

Annex - Prometer 100 MODBUS protocol Ver (0B01)

Starting
Address

Ver & Rev information

MODBUS Register	Description	Unit	R/W
19	TO 19	Protocol Version (MS byte) and Revision (LS Byte)	NA R

Registers for General Information

MODBUS Register	Description	Unit	R/W
1001	TO 1008	Meter Serial Number (16 digit)	NA R
1009	TO 1012	Meter Software Name	NA R
1013	TO 1014	Meter Primary Voltage	Volt R
1015	TO 1016	Meter Secondary Voltage	Volt R
1017	TO 1018	Meter Primary Current	Amp R
1019	TO 1020	Meter Secondary Current	Amp R
1021	TO 1022	Meter Maximum Current	Amp R
1023	TO 1024	0 - HT3, 1 - HT4, 2 - LT 3CT 4W	NA R

Note:

1. Primary voltage shall reply NAN in case of LT meter type.
2. MODBUS register 989 to 1000 is reserved for internal purpose.

Registers for General Information

MODBUS Register	Description	Unit	R/W
1051	TO 1052	MODBUS ID (1 to 247)	NA R/W
1053	TO 1054	MODBUS baud rate (1200, 2400, 4800, 9600, 19200, 38400, 57600)	NA R/W
1055	TO 1056	Real time will be in unit of seconds since 1 JAN 1988 00:00:00 (excluding DST)	NA R/W
1057	TO 1060	Real time (excluding DST) YYYY - Years, MM - Month, DD - Date HH - Hour, MM - Minute, SS - Second	NA R/W
1061	TO 1062	Season time will be in unit of seconds since 1 JAN 1988 00:00:00	NA R/W
1063	TO 1066	Season Time YYYY - Years, MM - Month, DD - Date HH - Hour, MM - Minute, SS - Second	NA R/W

Note: b denotes that the write operation on these parameters is not allowed via TCP-IP

Registers for Instantaneous Parameters Group 1

MODBUS Register	Description	Unit	R/W
1101	TO 1102	Phase voltage L1	Volt R
1103	TO 1104	Phase voltage L2	Volt R
1105	TO 1106	Phase voltage L3	Volt R
1107	TO 1108	Phase to phase voltage L1 - L2	Volt R
1109	TO 1110	Phase to phase voltage L2 - L3	Volt R
1111	TO 1112	Phase to phase voltage L3 - L1	Volt R
1113	TO 1114	Line current L1	Amp R
1115	TO 1116	Line current L2	Amp R
1117	TO 1118	Line current L3	Amp R

1119	TO	1120	Three phase average voltages % of Vnominal	%	R
1121	TO	1122	All phase Power factor	NA	R
1123	TO	1124	Frequency Hz	Hz	R
1125	TO	1126	All phase active power (Total)	KW	R
1127	TO	1128	All phase reactive power	KVAr	R
1129	TO	1130	All phase apparent power	KVA	R
1131	TO	1132	All phase active power (Fundamental)	KW	R

Note: ^c For 3 wire meters phase voltage is NAN.

Registers for Instantaneous Parameters Group 2

1201

MODBUS Register		Description		Unit	R/W
1201	TO	1202	Phase Symmetry voltage L1	Degree	R
1203	TO	1204	Phase Symmetry voltage L2	Degree	R
1205	TO	1206	Phase Symmetry voltage L3	Degree	R
1207	TO	1208	Phase Symmetry current L1	Degree	R
1209	TO	1210	Phase Symmetry current L2	Degree	R
1211	TO	1212	Phase Symmetry current L3	Degree	R
1213	TO	1214	THD voltage L1	%	R
1215	TO	1216	THD voltage L2	%	R
1217	TO	1218	THD voltage L3	%	R
1219	TO	1220	THD current L1	%	R
1221	TO	1222	THD current L2	%	R
1223	TO	1224	THD current L3	%	R
1225	TO	1226	THD power L1	%	R
1227	TO	1228	THD power L2	%	R
1229	TO	1230	THD power L3	%	R

Registers for Instantaneous Parameters Group 3

1301

MODBUS Register		Description		Unit	R/W
1301	TO	1302	Active power L1(T)	kW	R
1303	TO	1304	Active power L2(T)	kW	R
1305	TO	1306	Active power L3(T)	kW	R
1307	TO	1308	Active power L1(F)	kW	R
1309	TO	1310	Active power L2(F)	kW	R
1311	TO	1312	Active power L3(F)	kW	R
1313	TO	1314	Reactive power L1	kVAr	R
1315	TO	1316	Reactive power L2	kVAr	R
1317	TO	1318	Reactive power L3	kVAr	R
1319	TO	1320	Apparent power L1	kVA	R
1321	TO	1322	Apparent power L2	kVA	R
1323	TO	1324	Apparent power L3	kVA	R
1325	TO	1326	Power factor L1	NA	R
1327	TO	1328	Power factor L2	NA	R
1329	TO	1330	Power factor L3	NA	R
1331	TO	1332	Phase angle L1	Degree	R
1333	TO	1334	Phase angle L2	Degree	R
1335	TO	1336	Phase angle L3	Degree	R

Note:

1. MODBUS register 1297 to 1300 is reserved for internal purpose.

Registers for Energy Parameters

1401

MODBUS Register		Description		Unit	R/W
1401	TO	1402	Active import (Fundamental + Harmonics)	kWh	R
1403	TO	1404	Active export (Fundamental + Harmonics)	kWh	R
1405	TO	1406	Active import (Fundamental)	kWh	R
1407	TO	1408	Active export (Fundamental)	kWh	R
1409	TO	1410	Reactive - Quadrant 1	kVArh	R
1411	TO	1412	Reactive - Quadrant 4	kVArh	R
1413	TO	1414	Reactive - Quadrant 2	kVArh	R

1415	TO	1416	Reactive - Quadrant 3	kVArh	R
1417	TO	1418	Apparent while active import	kVAh	R
1419	TO	1420	Apparent while active export	kVAh	R
1421	TO	1422	Reactive Import (Q1+Q2)	kVArh	R
1423	TO	1424	Reactive Export (Q3+Q4)	kVArh	R
1425	TO	1426	Reactive High Import	kVArh	R
1427	TO	1428	Reactive High Export	kVArh	R
1429	TO	1430	Reactive Low Import	kVArh	R
1431	TO	1432	Reactive Low Export	kVArh	R
1433	TO	1434	Reactive Lag (Inductive) (Q1+Q3)	kVArh	R
1435	TO	1436	Reactive Lead (Capacitive) (Q2+Q4)	kVArh	R
1437	TO	1438	Active Import (Fundamental + Harmonics) L1	kWh	R
1439	TO	1440	Active Import (Fundamental + Harmonics) L2	kWh	R
1441	TO	1442	Active Import (Fundamental + Harmonics) L3	kWh	R
1443	TO	1444	Active Export (Fundamental + Harmonics) L1	kWh	R
1445	TO	1446	Active Export (Fundamental + Harmonics) L2	kWh	R
1447	TO	1448	Active Export (Fundamental + Harmonics) L3	kWh	R
1449	TO	1450	Net Active (Imp – Exp)	kWh	R
1451	TO	1452	Net Reactive (Q1+Q2-Q3-Q4)	kVArh	R
1453	TO	1454	Net reactive High	kVArh	R
1455	TO	1456	Net reactive Low	kVArh	R
1457	TO	1458	Active Import (Fundamental) L1	kWh	R
1459	TO	1460	Active Import (Fundamental) L2	kWh	R
1461	TO	1462	Active Import (Fundamental) L3	kWh	R
1463	TO	1464	Active Export (Fundamental) L1	kWh	R
1465	TO	1466	Active Export (Fundamental) L2	kWh	R
1467	TO	1468	Active Export (Fundamental) L3	kWh	R

Registers for Minute Frozen Parameters

1501

MODBUS Register			Description	Unit	R/W
1501	TO	1502	Minute number of the day	NA	R
1503	TO	1504	Power On Minutes	Min	R
1505	TO	1506	Power Off Minutes	Min	R
1507	TO	1508	Active import (Fundamental + Harmonics)	kWh	R
1509	TO	1510	Active export (Fundamental + Harmonics)	kWh	R
1511	TO	1512	Active import (Fundamental)	kWh	R
1513	TO	1514	Active export (Fundamental)	kWh	R
1515	TO	1516	Reactive - Quadrant 1	kVArh	R
1517	TO	1518	Reactive - Quadrant 4	kVArh	R
1519	TO	1520	Reactive - Quadrant 2	kVArh	R
1521	TO	1522	Reactive - Quadrant 3	kVArh	R
1523	TO	1524	Apparent while active import	kVAh	R
1525	TO	1526	Apparent while active export	kVAh	R
1527	TO	1528	Reactive Import (Q1+Q2)	kVArh	R
1529	TO	1530	Reactive Export (Q3+Q4)	kVArh	R
1531	TO	1532	Reactive High Import	kVArh	R
1533	TO	1534	Reactive High Export	kVArh	R
1535	TO	1536	Reactive Low Import	kVArh	R
1537	TO	1538	Reactive Low Export	kVArh	R
1539	TO	1540	Reactive Lag (Inductive) (Q1+Q3)	kVArh	R
1541	TO	1542	Reactive Lead (Capacitive) (Q2+Q4)	kVArh	R
1543	TO	1544	Active Import (Fundamental + Harmonics) L1	kWh	R
1545	TO	1546	Active Import (Fundamental + Harmonics) L2	kWh	R
1547	TO	1548	Active Import (Fundamental + Harmonics) L3	kWh	R
1549	TO	1550	Active Export (Fundamental + Harmonics) L1	kWh	R
1551	TO	1552	Active Export (Fundamental + Harmonics) L2	kWh	R
1553	TO	1554	Active Export (Fundamental + Harmonics) L3	kWh	R
1555	TO	1556	Net Active (Imp – Exp)	kWh	R

1557	TO	1558	Net Reactive (Q1+Q2-Q3-Q4)	kVArh	R
1559	TO	1560	Net reactive High	kVArh	R
1561	TO	1562	Net reactive Low	kVArh	R
1563	TO	1564	Active Import (Fundamental) L1	kWh	R
1565	TO	1566	Active Import (Fundamental) L2	kWh	R
1567	TO	1568	Active Import (Fundamental) L3	kWh	R
1569	TO	1570	Active Export (Fundamental) L1	kWh	R
1571	TO	1572	Active Export (Fundamental) L2	kWh	R
1573	TO	1574	Active Export (Fundamental) L3	kWh	R

Registers for Current SIP Parameters for logger 1

1701

MODBUS Register		Description		Unit	R/W
1701	TO	1702	Status Flag	NA	R
1703	TO	1704	SIP number of the day	NA	R
1705	TO	1706	Avg. Frequency since last SIP	Hz	R
1707	TO	1708	Average voltage since last SIP	Volt	R
1709	TO	1710	Active import (Fundamental + Harmonics)	kWh	R
1711	TO	1712	Active export (Fundamental + Harmonics)	kWh	R
1713	TO	1714	Active import (Fundamental)	kWh	R
1715	TO	1716	Active export (Fundamental)	kWh	R
1717	TO	1718	Reactive - Quadrant 1	kVArh	R
1719	TO	1720	Reactive - Quadrant 4	kVArh	R
1721	TO	1722	Reactive - Quadrant 2	kVArh	R
1723	TO	1724	Reactive - Quadrant 3	kVArh	R
1725	TO	1726	Apparent while active import	kVAh	R
1727	TO	1728	Apparent while active export	kVAh	R
1729	TO	1730	Net Active (Imp – Exp)	kWh	R
1731	TO	1732	Net Reactive (Q1+Q2-Q3-Q4)	kVArh	R
1733	TO	1734	Net reactive High	kVArh	R
1735	TO	1736	Net reactive Low	kVArh	R

Status Flag bit interpretation (If bit value is 1 than condition is true)

Registers for Previous SIP Parameters for logger 1

1801

MODBUS Register		Description		Unit	R/W
1801	TO	1802	Status Flag	NA	R
1803	TO	1804	SIP number of the day	NA	R
1805	TO	1806	Previous SIP Average Frequency	Hz	R
1807	TO	1808	Previous SIP Avg Voltage	Volt	R
1809	TO	1810	Active import (Fundamental + Harmonics)	kWh	R
1811	TO	1812	Active export (Fundamental + Harmonics)	kWh	R
1813	TO	1814	Active import (Fundamental)	kWh	R
1815	TO	1816	Active export (Fundamental)	kWh	R
1817	TO	1818	Reactive - Quadrant 1	kVArh	R
1819	TO	1820	Reactive - Quadrant 4	kVArh	R
1821	TO	1822	Reactive - Quadrant 2	kVArh	R
1823	TO	1824	Reactive - Quadrant 3	kVArh	R
1825	TO	1826	Apparent while active import	kVAh	R
1827	TO	1828	Apparent while active export	kVAh	R
1829	TO	1830	Reactive Import (Q1+Q2)	kVArh	R
1831	TO	1832	Reactive Export (Q3+Q4)	kVArh	R
1833	TO	1834	Reactive High Import	kVArh	R
1835	TO	1836	Reactive High Export	kVArh	R
1837	TO	1838	Reactive Low Import	kVArh	R
1839	TO	1840	Reactive Low Export	kVArh	R
1841	TO	1842	Reactive Lag (Inductive) (Q1+Q3)	kVArh	R
1843	TO	1844	Reactive Lead (Capacitive) (Q2+Q4)	kVArh	R
1845	TO	1846	Active Import (Fundamental + Harmonics) L1	kWh	R
1847	TO	1848	Active Import (Fundamental + Harmonics) L2	kWh	R
1849	TO	1850	Active Import (Fundamental + Harmonics) L3	kWh	R

1851	TO	1852	Active Export (Fundamental + Harmonics) L1	kWh	R
1853	TO	1854	Active Export (Fundamental + Harmonics) L2	kWh	R
1855	TO	1856	Active Export (Fundamental + Harmonics) L3	kWh	R
1857	TO	1858	Net Active (Imp – Exp)	kWh	R
1859	TO	1860	Net Reactive (Q1+Q2-Q3-Q4)	kVArh	R
1861	TO	1862	Net reactive High	kVArh	R
1863	TO	1864	Net reactive Low	kVArh	R
1865	TO	1866	Active Import (Fundamental) L1	kWh	R
1867	TO	1868	Active Import (Fundamental) L2	kWh	R
1869	TO	1870	Active Import (Fundamental) L3	kWh	R
1871	TO	1872	Active Export (Fundamental) L1	kWh	R
1873	TO	1874	Active Export (Fundamental) L2	kWh	R
1875	TO	1876	Active Export (Fundamental) L3	kWh	R

Status Flag bit interpretation (Refer "Current SIP Consumption Parameters for logger 1")

Registers for Demand Value

2001

MODBUS Register			Description	Unit	R/W
2001	TO	2002	No of Billing Operation (MD Reset) since Manufacture / Reset	NA	R
2003	TO	2004	Current Maximum Demand since Billing - Active Import (Fundamental + Harmonics)	KW	R
2005	TO	2006	Current Maximum Demand since Billing - Active Export (Fundamental + Harmonics)	KW	R
2007	TO	2008	Current Maximum Demand since Billing - Active Import (Fundamental)	KW	R
2009	TO	2010	Current Maximum Demand since Billing - Active Export (Fundamental)	KW	R
2011	TO	2012	Current Maximum Demand since Billing - Apparent Import	kVA	R
2013	TO	2014	Current Maximum Demand since Billing - Apparent Export	kVA	R
2015	TO	2016	Previous Billing Maximum Demand - Active Import (Fundamental + Harmonics)	KW	R
2017	TO	2018	Previous Billing Maximum Demand - Active Export (Fundamental + Harmonics)	KW	R
2019	TO	2020	Previous Billing Maximum Demand - Active Import (Fundamental)	KW	R
2021	TO	2022	Previous Billing Maximum Demand - Active Export (Fundamental)	KW	R
2023	TO	2024	Previous Billing Maximum Demand - Apparent Import	kVA	R
2025	TO	2026	Previous Billing Maximum Demand - Apparent Export	kVA	R
2027	TO	2028	Cumulative Maximum Demand - Active Import (Fundamental + Harmonics)	KW	R
2029	TO	2030	Cumulative Maximum Demand - Active Export (Fundamental + Harmonics)	KW	R
2031	TO	2032	Cumulative Maximum Demand - Active Import (Fundamental)	KW	R
2033	TO	2034	Cumulative Maximum Demand - Active Export (Fundamental)	KW	R
2035	TO	2036	Cumulative Maximum Demand - Apparent Import	kVA	R
2037	TO	2038	Cumulative Maximum Demand - Apparent Export	kVA	R

Registers for Demand Date & Time

2101

MODBUS Register			Description	Unit	R/W
2101	TO	2104	Previous billing date and time (YYYY MM DD HH MM SS)	NA	R

2105	TO	2108	Date and Time of Current Maximum Demand since Billing - Active Import (Fundamental + Harmonics) (YYYY MM DD HH MM SS)	NA	R
2109	TO	2112	Date and Time of Current Maximum Demand since Billing - Active Export (Fundamental + Harmonics) (YYYY MM DD HH MM SS)	NA	R
2113	TO	2116	Date and Time of Current Maximum Demand since Billing - Active Import (Fundamental) (YYYY MM DD HH MM SS)	NA	R
2117	TO	2120	Date and Time of Current Maximum Demand since Billing - Active Export (Fundamental) (YYYY MM DD HH MM SS)	NA	R
2121	TO	2124	Date and Time of Current Maximum Demand since Billing - Apparent Import (YYYY MM DD HH MM SS)	NA	R
2125	TO	2128	Date and Time of Current Maximum Demand since Billing - Apparent Export (YYYY MM DD HH MM SS)	NA	R
2129	TO	2132	Date and Time of Previous Billing Maximum Demand - Active Import (Fundamental + Harmonics) (YYYY MM DD HH MM SS)	NA	R
2133	TO	2136	Date and Time of Previous Billing Maximum Demand - Active Export (Fundamental + Harmonics) (YYYY MM DD HH MM SS)	NA	R
2137	TO	2140	Date and Time of Previous Billing Maximum Demand - Active Import (Fundamental) (YYYY MM DD HH MM SS)	NA	R
2141	TO	2144	Date and Time of Previous Billing Maximum Demand - Active Export (Fundamental) (YYYY MM DD HH MM SS)	NA	R
2145	TO	2148	Date and Time of Previous Billing Maximum Demand - Apparent Import (YYYY MM DD HH MM SS)	NA	R
2149	TO	2152	Date and Time of Previous Billing Maximum Demand - Apparent Export (YYYY MM DD HH MM SS)	NA	R

Registers for Daily Energy Snapshot Parameters

2201

MODBUS Register			Description	Unit	R/W
2201	TO	2202	Active import (Fundamental + Harmonics)	kWh	R
2203	TO	2204	Active export (Fundamental + Harmonics)	kWh	R
2205	TO	2206	Active import (Fundamental)	kWh	R
2207	TO	2208	Active export (Fundamental)	kWh	R
2209	TO	2210	Reactive - Quadrant 1	kVArh	R
2211	TO	2212	Reactive - Quadrant 4	kVArh	R
2213	TO	2214	Reactive - Quadrant 2	kVArh	R
2215	TO	2216	Reactive - Quadrant 3	kVArh	R
2217	TO	2218	Apparent while active import	kVAh	R
2219	TO	2220	Apparent while active export	kVAh	R
2221	TO	2222	Reactive Import (Q1+Q2)	kVArh	R
2223	TO	2224	Reactive Export (Q3+Q4)	kVArh	R
2225	TO	2226	Reactive High Import	kVArh	R
2227	TO	2228	Reactive High Export	kVArh	R
2229	TO	2230	Reactive Low Import	kVArh	R
2231	TO	2232	Reactive Low Export	kVArh	R
2233	TO	2234	Reactive Lag (Inductive) (Q1+Q3)	kVArh	R
2235	TO	2236	Reactive Lead (Capacitive) (Q2+Q4)	kVArh	R
2237	TO	2238	Active Import (Fundamental + Harmonics) L1	kWh	R
2239	TO	2240	Active Import (Fundamental + Harmonics) L2	kWh	R
2241	TO	2242	Active Import (Fundamental + Harmonics) L3	kWh	R
2243	TO	2244	Active Export (Fundamental + Harmonics) L1	kWh	R

2245	TO	2246	Active Export (Fundamental + Harmonics) L2	kWh	R
2247	TO	2248	Active Export (Fundamental + Harmonics) L3	kWh	R
2249	TO	2250	Net Active (Imp – Exp)	kWh	R
2251	TO	2252	Net Reactive (Q1+Q2-Q3-Q4)	kVArh	R
2253	TO	2254	Net reactive High	kVArh	R
2255	TO	2256	Net reactive Low	kVArh	R
2257	TO	2258	Active Import (Fundamental) L1	kWh	R
2259	TO	2260	Active Import (Fundamental) L2	kWh	R
2261	TO	2262	Active Import (Fundamental) L3	kWh	R
2263	TO	2264	Active Export (Fundamental) L1	kWh	R
2265	TO	2266	Active Export (Fundamental) L2	kWh	R
2267	TO	2268	Active Export (Fundamental) L3	kWh	R

Registers for Voltage Odd Harmonics

2301

MODBUS Register			Description	Unit	R/W
2301	TO	2302	L1 - fundamental Voltage	Volt	R
2303	TO	2304	L1 - Voltage 3rd Harmonic	Volt	R
2305	TO	2306	L1 - Voltage 5th Harmonic	Volt	R
2307	TO	2308	L1 - Voltage 7th Harmonic	Volt	R
2309	TO	2310	L1 - Voltage 9th Harmonic	Volt	R
2311	TO	2312	L1 - Voltage 11th Harmonic	Volt	R
2313	TO	2314	L1 - Voltage 13th Harmonic	Volt	R
2315	TO	2316	L1 - Voltage 15th Harmonic	Volt	R
2317	TO	2318	L1 - Voltage 17th Harmonic	Volt	R
2319	TO	2320	L1 - Voltage 19th Harmonic	Volt	R
2321	TO	2322	L1 - Voltage 21st Harmonic	Volt	R
2323	TO	2324	L1 - Voltage 23rd Harmonic	Volt	R
2325	TO	2326	L1 - Voltage 25th Harmonic	Volt	R
2327	TO	2328	L1 - Voltage 27th Harmonic	Volt	R
2329	TO	2330	L1 - Voltage 29th Harmonic	Volt	R
2331	TO	2332	L1 - Voltage 31st Harmonic	Volt	R
2333	TO	2334	L2 - fundamental Voltage	Volt	R
2335	TO	2336	L2 - Voltage 3rd Harmonic	Volt	R
2337	TO	2338	L2 - Voltage 5th Harmonic	Volt	R
2339	TO	2340	L2 - Voltage 7th Harmonic	Volt	R
2341	TO	2342	L2 - Voltage 9th Harmonic	Volt	R
2343	TO	2344	L2 - Voltage 11th Harmonic	Volt	R
2345	TO	2346	L2 - Voltage 13th Harmonic	Volt	R
2347	TO	2348	L2 - Voltage 15th Harmonic	Volt	R
2349	TO	2350	L2 - Voltage 17th Harmonic	Volt	R
2351	TO	2352	L2 - Voltage 19th Harmonic	Volt	R
2353	TO	2354	L2 - Voltage 21st Harmonic	Volt	R
2355	TO	2356	L2 - Voltage 23rd Harmonic	Volt	R
2357	TO	2358	L2 - Voltage 25th Harmonic	Volt	R
2359	TO	2360	L2 - Voltage 27th Harmonic	Volt	R
2361	TO	2362	L2 - Voltage 29th Harmonic	Volt	R
2363	TO	2364	L2 - Voltage 31st Harmonic	Volt	R
2365	TO	2366	L3 - fundamental Voltage	Volt	R
2367	TO	2368	L3 - Voltage 3rd Harmonic	Volt	R
2369	TO	2370	L3 - Voltage 5th Harmonic	Volt	R
2371	TO	2372	L3 - Voltage 7th Harmonic	Volt	R
2373	TO	2374	L3 - Voltage 9th Harmonic	Volt	R
2375	TO	2376	L3 - Voltage 11th Harmonic	Volt	R
2377	TO	2378	L3 - Voltage 13th Harmonic	Volt	R
2379	TO	2380	L3 - Voltage 15th Harmonic	Volt	R
2381	TO	2382	L3 - Voltage 17th Harmonic	Volt	R
2383	TO	2384	L3 - Voltage 19th Harmonic	Volt	R
2385	TO	2386	L3 - Voltage 21st Harmonic	Volt	R

2387	TO	2388	L3 - Voltage 23rd Harmonic	Volt	R
2389	TO	2390	L3 - Voltage 25th Harmonic	Volt	R
2391	TO	2392	L3 - Voltage 27th Harmonic	Volt	R
2393	TO	2394	L3 - Voltage 29th Harmonic	Volt	R
2395	TO	2396	L3 - Voltage 31st Harmonic	Volt	R

Registers for Current Odd Harmonics

2501

MODBUS Register		Description		Unit	R/W
2501	TO	2502	L1 - fundamental Current	Amp	R
2503	TO	2504	L1 - Current 3rd Harmonic	Amp	R
2505	TO	2506	L1 - Current 5th Harmonic	Amp	R
2507	TO	2508	L1 - Current 7th Harmonic	Amp	R
2509	TO	2510	L1 - Current 9th Harmonic	Amp	R
2511	TO	2512	L1 - Current 11th Harmonic	Amp	R
2513	TO	2514	L1 - Current 13th Harmonic	Amp	R
2515	TO	2516	L1 - Current 15th Harmonic	Amp	R
2517	TO	2518	L1 - Current 17th Harmonic	Amp	R
2519	TO	2520	L1 - Current 19th Harmonic	Amp	R
2521	TO	2522	L1 - Current 21st Harmonic	Amp	R
2523	TO	2524	L1 - Current 23rd Harmonic	Amp	R
2525	TO	2526	L1 - Current 25th Harmonic	Amp	R
2527	TO	2528	L1 - Current 27th Harmonic	Amp	R
2529	TO	2530	L1 - Current 29th Harmonic	Amp	R
2531	TO	2532	L1 - Current 31st Harmonic	Amp	R
2533	TO	2534	L2 - fundamental Current	Amp	R
2535	TO	2536	L2 - Current 3rd Harmonic	Amp	R
2537	TO	2538	L2 - Current 5th Harmonic	Amp	R
2539	TO	2540	L2 - Current 7th Harmonic	Amp	R
2541	TO	2542	L2 - Current 9th Harmonic	Amp	R
2543	TO	2544	L2 - Current 11th Harmonic	Amp	R
2545	TO	2546	L2 - Current 13th Harmonic	Amp	R
2547	TO	2548	L2 - Current 15th Harmonic	Amp	R
2549	TO	2550	L2 - Current 17th Harmonic	Amp	R
2551	TO	2552	L2 - Current 19th Harmonic	Amp	R
2553	TO	2554	L2 - Current 21st Harmonic	Amp	R
2555	TO	2556	L2 - Current 23rd Harmonic	Amp	R
2557	TO	2558	L2 - Current 25th Harmonic	Amp	R
2559	TO	2560	L2 - Current 27th Harmonic	Amp	R
2561	TO	2562	L2 - Current 29th Harmonic	Amp	R
2563	TO	2564	L2 - Current 31st Harmonic	Amp	R
2565	TO	2566	L3 - fundamental Current	Amp	R
2567	TO	2568	L3 - Current 3rd Harmonic	Amp	R
2569	TO	2570	L3 - Current 5th Harmonic	Amp	R
2571	TO	2572	L3 - Current 7th Harmonic	Amp	R
2573	TO	2574	L3 - Current 9th Harmonic	Amp	R
2575	TO	2576	L3 - Current 11th Harmonic	Amp	R
2577	TO	2578	L3 - Current 13th Harmonic	Amp	R
2579	TO	2580	L3 - Current 15th Harmonic	Amp	R
2581	TO	2582	L3 - Current 17th Harmonic	Amp	R
2583	TO	2584	L3 - Current 19th Harmonic	Amp	R
2585	TO	2586	L3 - Current 21st Harmonic	Amp	R
2587	TO	2588	L3 - Current 23rd Harmonic	Amp	R
2589	TO	2590	L3 - Current 25th Harmonic	Amp	R
2591	TO	2592	L3 - Current 27th Harmonic	Amp	R
2593	TO	2594	L3 - Current 29th Harmonic	Amp	R
2595	TO	2596	L3 - Current 31st Harmonic	Amp	R

Registers for instantaneous parameters 2

2701

MODBUS Register			Description	Unit	R/W
2701	TO	2702	External Register 1	Counter	R
2703	TO	2704	External Register 2	Counter	R
2705	TO	2706	External Register 3	Counter	R
2707	TO	2708	External Register 4	Counter	R

Registers for Events Parameters

2801

MODBUS Register			Description	Unit	R/W
2801	TO	2804	Current tamper information bit wise	NA	R
2805	TO	2806	V1 Sag event occurrence count	NA	R
2807	TO	2808	V2 Sag event occurrence count	NA	R
2809	TO	2810	V3 Sag event occurrence count	NA	R
2811	TO	2812	V1 Swell event occurrence count	NA	R
2813	TO	2814	V2 Swell event occurrence count	NA	R
2815	TO	2816	V3 Swell event occurrence count	NA	R
2817	TO	2818	V1 Interrupt event occurrence count	NA	R
2819	TO	2820	V2 Interrupt event occurrence count	NA	R
2821	TO	2822	V3 Interrupt event occurrence count	NA	R
2823	TO	2824	Voltage unbalance occurrence count	NA	R
2825	TO	2826	V1 Last sag event duration	Sec	R
2827	TO	2828	V2 Last sag event duration	Sec	R
2829	TO	2830	V3 Last sag event duration	Sec	R
2831	TO	2832	V1 Last swell event duration	Sec	R
2833	TO	2834	V2 Last swell event duration	Sec	R
2835	TO	2836	V3 Last swell event duration	Sec	R
2837	TO	2838	V1 Last interrupt event duration	Sec	R
2839	TO	2840	V2 Last interrupt event duration	Sec	R
2841	TO	2842	V3 Last interrupt event duration	Sec	R
2843	TO	2844	Last voltage unbalance event duration	Sec	R

Note: ^u If bit value is 1 than event condition persist. (Register 2804 -> LSB is Bit 0 and MSB is

Registers for Energy Parameters (64 Bit)

2901

MODBUS Register			Description	Unit	R/W
2901	TO	2904	Active import (Fundamental + Harmonics)	kWh	R
2905	TO	2908	Active export (Fundamental + Harmonics)	kWh	R
2909	TO	2912	Active import (Fundamental)	kWh	R
2913	TO	2916	Active export (Fundamental)	kWh	R
2917	TO	2920	Reactive - Quadrant 1	kVArh	R
2921	TO	2924	Reactive - Quadrant 4	kVArh	R
2925	TO	2928	Reactive - Quadrant 2	kVArh	R
2929	TO	2932	Reactive - Quadrant 3	kVArh	R
2933	TO	2936	Apparent while active import	kVAh	R
2937	TO	2940	Apparent while active export	kVAh	R
2941	TO	2944	Reactive Import (Q1+Q2)	kVArh	R
2945	TO	2948	Reactive Export (Q3+Q4)	kVArh	R
2949	TO	2952	Reactive High Import	kVArh	R
2953	TO	2956	Reactive High Export	kVArh	R
2957	TO	2960	Reactive Low Import	kVArh	R
2961	TO	2964	Reactive Low Export	kVArh	R
2965	TO	2968	Reactive Lag (Inductive) (Q1+Q3)	kVArh	R
2969	TO	2972	Reactive Lead (Capacitive) (Q2+Q4)	kVArh	R
2973	TO	2976	Active Import (Fundamental + Harmonics) L1	kWh	R
2977	TO	2980	Active Import (Fundamental + Harmonics) L2	kWh	R
2981	TO	2984	Active Import (Fundamental + Harmonics) L3	kWh	R
2985	TO	2988	Active Export (Fundamental + Harmonics) L1	kWh	R
2989	TO	2992	Active Export (Fundamental + Harmonics) L2	kWh	R
2993	TO	2996	Active Export (Fundamental + Harmonics) L3	kWh	R
2997	TO	3000	Net Active (Imp – Exp)	kWh	R

3001	TO	3004	Net Reactive (Q1+Q2-Q3-Q4)	kVArh	R
3005	TO	3008	Net reactive High	kVArh	R
3009	TO	3012	Net reactive Low	kVArh	R

Registers for Energy Parameters (64 Bit)

3051

MODBUS Register			Description	Unit	R/W
3051	TO	3054	Active Import (Fundamental) L1	kWh	R
3055	TO	3058	Active Import (Fundamental) L2	kWh	R
3059	TO	3062	Active Import (Fundamental) L3	kWh	R
3063	TO	3066	Active Export (Fundamental) L1	kWh	R
3067	TO	3070	Active Export (Fundamental) L2	kWh	R
3071	TO	3074	Active Export (Fundamental) L3	kWh	R

TOU Rate Registers and Energy Channels (1 to 7)

3201

MODBUS Register			Description	Unit	R/W
3201	TO	3202	TOU Rate Register Bit Mask. Bit Set means Energy Channel configured and vice a versa	NA	R
3203	TO	3204	Energy Channel 1 Linked with Rate Register 1	NA	R
3205	TO	3206	Energy Channel 1 Linked with Rate Register 2	NA	R
3207	TO	3208	Energy Channel 1 Linked with Rate Register 3	NA	R
3209	TO	3210	Energy Channel 1 Linked with Rate Register 4	NA	R
3211	TO	3212	Energy Channel 1 Linked with Rate Register 5	NA	R
3213	TO	3214	Energy Channel 1 Linked with Rate Register 6	NA	R
3215	TO	3216	Energy Channel 1 Linked with Rate Register 7	NA	R
3217	TO	3218	Energy Channel 1 Linked with Rate Register 8	NA	R
3219	TO	3220	Energy Channel 2 Linked with Rate Register 1	NA	R
3221	TO	3222	Energy Channel 2 Linked with Rate Register 2	NA	R
3223	TO	3224	Energy Channel 2 Linked with Rate Register 3	NA	R
3225	TO	3226	Energy Channel 2 Linked with Rate Register 4	NA	R
3227	TO	3228	Energy Channel 2 Linked with Rate Register 5	NA	R
3229	TO	3230	Energy Channel 2 Linked with Rate Register 6	NA	R
3231	TO	3232	Energy Channel 2 Linked with Rate Register 7	NA	R
3233	TO	3234	Energy Channel 2 Linked with Rate Register 8	NA	R
3235	TO	3236	Energy Channel 3 Linked with Rate Register 1	NA	R
3237	TO	3238	Energy Channel 3 Linked with Rate Register 2	NA	R
3239	TO	3240	Energy Channel 3 Linked with Rate Register 3	NA	R
3241	TO	3242	Energy Channel 3 Linked with Rate Register 4	NA	R
3243	TO	3244	Energy Channel 3 Linked with Rate Register 5	NA	R
3245	TO	3246	Energy Channel 3 Linked with Rate Register 6	NA	R
3247	TO	3248	Energy Channel 3 Linked with Rate Register 7	NA	R
3249	TO	3250	Energy Channel 3 Linked with Rate Register 8	NA	R
3251	TO	3252	Energy Channel 4 Linked with Rate Register 1	NA	R
3253	TO	3254	Energy Channel 4 Linked with Rate Register 2	NA	R
3255	TO	3256	Energy Channel 4 Linked with Rate Register 3	NA	R
3257	TO	3258	Energy Channel 4 Linked with Rate Register 4	NA	R
3259	TO	3260	Energy Channel 4 Linked with Rate Register 5	NA	R
3261	TO	3262	Energy Channel 4 Linked with Rate Register 6	NA	R
3263	TO	3264	Energy Channel 4 Linked with Rate Register 7	NA	R
3265	TO	3266	Energy Channel 4 Linked with Rate Register 8	NA	R
3267	TO	3268	Energy Channel 5 Linked with Rate Register 1	NA	R
3269	TO	3270	Energy Channel 5 Linked with Rate Register 2	NA	R
3271	TO	3272	Energy Channel 5 Linked with Rate Register 3	NA	R
3273	TO	3274	Energy Channel 5 Linked with Rate Register 4	NA	R
3275	TO	3276	Energy Channel 5 Linked with Rate Register 5	NA	R
3277	TO	3278	Energy Channel 5 Linked with Rate Register 6	NA	R
3279	TO	3280	Energy Channel 5 Linked with Rate Register 7	NA	R
3281	TO	3282	Energy Channel 5 Linked with Rate Register 8	NA	R
3283	TO	3284	Energy Channel 6 Linked with Rate Register 1	NA	R

3285	TO	3286	Energy Channel 6 Linked with Rate Register 2	NA	R
3287	TO	3288	Energy Channel 6 Linked with Rate Register 3	NA	R
3289	TO	3290	Energy Channel 6 Linked with Rate Register 4	NA	R
3291	TO	3292	Energy Channel 6 Linked with Rate Register 5	NA	R
3293	TO	3294	Energy Channel 6 Linked with Rate Register 6	NA	R
3295	TO	3296	Energy Channel 6 Linked with Rate Register 7	NA	R
3297	TO	3298	Energy Channel 6 Linked with Rate Register 8	NA	R
3299	TO	3300	Energy Channel 7 Linked with Rate Register 1	NA	R
3301	TO	3302	Energy Channel 7 Linked with Rate Register 2	NA	R
3303	TO	3304	Energy Channel 7 Linked with Rate Register 3	NA	R
3305	TO	3306	Energy Channel 7 Linked with Rate Register 4	NA	R
3307	TO	3308	Energy Channel 7 Linked with Rate Register 5	NA	R
3309	TO	3310	Energy Channel 7 Linked with Rate Register 6	NA	R
3311	TO	3312	Energy Channel 7 Linked with Rate Register 7	NA	R
3313	TO	3314	Energy Channel 7 Linked with Rate Register 8	NA	R

Note:

1. Unit of energy channels are depend upon configured energies.
2. TOU Rate Register description. Bit Set means Energy configured and vice a versa.
 - Bit 0 - Active import (Fundamental + Harmonics)
 - Bit 1 - Active Export (Fundamental + Harmonics)
 - Bit 2 - Active import (Fundamental)
 - Bit 3 - Active Export (Fundamental)
 - Bit 4 - Reactive - Quadrant 1
 - Bit 5 - Reactive - Quadrant 4
 - Bit 6 - Reactive - Quadrant 2
 - Bit 7 - Reactive - Quadrant 3
 - Bit 8 - Apparent while active import
 - Bit 9 - Apparent while active export
 - Bit 10 - Reactive Import (Q1+Q2)
 - Bit 11 - Reactive Import (Q3+Q4)
 - Bit 12 - Reactive Lag (Inductive) (Q1+Q3)
 - Bit 13 - Reactive Lead (Capacitive) (Q2+Q4)

TOU Maximum Demand Registers and Energy Channels (1 to 7)

3401

MODBUS Register			Description	Unit	R/W
3401	TO	3402	TOU MD Register Bit Mask. Bit Set means Energy Channel configured and vice a versa	NA	R
3403	TO	3404	Energy Channel 1 Linked with MD Register 1	NA	R
3405	TO	3406	Energy Channel 1 Linked with MD Register 2	NA	R
3407	TO	3408	Energy Channel 1 Linked with MD Register 3	NA	R
3409	TO	3410	Energy Channel 1 Linked with MD Register 4	NA	R
3411	TO	3412	Energy Channel 1 Linked with MD Register 5	NA	R
3413	TO	3414	Energy Channel 1 Linked with MD Register 6	NA	R
3415	TO	3416	Energy Channel 1 Linked with MD Register 7	NA	R
3417	TO	3418	Energy Channel 1 Linked with MD Register 8	NA	R
3419	TO	3420	Energy Channel 2 Linked with MD Register 1	NA	R
3421	TO	3422	Energy Channel 2 Linked with MD Register 2	NA	R
3423	TO	3424	Energy Channel 2 Linked with MD Register 3	NA	R
3425	TO	3426	Energy Channel 2 Linked with MD Register 4	NA	R
3427	TO	3428	Energy Channel 2 Linked with MD Register 5	NA	R
3429	TO	3430	Energy Channel 2 Linked with MD Register 6	NA	R
3431	TO	3432	Energy Channel 2 Linked with MD Register 7	NA	R
3433	TO	3434	Energy Channel 2 Linked with MD Register 8	NA	R
3435	TO	3436	Energy Channel 3 Linked with MD Register 1	NA	R
3437	TO	3438	Energy Channel 3 Linked with MD Register 2	NA	R
3439	TO	3440	Energy Channel 3 Linked with MD Register 3	NA	R
3441	TO	3442	Energy Channel 3 Linked with MD Register 4	NA	R
3443	TO	3444	Energy Channel 3 Linked with MD Register 5	NA	R
3445	TO	3446	Energy Channel 3 Linked with MD Register 6	NA	R
3447	TO	3448	Energy Channel 3 Linked with MD Register 7	NA	R

3449	TO	3450	Energy Channel 3 Linked with MD Register 8	NA	R
3451	TO	3452	Energy Channel 4 Linked with MD Register 1	NA	R
3453	TO	3454	Energy Channel 4 Linked with MD Register 2	NA	R
3455	TO	3456	Energy Channel 4 Linked with MD Register 3	NA	R
3457	TO	3458	Energy Channel 4 Linked with MD Register 4	NA	R
3459	TO	3460	Energy Channel 4 Linked with MD Register 5	NA	R
3461	TO	3462	Energy Channel 4 Linked with MD Register 6	NA	R
3463	TO	3464	Energy Channel 4 Linked with MD Register 7	NA	R
3465	TO	3466	Energy Channel 4 Linked with MD Register 8	NA	R
3467	TO	3468	Energy Channel 5 Linked with MD Register 1	NA	R
3469	TO	3470	Energy Channel 5 Linked with MD Register 2	NA	R
3471	TO	3472	Energy Channel 5 Linked with MD Register 3	NA	R
3473	TO	3474	Energy Channel 5 Linked with MD Register 4	NA	R
3475	TO	3476	Energy Channel 5 Linked with MD Register 5	NA	R
3477	TO	3478	Energy Channel 5 Linked with MD Register 6	NA	R
3479	TO	3480	Energy Channel 5 Linked with MD Register 7	NA	R
3481	TO	3482	Energy Channel 5 Linked with MD Register 8	NA	R
3483	TO	3484	Energy Channel 6 Linked with MD Register 1	NA	R
3485	TO	3486	Energy Channel 6 Linked with MD Register 2	NA	R
3487	TO	3488	Energy Channel 6 Linked with MD Register 3	NA	R
3489	TO	3490	Energy Channel 6 Linked with MD Register 4	NA	R
3491	TO	3492	Energy Channel 6 Linked with MD Register 5	NA	R
3493	TO	3494	Energy Channel 6 Linked with MD Register 6	NA	R
3495	TO	3496	Energy Channel 6 Linked with MD Register 7	NA	R
3497	TO	3498	Energy Channel 6 Linked with MD Register 8	NA	R
3499	TO	3500	Energy Channel 7 Linked with MD Register 1	NA	R
3501	TO	3502	Energy Channel 7 Linked with MD Register 2	NA	R
3503	TO	3504	Energy Channel 7 Linked with MD Register 3	NA	R
3505	TO	3506	Energy Channel 7 Linked with MD Register 4	NA	R
3507	TO	3508	Energy Channel 7 Linked with MD Register 5	NA	R
3509	TO	3510	Energy Channel 7 Linked with MD Register 6	NA	R
3511	TO	3512	Energy Channel 7 Linked with MD Register 7	NA	R
3513	TO	3514	Energy Channel 7 Linked with MD Register 8	NA	R

Note:

- Unit of energy channels are depend upon configured energies.
- TOU MD Register description. Bit Set means Energy configured and vice a versa.
 - Bit 0 - Active import (Fundamental + Harmonics)
 - Bit 1 - Active Export (Fundamental + Harmonics)
 - Bit 2 - Active import (Fundamental)
 - Bit 3 - Active Export (Fundamental)
 - Bit 4 - Reactive - Quadrant 1
 - Bit 5 - Reactive - Quadrant 4
 - Bit 6 - Reactive - Quadrant 2
 - Bit 7 - Reactive - Quadrant 3
 - Bit 8 - Apparent while active import
 - Bit 9 - Apparent while active export
 - Bit 10 - Reactive Import (Q1+Q2)
 - Bit 11 - Reactive Import (Q3+Q4)
 - Bit 12 - Reactive Lag (Inductive) (Q1+Q3)
 - Bit 13 - Reactive Lead (Capacitive) (Q2+Q4)

Registers for Minute Frozen Parameters (64 Bit)

MODBUS Register			Description	Unit	R/W
3601	TO	3604	Minute number of the day	NA	R
3605	TO	3608	Power On Minutes	Min	R
3609	TO	3612	Power Off Minutes	Min	R
3613	TO	3616	Active import (Fundamental + Harmonics)	kWh	R
3617	TO	3620	Active export (Fundamental + Harmonics)	kWh	R
3621	TO	3624	Active import (Fundamental)	kWh	R
3625	TO	3628	Active export (Fundamental)	kWh	R

3629	TO	3632	Reactive - Quadrant 1	kVArh	R
3633	TO	3636	Reactive - Quadrant 4	kVArh	R
3637	TO	3640	Reactive - Quadrant 2	kVArh	R
3641	TO	3644	Reactive - Quadrant 3	kVArh	R
3645	TO	3648	Apparent while active import	kVAh	R
3649	TO	3652	Apparent while active export	kVAh	R
3653	TO	3656	Reactive Import (Q1+Q2)	kVArh	R
3657	TO	3660	Reactive Export (Q3+Q4)	kVArh	R
3661	TO	3664	Reactive High Import	kVArh	R
3665	TO	3668	Reactive High Export	kVArh	R
3669	TO	3672	Reactive Low Import	kVArh	R
3673	TO	3676	Reactive Low Export	kVArh	R
3677	TO	3680	Reactive Lag (Inductive) (Q1+Q3)	kVArh	R
3681	TO	3684	Reactive Lead (Capacitive) (Q2+Q4)	kVArh	R
3685	TO	3688	Active Import (Fundamental + Harmonics) L1	kWh	R
3689	TO	3692	Active Import (Fundamental + Harmonics) L2	kWh	R
3693	TO	3696	Active Import (Fundamental + Harmonics) L3	kWh	R
3697	TO	3700	Active Export (Fundamental + Harmonics) L1	kWh	R
3701	TO	3704	Active Export (Fundamental + Harmonics) L2	kWh	R
3705	TO	3708	Active Export (Fundamental + Harmonics) L3	kWh	R
3709	TO	3712	Net Active (Imp – Exp)	kWh	R
3713	TO	3716	Net Reactive (Q1+Q2-Q3-Q4)	kVArh	R
3717	TO	3720	Net reactive High	kVArh	R
3721	TO	3724	Net reactive Low	kVArh	R

Registers for Minute Frozen Parameters (64 Bit)

3751

MODBUS Register			Description	Unit	R/W
3751	TO	3754	Active Import (Fundamental) L1	kWh	R
3755	TO	3758	Active Import (Fundamental) L2	kWh	R
3759	TO	3762	Active Import (Fundamental) L3	kWh	R
3763	TO	3766	Active Export (Fundamental) L1	kWh	R
3767	TO	3770	Active Export (Fundamental) L2	kWh	R
3771	TO	3774	Active Export (Fundamental) L3	kWh	R

Note:-

1) Modbus Register Address 0x5500 to 0x5600 is reserver for internal use.

[illegible]

Every second	32 bits FP
Every second	32 bits FP
Every second	32 bits FP
Every second	32 bits FP
Every second	32 bits FP
Every second	32 bits FP
Every second	32 bits FP

1101 (LSR) and 1102 (MSR)

[illegible]

Refresh rate	Format
Every second	32 bits FP
Every second	32 bits FP
Every second	32 bits FP
Every second	32 bits FP
Every second	32 bits FP
Every second	32 bits FP
Every second	32 bits FP
Every second	32 bits FP
Every second	32 bits FP
Every second	32 bits FP
Every second	32 bits FP
Every second	32 bits FP
Every second	32 bits FP
Every second	32 bits FP
Every second	32 bits FP
Every second	32 bits FP
Every second	32 bits FP
Every second	32 bits FP
Every second	32 bits FP
Every second	32 bits FP
Every second	32 bits FP

First register is LSR and second register is MSR for example:- 1301 (LSR) and 1302 (MSR)

[illegible]

Every SIP	32 bits FP
Every SIP	32 bits FP
Every SIP	32 bits FP
Every SIP	32 bits FP
Every SIP	32 bits FP
Every SIP	32 bits FP
Every SIP	32 bits FP
Every SIP	32 bits FP
Every SIP	32 bits FP
Every SIP	32 bits FP
Every SIP	32 bits FP
Every SIP	32 bits FP
Every SIP	32 bits FP
Every SIP	32 bits FP

--

Refresh rate	Format	
Every Billing	32 bits FP	First register is LSR and second register is MSR for example:- 2001 (LSR) and 2002 (MSR)
Every DIP / DSP	32 bits FP	
Every DIP / DSP	32 bits FP	
Every DIP / DSP	32 bits FP	
Every DIP / DSP	32 bits FP	
Every DIP / DSP	32 bits FP	
Every DIP / DSP	32 bits FP	
Every Billing	32 bits FP	
Every Billing	32 bits FP	
Every Billing	32 bits FP	
Every Billing	32 bits FP	
Every Billing	32 bits FP	
Every Billing	32 bits FP	
Every Billing	32 bits FP	
Every Billing	32 bits FP	
Every Billing	32 bits FP	
Every Billing	32 bits FP	
Every Billing	32 bits FP	
Every Billing	32 bits FP	
Every Billing	32 bits FP	
Every Billing	32 bits FP	

--

Refresh rate	Format	
Every Billing	Unsigned 64b	

Refresh rate	Format	
Alternative second	32 bits FP	First register is LSR and second register is MSR for example:- 2701 (LSR) and 2702 (MSR)
Alternative second	32 bits FP	
Alternative second	32 bits FP	
Alternative second	32 bits FP	

Bit 15, Register 2803 -> LSB is Bit 16 and MSB is Bit 31, Register 2802 -> LSB

