

MODBUS Protocol			
	Version No.	Revision No.	
	0A	00	
Registers for General (Meter) Information			
MODBUS Register		Parameter	Description
40001	40004	SrNLo	Meter Serial Number
40005	40008	SfN	Meter Software Name
40009	40012	FrN1	FirmWare Name of Module 1
40013	40016	FrN2	FirmWare Name of Module 2
40017	40017	Ext_M	IO Card [0=None,1=2I2O,2=4PWM,3=3C
40018	40018	MBID	Modbus ID
40019	40019	Pver_rev	Modbus Protocol Version & Revision
40020	40025	PrdCd	Product Code
40026	40027	Metro LED Pulse Rate	Metro LED Pulse rate in terms of number of counts
40028	40028	Supported Parameters Energy	Bit 0: Active Total Import Energy
Next Bill Date			
40030	40031	Next Bill Date	Next Bill Date
Meter Type Information			
40041	40041	Meter Type	To change the 3W to 4 W application
Energy Configured parameters			
40051	40051	Energy Parameters	Bit mask will be same as mentioned in reg 40028
40052	40052	MD_Params	Bit mask will be based on selected energy in reg 40051
40058	40058	SIP	Survey Integration Period in minutes
40060	40060	Energy parameter BitMask for Load Survey	Bit 0: Active Total Import Energy Bit 1: Active Total Export Energy
40061	40061	Instantaneous parameter BitMask for Load Survey	0: R Phase Voltage 1: Y Phase Voltage 2: B Phase Voltage
Coil Registers			
1		Billing Trigger	To Trigger the billing action (Write Only Coil Regs),i.e. MD Reset
Note: Rest of the registers are reserved.			

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Registers for Instantaneous Parameters

MODBUS Register		Parameter	Description	Format	Type	Units
40100	40101	V1	R Phase to Neutral Voltage	32 bit FP	R	Volt
40102	40103	V2	Y Phase to Neutral Voltage	32 bit FP	R	Volt
40104	40105	V3	B Phase to Neutral Voltage	32 bit FP	R	Volt
40106	40107	Vavg	Average Voltage	32 bit FP	R	Volt
40108	40109	V12	RY Voltage	32 bit FP	R	Volt
40110	40111	V23	YB Voltage	32 bit FP	R	Volt
40112	40113	V31	BR Voltage	32 bit FP	R	Volt
40114	40115	L1	R Phase Line current	32 bit FP	R	Ampere
40116	40117	L2	Y Phase Line current	32 bit FP	R	Ampere
40118	40119	L3	B Phase Line current	32 bit FP	R	Ampere
40120	40121	LN	Neutral Line current	32 bit FP	R	Ampere
40122	40123	I1	R Phase Active Current	32 bit FP	R	Ampere
40124	40125	I2	Y Phase Active Current	32 bit FP	R	Ampere
40126	40127	I3	B Phase Active Current	32 bit FP	R	Ampere
40128	40129	R1	R Phase Reactive Current	32 bit FP	R	Ampere
40130	40131	R2	Y Phase Reactive Current	32 bit FP	R	Ampere
40132	40133	R3	B Phase Reactive Current	32 bit FP	R	Ampere
40134	40135	Q1	Power factor	32 bit FP	R	
40136	40137	Q2	Power factor	32 bit FP	R	
40138	40139	Q3	Power factor	32 bit FP	R	
40140	40141	QA	Avg power factor	32 bit FP	R	
40142	40143	KT1	R- Phase Active Power	32 bit FP	R	kW
40144	40145	KT2	Y- Phase Active Power	32 bit FP	R	kW
40146	40147	KT3	B- Phase Active Power	32 bit FP	R	kW
40148	40149	KT	3 Phase Active Power	32 bit FP	R	KW
40150	40151	KV1	R- Phase Reactive Power	32 bit FP	R	kVAr
40152	40153	KV2	Y- Phase Reactive Power	32 bit FP	R	kVAr
40154	40155	KV3	B- Phase Reactive Power	32 bit FP	R	kVAr
40156	40157	KV	3 Phase Reactive Power	32 bit FP	R	kVAr
40158	40159	KA1	R- Phase Apparent Power	32 bit FP	R	kVA
40160	40161	KA2	Y- Phase Apparent Power	32 bit FP	R	kVA
40162	40163	KA3	B- Phase Apparent Power	32 bit FP	R	kVA
40164	40165	KA	3 Phase Apparent Power	32 bit FP	R	kVA
40166	40167	A12	RY ph ang	32 bit FP	R	Degree
40168	40169	A23	YB ph ang	32 bit FP	R	Degree
40170	40171	A31	BR ph ang	32 bit FP	R	Degree
40172	40173	FQ	Frequency Hz	32 bit FP	R	Hz
40174	40175	RT	Meter real Time	Unsigned 32	R/W	Seconds
40176	40177	Temperature	Meter Temperature	32 bit FP	R	Degree Centi
40178	40179	THDV1	R-Phase Voltage Total Harmonic Distortion	32 bit FP	R	%
40180	40181	THDV2	Y-Phase Voltage Total Harmonic Distortion	32 bit FP	R	%
40182	40183	THDV3	B-Phase Voltage Total Harmonic Distortion	32 bit FP	R	%
40184	40185	THDC1	R-Phase Current Total Harmonic Distortion	32 bit FP	R	%

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Registers for Re					
MODBUS Regis		Parameter	Description	Format	Type
Cumulative Energy Parameters					
40200	40201	kWhT(I)	Active Total - Import	32 bit FP	R
40202	40203	kWhT(E)	Active Total - Export	32 bit FP	R
40204	40205	kWhT(I)	Active Fundamental - Import	32 bit FP	R
40206	40207	kWhT(E)	Active Fundamental - Export	32 bit FP	R
40208	40209	kVArh(I)_ WI	Reactive - Import While Active Import	32 bit FP	R
40210	40211	kVArh(E)_ WI	Reactive - Export While Active Import	32 bit FP	R
40212	40213	kVArh(I)_ WE	Reactive - Import While Active Export	32 bit FP	R
40214	40215	kVArh(E)_ WE	Reactive - Export While Active Export	32 bit FP	R
40216	40217	kVAh(I)	Apparent - Import	32 bit FP	R
40218	40219	kVAh(E)	Apparent - Export	32 bit FP	R
40220	40221	kVArh(I)	Reactive - Import (Q1+Q2)	32 bit FP	R
40222	40223	kVArh(E)	Reactive - Export (Q3+Q4)	32 bit FP	R
40224	40225	kWh (ABS)	Active - Forwarded	32 bit FP	R
40226	40227	kVAh(ABS)	Apparent - Forwarded	32 bit FP	R
40228	40229	kWhLag (ABS)	Reactive - Lag Forwarded	32 bit FP	R
40230	40231	kWhLead (ABS)	Reactive - Lead Forwarded	32 bit FP	R
40232	40239		Unused- Reserved		
Maximum Demand Parameters (24hr MD)					
40240	40241	kWT(I)	Active Total - Import	32 bit FP	R
40242	40243	24hMDTime kWT(I)	24h MD Date & Time Stamp	Unsigned	R
40244	40245	kWT(E)	Active Total - Export	32 bit FP	R
40246	40247	24hMDTime kWT(E)	24h MD Date & Time Stamp	Unsigned	R
40248	40249	kW(I)	Active Fun - Import	32 bit FP	R
40250	40251	24hMDTime kW(I)	24h MD Date & Time Stamp	Unsigned	R
40252	40253	kW(E)	Active FunI - Export	32 bit FP	R
40254	40255	24hMDTime kW(E)	24h MD Date & Time Stamp	Unsigned	R
40256	40257	kVAr(I)_ WI	Reactive - Import While Active Import	32 bit FP	R
40258	40259	24hMDTime kVAr(I)_ WI	24h MD Date & Time Stamp	Unsigned	R
40260	40261	kVAr(E)_ WI	Reactive -Export While Active Import	32 bit FP	R
40262	40263	24hMDTime kVAr(E)_ WI	24h MD Date & Time Stamp	Unsigned	R
40264	40265	kVAr(I)_ WE	Reactive - Import While Active Export	32 bit FP	R
40266	40267	24hMDTime kVAr(I)_ WE	24h MD Date & Time Stamp	Unsigned	R
40268	40269	kVAr(E)_ WE	Reactive - Export While Active Export	32 bit FP	R
40270	40271	24hMDTime kVAr(E)_ WE	24h MD Date & Time Stamp	Unsigned	R
40272	40273	kVA(I)	Apparent - Import	32 bit FP	R
40274	40275	24hMDTime kVA(I)	24h MD Date & Time Stamp	Unsigned	R
40276	40277	kVA(E)	Apparent - Export	32 bit FP	R
40278	40279	24hMDTime kVA(E)	24h MD Date & Time Stamp	Unsigned	R
40280	40281	kVAr(I)	Reactive - Import	32 bit FP	R
40282	40283	24hMDTime kVAr(I)	24h MD Date & Time Stamp	Unsigned	R
40284	40285	kVAr(E)	Reactive - Export	32 bit FP	R
40286	40287	24hMDTime kVAr(E)	24h MD Date & Time Stamp	Unsigned	R
40288	40289	kW(I) ABS	Active - Forwarded	32 bit FP	R

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					Variant				
Units	Remarks			ELITE 440-441	ELITE 440-442	ELITE 440-443	ELITE 440-444	ELITE 440-445	ELITE 440-446
kWh				N	N	N	N	Y	Y
kWh				N	N	N	N	Y	Y
kWh				N	N	N	N	N	N
kWh				N	N	N	N	N	N
kVArh				N	N	N	N	Y	N
kVArh				N	N	N	N	Y	N
kVArh				N	N	N	N	Y	N
kVArh				N	N	N	N	Y	N
kVAh				N	N	N	N	Y	Y
kVAh				N	N	N	N	Y	Y
kVArh				N	N	N	N	N	Y
kVArh				N	N	N	N	N	Y
kWh				N	Y	Y	Y	N	N
kVArh				N	Y	Y	Y	N	N
kVArh				N	N	Y	Y	N	N
kVAh				N	N	Y	Y	N	N
kW				N	N	N	N	Y	Y
Seconds	Seconds Since 1988			N	N	N	N	Y	Y
kW				N	N	N	N	Y	Y
Seconds	Seconds Since 1988			N	N	N	N	Y	Y
kW				N	N	N	N	N	N
Seconds	Seconds Since 1988			N	N	N	N	N	N
kW				N	N	N	N	N	N
Seconds	Seconds Since 1988			N	N	N	N	N	N
kVAr				N	N	N	N	Y	N
Seconds	Seconds Since 1988			N	N	N	N	Y	N
kVAr				N	N	N	N	Y	N
Seconds	Seconds Since 1988			N	N	N	N	Y	N
kVAr				N	N	N	N	Y	N
Seconds	Seconds Since 1988			N	N	N	N	Y	N
kVAr				N	N	N	N	Y	N
Seconds	Seconds Since 1988			N	N	N	N	Y	N
Seconds	Seconds Since 1988			N	N	N	N	Y	N
kVA				N	N	N	N	Y	Y
Seconds	Seconds Since 1988			N	N	N	N	Y	Y
kVA				N	N	N	N	Y	Y
Seconds	Seconds Since 1988			N	N	N	N	Y	Y
kVAr				N	N	N	N	N	Y
Seconds	Seconds Since 1988			N	N	N	N	N	Y
kVAr				N	N	N	N	N	Y
Seconds	Seconds Since 1988			N	N	N	N	N	Y
kW				N	Y	Y	Y	N	N

ELITE 440-447	ELITE 440-448	ELITE 440-000			
Y	Y	Y			
Y	Y	Y			
N	N	Y			
N	N	Y			
Y	N	Y			
Y	N	Y			
Y	N	Y			
Y	N	Y			
Y	Y	Y			
Y	Y	Y			
N	Y	Y			
N	Y	Y			
N	N	Y			
N	N	Y			
N	N	Y			
N	N	Y			
Y	Y	Y			
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N	N	Y			

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Registers for Maximima-Minima Parameters

MODBUS Register	Parameter	Description	
40350	40351	VmaxR	Maximum Voltage of R Phase
40352	40353	RTVmaxR	Time in seconds since 1988 for Vmax
40354	40355	VminR	Minimum Voltage of R Phase
40356	40357	RTVminR	Time in seconds since 1988 for VminR
40358	40359	VmaxY	Maximum Voltage of Y Phase
40360	40361	RTVmaxY	Time in seconds since 1988 for VmaxY
40362	40363	VminY	Minimum Voltage of Y Phase
40364	40365	RTVminY	Time in seconds since 1988 for VminY
40366	40367	VmaxB	Maximum Voltage of B Phase
40368	40369	RTVmaxB	Time in seconds since 1988 for VmaxB
40370	40371	VminB	Minimum Voltage of B Phase
40372	40373	RTVminB	Time in seconds since 1988 for VminB
40374	40375	LmaxR	Maximum Line Current of R Phase
40376	40377	RTLmaxR	Time in seconds since 1988 for LmaxR
40378	40379	LminR	Minimum Line Current of R Phase
40380	40381	RTLminR	Time in seconds since 1988 for LminR
40382	40383	LmaxY	Maximum Line Current of Y Phase
40384	40385	RTLmaxY	Time in seconds since 1988 for LmaxY
40386	40387	LminY	Minimum Line Current of Y Phase
40388	40389	RTLminY	Time in seconds since 1988 for LminY
40390	40391	LmaxB	Maximum Line Current of B Phase
40392	40393	RTLmaxB	Time in seconds since 1988 for LmaxB
40394	40395	LminB	Minimum Line Current of B Phase
40396	40397	RTLminB	Time in seconds since 1988 for LminB
40398	40399	PowerActiveMaxR	Maximum Active Power of R Phase
40400	40401	RTPowerActiveMaxR	Time in seconds since 1988 for PowerActiveMaxR
40402	40403	PowerActiveMinR	Minimum Active Power of R Phase
40404	40405	RTPowerActiveMinR	Time in seconds since 1988 for PowerActiveMinR
40406	40407	PowerActiveMaxY	Maximum Active Power of Y Phase
40408	40409	RTPowerActiveMaxY	Time in seconds since 1988 for PowerActiveMaxY
40410	40411	PowerActiveMinY	Minimum Active Power of Y Phase
40412	40413	RTPowerActiveMinY	Time in seconds since 1988 for PowerActiveMinY
40414	40415	PowerActiveMaxB	Maximum Active Power of B Phase
40416	40417	RTPowerActiveMaxB	Time in seconds since 1988 for PowerActiveMaxB
40418	40419	PowerActiveMinB	Minimum Active Power of B Phase
40420	40421	RTPowerActiveMinB	Time in seconds since 1988 for PowerActiveMinB
40422	40423	PowerReactiveMaxR	Maximum Reactive Power of R Phase
40424	40425	RTPowerReactiveMaxR	Time in seconds since 1988 for PowerReactiveMaxR
40426	40427	PowerReactiveMinR	Minimum Reactive Power of R Phase
40428	40429	RTPowerReactiveMinR	Time in seconds since 1988 for PowerReactiveMinR
40430	40431	PowerReactiveMaxY	Maximum Reactive Power of Y Phase
40432	40433	RTPowerReactiveMaxY	Time in seconds since 1988 for PowerReactiveMaxY
40434	40435	PowerReactiveMinY	Minimum Reactive Power of Y Phase
40436	40437	RTPowerReactiveMinY	Time in seconds since 1988 for PowerReactiveMinY
40438	40439	PowerReactiveMaxB	Maximum Reactive Power of B Phase
40440	40441	RTPowerReactiveMaxB	Time in seconds since 1988 for PowerReactiveMaxB

40442	40443	PowerReactiveMinB	Minimum Reactive Power of B Phase
40444	40445	RTPowerReactiveMinB	Time in seconds since 1988 for PowerReactiveMinB
40446	40447	PowerApparentMaxR	Maximum Apparent Power of R Phase
40448	40449	RTPowerApparentMaxR	Time in seconds since 1988 for PowerApparentMaxR
40450	40451	PowerApparentMinR	Minimum Apparent Power of R Phase
40452	40453	RTPowerApparentMinR	Time in seconds since 1988 for PowerApparentMinR
40454	40455	PowerApparentMaxY	Maximum Apparent Power of Y Phase
40456	40457	RTPowerApparentMaxY	Time in seconds since 1988 for PowerApparentMaxY
40458	40459	PowerApparentMinY	Minimum Apparent Power of Y Phase
40460	40461	RTPowerApparentMinY	Time in seconds since 1988 for PowerApparentMinY
40462	40463	PowerApparentMaxB	Maximum Apparent Power of B Phase
40464	40465	RTPowerApparentMaxB	Time in seconds since 1988 for PowerApparentMaxB
40466	40467	PowerApparentMinB	Minimum Apparent Power of B Phase
40468	40469	RTPowerApparentMinB	Time in seconds since 1988 for PowerApparentMinB
40470	40471	PowerFactorMinLagR	Minimum Lagging Power Factor of R Phase
40472	40473	RTPowerFactorMinLagR	Time in seconds since 1988 for PowerFactorMinLagR
40474	40475	PowerFactorMinLeadR	Minimum Leading Power Factor of R Phase
40476	40477	RTPowerFactorMinLeadR	Time in seconds since 1988 for PowerFactorMinLeadR
40478	40479	PowerFactorMinLagY	Minimum Lagging Power Factor of Y Phase
40480	40481	RTPowerFactorMinLagY	Time in seconds since 1988 for PowerFactorMinLagY
40482	40483	PowerFactorMinLeadY	Minimum Leading Power Factor of y Phase
40484	40485	RTPowerFactorMinLeadY	Time in seconds since 1988 for PowerFactorMinLeadY
40486	40487	PowerFactorMinLagB	Minimum Lagging Power Factor of B Phase
40488	40489	RTPowerFactorMinLagB	Time in seconds since 1988 for PowerFactorMinLagB
40490	40491	PowerFactorMinLeadB	Minimum Leading Power Factor of B Phase
40492	40493	RTPowerFactorMinLeadB	Time in seconds since 1988 for PowerFactorMinLeadB
40494	40495	FrequencyMax	Maximum Frequency
40496	40497	RTFrequencyMax	Time in seconds since 1988 for FrequencyMax
40498	40499	FrequencyMin	Minimum Frequency
40500	40501	RTFrequencyMin	Time in seconds since 1988 for FrequencyMin
40502	40519		Unused- Reserved

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Registers for Energy Histories

MODBUS Register	Parameter	Description
40520	40520	History Available
40521	40521	History Number
40522	40523	History Date
40524	40524	Supported Energy Mask as per History number
40525	40525	Supported MD Mask as per History number
40526	40526	Unused- Reserved
40527	40528	kWhT(I)
40529	40530	kWhT(E)
40531	40532	kWhT(I)
40533	40534	kWhT(E)
40535	40536	kVArh(I)_WI
40537	40538	kVArh(E)_WI
40539	40540	kVArh(I)_WE
40541	40542	kVArh(E)_WE
40543	40544	kVAh(I)
40545	40546	kVAh(E)
40547	40548	kVArh(I)
40549	40550	kVArh(E)
40551	40552	kWh (ABS)
40553	40554	kVAh(ABS)
40555	40556	kWhLag (ABS)
40557	40558	kWhLead (ABS)
40559	40569	Unused- Reserved

Maximum Demand History (24 Hr MD i.e.UMD)

40570	40571	kWT(I)	Active Total - Import
40572	40573	24hMDTime kWT(I)	24h MD Date & Time Stamp
40574	40575	kWT(E)	Active Total - Export
40576	40577	24hMDTime kWT(E)	24h MD Date & Time Stamp
40578	40579	kW(I)	Active Fun - Import
40580	40581	24hMDTime kW(I)	24h MD Date & Time Stamp
40582	40583	kW(E)	Active FunI - Export
40584	40585	24hMDTime kW(E)	24h MD Date & Time Stamp
40586	40587	kVAr(I)_WI	Reactive - Import While Active Import
40588	40589	24hMDTime kVAr(I)_WI	24h MD Date & Time Stamp
40590	40591	kVAr(E)_WI	Reactive -Export While Active Import
40592	40593	24hMDTime kVAr(E)_WI	24h MD Date & Time Stamp
40594	40595	kVAr(I)_WE	Reactive - Import While Active Export
40596	40597	24hMDTime kVAr(I)_WE	24h MD Date & Time Stamp
40598	40599	kVAr(E)_WE	Reactive - Export While Active Export
40600	40601	24hMDTime kVAr(E)_WE	24h MD Date & Time Stamp
40602	40603	kVA(I)	Apparent - Import
40604	40605	24hMDTime kVA(I)	24h MD Date & Time Stamp
40606	40607	kVA(E)	Apparent - Export
40608	40609	24hMDTime kVA(E)	24h MD Date & Time Stamp
40610	40611	kVAr(I)	Reactive - Import
40612	40613	24hMDTime kVAr(I)	24h MD Date & Time Stamp

40614	40615	kVAr(E)	Reactive - Export
40616	40617	24hMDTime kVAr(E)	24h MD Date & Time Stamp
40618	40619	kW(I) ABS	Active - Forwarded
40620	40621	24hMDTime kW(I) ABS	24h MD Date & Time Stamp
40622	40623	kVA (ABS)	Apparent - Forwarded
40624	40625	24hMDTime kVA (ABS)	24h MD Date & Time Stamp
40626	40627	kVAr(I)_Lag (ABS)	Reactive - Lag Forwarded
40628	40629	24hMDTime kVAr(I)_Lag (ABS)	24h MD Date & Time Stamp
40630	40631	kVAr(I)_Lead (ABS)	Reactive - Lead Forwarded
40632	40633	24hMDTime kVAr(I)_Lead (ABS)	24h MD Date & Time Stamp
40634	40639		Unused- Reserved

Cummulative CMD

40640	40641	CMD kWhT(I)	Active Total - Import
40642	40643	CMD kWhT(E)	Active Total - Export
40644	40645	CMD kWhT(I)	Active Fundamental - Import
40646	40647	CMD kWhT(E)	Active Fundamental - Export
40648	40649	CMD kVArh(I) WI	Reactive - Import While Active Import
40650	40651	CMD kVArh(E) WI	Reactive - Export While Active Import
40652	40653	CMD kVArh(I) WE	Reactive - Import While Active Export
40654	40655	CMD kVArh(E) WE	Reactive - Export While Active Export
40656	40657	CMD kVAh(I)	Apparent - Import
40658	40659	CMD kVAh(E)	Apparent - Export
40660	40661	CMD kVArh(I)	Reactive - Import
40662	40663	CMD kVArh(E)	Reactive - Export
40664	40665	CMD kW(I) ABS	Active - Forwarded
40666	40667	CMD kVA (ABS)	Apparent - Forwarded
40668	40669	CMD kVAr(I) Lag(ABS)	Reactive - Lag Forwarded
40670	40671	CMD kVAr(I) Lead(ABS)	Reactive - Lead Forwarded
40672	40679		Unused- Reserved

Other Param

40680	40681	PONMins	Cumulative Power ON Minutes
40682	40683	POFFMins	Cumulative Power OFF Minutes
40684	40685	LON Mins	Cumulative Load ON Minutes
40686	40687	LOFF Mins	Cumulative Load OFF Minutes
40688	40699		Unused- Reserved

							ELITE 440-441
Format	Type	Units	Remarks				
16 Bit Unsigned	R						N
16 Bit Unsigned	R/W						N
32 Bit Unsigned	R	Seconds since 1988					N
16 Bit Unsigned	R						N
16 Bit Unsigned	R						N
32 bit FP	R	kWh					N
32 bit FP	R	kWh					N
32 bit FP	R	kWh					N
32 bit FP	R	kWh					N
32 bit FP	R	kVArh					N
32 bit FP	R	kVArh					N
32 bit FP	R	kVArh					N
32 bit FP	R	kVArh					N
32 bit FP	R	kVAh					N
32 bit FP	R	kVAh					N
32 bit FP	R	kVArh					N
32 bit FP	R	kVArh					N
32 bit FP	R	kWh					N
32 bit FP	R	kVArh					N
32 bit FP	R	kVArh					N
32 bit FP	R	kVAh					N
32 bit FP	R	kWh					N
Unsigned 32 bits	R	Seconds	Seconds Since 1988				N
32 bit FP	R	kWh					N
Unsigned 32 bits	R	Seconds	Seconds Since 1988				N
32 bit FP	R	kWh					N
Unsigned 32 bits	R	Seconds	Seconds Since 1988				N
32 bit FP	R	kWh					N
Unsigned 32 bits	R	Seconds	Seconds Since 1988				N
32 bit FP	R	kVArh					N
Unsigned 32 bits	R	Seconds	Seconds Since 1988				N
32 bit FP	R	kVArh					N
Unsigned 32 bits	R	Seconds	Seconds Since 1988				N
32 bit FP	R	kVArh					N
Unsigned 32 bits	R	Seconds	Seconds Since 1988				N
32 bit FP	R	kVAh					N
Unsigned 32 bits	R	Seconds	Seconds Since 1988				N
32 bit FP	R	kVAh					N
Unsigned 32 bits	R	Seconds	Seconds Since 1988				N
32 bit FP	R	kVArh					N
Unsigned 32 bits	R	Seconds	Seconds Since 1988				N

[illegible]

Variant							
ELITE 440-442	ELITE 440-443	ELITE 440-444	ELITE 440-445	ELITE 440-446	ELITE 440-447	ELITE 440-448	ELITE 440-000
Y	Y	Y	Y	Y	Y	Y	Y
Y	Y	Y	Y	Y	Y	Y	Y
Y	Y	Y	Y	Y	Y	Y	Y
Y	Y	Y	Y	Y	Y	Y	Y
N	N	Y	Y	Y	Y	Y	Y
N	N	N	Y	Y	Y	Y	Y
N	N	N	Y	Y	Y	Y	Y
N	N	N	N	N	N	N	Y
N	N	N	N	N	N	N	Y
N	N	N	Y	N	Y	N	Y
N	N	N	Y	N	Y	N	Y
N	N	N	Y	N	Y	N	Y
N	N	N	Y	N	Y	N	Y
N	N	N	Y	N	Y	N	Y
N	N	N	N	Y	N	Y	Y
N	N	N	N	Y	N	Y	Y
Y	Y	Y	N	N	N	N	Y
Y	Y	Y	N	N	N	N	Y
N	Y	Y	N	N	N	N	Y
N	Y	Y	N	N	N	N	Y
N	N	N	Y	Y	Y	Y	Y
N	N	N	Y	Y	Y	Y	Y
N	N	N	Y	Y	Y	Y	Y
N	N	N	Y	Y	Y	Y	Y
N	N	N	N	N	N	N	Y
N	N	N	N	N	N	N	Y
N	N	N	N	N	N	N	Y
N	N	N	Y	N	Y	N	Y
N	N	N	Y	N	Y	N	Y
N	N	N	Y	N	Y	N	Y
N	N	N	Y	N	Y	N	Y
N	N	N	Y	N	Y	N	Y
N	N	N	Y	N	Y	N	Y
N	N	N	Y	N	Y	N	Y
N	N	N	Y	N	Y	N	Y
N	N	N	Y	N	Y	N	Y
N	N	N	Y	N	Y	N	Y
N	N	N	Y	N	Y	N	Y
N	N	N	N	Y	N	Y	Y
N	N	N	N	Y	N	Y	Y

[illegible]

Registers for Daily Energy Snapshots

MODBUS Register		Parameter	Description	Format
40700	40700	Available Snapshots	Snapshots available in the meter	16 Bit Unsigned
40701	40701	Snap shot number	0 means last snapshot	16 Bit Unsigned
40702	40703	Time of snapshot	Seconds since 1988	32 Bit Unsigned
40704	40704	Daily Energy Parameter	Bit 0: Active Total Import Energy Bit 1: Active Total Export Energy	16 Bit Unsigned
40705	40709		Unused- Reserved	
40710	40711	kWhT(I)	Active Total - Import	32 bit FP
40712	40713	kWhT(E)	Active Total - Export	32 bit FP
40714	40715	kWhT(I)	Active Fundamental - Import	32 bit FP
40716	40717	kWhT(E)	Active Fundamental - Export	32 bit FP
40718	40719	kVArh(I)_WI	Reactive - Import While Active Import	32 bit FP
40720	40721	kVArh(E)_WI	Reactive - Export While Active Import	32 bit FP
40722	40723	kVArh(I)_WE	Reactive - Import While Active Export	32 bit FP
40724	40725	kVArh(E)_WE	Reactive - Export While Active Export	32 bit FP
40726	40727	kVAh(I)	Apparent - Import	32 bit FP
40728	40729	kVAh(E)	Apparent - Export	32 bit FP
40730	40731	kVArh(I)	Reactive - Import	32 bit FP
40732	40733	kVArh(E)	Reactive - Export	32 bit FP
40734	40735	kWh (ABS)	Active - Forwarded	32 bit FP
40736	40737	kVAh(ABS)	Apparent - Forwarded	32 bit FP
40738	40739	kWhLag (ABS)	Reactive - Lag Forwarded	32 bit FP
40740	40741	kWhLead (ABS)	Reactive - Lead Forwarded	32 bit FP
40742	40749		Unused- Reserved	

[illegible]

Variant				
ELITE 440-445	ELITE 440-446	ELITE 440-447	ELITE 440-448	ELITE 440-000
Y	Y	Y	Y	Y
Y	Y	Y	Y	Y
Y	Y	Y	Y	Y
Y	Y	Y	Y	Y
Y	Y	Y	Y	Y
Y	Y	Y	Y	Y
N	N	N	N	Y
N	N	N	N	Y
Y	N	Y	N	Y
Y	N	Y	N	Y
Y	N	Y	N	Y
Y	N	Y	N	Y
Y	Y	Y	Y	Y
Y	Y	Y	Y	Y
N	Y	N	Y	Y
N	Y	N	Y	Y
N	N	N	N	Y
N	N	N	N	Y
N	N	N	N	Y
N	N	N	N	Y

Miscellaneous Registers					
MODBUS Register		Parameter	Description	Format	Type
40750	40751	Flags ***	Event Status	Unsigned 32bits	R
40752	40753	Last OCC Evt	Last Occ Event	Unsigned 32bits	R
40754	40755	Last OCC Evt Tm	Last Occ Event Tim	Unsigned 32bits	R
40756	40756	Special Flags ****	Special Events Stat	Unsigned 16bits	R
40757	40769	Unused- Reserved			

Note: Applicable for all the variants

Bit number	Format	Flags ***
0	bit	R-Phase Voltage missing
1	bit	Y-Phase Voltage missing
2	bit	B-Phase Voltage missing
3	bit	Invalid Voltage
4	bit	Voltage Imbalance
5	bit	High Voltage
6	bit	Low Voltage
7	bit	R-Phase CT reverse
8	bit	Y-Phase CT reverse
9	bit	B-Phase CT reverse
10	bit	Low power factor
11	bit	Invalid Phase Association
12	bit	Over Load
13	bit	Under Load
14	bit	Current Imbalance
15	bit	Module Card Unplugged
16 to 31	bit	Not used

Bit number	Format	Special Flags ****
0	bit	Battery fail
1	bit	NVRAM fail
2	bit	NVM Fail
3 to 15	bit	Not used

			Variant						
Units	Remarks		ELITE 440-441	ELITE 440-442	ELITE 440-443	ELITE 440-444	ELITE 440-445	ELITE 440-446	ELITE 440-447
			Y	Y	Y	Y	Y	Y	Y
Bit Mask as mentioned below			Y	Y	Y	Y	Y	Y	Y
Time in Seconds Since 1988			Y	Y	Y	Y	Y	Y	Y
			Y	Y	Y	Y	Y	Y	Y

ELITE 440-448	ELITE 440-000
Y	Y
Y	Y
Y	Y
Y	Y

Configurable Registers									ELITE 440-441
MODBUS Register		Parameter	Description	Format	Type	Units	Remarks		
40770									
40770	40799	Unused- Reserved							

Variant							
ELITE 440-442	ELITE 440-443	ELITE 440-444	ELITE 440-445	ELITE 440-446	ELITE 440-447	ELITE 440-448	ELITE 440-000

Registers for Data Logging Information		
MODBUS Register		Parameter
40800	40800	Data Logging Days Available
40801	40801	SIP Config Indices
40802	40802	Day Number
40803	40803	

40804	40805	Date
40806	40807	

40808	40809	SIP 1
40810	40811	SIP 2
40812	40813	SIP 3
40814	40815	SIP 4
40816	40817	SIP 5
40818	40819	SIP 6
40820	40821	SIP 7
40822	40823	SIP 8
40824	40825	SIP 9
40826	40827	SIP 10
40828	40829	SIP 11
40830	40831	SIP 12
40832	40833	SIP 13
40834	40835	SIP 14
40836	40837	SIP 15
40838	40839	SIP 16
40840	40841	SIP 17
40842	40843	SIP 18
40844	40845	SIP 19
40846	40847	SIP 20
40848	40849	SIP 21
40850	40851	SIP 22
40852	40853	SIP 23
40854	40855	SIP 24
40856	40857	SIP 25
40858	40859	SIP 26
40860	40861	SIP 27
40862	40863	SIP 28
40864	40865	SIP 29
40866	40867	SIP 30
40868	40869	SIP 31
40870	40871	SIP 32
40872	40873	SIP 33
40874	40875	SIP 34
40876	40877	SIP 35
40878	40879	SIP 36
40880	40881	SIP 37
40882	40883	SIP 38
40884	40885	SIP 39

40886	40887	SIP 40
40888	40889	SIP 41
40890	40891	SIP 42
40892	40893	SIP 43
40894	40895	SIP 44
40896	40897	SIP 45
40898	40899	SIP 46
40900	40901	SIP 47
40902	40903	SIP 48
40904	40905	SIP 49
40906	40907	SIP 50
40908	40909	SIP 51
40910	40911	SIP 52
40912	40913	SIP 53
40914	40915	SIP 54
40916	40917	SIP 55
40918	40919	SIP 56
40920	40921	SIP 57
40922	40923	SIP 58
40924	40925	SIP 59
40926	40927	SIP 60
40928	40929	SIP 61
40930	40931	SIP 62
40932	40933	SIP 63
40934	40935	SIP 64
40936	40937	SIP 65
40938	40939	SIP 66
40940	40941	SIP 67
40942	40943	SIP 68
40944	40945	SIP 69
40946	40947	SIP 70
40948	40949	SIP 71
40950	40951	SIP 72
40952	40953	SIP 73
40954	40955	SIP 74
40956	40957	SIP 75
40958	40959	SIP 76
40960	40961	SIP 77
40962	40963	SIP 78
40964	40965	SIP 79
40966	40967	SIP 80
40968	40969	SIP 81
40970	40971	SIP 82
40972	40973	SIP 83
40974	40975	SIP 84
40976	40977	SIP 85
40978	40979	SIP 86
40980	40981	SIP 87
40982	40983	SIP 88
40984	40985	SIP 89
40986	40987	SIP 90
40988	40989	SIP 91

40990	40991	SIP 92
40992	40993	SIP 93
40994	40995	SIP 94
40996	40997	SIP 95
40998	40999	SIP 96

Note: It is proposed that while reading SIP data should be rea

Description	Format	Type	Remarks	
Active LS Days available		R		
0: Active Total Import Energy	Unsigned 16 bits	R/W	Parameter index To be	
1 for Previous; 0 for current	Unsigned 16 bits	R/W	Default zero (i.e. current day)	
Unused- Reserved				
Load Survey Date of the corresponding day no.	Unsigned 32 bits	R	Secs Since 1988	
Unused- Reserved				
1st SIP Since Midnight	32 bit FP	R		
2nd SIP Since Midnight	32 bit FP	R		
3rd SIP Since Midnight	32 bit FP	R		
4th SIP Since Midnight	32 bit FP	R		
5th SIP Since Midnight	32 bit FP	R		
6th SIP Since Midnight	32 bit FP	R		
7th SIP Since Midnight	32 bit FP	R		
8th SIP Since Midnight	32 bit FP	R		
9th SIP Since Midnight	32 bit FP	R		
10th SIP Since Midnight	32 bit FP	R		
11th SIP Since Midnight	32 bit FP	R		
12th SIP Since Midnight	32 bit FP	R		
13th SIP Since Midnight	32 bit FP	R		
14th SIP Since Midnight	32 bit FP	R		
15th SIP Since Midnight	32 bit FP	R		
16th SIP Since Midnight	32 bit FP	R		
17th SIP Since Midnight	32 bit FP	R		
18th SIP Since Midnight	32 bit FP	R		
19th SIP Since Midnight	32 bit FP	R		
20th SIP Since Midnight	32 bit FP	R		
21th SIP Since Midnight	32 bit FP	R		
22th SIP Since Midnight	32 bit FP	R		
23th SIP Since Midnight	32 bit FP	R		
24th SIP Since Midnight	32 bit FP	R		
25th SIP Since Midnight	32 bit FP	R		
26th SIP Since Midnight	32 bit FP	R		
27th SIP Since Midnight	32 bit FP	R		
28th SIP Since Midnight	32 bit FP	R		
29th SIP Since Midnight	32 bit FP	R		
30th SIP Since Midnight	32 bit FP	R		
31th SIP Since Midnight	32 bit FP	R		
32th SIP Since Midnight	32 bit FP	R		
33th SIP Since Midnight	32 bit FP	R		
34th SIP Since Midnight	32 bit FP	R		
35th SIP Since Midnight	32 bit FP	R		
36th SIP Since Midnight	32 bit FP	R		
37th SIP Since Midnight	32 bit FP	R		
38th SIP Since Midnight	32 bit FP	R		
39th SIP Since Midnight	32 bit FP	R		

40th SIP Since Midnight	32 bit FP	R	
41th SIP Since Midnight	32 bit FP	R	
42th SIP Since Midnight	32 bit FP	R	
43th SIP Since Midnight	32 bit FP	R	
44th SIP Since Midnight	32 bit FP	R	
45th SIP Since Midnight	32 bit FP	R	
46th SIP Since Midnight	32 bit FP	R	
47th SIP Since Midnight	32 bit FP	R	
48th SIP Since Midnight	32 bit FP	R	
49th SIP Since Midnight	32 bit FP	R	
50th SIP Since Midnight	32 bit FP	R	
51th SIP Since Midnight	32 bit FP	R	
52th SIP Since Midnight	32 bit FP	R	
53th SIP Since Midnight	32 bit FP	R	
54th SIP Since Midnight	32 bit FP	R	
55th SIP Since Midnight	32 bit FP	R	
56th SIP Since Midnight	32 bit FP	R	
57th SIP Since Midnight	32 bit FP	R	
58th SIP Since Midnight	32 bit FP	R	
59th SIP Since Midnight	32 bit FP	R	
60th SIP Since Midnight	32 bit FP	R	
61th SIP Since Midnight	32 bit FP	R	
62th SIP Since Midnight	32 bit FP	R	
63th SIP Since Midnight	32 bit FP	R	
64th SIP Since Midnight	32 bit FP	R	
65th SIP Since Midnight	32 bit FP	R	
66th SIP Since Midnight	32 bit FP	R	
67th SIP Since Midnight	32 bit FP	R	
68th SIP Since Midnight	32 bit FP	R	
69th SIP Since Midnight	32 bit FP	R	
70th SIP Since Midnight	32 bit FP	R	
71th SIP Since Midnight	32 bit FP	R	
72th SIP Since Midnight	32 bit FP	R	
73th SIP Since Midnight	32 bit FP	R	
74th SIP Since Midnight	32 bit FP	R	
75th SIP Since Midnight	32 bit FP	R	
76th SIP Since Midnight	32 bit FP	R	
77th SIP Since Midnight	32 bit FP	R	
78th SIP Since Midnight	32 bit FP	R	
79th SIP Since Midnight	32 bit FP	R	
80th SIP Since Midnight	32 bit FP	R	
81th SIP Since Midnight	32 bit FP	R	
82th SIP Since Midnight	32 bit FP	R	
83th SIP Since Midnight	32 bit FP	R	
84th SIP Since Midnight	32 bit FP	R	
85th SIP Since Midnight	32 bit FP	R	
86th SIP Since Midnight	32 bit FP	R	
87th SIP Since Midnight	32 bit FP	R	
88th SIP Since Midnight	32 bit FP	R	
89th SIP Since Midnight	32 bit FP	R	
90th SIP Since Midnight	32 bit FP	R	
91th SIP Since Midnight	32 bit FP	R	

92th SIP Since Midnight	32 bit FP	R	
93th SIP Since Midnight	32 bit FP	R	
94th SIP Since Midnight	32 bit FP	R	
95th SIP Since Midnight	32 bit FP	R	
96th SIP Since Midnight	32 bit FP	R	

d by setting the "SIP Config. Index" & "Day Number" every time while reading

[illegible]

Y	Y	Y	Y	Y	Y	Y	Y	Y
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[illegible]

[illegible]

Version	Date	Modified By
001	31/10/2011	Daood Ahmad
002	1/16/2012	Kamal Prajapati

Revision History
Initial Version for IIIrd Party Interface
1. Variant wise applicability of each registers mentioned.