

NETWORK ANALYSER MPR-53/53S

MODBUS REGISTER MAP

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ADDRESS	ADDRESS (HEX)	REGISTER	R/W	RANGE	UNIT	MULTIPLIER	FORMAT
0	0000	L1 PHASE VOLTAGE	R	(0-3000)xUT	Volt	0.1	unsigned int
2	0002	L2 PHASE VOLTAGE	R	(0-3000)xUT	Volt	0.1	unsigned int
4	0004	L3 PHASE VOLTAGE	R	(0-3000)xUT	Volt	0.1	unsigned int
6	0006	L1 PHASE CURRENT	R	(0-6000)xCT	Amper	0.001	unsigned int
8	0008	L2 PHASE CURRENT	R	(0-6000)xCT	Amper	0.001	unsigned int
10	000A	L3 PHASE CURRENT	R	(0-6000)xCT	Amper	0.001	unsigned int
12	000C	NEUTRAL CURRENT	R	(0-6000)xCT	Amper	0.001	unsigned int
14	000E	L1-L2 PHASE-PHASE VOLTAGE	R	(0-5000)xUT	Volt	0.1	unsigned int
16	0010	L2-L3 PHASE-PHASE VOLTAGE	R	(0-5000)xUT	Volt	0.1	unsigned int
18	0012	L3-L1 PHASE-PHASE VOLTAGE	R	(0-5000)xUT	Volt	0.1	unsigned int
20	0014	L1 PHASE ACTIVE POWER	R	(-18000 - 18000)xCTxVT	Watt	0.1	int
22	0016	L2 PHASE ACTIVE POWER	R	(-18000 - 18000)xCTxVT	Watt	0.1	int
24	0018	L3 PHASE ACTIVE POWER	R	(-18000 - 18000)xCTxVT	Watt	0.1	int
26	001A	L1 PHASE REACTIVE POWER	R	(-18000 - 18000)xCTxVT	Var	0.1	int
28	001C	L2 PHASE REACTIVE POWER	R	(-18000 - 18000)xCTxVT	Var	0.1	int
30	001E	L3 PHASE REACTIVE POWER	R	(-18000 - 18000)xCTxVT	Var	0.1	int
32	0020	L1 PHASE APPARENT POWER	R	(0 - 18000)xCTxVT	VA	0.1	unsigned int
34	0022	L2 PHASE APPARENT POWER	R	(0 - 18000)xCTxVT	VA	0.1	unsigned int
36	0024	L3 PHASE APPARENT POWER	R	(0 - 18000)xCTxVT	VA	0.1	unsigned int
38	0026	L1 PHASE COS ϕ	R	(-1000 - 1000)	-	0.001	int
40	0028	L2 PHASE COS ϕ	R	(-1000 - 1000)	-	0.001	int
42	002A	L3 PHASE COS ϕ	R	(-1000 - 1000)	-	0.001	int
44	002C	TOTAL IMPORT ACTIVE POWER	R	(0 - 54000)xCTxVT	Watt	0.1	int
46	002E	TOTAL EXPORT ACTIVE POWER	R	(0 - 54000)xCTxVT	Watt	0.1	int
48	0030	TOTAL INDUCTIVE REACTIVE POWER	R	(0 - 54000)xCTxVT	Var	0.1	int
50	0032	TOTAL CAPACITIVE REACTIVE POWER	R	(0 - 54000)xCTxVT	Var	0.1	int
52	0034	TOTAL APPARENT POWER	R	(0 - 54000)xCTxVT	VA	0.1	unsigned int
54	0036	AVERAGE INDUCTIVE COS ϕ	R	(-1000 - 1000)	-	0.001	int
56	0038	AVERAGE CAPACITIVE COS ϕ	R	(-1000 - 1000)	-	0.001	int
58	003A	FREQUENCY	R	(4000 - 7000)	Hz	0.01	unsigned int
60	003C	L1 PHASE VOLTAGE ANGLE	R	0-360	Degree	1	unsigned int
62	003E	L2 PHASE VOLTAGE ANGLE	R	0-360	Degree	1	unsigned int
64	0040	L3 PHASE VOLTAGE ANGLE	R	0-360	Degree	1	unsigned int
66	0042	L1 PHASE CURRENT ANGLE	R	0-360	Degree	1	unsigned int
68	0044	L2 PHASE CURRENT ANGLE	R	0-360	Degree	1	unsigned int
70	0046	L3 PHASE CURRENT ANGLE	R	0-360	Degree	1	unsigned int
72	0048	L1 PHASE VOLTAGE THD	R	0-999	%	0.1	unsigned int
74	004A	L2 PHASE VOLTAGE THD	R	0-999	%	0.1	unsigned int
76	004C	L3 PHASE VOLTAGE THD	R	0-999	%	0.1	unsigned int
78	004E	L1 PHASE CURRENT THD	R	0-999	%	0.1	unsigned int
80	0050	L2 PHASE CURRENT THD	R	0-999	%	0.1	unsigned int
82	0052	L3 PHASE CURRENT THD	R	0-999	%	0.1	unsigned int
84	0054	DIGITAL INPUT STATUS	R	-	-	-	-
86	0056	IMPORT ACTIVE ENERGY-1	R/W	0-FFFFFFFFFFFFFFF	Wh	1	long int
88	0058	EXPORT ACTIVE ENERGY-1	R/W	0-FFFFFFFFFFFFFFF	Wh	1	long int
90	005A	INDUCTIVE REACTIVE ENERGY-1	R/W	0-FFFFFFFFFFFFFFF	VArh	1	long int
92	005C	CAPACITIVE REACTIVE ENERGY-1	R/W	0-FFFFFFFFFFFFFFF	VArh	1	long int
94	005E	IMPORT ACTIVE ENERGY-2	R/W	0-FFFFFFFFFFFFFFF	Wh	1	long int
96	0060	EXPORT ACTIVE ENERGY-2	R/W	0-FFFFFFFFFFFFFFF	Wh	1	long int
98	0062	INDUCTIVE REACTIVE ENERGY-2	R/W	0-FFFFFFFFFFFFFFF	VArh	1	long int
100	0064	CAPACITIVE REACTIVE ENERGY-2	R/W	0-FFFFFFFFFFFFFFF	VArh	1	long int
102	0066	L1 PHASE MIN. VOLTAGE	R/W	(0-3000)xUT	Volt	0.1	unsigned int
104	0068	L2 PHASE MIN. VOLTAGE	R/W	(0-3000)xUT	Volt	0.1	unsigned int
106	006A	L3 PHASE MIN. VOLTAGE	R/W	(0-3000)xUT	Volt	0.1	unsigned int
108	006C	L1-L2 PHASE-PHASE MIN. VOLTAGE	R/W	(0-3000)xUT	Volt	0.1	unsigned int
110	006E	L2-L3 PHASE-PHASE MIN. VOLTAGE	R/W	(0-3000)xUT	Volt	0.1	unsigned int
112	0070	L3-L1 PHASE-PHASE MIN. VOLTAGE	R/W	(0-3000)xUT	Volt	0.1	unsigned int
114	0072	L1 PHASE MIN. CURRENT	R/W	(0-6000)xCT	Amper	0.001	unsigned int
116	0074	L2 PHASE MIN. CURRENT	R/W	(0-6000)xCT	Amper	0.001	unsigned int
118	0076	L3 PHASE MIN. CURRENT	R/W	(0-6000)xCT	Amper	0.001	unsigned int
120	0078	L1 PHASE MIN. ACTIVE POWER	R/W	(-18000 - 18000)xCTxVT	Watt	0.1	int
122	007A	L2 PHASE MIN. ACTIVE POWER	R/W	(-18000 - 18000)xCTxVT	Watt	0.1	int
124	007C	L3 PHASE MIN. ACTIVE POWER	R/W	(-18000 - 18000)xCTxVT	Watt	0.1	int
126	007E	L1 PHASE MIN. REACTIVE POWER	R/W	(-18000 - 18000)xCTxVT	Var	0.1	int
128	0080	L2 PHASE MIN. REACTIVE POWER	R/W	(-18000 - 18000)xCTxVT	Var	0.1	int
130	0082	L3 PHASE MIN. REACTIVE POWER	R/W	(-18000 - 18000)xCTxVT	Var	0.1	int
132	0084	L1 PHASE MIN. APPARENT POWER	R/W	(0 - 18000)xCTxVT	VA	0.1	unsigned int
134	0086	L2 PHASE MIN. APPARENT POWER	R/W	(0 - 18000)xCTxVT	VA	0.1	unsigned int
136	0088	L3 PHASE MIN. APPARENT POWER	R/W	(0 - 18000)xCTxVT	VA	0.1	unsigned int
138	008A	TOTAL IMPORT ACTIVE POWER	R/W	(0 - 54000)xCTxVT	Watt	0.1	int
140	008C	TOTAL EXPORT ACTIVE POWER	R/W	(0 - 54000)xCTxVT	Watt	0.1	int
142	008E	TOTAL INDUCTIVE REACTIVE POWER	R/W	(0 - 54000)xCTxVT	Var	0.1	int
144	0090	TOTAL CAPACITIVE REACTIVE POWER	R/W	(0 - 54000)xCTxVT	Var	0.1	int
146	0092	TOTAL APPARENT POWER	R/W	(0 - 54000)xCTxVT	VA	0.1	int
148	0094	AVERAGE INDUCTIVE COS ϕ	R/W	(-1000 - 1000)	-	0.001	int
150	0096	AVERAGE CAPACITIVE COS ϕ	R/W	(-1000 - 1000)	-	0.001	int

*Available only for MPR-53S

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152	0098	L3 PHASE MIN. APPARENT POWER	R/W	(0 - 18000)xCTxVT	VA	0.1	unsigned int
154	009A	TOTAL MIN. IMPORT ACTIVE POWER	R/W	(-18000 - 18000)xCTxVT	Watt	0.1	int
156	009C	TOTAL MIN. EXPORT ACTIVE POWER	R/W	(-18000 - 18000)xCTxVT	Watt	0.1	int
158	009E	TOTAL MIN. IMPORT REACTIVE POWER	R/W	(-18000 - 18000)xCTxVT	Var	0.1	int
160	00A0	TOTAL MIN. EXPORT REACTIVE POWER	R/W	(-18000 - 18000)xCTxVT	Var	0.1	int
162	00A2	TOTAL MIN. APPARENT POWER	R/W	(0 - 18000)xCTxVT	VA	0.1	unsigned int
164	00A4	L1 PHASE MAX. VOLTAGE	R/W	(0-3000)xUT	Volt	0.1	unsigned int
166	00A6	L2 PHASE MAX. VOLTAGE	R/W	(0-3000)xUT	Volt	0.1	unsigned int
168	00A8	L3 PHASE MAX. VOLTAGE	R/W	(0-3000)xUT	Volt	0.1	unsigned int
170	00AA	L1-L2 PHASE-PHASE MAX. VOLTAGE	R/W	(0-5000)xUT	Volt	0.1	unsigned int
172	00AC	L2-L3 PHASE-PHASE MAX. VOLTAGE	R/W	(0-5000)xUT	Volt	0.1	unsigned int
174	00AE	L3-L1 PHASE-PHASE MAX. VOLTAGE	R/W	(0-5000)xUT	Volt	0.1	unsigned int
176	00B0	L1 PHASE MAX. CURRENT	R/W	(0-6000)xCT	Amper	0.001	unsigned int
178	00B2	L2 PHASE MAX. CURRENT	R/W	(0-6000)xCT	Amper	0.001	unsigned int
180	00B4	L3 PHASE MAX. CURRENT	R/W	(0-6000)xCT	Amper	0.001	unsigned int
182	00B6	L1 PHASE MAX. ACTIVE POWER	R/W	(-18000 - 18000)xCTxVT	Watt	0.1	int
184	00B8	L2 PHASE MAX. ACTIVE POWER	R/W	(-18000 - 18000)xCTxVT	Watt	0.1	int
186	00BA	L3 PHASE MAX. ACTIVE POWER	R/W	(-18000 - 18000)xCTxVT	Watt	0.1	int
188	00BC	L1 PHASE MAX. REACTIVE POWER	R/W	(-18000 - 18000)xCTxVT	Var	0.1	int
190	00BE	L2 PHASE MAX. REACTIVE POWER	R/W	(-18000 - 18000)xCTxVT	Var	0.1	int
192	00C0	L3 PHASE MAX. REACTIVE POWER	R/W	(-18000 - 18000)xCTxVT	Var	0.1	int
194	00C2	L1 PHASE MAX. APPARENT POWER	R/W	(0 - 18000)xCTxVT	VA	0.1	unsigned int
196	00C4	L2 PHASE MAX. APPARENT POWER	R/W	(0 - 18000)xCTxVT	VA	0.1	unsigned int
198	00C6	L3 PHASE MAX. APPARENT POWER	R/W	(0 - 18000)xCTxVT	VA	0.1	unsigned int
200	00C8	TOTAL MAX. IMPORT ACTIVE POWER	R/W	(-18000 - 18000)xCTxVT	Watt	0.1	int
202	00CA	TOTAL MAX. EXPORT ACTIVE POWER	R/W	(-18000 - 18000)xCTxVT	Watt	0.1	int
204	00CC	TOTAL MAX. IMPORT REACTIVE POWER	R/W	(-18000 - 18000)xCTxVT	Var	0.1	int
206	00CE	TOTAL MAX. EXPORT REACTIVE POWER	R/W	(-18000 - 18000)xCTxVT	Var	0.1	int
208	00D0	TOTAL MAX. APPARENT POWER	R/W	(0 - 18000)xCTxVT	VA	0.1	unsigned int
210	00D2	L1 PHASE MAX. CURRENT DEMAND	R/W	(0-6000)xCT	Amper	0.001	unsigned int
212	00D4	L2 PHASE MAX. CURRENT DEMAND	R/W	(0-6000)xCT	Amper	0.001	unsigned int
214	00D6	L3 PHASE MAX. CURRENT DEMAND	R/W	(0-6000)xCT	Amper	0.001	unsigned int
216	00D8	L1 PHASE IMPORT MAX. DEMAND ACTIVE POWER	R/W	(-18000 - 18000)xCTxVT	Watt	0.1	int
218	00DA	L1 PHASE EXPORT MAX. DEMAND ACTIVE POWER	R/W	(-18000 - 18000)xCTxVT	Watt	0.1	int
220	00DC	L2 PHASE IMPORT MAX. DEMAND ACTIVE POWER	R/W	(-18000 - 18000)xCTxVT	Watt	0.1	int
222	00DE	L2 PHASE EXPORT MAX. DEMAND ACTIVE POWER	R/W	(-18000 - 18000)xCTxVT	Watt	0.1	int
224	00E0	L3 PHASE IMPORT MAX. DEMAND ACTIVE POWER	R/W	(-18000 - 18000)xCTxVT	Watt	0.1	int
226	00E2	L3 PHASE EXPORT MAX. DEMAND ACTIVE POWER	R/W	(-18000 - 18000)xCTxVT	Watt	0.1	int
228	00E4	L1 PHASE IMPORT MAX. DEMAND REACTIVE POWER	R/W	(-18000 - 18000)xCTxVT	Var	0.1	int
230	00E6	L1 PHASE EXPORT MAX. DEMAND REACTIVE POWER	R/W	(-18000 - 18000)xCTxVT	Var	0.1	int
232	00E8	L2 PHASE IMPORT MAX. DEMAND REACTIVE POWER	R/W	(-18000 - 18000)xCTxVT	Var	0.1	int
234	00EA	L2 PHASE EXPORT MAX. DEMAND REACTIVE POWER	R/W	(-18000 - 18000)xCTxVT	Var	0.1	int
236	00EC	L3 PHASE IMPORT MAX. DEMAND REACTIVE POWER	R/W	(-18000 - 18000)xCTxVT	Var	0.1	int
238	00EE	L3 PHASE EXPORT MAX. DEMAND REACTIVE POWER	R/W	(-18000 - 18000)xCTxVT	Var	0.1	int
240	00F0	L1 PHASE MAX. DEMAND APPARENT POWER	R/W	(0 - 18000)xCTxVT	VA	0.1	unsigned int
242	00F2	L2 PHASE MAX. DEMAND APPARENT POWER	R/W	(0 - 18000)xCTxVT	VA	0.1	unsigned int
244	00F4	L3 PHASE MAX. DEMAND APPARENT POWER	R/W	(0 - 18000)xCTxVT	VA	0.1	unsigned int
246	00F6	TOTAL IMPORT MAX. DEMAND ACTIVE POWER	R/W	(-18000 - 18000)xCTxVT	Watt	0.1	int
248	00F8	TOTAL EXPORT MAX. DEMAND ACTIVE POWER	R/W	(-18000 - 18000)xCTxVT	Watt	0.1	int
250	00FA	TOTAL IMPORT MAX. DEMAND REACTIVE POWER	R/W	(-18000 - 18000)xCTxVT	Var	0.1	int
252	00FC	TOTAL EXPORT MAX. DEMAND REACTIVE POWER	R/W	(-18000 - 18000)xCTxVT	Var	0.1	int
254	00FE	TOTAL MAX. DEMAND APPARENT POWER	R/W	(0 - 18000)xCTxVT	VA	0.1	unsigned int

ADDRESS	ADDRESS (HEX)	REGISTER	R/W	RANGE	UNIT	MULTIPLIER	FORMAT
32768	8000	VOLTAGE TRANSFORMER RATIO	R/W	0-40000	-	0.1	short-int
32769	8001	CURRENT TRANSFORMER RATIO	R/W	0-2000	-	0.1	short-int
32770	8002	CALCULATION METHOD	R/W	0-5	-	-	short-int
32771	8003	DEMAND TIME	R/W	1-60	minute	1	short-int
32772	8004	PULSE RATIO	R/W	0-6	-	-	short-int
32773	8005	PULSE OUTPUT 1 PARAMETER SETTING	R/W	0-5	-	-	short-int
32774	8006	PULSE OUTPUT 2 PARAMETER SETTING	R/W	0-5	-	-	short-int
32775	8007	ENERGY COUNTER 1 SELECTION	R/W	0-3	-	-	short-int
32776	8008	ENERGY COUNTER 2 SELECTION	R/W	0-3	-	-	short-int
32777	8009	COMMUNICATION ADDRESS	R/W	0 - 247	-	-	short-int
32778	800A	BAUD RATE	R/W	1 - 5	-	-	short-int
32779	800B	PARITY	R/W	0 - 2	-	-	short-int
32780	800C	PASSWORD ENABLE	R/W	0-1	-	-	short-int
32781	800D	PASSWORD	R/W	0-9999	-	-	short-int

PULSE OUTPUT 1-2

PARAMETER SETTING 0-5 :

- 0: Active
- 1: Active Import
- 2: Active Export
- 3: Reactive
- 4: Reactive Import
- 5: Reactive Export

PULSE RATIO 0-6 :

- 0: 1 Watt / Pulse
- 1: 10 Watt / Pulse
- 2: 100 Watt / Pulse
- 3: 1 kW / Pulse
- 4: 10 kW / Pulse
- 5: 100 kW / Pulse
- 6: 1 MW / Pulse

ENERGY COUNTER 1 SELECTION 0-3 :

- 0: On (EC -Energy counter- will count on all conditions)
- 1: EC will count when Digital Input1 is 1 (1-active)
- 2: EC will count when Digital Input2 is 1 (1-active)
- 3: Inverse Energy Counter 2 (It will count when EC2 is not counted)

ENERGY COUNTER 2 SELECTION 0-3 :

- 0: On (EC -Energy counter- will count on all conditions)
- 1: EC will count when Digital Input1 is 1 (1-active)
- 2: EC will count when Digital Input2 is 1 (1-active)
- 3: Inverse Energy Counter 1 (It will count when EC1 is not counted)

BAUD RATE 1-5 :

- 1: 38400 bps
- 2: 19200 bps
- 3: 9600 bps
- 4: 4800 bps
- 5: 2400 bps

PARITY 0-2 :

- 0: No
- 1: Odd
- 2: Even

PASSWORD ENABLE 0-1 :

- 0: Disable
- 1: Enable

CALCULATION 0-5 :

Refer to "Reactive Energy Calculation Method Setting" on page 2.