PowerLogic EM4800
MODBUS Register List

Data Format

MODBUS address is fixed at 1, MODBUS port is fixed at 502.

MODBUS registers are native 16 bit, so larger data types are packed into multiple registers. 32 bit values (either IEEE standard 754 float or integer) are stored in two consecutive MODBUS registers in big-endian order - B3:B2:B1:B0.

The MODBUS registers are "1 based" numbers for example 0 = 40001, 2=40003, 4=40005 etc.

These registers are set as read only.

The Register Map is provided in 3 sections: 8 3-phase meters, 12 2-pole meters, and 24 1-pole meters. The relevant section for a particular EM4800 will depend on the meter's configuration setting.

The section "How to Read Interval Data" applies only to EM4800 meters with a firmware Manufacturing Build value of 1053 or higher.

Table 1: EM4800 3P08 Registers

Address	Name	Type	Radix
0	Meter 1 WH delivered	int32	10
2	Meter 2 WH delivered	int32	10
4	Meter 3 WH delivered	int32	10
6	Meter 4 WH delivered	int32	10
8	Meter 5 WH delivered	int32	10
10	Meter 6 WH delivered	int32	10
12	Meter 7 WH delivered	int32	10
14	Meter 8 WH delivered	int32	10
100	Meter 1 Wh received	int32	10
102	Meter 2 Wh received	int32	10
104	Meter 3 Wh received	int32	10
106	Meter 4 Wh received	int32	10
108	Meter 5 Wh received	int32	10
110	Meter 6 Wh received	int32	10
112	Meter 7 Wh received	int32	10
114	Meter 8 Wh received	int32	10
200	Meter 1 VARh delivered	int32	10
202	Meter 2 VARh delivered	int32	10
204	Meter 3 VARh delivered	int32	10
206	Meter 4 VARh delivered	int32	10

Address	Name	Type	Radix
208	Meter 5 VARh delivered	int32	10
210	Meter 6 VARh delivered	int32	10
212	Meter 7 VARh delivered	int32	10
214	Meter 8 VARh delivered	int32	10
300	Meter 1 VARh received	int32	10
302	Meter 2 VARh received	int32	10
304	Meter 3 VARh received	int32	10
306	Meter 4 VARh received	int32	10
308	Meter 5 VARh received	int32	10
310	Meter 6 VARh received	int32	10
312	Meter 7 VARh received	int32	10
314	Meter 8 VARh received	int32	10
400	Meter 1 VAh	int32	10
402	Meter 2 VAh	int32	10
404	Meter 3 VAh	int32	10
406	Meter 4 VAh	int32	10
408	Meter 5 VAh	int32	10
410	Meter 6 VAh	int32	10
412	Meter 7 VAh	int32	10
414	Meter 8 VAh	int32	10
600	Meter 1 Watts	int32	10
602	Meter 2 Watts	int32	10
604	Meter 3 Watts	int32	10
606	Meter 4 Watts	int32	10
608	Meter 5 Watts	int32	10
610	Meter 6 Watts	int32	10
612	Meter 7 Watts	int32	10
614	Meter 8 Watts	int32	10
700	Meter 1 VAR	int32	10
702	Meter 2 VAR	int32	10
704	Meter 3 VAR	int32	10
706	Meter 4 VAR	int32	10
708	Meter 5 VAR	int32	10
710	Meter 6 VAR	int32	10
712	Meter 7 VAR	int32	10
714	Meter 8 VAR	int32	10
800	Meter 1 VA	int32	10
802	Meter 2 VA	int32	10
804	Meter 3 VA	int32	10
806	Meter 4 VA	int32	10

Address	Name	Type	Radix
808	Meter 5 VA	int32	10
810	Meter 6 VA	int32	10
812	Meter 7 VA	int32	10
814	Meter 8 VA	int32	10
900	Meter 1 pf	float32	10
902	Meter 2 pf	float32	10
904	Meter 3 pf	float32	10
906	Meter 4 pf	float32	10
908	Meter 5 pf	float32	10
910	Meter 6 pf	float32	10
912	Meter 7 pf	float32	10
914	Meter 8 pf	float32	10
1000	Meter 1-1 Current	float32	10
1002	Meter 2-1 Current	float32	10
1004	Meter 3-1 Current	float32	10
1006	Meter 4-1 Current	float32	10
1008	Meter 5-1 Current	float32	10
1010	Meter 6-1 Current	float32	10
1012	Meter 7-1 Current	float32	10
1014	Meter 8-1 Current	float32	10
1100	Meter 1-2 Current	float32	10
1102	Meter 2-2 Current	float32	10
1104	Meter 3-2 Current	float32	10
1106	Meter 4-2 Current	float32	10
1108	Meter 5-2 Current	float32	10
1110	Meter 6-2 Current	float32	10
1112	Meter 7-2 Current	float32	10
1114	Meter 8-2 Current	float32	10
1200	Meter 1-3 Current	float32	10
1202	Meter 2-3 Current	float32	10
1204	Meter 3-3 Current	float32	10
1206	Meter 4-3 Current	float32	10
1208	Meter 5-3 Current	float32	10
1210	Meter 6-3 Current	float32	10
1212	Meter 7-3 Current	float32	10
1214	Meter 8-3 Current	float32	10
1300	Meter 1-1 Voltage	float32	10
1302	Meter 2-1 Voltage	float32	10
1304	Meter 3-1 Voltage	float32	10
1306	Meter 4-1 Voltage	float32	10

Address	Name	Type	Radix
1308	Meter 5-1 Voltage	float32	10
1310	Meter 6-1 Voltage	float32	10
1312	Meter 7-1 Voltage	float32	10
1314	Meter 8-1 Voltage	float32	10
1400	Meter 1-2 Voltage	float32	10
1402	Meter 2-2 Voltage	float32	10
1404	Meter 3-2 Voltage	float32	10
1406	Meter 4-2 Voltage	float32	10
1408	Meter 5-2 Voltage	float32	10
1410	Meter 6-2 Voltage	float32	10
1412	Meter 7-2 Voltage	float32	10
1414	Meter 8-2 Voltage	float32	10
1500	Meter 1-3 Voltage	float32	10
1502	Meter 2-3 Voltage	float32	10
1504	Meter 3-3 Voltage	float32	10
1506	Meter 4-3 Voltage	float32	10
1508	Meter 5-3 Voltage	float32	10
1510	Meter 6-3 Voltage	float32	10
1512	Meter 7-3 Voltage	float32	10
1514	Meter 8-3 Voltage	float32	10
1600	Meter 1-1 W	float32	10
1602	Meter 2-1 W	float32	10
1604	Meter 3-1 W	float32	10
1606	Meter 4-1 W	float32	10
1608	Meter 5-1 W	float32	10
1610	Meter 6-1 W	float32	10
1612	Meter 7-1 W	float32	10
1614	Meter 8-1 W	float32	10
1700	Meter 1-2 W	float32	10
1702	Meter 2-2 W	float32	10
1704	Meter 3-2 W	float32	10
1706	Meter 4-2 W	float32	10
1708	Meter 5-2 W	float32	10
1710	Meter 6-2 W	float32	10
1712	Meter 7-2 W	float32	10
1714	Meter 8-2 W	float32	10
1800	Meter 1-3 W	float32	10
1802	Meter 2-3 W	float32	10
1804	Meter 3-3 W	float32	10
1806	Meter 4-3 W	float32	10

Address	Name	Type	Radix
1808	Meter 5-3 W	float32	10
1810	Meter 6-3 W	float32	10
1812	Meter 7-3 W	float32	10
1814	Meter 8-3 W	float32	10
1900	Meter 1-1 VAR	float32	10
1902	Meter 2-1 VAR	float32	10
1904	Meter 3-1 VAR	float32	10
1906	Meter 4-1 VAR	float32	10
1908	Meter 5-1 VAR	float32	10
1910	Meter 6-1 VAR	float32	10
1912	Meter 7-1 VAR	float32	10
1914	Meter 8-1 VAR	float32	10
2000	Meter 1-2 VAR	float32	10
2002	Meter 2-2 VAR	float32	10
2004	Meter 3-2 VAR	float32	10
2006	Meter 4-2 VAR	float32	10
2008	Meter 5-2 VAR	float32	10
2010	Meter 6-2 VAR	float32	10
2012	Meter 7-2 VAR	float32	10
2014	Meter 8-2 VAR	float32	10
2100	Meter 1-3 VAR	float32	10
2102	Meter 2-3 VAR	float32	10
2104	Meter 3-3 VAR	float32	10
2106	Meter 4-3 VAR	float32	10
2108	Meter 5-3 VAR	float32	10
2110	Meter 6-3 VAR	float32	10
2112	Meter 7-3 VAR	float32	10
2114	Meter 8-3 VAR	float32	10
2200	Meter 1-1 VA	float32	10
2202	Meter 2-1 VA	float32	10
2204	Meter 3-1 VA	float32	10
2206	Meter 4-1 VA	float32	10
2208	Meter 5-1 VA	float32	10
2210	Meter 6-1 VA	float32	10
2212	Meter 7-1 VA	float32	10
2214	Meter 8-1 VA	float32	10
2300	Meter 1-2 VA	float32	10
2302	Meter 2-2 VA	float32	10
2304	Meter 3-2 VA	float32	10
2306	Meter 4-2 VA	float32	10

Address	Name	Type	Radix
2308	Meter 5-2 VA	float32	10
2310	Meter 6-2 VA	float32	10
2312	Meter 7-2 VA	float32	10
2314	Meter 8-2 VA	float32	10
2400	Meter 1-3 VA	float32	10
2402	Meter 2-3 VA	float32	10
2404	Meter 3-3 VA	float32	10
2406	Meter 4-3 VA	float32	10
2408	Meter 5-3 VA	float32	10
2410	Meter 6-3 VA	float32	10
2412	Meter 7-3 VA	float32	10
2414	Meter 8-3 VA	float32	10
2500	Pulse 1 Input	int32	10
2502	Pulse 2 Input	int32	10
2600	Model	int16	16
2601	Model	int16	16
2602	Model	int16	16
2603	Model	int16	16
2604	Model	int16	16
2605	Model	int16	16
2606	Model	int16	16
2607	Model	int16	16
2700	Time Stamp	int32	10
2702	Record Type	int32	10
2704	Interval Meter 1	int32	10
2706	Interval Meter 2	int32	10
2708	Interval Meter 3	int32	10
2710	Interval Meter 4	int32	10
2712	Interval Meter 5	int32	10
2714	Interval Meter 6	int32	10
2716	Interval Meter 7	int32	10
2718	Interval Meter 8	int32	10

How to read interval data (requires a firmware Manufacturing Build value of 1053 or higher)

Procedure:

1. Write the Time Stamp register with the time stamp of the interval to be retrieved
2. Read the Time Stamp register to confirm which interval record(s) are currently mapped.
3. Read the Record Type register. This provides the record type currently mapped.
4. Read the records of interest from the Interval Meter X registers.

5. To read subsequent records, repeat from step 2 until all the records of interest have been read.

   Note: The Time Stamp register will auto-increment to the next interval each time it is read. If it stops incrementing, all available intervals have been read. If a new record is stored, the Time Stamp register will increment when read.

Notes:
Time Stamp information

- Time stamps are in Unix format.
- Time stamps mark the END of a given interval.
- Writing to the time stamp register sets a starting point for reading interval records.
- Time stamps are interpreted as follows:
  - If the requested time stamp is older than or equal to the oldest available record, the oldest time stamp is returned.
  - If the requested time stamp is newer than newest available record, the newest time stamp is returned.
  - If the requested time stamp is in between intervals, the next full interval time stamp is returned.
  - If the given time stamp is exactly on an interval boundary, that same time stamp is returned

Table 2: EM4800 2P12 Registers

Address	Name	Type	Radix
0	Meter 1 WH delivered	int32	10
2	Meter 2 WH delivered	int32	10
4	Meter 3 WH delivered	int32	10
6	Meter 4 WH delivered	int32	10
8	Meter 5 WH delivered	int32	10
10	Meter 6 WH delivered	int32	10
12	Meter 7 WH delivered	int32	10
14	Meter 8 WH delivered	int32	10
16	Meter 9 WH delivered	int32	10
18	Meter 10 WH delivered	int32	10
20	Meter 11 WH delivered	int32	10
22	Meter 12 WH delivered	int32	10
100	Meter 1 WH received	int32	10
102	Meter 2 WH received	int32	10
104	Meter 3 WH received	int32	10
106	Meter 4 WH received	int32	10
108	Meter 5 WH received	int32	10
110	Meter 6 WH received	int32	10
112	Meter 7 WH received	int32	10
114	Meter 8 WH received	int32	10
116	Meter 9 WH received	int32	10
118	Meter 10 WH received	int32	10
120	Meter 11 WH received	int32	10
122	Meter 12 WH received	int32	10
200	Meter 1 VARh delivered	int32	10
202	Meter 2 VARh delivered	int32	10
204	Meter 3 VARh delivered	int32	10
206	Meter 4 VARh delivered	int32	10
208	Meter 5 VARh delivered	int32	10
210	Meter 6 VARh delivered	int32	10
212	Meter 7 VARh delivered	int32	10
214	Meter 8 VARh delivered	int32	10
216	Meter 9 VARh delivered	int32	10
218	Meter 10 VARh delivered	int32	10
220	Meter 11 VARh delivered	int32	10
222	Meter 12 VARh delivered	int32	10
300	Meter 1 VARh received	int32	10

Address	Name	Type	Radix
302	Meter 2 VARh received	int32	10
304	Meter 3 VARh received	int32	10
306	Meter 4 VARh received	int32	10
308	Meter 5 VARh received	int32	10
310	Meter 6 VARh received	int32	10
312	Meter 7 VARh received	int32	10
314	Meter 8 VARh received	int32	10
316	Meter 9 VARh received	int32	10
318	Meter 10 VARh received	int32	10
320	Meter 11 VARh received	int32	10
322	Meter 12 VARh received	int32	10
400	Meter 1 VAh	int32	10
402	Meter 2 VAh	int32	10
404	Meter 3 VAh	int32	10
406	Meter 4 VAh	int32	10
408	Meter 5 VAh	int32	10
410	Meter 6 VAh	int32	10
412	Meter 7 VAh	int32	10
414	Meter 8 VAh	int32	10
416	Meter 9 VAh	int32	10
418	Meter 10 VAh	int32	10
420	Meter 11 VAh	int32	10
422	Meter 12 VAh	int32	10
600	Meter 1 Watts	int32	10
602	Meter 2 Watts	int32	10
604	Meter 3 Watts	int32	10
606	Meter 4 Watts	int32	10
608	Meter 5 Watts	int32	10
610	Meter 6 Watts	int32	10
612	Meter 7 Watts	int32	10
614	Meter 8 Watts	int32	10
616	Meter 9 Watts	int32	10
618	Meter 10 Watts	int32	10
620	Meter 11 Watts	int32	10
622	Meter 12 Watts	int32	10
700	Meter 1 VAR	int32	10
702	Meter 2 VAR	int32	10
704	Meter 3 VAR	int32	10
706	Meter 4 VAR	int32	10
708	Meter 5 VAR	int32	10

Address	Name	Type	Radix
710	Meter 6 VAR	int32	10
712	Meter 7 VAR	int32	10
714	Meter 8 VAR	int32	10
716	Meter 9 VAR	int32	10
718	Meter 10 VAR	int32	10
720	Meter 12 VAR	int32	10
800	Meter 1 VA	int32	10
802	Meter 2 VA	int32	10
804	Meter 3 VA	int32	10
806	Meter 4 VA	int32	10
808	Meter 5 VA	int32	10
810	Meter 6 VA	int32	10
812	Meter 7 VA	int32	10
814	Meter 8 VA	int32	10
816	Meter 9 VA	int32	10
818	Meter 10 VA	int32	10
820	Meter 11 VA	int32	10
822	Meter 12 VA	int32	10
900	Meter 1 pf	float32	10
902	Meter 2 pf	float32	10
904	Meter 3 pf	float32	10
906	Meter 4 pf	float32	10
908	Meter 5 pf	float32	10
910	Meter 6 pf	float32	10
912	Meter 7 pf	float32	10
914	Meter 8 pf	float32	10
916	Meter 9 pf	float32	10
918	Meter 10 pf	float32	10
920	Meter 11 pf	float32	10
922	Meter 12 pf	float32	10
1000	Meter 1-1 Current	float32	10
1002	Meter 2-1 Current	float32	10
1004	Meter 3-1 Current	float32	10
1006	Meter 4-1 Current	float32	10
1008	Meter 5-1 Current	float32	10
1010	Meter 6-1 Current	float32	10
1012	Meter 7-1 Current	float32	10
1014	Meter 8-1 Current	float32	10
1016	Meter 9-1 Current	float32	10
1018	Meter 10-1 Current	float32	10

Address	Name	Type	Radix
1020	Meter 11-1 Current	float32	10
1022	Meter 12-1 Current	float32	10
1100	Meter 1-2 Current	float32	10
1102	Meter 2-2 Current	float32	10
1104	Meter 3-2 Current	float32	10
1106	Meter 4-2 Current	float32	10
1108	Meter 5-2 Current	float32	10
1110	Meter 6-2 Current	float32	10
1112	Meter 7-2 Current	float32	10
1114	Meter 8-2 Current	float32	10
1116	Meter 9-2 Current	float32	10
1118	Meter 10-2 Current	float32	10
1120	Meter 11-2 Current	float32	10
1122	Meter 12-2 Current	float32	10
1300	Meter 1-1 Voltage	float32	10
1302	Meter 2-1 Voltage	float32	10
1304	Meter 3-1 Voltage	float32	10
1306	Meter 4-1 Voltage	float32	10
1308	Meter 5-1 Voltage	float32	10
1310	Meter 6-1 Voltage	float32	10
1312	Meter 7-1 Voltage	float32	10
1314	Meter 8-1 Voltage	float32	10
1316	Meter 9-1 Voltage	float32	10
1318	Meter 10-1 Voltage	float32	10
1320	Meter 11-1 Voltage	float32	10
1322	Meter 12-1 Voltage	float32	10
1400	Meter 1-2 Voltage	float32	10
1402	Meter 2-2 Voltage	float32	10
1404	Meter 3-2 Voltage	float32	10
1406	Meter 4-2 Voltage	float32	10
1408	Meter 5-2 Voltage	float32	10
1410	Meter 6-2 Voltage	float32	10
1412	Meter 7-2 Voltage	float32	10
1414	Meter 8-2 Voltage	float32	10
1416	Meter 9-2 Voltage	float32	10
1418	Meter 10-2 Voltage	float32	10
1420	Meter 11-2 Voltage	float32	10
1422	Meter 12-2 Voltage	float32	10
1600	Meter 1-1 Watts	float32	10
1602	Meter 2-1 Watts	float32	10

Address	Name	Type	Radix
1604	Meter 3-1 Watts	float32	10
1606	Meter 4-1 Watts	float32	10
1608	Meter 5-1 Watts	float32	10
1610	Meter 6-1 Watts	float32	10
1612	Meter 7-1 Watts	float32	10
1614	Meter 8-1 Watts	float32	10
1616	Meter 9-1 Watts	float32	10
1618	Meter 10-1 Watts	float32	10
1620	Meter 11-1 Watts	float32	10
1622	Meter 12-1 Watts	float32	10
1700	Meter 1-2 Watts	float32	10
1702	Meter 2-2 Watts	float32	10
1704	Meter 3-2 Watts	float32	10
1706	Meter 4-2 Watts	float32	10
1708	Meter 5-2 Watts	float32	10
1710	Meter 6-2 Watts	float32	10
1712	Meter 7-2 Watts	float32	10
1714	Meter 8-2 Watts	float32	10
1716	Meter 9-2 Watts	float32	10
1718	Meter 10-2 Watts	float32	10
1720	Meter 11-2 Watts	float32	10
1722	Meter 12-2 Watts	float32	10
1900	Meter 1-1 VAR	float32	10
1902	Meter 2-1 VAR	float32	10
1904	Meter 3-1 VAR	float32	10
1906	Meter 4-1 VAR	float32	10
1908	Meter 5-1 VAR	float32	10
1910	Meter 6-1 VAR	float32	10
1912	Meter 7-1 VAR	float32	10
1914	Meter 8-1 VAR	float32	10
1916	Meter 9-1 VAR	float32	10
1918	Meter 10-1 VAR	float32	10
1920	Meter 11-1 VAR	float32	10
1922	Meter 12-1 VAR	float32	10
2000	Meter 1-2 VAR	float32	10
2002	Meter 2-2 VAR	float32	10
2004	Meter 3-2 VAR	float32	10
2006	Meter 4-2 VAR	float32	10
2008	Meter 5-2 VAR	float32	10
2010	Meter 6-2 VAR	float32	10

Address	Name	Type	Radix
2012	Meter 7-2 VAR	float32	10
2014	Meter 8-2 VAR	float32	10
2016	Meter 9-2 VAR	float32	10
2018	Meter 10-2 VAR	float32	10
2020	Meter 11-2 VAR	float32	10
2022	Meter 12-2 VAR	float32	10
2200	Meter 1-1 VA	float32	10
2202	Meter 2-1 VA	float32	10
2204	Meter 3-1 VA	float32	10
2206	Meter 4-1 VA	float32	10
2208	Meter 5-1 VA	float32	10
2210	Meter 6-1 VA	float32	10
2212	Meter 7-1 VA	float32	10
2214	Meter 8-1 VA	float32	10
2216	Meter 9-1 VA	float32	10
2218	Meter 10-1 VA	float32	10
2220	Meter 11-1 VA	float32	10
2222	Meter 12-1 VA	float32	10
2300	Meter 1-2 VA	float32	10
2302	Meter 2-2 VA	float32	10
2304	Meter 3-2 VA	float32	10
2306	Meter 4-2 VA	float32	10
2308	Meter 5-2 VA	float32	10
2310	Meter 6-2 VA	float32	10
2312	Meter 7-2 VA	float32	10
2314	Meter 8-2 VA	float32	10
2316	Meter 9-2 VA	float32	10
2318	Meter 10-2 VA	float32	10
2320	Meter 11-2 VA	float32	10
2322	Meter 12-2 VA	float32	10
2500	Pulse 1 Input	int32	10
2502	Pulse 2 Input	int32	10
2600	Model	int16	16
2601	Model	int16	16
2602	Model	int16	16
2603	Model	int16	16
2604	Model	int16	16
2605	Model	int16	16
2606	Model	int16	16
2607	Model	int16	16

Address	Name	Type	Radix
2700	Time Stamp	int32	10
2702	Record Type	int32	10
2704	WH Interval Meter 1	int32	10
2706	WH Interval Meter 2	int32	10
2708	WH Interval Meter 3	int32	10
2710	WH Interval Meter 4	int32	10
2712	WH Interval Meter 5	int32	10
2714	WH Interval Meter 6	int32	10
2716	WH Interval Meter 7	int32	10
2718	WH Interval Meter 8	int32	10
2720	WH Interval Meter 9	int32	10
2722	WH Interval Meter 10	int32	10
2724	WH Interval Meter 11	int32	10
2726	WH Interval Meter 12	int32	10

How to read interval data (requires a firmware Manufacturing Build value of 1053 or higher)

Procedure:

1. Write the Time Stamp register with the time stamp of the interval to be retrieved.
2. Read the Time Stamp register to confirm which interval record(s) are currently mapped.
3. Read the Record Type register. This provides the record type currently mapped.
4. Read the records of interest from the Interval Meter X registers.
5. To read subsequent records, repeat from step 2 until all the records of interest have been read.

   Note: The Time Stamp register will auto-increment to the next interval each time it is read. If it stops incrementing, all available intervals have been read. If a new record is stored, the Time Stamp register will increment when read.

Notes:
Time Stamp information

- Time stamps are in Unix format.
- Time stamps mark the END of a given interval.
- Writing to the Time Stamp register sets a starting point for reading interval records.
- Time stamps are interpreted as follows:
    - If the requested time stamp is older than or equal to the oldest available record, the oldest time stamp is returned.
    - If the requested time stamp is newer than newest available record, the newest time stamp is returned.
    - If the requested time stamp is in between intervals, the next full interval time stamp is returned.
    - If the given time stamp is exactly on an interval boundary, that same time stamp is returned.

Table 3: EM4800 1P24 Registers

Address	Name	Type	Radix
0	Meter 1 Wh delivered	int32	10
2	Meter 2 Wh delivered	int32	10
4	Meter 3 Wh delivered	int32	10
6	Meter 4 Wh delivered	int32	10
8	Meter 5 Wh delivered	int32	10
10	Meter 6 Wh delivered	int32	10
12	Meter 7 Wh delivered	int32	10
14	Meter 8 Wh delivered	int32	10
16	Meter 9 Wh delivered	int32	10
18	Meter 10 Wh delivered	int32	10
20	Meter 11 Wh delivered	int32	10
22	Meter 12 Wh delivered	int32	10
24	Meter 13 Wh delivered	int32	10
26	Meter 14 Wh delivered	int32	10
28	Meter 15 Wh delivered	int32	10
30	Meter 16 Wh delivered	int32	10
32	Meter 17 Wh delivered	int32	10
34	Meter 18 Wh delivered	int32	10
36	Meter 19 Wh delivered	int32	10
38	Meter 20 Wh delivered	int32	10
40	Meter 21 Wh delivered	int32	10
42	Meter 22 Wh delivered	int32	10
44	Meter 23 Wh delivered	int32	10
46	Meter 24 Wh delivered	int32	10
100	Meter 1 Wh received	int32	10
102	Meter 2 Wh received	int32	10
104	Meter 3 Wh received	int32	10
106	Meter 4 Wh received	int32	10
108	Meter 5 Wh received	int32	10
110	Meter 6 Wh received	int32	10
112	Meter 7 Wh received	int32	10
114	Meter 8 Wh received	int32	10
116	Meter 9 Wh received	int32	10
118	Meter 10 Wh received	int32	10
120	Meter 11 Wh received	int32	10
122	Meter 12 Wh received	int32	10
124	Meter 13 Wh received	int32	10
126	Meter 14 Wh received	int32	10

Address	Name	Type	Radix
128	Meter 15 Wh received	int32	10
130	Meter 16 Wh received	int32	10
132	Meter 17 Wh received	int32	10
134	Meter 18 Wh received	int32	10
136	Meter 19 Wh received	int32	10
138	Meter 20 Wh received	int32	10
140	Meter 21 Wh received	int32	10
142	Meter 22 Wh received	int32	10
144	Meter 23 Wh received	int32	10
146	Meter 24 Wh received	int32	10
200	Meter 1 VARh delivered	int32	10
202	Meter 2 VARh delivered	int32	10
204	Meter 3 VARh delivered	int32	10
206	Meter 4 VARh delivered	int32	10
208	Meter 5 VARh delivered	int32	10
210	Meter 6 VARh delivered	int32	10
212	Meter 7 VARh delivered	int32	10
214	Meter 8 VARh delivered	int32	10
216	Meter 9 VARh delivered	int32	10
218	Meter 10 VARh delivered	int32	10
220	Meter 11 VARh delivered	int32	10
222	Meter 12 VARh delivered	int32	10
224	Meter 13 VARh delivered	int32	10
226	Meter 14 VARh delivered	int32	10
228	Meter 15 VARh delivered	int32	10
230	Meter 16 VARh delivered	int32	10
232	Meter 17 VARh delivered	int32	10
234	Meter 18 VARh delivered	int32	10
236	Meter 19 VARh delivered	int32	10
238	Meter 20 VARh delivered	int32	10
240	Meter 21 VARh delivered	int32	10
242	Meter 22 VARh delivered	int32	10
244	Meter 23 VARh delivered	int32	10
246	Meter 24 VARh delivered	int32	10
300	Meter 1 VARh received	int32	10
302	Meter 2 VARh received	int32	10
304	Meter 3 VARh received	int32	10
306	Meter 4 VARh received	int32	10
308	Meter 5 VARh received	int32	10
310	Meter 6 VARh received	int32	10

Address	Name	Type	Radix
312	Meter 7 VARh received	int32	10
314	Meter 8 VARh received	int32	10
316	Meter 9 VARh received	int32	10
318	Meter 10 VARh received	int32	10
320	Meter 11 VARh received	int32	10
322	Meter 12 VARh received	int32	10
324	Meter 13 VARh received	int32	10
326	Meter 14 VARh received	int32	10
328	Meter 15 VARh received	int32	10
330	Meter 16 VARh received	int32	10
332	Meter 17 VARh received	int32	10
334	Meter 18 VARh received	int32	10
336	Meter 19 VARh received	int32	10
338	Meter 20 VARh received	int32	10
340	Meter 21 VARh received	int32	10
342	Meter 22 VARh received	int32	10
344	Meter 23 VARh received	int32	10
346	Meter 24 VARh received	int32	10
400	Meter 1 VAh	int32	10
402	Meter 2 VAh	int32	10
404	Meter 3 VAh	int32	10
406	Meter 4 VAh	int32	10
408	Meter 5 VAh	int32	10
410	Meter 6 VAh	int32	10
412	Meter 7 VAh	int32	10
414	Meter 8 VAh	int32	10
416	Meter 9 VAh	int32	10
418	Meter 10 VAh	int32	10
420	Meter 11 VAh	int32	10
422	Meter 12 VAh	int32	10
424	Meter 13 VAh	int32	10
426	Meter 14 VAh	int32	10
428	Meter 15 VAh	int32	10
430	Meter 16 VAh	int32	10
432	Meter 17 VAh	int32	10
434	Meter 18 VAh	int32	10
436	Meter 19 VAh	int32	10
438	Meter 20 VAh	int32	10
440	Meter 21 VAh	int32	10
442	Meter 22 VAh	int32	10

Address	Name	Type	Radix
444	Meter 23 VAh	int32	10
446	Meter 24 VAh	int32	10
600	Meter 1 Watts	int32	10
602	Meter 2 Watts	int32	10
604	Meter 3 Watts	int32	10
606	Meter 4 Watts	int32	10
608	Meter 5 Watts	int32	10
610	Meter 6 Watts	int32	10
612	Meter 7 Watts	int32	10
614	Meter 8 Watts	int32	10
616	Meter 9 Watts	int32	10
618	Meter 10 Watts	int32	10
620	Meter 11 Watts	int32	10
622	Meter 12 Watts	int32	10
624	Meter 13 Watts	int32	10
626	Meter 14 Watts	int32	10
628	Meter 15 Watts	int32	10
630	Meter 16 Watts	int32	10
632	Meter 17 Watts	int32	10
634	Meter 18 Watts	int32	10
636	Meter 19 Watts	int32	10
638	Meter 20 Watts	int32	10
640	Meter 21 Watts	int32	10
642	Meter 22 Watts	int32	10
644	Meter 23 Watts	int32	10
646	Meter 24 Watts	int32	10
700	Meter 1 VARs	int32	10
702	Meter 2 VARs	int32	10
704	Meter 3 VARs	int32	10
706	Meter 4 VARs	int32	10
708	Meter 5 VARs	int32	10
710	Meter 6 VARs	int32	10
712	Meter 7 VARs	int32	10
714	Meter 8 VARs	int32	10
716	Meter 9 VARs	int32	10
718	Meter 10 VARs	int32	10
720	Meter 11 VARs	int32	10
722	Meter 12 VARS	int32	10
724	Meter 13 VARs	int32	10
726	Meter 14 VARs	int32	10

Address	Name	Type	Radix
728	Meter 15 VARs	int32	10
730	Meter 16 VARs	int32	10
732	Meter 17 VARs	int32	10
734	Meter 18 VARs	int32	10
736	Meter 19 VARs	int32	10
738	Meter 20 VARs	int32	10
740	Meter 21 VARs	int32	10
742	Meter 22 VARs	int32	10
744	Meter 23 VARs	int32	10
746	Meter 24 VARs	int32	10
800	Meter 1 VA	int32	10
802	Meter 2 VA	int32	10
804	Meter 3 VA	int32	10
806	Meter 4 VA	int32	10
808	Meter 5 VA	int32	10
810	Meter 6 VA	int32	10
812	Meter 7 VA	int32	10
814	Meter 8 VA	int32	10
816	Meter 9 VA	int32	10
818	Meter 10 VA	int32	10
820	Meter 11 VA	int32	10
822	Meter 12 VA	int32	10
824	Meter 13 VA	int32	10
826	Meter 14 VA	int32	10
828	Meter 15 VA	int32	10
830	Meter 16 VA	int32	10
832	Meter 17 VA	int32	10
834	Meter 18 VA	int32	10
836	Meter 19 VA	int32	10
838	Meter 20 VA	int32	10
840	Meter 21 VA	int32	10
842	Meter 22 VA	int32	10
844	Meter 23 VA	int32	10
846	Meter 24 VA	int32	10
900	Meter 1 pf	float32	10
902	Meter 2 pf	float32	10
904	Meter 3 pf	float32	10
906	Meter 4 pf	float32	10
908	Meter 5 pf	float32	10
910	Meter 6 pf	float32	10

Address	Name	Type	Radix
912	Meter 7 pf	float32	10
914	Meter 8 pf	float32	10
916	Meter 9 pf	float32	10
918	Meter 10 pf	float32	10
920	Meter 11 pf	float32	10
922	Meter 12 pf	float32	10
924	Meter 13 pf	float32	10
926	Meter 14 pf	float32	10
928	Meter 15 pf	float32	10
930	Meter 16 pf	float32	10
932	Meter 17 pf	float32	10
934	Meter 18 pf	float32	10
936	Meter 19 pf	float32	10
938	Meter 20 pf	float32	10
940	Meter 21 pf	float32	10
942	Meter 22 pf	float32	10
944	Meter 23 pf	float32	10
946	Meter 24 pf	float32	10
1000	Meter 1 Current	float32	10
1002	Meter 2 Current	float32	10
1004	Meter 3 Current	float32	10
1006	Meter 4 Current	float32	10
1008	Meter 5 Current	float32	10
1010	Meter 6 Current	float32	10
1012	Meter 7 Current	float32	10
1014	Meter 8 Current	float32	10
1016	Meter 9 Current	float32	10
1018	Meter 10 Current	float32	10
1020	Meter 11 Current	float32	10
1022	Meter 12 Current	float32	10
1024	Meter 13 Current	float32	10
1026	Meter 14 Current	float32	10
1028	Meter 15 Current	float32	10
1030	Meter 16 Current	float32	10
1032	Meter 17 Current	float32	10
1034	Meter 18 Current	float32	10
1036	Meter 19 Current	float32	10
1038	Meter 20 Current	float32	10
1040	Meter 21 Current	float32	10
1042	Meter 22 Current	float32	10

Address	Name	Type	Radix
1044	Meter 23 Current	float32	10
1046	Meter 24 Current	float32	10
1300	Meter 1 Voltage	float32	10
1302	Meter 2 Voltage	float32	10
1304	Meter 3 Voltage	float32	10
1306	Meter 4 Voltage	float32	10
1308	Meter 5 Voltage	float32	10
1310	Meter 6 Voltage	float32	10
1312	Meter 7 Voltage	float32	10
1314	Meter 8 Voltage	float32	10
1316	Meter 9 Voltage	float32	10
1318	Meter 10 Voltage	float32	10
1320	Meter 11 Voltage	float32	10
1322	Meter 12 Voltage	float32	10
1324	Meter 13 Voltage	float32	10
1326	Meter 14 Voltage	float32	10
1328	Meter 15 Voltage	float32	10
1330	Meter 16 Voltage	float32	10
1332	Meter 17 Voltage	float32	10
1334	Meter 18 Voltage	float32	10
1336	Meter 19 Voltage	float32	10
1338	Meter 20 Voltage	float32	10
1340	Meter 21 Voltage	float32	10
1342	Meter 22 Voltage	float32	10
1344	Meter 23 Voltage	float32	10
2500	Pulse 1 Input	int32	10
2502	Pulse 2 Input	int32	10
2600	Model	int16	16
2601	Model	int16	16
2602	Model	int16	16
2603	Model	int16	16
2604	Model	int16	16
2605	Model	int16	16
2606	Model	int16	16
2607	Model	int16	16
2700	Time Stamp	int32	10
2702	Record Type	int32	10
2704	WH Interval Meter 1	int32	10
2706	WH Interval Meter 2	int32	10
2708	WH Interval Meter 3	int32	10

Address	Name	Type	Radix
2710	WH Interval Meter 4	int32	10
2712	WH Interval Meter 5	int32	10
2714	WH Interval Meter 6	int32	10
2716	WH Interval Meter 7	int32	10
2718	WH Interval Meter 8	int32	10
2720	WH Interval Meter 9	int32	10
2722	WH Interval Meter 10	int32	10
2724	WH Interval Meter 11	int32	10
2726	WH Interval Meter 12	int32	10
2704	WH Interval Meter 13	int32	10
2706	WH Interval Meter 14	int32	10
2708	WH Interval Meter15	int32	10
2710	WH Interval Meter 16	int32	10
2712	WH Interval Meter 17	int32	10
2714	WH Interval Meter 18	int32	10
2716	WH Interval Meter 19	int32	10
2718	WH Interval Meter 20	int32	10
2720	WH Interval Meter 21	int32	10
2722	WH Interval Meter 22	int32	10
2724	WH Interval Meter 23	int32	10
2726	WH Interval Meter 24	int32	10

How to read interval data (requires a firmware Manufacturing Build value of 1053 or higher)

Procedure:

1. Write the Time Stamp register with the time stamp of the interval to be retrieved.
2. Read the Time Stamp register to confirm which interval record(s) are currently mapped.
3. Read the Record Type register. This provides the record type currently mapped.
4. Read the records of interest from the Interval Meter X registers.
5. To read subsequent records, repeat from step 2 until all the records of interest have been read.

   Note: The Time Stamp register will auto-increment to the next interval each time it is read. If it stops incrementing, all available intervals have been read. If a new record is stored, the Time Stamp register will increment when read.

Notes:
Time Stamp information

- Time stamps are in Unix format.
- Time stamps mark the END of a given interval.
- Writing to the Time Stamp register sets a starting point for reading interval records.
- Time stamps are interpreted as follows:
    - If the requested time stamp is older than or equal to the oldest available record, the oldest time stamp is returned.
    - If the requested time stamp is newer than newest available record, the newest time stamp is returned.
    - If the requested time stamp is in between intervals, the next full interval time stamp is returned.
    - If the given time stamp is exactly on an interval boundary, that same time stamp is returned.