
0826	033A	uint	2	Time	L3-L1 Max Voltage Time	Unix Time Stamp			✓		✓		✓	
0828	033C	float	2	A	L1 Phase Max Current	1			✓		✓		✓	
0830	033E	uint	2	Time	L1 Phase Max Current Time	Unix Time Stamp			✓		✓		✓	
0832	0340	float	2	A	L2 Phase Max Current	1			✓		✓		✓	
0834	0342	uint	2	Time	L2 Phase Max Current Time	Unix Time Stamp			✓		✓		✓	
0836	0344	float	2	A	L3 Phase Max Current	1			✓		✓		✓	
0838	0346	uint	2	Time	L3 Phase Max Current Time	Unix Time Stamp			✓		✓		✓	
0840	0348	uint	2	-	N/A	1								
0842	034A	uint	2	-	N/A	Unix Time Stamp								
0844	034C	float	2	A	L4 Phase Max Current	1			✓		✓		✓	
0846	034E	uint	2	Time	L4 Phase Max Current Time	Unix Time Stamp			✓		✓		✓	
0848	0350	float	2	Hz	Max System Frequency	1			✓		✓		✓	
0850	0352	uint	2	Time	Max System Frequency Time	Unix Time Stamp			✓		✓		✓	
0852	0354	float	2	%	Max Unbalance	1	R		✓		✓		✓	
0854	0356	uint	2	Time	Max Unbalance Time	Unix Time Stamp	R		✓		✓		✓	
0856	0358	float	2	W	L1 Phase Max Active Power	1	R		✓		✓		✓	✓
0858	035A	uint	2	Time	L1 Phase Max Active Power Time	Unix Time Stamp	R		✓		✓		✓	✓
0860	035C	float	2	W	L2 Phase Max Active Power	1	R		✓		✓		✓	✓
0862	035E	uint	2	Time	L2 Phase Max Active Power Time	Unix Time Stamp	R		✓		✓		✓	✓
0864	0360	float	2	W	L3 Phase Max Active Power	1	R		✓		✓		✓	✓
0866	0362	uint	2	Time	L3 Phase Max Active Power Time	Unix Time Stamp	R		✓		✓		✓	✓
0868	0364	uint	2	-	N/A	1	R							
0870	0366	uint	2	-	N/A	Unix Time Stamp	R							
0872	0368	float	2	W	Max Total Import Active Power	1	R		✓		✓		✓	✓
0874	036A	uint	2	Time	Max Total Import Active Power Time	Unix Time Stamp	R		✓		✓		✓	✓
0876	036C	float	2	W	Max Total Export Active Power	1	R		✓		✓		✓	✓
0878	036E	uint	2	Time	Max Total Export Active Power Time	Unix Time Stamp	R		✓		✓		✓	✓
0880	0370	float	2	W	Max Total Active Power	1	R		✓		✓		✓	✓
0882	0372	uint	2	Time	Max Total Active Power Time	Unix Time Stamp	R		✓		✓		✓	✓
0884	0374	float	2	VAR	L1 Phase Max Reactive Power	1	R		✓		✓		✓	✓
0886	0376	uint	2	Time	L1 Phase Max Reactive Power Time	Unix Time Stamp	R		✓		✓		✓	✓
0888	0378	float	2	VAR	L2 Phase Max Reactive Power	1	R		✓		✓		✓	✓
0890	037A	uint	2	Time	L2 Phase Max Reactive Power Time	Unix Time Stamp	R		✓		✓		✓	✓
0892	037C	float	2	VAR	L3 Phase Max Reactive Power	1	R		✓		✓		✓	✓
0894	037E	uint	2	Time	L3 Phase Max Reactive Power Time	Unix Time Stamp	R		✓		✓		✓	✓
0896	0380	uint	2	-	N/A	1	R							
0898	0382	uint	2	-	N/A	Unix Time Stamp	R							
0900	0384	float	2	VAR	Quadrant 1 Max Reactive Power	1	R		✓		✓		✓	✓
0902	0386	uint	2	Time	Quadrant 1 Max Reactive Power Time	Unix Time Stamp	R		✓		✓		✓	✓
0904	0388	float	2	VAR	Quadrant 2 Max Reactive Power	1	R		✓		✓		✓	✓
0906	038A	uint	2	Time	Quadrant 2 Max Reactive Power Time	Unix Time Stamp	R		✓		✓		✓	✓
0908	038C	float	2	VAR	Quadrant 3 Max Reactive Power	1	R		✓		✓		✓	✓
0910	038E	uint	2	Time	Quadrant 3 Max Reactive Power Time	Unix Time Stamp	R		✓		✓		✓	✓
0912	0390	float	2	VAR	Quadrant 4 Max Reactive Power	1	R		✓		✓		✓	✓
0914	0392	uint	2	Time	Quadrant 4 Max Reactive Power Time	Unix Time Stamp	R		✓		✓		✓	✓
0916	0394	float	2	VAR	Quadrant Total Max Reactive Power	1	R		✓		✓		✓	✓
0918	0396	uint	2	Time	Quadrant Total Max Reactive Power Time	Unix Time Stamp	R		✓		✓		✓	✓
0920	0398	float	2	VA	L1 Phase Max Apperant Power	1	R		✓		✓		✓	✓
0922	039A	uint	2	Time	L1 Phase Max Apperant Power Time	Unix Time Stamp	R		✓		✓		✓	✓
0924	039C	float	2	VA	L2 Phase Max Apperant Power	1	R		✓		✓		✓	✓
0926	039E	uint	2	Time	L2 Phase Max Apperant Power Time	Unix Time Stamp	R		✓		✓		✓	✓
0928	03A0	float	2	VA	L3 Phase Max Apperant Power	1	R		✓		✓		✓	✓
0930	03A2	uint	2	Time	L3 Phase Max Apperant Power Time	Unix Time Stamp	R		✓		✓		✓	✓
0932	03A4	uint	2	-	N/A	1	R							
0934	03A6	uint	2	-	N/A	Unix Time Stamp	R							
0936	03A8	float	2	VA	Max Total Import Apperant Power	1	R		✓		✓		✓	✓
0938	03AA	uint	2	Time	Max Total Import Apperant Power Time	Unix Time Stamp	R		✓		✓		✓	✓
0940	03AC	float	2	VA	Max Total Export Apperant Power	1	R		✓		✓		✓	✓
0942	03AE	uint	2	Time	Max Total Export Apperant Power Time	Unix Time Stamp	R		✓		✓		✓	✓
0944	03B0	float	2	VA	Max Total Apperant Power	1	R		✓		✓		✓	✓

0946	03B2	uint	2	-	Time	Max Total Apperant Power Time	Unix Time Stamp	R		✓	✓		✓	✓
0948	03B4	uint	2	-		N/A	1	R						
0950	03B6	uint	2	-		N/A	Unix Time Stamp	R						
0952	03B8	uint	2	-		N/A	1	R						
0954	03BA	uint	2	-		N/A	Unix Time Stamp	R						
0956	03BC	uint	2	-		N/A	1	R						
0958	03BE	uint	2	-		N/A	Unix Time Stamp	R						
0960	03C0	uint	2	-		N/A	1	R						
0962	03C2	uint	2	-		N/A	Unix Time Stamp	R						
0964	03C4	uint	2	-		N/A	1	R						
0966	03C6	uint	2	-		N/A	Unix Time Stamp	R						
0968	03C8	uint	2	-		N/A	1	R						
0970	03CA	uint	2	-		N/A	Unix Time Stamp	R						
0972	03CC	uint	2	-		N/A	1	R						
0974	03CE	uint	2	-		N/A	Unix Time Stamp	R						
0976	03D0	uint	2	-		N/A	1	R						
0978	03D2	uint	2	-		N/A	Unix Time Stamp	R						
0980	03D4	uint	2	-		N/A	1	R						
0982	03D6	uint	2	-		N/A	Unix Time Stamp	R						
0984	03D8	uint	2	-		N/A	1	R						
0986	03DA	uint	2	-		N/A	Unix Time Stamp	R						
0988	03DC	uint	2	-		N/A	1	R						
0990	03DE	uint	2	-		N/A	Unix Time Stamp	R						
0992	3E+0	float	2	V		L1 Phase Min Voltage	1	R		✓	✓		✓	
0994	3E+2	uint	2		Time	L1 Phase Min Voltage Time	Unix Time Stamp	R		✓	✓		✓	
0996	3E+4	float	2	V		L2 Phase Min Voltage	1	R		✓	✓		✓	
0998	3E+6	uint	2		Time	L2 Phase Min Voltage Time	Unix Time Stamp	R		✓	✓		✓	
1000	3E+8	float	2	V		L3 Phase Min Voltage	1	R		✓	✓		✓	
1002	03EA	uint	2		Time	L3 Phase Min Voltage Time	Unix Time Stamp	R		✓	✓		✓	
1004	03EC	uint	2	-		N/A	1	R						
1006	03EE	uint	2	-		N/A	Unix Time Stamp	R						
1008	03F0	float	2	V		L1-L2 Min Voltage	1	R		✓	✓		✓	
1010	03F2	uint	2		Time	L1-L2 Min Voltage Time	Unix Time Stamp	R		✓	✓		✓	
1012	03F4	float	2	V		L2-L3 Min Voltage	1	R		✓	✓		✓	
1014	03F6	uint	2		Time	L2-L3 Min Voltage Time	Unix Time Stamp	R		✓	✓		✓	
1016	03F8	float	2	V		L3-L1 Min Voltage	1	R		✓	✓		✓	
1018	03FA	uint	2		Time	L3-L1 Min Voltage Time	Unix Time Stamp	R		✓	✓		✓	
1020	03FC	float	2	A		L1 Phase Min Current	1	R		✓	✓		✓	
1022	03FE	uint	2		Time	L1 Phase Min Current Time	Unix Time Stamp	R		✓	✓		✓	
1024	0400	float	2	A		L2 Phase Min Current	1	R		✓	✓		✓	
1026	0402	uint	2		Time	L2 Phase Min Current Time	Unix Time Stamp	R		✓	✓		✓	
1028	0404	float	2	A		L3 Phase Min Current	1	R		✓	✓		✓	
1030	0406	uint	2		Time	L3 Phase Min Current Time	Unix Time Stamp	R		✓	✓		✓	
1032	0408	uint	2	-		N/A	1	R						
1034	040A	uint	2	-		N/A	Unix Time Stamp	R						
1036	040C	float	2	A		L4 Phase Min Current	1	R		✓	✓		✓	
1038	040E	uint	2		Time	L4 Phase Min Current Time	Unix Time Stamp	R		✓	✓		✓	
1040	0410	float	2	W		L1 Phase Min Active Power	1	R		✓	✓		✓	✓
1042	0412	uint	2		Time	L1 Phase Min Active Power Time	Unix Time Stamp	R		✓	✓		✓	✓
1044	0414	float	2	W		L2 Phase Min Active Power	1	R		✓	✓		✓	✓
1046	0416	uint	2		Time	L2 Phase Min Active Power Time	Unix Time Stamp	R		✓	✓		✓	✓
1048	0418	float	2	W		L3 Phase Min Active Power	1	R		✓	✓		✓	✓
1050	041A	uint	2		Time	L3 Phase Min Active Power Time	Unix Time Stamp	R		✓	✓		✓	✓
1052	041C	uint	2	-		N/A	1	R						
1054	041E	uint	2	-		N/A	Unix Time Stamp	R						
1056	0420	float	2	W		Min Total Import Active Power	1	R		✓	✓		✓	✓
1058	0422	uint	2		Time	Min Total Import Active Power Time	Unix Time Stamp	R		✓	✓		✓	✓
1060	0424	float	2	W		Min Total Export Active Power	1	R		✓	✓		✓	✓
1062	0426	uint	2		Time	Min Total Export Active Power Time	Unix Time Stamp	R		✓	✓		✓	✓
1064	0428	float	2	W		Min Total Active Power	1	R		✓	✓		✓	✓
1066	042A	uint	2		Time	Min Total Active Power Time	Unix Time Stamp	R		✓	✓		✓	✓
1068	042C	float	2	VAR		L1 Phase Min Reactive Power	1	R		✓	✓		✓	✓
1070	042E	uint	2		Time	L1 Phase Min Reactive Power Time	Unix Time Stamp	R		✓	✓		✓	✓
1072	0430	float	2	VAR		L2 Phase Min Reactive Power	1	R		✓	✓		✓	✓
1074	0432	uint	2		Time	L2 Phase Min Reactive Power Time	Unix Time Stamp	R		✓	✓		✓	✓
1076	0434	float	2	VAR		L3 Phase Min Reactive Power	1	R		✓	✓		✓	✓
1078	0436	uint	2		Time	L3 Phase Min Reactive Power Time	Unix Time Stamp	R		✓	✓		✓	✓
1080	0438	uint	2	-		N/A	1	R						
1082	043A	uint	2	-		N/A	Unix Time Stamp	R						

1084	043C	float	2	VAR	Quadrant 1 Min Reactive Power	1	R		✓	✓		✓	✓
1086	043E	uint	2	Time	Quadrant 1 Min Reactive Power Time	Unix Time Stamp	R		✓	✓		✓	✓
1088	0440	float	2	VAR	Quadrant 2 Min Reactive Power	1	R		✓	✓		✓	✓
1090	0442	uint	2	Time	Quadrant 2 Min Reactive Power Time	Unix Time Stamp	R		✓	✓		✓	✓
1092	0444	float	2	VAR	Quadrant 3 Min Reactive Power	1	R		✓	✓		✓	✓
1094	0446	uint	2	Time	Quadrant 3 Min Reactive Power Time	Unix Time Stamp	R		✓	✓		✓	✓
1096	0448	float	2	VAR	Quadrant 4 Min Reactive Power	1	R		✓	✓		✓	✓
1098	044A	uint	2	Time	Quadrant 4 Min Reactive Power Time	Unix Time Stamp	R		✓	✓		✓	✓
1100	044C	float	2	VAR	Quadrant Total Min Reactive Power	1	R		✓	✓		✓	✓
1102	044E	uint	2	Time	Quadrant Total Min Reactive Power Time	Unix Time Stamp	R		✓	✓		✓	✓
1104	0450	float	2	VA	L1 Phase Min Apperant Power	1	R		✓	✓		✓	✓
1106	0452	uint	2	Time	L1 Phase Min Apperant Power Time	Unix Time Stamp	R		✓	✓		✓	✓
1108	0454	float	2	VA	L2 Phase Min Apperant Power	1	R		✓	✓		✓	✓
1110	0456	uint	2	Time	L2 Phase Min Apperant Power Time	Unix Time Stamp	R		✓	✓		✓	✓
1112	0458	float	2	VA	L3 Phase Min Apperant Power	1	R		✓	✓		✓	✓
1114	045A	uint	2	Time	L3 Phase Min Apperant Power Time	Unix Time Stamp	R		✓	✓		✓	✓
1116	045C	uint	2	-	N/A	1	R						
1118	045E	uint	2	-	N/A	Unix Time Stamp	R						
1120	0460	float	2	VA	Min Total Import Apperant Power	1	R		✓	✓		✓	✓
1122	0462	uint	2	Time	Min Total Import Apperant Power Time	Unix Time Stamp	R		✓	✓		✓	✓
1124	0464	float	2	VA	Min Total Export Apperant Power	1	R		✓	✓		✓	✓
1126	0466	uint	2	Time	Min Total Export Apperant Power Time	Unix Time Stamp	R		✓	✓		✓	✓
1128	0468	float	2	VA	Min Total Apperant Power	1	R		✓	✓		✓	✓
1130	046A	uint	2	Time	Min Total Apperant Power Time	Unix Time Stamp	R		✓	✓		✓	✓
1132	046C	float	2	Hz	Min System Frequency	1	R		✓	✓		✓	
1134	046E	uint	2	Time	Min System Frequency Time	Unix Time Stamp	R		✓	✓		✓	
1136	0470	float	2	%	Min. Unbalance	1	R		✓	✓		✓	
1138	0472	uint	2	Time	Min. Unbalance Time	Unix Time Stamp	R		✓	✓		✓	
1140	0474	uint	2	-	N/A	1	R						
1142	0476	uint	2	-	N/A	Unix Time Stamp	R						
1144	0478	uint	2	-	N/A	1	R						
1146	047A	uint	2	-	N/A	Unix Time Stamp	R						
1148	047C	uint	2	-	N/A	1	R						
1150	047E	uint	2	-	N/A	Unix Time Stamp	R						
1152	0480	uint	2	-	N/A	1	R						
1154	0482	uint	2	-	N/A	Unix Time Stamp	R						
1156	0484	uint	2	-	N/A	1	R						
1158	0486	uint	2	-	N/A	Unix Time Stamp	R						
1160	0488	uint	2	-	N/A	1	R						
1162	048A	uint	2	-	N/A	Unix Time Stamp	R						
1164	048C	uint	2	-	N/A	1	R						
1166	048E	uint	2	-	N/A	Unix Time Stamp	R						
1168	0490	uint	2	-	N/A	1	R						
1170	0492	uint	2	-	N/A	Unix Time Stamp	R						
1172	0494	uint	2	-	N/A	1	R						
1174	0496	uint	2	-	N/A	Unix Time Stamp	R						
1176	0498	uint	2	-	N/A	1	R						
1178	049A	uint	2	-	N/A	Unix Time Stamp	R						
1180	049C	uint	2	-	N/A	1	R						
1182	049E	uint	2	-	N/A	Unix Time Stamp	R						
1184	04A0	float	2	A	L1 Phase Current Demand	1	R		✓	✓		✓	
1186	04A2	float	2	A	L2 Phase Current Demand	1	R		✓	✓		✓	
1188	04A4	float	2	A	L3 Phase Current Demand	1	R		✓	✓		✓	
1190	04A6	uint	2	-	N/A	1	R						
1192	04A8	float	2	A	IN Current Demand	1	R		✓	✓		✓	
1194	04AA	float	2	W	L1 Phase Active Power Demand	1	R		✓	✓		✓	✓
1196	04AC	float	2	W	L2 Phase Active Power Demand	1	R		✓	✓		✓	✓
1198	04AE	float	2	W	L3 Phase Active Power Demand	1	R		✓	✓		✓	✓
1200	04B0	uint	2	-	N/A	1	R						
1202	04B2	float	2	W	Total Import Active Power Demand	1	R		✓	✓		✓	✓
1204	04B4	float	2	W	Total Export Active Power Demand	1	R		✓	✓		✓	✓
1206	04B6	float	2	W	Total Active Power Demand	1	R		✓	✓		✓	✓
1208	04B8	float	2	VAr	L1 Phase Reactive Power Demand	1	R		✓	✓		✓	✓
1210	04BA	float	2	VAr	L2 Phase Reactive Power Demand	1	R		✓	✓		✓	✓
1212	04BC	float	2	VAr	L3 Phase Reactive Power Demand	1	R		✓	✓		✓	✓
1214	04BE	uint	2	-	N/A	1	R						
1216	04C0	float	2	VAr	Quadrant 1 Total Reactive Power Demand	1	R		✓	✓		✓	✓
1218	04C2	float	2	VAr	Quadrant 2 Total Reactive Power Demand	1	R		✓	✓		✓	✓
1220	04C4	float	2	VAr	Quadrant 3 Total Reactive Power Demand	1	R		✓	✓		✓	✓

1222	04C6	float	2	VAr	Quadrant 4 Total Reactive Power Demand	1	R		✓	✓		✓	✓
1224	04C8	float	2	VAr	Total Reactive Power Demand	1	R		✓	✓		✓	✓
1226	04CA	float	2	VA	L1 Phase Apperant Power Demand	1	R		✓	✓		✓	✓
1228	04CC	float	2	VA	L2 Phase Apperant Power Demand	1	R		✓	✓		✓	✓
1230	04CE	float	2	VA	L3 Phase Apperant Power Demand	1	R		✓	✓		✓	✓
1232	04D0	uint	2	-	N/A	1	R						
1234	04D2	float	2	VA	Total Import Apperant Power Demand	1	R		✓	✓		✓	✓
1236	04D4	float	2	VA	Total Export Apperant Power Demand	1	R		✓	✓		✓	✓
1238	04D6	float	2	VA	Total Apperant Power Demand	1	R		✓	✓		✓	✓
1240	04D8	float	2	A	L1 Phase Max. Current Demand	1	R		✓	✓		✓	
1242	04DA	uint	2	Time	L1 Phase Max. Current Demand Time	Unix Time Stamp	R		✓	✓		✓	
1244	04DC	float	2	A	L2 Phase Max. Current Demand	1	R		✓	✓		✓	
1246	04DE	uint	2	Time	L2 Phase Max. Current Demand Time	Unix Time Stamp	R		✓	✓		✓	
1248	4E+0	float	2	A	L3 Phase Max. Current Demand	1	R		✓	✓		✓	
1250	4E+2	uint	2	Time	L3 Phase Max. Current Demand Time	Unix Time Stamp	R		✓	✓		✓	
1252	4E+4	uint	2	-	N/A	1	R						
1254	4E+6	uint	2	-	N/A	1	R						
1256	4E+8	float	2	W	PL1 Max Active Power Demand	1	R		✓	✓		✓	✓
1258	04EA	uint	2	Time	PL1 Max Active Power Demand Time	Unix Time Stamp	R		✓	✓		✓	✓
1260	04EC	float	2	W	PL2 Max Active Power Demand	1	R		✓	✓		✓	✓
1262	04EE	uint	2	Time	PL2 Max Active Power Demand Time	Unix Time Stamp	R		✓	✓		✓	✓
1264	04F0	float	2	W	PL3 Max Active Power Demand	1	R		✓	✓		✓	✓
1266	04F2	uint	2	Time	PL3 Max Active Power Demand Time	Unix Time Stamp	R		✓	✓		✓	✓
1268	04F4	float	2	W	Total Active Max Power Demand	1	R		✓	✓		✓	✓
1270	04F6	uint	2	Time	Total Active Max Power Demand Time	Unix Time Stamp	R		✓	✓		✓	✓
1272	04F8	float	2	W	Total Active Import Max Power Demand	1	R		✓	✓		✓	✓
1274	04FA	uint	2	Time	Total Active Import Max Power Demand Time	Unix Time Stamp	R		✓	✓		✓	✓
1276	04FC	float	2	W	Total Active Export Max Power Demand	1	R		✓	✓		✓	✓
1278	04FE	uint	2	Time	Total Active Export Max Power Demand Time	Unix Time Stamp	R		✓	✓		✓	✓
1280	0500	float	2	VA	SL1 Max Active Power Demand	1	R		✓	✓		✓	✓
1282	0502	uint	2	Time	SL1 Max Active Power Demand Time	Unix Time Stamp	R		✓	✓		✓	✓
1284	0504	float	2	VA	SL2 Max Active Power Demand	1	R		✓	✓		✓	✓
1286	0506	uint	2	Time	SL2 Max Active Power Demand Time	Unix Time Stamp	R		✓	✓		✓	✓
1288	0508	float	2	VA	SL3 Max Active Power Demand	1	R		✓	✓		✓	✓
1290	050A	uint	2	Time	SL3 Max Active Power Demand Time	Unix Time Stamp	R		✓	✓		✓	✓
1292	050C	float	2	VA	Total Apperant Max Power Demand	1	R		✓	✓		✓	✓
1294	050E	uint	2	Time	Total Apperant Max Power Demand Time	Unix Time Stamp	R		✓	✓		✓	✓
1296	0510	float	2	VA	Total Apperant Import Max Power Demand	1	R		✓	✓		✓	✓
1298	0512	uint	2	Time	Total Apperant Import Max Power Demand Time	Unix Time Stamp	R		✓	✓		✓	✓
1300	0514	float	2	VA	Total Apperant Export Max Power Demand	1	R		✓	✓		✓	✓
1302	0516	uint	2	Time	Total Apperant Export Max Power Demand Time	Unix Time Stamp	R		✓	✓		✓	✓
1304	0518	float	2	A	L1 Phase Sum Current Demand	1	R		✓	✓		✓	
1306	051A	float	2	A	L2 Phase Sum Current Demand	1	R		✓	✓		✓	
1308	051C	float	2	A	L3 Phase Sum Current Demand	1	R		✓	✓		✓	
1310	051E	float	2	A	IN Phase Sum Current Demand	1	R		✓	✓		✓	
1312	0520	float	2	W	PL1 Sum Active Power Demand	1	R		✓	✓		✓	✓
1314	0522	float	2	W	PL2 Sum Active Power Demand	1	R		✓	✓		✓	✓
1316	0524	float	2	W	PL3 Sum Active Power Demand	1	R		✓	✓		✓	✓
1318	0526	float	2	W	Total Active Sum. Power Demand	1	R		✓	✓		✓	✓
1320	0528	float	2	W	Total Active Import Sum. Power Demand	1	R		✓	✓		✓	✓
1322	052A	float	2	W	Total Active Export Sum. Power Demand	1	R		✓	✓		✓	✓
1324	052C	float	2	VA	SL1 Sum Active Power Demand	1	R		✓	✓		✓	✓
1326	052E	float	2	VA	SL2 Sum Active Power Demand	1	R		✓	✓		✓	✓
1328	0530	float	2	VA	SL3 Sum Active Power Demand	1	R		✓	✓		✓	✓
1330	0532	float	2	VA	Total Apperant Sum. Power Demand	1	R		✓	✓		✓	✓
1332	0534	float	2	VA	Total Apperant Import Sum. Power Demand	1	R		✓	✓		✓	✓
1334	0536	float	2	VA	Total Apperant Export Sum. Power Demand	1	R		✓	✓		✓	✓

**THD**

Supported Functions	Start Address	Register Counts
Read holding registers	0000	24

Address (Dec)	Address (Hex)	Format	Bits	Bitm	Description	Multiplier	Range	EMR-53CS	EMR-53S	EMR-07S	EMR-04S
2000	07D0	float	2	%	Total Harmonic Distorsion VLL12	100		✓	✓		
2002	07D2	float	2	%	Total Harmonic Distorsion VLL23	100		✓	✓		
2004	07D4	float	2	%	Total Harmonic Distorsion VLL31	100		✓	✓		
2006	07D6	float	2	%	Total Harmonic Distorsion VL1	100		✓	✓		
2008	07D8	float	2	%	Total Harmonic Distorsion VL2	100		✓	✓		
2010	07DA	float	2	%	Total Harmonic Distorsion VL3	100		✓	✓		
2012	07DC	uint	2	-	N/A	100					
2014	07DE	float	2	%	Total Harmonic Distorsion IL1	100		✓	✓		
2016	7E+0	float	2	%	Total Harmonic Distorsion IL2	100		✓	✓		
2018	7E+2	float	2	%	Total Harmonic Distorsion IL3	100		✓	✓		
2020	7E+4	uint	2	-	N/A	100					
2022	7E+6	float	2	%	Total Harmonic Distorsion N	100		✓	✓		

**THD I Harmonic Order**

Supported Functions	Start Address	Register Counts
Read holding registers	300	322

Address (Dec)	Address (Hex)	Format	Bits	Bitm	Description	Multiplier	Range	EMR-53CS	EMR-53S	EMR-07S	EMR-04S
3000	0BB8	uint	1	-	Zero Data	1		✓	✓		
3001	0BB9	uint	1	-	Number of Harmonics	1		31	31	0	0
3002	0BBA	float	2	A	AMPLITUDE H_IL1_0	1		✓	✓		
3004	0BBC	float	2	A	AMPLITUDE H_IL2_0	1		✓	✓		
3006	0BBE	float	2	A	AMPLITUDE H_IL3_0	1		✓	✓		
3008	0BC0	float	2	A	N/A	1					
3010	0BC2	float	2	A	AMPLITUDE H_ILN_0	1		✓	✓		
3012	0BC4	float	2	A	AMPLITUDE H_IL1_1	1		✓	✓		
3014	0BC6	float	2	A	AMPLITUDE H_IL2_1	1		✓	✓		
3016	0BC8	float	2	A	AMPLITUDE H_IL3_1	1		✓	✓		
3018	0BCA	float	2	A	N/A	1					
3020	0BCC	float	2	A	AMPLITUDE H_ILN_1	1		✓	✓		
3022	0BCE	float	2	A	AMPLITUDE H_IL1_2	1		✓	✓		
3024	0BD0	float	2	A	AMPLITUDE H_IL2_2	1		✓	✓		
3026	0BD2	float	2	A	AMPLITUDE H_IL3_2	1		✓	✓		
3028	0BD4	float	2	A	N/A	1					
3030	0BD6	float	2	A	AMPLITUDE H_ILN_2	1		✓	✓		
3032	0BD8	float	2	A	AMPLITUDE H_IL1_3	1		✓	✓		
3034	0BDA	float	2	A	AMPLITUDE H_IL2_3	1		✓	✓		
3036	0BDC	float	2	A	AMPLITUDE H_IL3_3	1		✓	✓		
3038	0BDE	float	2	A	N/A	1					
3040	0BE0	float	2	A	AMPLITUDE H_ILN_3	1		✓	✓		
3042	0BE2	float	2	A	AMPLITUDE H_IL1_4	1		✓	✓		
3044	0BE4	float	2	A	AMPLITUDE H_IL2_4	1		✓	✓		
3046	0BE6	float	2	A	AMPLITUDE H_IL3_4	1		✓	✓		
3048	0BE8	float	2	A	N/A	1					
3050	0BEA	float	2	A	AMPLITUDE H_ILN_4	1	R	✓	✓		
3052	0BEC	float	2	A	AMPLITUDE H_IL1_5	1	R	✓	✓		
3054	0BEE	float	2	A	AMPLITUDE H_IL2_5	1	R	✓	✓		
3056	0BF0	float	2	A	AMPLITUDE H_IL3_5	1	R	✓	✓		
3058	0BF2	float	2	A	N/A	1	R				
3060	0BF4	float	2	A	AMPLITUDE H_ILN_5	1	R	✓	✓		
3062	0BF6	float	2	A	AMPLITUDE H_IL1_6	1	R	✓	✓		
3064	0BF8	float	2	A	AMPLITUDE H_IL2_6	1	R	✓	✓		
3066	0BFA	float	2	A	AMPLITUDE H_IL3_6	1	R	✓	✓		
3068	0BFC	float	2	A	N/A	1	R				
3070	0BFE	float	2	A	AMPLITUDE H_ILN_6	1	R	✓	✓		
3072	0C00	float	2	A	AMPLITUDE H_IL1_7	1	R	✓	✓		
3074	0C02	float	2	A	AMPLITUDE H_IL2_7	1	R	✓	✓		

3076	OC04	float	2	A	AMPLITUDE_H_IL3_7	1	R		✓	✓		
3078	OC06	float	2	A	N/A	1	R					
3080	OC08	float	2	A	AMPLITUDE_H_ILN_7	1	R		✓	✓		
3082	OC0A	float	2	A	AMPLITUDE_H_IL1_8	1	R		✓	✓		
3084	OC0C	float	2	A	AMPLITUDE_H_IL2_8	1	R		✓	✓		
3086	OC0E	float	2	A	AMPLITUDE_H_IL3_8	1	R		✓	✓		
3088	OC10	float	2	A	N/A	1	R					
3090	OC12	float	2	A	AMPLITUDE_H_ILN_8	1	R		✓	✓		
3092	OC14	float	2	A	AMPLITUDE_H_IL1_9	1	R		✓	✓		
3094	OC16	float	2	A	AMPLITUDE_H_IL2_9	1	R		✓	✓		
3096	OC18	float	2	A	AMPLITUDE_H_IL3_9	1	R		✓	✓		
3098	OC1A	float	2	A	N/A	1	R					
3100	OC1C	float	2	A	AMPLITUDE_H_ILN_9	1	R		✓	✓		
3102	OC1E	float	2	A	AMPLITUDE_H_IL1_10	1	R		✓	✓		
3104	OC20	float	2	A	AMPLITUDE_H_IL2_10	1	R		✓	✓		
3106	OC22	float	2	A	AMPLITUDE_H_IL3_10	1	R		✓	✓		
3108	OC24	float	2	A	N/A	1	R					
3110	OC26	float	2	A	AMPLITUDE_H_ILN_10	1	R		✓	✓		
3112	OC28	float	2	A	AMPLITUDE_H_IL1_11	1	R		✓	✓		
3114	OC2A	float	2	A	AMPLITUDE_H_IL2_11	1	R		✓	✓		
3116	OC2C	float	2	A	AMPLITUDE_H_IL3_11	1	R		✓	✓		
3118	OC2E	float	2	A	N/A	1	R					
3120	OC30	float	2	A	AMPLITUDE_H_ILN_11	1	R		✓	✓		
3122	OC32	float	2	A	AMPLITUDE_H_IL1_12	1	R		✓	✓		
3124	OC34	float	2	A	AMPLITUDE_H_IL2_12	1	R		✓	✓		
3126	OC36	float	2	A	AMPLITUDE_H_IL3_12	1	R		✓	✓		
3128	OC38	float	2	A	N/A	1	R					
3130	OC3A	float	2	A	AMPLITUDE_H_ILN_12	1	R		✓	✓		
3132	OC3C	float	2	A	AMPLITUDE_H_IL1_13	1	R		✓	✓		
3134	OC3E	float	2	A	AMPLITUDE_H_IL2_13	1	R		✓	✓		
3136	OC40	float	2	A	AMPLITUDE_H_IL3_13	1	R		✓	✓		
3138	OC42	float	2	A	N/A	1	R					
3140	OC44	float	2	A	AMPLITUDE_H_ILN_13	1	R		✓	✓		
3142	OC46	float	2	A	AMPLITUDE_H_IL1_14	1	R		✓	✓		
3144	OC48	float	2	A	AMPLITUDE_H_IL2_14	1	R		✓	✓		
3146	OC4A	float	2	A	AMPLITUDE_H_IL3_14	1	R		✓	✓		
3148	OC4C	float	2	A	N/A	1	R					
3150	OC4E	float	2	A	AMPLITUDE_H_ILN_14	1	R		✓	✓		
3152	OC50	float	2	A	AMPLITUDE_H_IL1_15	1	R		✓	✓		
3154	OC52	float	2	A	AMPLITUDE_H_IL2_15	1	R		✓	✓		
3156	OC54	float	2	A	AMPLITUDE_H_IL3_15	1	R		✓	✓		
3158	OC56	float	2	A	N/A	1	R					
3160	OC58	float	2	A	AMPLITUDE_H_ILN_15	1	R		✓	✓		
3162	OC5A	float	2	A	AMPLITUDE_H_IL1_16	1	R		✓	✓		
3164	OC5C	float	2	A	AMPLITUDE_H_IL2_16	1	R		✓	✓		
3166	OC5E	float	2	A	AMPLITUDE_H_IL3_16	1	R		✓	✓		
3168	OC60	float	2	A	N/A	1	R					
3170	OC62	float	2	A	AMPLITUDE_H_ILN_16	1	R		✓	✓		
3172	OC64	float	2	A	AMPLITUDE_H_IL1_17	1	R		✓	✓		
3174	OC66	float	2	A	AMPLITUDE_H_IL2_17	1	R		✓	✓		
3176	OC68	float	2	A	AMPLITUDE_H_IL3_17	1	R		✓	✓		
3178	OC6A	float	2	A	N/A	1	R					
3180	OC6C	float	2	A	AMPLITUDE_H_ILN_17	1	R		✓	✓		
3182	OC6E	float	2	A	AMPLITUDE_H_IL1_18	1	R		✓	✓		
3184	OC70	float	2	A	AMPLITUDE_H_IL2_18	1	R		✓	✓		
3186	OC72	float	2	A	AMPLITUDE_H_IL3_18	1	R		✓	✓		
3188	OC74	float	2	A	N/A	1	R					
3190	OC76	float	2	A	AMPLITUDE_H_ILN_18	1	R		✓	✓		
3192	OC78	float	2	A	AMPLITUDE_H_IL1_19	1	R		✓	✓		
3194	OC7A	float	2	A	AMPLITUDE_H_IL2_19	1	R		✓	✓		
3196	OC7C	float	2	A	AMPLITUDE_H_IL3_19	1	R		✓	✓		
3198	OC7E	float	2	A	N/A	1	R					
3200	OC80	float	2	A	AMPLITUDE_H_ILN_19	1	R		✓	✓		
3202	OC82	float	2	A	AMPLITUDE_H_IL1_20	1	R		✓	✓		
3204	OC84	float	2	A	AMPLITUDE_H_IL2_20	1	R		✓	✓		
3206	OC86	float	2	A	AMPLITUDE_H_IL3_20	1	R		✓	✓		
3208	OC88	float	2	A	N/A	1	R					
3210	OC8A	float	2	A	AMPLITUDE_H_ILN_20	1	R		✓	✓		
3212	OC8C	float	2	A	AMPLITUDE_H_IL1_21	1	R		✓	✓		
3214	OC8E	float	2	A	AMPLITUDE_H_IL2_21	1	R		✓	✓		



3216	0C90	float	2	A	AMPLITUDE_H_IL3_21	1	R	✓	✓		
3218	0C92	float	2	A	N/A	1	R				
3220	0C94	float	2	A	AMPLITUDE_H_ILN_21	1	R	✓	✓		
3222	0C96	float	2	A	AMPLITUDE_H_IL1_22	1	R	✓	✓		
3224	0C98	float	2	A	AMPLITUDE_H_IL2_22	1	R	✓	✓		
3226	0C9A	float	2	A	AMPLITUDE_H_IL3_22	1	R	✓	✓		
3228	0C9C	float	2	A	N/A	1	R				
3230	0C9E	float	2	A	AMPLITUDE_H_ILN_22	1	R	✓	✓		
3232	0CA0	float	2	A	AMPLITUDE_H_IL1_23	1	R	✓	✓		
3234	0CA2	float	2	A	AMPLITUDE_H_IL2_23	1	R	✓	✓		
3236	0CA4	float	2	A	AMPLITUDE_H_IL3_23	1	R	✓	✓		
3238	0CA6	float	2	A	N/A	1	R				
3240	0CA8	float	2	A	AMPLITUDE_H_ILN_23	1	R	✓	✓		
3242	0CAA	float	2	A	AMPLITUDE_H_IL1_24	1	R	✓	✓		
3244	0CAC	float	2	A	AMPLITUDE_H_IL2_24	1	R	✓	✓		
3246	0CAE	float	2	A	AMPLITUDE_H_IL3_24	1	R	✓	✓		
3248	0CB0	float	2	A	N/A	1	R				
3250	0CB2	float	2	A	AMPLITUDE_H_ILN_24	1	R	✓	✓		
3252	0CB4	float	2	A	AMPLITUDE_H_IL1_25	1	R	✓	✓		
3254	0CB6	float	2	A	AMPLITUDE_H_IL2_25	1	R	✓	✓		
3256	0CB8	float	2	A	AMPLITUDE_H_IL3_25	1	R	✓	✓		
3258	0CBA	float	2	A	N/A	1	R				
3260	0CBC	float	2	A	AMPLITUDE_H_ILN_25	1	R	✓	✓		
3262	0CBE	float	2	A	AMPLITUDE_H_IL1_26	1	R	✓	✓		
3264	0CC0	float	2	A	AMPLITUDE_H_IL2_26	1	R	✓	✓		
3266	0CC2	float	2	A	AMPLITUDE_H_IL3_26	1	R	✓	✓		
3268	0CC4	float	2	A	N/A	1	R				
3270	0CC6	float	2	A	AMPLITUDE_H_ILN_26	1	R	✓	✓		
3272	0CC8	float	2	A	AMPLITUDE_H_IL1_27	1	R	✓	✓		
3274	0CCA	float	2	A	AMPLITUDE_H_IL2_27	1	R	✓	✓		
3276	0CCC	float	2	A	AMPLITUDE_H_IL3_27	1	R	✓	✓		
3278	0CCE	float	2	A	N/A	1	R				
3280	0CD0	float	2	A	AMPLITUDE_H_ILN_27	1	R	✓	✓		
3282	0CD2	float	2	A	AMPLITUDE_H_IL1_28	1	R	✓	✓		
3284	0CD4	float	2	A	AMPLITUDE_H_IL2_28	1	R	✓	✓		
3286	0CD6	float	2	A	AMPLITUDE_H_IL3_28	1	R	✓	✓		
3288	0CD8	float	2	A	N/A	1	R				
3290	0CDA	float	2	A	AMPLITUDE_H_ILN_28	1	R	✓	✓		
3292	0CDC	float	2	A	AMPLITUDE_H_IL1_29	1	R	✓	✓		
3294	0CDE	float	2	A	AMPLITUDE_H_IL2_29	1	R	✓	✓		
3296	0CE0	float	2	A	AMPLITUDE_H_IL3_29	1	R	✓	✓		
3298	0CE2	float	2	A	N/A	1	R				
3300	0CE4	float	2	A	AMPLITUDE_H_ILN_29	1	R	✓	✓		
3302	0CE6	float	2	A	AMPLITUDE_H_IL1_30	1	R	✓	✓		
3304	0CE8	float	2	A	AMPLITUDE_H_IL2_30	1	R	✓	✓		
3306	0CEA	float	2	A	AMPLITUDE_H_IL3_30	1	R	✓	✓		
3308	0CEC	float	2	A	N/A	1	R				
3310	0CEE	float	2	A	AMPLITUDE_H_ILN_30	1	R	✓	✓		
3312	0CF0	float	2	A	AMPLITUDE_H_IL1_31	1	R	✓	✓		
3314	0CF2	float	2	A	AMPLITUDE_H_IL2_31	1	R	✓	✓		
3316	0CF4	float	2	A	AMPLITUDE_H_IL3_31	1	R	✓	✓		
3318	0CF6	float	2	A	N/A	1	R				
3320	0CF8	float	2	A	AMPLITUDE_H_ILN_31	1	R	✓	✓		

**THD VLN Harmonic Order**

Supported Functions		Register Counts		Start Address							
Address (Dec)	Address (Hex)	Format	Bits	Description	Multiplier	Range	EMR-53CS	EMR-53S	EMR-07S	EMR-04S	
Read holding registers				258							
4000	0FA0	uint	1	Zero Data	1		✓	✓			
4001	0FA1	uint	1	Number of Harmonics	1		31	31	0	0	
4002	0FA2	float	2	AMPLITUDE_H_VL1_0	1		✓	✓			
4004	0FA4	float	2	AMPLITUDE_H_VL2_0	1		✓	✓			

4006	0FA6	float	2	V	AMPLITUDE_H_VL3_0	1			✓	✓		
4008	0FA8	float	2	V	N/A	1						
4010	0FAA	float	2	V	AMPLITUDE_H_VL1_1	1			✓	✓		
4012	0FAC	float	2	V	AMPLITUDE_H_VL2_1	1			✓	✓		
4014	0FAE	float	2	V	AMPLITUDE_H_VL3_1	1			✓	✓		
4016	0FB0	float	2	V	N/A	1						
4018	0FB2	float	2	V	AMPLITUDE_H_VL1_2	1			✓	✓		
4020	0FB4	float	2	V	AMPLITUDE_H_VL2_2	1			✓	✓		
4022	0FB6	float	2	V	AMPLITUDE_H_VL3_2	1			✓	✓		
4024	0FB8	float	2	V	N/A	1						
4026	0FBA	float	2	V	AMPLITUDE_H_VL1_3	1			✓	✓		
4028	0FBC	float	2	V	AMPLITUDE_H_VL2_3	1			✓	✓		
4030	0FBE	float	2	V	AMPLITUDE_H_VL3_3	1			✓	✓		
4032	0FC0	float	2	V	N/A	1						
4034	0FC2	float	2	V	AMPLITUDE_H_VL1_4	1			✓	✓		
4036	0FC4	float	2	V	AMPLITUDE_H_VL2_4	1			✓	✓		
4038	0FC6	float	2	V	AMPLITUDE_H_VL3_4	1			✓	✓		
4040	0FC8	float	2	V	N/A	1						
4042	0FCA	float	2	V	AMPLITUDE_H_VL1_5	1			✓	✓		
4044	0FCC	float	2	V	AMPLITUDE_H_VL2_5	1			✓	✓		
4046	0FCE	float	2	V	AMPLITUDE_H_VL3_5	1			✓	✓		
4048	0FD0	float	2	V	N/A	1						
4050	0FD2	float	2	V	AMPLITUDE_H_VL1_6	1			✓	✓		
4052	0FD4	float	2	V	AMPLITUDE_H_VL2_6	1			✓	✓		
4054	0FD6	float	2	V	AMPLITUDE_H_VL3_6	1			✓	✓		
4056	0FD8	float	2	V	N/A	1						
4058	0FDA	float	2	V	AMPLITUDE_H_VL1_7	1			✓	✓		
4060	0FDC	float	2	V	AMPLITUDE_H_VL2_7	1			✓	✓		
4062	0FDE	float	2	V	AMPLITUDE_H_VL3_7	1			✓	✓		
4064	0FE0	float	2	V	N/A	1						
4066	0FE2	float	2	V	AMPLITUDE_H_VL1_8	1			✓	✓		
4068	0FE4	float	2	V	AMPLITUDE_H_VL2_8	1			✓	✓		
4070	0FE6	float	2	V	AMPLITUDE_H_VL3_8	1			✓	✓		
4072	0FE8	float	2	V	N/A	1						
4074	0FEA	float	2	V	AMPLITUDE_H_VL1_9	1			✓	✓		
4076	0FEC	float	2	V	AMPLITUDE_H_VL2_9	1			✓	✓		
4078	0FEE	float	2	V	AMPLITUDE_H_VL3_9	1			✓	✓		
4080	0FF0	float	2	V	N/A	1						
4082	0FF2	float	2	V	AMPLITUDE_H_VL1_10	1			✓	✓		
4084	0FF4	float	2	V	AMPLITUDE_H_VL2_10	1			✓	✓		
4086	0FF6	float	2	V	AMPLITUDE_H_VL3_10	1			✓	✓		
4088	0FF8	float	2	V	N/A	1						
4090	0FFA	float	2	V	AMPLITUDE_H_VL1_11	1			✓	✓		
4092	0FFC	float	2	V	AMPLITUDE_H_VL2_11	1			✓	✓		
4094	0FFE	float	2	V	AMPLITUDE_H_VL3_11	1			✓	✓		
4096	1000	float	2	V	N/A	1						
4098	1002	float	2	V	AMPLITUDE_H_VL1_12	1			✓	✓		
4100	1004	float	2	V	AMPLITUDE_H_VL2_12	1			✓	✓		
4102	1006	float	2	V	AMPLITUDE_H_VL3_12	1			✓	✓		
4104	1008	float	2	V	N/A	1						
4106	100A	float	2	V	AMPLITUDE_H_VL1_13	1			✓	✓		
4108	100C	float	2	V	AMPLITUDE_H_VL2_13	1	R		✓	✓		
4110	100E	float	2	V	AMPLITUDE_H_VL3_13	1	R		✓	✓		
4112	1010	float	2	V	N/A	1	R					
4114	1012	float	2	V	AMPLITUDE_H_VL1_14	1	R		✓	✓		
4116	1014	float	2	V	AMPLITUDE_H_VL2_14	1	R		✓	✓		
4118	1016	float	2	V	AMPLITUDE_H_VL3_14	1	R		✓	✓		
4120	1018	float	2	V	N/A	1	R					
4122	101A	float	2	V	AMPLITUDE_H_VL1_15	1	R		✓	✓		
4124	101C	float	2	V	AMPLITUDE_H_VL2_15	1	R		✓	✓		
4126	101E	float	2	V	AMPLITUDE_H_VL3_15	1	R		✓	✓		
4128	1020	float	2	V	N/A	1	R					
4130	1022	float	2	V	AMPLITUDE_H_VL1_16	1	R		✓	✓		
4132	1024	float	2	V	AMPLITUDE_H_VL2_16	1	R		✓	✓		
4134	1026	float	2	V	AMPLITUDE_H_VL3_16	1	R		✓	✓		
4136	1028	float	2	V	N/A	1	R					
4138	102A	float	2	V	AMPLITUDE_H_VL1_17	1	R		✓	✓		
4140	102C	float	2	V	AMPLITUDE_H_VL2_17	1	R		✓	✓		
4142	102E	float	2	V	AMPLITUDE_H_VL3_17	1	R		✓	✓		
4144	1030	float	2	V	N/A	1	R					

4146	1032	float	2	V	AMPLITUDE_H_VL1_18	1	R		✓	✓			
4148	1034	float	2	V	AMPLITUDE_H_VL2_18	1	R		✓	✓			
4150	1036	float	2	V	AMPLITUDE_H_VL3_18	1	R		✓	✓			
4152	1038	float	2	V	N/A	1	R						
4154	103A	float	2	V	AMPLITUDE_H_VL1_19	1	R		✓	✓			
4156	103C	float	2	V	AMPLITUDE_H_VL2_19	1	R		✓	✓			
4158	103E	float	2	V	AMPLITUDE_H_VL3_19	1	R		✓	✓			
4160	1040	float	2	V	N/A	1	R						
4162	1042	float	2	V	AMPLITUDE_H_VL1_20	1	R		✓	✓			
4164	1044	float	2	V	AMPLITUDE_H_VL2_20	1	R		✓	✓			
4166	1046	float	2	V	AMPLITUDE_H_VL3_20	1	R		✓	✓			
4168	1048	float	2	V	N/A	1	R						
4170	104A	float	2	V	AMPLITUDE_H_VL1_21	1	R		✓	✓			
4172	104C	float	2	V	AMPLITUDE_H_VL2_21	1	R		✓	✓			
4174	104E	float	2	V	AMPLITUDE_H_VL3_21	1	R		✓	✓			
4176	1050	float	2	V	N/A	1	R						
4178	1052	float	2	V	AMPLITUDE_H_VL1_22	1	R		✓	✓			
4180	1054	float	2	V	AMPLITUDE_H_VL2_22	1	R		✓	✓			
4182	1056	float	2	V	AMPLITUDE_H_VL3_22	1	R		✓	✓			
4184	1058	float	2	V	N/A	1	R						
4186	105A	float	2	V	AMPLITUDE_H_VL1_23	1	R		✓	✓			
4188	105C	float	2	V	AMPLITUDE_H_VL2_23	1	R		✓	✓			
4190	105E	float	2	V	AMPLITUDE_H_VL3_23	1	R		✓	✓			
4192	1060	float	2	V	N/A	1	R						
4194	1062	float	2	V	AMPLITUDE_H_VL1_24	1	R		✓	✓			
4196	1064	float	2	V	AMPLITUDE_H_VL2_24	1	R		✓	✓			
4198	1066	float	2	V	AMPLITUDE_H_VL3_24	1	R		✓	✓			
4200	1068	float	2	V	N/A	1	R						
4202	106A	float	2	V	AMPLITUDE_H_VL1_25	1	R		✓	✓			
4204	106C	float	2	V	AMPLITUDE_H_VL2_25	1	R		✓	✓			
4206	106E	float	2	V	AMPLITUDE_H_VL3_25	1	R		✓	✓			
4208	1070	float	2	V	N/A	1	R						
4210	1072	float	2	V	AMPLITUDE_H_VL1_26	1	R		✓	✓			
4212	1074	float	2	V	AMPLITUDE_H_VL2_26	1	R		✓	✓			
4214	1076	float	2	V	AMPLITUDE_H_VL3_26	1	R		✓	✓			
4216	1078	float	2	V	N/A	1	R						
4218	107A	float	2	V	AMPLITUDE_H_VL1_27	1	R		✓	✓			
4220	107C	float	2	V	AMPLITUDE_H_VL2_27	1	R		✓	✓			
4222	107E	float	2	V	AMPLITUDE_H_VL3_27	1	R		✓	✓			
4224	1080	float	2	V	N/A	1	R						
4226	1082	float	2	V	AMPLITUDE_H_VL1_28	1	R		✓	✓			
4228	1084	float	2	V	AMPLITUDE_H_VL2_28	1	R		✓	✓			
4230	1086	float	2	V	AMPLITUDE_H_VL3_28	1	R		✓	✓			
4232	1088	float	2	V	N/A	1	R						
4234	108A	float	2	V	AMPLITUDE_H_VL1_29	1	R		✓	✓			
4236	108C	float	2	V	AMPLITUDE_H_VL2_29	1	R		✓	✓			
4238	108E	float	2	V	AMPLITUDE_H_VL3_29	1	R		✓	✓			
4240	1090	float	2	V	N/A	1	R						
4242	1092	float	2	V	AMPLITUDE_H_VL1_30	1	R		✓	✓			
4244	1094	float	2	V	AMPLITUDE_H_VL2_30	1	R		✓	✓			
4246	1096	float	2	V	AMPLITUDE_H_VL3_30	1	R		✓	✓			
4248	1098	float	2	V	N/A	1	R						
4250	109A	float	2	V	AMPLITUDE_H_VL1_31	1	R		✓	✓			
4252	109C	float	2	V	AMPLITUDE_H_VL2_31	1	R		✓	✓			
4254	109E	float	2	V	AMPLITUDE_H_VL3_31	1	R		✓	✓			
4256	10A0	float	2	V	N/A	1	R						

**THD VLL Harmonic Order**

Supported Functions		Start Address	Register Counts										
Read holding registers		5000	194										
Address (Dec)	Address (Hex)	Format	Bitm	Description	Multiplier	Range	EMR-53CS	EMR-53S	EMR-07S	EMR-04S			
5000	1388	uint	1	Zero Data	1		✓	✓					

5001	1389	uint	1	-	Number of Harmonics	1			31	31	0	0
5002	138A	float	2	V	AMPLITUDE H_VLL1_0	1			✓	✓		
5004	138C	float	2	V	AMPLITUDE H_VLL2_0	1			✓	✓		
5006	138E	float	2	V	AMPLITUDE H_VLL3_0	1			✓	✓		
5008	1390	float	2	V	AMPLITUDE H_VLL1_1	1			✓	✓		
5010	1392	float	2	V	AMPLITUDE H_VLL2_1	1			✓	✓		
5012	1394	float	2	V	AMPLITUDE H_VLL3_1	1			✓	✓		
5014	1396	float	2	V	AMPLITUDE H_VLL1_2	1			✓	✓		
5016	1398	float	2	V	AMPLITUDE H_VLL2_2	1			✓	✓		
5018	139A	float	2	V	AMPLITUDE H_VLL3_2	1			✓	✓		
5020	139C	float	2	V	AMPLITUDE H_VLL1_3	1			✓	✓		
5022	139E	float	2	V	AMPLITUDE H_VLL2_3	1			✓	✓		
5024	13A0	float	2	V	AMPLITUDE H_VLL3_3	1			✓	✓		
5026	13A2	float	2	V	AMPLITUDE H_VLL1_4	1			✓	✓		
5028	13A4	float	2	V	AMPLITUDE H_VLL2_4	1	R		✓	✓		
5030	13A6	float	2	V	AMPLITUDE H_VLL3_4	1	R		✓	✓		
5032	13A8	float	2	V	AMPLITUDE H_VLL1_5	1	R		✓	✓		
5034	13AA	float	2	V	AMPLITUDE H_VLL2_5	1	R		✓	✓		
5036	13AC	float	2	V	AMPLITUDE H_VLL3_5	1	R		✓	✓		
5038	13AE	float	2	V	AMPLITUDE H_VLL1_6	1	R		✓	✓		
5040	13B0	float	2	V	AMPLITUDE H_VLL2_6	1	R		✓	✓		
5042	13B2	float	2	V	AMPLITUDE H_VLL3_6	1	R		✓	✓		
5044	13B4	float	2	V	AMPLITUDE H_VLL1_7	1	R		✓	✓		
5046	13B6	float	2	V	AMPLITUDE H_VLL2_7	1	R		✓	✓		
5048	13B8	float	2	V	AMPLITUDE H_VLL3_7	1	R		✓	✓		
5050	13BA	float	2	V	AMPLITUDE H_VLL1_8	1	R		✓	✓		
5052	13BC	float	2	V	AMPLITUDE H_VLL2_8	1	R		✓	✓		
5054	13BE	float	2	V	AMPLITUDE H_VLL3_8	1	R		✓	✓		
5056	13C0	float	2	V	AMPLITUDE H_VLL1_9	1	R		✓	✓		
5058	13C2	float	2	V	AMPLITUDE H_VLL2_9	1	R		✓	✓		
5060	13C4	float	2	V	AMPLITUDE H_VLL3_9	1	R		✓	✓		
5062	13C6	float	2	V	AMPLITUDE H_VLL1_10	1	R		✓	✓		
5064	13C8	float	2	V	AMPLITUDE H_VLL2_10	1	R		✓	✓		
5066	13CA	float	2	V	AMPLITUDE H_VLL3_10	1	R		✓	✓		
5068	13CC	float	2	V	AMPLITUDE H_VLL1_11	1	R		✓	✓		
5070	13CE	float	2	V	AMPLITUDE H_VLL2_11	1	R		✓	✓		
5072	13D0	float	2	V	AMPLITUDE H_VLL3_11	1	R		✓	✓		
5074	13D2	float	2	V	AMPLITUDE H_VLL1_12	1	R		✓	✓		
5076	13D4	float	2	V	AMPLITUDE H_VLL2_12	1	R		✓	✓		
5078	13D6	float	2	V	AMPLITUDE H_VLL3_12	1	R		✓	✓		
5080	13D8	float	2	V	AMPLITUDE H_VLL1_13	1	R		✓	✓		
5082	13DA	float	2	V	AMPLITUDE H_VLL2_13	1	R		✓	✓		
5084	13DC	float	2	V	AMPLITUDE H_VLL3_13	1	R		✓	✓		
5086	13DE	float	2	V	AMPLITUDE H_VLL1_14	1	R		✓	✓		
5088	13E0	float	2	V	AMPLITUDE H_VLL2_14	1	R		✓	✓		
5090	13E2	float	2	V	AMPLITUDE H_VLL3_14	1	R		✓	✓		
5092	13E4	float	2	V	AMPLITUDE H_VLL1_15	1	R		✓	✓		
5094	13E6	float	2	V	AMPLITUDE H_VLL2_15	1	R		✓	✓		
5096	13E8	float	2	V	AMPLITUDE H_VLL3_15	1	R		✓	✓		
5098	13EA	float	2	V	AMPLITUDE H_VLL1_16	1	R		✓	✓		
5100	13EC	float	2	V	AMPLITUDE H_VLL2_16	1	R		✓	✓		
5102	13EE	float	2	V	AMPLITUDE H_VLL3_16	1	R		✓	✓		
5104	13F0	float	2	V	AMPLITUDE H_VLL1_17	1	R		✓	✓		
5106	13F2	float	2	V	AMPLITUDE H_VLL2_17	1	R		✓	✓		
5108	13F4	float	2	V	AMPLITUDE H_VLL3_17	1	R		✓	✓		
5110	13F6	float	2	V	AMPLITUDE H_VLL1_18	1	R		✓	✓		
5112	13F8	float	2	V	AMPLITUDE H_VLL2_18	1	R		✓	✓		
5114	13FA	float	2	V	AMPLITUDE H_VLL3_18	1	R		✓	✓		
5116	13FC	float	2	V	AMPLITUDE H_VLL1_19	1	R		✓	✓		
5118	13FE	float	2	V	AMPLITUDE H_VLL2_19	1	R		✓	✓		
5120	1400	float	2	V	AMPLITUDE H_VLL3_19	1	R		✓	✓		
5122	1402	float	2	V	AMPLITUDE H_VLL1_20	1	R		✓	✓		
5124	1404	float	2	V	AMPLITUDE H_VLL2_20	1	R		✓	✓		
5126	1406	float	2	V	AMPLITUDE H_VLL3_20	1	R		✓	✓		
5128	1408	float	2	V	AMPLITUDE H_VLL1_21	1	R		✓	✓		
5130	140A	float	2	V	AMPLITUDE H_VLL2_21	1	R		✓	✓		
5132	140C	float	2	V	AMPLITUDE H_VLL3_21	1	R		✓	✓		
5134	140E	float	2	V	AMPLITUDE H_VLL1_22	1	R		✓	✓		
5136	1410	float	2	V	AMPLITUDE H_VLL2_22	1	R		✓	✓		
5138	1412	float	2	V	AMPLITUDE H_VLL3_22	1	R		✓	✓		

5140	1414	Roat	2	V	AMPLITUDE H_VLL1_24	1	R	✓	✓				
5142	1416	Roat	2	V	AMPLITUDE H_VLL2_23	1	R	✓	✓				
5144	1418	Roat	2	V	AMPLITUDE H_VLL3_23	1	R	✓	✓				
5146	141A	Roat	2	V	AMPLITUDE H_VLL1_24	1	R	✓	✓				
5148	141C	Roat	2	V	AMPLITUDE H_VLL2_24	1	R	✓	✓				
5150	141E	Roat	2	V	AMPLITUDE H_VLL3_24	1	R	✓	✓				
5152	1420	Roat	2	V	AMPLITUDE H_VLL1_25	1	R	✓	✓				
5154	1422	Roat	2	V	AMPLITUDE H_VLL2_25	1	R	✓	✓				
5156	1424	Roat	2	V	AMPLITUDE H_VLL3_25	1	R	✓	✓				
5158	1426	Roat	2	V	AMPLITUDE H_VLL1_26	1	R	✓	✓				
5160	1428	Roat	2	V	AMPLITUDE H_VLL2_26	1	R	✓	✓				
5162	142A	Roat	2	V	AMPLITUDE H_VLL3_26	1	R	✓	✓				
5164	142C	Roat	2	V	AMPLITUDE H_VLL1_27	1	R	✓	✓				
5166	142E	Roat	2	V	AMPLITUDE H_VLL2_27	1	R	✓	✓				
5168	1430	Roat	2	V	AMPLITUDE H_VLL3_27	1	R	✓	✓				
5170	1432	Roat	2	V	AMPLITUDE H_VLL1_28	1	R	✓	✓				
5172	1434	Roat	2	V	AMPLITUDE H_VLL2_28	1	R	✓	✓				
5174	1436	Roat	2	V	AMPLITUDE H_VLL3_28	1	R	✓	✓				
5176	1438	Roat	2	V	AMPLITUDE H_VLL1_29	1	R	✓	✓				
5178	143A	Roat	2	V	AMPLITUDE H_VLL2_29	1	R	✓	✓				
5180	143C	Roat	2	V	AMPLITUDE H_VLL3_29	1	R	✓	✓				
5182	143E	Roat	2	V	AMPLITUDE H_VLL1_30	1	R	✓	✓				
5184	1440	Roat	2	V	AMPLITUDE H_VLL2_30	1	R	✓	✓				
5186	1442	Roat	2	V	AMPLITUDE H_VLL3_30	1	R	✓	✓				
5188	1444	Roat	2	V	AMPLITUDE H_VLL1_31	1	R	✓	✓				
5190	1446	Roat	2	V	AMPLITUDE H_VLL2_31	1	R	✓	✓				
5192	1448	Roat	2	V	AMPLITUDE H_VLL3_31	1	R	✓	✓				

**ALARM STATUS**

Supported Functions		Register Counts											
Read holding registers		28											
Address (Dec)	Address (Hex)	Format	Bitn	Description	Multiplier	Range	EMR-505	EMR-515	EMR-575	EMR-645			
20000	4E+20	uint	2	NA	1		✓	✓	✓	✓			
YANLIS	4E+22	uint	2	BR 0: L1 Phase Loss Bit 0 1: L2 Phase Loss Bit 2 L3 Phase Loss Bit 3		R	✓	✓	✓	✓			
0002	4E+24	uint	2	Custom Alarm Status: Bit 0: User Alarm 1 High Trip Bit 1: User Alarm 2 High Trip		R	✓	✓	✓	✓			
0004	4E+26	uint	2	NA		R							
0006	4E+28	uint	2	NA		R							
0008	4E2A	uint	2	NA		R							
0010	4E2C	uint	2	NA		R							
0012	4E2E	uint	2	NA		R							
0014	4E+30	uint	2	NA		R							
0016	4E+32	uint	2	NA		R							
0018	4E+34	uint	2	NA		R							
0020	4E+36	uint	2	NA		R							
0022	4E+38	uint	2	NA		R							

**ALARMS**

Supported Functions		Register Counts											
Read holding registers		32											
Address (Dec)	Address (Hex)	Format	Bitn	Description	Multiplier	Range	EMR-605	EMR-615	EMR-675	EMR-645			
20500	5014	uint	2	NA Alarm Source	1		✓	✓	✓	✓			
20502	5016	ushort	1	NA Alarm Type	1		✓	✓	✓	✓			
20503	5017	ushort	1	Modbus Alarm Dynamic Status	1		✓	✓	✓	✓			

20504	5018	uint	2		L1 Voltage Loss Alarm Source	1			✓	✓	✓	✓
20506	501A	ushort	1		L1 Voltage Loss Alarm Type	1			✓	✓	✓	✓
20507	501B	ushort	1		Modbus Alarm Dynamic Status	1			✓	✓	✓	✓
20508	501C	uint	2		L2 Voltage Loss Alarm Source	1			✓	✓	✓	✓
20510	501E	ushort	1		L2 Voltage Loss Alarm Type	1			✓	✓	✓	✓
20511	501F	ushort	1		Modbus Alarm Dynamic Status	1			✓	✓	✓	✓
20512	5020	uint	2		L3 Voltage Loss Alarm Source	1			✓	✓	✓	✓
20514	5022	ushort	1		L3 Voltage Loss Alarm Type	1			✓	✓	✓	✓
20515	5023	ushort	1		Modbus Alarm Dynamic Status	1			✓	✓	✓	✓
20516	5024	uint	2		LN Voltage Loss Alarm Source	1			✓	✓	✓	✓
20518	5026	ushort	1		LN Voltage Loss Alarm Type	1			✓	✓	✓	✓
20519	5027	ushort	1		Modbus Alarm Dynamic Status	1			✓	✓	✓	✓
20520	5028	uint	2		Wrong Phase Angle Alarm Source	1	R		✓	✓	✓	✓
20522	502A	ushort	1		Wrong Phase Angle Alarm Type	1	R		✓	✓	✓	✓
20523	502B	ushort	1		Modbus Alarm Dynamic Status	1	R		✓	✓	✓	✓
20524	502C	uint	2		Wrong Phase Sequence Alarm Source	1	R		✓	✓	✓	✓
20526	502E	ushort	1		Wrong Phase Sequence Alarm Type	1	R		✓	✓	✓	✓
20527	502F	ushort	1		Modbus Alarm Dynamic Status	1	R		✓	✓	✓	✓
20528	5030	uint	2		L1 Current Connection Loss Alarm Source	1	R		✓	✓	✓	✓
20530	5032	ushort	1		L1 Current Connection Loss Alarm Type	1	R		✓	✓	✓	✓
20531	5033	ushort	1		Modbus Alarm Dynamic Status	1	R		✓	✓	✓	✓

**NETWORK SETTINGS**

Supported Functions			Start Addresses	Register Counts	
Read holding registers			32		

Address (Dec)	Address (Hex)	Format		Birim	Description	Multiplier	Range	EMR-53CS	EMR-53S	EMR-07S	EMR-04S
16384	4000	uint	2		Network Type: 0: 3P4W 1: 3P3W	1		✓	✓	✓	✓
16386	4002	uint	2		Current Transformer Secondary: 0: 1A 1: 5A	1		✓	✓	✓	✓
16388	4004	float	2		Current Transformer Primary: 5 - 9999	1		✓	✓	✓	✓
16390	4006	uint	2		Voltage Transformer Present: 0: None 1: Present	1		✓	✓	✓	✓
16392	4008	float	2		Voltage Transformer Secondary: 50 - 300	1		✓	✓	✓	✓
16394	400A	float	2		Voltage Transformer Primary: 100-999900	1		✓	✓	✓	✓
16396	400C	uint	2		Demand Time: 0: 60 seconds	1		✓	✓	✓	✓
16398	400E	uint	2		N/A	1					
16400	4010	uint	2		N/A	1					
16402	4012	uint	2		System Frequency: 0: 50 Hz	1		✓	✓	✓	✓
16404	4014	uint	2		N/A	1					
16406	4016	uint	2		N/A	1					
16408	4018	uint	2		N/A	1					
16410	401A	uint	2		N/A	1					
16412	401C	uint	2		N/A	1					
16414	401E	uint	2		N/A	1					

**Setup**

Supported Functions			Start Addresses	Register Counts	
Read holding registers			374		

Address (Dec)	Address (Hex)	Format		Birim	Description	Multiplier	R/W	Range	EMR-53CS	EMR-53S	EMR-07S	EMR-07S
17000	4268	uint	2	-	Network Type 0: 3P4W 1: 3P3W	1	R/W	0-4	✓	✓	✓	✓
17002	426A	uint	2	A	Current Transformer Secondary 0: 1A 1: 5A	1	R/W	0-1	✓	✓	✓	✓
17004	426C	float	2	-	Current Transformer Primary 5.0 - 9999.0	1	R/W	5.0 - 9999.0	✓	✓	✓	✓
17006	426E	uint	2	-	Voltage Transformer Present 0: None 1: Present	1	R/W	0-1	✓	✓	✓	✓
17008	4270	float	2	V	Voltage Transformer Secondary 50.0 - 300.0	1	R/W	50.0 - 300.0	✓	✓	✓	✓
17010	4272	float	2	V	Voltage Transformer Primary 100 - 999900	1	R/W	100.0 - 999900.0	✓	✓	✓	✓

17012	4274	uint	2	Seconds	Demand Time 0: 60 seconds	1	R/W	0-6	✓	✓	✓	✓
17014	4276	uint	2	-	N/A	1	R/W	-				
17016	4278	uint	2	-	N/A	1	R/W	-				
17018	427A	uint	2	V	System Nominal Frequency Value 0: 50 Hz	1	R/W	0-1	✓	✓	✓	✓
17020	427C	uint	2	-	N/A	1	R/W	-				
17022	427E	uint	2	-	N/A	1	R/W	-				
17024	4280	uint	2	-	N/A	1	R/W	-				
17026	4282	uint	2	-	N/A	1	R/W	-				
17028	4284	uint	2	-	N/A	1	R/W	-				
17030	4286	uint	2	-	N/A	1	R/W	-				
17032	4288	uint	2	-	Digital Output 1 Type 0: Digital Output 1: Pulse 0: Relay	1	R/W	0-2	✓	✓	✓	✓
17034	428A	uint	2	-	Digital Output 2 Type 0: Digital Output 1: Pulse 0: Relay	1	R/W	0-2	✓	✓	✓	✓
17036	428C	uint	2	-	N/A	1	R/W	-				
17038	428E	uint	2	-	N/A	1	R/W	-				
17040	4290	uint	2	-	N/A	1	R/W	-				
17042	4292	uint	2	-	N/A	1	R/W	-				
17044	4294	uint	2	-	N/A	1	R/W	-				
17046	4296	uint	2	-	N/A	1	R/W	-				
17048	4298	uint	2	-	Relay 1 Type 0: Relay 0: Relay	1	R/W	0/2	✓			
17050	429A	uint	2	-	Relay 2 Type 0: Relay 0: Relay	1	R/W	0/2	✓			
17052	429C	uint	2	-	N/A	1	R/W	-				
17054	429E	uint	2	-	N/A	1	R/W	-				
17056	42A0	float	2	-	N/A	1	R/W	-				
17058	42A2	float	2	-	N/A	1	R/W	-				
17060	42A4	float	2	-	N/A	1	R/W	-				
17062	42A6	uint	2	-	N/A	1	R/W	-				
17064	42A8	uint	2	-	Digital Input 1 Type 0: Digital Input 1: Pulse 0: Inverter	1	R/W	0-2	✓	✓	✓	✓
17066	42AA	uint	2	-	Digital Input 2 Type 0: Digital Input 1: Pulse 0: Inverter	1	R/W	0-2	✓	✓	✓	✓
17068	42AC	uint	2	-	N/A	1	R/W	-				
17070	42AE	uint	2	-	N/A	1	R/W	-				
17072	42B0	float	2	-	N/A	1	R/W	-				
17074	42B2	float	2	-	N/A	1	R/W	-				
17076	42B4	float	2	-	N/A	1	R/W	-				
17078	42B6	uint	2	-	N/A	1	R/W	-				
17080	42B8	uint	2	-	N/A	1	R/W	-				
17082	42BA	uint	2	-	N/A	1	R/W	-				
17084	42BC	uint	2	-	N/A	1	R/W	-				
17086	42BE	uint	2	-	N/A	1	R/W	-				
17088	42C0	uint	2	-	N/A	1	R/W	-				
17090	42C2	float	2	-	Pulse Input 1 Ratio 1.0 - 9999.0	1	R/W	1.0 - 9999.0	✓	✓	✓	✓
17092	42C4	uint	2	-	Pulse Input 1 Parameter Unit 0: kWh 1: kWh	1	R/W	0-2	✓	✓	✓	✓
17094	42C6	uint	2	-	Pulse Input 1 Width 20 - 1000	1	R/W	20 - 1000	✓	✓	✓	✓
17096	42C8	float	2	-	Pulse Input 2 Ratio 1.0 - 9999	1	R/W	1.0 - 9999.0	✓	✓	✓	✓
17098	42CA	uint	2	-	Pulse Input 2 Parameter Unit 0: kWh 1: kWh	1	R/W	0-2	✓	✓	✓	✓
17100	42CC	uint	2	-	Pulse Input 2 Width 20 - 1000	1	R/W	20 - 1000	✓	✓	✓	✓
17102	42CE	uint	2	-	N/A	1	R/W	-				
17104	42D0	uint	2	-	N/A	1	R/W	-				
17106	42D2	uint	2	-	N/A	1	R/W	-				
17108	42D4	uint	2	-	N/A	1	R/W	-				
17110	42D6	uint	2	-	N/A	1	R/W	-				
17112	42D8	uint	2	-	N/A	1	R/W	-				
17114	42DA	uint	2	-	N/A	1	R/W	-				
17116	42DC	uint	2	-	N/A	1	R/W	-				
17118	42DE	uint	2	-	N/A	1	R/W	-				
17120	42E0	uint	2	-	N/A	1	R/W	-				
17122	42E2	uint	2	-	N/A	1	R/W	-				
17124	42E4	uint	2	-	N/A	1	R/W	-				
17126	42E6	uint	2	-	N/A	1	R/W	-				
17128	42E8	uint	2	-	N/A	1	R/W	-				
17130	42EA	uint	2	-	N/A	1	R/W	-				
17132	42EC	uint	2	-	N/A	1	R/W	-				
17134	42EE	uint	2	-	N/A	1	R/W	-				
17136	42F0	uint	2	-	N/A	1	R/W	-				
17138	42F2	uint	2	-	Pulse Output 1 Parameter 0: Active	1	R/W	0-6	✓	✓	✓	✓
17140	42F4	uint	2	Wh	Pulse Output 1 Ratio: 0: 1 1: 10 2: 100	1	R/W	0-8	✓	✓	✓	✓
17142	42F6	uint	2	ms	Pulse Output 1 Width: 20 - 1000	1	R/W	20 - 1000	✓	✓	✓	✓

17144	42F8	uint	2	-	ms	Pulse Output 1 Pulse Duty 20 -- 1000	1	R/W	20 - 1000	✓	✓	✓	✓
17146	42FA	uint	2	-	-	Pulse Output 2 Parameter 0: Active Pulse Ratio: 0: 1-10	1	R/W	0-6	✓	✓	✓	✓
17148	42FC	uint	2	-	Wh	Pulse Output 2 Ratio: 0: 1-10	1	R/W	0-8	✓	✓	✓	✓
17150	42FE	uint	2	-	ms	Pulse Output 2 Width: 20 - 1000	1	R/W	20 - 1000	✓	✓	✓	✓
17152	4300	uint	2	-	ms	Pulse Output 2 Pulse Duty 20 -- 1000	1	R/W	20 - 1000	✓	✓	✓	✓
17154	4302	uint	2	-	-	N/A	1	R/W	-				
17156	4304	uint	2	-	-	N/A	1	R/W	-				
17158	4306	uint	2	-	-	N/A	1	R/W	-				
17160	4308	uint	2	-	-	N/A	1	R/W	-				
17162	430A	uint	2	-	-	N/A	1	R/W	-				
17164	430C	uint	2	-	-	N/A	1	R/W	-				
17166	430E	uint	2	-	-	N/A	1	R/W	-				
17168	4310	uint	2	-	-	N/A	1	R/W	-				
17170	4312	uint	2	-	-	N/A	1	R/W	-				
17172	4314	uint	2	-	-	N/A	1	R/W	-				
17174	4316	uint	2	-	-	N/A	1	R/W	-				
17176	4318	uint	2	-	-	N/A	1	R/W	-				
17178	431A	uint	2	-	-	N/A	1	R/W	-				
17180	431C	uint	2	-	-	N/A	1	R/W	-				
17182	431E	uint	2	-	-	N/A	1	R/W	-				
17184	4320	uint	2	-	-	N/A	1	R/W	-				
17186	4322	uint	2	-	-	N/A	1	R/W	-				
17188	4324	uint	2	-	-	N/A	1	R/W	-				
17190	4326	uint	2	-	-	N/A	1	R/W	-				
17192	4328	uint	2	-	-	N/A	1	R/W	-				
17194	432A	uint	2	-	-	N/A	1	R/W	-				
17196	432C	uint	2	-	-	N/A	1	R/W	-				
17198	432E	uint	2	-	-	N/A	1	R/W	-				
17200	4330	uint	2	-	-	N/A	1	R/W	-				
17202	4332	uint	2	-	-	N/A	1	R/W	-				
17204	4334	uint	2	-	-	0: OFF 1: VLN 2: VLL 3: I 4: I-neutral 5: I-demand 6: I-neutral demand 7: Frequency 8: Cos 9: Total Cos 10: Active Power 11: Reactive Power 12: Apparent Power 13: Total Active Power 14: Total Reactive Power 15: Total Apparent Power 16: Active Power Demand 17: Null 18: Apparent Power Demand 19: Total Active Power Demand 20: Null 21: Total Apparent Power Demand 22: THD V 23: THD U 24: THD I 25: Total Operating Hour 26: Working Hour	1	R/W	0-28	✓	✓	0: OFF 1: VLN 2: VLL 3: I 4: I-neutral 5: I-demand 6: I-neutral demand 7: Frequency 8: Cos 9: Total Cos 10: Active Power 11: Reactive Power 12: Apparent Power 13: Total Active Power 14: Total Reactive Power 15: Total Apparent Power 16: Active Power Demand 17: Null 18: Apparent Power Demand 19: Total Active Power Demand 20: Null 21: Total Apparent Power Demand 22: Null 23: Null	Parameter: 0: OFF 1: Null 2: Null 3: Null 4: Null 5: Null 6: Null 7: Null 8: Cos 9: Total Cos 10: Reactive Power 11: Active Power 12: Apparent Power 13: Total Active Power
17206	4336	uint	2	-	-	Alarm 1 Operand 0: Less	1	R/W	0-1	✓	✓	✓	✓
17208	4338	float	2	-	-	Alarm 1 On Time 0.0 -- 999.9	1	R/W	0.0-999.0	✓	✓	✓	✓
17210	433A	float	2	-	-	Alarm 1 Off Time 0.0 -- 999.9	1	R/W	0.0-999.0	✓	✓	✓	✓
17212	433C	uint	2	-	-	Alarm 1 Output: 0: None 1: Digital Output 1 2: Digital Output 2 3: Null 4: Null 5: Null 6: Null 7: Null 8: Null 9: Relay 1 10: Relay 2 11: Null 12: Null 13: Null 14: Null 15: Null 16: Null	1	R/W	0-16	✓		Alarm 1 Output: 0: None 1: Digital Output 1 2: Digital Output 2 3: Null 4: Null 5: Null 6: Null 7: Null 8: Null 9: Null 10: Null 11: Null 12: Null 13: Null 14: Null 15: Null 16: Null	Alarm 1 Output: 0: None 1: Digital Output 1 2: Digital Output 2 3: Null 4: Null 5: Null 6: Null 7: Null 8: Null 9: Null 10: Null 11: Null 12: Null 13: Null 14: Null 15: Null 16: Null
17214	433E	float	2	-	-	Alarm 1 Limit Value	1	R/W	Depends on parameter	✓	✓	✓	✓
17216	4340	uint	2	-	-	Alarm 1 Output Function 0: Standst	1	R/W	0-2	✓	✓	✓	✓
17218	4342	float	2	-	-	Alarm 1 Hysteresis 0.0 -- 90.0	1	R/W	0.0-90.0	✓	✓	✓	✓
17220	4344	uint	2	-	-	N/A	1	R/W	-				
17222	4346	uint	2	-	-	0: OFF 1: VLN	1	R/W	0-28	✓	✓	0: OFF 1: VLN	Parameter: 0: OFF
17224	4348	uint	2	-	-	Alarm 2 Operand 0: Less	1	R/W	0-1	✓	✓	✓	✓
17226	434A	float	2	-	-	Alarm 2 On Time 0.0 -- 999.9	1	R/W	0.0-999.0	✓	✓	✓	✓
17228	434C	float	2	-	-	Alarm 2 Off Time 0.0 -- 999.9	1	R/W	0.0-999.0	✓	✓	✓	✓



17230	434E	uint	2	-	Alarm 2 Output: 0: None 1: Digital Output 1 2: Digital Output 2 3: Null 4: Null 5: Null 6: Null 7: Null 8: Null 9: Relay 1 10: Relay 2 11: Null 12: Null 13: Null 14: Null 15: Null 16: Null	1	R/W	0-16	✓	Alarm 2 Output: 0: None 1: Digital Output 1 2: Digital Output 2 3: Null 4: Null 5: Null 6: Null 7: Null 8: Null 9: Null 10: Null 11: Null 12: Null 13: Null 14: Null 15: Null 16: Null	Alarm 2 Output: 0: None 1: Digital Output 1 2: Digital Output 2 3: Null 4: Null 5: Null 6: Null 7: Null 8: Null 9: Null 10: Null 11: Null 12: Null 13: Null 14: Null 15: Null 16: Null	Alarm 2 Output: 0: None 1: Digital Output 1 2: Digital Output 2 3: Null 4: Null 5: Null 6: Null 7: Null 8: Null 9: Null 10: Null 11: Null 12: Null 13: Null 14: Null 15: Null 16: Null
17232	4350	float	2	-	Alarm 2 Limit Value	1	R/W	Depends on parameter	✓	✓	✓	✓
17234	4352	uint	2	-	Alarm 2 Output Function 0: Standart 1: Inverse	1	R/W	0-2	✓	✓	✓	✓
17236	4354	float	2	-	Alarm 2 Hysteresis 0.0 – 90.0	1	R/W	0.0-90.0	✓	✓	✓	✓
17238	4356	uint	2	-	N/A	1	R/W	-				
17240	4358	uint	2	-	0: OFF 1: VLN 2: VLI	1	R/W	0-28	✓	✓	0: OFF 1: VLN 2: VLI	Parameter r: 0: OFF
17242	435A	uint	2	-	Alarm 3 Operand 0: Less 1: Greater	1	R/W	0-1	✓	✓	✓	✓
17244	435C	float	2	-	Alarm 3 On Time 0.0 – 999.9	1	R/W	0.0-999.0	✓	✓	✓	✓
17246	435E	float	2	-	Alarm 3 Off Time 0.0 – 999.9	1	R/W	0.0-999.0	✓	✓	✓	✓
17248	4360	uint	2	-	Alarm 3 Output: 0: None 1: Digital Output 1 2: Digital Output 2 3: Null 4: Null 5: Null 6: Null 7: Null 8: Null 9: Relay 1 10: Relay 2 11: Null 12: Null 13: Null 14: Null 15: Null 16: Null	1	R/W	0-16	✓	Alarm 3 Output: 0: None 1: Digital Output 1 2: Digital Output 2 3: Null 4: Null 5: Null 6: Null 7: Null 8: Null 9: Null 10: Null 11: Null 12: Null 13: Null 14: Null 15: Null 16: Null	Alarm 3 Output: 0: None 1: Digital Output 1 2: Digital Output 2 3: Null 4: Null 5: Null 6: Null 7: Null 8: Null 9: Null 10: Null 11: Null 12: Null 13: Null 14: Null 15: Null 16: Null	Alarm 3 Output: 0: None 1: Digital Output 1 2: Digital Output 2 3: Null 4: Null 5: Null 6: Null 7: Null 8: Null 9: Null 10: Null 11: Null 12: Null 13: Null 14: Null 15: Null 16: Null
17250	4362	float	2	-	Alarm 3 Limit Value	1	R/W	Depends on parameter	✓	✓	✓	✓
17252	4364	uint	2	-	Alarm 3 Output Function 0: Standart 1: Inverse	1	R/W	0-2	✓	✓	✓	✓
17254	4366	float	2	-	Alarm 3 Hysteresis 0.0 – 90.0	1	R/W	0.0-90.0	✓	✓	✓	✓
17256	4368	uint	2	-	N/A	1	R/W	-				
17258	436A	uint	2	-	0: OFF 1: VLN 2: VLI	1	R/W	0-28	✓	✓	0: OFF 1: VLN 2: VLI	Parameter r: 0: OFF
17260	436C	uint	2	-	Alarm 4 Operand 0: Less 1: Greater	1	R/W	0-1	✓	✓	✓	✓
17262	436E	float	2	-	Alarm 4 On Time 0.0 – 999.9	1	R/W	0.0-999.0	✓	✓	✓	✓
17264	4370	float	2	-	Alarm 4 Off Time 0.0 – 999.9	1	R/W	0.0-999.0	✓	✓	✓	✓
17266	4372	uint	2	-	Alarm 4 Output: 0: None 1: Digital Output 1	1	R/W	0-16	✓	✓	Alarm 4 Output: 0: None 1: Digital Output 1	1: Digital Output 1
17268	4374	float	2	-	Alarm 4 Limit Value	1	R/W	Depends on parameter	✓	✓	✓	✓
17270	4376	uint	2	-	Alarm 4 Output Function 0: Standart 1: Inverse	1	R/W	0-2	✓	✓	✓	✓
17272	4378	float	2	-	Alarm 4 Hysteresis 0.0 – 90.0	1	R/W	0.0-90.0	✓	✓	✓	✓
17274	437A	uint	2	-	N/A	1	R/W	-				
17276	437C	uint	2	-	0: OFF 1: VLN 2: VLI	1	R/W	0-28	✓	✓	0: OFF 1: VLN 2: VLI	Parameter r: 0: OFF
17278	437E	uint	2	-	Alarm 5 Operand 0: Less 1: Greater	1	R/W	0-1	✓	✓	✓	✓
17280	4380	float	2	-	Alarm 5 On Time 0.0 – 999.9	1	R/W	0.0-999.0	✓	✓	✓	✓
17282	4382	float	2	-	Alarm 5 Off Time 0.0 – 999.9	1	R/W	0.0-999.0	✓	✓	✓	✓
17284	4384	uint	2	-	Alarm 5 Output: 0: None 1: Digital Output 1 2: Digital Output 2 3: Null 4: Null 5: Null 6: Null 7: Null 8: Null 9: Relay 1 10: Relay 2 11: Null 12: Null 13: Null 14: Null 15: Null 16: Null	1	R/W	0-16	✓	Alarm 5 Output: 0: None 1: Digital Output 1 2: Digital Output 2 3: Null 4: Null 5: Null 6: Null 7: Null 8: Null 9: Null 10: Null 11: Null 12: Null 13: Null 14: Null 15: Null 16: Null	Alarm 5 Output: 0: None 1: Digital Output 1 2: Digital Output 2 3: Null 4: Null 5: Null 6: Null 7: Null 8: Null 9: Null 10: Null 11: Null 12: Null 13: Null 14: Null 15: Null 16: Null	Alarm 5 Output: 0: None 1: Digital Output 1 2: Digital Output 2 3: Null 4: Null 5: Null 6: Null 7: Null 8: Null 9: Null 10: Null 11: Null 12: Null 13: Null 14: Null 15: Null 16: Null
17286	4386	float	2	-	Alarm 5 Limit Value	1	R/W	Depends on parameter	✓	✓	✓	✓
17288	4388	uint	2	-	Alarm 5 Output Function 0: Standart 1: Inverse	1	R/W	0-2	✓	✓	✓	✓
17290	438A	float	2	-	Alarm 5 Hysteresis 0.0 – 90.0	1	R/W	0.0-90.0	✓	✓	✓	✓
17292	438C	uint	2	-	N/A	1	R/W	-				
17294	438E	uint	2	-	0: OFF 1: VLN 2: VLI	1	R/W	0-28	✓	✓	0: OFF 1: VLN 2: VLI	Parameter r: 0: OFF
17296	4390	uint	2	-	Alarm 6 Operand 0: Less 1: Greater	1	R/W	0-1	✓	✓	✓	✓
17298	4392	float	2	-	Alarm 6 On Time 0.0 – 999.9	1	R/W	0.0-999.0	✓	✓	✓	✓
17300	4394	float	2	-	Alarm 6 Off Time 0.0 – 999.9	1	R/W	0.0-999.0	✓	✓	✓	✓

17302	4396	uint	2	-	Alarm 6 Output: 0: None 1: Digital Output 1 2: Digital Output 2 3: Null 4: Null 5: Null 6: Null 7: Null 8: Null 9: Relay 1 10: Relay 2 11: Null 12: Null 13: Null 14: Null 15: Null 16: Null	1	R/W	0-16	✓	Alarm 6 Output: 0: None 1: Digital Output 1 2: Digital Output 2 3: Null 4: Null 5: Null 6: Null 7: Null 8: Null 9: Null 10: Null 11: Null 12: Null 13: Null 14: Null 15: Null 16: Null	Alarm 6 Output: 0: None 1: Digital Output 1 2: Digital Output 2 3: Null 4: Null 5: Null 6: Null 7: Null 8: Null 9: Null 10: Null 11: Null 12: Null 13: Null 14: Null 15: Null 16: Null	Alarm 6 Output: 0: None 1: Digital Output 1 2: Digital Output 2 3: Null 4: Null 5: Null 6: Null 7: Null 8: Null 9: Null 10: Null 11: Null 12: Null 13: Null 14: Null 15: Null 16: Null	
17304	4398	float	2	-	Alarm 6 Limit Value	1	R/W	Depends on parameter	✓	✓	✓	✓	✓
17306	439A	uint	2	-	Alarm 6 Output Function 0: Standart 1: Inverse	1	R/W	0-2	✓	✓	✓	✓	✓
17308	439C	float	2	-	Alarm 6 Hysteresis 0.0 -- 90.0	1	R/W	0.0-90.0	✓	✓	✓	✓	✓
17310	439E	uint	2	-	N/A	1	R/W	-					
17312	43A0	uint	2	-	0: OFF 1: VLN 2: VLI	1	R/W	0-28	✓	✓	0: OFF 1: VLN 2: VLI	Paramete r: 0: OFF	✓
17314	43A2	uint	2	-	Alarm 7 Operand 0: Less 1: Greater	1	R/W	0-1	✓	✓	✓	✓	✓
17316	43A4	float	2	-	Alarm 7 On Time 0.0 -- 999.9	1	R/W	0.0-999.0	✓	✓	✓	✓	✓
17318	43A6	float	2	-	Alarm 7 Off Time 0.0 -- 999.9	1	R/W	0.0-999.0	✓	✓	✓	✓	✓
17320	43A8	uint	2	-	Alarm 7 Output: 0: None 1: Digital Output 1 2: Digital Output 2 3: Null 4: Null 5: Null 6: Null 7: Null 8: Null 9: Relay 1 10: Relay 2 11: Null 12: Null 13: Null 14: Null 15: Null 16: Null	1	R/W	0-16	✓	Alarm 7 Output: 0: None 1: Digital Output 1 2: Digital Output 2 3: Null 4: Null 5: Null 6: Null 7: Null 8: Null 9: Null 10: Null 11: Null 12: Null 13: Null 14: Null 15: Null 16: Null	Alarm 7 Output: 0: None 1: Digital Output 1 2: Digital Output 2 3: Null 4: Null 5: Null 6: Null 7: Null 8: Null 9: Null 10: Null 11: Null 12: Null 13: Null 14: Null 15: Null 16: Null	Alarm 7 Output: 0: None 1: Digital Output 1 2: Digital Output 2 3: Null 4: Null 5: Null 6: Null 7: Null 8: Null 9: Null 10: Null 11: Null 12: Null 13: Null 14: Null 15: Null 16: Null	
17322	43AA	float	2	-	Alarm 7 Limit Value	1	R/W	Depends on parameter	✓	✓	✓	✓	✓
17324	43AC	uint	2	-	Alarm 7 Output Function 0: Standart 1: Inverse	1	R/W	0-2	✓	✓	✓	✓	✓
17326	43AE	float	2	-	Alarm 7 Hysteresis 0.0 -- 90.0	1	R/W	0.0-90.0	✓	✓	✓	✓	✓
17328	43B0	uint	2	-	N/A	1	R/W	-					
17330	43B2	uint	2	-	0: OFF 1: VLN 2: VLI	1	R/W	0-28	✓	✓	0: OFF 1: VLN 2: VLI	Paramete r: 0: OFF	✓
17332	43B4	uint	2	-	Alarm 8 Operand 0: Less 1: Greater	1	R/W	0-1	✓	✓	✓	✓	✓
17334	43B6	float	2	-	Alarm 8 On Time 0.0 -- 999.9	1	R/W	0.0-999.0	✓	✓	✓	✓	✓
17336	43B8	float	2	-	Alarm 8 Off Time 0.0 -- 999.9	1	R/W	0.0-999.0	✓	✓	✓	✓	✓
17338	43BA	uint	2	-	Alarm 8 Output: 0: None 1: Digital Output 1 2: Digital Output 2 3: Null 4: Null 5: Null 6: Null 7: Null 8: Null 9: Relay 1 10: Relay 2 11: Null 12: Null 13: Null 14: Null 15: Null 16: Null	1	R/W	0-16	✓	Alarm 8 Output: 0: None 1: Digital Output 1 2: Digital Output 2 3: Null 4: Null 5: Null 6: Null 7: Null 8: Null 9: Null 10: Null 11: Null 12: Null 13: Null 14: Null 15: Null 16: Null	Alarm 8 Output: 0: None 1: Digital Output 1 2: Digital Output 2 3: Null 4: Null 5: Null 6: Null 7: Null 8: Null 9: Null 10: Null 11: Null 12: Null 13: Null 14: Null 15: Null 16: Null	Alarm 8 Output: 0: None 1: Digital Output 1 2: Digital Output 2 3: Null 4: Null 5: Null 6: Null 7: Null 8: Null 9: Null 10: Null 11: Null 12: Null 13: Null 14: Null 15: Null 16: Null	
17340	43BC	float	2	-	Alarm 8 Limit Value	1	R/W	Depends on parameter	✓	✓	✓	✓	✓
17342	43BE	uint	2	-	Alarm 8 Output Function 0: Standart 1: Inverse	1	R/W	0-2	✓	✓	✓	✓	✓
17344	43C0	float	2	-	Alarm 8 Hysteresis 0.0 -- 90.0	1	R/W	0.0-90.0	✓	✓	✓	✓	✓
17346	43C2	uint	2	-	N/A	1	R/W	-					
17348	43C4	uint	2	-	N/A	1	R/W	-					
17350	43C6	uint	2	-	N/A	1	R/W	-					
17352	43C8	uint	2	-	N/A	1	R/W	-					
17354	43CA	uint	2	-	Modbus Protocol 0: Modbus 1: ENTBUS	1	R/W	0-1	✓	✓	✓	✓	✓
17356	43CC	uint	2	-	Modbus Slave Address 1 -- 247	1	R/W	0-247	✓	✓	✓	✓	✓
17358	43CE	uint	2	-	Modbus Baud Rate: 0: 2400 1: 4800	1	R/W	0-6	✓	✓	✓	✓	✓
17360	43D0	uint	2	-	Modbus Parity: 0: None 1: Odd 2: Even	1	R/W	0-2	✓	✓	✓	✓	✓
17362	43D2	uint	2	-	Password Activate: 0: Passive 1: Active	1	R/W	0-1	✓	✓	✓	✓	✓
17364	43D4	uint	2	-	Password: 0000-9999	1	R/W	0-9999	✓	✓	✓	✓	✓
17366	43D6	uint	2	-	N/A	1	R/W	-					
17368	43D8	uint	2	-	N/A	1	R/W	-					
17370	43DA	uint	2	-	Language Setting: 0: Turkish 1: English 2: German	1	R/W	0-3	✓	✓	✓	✓	✓
17372	43DC	uint	2	-	Notification Snooze Time 0: 1 Hour 1: 2 Hours	1	R/W	0-6	✓	✓	✓	✓	✓

**CALENDER SETUPS**

Supported Functions	Start Address	Registers Counts

Read holding registers	6000	36
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Write holding registers	
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Write Multiple registers

Address (Dec)	Address (Hex)	Format	Birim	Description	Multiplier	Range	EMR-53CS	EMR-53S	EMR-07S	EMR-04S	
6000	1770	uint	2	second	Unix Time Date and Hour can be setted via this register as Unix time	1		✓	✓	✓	✓
6002	1772	uint	2	DAY	DAY 1-31	1	1 - 31	✓	✓	✓	✓
6004	1774	uint	2	month	MONTH 1-12	1	1 - 12	✓	✓	✓	✓
6006	1776	uint	2	Yr	YEAR 2000-2099	1	2000 - 2099	✓	✓	✓	✓
6008	1778	uint	2	hour	HOUR 0-23	1	0 - 23	✓	✓	✓	✓
6010	177A	uint	2	MINUTE	MINUTES 0-59	1	0 - 59	✓	✓	✓	✓
6012	177C	uint	2	Second	SECONDS 0-59	1	0 - 59	✓	✓	✓	✓
6014	177E	uint	2	DAY	1: MONDAY 2: TUESDAY 3: WEDNESDAY	1	1 - 7	✓	✓	✓	✓
6016	1780	uint	2	-	Time Zone 0 - 36	1	0 - 36	✓	✓	✓	✓
6018	1782	uint	2	-	Daylight Saving 0: Off 1: Europe 2: USA 3: Custom	1	0 - 3	✓	✓	✓	✓
6020	1784	uint	2	Month	Start Month: 1: January 2: February 3: March 4: April	1	1 - 12	✓	✓	✓	✓
6022	1786	uint	2	Week	Start Week ( Week of Month ) 1: First 2: Second 3: Third	1	1 - 5	✓	✓	✓	✓
6024	1788	uint	2	Day	Start Day ( Day of Week ) 1: Monday 2: Tuesday 3: Wednesday 4: Thursday	1	1 - 7	✓	✓	✓	✓
6026	178A	uint	2	Hour	Start Hour: 0 - 23	1	0 - 23	✓	✓	✓	✓
6028	178C	uint	2	Month	End Month: 1: January 2: February 3: March 4: April	1	1 - 12	✓	✓	✓	✓
6030	178E	uint	2	Week	End Week ( Week of Month ) 1: First 2: Second 3: Third	1	1 - 5	✓	✓	✓	✓
6032	1790	uint	2	Day	End Day ( Day of Week ): 1: Monday 2: Tuesday 3: Wednesday 4: Thursday	1	1 - 7	✓	✓	✓	✓
6034	1792	uint	2	Hour	End Hour: 0 - 23	1	0-23	✓	✓	✓	✓

**Input Coil Controls**

Supported Functions	Start Address	Register Counts
Read Coil registers	1790	8

Address (Dec)	Address (Hex)	Format	Birim	Description	Multiplier	Range	EMR-53CS	EMR-53S	EMR-07S	EMR-04S	
17950	461E	coil	1	-	Digital Input 1	1		✓	✓	✓	✓
17951	461F	coil	1	-	Digital Input 2	1		✓	✓	✓	✓
17952	4620	coil	1	-	Digital Input 3	1					
17953	4621	coil	1	-	Digital Input 4	1					
17954	4622	coil	1	-	Digital Input 5	1					
17955	4623	coil	1	-	Digital Input 6	1					
17956	4624	coil	1	-	Digital Input 7	1					
17957	4625	coil	1	-	Digital Input 8	1					

**Output Coil Controls**

Supported Functions	Start Address	Register Counts
Read Coil registers	1790	8

Address (Dec)	Address (Hex)	Format	Bitm	Description	Multiplier	Range	EMR-SIGS	EMR-SIS	EMR-DIS	EMR-RES
17558	4528	coil	1	Digital Output 1	1		✓	✓	✓	✓
17559	4527	coil	1	Digital Output 2	1		✓	✓	✓	✓
17560	4526	coil	1	Digital Output 3	1					
17561	4525	coil	1	Digital Output 4	1					
17562	4524	coil	1	Digital Output 5	1					
17563	4523	coil	1	Digital Output 6	1					
17564	4522	coil	1	Digital Output 7	1					
17565	4521	coil	1	Digital Output 8	1					

**Relays Coil Controls**

Supported Functions	EMR-SIGS EMR-SIS EMR-DIS EMR-RES	Register Counts
Read Coil registers		8

Address (Dec)	Address (Hex)	Format	Bitm	Description	Multiplier	Range	EMR-SIGS	EMR-SIS	EMR-DIS	EMR-RES
17566	452E	coil	1	Relay 1	1		✓			
17567	452F	coil	1	Relay 2	1		✓			
17568	4530	coil	1	Relay 3	1					
17569	4531	coil	1	Relay 4	1					
17570	4532	coil	1	Relay 5	1					
17571	4533	coil	1	Relay 6	1					
17572	4534	coil	1	Relay 7	1					
17573	4535	coil	1	Relay 8	1					

**Log Setup**

Supported Functions	EMR-SIGS EMR-SIS EMR-DIS EMR-RES	Register Counts
Read holding registers		24
Write Single registers		
Write Multiple registers		

Address (Dec)	Address (Hex)	Format	Bitm	Description	Multiplier	Range	EMR-SIGS	EMR-SIS	EMR-DIS	EMR-RES
21020	5208	uint	2	Load Profile Log Record Enable 0 Disable 1 Enable	1	0-99	✓	✓	✓	✓
21022	520A	uint	2	Load Profile Log Record Interval Enum 1 minute 2 minute	1	-	✓	✓	✓	✓
21024	520C	uint	2	Current Profile Log Record Enable 0 Disable 1 Enable	1	0-99	✓	✓	✓	✓
21026	520E	uint	2	Current Profile Log Record interval Enum 1 minute	1	-	✓	✓	✓	✓
21028	5210	uint	2	Voltage Profile Log Record Enable 0 Disable 1 Enable	1	0-99	✓	✓	✓	✓
21030	5212	uint	2	Voltage Profile Log Record interval Enum 1 minute	1	-	✓	✓	✓	✓
21032	5214	uint	2	Power Profile Log Record Enable 0 Disable 1 Enable	1	0-99	✓	✓	✓	✓
21034	5216	uint	2	Power Profile Log Record interval Enum 1 minute	1	-	✓	✓	✓	✓
21036	5218	uint	2	THD Profile Log Record Enable 0 Disable 1 Enable	1	0-99	✓	✓	✓	✓
21038	521A	uint	2	THD Profile Log Record Interval Enum 1 minute 2 minute	1	-	✓	✓	✓	✓
21040	521C	uint	2	Amalg Temperature Log Record Enable 0 Disable 1 Enable	1	0-99	✓	✓	✓	✓
21042	521E	uint	2	Amalg Temperature Log Record Interval Enum 1 minute	1	-	✓	✓	✓	✓

**Log Index Setup**

Supported Functions	EMR-SIGS EMR-SIS EMR-DIS EMR-RES	Register Counts
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Read holding registers	22
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Write Multiple registers

Address (Dec)	Address (Hex)	Format	Birim	Description	Multiplier	R/W	Range	EMR-53CS	EMR-53S	EMR-07S	EMR-04S	
21200	52D0	uint	2	-	Load Profile Log Index	1	R/W	0 - 4294967295	✓	✓	✓	✓
21202	52D2	uint	2	-	Voltage Log Index	1	R/W	0 - 4294967295	✓	✓	✓	
21204	52D4	uint	2	-	Current Log Index	1	R/W	0 - 4294967295	✓	✓	✓	
21206	52D6	uint	2	-	Power Log Index	1	R/W	0 - 4294967295	✓	✓	✓	✓
21208	52D8	uint	2	-	THD Log Index	1	R/W	0 - 4294967295	✓	✓		
21210	52DA	uint	2	-	Analog Temperature Log Index	1	R/W	0 - 4294967295				
21212	52DC	uint	2	-	Energy 15 Minute Log Index	1	R/W	0 - 4294967295	✓	✓	✓	✓
21214	52DE	uint	2	-	Energy 1 Hour Log Index	1	R/W	0 - 4294967295	✓	✓	✓	✓
21216	52E0	uint	2	-	Energy 1 Day Log Index	1	R/W	0 - 4294967295	✓	✓	✓	✓
21218	52E2	uint	2	-	Event Log Index	1	R/W	0 - 4294967295	✓	✓	✓	✓
21220	52E4	uint	2	-	System Log Index	1	R/W	0 - 4294967295	✓	✓	✓	✓

Log Time Stamp Setup

Supported Functions	Start Addresses	Register Counts
Read holding registers		22

Write Multiple registers

Address (Dec)	Address (Hex)	Format	Birim	Description	Multiplier	R/W	Range	EMR-53CS	EMR-53S	EMR-07S	EMR-04S	
21400	5398	uint	2	-	Load Profile Log Time Stamp	1	R/W		✓	✓	✓	✓
21402	539A	uint	2	-	Voltage Log Time Stamp	1	R/W		✓	✓	✓	
21404	539C	uint	2	-	Current Log Time Stamp	1	R/W		✓	✓	✓	
21406	539E	uint	2	-	Power Log Time Stamp	1	R/W		✓	✓	✓	✓
21408	53A0	uint	2	-	THD Log Time Stamp	1	R/W		✓	✓		
21410	53A2	uint	2	-	Analog Temperature Log Time Stamp	1	R/W					
21412	53A4	uint	2	-	Energy 15 Minute Log Time Stamp	1	R/W		✓	✓	✓	✓
21414	53A6	uint	2	-	Energy 1 Hour Log Time Stamp	1	R/W		✓	✓	✓	✓
21416	53A8	uint	2	-	Energy 1 Day Log Time Stamp	1	R/W		✓	✓	✓	✓
21418	53AA	uint	2	-	Event Log Time Stamp	1	R/W		✓	✓	✓	✓
21420	53AC	uint	2	-	System Log Time Stamp	1	R/W		✓	✓	✓	✓

Reset Register

Supported Functions	Start Addresses	Register Counts
Write Single registers		1

Write Single registers

Address (Dec)	Address (Hex)	Format	Birim	Description	Multiplier	R/W	Range	EMR-53CS	EMR-53S	EMR-07S	EMR-04S	
19988	4E+00	-	1	0x0001: Voltage Log Reset 0x0002: Current Log Reset 0x0003: Power Log Reset 0x0004: THD Log Reset 0x0005: Load Profile Log Reset 0x0006: All Log Records Reset 0x0007: Active Energy Reset 0x0008: Reactive Energy Reset 0x0009: Apperant Energy Reset 0x000A: Generator Energy Reset 0x000B: Alarm and Event Log Reset 0x000C: Max Values Reset 0x000D: Min Values Reset 0x000E: Demand Reset 0x000F: Max Demand Reset 0x0010: Working Hour Reset 0x0011: Tariff Index Reset 0x0012: N / A 0x0013: Alarm Reset 0x0014: Factory Reset (Kullanici taraftan) 0x0015: Pulse Counter 1	1	W	0 - 0x0019	✓	✓		0x0002: Current Log Reset 0x0003: Power Log Reset 0x0004: N / A 0x0005: Load Profile Log Reset 0x0006: All Log Records Reset 0x0007: Active Energy Reset 0x0008: Reactive Energy Reset 0x0009: Apperant Energy Reset 0x000A: Generator Energy Reset 0x000B: Alarm and Event Log Reset 0x000C: Max Values Reset 0x000D: Min Values Reset 0x000E: Demand Reset 0x000F: Max Demand Reset 0x0010: Working Hour Reset 0x0011: Tariff Index Reset 0x0012: N / A 0x0013: Alarm Reset	

**Load Profile Record**

Supported Functions			Start Address	Register Counts									
Read Holding registers					62								
Address (Dec)	Address (Hex)	Format	Birim	Description	Multiplier	Range	EMR-53CS	EMR-53S	EMR-07S	EMR-04S			
23000	59D8	uint	2	unix time	Record End Time	1		✓	✓	✓	✓		
23002	59DA	uint	2	unix time	Record Start Time	1		✓	✓	✓	✓		
23004	59DC	uint	2	-	Record Index	1		✓	✓	✓	✓		
23006	59DE	ulong	4	Wh	Import Active Energy	1		✓	✓	✓	✓		
23010	59E2	ulong	4	Wh	Export Active Energy	1		✓	✓	✓	✓		
23014	59E6	ulong	4	VARh	Import Inductive Reactive Energy	1		✓	✓	✓	✓		
23018	59EA	ulong	4	VARh	Export Inductive Reactive Energy	1		✓	✓	✓	✓		
23022	59EE	ulong	4	VARh	Export Capacitive Reactive Energy	1		✓	✓	✓	✓		
23026	59F2	ulong	4	VARh	Import Capacitive Reactive Energy	1		✓	✓	✓	✓		
23030	59F6	ulong	4	VAh	Import Apparent Energy	1		✓	✓	✓	✓		
23034	59FA	ulong	4	VAh	Export Apparent Energy	1		✓	✓	✓	✓		
23038	59FE	ulong	4	Wh	Generator Import Active Energy	1		✓	✓	✓	✓		
23042	5A02	ulong	4	Wh	Generator Export Active Energy	1		✓	✓	✓	✓		
23046	5A06	uint	2	-	Pulse Counter 1	1		✓	✓	✓	✓		
23048	5A08	uint	2	-	Pulse Counter 2	1		✓	✓	✓	✓		
23050	5A0A	uint	2	-	Pulse Counter 3	1							
23052	5A0C	uint	2	-	Pulse Counter 4	1							
23054	5A0E	uint	2	-	Pulse Counter 5	1							
23056	5A10	uint	2	-	Pulse Counter 6	1							
23058	5A12	uint	2	-	Pulse Counter 7	1							
23060	5A14	uint	2	-	Pulse Counter 8	1							

**15 Minute Energy Record**

Supported Functions			Start Address	Register Counts									
Read Holding registers					62								
Address (Dec)	Address (Hex)	Format	Birim	Description	Multiplier	Range	EMR-53CS	EMR-53S	EMR-07S	EMR-04S			
23200	5AA0	uint	2	unix time	Record End Time	1		✓	✓	✓	✓		
23202	5AA2	uint	2	unix time	Record Start Time	1		✓	✓	✓	✓		
23204	5AA4	uint	2	-	Record Index	1		✓	✓	✓	✓		
23206	5AA6	ulong	4	Wh	Import Active Energy	1		✓	✓	✓	✓		
23210	5AAA	ulong	4	Wh	Export Active Energy	1		✓	✓	✓	✓		
23214	5AAE	ulong	4	VARh	Import Inductive Reactive Energy	1		✓	✓	✓	✓		
23218	5AB2	ulong	4	VARh	Export Inductive Reactive Energy	1		✓	✓	✓	✓		
23222	5AB6	ulong	4	VARh	Export Capacitive Reactive Energy	1		✓	✓	✓	✓		
23226	5ABA	ulong	4	VARh	Import Capacitive Reactive Energy	1		✓	✓	✓	✓		
23230	5ABE	ulong	4	VAh	Import Apparent Energy	1		✓	✓	✓	✓		
23234	5AC2	ulong	4	VAh	Export Apparent Energy	1		✓	✓	✓	✓		
23238	5AC6	ulong	4	Wh	Generator Import Active Energy	1		✓	✓	✓	✓		
23242	5ACA	ulong	4	Wh	Generator Export Active Energy	1		✓	✓	✓	✓		
23246	5ACE	uint	2	-	Pulse Counter 1	1		✓	✓	✓	✓		
23248	5AD0	uint	2	-	Pulse Counter 2	1		✓	✓	✓	✓		
23250	5AD2	uint	2	-	Pulse Counter 3	1							
23252	5AD4	uint	2	-	Pulse Counter 4	1							
23254	5AD6	uint	2	-	Pulse Counter 5	1							
23256	5AD8	uint	2	-	Pulse Counter 6	1							
23258	5ADA	uint	2	-	Pulse Counter 7	1							



23660	5C6C	uint	2	-	Pulse Counter 8	1						
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**Voltage Record**

Supported Functions		Start Address	Register Counts									
Read Holding registers			60									
Address (Dec)	Address (Hex)	Format	Binim	Description	Multiplier	Range	EMR-53CS	EMR-53S	EMR-07S	EMR-04S		
25000	61A8	uint	2	unix time	Record End Time	1	✓	✓	✓			
25002	61AA	uint	2	unix time	Record Start Time	1	✓	✓	✓			
25004	61AC	uint	2	-	Record Index	1	✓	✓	✓			
25006	61AE	float	2	V	L1 Phase Avg voltage	1	✓	✓	✓			
25008	61B0	float	2	V	L1 Phase Max voltage	1	✓	✓	✓			
25010	61B2	float	2	V	L1 Phase Min voltage	1	✓	✓	✓			
25012	61B4	float	2	V	L2 Phase AVg voltage	1	✓	✓	✓			
25014	61B6	float	2	V	L2 Phase Max voltage	1	✓	✓	✓			
25016	61B8	float	2	V	L2 Phase Min voltage	1	✓	✓	✓			
25018	61BA	float	2	V	L3 Phase Avg voltage	1	✓	✓	✓			
25020	61BC	float	2	V	L3 Phase Max voltage	1	✓	✓	✓			
25022	61BE	float	2	V	L3 Phase Min voltage	1	✓	✓	✓			
25024	61C0	float	2	-	N/A	1						
25026	61C2	float	2	-	N/A	1						
25028	61C4	float	2	-	N/A	1						
25030	61C6	float	2	V	Avg Voltage L1-L2	1	✓	✓	✓			
25032	61C8	float	2	V	Max Voltage L1-L2	1	✓	✓	✓			
25034	61CA	float	2	V	Min Voltage L1-L2	1	✓	✓	✓			
25036	61CC	float	2	V	Avg Voltage L2-L3	1	✓	✓	✓			
25038	61CE	float	2	V	Max Voltage L2-L3	1	✓	✓	✓			
25040	61D0	float	2	V	Min Voltage L2-L3	1	✓	✓	✓			
25042	61D2	float	2	V	Avg Voltage L3-L1	1	✓	✓	✓			
25044	61D4	float	2	V	Max Voltage L3-L1	1	✓	✓	✓			
25046	61D6	float	2	V	Min Voltage L3-L1	1	✓	✓	✓			
25048	61D8	float	2	Hz	AVG Freq	1	✓	✓	✓			
25050	61DA	float	2	Hz	Max Freq	1	✓	✓	✓			
25052	61DC	float	2	Hz	Min Freq	1	✓	✓	✓			
25054	61DE	float	2	%	Avg Unbalance	1	✓	✓	✓			
25056	61E0	float	2	%	Max Unbalance	1	✓	✓	✓			
25058	61E2	float	2	%	Min Unbalance	1	✓	✓	✓			

**Current Record**

Supported Functions		Start Address	Register Counts									
Read Holding registers			36									
Address (Dec)	Address (Hex)	Format	Binim	Description	Multiplier	Range	EMR-53CS	EMR-53S	EMR-07S	EMR-04S		
24000	5DC0	uint	2	unix time	Record End Time	1	✓	✓	✓			
24002	5DC2	uint	2	unix time	Record Start Time	1	✓	✓	✓			
24004	5DC4	uint	2	-	Record Index	1	✓	✓	✓			
24006	5DC6	float	2	A	L1 Phase Avg current	1	✓	✓	✓			
24008	5DC8	float	2	A	L1 Phase Max current	1	✓	✓	✓			
24010	5DCA	float	2	A	L1 Phase Min current	1	✓	✓	✓			
24012	5DCC	float	2	A	L2 Phase Avg current	1	✓	✓	✓			
24014	5DCE	float	2	A	L2 Phase Max current	1	✓	✓	✓			
24016	5DD0	float	2	A	L2 Phase Min current	1	✓	✓	✓			
24018	5DD2	float	2	A	L3 Phase Avg current	1	✓	✓	✓			
24020	5DD4	float	2	A	L3 Phase Max current	1	✓	✓	✓			
24022	5DD6	float	2	A	L3 Phase Min current	1	✓	✓	✓			



24024	5DD8	float	2	-	N/A	1						
24026	5DDA	float	2	-	N/A	1						
24028	5DDC	float	2	-	N/A	1						
24030	5DDE	float	2	A	L N	1			✓	✓	✓	
24032	5DE0	float	2	A	L N	1			✓	✓	✓	
24034	5DE2	float	2	A	L N	1			✓	✓	✓	

**Power Record**

Supported Functions		Start Address	Register Counts
Read Holding registers			

Address (Dec)	Address (Hex)	Format	Bitm	Description	Multiplier	Range	EMR-63CS	EMR-63S	EMR-07S	EMR-04S
26000	6590	uint	2	unix time	Record End Time	1	✓	✓	✓	✓
26002	6592	uint	2	unix time	Record Start Time	1	✓	✓	✓	✓
26004	6594	uint	2	-	Record Index	1	✓	✓	✓	✓
26006	6596	float	2	W	L1 Phase Avg Active Power	1	✓	✓	✓	✓
26008	6598	float	2	W	L1 Phase Max Active Power	1	✓	✓	✓	✓
26010	659A	float	2	W	L1 Phase Min Active Power	1	✓	✓	✓	✓
26012	659C	float	2	W	L2 Phase Avg Active Power	1	✓	✓	✓	✓
26014	659E	float	2	W	L2 Phase Max Active Power	1	✓	✓	✓	✓
26016	65A0	float	2	W	L2 Phase Min Active Power	1	✓	✓	✓	✓
26018	65A2	float	2	W	L3 Phase Avg Active Power	1	✓	✓	✓	✓
26020	65A4	float	2	W	L3 Phase Max Active Power	1	✓	✓	✓	✓
26022	65A6	float	2	W	L3 Phase Min Active Power	1	✓	✓	✓	✓
26024	65A8	float	2	W	Avg Total Active Power	1	✓	✓	✓	✓
26026	65AA	float	2	W	Max Total Active Power	1	✓	✓	✓	✓
26028	65AC	float	2	W	Min Total Active Power	1	✓	✓	✓	✓
26030	65AE	float	2	W	Avg Total Import Active Power	1	✓	✓	✓	✓
26032	65B0	float	2	W	Max Total Import Active Power	1	✓	✓	✓	✓
26034	65B2	float	2	W	Min Total Import Active Power	1	✓	✓	✓	✓
26036	65B4	float	2	W	Avg Total Export Active Power	1	✓	✓	✓	✓
26038	65B6	float	2	W	Max Total Export Active Power	1	✓	✓	✓	✓
26040	65B8	float	2	W	Min Total Export Active Power	1	✓	✓	✓	✓
26042	65BA	float	2	Var	L1 Phase Avg Reactive Power	1	✓	✓	✓	✓
26044	65BC	float	2	Var	L1 Phase Max Reactive Power	1	✓	✓	✓	✓
26046	65BE	float	2	Var	L1 Phase Min Reactive Power	1	✓	✓	✓	✓
26048	65C0	float	2	Var	L2 Phase Avg Reactive Power	1	✓	✓	✓	✓
26050	65C2	float	2	Var	L2 Phase Max Reactive Power	1	✓	✓	✓	✓
26052	65C4	float	2	Var	L2 Phase Min Reactive Power	1	✓	✓	✓	✓
26054	65C6	float	2	Var	L3 Phase Avg Reactive Power	1	✓	✓	✓	✓
26056	65C8	float	2	Var	L3 Phase Max Reactive Power	1	✓	✓	✓	✓
26058	65CA	float	2	Var	L3 Phase Min Reactive Power	1	✓	✓	✓	✓
26060	65CC	float	2	Var	Quadrant Total Avg Reactive Power	1	✓	✓	✓	✓
26062	65CE	float	2	Var	Quadrant Total Max Reactive Power	1	✓	✓	✓	✓
26064	65D0	float	2	Var	Quadrant Total Min Reactive Power	1	✓	✓	✓	✓
26066	65D2	float	2	Var	Quadrant 1 Avg Reactive Power	1	✓	✓	✓	✓
26068	65D4	float	2	Var	Quadrant 1 Max Reactive Power	1	✓	✓	✓	✓
26070	65D6	float	2	Var	Quadrant 1 Min Reactive Power	1	✓	✓	✓	✓
26072	65D8	float	2	Var	Quadrant 2 Avg Reactive Power	1	✓	✓	✓	✓
26074	65DA	float	2	Var	Quadrant 2 Max Reactive Power	1	✓	✓	✓	✓
26076	65DC	float	2	Var	Quadrant 2 Min Reactive Power	1	✓	✓	✓	✓
26078	65DE	float	2	Var	Quadrant 3 Avg Reactive Power	1	✓	✓	✓	✓
26080	65E0	float	2	Var	Quadrant 3 Max Reactive Power	1	✓	✓	✓	✓
26082	65E2	float	2	Var	Quadrant 3 Min Reactive Power	1	✓	✓	✓	✓
26084	65E4	float	2	Var	Quadrant 4 Avg Reactive Power	1	✓	✓	✓	✓
26086	65E6	float	2	Var	Quadrant 4 Max Reactive Power	1	✓	✓	✓	✓
26088	65E8	float	2	Var	Quadrant 4 Min Reactive Power	1	✓	✓	✓	✓
26090	65EA	float	2	VA	L1 Phase Avg Apperant Power	1	✓	✓	✓	✓
26092	65EC	float	2	VA	L1 Phase Max Apperant Power	1	✓	✓	✓	✓
26094	65EE	float	2	VA	L1 Phase Min Apperant Power	1	✓	✓	✓	✓
26096	65F0	float	2	VA	L2 Phase Avg Apperant Power	1	✓	✓	✓	✓
26098	65F2	float	2	VA	L2 Phase Max Apperant Power	1	✓	✓	✓	✓

26100	65F4	float	2	VA	L2 Phase Min Apperant Power	1		✓	✓	✓	✓
26102	65F6	float	2	VA	L3 Phase Avg Apperant Power	1		✓	✓	✓	✓
26104	65F8	float	2	VA	L3 Phase Max Apperant Power	1		✓	✓	✓	✓
26106	65FA	float	2	VA	L3 Phase Min Apperant Power	1		✓	✓	✓	✓
26108	65FC	float	2	VA	Avg Total Import Apperant Power	1		✓	✓	✓	✓
26110	65FE	float	2	VA	Max Total Import Apperant Power	1		✓	✓	✓	✓
26112	6600	float	2	VA	Min Total Import Apperant Power	1		✓	✓	✓	✓
26114	6602	float	2	VA	Avg Total Export Apperant Power	1		✓	✓	✓	✓
26116	6604	float	2	VA	Max Total Export Apperant Power	1		✓	✓	✓	✓
26118	6606	float	2	VA	Min Total Export Apperant Power	1		✓	✓	✓	✓

**THD Record**

Supported Functions	Start Address	Register Counts
Read Holding registers		66

Address (Dec)	Address (Hex)	Format	Bit	Description	Multiplier	Range	EMR-53CS	EMR-53S	EMR-07S	EMR-04S
27000	6978	uint	2	unix time	Record End Time	1	✓	✓		
27002	697A	uint	2	unix time	Record Start Time	1	✓	✓		
27064	6968	uint	2	-	Record Index	1	✓	✓		
27004	697C	float	2	%	Avg Total Harmonic Distorsion VLL1	1	✓	✓		
27024	6990	float	2	%	Max Total Harmonic Distorsion VLL1	1	✓	✓		
27044	69A4	float	2	%	Min Total Harmonic Distorsion VLL1	1	✓	✓		
27006	697E	float	2	%	Avg Total Harmonic Distorsion VLL2	1	✓	✓		
27026	6992	float	2	%	Max Total Harmonic Distorsion VLL2	1	✓	✓		
27046	69A6	float	2	%	Min Total Harmonic Distorsion VLL2	1	✓	✓		
27008	6980	float	2	%	Avg Total Harmonic Distorsion VLL3	1	✓	✓		
27028	6994	float	2	%	Max Total Harmonic Distorsion VLL3	1	✓	✓		
27048	69A8	float	2	%	Min Total Harmonic Distorsion VLL3	1	✓	✓		
27010	6982	float	2	%	Avg Total Harmonic Distorsion VLL12	1	✓	✓		
27030	6996	float	2	%	Max Total Harmonic Distorsion VLL12	1	✓	✓		
27050	69AA	float	2	%	Min Total Harmonic Distorsion VLL12	1	✓	✓		
27012	6984	float	2	%	Avg Total Harmonic Distorsion VLL23	1	✓	✓		
27032	6998	float	2	%	Max Total Harmonic Distorsion VLL23	1	✓	✓		
27052	69AC	float	2	%	Min Total Harmonic Distorsion VLL23	1	✓	✓		
27014	6986	float	2	%	Avg Total Harmonic Distorsion VLL31	1	✓	✓		
27034	699A	float	2	%	Max Total Harmonic Distorsion VLL31	1	✓	✓		
27054	69AE	float	2	%	Min Total Harmonic Distorsion VLL31	1	✓	✓		
27016	6988	float	2	%	Avg Total Harmonic Distorsion IL1	1	✓	✓		
27036	699C	float	2	%	Max Total Harmonic Distorsion IL1	1	✓	✓		
27056	69B0	float	2	%	Min Total Harmonic Distorsion IL1	1	✓	✓		
27018	698A	float	2	%	Avg Total Harmonic Distorsion IL2	1	✓	✓		
27038	699E	float	2	%	Max Total Harmonic Distorsion IL2	1	✓	✓		
27058	69B2	float	2	%	Min Total Harmonic Distorsion IL2	1	✓	✓		
27020	698C	float	2	%	Avg Total Harmonic Distorsion IL3	1	✓	✓		
27040	69A0	float	2	%	Max Total Harmonic Distorsion IL3	1	✓	✓		
27060	69B4	float	2	%	Min Total Harmonic Distorsion IL3	1	✓	✓		
27022	698E	float	2	%	Avg Total Harmonic Distorsion ILN	1	✓	✓		
27042	69A2	float	2	%	Max Total Harmonic Distorsion ILN	1	✓	✓		
27062	69B6	float	2	%	Min Total Harmonic Distorsion ILN	1	✓	✓		

**Analog Temperature Record**

Supported Functions	Start Address	Register Counts
Read Holding registers		30

Address (Dec)	Address (Hex)	Format	Bit	Description	Multiplier	Range	EMR-53CS	EMR-53S	EMR-07S	EMR-04S
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28000	6D60	uint	2	unix time	Record End Time	1												
28002	6D62	uint	2	unix time	Record Start Time	1												
28004	6D64	uint	2	-	Record Index	1												
28006	6D66	float	2	C	Average Analog Channel 1	1												
28008	6D68	float	2	C	Maximum Analog Channel 1	1												
28010	6D6A	float	2	C	Minimum Analog Channel 1	1												
28012	6D6C	float	2	C	Average Analog Channel 2	1												
28014	6D6E	float	2	C	Maximum Analog Channel 2	1												
28016	6D70	float	2	C	Minimum Analog Channel 2	1												
28018	6D72	float	2	C	Average Analog Channel 3	1												
28020	6D74	float	2	C	Maximum Analog Channel 3	1												
28022	6D76	float	2	C	Minimum Analog Channel 3	1												
28024	6D78	float	2	C	Average Analog Channel 4	1												
28026	6D7A	float	2	C	Maximum Analog Channel 4	1												
28028	6D7C	float	2	C	Minimum Analog Channel 4	1												

**Event Record**

Supported Functions		Start Address	Register Counts														
Read holding registers				26													

Address (Dec)	Address (Hex)	Format	Bits	Bitm	Description	Multiplier	Range	EMR-53CS	EMR-53S	EMR-07S	EMR-04S
8016	1F50	uint	2		Event End Time	1		✓	✓	✓	✓
8018	1F52	uint	2		Event Start Time	1		✓	✓	✓	✓
8020	1F54	uint	2		Record Index	1		✓	✓	✓	✓
8022	1F56	float	2		Event Duration	1		✓	✓	✓	✓
8024	1F58	short	1		LogType ( 0:Null 1:Alarm Start 2:Alarm End 3:Event	1		✓	✓	✓	✓
8025	1F59	short	1		Type ( Depend on Log Type )	1		✓	✓	✓	✓
8026	1F5A	uint	2		Source ( Depend on Log Type and type )	1		✓	✓	✓	✓
8028	1F5C	uint	2		Param1 ( Depend on Log Type and type )	1		✓	✓	✓	✓
8030	1F5E	uint	2		Param2 ( Depend on Log Type and type )	1		✓	✓	✓	✓
8032	1F60	float	2		High Threshold value	1		✓	✓	✓	✓
8034	1F62	float	2		Low threshold value	1		✓	✓	✓	✓
8036	1F64	float	2		Max. High value	1		✓	✓	✓	✓
8038	1F66	float	2		Max. Low value	1		✓	✓	✓	✓
8040	1F68	uint	2		Alarm Index	1		✓	✓	✓	✓

**Device Identification**

Supported Functions		Start Address	Register Counts														
Read holding registers				40													

Address (Dec)	Address (Hex)	Format	Bits	Bitm	Description	Multiplier	Range	EMR-53CS	EMR-53S	EMR-07S	EMR-04S
60416	EC00	ushort	1	-	Device ID	1		✓	✓	✓	✓
60417	EC01	ushort	1	-	Device ID & Versiyon No	1		✓	✓	✓	✓
60418	EC02	uint	2	-	Serial Number	1		✓	✓	✓	✓
60420	EC04	uint	2	-	Software Version	1		✓	✓	✓	✓
60422	EC06	uint	2	-	Hardware Version	1		✓	✓	✓	✓
60424	EC08	uint	2	-	Modbus Table Version	1		✓	✓	✓	✓
60426	EC0A	uint	2	-	Boot loader version	1		✓	✓	✓	✓
60428	EC0C	unix time	2	unix time	Fabrication Date	1		✓	✓	✓	✓
60430	EC0E	unix time	2	unix time	Calibration Date	1		✓	✓	✓	✓
60432	EC10	uint	2	-	Bağlantı Test Sonucu	1					
60434	EC12	ushort	1	-	MAC Address Part 1	1					
60435	EC13	ushort	1	-	MAC Address Part 2	1					
60436	EC14	ushort	1	-	MAC Address Part 3	1					
60437	EC15	uint	2	-	Reserved	1					

60439	EC17	uint	2	-	ETH Software Version	1													
60441	EC19	uint	2	-	ETH Boot loader version	1													
60443	EC1B	uint	2	-	Reserved	1													
60445	EC1D	uint	2	-	IP Address	1													
60447	EC1F	uint	2	-	Subnet Mask Address	1													
60449	EC21	uint	2	-	Gateway Address	1													
60451	EC23	uint	2	-	DNS 1	1													
60453	EC25	uint	2	-	DNS Alter	1													
60455	EC27	ushort	1	-	Connection Status	1													

**Entes.Net**

Supported Functions		Start Address	Register Counts
Read holding registers			

Address (Dec)	Address (Hex)	Format	Birim	Description	Multiplier	Range	EMR-53CS	EMR-53S	EMR-07S	EMR-04S	
65000	FDE8	uint	2	-	Entes.Net Countdown	1		✓	✓	✓	✓
65002	FDEA	uint	2	-	Current Communication State	1		✓	✓	✓	✓
65004	FDEC	uint	2	unix time	Last Device Setup Date	1		✓	✓	✓	✓
65006	FDEE	uint	2	unix time	Last Device Boot Date	1		✓	✓	✓	✓

**Entes ID**

Supported Functions		Start Address	Register Counts
Read holding registers			

Address (Dec)	Address (Hex)	Format	Birim	Description	Multiplier	R/W	Range	EMR-53CS	EMR-53S	EMR-07S	EMR-04S
65032	FE08	string	4	-	Product Code	1	R/W	✓	✓	✓	✓
65036	FE0C	string	2	-	Revision	1	R/W	✓	✓	✓	✓
65038	FE0E	string	3	-	Fabrication Date	1	R/W	✓	✓	✓	✓
65041	FE11	string	1	-	Fabrication ID	1	R/W	✓	✓	✓	✓
65042	FE12	uint32	1	-	Product Line ID	1	R/W	✓	✓	✓	✓
65043	FE13	uint32	5	-	Serial Number	1	R/W	✓	✓	✓	✓