



**MODBUS & BACNET Communication with ELNET PowerMeters**

**Last Update 17.07.2014**

The *ELNet* Energy Powermeters and Analyzers are supporting communication over MODBUS (RS485 and TCP/IP) and BACNET (IP and MSTP). The supported modes for each model are described in the following table:

MODEL	MODBUS		BACNET	
	RS485	TCP/IP	MSTP	TCP/IP
GR\PQ	*	*	*	*
LT	*		*	
LT TCP	*	*	*	*
MC	*	*	*	*
PIC	*		*	
LTE	*			
LTC	*			

Table 1-1 Supported protocols

**MODBUS Protocol**

The *ELNet* Energy & Powermeters has a serial and TPC/IP interface ports allowing direct interface with an external communication network supporting the MODBUS Protocol.

MODBUS is an Industry Standard, widely known and commonly used communications protocol. Using MODBUS provides communication between a PC and up to 247 Powermeter slaves on a common line- the PC being the **master** and the powermeters the **slaves**. The PC initiates the transaction (either a query or broadcast) and the Powermeter/s responds. Powermeters respond to the **master** PC's request, but will not initiate any transmission on its own. The PC sends a single Query transaction and the Powermeter responds in a single response frame and is capable of only one query and one response at a time

## 1.1 — MODBUS Framing

### 1.1.1— RTU Transmission Mode

MODBUS uses the standard Remote Terminal Unit (RTU) transmission mode. RTU mode sends data in 8-bit binary EVEN parity or 8-bit binary NO parity data format. For the *EINet Energy & Powermeter* to successfully communicate, choose one in the communication Set Up.

Field	No. of bits
Start bit	1
Data bits	8
Parity	1
Stop bit	1

Table 1-2 RTU Data Format

### 1.1.2 — The RTU Frame Format

Query and response information is sent in frames. Each frame contains:

Address

Function (See Section 1.1.4 for descriptions of functions),

Data

Check.

Address	Function	Data	Check
8 bits	8 bits	N * 8 bits	16 bits

Table 1-3 R T U Message Frame Format

If the receiving device (Powermeter) detects a time laps of five characters, then it will assume the message is incomplete and will flush the frame. The device then assumes that the next byte received will be an address. The maximum query and response message length is 256 bytes including check characters.

### 1.1.3 — Address Field

Each Powermeter is designated in a network system by a user assigned address. The Address can be any number between 1 and 255. The Powermeter will only respond to it's own specifacally assigned address.

### 1.1.4 — Function Field

The function field contains the code that tells the Powermeter what action to perform.

The *EINet* Energy & Powermeter uses and responds to four standard Message Format Functions.

**Function 03**

**Function 04**

**Function 06**

**Function 16**

<b>Function</b>	<b>Meaning in MODBUS</b>	<b>Action</b>
<b>Function 03</b>	Read holding register	Obtain data from Powermeter (Read register)
<b>Function 04</b>	Read input register	Obtain data from Powermeter (Read register)
<b>Function 06</b>	Preset single register	Transmit data to Powermeter (Write single register)
<b>Function 16</b>	Preset multiple register	Transmit data to Powermeter (Write multiple register)

Table 1-4 **Function Codes**

### **1.1.5 — Data Field**

The Data field contains the body of the message and contains instructions from the PC **master** to the Powermeter **slave** to perform a particular action or respond to a query. The reply message from the Powermeter will be information contained in one or more of its registers.

### **1.1.6 — Check Field**

The error check field contains the result of Cyclical Redundancy Check (CRC). The start of the message is ignored in calculating the CRC.

For more detailed information on CRC, refer to the MODBUS Protocol Reference Guide.

## **1.2 — Registers for *EINet* Multimeter**

The *EINet* Energy & Powermeter is capable of supporting either Function 03 or Function 04 Message Format(See Table 1-3). In a reply to a query from the PC **master** for a reading from a particular field, the response from the Powermeter can be either in Format 03 or Format 04 but will depend on which Format the query was originally sent.

The difference is significant because by using Function 03 the EINet will only send the INTEGER part of the field value requested and the PC **master** will only display the INTEGER part of the field value.

Function 04 on the other hand, is capable of sending two separate halves of the full FLOAT requested information (each half contained in a separate register). Then it is the task of the PC **master** to merge the two halves into a full FLOAT reply. (For more detailed information See IEEE Standard 754 Floating-Point).

E.G. 1 If the user's PC **master** supports Function 03, then the reply will contain the INTEGER part of the field only.

The PC **master** requests the Voltage from Line1, and the actual Voltage in that field is 230.5 Volts.

Function 03 will respond with the INTEGER only i.e. 230V.

E.G. 2 If the user PC **master** supports Function 04, then the reply will contain the information stored in the two registers assigned to that field and will contain the full, accurate reply.

The PC master requests the Voltage from Line1, and the actual Voltage in that field is 230.5 Volts.

Function 04 will respond with a composite reply of both register 1 and 2 giving the full FLOAT value (in IEEE Format) from that field i.e. 230.5V.

When Writing The Clock Registers (151-157) – User must write special value (123) in register 99.
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## Bacnet Protocol

The EInet powermeters supports Bacnet IP and MSTP communication modes (please check page 1, table 1-1).

The information that can be read\write from the EInets is:

- Time and Date
- Analog values

The BACNET "analog value" address numbers appear under the right column of the address table.

The RS485 port can not support simultaneously MODBUS and BACNET MSTP, the default mode of the RS485 communication port of the EInet powermeters is set to be MODBUS, in order to activate the BACNET MSTP mode the password 2244 must be used.

**When using EInet TXT (System B) – User must add 2000 to item (4000 to Register)  
(e.g Current Line 1 - System B = ModBus Register # 4013-14)**

<b>MODBUS Register</b>	<b>Field Description</b>	<b>Type</b>	<b>GR</b>	<b>PQ</b>	<b>PICO</b>	<b>VIP-P</b>	<b>LT color</b>	<b>LT</b>	<b>MC</b>	<b>LTE</b>	<b>LTC</b>	<b>ITEM # UniArt \ BACnet AV</b>
1-2	Voltage Line 1	R	✓	✓	✓	✓	✓	✓	✓	✓	✓	1
3-4	Voltage Line 2	R	✓	✓	✓	✓	✓	✓	✓	✓	✓	2
5-6	Voltage Line 3	R	✓	✓	✓	✓	✓	✓	✓	✓	✓	3
7-8	Voltage between line 1 and Line 2	R	✓	✓	✓	✓	✓	✓	✓	✓	✓	4
9-10	Voltage between line 2 and Line 3	R	✓	✓	✓	✓	✓	✓	✓	✓	✓	5
11-12	Voltage between line 3 and Line 1	R	✓	✓	✓	✓	✓	✓	✓	✓	✓	6
13-14	Current in Line 1	R	✓	✓	✓	✓	✓	✓	✓	✓	✓	7
15-16	Current in Line 2	R	✓	✓	✓	✓	✓	✓	✓	✓	✓	8
17-18	Current in Line 3	R	✓	✓	✓	✓	✓	✓	✓	✓	✓	9
19-20	Active Power Line 1 (Watt)	R	✓	✓	✓	✓	✓	✓	✓	✓	✓	10
21-22	Active Power Line 2 (Watt)	R	✓	✓	✓	✓	✓	✓	✓	✓	✓	11
23-24	Active Power Line 3 (watt)	R	✓	✓	✓	✓	✓	✓	✓	✓	✓	12
25-26	Combined Active Power Line 1+2 +3 (watt)	R	✓	✓	✓	✓	✓	✓	✓	✓	✓	13
27-28	Apparent Power Line 1 (VA)	R	✓	✓	✓	✓	✓	✓	✓	✓	✓	14
29-30	Apparent Power Line 2 (VA)	R	✓	✓	✓	✓	✓	✓	✓	✓	✓	15
31-32	Apparent Power Line 3 (VA)	R	✓	✓	✓	✓	✓	✓	✓	✓	✓	16
33-34	Combined Apparent Power Line 1+2+3	R	✓	✓	✓	✓	✓	✓	✓	✓	✓	17
35-36	Reactive Power Line 1 (VAR)	R	✓	✓	✓	✓	✓	✓	✓	✓	✓	18
37-38	Reactive Power Line 2 (VAR)	R	✓	✓	✓	✓	✓	✓	✓	✓	✓	19
39-40	Reactive Power Line 3 (VAR)	R	✓	✓	✓	✓	✓	✓	✓	✓	✓	20
41-42	Combined Reactive Power Line 1+2+3	R	✓	✓	✓	✓	✓	✓	✓	✓	✓	21

MODBUS Register	Field Description	Type	GR	PQ	PICO	VIP-P	LT color	LT	MC	LTE	LTC	ITEM # UniArt \ BACnet AV
43-44	Power Factor Line 1 (PF)	R	✓	✓	✓	✓	✓	✓	✓	✓	✓	22
45-46	Power Factor Line 2 (PF)	R	✓	✓	✓	✓	✓	✓	✓	✓	✓	23
47-48	Power Factor Line 3 (PF)	R	✓	✓	✓	✓	✓	✓	✓	✓	✓	24
49-50	Combined Power Factor for Line 1+2+3	R	✓	✓	✓	✓	✓	✓	✓	✓	✓	25
51-52	Frequency Line 1 (Hz)	R	✓	✓	✓	✓	✓	✓	✓	✓	✓	26
53-54	Frequency Line 2 (Hz)	R	✓	✓	✓	✓	✓	✓	✓	✓	✓	27
55-56	Frequency Line 3 (Hz)	R	✓	✓	✓	✓	✓	✓	✓	✓	✓	28
57-58	Current Neutral Line	R	✓	✓	✓	✓	✓	✓	✓	✓	✓	29
59-60	Power Factor Line 1 (L & C)	R	✓	✓	✓		✓				✓	30
61-62	Power Factor Line 2 (L & C)	R	✓	✓	✓		✓				✓	31
63-64	Power Factor Line 3 (L & C)	R	✓	✓	✓		✓				✓	32
65-66	Combined Power Factor for Line 1+2+3 (L & C)	R	✓	✓	✓		✓				✓	33
67-68	Total Current in Line 1+2+3	R					✓					34
77-78	TOU (Taoz) rate	R/W	✓	✓	✓		✓	✓	✓		✓	39
79-80	Active Total Energy (Wh)	R	✓	✓	✓	✓	✓	✓	✓	✓	✓	40
81-82	Reactive Total Energy (VARh)	R	✓	✓	✓	✓	✓	✓	✓	✓	✓	41
83-84	Apparent Total Energy (Vah)	R	✓	✓	✓	✓	✓	✓	✓	✓	✓	42
85-86	Date Time (Win Format)	R	✓	✓	✓	✓	✓	✓		✓		43
87-88	Time from 01 01 2000 in seconds	R	✓	✓	✓	✓	✓	✓	✓	✓	✓	44
89-90	ADDRESS	R	✓	✓	✓	✓	✓	✓	✓	✓	✓	45
91-92	BAUD RATE	R	✓	✓	✓	✓	✓	✓	✓	✓	✓	46
93-94	PARITY	R	✓	✓	✓	✓	✓	✓	✓	✓	✓	47

MODBUS Register	Field Description	Type	GR	PQ	PICO	VIP-P	LT color	LT	MC	LTE	LTC	ITEM # UniArt \ BACnet AV
95-96	Current Transformer Ratio	R/W	✓	✓	✓	✓	✓	✓	✓	✓	✓	48
97-98	Timed average Voltage	R/W	✓	✓	✓	✓	✓	✓	✓	✓	✓	49
99-100	Timed average Current	R/W	✓	✓	✓	✓	✓	✓	✓	✓	✓	50
101-102	Timed average Power	R/W	✓	✓	✓	✓	✓	✓	✓	✓	✓	51
103-104	Timed average Frequency	R/W	✓	✓	✓	✓	✓	✓	✓	✓	✓	52
105-106	THD for Volts Line 1	R	✓	✓	✓	✓	✓	✓ <sup>1</sup>	✓	✓	✓ <sup>1</sup>	53
107-108	THD for Volts Line 2	R	✓	✓	✓	✓	✓	✓ <sup>1</sup>	✓	✓	✓ <sup>1</sup>	54
109-110	THD for Volts Line 3	R	✓	✓	✓	✓	✓	✓ <sup>1</sup>	✓	✓	✓ <sup>1</sup>	55
111-112	THD for Current Line 1	R	✓	✓	✓	✓	✓	✓ <sup>1</sup>	✓	✓	✓ <sup>1</sup>	56
113-114	THD for Current Line 2	R	✓	✓	✓	✓	✓	✓ <sup>1</sup>	✓	✓	✓ <sup>1</sup>	57
115-116	THD for Current Line 3	R	✓	✓	✓	✓	✓	✓ <sup>1</sup>	✓	✓	✓ <sup>1</sup>	58
117-118	Active Rate (1,2,3)	R	✓	✓	✓		✓	✓	✓		✓	59
119-120	Active Energy Line 1 (W-Import)	R	✓	✓	✓	✓	✓	✓	✓	✓	✓	60
121-122	Active Energy Line 2 (W-Import)	R	✓	✓	✓	✓	✓	✓	✓	✓	✓	61
123-124	Active Energy Line 3 (W-Import)	R	✓	✓	✓	✓	✓	✓	✓	✓	✓	62
125-126	Reactive Energy Line 1 (VAR-Import)	R	✓	✓	✓	✓	✓	✓	✓	✓	✓	63
127-128	Reactive Energy Line 2 (VAR-Import)	R	✓	✓	✓	✓	✓	✓	✓	✓	✓	64
129-130	Reactive Energy Line 3 (VAR-Import)	R	✓	✓	✓	✓	✓	✓	✓	✓	✓	65
131-132	Apparant Energy Line 1 (VA-Import)	R	✓	✓	✓	✓	✓	✓	✓	✓	✓	66
133-134	Apparant Energy Line 2 (VA-Import)	R	✓	✓	✓	✓	✓	✓	✓	✓	✓	67
135-136	Apparant Energy Line 3 (VA-Import)	R	✓	✓	✓	✓	✓	✓	✓	✓	✓	68
137-138	Active Energy Line 1 – Rate 1 (Imp)	R/W	✓	✓	✓		✓	✓	✓		✓	69
139-140	Active Energy Line 2 – Rate 1 (Imp)	R/W	✓	✓	✓		✓	✓	✓		✓	70
141-142	Active Energy Line 3 – Rate 1 (Imp)	R/W	✓	✓	✓		✓	✓	✓		✓	71



MODBUS Register	Field Description	Type	GR	PQ	PICO	VIP-P	LT color	LT	MC	LTE	LTC	ITEM # UniArt \ BACnet AV
143-144	Active Energy Line 1 – Rate 2 (Imp)	R/W	✓	✓	✓		✓	✓	✓		✓	72
145-146	Active Energy Line 2 – Rate 2 (Imp)	R/W	✓	✓	✓		✓	✓	✓		✓	73
147-148	Active Energy Line 3 – Rate 2 (Imp)	R/W	✓	✓	✓		✓	✓	✓		✓	74
149-150	Active Energy Line 1 – Rate 3 (Imp)	R/W	✓	✓	✓		✓	✓	✓		✓	75
151-152	Active Energy Line 2 – Rate 3 (Imp)	R/W	✓	✓	✓		✓	✓	✓		✓	76
153-154	Active Energy Line 3 – Rate 3 (Imp)	R/W	✓	✓	✓		✓	✓	✓		✓	77
155-156	Active Energy Line 1+2+3 – Rate 1 (I)	R	✓	✓	✓		✓	✓	✓		✓	78
157-158	Active Energy Line 1+2+3 – Rate 2 (I)	R	✓	✓	✓		✓	✓	✓		✓	79
159-160	Active Energy Line 1+2+3 – Rate 3 (I)	R	✓	✓	✓		✓	✓	✓		✓	80
161-162	Apparant Energy Line 1 – Rate 1 (I)	R/W	✓	✓	✓		✓	✓	✓		✓	81
163-164	Apparant Energy Line 2 – Rate 1 (I)	R/W	✓	✓	✓		✓	✓	✓		✓	82
165-166	Apparant Energy Line 3 – Rate 1 (I)	R/W	✓	✓	✓		✓	✓	✓		✓	83
167-168	Apparant Energy Line 1 – Rate 2 (I)	R/W	✓	✓	✓		✓	✓	✓		✓	84
169-170	Apparant Energy Line 2 – Rate 2 (I)	R/W	✓	✓	✓		✓	✓	✓		✓	85
171-172	Apparant Energy Line 3 – Rate 2 (I)	R/W	✓	✓	✓		✓	✓	✓		✓	86
173-174	Apparant Energy Line 1 – Rate 3 (I)	R/W	✓	✓	✓		✓	✓	✓		✓	87
175-176	Apparant Energy Line 2 – Rate 3 (I)	R/W	✓	✓	✓		✓	✓	✓		✓	88
177-178	Apparant Energy Line 3 – Rate 3 (I)	R/W	✓	✓	✓		✓	✓	✓		✓	89
179-180	Apparant Energy 1+2+3 – Rate 1 (I)	R	✓	✓	✓		✓	✓	✓		✓	90
181-182	Apparant Energy 1+2+3 – Rate 2 (I)	R	✓	✓	✓		✓	✓	✓		✓	91
183-184	Apparant Energy 1+2+3 – Rate 3 (I)	R	✓	✓	✓		✓	✓	✓		✓	92
185-186	Voltage Transformer Ratio	R/W	✓	✓	✓	✓	✓	✓	✓	✓	✓	93
187-188	Epeom Revision	R	✓	✓	✓	✓	✓	✓	✓	✓	✓	94
189-190	Demo Mode	R/W*	✓	✓	✓	✓	✓	✓	✓	✓	✓	95

MODBUS Register	Field Description	Type	GR	PQ	PICO	VIP-P	LT color	LT	MC	LTE	LTC	ITEM # UniArt \ BACnet AV
191-192	Configuration PassWord	R/W	✓	✓	✓		✓	✓	✓		✓	96
193-194	Min. Current To Accumulate Energy	R/W	✓	✓	✓		✓	✓	✓		✓	97
195-196	MuliMeter ID	R	✓	✓	✓		✓	✓	✓		✓	98
197-198	User Function Mode (Technical)	R/W	✓	✓	✓	✓	✓	✓	✓	✓	✓	99
199-200	Test Value 12.34	R					✓					100
201-202	Demand – KW Max (Watt)	R			✓		✓	✓			✓	101
203-204	Demand – PF (KW)	R			✓		✓	✓			✓	102
205-206	Demand – Date (KW)	R			✓		✓	✓			✓	103
207-208	Demand – KVA (Watt)	R			✓		✓	✓			✓	104
209-210	Demand – PF (KVA)	R			✓		✓	✓			✓	105
211-212	Demand – Date (KVA)	R			✓		✓	✓			✓	106
213-214	Demand – Current (A) L1	R/W*	✓	✓			✓	✓			✓	107
215-216	Demand – Current (A) L2	R/W*	✓	✓			✓	✓			✓	108
217-218	Demand – Current (A) L3	R/W*	✓	✓			✓	✓			✓	109
219-220	Demand – Current (A) L1+L2+L3	R/W*	✓	✓			✓	✓			✓	110
221-222	Demand – Current (A) L1 – Date	R	✓	✓			✓	✓			✓	111
223-224	Demand – Current (A) L2 – Date	R	✓	✓			✓	✓			✓	112
225-226	Demand – Current (A) L3 – Date	R	✓	✓			✓	✓			✓	113
227-228	Demand – Current (A) L1+2+3 – Date	R	✓	✓			✓	✓			✓	114
229-230	Demand – KVA (Last)	R					✓	✓			✓	115
231-232	Demand – KVAR (Last)	R					✓	✓			✓	116
233-234	Clear All Current Demand	R/W	✓	✓			✓	✓			✓	117
235-236	Demand – KW (Last)	R			✓		✓	✓			✓	118

<b>MODBUS Register</b>	<b>Field Description</b>	<b>Type</b>	<b>GR</b>	<b>PQ</b>	<b>PICO</b>	<b>VIP-P</b>	<b>LT color</b>	<b>LT</b>	<b>MC</b>	<b>LTE</b>	<b>LTC</b>	<b>ITEM # UniArt \ BACnet AV</b>
237-238	Min. Current For Display (0.1A)	R/W					✓	✓				119
241-242	PFC – Power Factor	R/W					✓	✓			✓	121
243-244	PFC – On Time	R/W					✓	✓			✓	122
245-246	PFC – Off Time	R/W					✓	✓			✓	123
247-248	PFC – Average Time (Minute)	R/W					✓	✓			✓	124
249-250	PFC – Stages	R/W					✓	✓			✓	125
251-252	PFC – Mode Of Operation	R/W					✓	✓			✓	126
253-254	PFC – THD (Volt)	R/W					✓	✓			✓	127
255-256	PFC – Capacitor #1 (KVAR)	R/W					✓	✓			✓	128
257-258	PFC – Capacitor #2 (KVAR)	R/W					✓	✓			✓	129
259-260	PFC – Capacitor #3 (KVAR)	R/W					✓	✓			✓	130
261-262	PFC – Capacitor #4 (KVAR)	R/W					✓	✓			✓	131
263-264	PFC – Capacitor #5 (KVAR)	R/W					✓	✓			✓	132
265-266	PFC – Capacitor #6 (KVAR)	R/W					✓	✓			✓	133
267-268	PFC – THD (Current)	R/W					✓	✓			✓	134
269-270	PFC – Min. Voltage	R/W					✓				✓	135
271-272	PFC – PF Average Time	R/W					✓	✓			✓	136
273-274	PFC – Comb. Stayble Time	R/W					✓	✓			✓	137
275-276	PFC – Hysteresis	R/W					✓	✓			✓	138
277-278	PFC – % Voltage (VT) For OK	R/W					✓	✓			✓	139
279-280	PFC – % Current (CT) To Stop	R/W					✓	✓			✓	140
281-282	PFC – Capacitor #1 Status	R					✓	✓			✓	141
283-284	PFC – Capacitor #2 Status	R					✓	✓			✓	142

MODBUS Register	Field Description	Type	GR	PQ	PICO	VIP-P	LT color	LT	MC	LTE	LTC	ITEM # UniArt \ BACnet AV
285-286	PFC – Capacitor #3 Status	R					✓	✓			✓	143
287-288	PFC – Capacitor #4 Status	R					✓	✓			✓	144
289-290	PFC – Capacitor #5 Status	R					✓	✓			✓	145
291-292	PFC – Capacitor #6 Status	R					✓	✓			✓	146
293-294	Pulse Value (KW-IMP) Relay 1	R/W	✓	✓			✓	✓			✓	147
295-296	Pulse Value (KW-EXP) Relay 2	R/W	✓	✓								148
297-298	Pulse Value (KQ-IMP) Relay 3	R/W	✓	✓								149
299-300	Pulse Duration (Seconds)	R/W	✓	✓			✓				✓	150
301-302	Clock : Seconds	R/W*	✓	✓	✓	✓	✓	✓	✓	✓	✓	151
303-304	Clock : Minutes	R/W*	✓	✓	✓	✓	✓	✓	✓	✓	✓	152
305-306	Clock : Hours	R/W*	✓	✓	✓	✓	✓	✓	✓	✓	✓	153
307-308	Clock : Week Day (1-7)	R/W*	✓	✓	✓	✓	✓	✓	✓	✓	✓	154
309-310	Clock : Day	R/W*	✓	✓	✓	✓	✓	✓	✓	✓	✓	155
311-312	Clock : Month	R/W*	✓	✓	✓	✓	✓	✓	✓	✓	✓	156
313-314	Clock : Year (20xx)	R/W*	✓	✓	✓	✓	✓	✓	✓	✓	✓	157
315-316	Run Time (Seconds With Current)	R/W*			✓		✓	✓	✓		✓	158
317-318	Day Time (Win Format)	R	✓	✓			✓	✓				159
319-320	Force Cpu To response in MC	R/W							✓			160
321-322	Type Of Din 1	R/W*										161
323-324	Type Of Din 2	R/W*										162
325-326	Type Of Din 3	R/W*										163
327-328	Type Of Din 4	R/W*										164
333-334	K.Factor – Current – Line 1	R	✓	✓								167

MODBUS Register	Field Description	Type	GR	PQ	PICO	VIP-P	LT color	LT	MC	LTE	LTC	ITEM # UniArt \ BACnet AV
335-336	K.Factor – Current – Line 2	R	✓	✓								168
337-338	K.Factor – Current – Line 3	R	✓	✓								169
339-340	K.Factor – Current – Line 1+2+3	R	✓	✓								170
341-342	Din 1 Energy Total – Rate 1	R										171
343-344	Din 2 Energy Total – Rate 1	R										172
345-346	Din 3 Energy Total – Rate 1	R										173
347-348	Din 4 Energy Total – Rate 1	R										174
349-350	Din 1 Energy Total – Rate 2	R										175
351-352	Din 2 Energy Total – Rate 2	R										176
353-354	Din 3 Energy Total – Rate 2	R										177
355-356	Din 4 Energy Total – Rate 2	R										178
357-358	Din 1 Energy Total – Rate 3	R										179
359-360	Din 2 Energy Total – Rate 3	R										180
361-362	Din 3 Energy Total – Rate 3	R										181
363-364	Din 4 Energy Total – Rate 3	R										182
365-366	Din 1 Energy Total – Rate 1+2+3	R										183
367-368	Din 2 Energy Total – Rate 1+2+3	R										184
369-370	Din 3 Energy Total – Rate 1+2+3	R										185
371-372	Din 4 Energy Total – Rate 1+2+3	R										186
379-380	Temperature Sensor	R/W*	✓	✓	✓		✓	✓	✓		✓	190
381-382	Digital In 1 - Status	R	✓	✓			✓	✓	✓		✓	191
383-384	Digital In 2 - Status	R	✓	✓			✓	✓	✓		✓	192

MODBUS Register	Field Description	Type	GR	PQ	PICO	VIP-P	LT color	LT	MC	LTE	LTC	ITEM # UniArt \ BACnet AV
385-386	Digital In 3 - Status	R	✓	✓					✓			193
387-388	Digital In 4 - Status	R	✓	✓								194
395-396	Web Authentication (User=admin)	R/W					✓	✓	✓		✓	198
397-398	Fast Trend Cycle Time (Seconds)	R/W	✓	✓								199
399-400	History - Date	R/W	✓	✓	✓		✓	✓	✓		✓	200
401-402	History – Day	R/W	✓	✓	✓		✓	✓	✓		✓	201
403-404	History – Month	R/W	✓	✓	✓		✓	✓	✓		✓	202
405-406	History - Year	R/W	✓	✓	✓		✓	✓	✓		✓	203
407-408	History-Active Energy Line 1 – Rate 1	R	✓	✓	✓		✓	✓	✓		✓	204
409-410	History-Active Energy Line 2 – Rate 1	R	✓	✓	✓		✓	✓	✓		✓	205
411-412	History-Active Energy Line 3 – Rate 1	R	✓	✓	✓		✓	✓	✓		✓	206
413-414	History-Active Energy Line 1 – Rate 2	R	✓	✓	✓		✓	✓	✓		✓	207
415-416	History-Active Energy Line 2 – Rate 2	R	✓	✓	✓		✓	✓	✓		✓	208
417-418	History-Active Energy Line 3 – Rate 2	R	✓	✓	✓		✓	✓	✓		✓	209
419-420	History-Active Energy Line 1 – Rate 3	R	✓	✓	✓		✓	✓	✓		✓	210
421-422	History-Active Energy Line 2 – Rate 3	R	✓	✓	✓		✓	✓	✓		✓	211
423-424	History-Active Energy Line 3 – Rate 3	R	✓	✓	✓		✓	✓	✓		✓	212
425-426	History-ReActive Energy Ln 1–Rate 1	R	✓	✓	✓		✓	✓	✓		✓	213
427-428	History-ReActive Energy Ln 2–Rate 1	R	✓	✓	✓		✓	✓	✓		✓	214
429-430	History-ReActive Energy Ln 3–Rate 1	R	✓	✓	✓		✓	✓	✓		✓	215
431-432	History-ReActive Energy Ln 1–Rate 2	R	✓	✓	✓		✓	✓	✓		✓	216
433-434	History-ReActive Energy Ln 2–Rate 2	R	✓	✓	✓		✓	✓	✓		✓	217
435-436	History-ReActive Energy Ln 3–Rate 2	R	✓	✓	✓		✓	✓	✓		✓	218

MODBUS Register	Field Description	Type	GR	PQ	PICO	VIP-P	LT color	LT	MC	LTE	LTC	ITEM # UniArt \ BACnet AV
437-438	History-ReActive Energy Ln 1–Rate 3	R	✓	✓	✓		✓	✓	✓		✓	219
439-440	History-ReActive Energy Ln 2–Rate 3	R	✓	✓	✓		✓	✓	✓		✓	220
441-442	History-ReActive Energy Ln 3–Rate 3	R	✓	✓	✓		✓	✓	✓		✓	221
443-444	History-Din 1 Energy – Rate 1	R					✓					222
445-446	History-Din 2 Energy – Rate 1	R					✓					223
447-448	History-Din 3 Energy – Rate 1	R										224
449-450	History-Din 4 Energy – Rate 1	R										225
451-452	History-Din 1 Energy – Rate 2	R					✓					226
453-454	History-Din 2 Energy – Rate 2	R					✓					227
455-456	History-Din 3 Energy – Rate 2	R										228
457-458	History-Din 4 Energy – Rate 2	R										229
459-460	History-Din 1 Energy – Rate 3	R					✓					230
461-462	History-Din 2 Energy – Rate 3	R					✓					231
463-464	History-Din 3 Energy – Rate 3	R										232
465-466	History-Din 4 Energy – Rate 3	R										233
491-492	History – Reading Date	R	✓	✓	✓		✓	✓	✓		✓	246
493-494	Debug Counter 1	R/W			✓		✓	✓	✓		✓	247
495-496	Debug Counter 2	R/W			✓		✓	✓	✓		✓	248
497-498	Debug Counter 3	R/W			✓		✓	✓	✓		✓	249
499-500	Debug Counter 4	R/W			✓		✓	✓	✓		✓	250
501-502	Technical Calibration Value 1	R	✓	✓	✓		✓	✓	✓		✓	251
503-504	Technical Calibration Value 2	R	✓	✓	✓		✓	✓	✓		✓	252
505-506	Technical Calibration Value 3	R	✓	✓	✓		✓	✓	✓		✓	253

MODBUS Register	Field Description	Type	GR	PQ	PICO	VIP-P	LT color	LT	MC	LTE	LTC	ITEM # UniArt \ BACnet AV
507-508	Technical Calibration Value 4	R	✓	✓	✓		✓	✓	✓		✓	254
509-510	Float Format (0,1,2)	R/W	✓		✓		✓	✓	✓		✓	255
511-512	Compatibility Mode (0,130,170)	R/W			✓		✓	✓	✓		✓	256
513-514	Technical Current Calibration	R/W	✓	✓	✓		✓	✓	✓		✓	257
519-520	Start Time1 For Period Alarm	R/W	✓	✓								260
521-522	Stop Time1 For Period Alarm	R/W	✓	✓								261
523-524	High Power (KW) (Period)	R/W	✓	✓								262
525-526	Low Power (KW) (Period)	R/W	✓	✓								263
527-528	Time Table For Period Alarm High	R/W	✓	✓								264
529-530	Time Table For Period Alarm Low	R/W	✓	✓								265
531-532	Start2 Time For Period Alarm	R/W	✓	✓								266
533-534	Stop2 Time For Period Alarm	R/W	✓	✓								267
537-538	ReActive Energy Line 1 –Rate 1 (Imp)	R/W	✓	✓	✓		✓	✓	✓		✓	269
539-540	ReActive Energy Line 2 –Rate 1 (Imp)	R/W	✓	✓	✓		✓	✓	✓		✓	270
541-542	ReActive Energy Line 3 –Rate 1 (Imp)	R/W	✓	✓	✓		✓	✓	✓		✓	271
543-544	ReActive Energy Line 1 –Rate 2 (Imp)	R/W	✓	✓	✓		✓	✓	✓		✓	272
545-546	ReActive Energy Line 2 –Rate 2 (Imp)	R/W	✓	✓	✓		✓	✓	✓		✓	273
547-548	ReActive Energy Line 3 –Rate 2 (Imp)	R/W	✓	✓	✓		✓	✓	✓		✓	274
549-550	ReActive Energy Line 1 –Rate 3 (Imp)	R/W	✓	✓	✓		✓	✓	✓		✓	275
551-552	ReActive Energy Line 2 –Rate 3 (Imp)	R/W	✓	✓	✓		✓	✓	✓		✓	276
553-554	ReActive Energy Line 3 –Rate 3 (Imp)	R/W	✓	✓	✓		✓	✓	✓		✓	277
555-556	ReActive E. Line 1+2+3 –Rate 1 (I)	R	✓	✓			✓	✓	✓		✓	278



MODBUS Register	Field Description	Type	GR	PQ	PICO	VIP-P	LT color	LT	MC	LTE	LTC	ITEM # UniArt \ BACnet AV
557-558	ReActive E. Line 1+2+3 –Rate 2 (I)	R	✓	✓			✓	✓	✓		✓	279
559-560	ReActive E. Line 1+2+3 –Rate 3 (I)	R	✓	✓			✓	✓	✓		✓	280
561-562	Virtual Pulse Value (KW) P-Total	R/W	✓	✓								281
563-564	Virtual Pulse Counter	R/W	✓	✓								282
565-566	Fix Value (Debug) 123.4	R	✓	✓		✓	✓	✓		✓		283
567-568	Float Order (0=LM),(1=ML)	R/W	✓	✓								284
569-570	ReActive E.Total In Capacitor Mode	R					✓	✓	✓	✓		285
571-572	ReActive E.Total In Non Capacitor Mode	R					✓	✓	✓	✓		286
573-574	Demand – KVAR (Var)	R					✓	✓				287
575-576	Demand – PF (KVAR)	R					✓	✓				288
577-578	Demand – Date (KVAR)	R					✓	✓				289
579-580	Delay (MS) for response time (RS485)	R/W	✓				✓	✓				290
581-582	Current Line 1 Opposite Error	R	✓	✓	✓		✓	✓	✓		✓	291
583-584	Current Line 2 Opposite Error	R	✓	✓	✓		✓	✓	✓		✓	292
585-586	Current Line 3 Opposite Error	R	✓	✓	✓		✓	✓	✓		✓	293
587-588	Voltage Seq. Error	R	✓	✓	✓		✓	✓	✓		✓	294
589-590	Reactive Energy Quadrant # 1 (kvarh) W:Imp, Q:Imp	R	✓	✓			✓	✓	✓			295
591-592	Reactive Energy Quadrant # 2 (kvarh) W:Imp, Q:Exp	R	✓	✓			✓	✓	✓			296
593-594	Reactive Energy Quadrant # 3 (kvarh) W:Exp, Q:Imp	R	✓	✓			✓	✓	✓			297
595-596	Reactive Energy Quadrant # 4 (kvarh) W:Exp, Q:Exp	R	✓	✓			✓	✓	✓			298

<b>MODBUS Register</b>	<b>Field Description</b>	<b>Type</b>	<b>GR</b>	<b>PQ</b>	<b>PICO</b>	<b>VIP-P</b>	<b>LT color</b>	<b>LT</b>	<b>MC</b>	<b>LTE</b>	<b>LTC</b>	<b>ITEM # UniArt \ BACnet AV</b>
601-602	1 <sup>st</sup> Harmonics for Volts <b>Line 1</b>	R	✓	✓	✓		✓ <sup>1</sup>	✓ <sup>1</sup>			✓ <sup>1</sup>	301
603-604	2 <sup>nd</sup> Harmonics for Volts <b>Line 1</b>	R	✓	✓	✓		✓ <sup>1</sup>	✓ <sup>1</sup>			✓ <sup>1</sup>	302
⇓	⇓	⇓					✓ <sup>1</sup>	✓ <sup>1</sup>			✓ <sup>1</sup>	⇓
661-662	31 <sup>st</sup> Harmonics for Volts <b>Line 1</b>	R	✓	✓	✓		✓ <sup>1</sup>	✓ <sup>1</sup>			✓ <sup>1</sup>	331
663-664	32 <sup>nd</sup> Harmonics for Volts <b>Line 1</b>	R	✓	✓	✓		✓ <sup>1</sup>	✓ <sup>1</sup>			✓ <sup>1</sup>	332
665-666	1 <sup>st</sup> Harmonics for Volts <b>Line 2</b>	R	✓	✓	✓		✓ <sup>1</sup>	✓ <sup>1</sup>			✓ <sup>1</sup>	333
667-668	2 <sup>nd</sup> Harmonics for Volts <b>Line 2</b>	R	✓	✓	✓		✓ <sup>1</sup>	✓ <sup>1</sup>			✓ <sup>1</sup>	334
⇓	⇓	⇓					✓ <sup>1</sup>	✓ <sup>1</sup>			✓ <sup>1</sup>	⇓
725-726	31 <sup>st</sup> Harmonics for Volts <b>Line 2</b>	R	✓	✓	✓		✓ <sup>1</sup>	✓ <sup>1</sup>			✓ <sup>1</sup>	363
727-728	32 <sup>nd</sup> Harmonics for Volts <b>Line 2</b>	R	✓	✓	✓		✓ <sup>1</sup>	✓ <sup>1</sup>			✓ <sup>1</sup>	364
729-730	1 <sup>st</sup> Harmonic for Volts <b>Line 3</b>	R	✓	✓	✓		✓ <sup>1</sup>	✓ <sup>1</sup>			✓ <sup>1</sup>	365
731-732	2 <sup>nd</sup> Harmonics for Volts <b>Line 3</b>	R	✓	✓	✓		✓ <sup>1</sup>	✓ <sup>1</sup>			✓ <sup>1</sup>	366
⇓	⇓	⇓										⇓
789-790	31 <sup>st</sup> Harmonics for Vots <b>Line 3</b>	R	✓	✓	✓		✓ <sup>1</sup>	✓ <sup>1</sup>			✓ <sup>1</sup>	395
791-792	32 <sup>nd</sup> Harmonics for Volts <b>Line 3</b>	R	✓	✓	✓		✓ <sup>1</sup>	✓ <sup>1</sup>			✓ <sup>1</sup>	396
793-794	1 <sup>st</sup> Harmonics for Current <b>Line 1</b>	R	✓	✓	✓		✓ <sup>1</sup>	✓ <sup>1</sup>			✓ <sup>1</sup>	397
795-796	2 <sup>nd</sup> Harmonics for Current <b>Line 1</b>	R	✓	✓	✓		✓ <sup>1</sup>	✓ <sup>1</sup>			✓ <sup>1</sup>	398
⇓	⇓	⇓					✓ <sup>1</sup>	✓ <sup>1</sup>			✓ <sup>1</sup>	⇓
853-854	31 <sup>st</sup> Harmonics for Current <b>Line 1</b>	R	✓	✓	✓		✓ <sup>1</sup>	✓ <sup>1</sup>			✓ <sup>1</sup>	427
855-856	32 <sup>nd</sup> Harmonics for Current <b>Line 1</b>	R	✓	✓	✓		✓ <sup>1</sup>	✓ <sup>1</sup>			✓ <sup>1</sup>	428

MODBUS Register	Field Description	Type	GR	PQ	PICO	VIP-P	LT color	LT	MC	LTE	LTC	ITEM # UniArt \ BACnet AV
857-858	1 <sup>st</sup> Harmonics for Current <b>Line 2</b>	R	✓	✓	✓		✓ <sup>1</sup>	✓ <sup>1</sup>			✓ <sup>1</sup>	429
859-860	2 <sup>nd</sup> Harmonics for Current <b>Line 2</b>	R	✓	✓	✓		✓ <sup>1</sup>	✓ <sup>1</sup>			✓ <sup>1</sup>	430
⇓	⇓	⇓					✓ <sup>1</sup>	✓ <sup>1</sup>			✓ <sup>1</sup>	⇓
917-918	31 <sup>st</sup> Harmonics for Current <b>line 2</b>	R	✓	✓	✓		✓ <sup>1</sup>	✓ <sup>1</sup>			✓ <sup>1</sup>	459
919-920	32 <sup>nd</sup> Harmonicsfor Current <b>Line 2</b>	R	✓	✓	✓		✓ <sup>1</sup>	✓ <sup>1</sup>			✓ <sup>1</sup>	460
921-922	1 <sup>st</sup> Harmonics for Current <b>Line 3</b>	R	✓	✓	✓		✓ <sup>1</sup>	✓ <sup>1</sup>			✓ <sup>1</sup>	461
923-924	2 <sup>nd</sup> Harmonics for Current <b>Line 3</b>	R	✓	✓	✓		✓ <sup>1</sup>	✓ <sup>1</sup>			✓ <sup>1</sup>	462
⇓	⇓	⇓					✓ <sup>1</sup>	✓ <sup>1</sup>			✓ <sup>1</sup>	⇓
981-982	31 <sup>st</sup> Harmonics for Current <b>Line 3</b>	R	✓	✓	✓		✓ <sup>1</sup>	✓ <sup>1</sup>			✓ <sup>1</sup>	491
983-984	32 <sup>nd</sup> Harmonics for Current <b>Line 3</b>	R	✓	✓	✓		✓ <sup>1</sup>	✓ <sup>1</sup>			✓ <sup>1</sup>	492
993-994	Current Transformer Ratio (Line 1)	R/W							✓			497
995-996	Current Transformer Ratio (Line 2)	R/W							✓			498
997-998	Current Transformer Ratio (Line 3)	R/W							✓			499
1001-2	User Alarm #1	R	✓	✓	✓		✓	✓				501
1003-4	User Alarm #2	R	✓	✓	✓		✓	✓				502
1005-6	User Alarm #3	R	✓	✓	✓		✓	✓				503
⇓	⇓	⇓										⇓
1253-4	User Alarm #127	R	✓	✓	✓		✓	✓				627
1255-6	User Alarm #128	R	✓	✓	✓		✓	✓				628
1257-8												629

MODBUS Register	Field Description	Type	GR	PQ	PICO	VIP-P	LT color	LT	MC	LTE	LTC	ITEM # UniArt \ BACnet AV
1259-60	Demand – Synchronize Pulse	W	✓	✓			✓					630
1261-62	Demand – Watt L1	R	✓	✓			✓					631
1263-64	Demand – Watt L2	R	✓	✓			✓					632
1265-66	Demand – Watt L3	R	✓	✓			✓					633
1267-68	Demand – VAR L1	R	✓	✓			✓					634
1269-70	Demand – VAR L2	R	✓	✓			✓					635
1271-72	Demand – VAR L3	R	✓	✓			✓					636
1273-74	Demand – VA L1	R	✓	✓			✓					637
1275-76	Demand – VA L2	R	✓	✓			✓					638
1277-78	Demand – VA L3	R	✓	✓			✓					639
1279-80	Demand – Watt L1+L2+L3	R	✓	✓			✓					640
1281-82	Demand – VAR L1+L2+L3	R	✓	✓			✓					641
1283-84	Demand – VA L1+L2+L3	R	✓	✓			✓					642
1285-86	Demand – Current (A) L1	R	✓	✓			✓					643
1287-88	Demand – Current (A) L2	R	✓	✓			✓					644
1289-90	Demand – Current (A) L3	R	✓	✓			✓					645
1291-92	Demand – Current (A) L1+L2+L3	R	✓	✓			✓					646
1293-94	Displacement Power Factor Line 1 (CosF)	R					✓	✓				647
1295-96	Displacement Power Factor Line 2 (CosF)	R					✓	✓				648
1297-98	Displacement Power Factor Line 3 (CosF)	R					✓	✓				649
1299-00	Long Wave Write Now !!	W		✓								650
1301-02	Long Wave Event (Before) - Seconds	R/W		✓								651
1303-04	Long Wave Event (Total) - Seconds	R/W		✓								652

MODBUS Register	Field Description	Type	GR	PQ	PICO	VIP-P	LT color	LT	MC	LTE	LTC	ITEM # UniArt \ BACnet AV
1305-06	Current L1 – High - Write Long Wave Event	R/W		✓								653
1307-08	Current L1 – Hysteresis (Long Wave Event)	R/W		✓								654
1313-14	Conn Type (0=STAR,1=DELTA)	R/W	✓	✓								657
1315-16	PQ – V.Nominal	R/W		✓								658
1317-18	PQ – Enable (Active)	R/W		✓								659
1319-20	Active Energy Line 1 (Export)	R	✓	✓	✓		✓	✓	✓		✓	660
1321-22	Active Energy Line 2 (Export)	R	✓	✓	✓		✓	✓	✓		✓	661
1323-24	Active Energy Line 3 (Export)	R	✓	✓	✓		✓	✓	✓		✓	662
1325-26	Reactive Energy Line 1 (Export)	R	✓	✓	✓		✓	✓	✓		✓	663
1327-28	Reactive Energy Line 2 (Export)	R	✓	✓	✓		✓	✓	✓		✓	664
1329-30	Reactive Energy Line 3 (Export)	R	✓	✓	✓		✓	✓	✓		✓	665
1331-32	Apparant Energy Line 1 (Export)	R	✓	✓	✓		✓	✓	✓		✓	666
1333-34	Apparant Energy Line 2 (Export)	R	✓	✓	✓		✓	✓	✓		✓	667
1335-36	Apparant Energy Line 3 (Export)	R	✓	✓	✓		✓	✓	✓		✓	668
1337-38	Active Energy Line 1 – Rate 1 (Exp)	R	✓	✓	✓		✓	✓	✓		✓	669
1339-40	Active Energy Line 2 – Rate 1 (Exp)	R	✓	✓	✓		✓	✓	✓		✓	670
1341-42	Active Energy Line 3 – Rate 1 (Exp)	R	✓	✓	✓		✓	✓	✓		✓	671
1343-44	Active Energy Line 1 – Rate 2 (Exp)	R	✓	✓	✓		✓	✓	✓		✓	672
1345-46	Active Energy Line 2 – Rate 2 (Exp)	R	✓	✓	✓		✓	✓	✓		✓	673
1347-48	Active Energy Line 3 – Rate 2 (Exp)	R	✓	✓	✓		✓	✓	✓		✓	674
1349-50	Active Energy Line 1 – Rate 3 (Exp)	R	✓	✓	✓		✓	✓	✓		✓	675
1351-52	Active Energy Line 2 – Rate 3 (Exp)	R	✓	✓	✓		✓	✓	✓		✓	676
1353-54	Active Energy Line 3 – Rate 3 (Exp)	R	✓	✓	✓		✓	✓	✓		✓	677

MODBUS Register	Field Description	Type	GR	PQ	PICO	VIP-P	LT color	LT	MC	LTE	LTC	ITEM # UniArt \ BACnet AV
1355-56	Active Energy Line 1+2+3 –Rate 1 (E)	R	✓	✓	✓		✓	✓	✓		✓	678
1357-58	Active Energy Line 1+2+3 –Rate 2 (E)	R	✓	✓	✓		✓	✓	✓		✓	679
1359-60	Active Energy Line 1+2+3 –Rate 3 (E)	R	✓	✓	✓		✓	✓	✓		✓	680
1361-62	Apparant Energy Line 1 – Rate 1 (E)	R	✓	✓	✓		✓	✓	✓		✓	681
1363-64	Apparant Energy Line 2 – Rate 1 (E)	R	✓	✓	✓		✓	✓	✓		✓	682
1365-66	Apparant Energy Line 3 – Rate 1 (E)	R	✓	✓	✓		✓	✓	✓		✓	683
1367-68	Apparant Energy Line 1 – Rate 2 (E)	R	✓	✓	✓		✓	✓	✓		✓	684
1369-70	Apparant Energy Line 2 – Rate 2 (E)	R	✓	✓	✓		✓	✓	✓		✓	685
1371-72	Apparant Energy Line 3 – Rate 2 (E)	R	✓	✓	✓		✓	✓	✓		✓	686
1373-74	Apparant Energy Line 1 – Rate 3 (E)	R	✓	✓	✓		✓	✓	✓		✓	687
1375-76	Apparant Energy Line 2 – Rate 3 (E)	R	✓	✓	✓		✓	✓	✓		✓	688
1377-78	Apparant Energy Line 3 – Rate 3 (E)	R	✓	✓	✓		✓	✓	✓		✓	689
1379-80	Apparant Energy 1+2+3 – Rate 1 (E)	R	✓	✓	✓		✓	✓	✓		✓	690
1381-82	Apparant Energy 1+2+3 – Rate 2 (E)	R	✓	✓	✓		✓	✓	✓		✓	691
1383-84	Apparant Energy 1+2+3 – Rate 3 (E)	R	✓	✓	✓		✓	✓	✓		✓	692
1385-86	Active Energy (Export)	R	✓	✓	✓		✓	✓	✓		✓	693
1387-88	Reactive Energy (Export)	R	✓	✓	✓		✓	✓	✓		✓	694
1389-90	Apparant Energy (Export)	R	✓	✓	✓		✓	✓	✓		✓	695
1393-94	Energy Flow Line #1 (1=Export)	R	✓	✓			✓					697
1395-96	Energy Flow Line #2 (1=Export)	R	✓	✓			✓					698
1397-98	Energy Flow Line #3 (1=Export)	R	✓	✓			✓					699
1401-02	BacNet MSTP – Max Master	R/W					✓					701

<b>MODBUS Register</b>	<b>Field Description</b>	<b>Type</b>	<b>GR</b>	<b>PQ</b>	<b>PICO</b>	<b>VIP-P</b>	<b>LT color</b>	<b>LT</b>	<b>MC</b>	<b>LTE</b>	<b>LTC</b>	<b>ITEM # UniArt \ BACnet AV</b>
1403-04	BacNet MSTP – Instance	R/W					✓					702
1405-06	BacNet MSTP – MAC	R/W					✓					703
1407-08	BacNet MSTP – Slave Mode	R/W					✓					704
1419-20	PQ – Level 0.95	R/W		✓								710
1421-22	PQ – Level 1.05	R/W		✓								711
1423-24	PQ – Level 1.10	R/W		✓								712
1429-30	Crest Factor – Voltage L1	R		✓								715
1431-32	Crest Factor – Voltage L2	R		✓								716
1433-34	Crest Factor – Voltage L3	R		✓								717
1435-36	Crest Factor – Current L1	R		✓								718
1437-38	Crest Factor – Current L2	R		✓								719
1439-40	Crest Factor – Current L3	R		✓								720
3841-42	Summer Clock DTE #1 (Sec)	R/W			✓		✓	✓	✓		✓	1921
3843-44	Summer Clock DTE #2 (Sec)	R/W			✓		✓	✓	✓		✓	1922
↓	↓	↓										↓
3879-80	Summer Clock DTE #20 (Sec)	R/W			✓		✓	✓	✓		✓	1940
3881-82	Summer Clock #1 – Minute To Add	R/W			✓		✓	✓	✓		✓	1941
3883-84	Summer Clock #2 – Minute To Add	R/W			✓		✓	✓	✓		✓	1942
↓	↓	↓										↓

MODBUS Register	Field Description	Type	GR	PQ	PICO	VIP-P	LT color	LT	MC	LTE	LTC	ITEM # UniArt \ BACnet AV
3919-20	Summer Clock #20 – Minute To Add	R/W			✓		✓	✓	✓		✓	1960
3921-22	Summer Clock DTE #1 (Hour)	R/W			✓		✓	✓	✓		✓	1961
3923-24	Summer Clock DTE #2 (Hour)	R/W			✓		✓	✓	✓		✓	1962
⇓	⇓	⇓										⇓
3959-60	Summer Clock DTE #20 (Hour)	R/W			✓		✓	✓	✓		✓	1980
3961-62	PFC – Capacitor #7 (KVAR)	R/W										1981
3963-64	PFC – Capacitor #8 (KVAR)	R/W										1982
3965-66	PFC – Capacitor #9 (KVAR)	R/W										1983
3967-68	PFC – Capacitor #10 (KVAR)	R/W										1984
3969-70	PFC – Capacitor #11 (KVAR)	R/W										1985
3971-72	PFC – Capacitor #12 (KVAR)	R/W										1986
3973-74	PFC – Capacitor #13 (KVAR)	R/W										1987
3975-76	PFC – Capacitor #14 (KVAR)	R/W										1988
3977-78	PFC – Capacitor #15 (KVAR)	R/W										1989
3979-80	PFC – Capacitor #16 (KVAR)	R/W										1990
3981-82	ModBus/IP Port	R/W	✓	✓			✓		✓			1991
3983-84	HTTP Port	R/W	✓	✓			✓		✓			1992
3985-86	UDP Extended Port	R/W	✓	✓			✓		✓			1993
4001-2	Active Energy (L123)- Month 1 -KWh	R	✓	✓	✓		✓	✓	✓		✓	2001
4003-4	Active Energy (L123)- Month 2-KWh	R	✓	✓	✓		✓	✓	✓		✓	2002



MODBUS Register	Field Description	Type	GR	PQ	PICO	VIP-P	LT color	LT	MC	LTE	LTC	ITEM # UniArt \ BACnet AV
↓	↓	↓										↓
4071-72	Active Energy(L123)- Month 36-KWh	R	✓	✓	✓		✓	✓	✓		✓	2036
4073-74	Month # 1 (1-12) (For Item 2001)	R	✓	✓	✓		✓	✓			✓	2037
4075-76	Month # 2 (1-12) (For Item 2002)	R	✓	✓	✓		✓	✓			✓	2038
↓	↓	↓										↓
4143-44	Month #36 (1-12) (For Item 2036)	R	✓	✓	✓		✓	✓			✓	2072
4145-46	Year # 1 (2001-99) (Item 2001)	R	✓	✓	✓		✓	✓			✓	2073
4147-48	Year # 2 (2001-99) (Item 2002)	R	✓	✓	✓		✓	✓			✓	2074
↓	↓	↓										↓
4215-16	Year #36 (2001-99) (Item 2036)	R	✓	✓	✓		✓	✓			✓	2108
4239-40	Keyboard Lock Status	R/W					✓					2120
4241-42	Comm.Alarm – High Current Value	R/W			✓		✓	✓			✓	2121
4243-44	Comm.Alarm – High Voltage Value	R/W			✓		✓	✓			✓	2122
4245-46	Comm.Alarm – Low Voltage Value	R/W			✓		✓	✓			✓	2123
4247-48	Comm.Alarm – Low PF Value	R/W			✓		✓	✓			✓	2124
4249-50	Comm.Alarm – High V. THD Value	R/W			✓		✓	✓			✓	2125
4251-52	Comm.Alarm – High I. THD Value	R/W			✓		✓	✓			✓	2126
4261-62	Comm.Alarm – High Current DelayOn	R/W			✓		✓	✓			✓	2131
4263-64	Comm.Alarm – High Voltage DelayOn	R/W			✓		✓	✓			✓	2132
4265-66	Comm.Alarm – Low Voltage DelayOn	R/W			✓		✓	✓			✓	2133

MODBUS Register	Field Description	Type	GR	PQ	PICO	VIP-P	LT color	LT	MC	LTE	LTC	ITEM # UniArt \ BACnet AV
4267-68	Comm.Alarm – Low PF DelayOn	R/W			✓		✓	✓			✓	2134
4269-70	Comm.Alarm – High V.THD DelayOn	R/W			✓		✓	✓			✓	2135
4271-72	Comm.Alarm – High I.THD DelayOn	R/W			✓		✓	✓			✓	2136
4281-82	Demand – THD Current (A) L1	R/W*			✓		✓	✓			✓	2141
4283-84	Demand – THD Current (A) L2	R/W*			✓		✓	✓			✓	2142
4285-86	Demand – THD Current (A) L3	R/W*			✓		✓	✓			✓	2143
4287-88	Demand – THD Current (A) L1   L2   I3	R/W*			✓		✓	✓			✓	2144
4289-90	Demand – THD Current (A) L1 - Date	R			✓		✓	✓			✓	2145
4291-92	Demand – THD Current (A) L2 - Date	R			✓		✓	✓			✓	2146
4293-94	Demand – THD Current (A) L3 - Date	R			✓		✓	✓			✓	2147
4295-96	Demand – THD Current (A) L123 - Date	R			✓		✓	✓			✓	2148
4297-98	Demand – THD Voltage (A) L1	R/W*			✓		✓	✓			✓	2149
4299-300	Demand – THD Voltage (A) L2	R/W*			✓		✓	✓			✓	2150
4301-02	Demand – THD Voltage (A) L3	R/W*			✓		✓	✓			✓	2151
4303-04	Demand – THD Voltage (A) L1   L2   I3	R/W*			✓		✓	✓			✓	2152
4305-06	Demand – THD Voltage (A) L1 - Date	R					✓	✓			✓	2153
4307-08	Demand – THD Voltage (A) L2 - Date	R					✓	✓			✓	2154
4309-10	Demand – THD Voltage (A) L3 - Date	R					✓	✓			✓	2155
4311-12	Demand – THD Voltage (A) L123 - Date	R					✓	✓			✓	2156
4313-14	Clear All THD Demand	R/W	✓	✓			✓	✓			✓	2157
4399-00	Alarm- High Voltage L1	R/W	✓	✓								2200

MODBUS Register	Field Description	Type	GR	PQ	PICO	VIP-P	LT color	LT	MC	LTE	LTC	ITEM # UniArt \ BACnet AV
4401-02	Alarm- High Voltage L2	R/W	✓	✓								2201
4403-04	Alarm- High Voltage L3	R/W	✓	✓								2202
4405-06	Alarm- High Voltage L1-2	R/W	✓	✓								2203
4407-08	Alarm- High Voltage L2-3	R/W	✓	✓								2204
4409-10	Alarm- High Voltage L3-1	R/W	✓	✓								2205
4411-12	Alarm- High Current L1	R/W	✓	✓								2206
4413-14	Alarm- High Current L2	R/W	✓	✓								2207
4415-16	Alarm- High Current L3	R/W	✓	✓								2208
4417-18	Alarm- High Current L0	R/W	✓	✓								2209
4419-20	Alarm- High PF L1	R/W	✓	✓								2210
4421-22	Alarm- High PF L2	R/W	✓	✓								2211
4423-24	Alarm- High PF L3	R/W	✓	✓								2212
4425-26	Alarm- High PF Total	R/W	✓	✓								2213
4427-28	Alarm- High Voltage THD L1	R/W	✓	✓								2214
4429-30	Alarm- High Voltage THD L2	R/W	✓	✓								2215
4431-32	Alarm- High Voltage THD L3	R/W	✓	✓								2216
4433-34	Alarm- High Current THD L1	R/W	✓	✓								2217
4435-36	Alarm- High Current THD L2	R/W	✓	✓								2218
4437-38	Alarm- High Current THD L3	R/W	✓	✓								2219
4439-40	Alarm- High Current THD L0	R/W	✓	✓								2220
4441-42	Alarm- High Current TDD L1	R/W	✓	✓								2221
4443-44	Alarm- High Current TDD L2	R/W	✓	✓								2222
4445-46	Alarm- High Current TDD L3	R/W	✓	✓								2223
4447-48	Alarm- High Current TDD L0	R/W	✓	✓								2224

<b>MODBUS Register</b>	<b>Field Description</b>	<b>Type</b>	<b>GR</b>	<b>PQ</b>	<b>PICO</b>	<b>VIP-P</b>	<b>LT color</b>	<b>LT</b>	<b>MC</b>	<b>LTE</b>	<b>LTC</b>	<b>ITEM # UniArt \ BACnet AV</b>
4449-50	Alarm – High KW – L1	R/W	✓	✓								2225
4451-52	Alarm – High KW – L2	R/W	✓	✓								2226
4453-54	Alarm – High KW – L3	R/W	✓	✓								2227
4455-56	Alarm – High KW – Total 1	R/W	✓	✓								2228
4457-58	Alarm – High KW – Total 2	R/W	✓	✓								2229
4459-60	Alarm – High UnBalanced Current	R/W	✓	✓								2230
4461-62	Alarm – High UnBalanced Voltage	R/W	✓	✓								2231
4463-64	Alarm – High Freq - L1	R/W	✓	✓								2232
4465-66	Alarm – High Freq – L2	R/W	✓	✓								2233
4467-68	Alarm – High Freq – L3	R/W	✓	✓								2234
4469-70	Alarm - High KVA Total	R/W	✓	✓								2235
4471-72	Alarm - High KVAR Total	R/W	✓	✓								2236
4473-74	Alarm- High CosF – L1	R/W	✓	✓								2237
4475-76	Alarm- High CosF – L2	R/W	✓	✓								2238
4477-78	Alarm- High CosF – L3	R/W	✓	✓								2239
4479-80	Alarm- High Demand Total KW	R/W	✓	✓								2240
4481-82	Alarm – High Demad Total Current	R/W	✓	✓								2241
4599-00	Alarm- Low Voltage L1	R/W	✓	✓								2300
4601-02	Alarm- Low Voltage L2	R/W	✓	✓								2301
4603-04	Alarm- Low Voltage L3	R/W	✓	✓								2302
4605-06	Alarm- Low Voltage L1-2	R/W	✓	✓								2303
4607-08	Alarm- Low Voltage L2-3	R/W	✓	✓								2304
4609-10	Alarm- Low Voltage L3-1	R/W	✓	✓								2305

<b>MODBUS Register</b>	<b>Field Description</b>	<b>Type</b>	<b>GR</b>	<b>PQ</b>	<b>PICO</b>	<b>VIP-P</b>	<b>LT color</b>	<b>LT</b>	<b>MC</b>	<b>LTE</b>	<b>LTC</b>	<b>ITEM # UniArt \ BACnet AV</b>
4611-12	Alarm- Low Current L1	R/W	✓	✓								2306
4613-14	Alarm- Low Current L2	R/W	✓	✓								2307
4615-16	Alarm- Low Current L3	R/W	✓	✓								2308
4617-18	Alarm- Low Current L0	R/W	✓	✓								2309
4619-20	Alarm- Low PF L1	R/W	✓	✓								2310
4621-22	Alarm- Low PF L2	R/W	✓	✓								2311
4623-24	Alarm- Low PF L3	R/W	✓	✓								2312
4625-26	Alarm- Low PF Total	R/W	✓	✓								2313
4627-28	Alarm- Low Voltage THD L1	R/W	✓	✓								2314
4629-30	Alarm- Low Voltage THD L2	R/W	✓	✓								2315
4631-32	Alarm- Low Voltage THD L3	R/W	✓	✓								2316
4633-34	Alarm- Low Current THD L1	R/W	✓	✓								2317
4635-36	Alarm- Low Current THD L2	R/W	✓	✓								2318
4637-38	Alarm- Low Current THD L3	R/W	✓	✓								2319
4639-40	Alarm- Low Current THD L0	R/W	✓	✓								2320
4641-42	Alarm- Low Current TDD L1	R/W	✓	✓								2321
4643-44	Alarm- Low Current TDD L2	R/W	✓	✓								2322
4645-46	Alarm- Low Current TDD L3	R/W	✓	✓								2323
4647-48	Alarm- Low Current TDD L0	R/W	✓	✓								2324
4649-50	Alarm- Low KW – L1	R/W	✓	✓								2325
4651-52	Alarm – Low KW – L2	R/W	✓	✓								2326
4653-54	Alarm – Low KW – L3	R/W	✓	✓								2327
4655-56	Alarm – Low KW – Total 1	R/W	✓	✓								2328
4657-58	Alarm – Low KW – Total 2	R/W	✓	✓								2329

MODBUS Register	Field Description	Type	GR	PQ	PICO	VIP-P	LT color	LT	MC	LTE	LTC	ITEM # UniArt \ BACnet AV
4859-60	Alarm – Low UnBalanced Current	R/W	✓	✓								2330
4861-62	Alarm – Low UnBalanced Voltage	R/W	✓	✓								2331
4863-64	Alarm – Low Freq - L1	R/W	✓	✓								2332
4865-66	Alarm – Low Freq – L2	R/W	✓	✓								2333
4867-68	Alarm – Low Freq – L3	R/W	✓	✓								2334
4869-70	Alarm - Low KVA Total	R/W	✓	✓								2335
4871-72	Alarm - Low KVAR Total	R/W	✓	✓								2336
4873-74	Alarm - Low CosF – L1	R/W	✓	✓								2337
4875-76	Alarm - Low CosF – L2	R/W	✓	✓								2338
4877-78	Alarm - Low CosF – L3	R/W	✓	✓								2339
4879-80	Alarm - Low Demand Total KW	R/W	✓	✓								2340
4881-82	Alarm – Low Demad Total Current	R/W	✓	✓								2341
4799-00	Alarm- Relay High Voltage L1	R/W	✓	✓								2400
4801-02	Alarm- Relay High Voltage L2	R/W	✓	✓								2401
4803-04	Alarm- Relay High Voltage L3	R/W	✓	✓								2402
4805-06	Alarm- Relay High Voltage L1-2	R/W	✓	✓								2403
4807-08	Alarm- Relay High Voltage L2-3	R/W	✓	✓								2404
4809-10	Alarm- Relay High Voltage L3-1	R/W	✓	✓								2405
4811-12	Alarm- Relay High Current L1	R/W	✓	✓								2406
4813-14	Alarm- Relay High Current L2	R/W	✓	✓								2407
4815-16	Alarm- Relay High Current L3	R/W	✓	✓								2408
4817-18	Alarm- Relay High Current L0	R/W	✓	✓								2409
4819-20	Alarm- Relay High PF L1	R/W	✓	✓								2410

MODBUS Register	Field Description	Type	GR	PQ	PICO	VIP-P	LT color	LT	MC	LTE	LTC	ITEM # UniArt \ BACnet AV
4821-22	Alarm- Relay High PF L2	R/W	✓	✓								2411
4823-24	Alarm- Relay High PF L3	R/W	✓	✓								2412
4825-26	Alarm- Relay High PF Total	R/W	✓	✓								2413
4827-28	Alarm- Relay High Voltage THD L1	R/W	✓	✓								2414
4829-30	Alarm- Relay High Voltage THD L2	R/W	✓	✓								2415
4831-32	Alarm- Relay High Voltage THD L3	R/W	✓	✓								2416
4833-34	Alarm- Relay High Current THD L1	R/W	✓	✓								2417
4835-36	Alarm- Relay High Current THD L2	R/W	✓	✓								2418
4837-38	Alarm- Relay High Current THD L3	R/W	✓	✓								2419
4839-40	Alarm- Relay High Current THD L0	R/W	✓	✓								2420
4841-42	Alarm- Relay High Current TDD L1	R/W	✓	✓								2421
4843-44	Alarm- Relay High Current TDD L2	R/W	✓	✓								2422
4845-46	Alarm- Relay High Current TDD L3	R/W	✓	✓								2423
4847-48	Alarm- Relay High Current TDD L0	R/W	✓	✓								2424
4849-50	Alarm- Relay High KW – L1	R/W	✓	✓								2425
4851-52	Alarm – Relay High KW – L2	R/W	✓	✓								2426
4853-54	Alarm – Relay High KW – L3	R/W	✓	✓								2427
4855-56	Alarm – Relay High KW – Total 1	R/W	✓	✓								2428
4857-58	Alarm – Relay High KW – Total 2	R/W	✓	✓								2429
4859-60	Alarm – Relay High UnBalanced Current	R/W	✓	✓								2430
4861-62	Alarm – Relay High UnBalanced Voltage	R/W	✓	✓								2431
4863-64	Alarm – Relay High Freq - L1	R/W	✓	✓								2432
4865-66	Alarm – Relay High Freq – L2	R/W	✓	✓								2433
4867-68	Alarm – Relay High Freq – L3	R/W	✓	✓								2434

MODBUS Register	Field Description	Type	GR	PQ	PICO	VIP-P	LT color	LT	MC	LTE	LTC	ITEM # UniArt \ BACnet AV
4869-70	Alarm - Relay High KVA Total	R/W	✓	✓								2435
4871-72	Alarm - Relay High KVAR Total	R/W	✓	✓								2436
4873-74	Alarm - Relay High CosF – L1	R/W	✓	✓								2437
4875-76	Alarm - Relay High CosF – L2	R/W	✓	✓								2438
4877-78	Alarm - Relay High CosF – L3	R/W	✓	✓								2439
4879-80	Alarm - Relay High Demand Total KW	R/W	✓	✓								2440
4881-82	Alarm – Relay High Demad Total Current	R/W	✓	✓								2441
4999-00	Alarm- Relay Low Voltage L1	R/W	✓	✓								2500
5001-02	Alarm- Relay Low Voltage L2	R/W	✓	✓								2501
5003-04	Alarm- Relay Low Voltage L3	R/W	✓	✓								2502
5005-06	Alarm- Relay Low Voltage L1-2	R/W	✓	✓								2503
5007-08	Alarm- Relay Low Voltage L2-3	R/W	✓	✓								2504
5009-10	Alarm- Relay Low Voltage L3-1	R/W	✓	✓								2505
5011-12	Alarm- Relay Low Current L1	R/W	✓	✓								2506
5013-14	Alarm- Relay Low Current L2	R/W	✓	✓								2507
5015-16	Alarm- Relay Low Current L3	R/W	✓	✓								2508
5017-18	Alarm- Relay Low Current L0	R/W	✓	✓								2509
5019-20	Alarm- Relay Low PF L1	R/W	✓	✓								2510
5021-22	Alarm- Relay Low PF L2	R/W	✓	✓								2511
5023-24	Alarm- Relay Low PF L3	R/W	✓	✓								2512
5025-26	Alarm- Relay Low PF Total	R/W	✓	✓								2513
5027-28	Alarm- Relay Low Voltage THD L1	R/W	✓	✓								2514
5029-30	Alarm- Relay Low Voltage THD L2	R/W	✓	✓								2515



<b>MODBUS Register</b>	<b>Field Description</b>	<b>Type</b>	<b>GR</b>	<b>PQ</b>	<b>PICO</b>	<b>VIP-P</b>	<b>LT color</b>	<b>LT</b>	<b>MC</b>	<b>LTE</b>	<b>LTC</b>	<b>ITEM # UniArt \ BACnet AV</b>
5031-32	Alarm- Relay Low Voltage THD L3	R/W	✓	✓								2516
5033-34	Alarm- Relay Low Current THD L1	R/W	✓	✓								2517
5035-36	Alarm- Relay Low Current THD L2	R/W	✓	✓								2518
5037-38	Alarm- Relay Low Current THD L3	R/W	✓	✓								2519
5039-40	Alarm- Relay Low Current THD L0	R/W	✓	✓								2520
5041-42	Alarm- Relay Low Current TDD L1	R/W	✓	✓								2521
5043-44	Alarm- Relay Low Current TDD L2	R/W	✓	✓								2522
5045-46	Alarm- Relay Low Current TDD L3	R/W	✓	✓								2523
5047-48	Alarm- Relay Low Current TDD L0	R/W	✓	✓								2524
5049-50	Alarm- Relay Low KW – L1	R/W	✓	✓								2525
5051-52	Alarm – Relay Low KW – L2	R/W	✓	✓								2526
5053-54	Alarm – Relay Low KW – L3	R/W	✓	✓								2527
5055-56	Alarm – Relay Low KW – Total 1	R/W	✓	✓								2528
5057-58	Alarm – Relay Low KW – Total 2	R/W	✓	✓								2529
5059-60	Alarm – Relay Low UnBalanced Current	R/W	✓	✓								2530
5061-62	Alarm – Relay Low UnBalanced Voltage	R/W	✓	✓								2531
5063-64	Alarm – Relay Low Freq - L1	R/W	✓	✓								2532
5065-66	Alarm – Relay Low Freq – L2	R/W	✓	✓								2533
5067-68	Alarm – Relay Low Freq – L3	R/W	✓	✓								2534
5069-70	Alarm - Relay Low KVA Total	R/W	✓	✓								2535
5071-72	Alarm - Relay Low KVAR Total	R/W	✓	✓								2536
5073-74	Alarm - Relay Low CosF – L1	R/W	✓	✓								2537
5075-76	Alarm - Relay Low CosF – L2	R/W	✓	✓								2538
5077-78	Alarm - Relay Low CosF – L3	R/W	✓	✓								2539

<b>MODBUS Register</b>	<b>Field Description</b>	<b>Type</b>	<b>GR</b>	<b>PQ</b>	<b>PICO</b>	<b>VIP-P</b>	<b>LT color</b>	<b>LT</b>	<b>MC</b>	<b>LTE</b>	<b>LTC</b>	<b>ITEM # UniArt \ BACnet AV</b>
5079-80	Alarm - Relay Low Demand Total KW	R/W	✓	✓								2540
5081-82	Alarm – Relay Low Demad Total Current	R/W	✓	✓								2541
5199-00	Alarm- T.Tbl Voltage L1	R/W	✓	✓								2600
5201-02	Alarm- T.Tbl Voltage L2	R/W	✓	✓								2601
5203-04	Alarm- T.Tbl Voltage L3	R/W	✓	✓								2602
5205-06	Alarm- T.Tbl Voltage L1-2	R/W	✓	✓								2603
5207-08	Alarm- T.Tbl Voltage L2-3	R/W	✓	✓								2604
5209-10	Alarm- T.Tbl Voltage L3-1	R/W	✓	✓								2605
5211-12	Alarm- T.Tbl Current L1	R/W	✓	✓								2606
5213-14	Alarm- T.Tbl Current L2	R/W	✓	✓								2607
5215-16	Alarm- T.Tbl Current L3	R/W	✓	✓								2608
5217-18	Alarm- T.Tbl Current L0	R/W	✓	✓								2609
5219-20	Alarm- T.Tbl PF L1	R/W	✓	✓								2610
5221-22	Alarm- T.Tbl PF L2	R/W	✓	✓								2611
5223-24	Alarm- T.Tbl PF L3	R/W	✓	✓								2612
5225-26	Alarm- T.Tbl PF Total	R/W	✓	✓								2613
5227-28	Alarm- T.Tbl Voltage THD L1	R/W	✓	✓								2614
5229-30	Alarm- T.Tbl Voltage THD L2	R/W	✓	✓								2615
5231-32	Alarm- T.Tbl Voltage THD L3	R/W	✓	✓								2616
5233-34	Alarm- T.Tbl Current THD L1	R/W	✓	✓								2617
5235-36	Alarm- T.Tbl Current THD L2	R/W	✓	✓								2618
5237-38	Alarm- T.Tbl Current THD L3	R/W	✓	✓								2619
5239-40	Alarm- T.Tbl Current THD L0	R/W	✓	✓								2620

MODBUS Register	Field Description	Type	GR	PQ	PICO	VIP-P	LT color	LT	MC	LTE	LTC	ITEM # UniArt \ BACnet AV
5241-42	Alarm- T.Tbl Current TDD L1	R/W	✓	✓								2621
5243-44	Alarm- T.Tbl Current TDD L2	R/W	✓	✓								2622
5245-46	Alarm- T.Tbl Current TDD L3	R/W	✓	✓								2623
5247-48	Alarm- T.Tbl Current TDD L0	R/W	✓	✓								2624
5249-50	Alarm- T.Tbl KW – L1	R/W	✓	✓								2625
5251-52	Alarm – T.Tbl KW – L2	R/W	✓	✓								2626
5253-54	Alarm – T.Tbl KW – L3	R/W	✓	✓								2627
5255-56	Alarm – T.Tbl KW – Total 1	R/W	✓	✓								2628
5257-58	Alarm – T.Tbl KW – Total 2	R/W	✓	✓								2629
5259-60	Alarm – T.Tbl UnBalanced Current	R/W	✓	✓								2630
5261-62	Alarm – T.Tbl UnBalanced Voltage	R/W	✓	✓								2631
5263-64	Alarm – T.Tbl Freq - L1	R/W	✓	✓								2632
5265-66	Alarm – T.Tbl Freq – L2	R/W	✓	✓								2633
5267-68	Alarm – T.Tbl Freq – L3	R/W	✓	✓								2634
5269-70	Alarm - T.Tbl KVA Total	R/W	✓	✓								2635
5271-72	Alarm - T.Tbl KVAR Total	R/W	✓	✓								2636
5273-74	Alarm - T.Tbl CosF – L1	R/W	✓	✓								2637
5275-76	Alarm - T.Tbl CosF – L2	R/W	✓	✓								2638
5277-78	Alarm - T.Tbl CosF – L3	R/W	✓	✓								2639
5279-80	Alarm - T.Tbl Demand Total KW	R/W	✓	✓								2640
5281-82	Alarm – T.Tbl Demad Total Current	R/W	✓	✓								2641
5401-2	Alarm- T.Tbl #1	R/W	✓	✓								2701

MODBUS Register	Field Description	Type	GR	PQ	PICO	VIP-P	LT color	LT	MC	LTE	LTC	ITEM # UniArt \ BACnet AV
↓	↓	↓										↓
5431-32	Alarm- T.Tbl #16	R/W	✓	✓								2716
5601-2	TOU- custom (Dbl) Low - From	R/W	✓	✓	✓		✓	✓			✓	2801
5603-4	TOU- custom (Dbl) Low - To	R/W	✓	✓	✓		✓	✓			✓	2802
5605-6	TOU- custom (Dbl) Low - From	R/W	✓	✓	✓		✓	✓			✓	2803
5607-8	TOU- custom (Dbl) Low - To	R/W	✓	✓	✓		✓	✓			✓	2804
5609-10	TOU- custom (Dbl) Med - From	R/W	✓	✓	✓		✓	✓			✓	2805
5611-12	TOU- custom (Dbl) Med - To	R/W	✓	✓	✓		✓	✓			✓	2806
5613-14	TOU- custom (Dbl) Med - From	R/W	✓	✓	✓		✓	✓			✓	2807
5615-16	TOU- custom (Dbl) Med - To	R/W	✓	✓	✓		✓	✓			✓	2808
5617-18	TOU- custom (Dbl) High - From	R/W	✓	✓	✓		✓	✓			✓	2809
5619-20	TOU- custom (Dbl) High - To	R/W	✓	✓	✓		✓	✓			✓	2810
5621-22	TOU- custom (Dbl) High - From	R/W	✓	✓	✓		✓	✓			✓	2811
5623-24	TOU- custom (Dbl) High - To	R/W	✓	✓	✓		✓	✓			✓	2812
5625-26	TOU- Uruguay (Trpl) Low - From	R/W	✓	✓	✓		✓	✓			✓	2813
5627-28	TOU- Uruguay (Trpl) Low - To	R/W	✓	✓	✓		✓	✓			✓	2814
5629-30	TOU- Uruguay (Trpl) Low - From	R/W	✓	✓	✓		✓	✓			✓	2815
5631-32	TOU- Uruguay (Trpl) Low - To	R/W	✓	✓	✓		✓	✓			✓	2816
5633-34	TOU- Uruguay (Trpl) Med - From	R/W	✓	✓	✓		✓	✓			✓	2817
5635-36	TOU- Uruguay (Trpl) Med - To	R/W	✓	✓	✓		✓	✓			✓	2818
5637-38	TOU- Uruguay (Trpl) Med - From	R/W	✓	✓	✓		✓	✓			✓	2819
5639-40	TOU- Uruguay (Trpl) Med - To	R/W	✓	✓	✓		✓	✓			✓	2820

<b>MODBUS Register</b>	<b>Field Description</b>	<b>Type</b>	<b>GR</b>	<b>PQ</b>	<b>PICO</b>	<b>VIP-P</b>	<b>LT color</b>	<b>LT</b>	<b>MC</b>	<b>LTE</b>	<b>LTC</b>	<b>ITEM # UniArt \ BACnet AV</b>
5641-42	TOU- Uruguay (Trpl) High - From	R/W	✓	✓	✓		✓	✓			✓	2821
5643-44	TOU- Uruguay (Trpl) High - To	R/W	✓	✓	✓		✓	✓			✓	2822
5645-46	TOU- Uruguay (Trpl) High - From	R/W	✓	✓	✓		✓	✓			✓	2823
5647-48	TOU- Uruguay (Trpl) High - To	R/W	✓	✓	✓		✓	✓			✓	2824
6001-2	Relay # 1 Force Start Time	R/W	✓	✓								3001
6003-4	Relay # 1 Force Stop Time	R/W	✓	✓								3002
6005-6	Relay # 1 Force Start Time	R/W	✓	✓								3003
6007-8	Relay # 1 Force Stop Time	R/W	✓	✓								3004
6009-10	Relay # 1 Force Start Time	R/W	✓	✓								3005
6011-12	Relay # 1 Force Stop Time	R/W	✓	✓								3006
6017-18	Relay # 2 Force Start Time	R/W	✓	✓								3009
6019-20	Relay # 2 Force Stop Time	R/W	✓	✓								3010
6021-22	Relay # 2 Force Start Time	R/W	✓	✓								3011
6023-24	Relay # 2 Force Stop Time	R/W	✓	✓								3012
6025-26	Relay # 2 Force Start Time	R/W	✓	✓								3013
6027-28	Relay # 2 Force Stop Time	R/W	✓	✓								3014
6033-34	Relay # 3 Force Start Time	R/W	✓	✓								3017
6035-36	Relay # 3 Force Stop Time	R/W	✓	✓								3018
6037-38	Relay # 3 Force Start Time	R/W	✓	✓								3019
6039-40	Relay # 3 Force Stop Time	R/W	✓	✓								3020
6041-42	Relay # 3 Force Start Time	R/W	✓	✓								3021

MODBUS Register	Field Description	Type	GR	PQ	PICO	VIP-P	LT color	LT	MC	LTE	LTC	ITEM # UniArt \ BACnet AV
6043-44	Relay # 3 Force Stop Time	R/W	✓	✓								3022
6049-50	Flg To Clear SST At MidNight	R/W	✓	✓								3025
6061-62	Digital Out #1 (Status)	R	✓	✓			✓					3031
6063-64	Digital Out #2 (Status)	R	✓	✓			✓					3032
6065-66	Digital Out #3 (Status)	R	✓	✓			✓					3033
6067-68	Digital Out #4 (Status)	R	✓	✓			✓					3034
6069-70	Digital Out #5 (Status)	R					✓					3035
6071-72	Digital Out #6 (Status)	R					✓					3036
6201-2	TOU – January Type	R/W*	✓	✓	✓		✓	✓	✓			3101
6203-4	TOU – February Type	R/W*	✓	✓	✓		✓	✓	✓			3102
⇓	⇓	⇓										⇓
6223-24	TOU – December Type	R/W*	✓	✓	✓		✓	✓	✓			3112
6225-26	TOU – Hour Details	R/W*	✓	✓	✓		✓	✓	✓			3113
⇓	⇓	⇓										⇓
6655-56	TOU – Hour Details	R/W*	✓	✓	✓		✓	✓	✓			3328
6799-0	Active Total Energy (KWh)	R	✓	✓	✓	✓	✓	✓	✓	✓		3400
6801-2	Reactive Total Energy (KVARh)	R	✓	✓	✓	✓	✓	✓	✓	✓		3401
6803-4	Apparent Total Energy (KVah)	R	✓	✓	✓	✓	✓	✓	✓	✓		3402

MODBUS Register	Field Description	Type	GR	PQ	PICO	VIP-P	LT color	LT	MC	LTE	LTC	ITEM # UniArt \ BACnet AV
6805-6	Active Energy Line 1 (KWh-Import)	R	✓	✓	✓	✓	✓	✓	✓	✓		3403
6807-8	Active Energy Line 2 (KWh-Import)	R	✓	✓	✓	✓	✓	✓	✓	✓		3404
6809-10	Active Energy Line 3 (KWh-Import)	R	✓	✓	✓	✓	✓	✓	✓	✓		3405
6811-12	Reactive Energy Line 1 (KVARh-Import)	R	✓	✓	✓	✓	✓	✓	✓	✓		3406
6813-14	Reactive Energy Line 2 (KVARh-Import)	R	✓	✓	✓	✓	✓	✓	✓	✓		3407
6815-16	Reactive Energy Line 3 (KVARh-Import)	R	✓	✓	✓	✓	✓	✓	✓	✓		3408
6817-18	Apparant Energy Line 1 (KVAh-Import)	R	✓	✓	✓	✓	✓	✓	✓	✓		3409
6819-20	Apparant Energy Line 2 (KVAh-Import)	R	✓	✓	✓	✓	✓	✓	✓	✓		3410
6821-22	Apparant Energy Line 3 (KVAh-Import)	R	✓	✓	✓	✓	✓	✓	✓	✓		3411
6823-24	Active Energy Line 1 – Rate 1 – KWh (Imp)	R	✓	✓	✓		✓	✓	✓			3412
6825-26	Active Energy Line 2 – Rate 1 – KWh (Imp)	R	✓	✓	✓		✓	✓	✓			3413
6827-28	Active Energy Line 3 – Rate 1 – KWh (Imp)	R	✓	✓	✓		✓	✓	✓			3414
6829-30	Active Energy Line 1 – Rate 2 – KWh (Imp)	R	✓	✓	✓		✓	✓	✓			3415
6831-32	Active Energy Line 2 – Rate 2 – KWh (Imp)	R	✓	✓	✓		✓	✓	✓			3416
6833-34	Active Energy Line 3 – Rate 2 – KWh (Imp)	R	✓	✓	✓		✓	✓	✓			3417
6835-36	Active Energy Line 1 – Rate 3 – KWh (Imp)	R	✓	✓	✓		✓	✓	✓			3418
6837-38	Active Energy Line 2 – Rate 3 – KWh (Imp)	R	✓	✓	✓		✓	✓	✓			3419
6839-40	Active Energy Line 3 – Rate 3 – KWh (Imp)	R	✓	✓	✓		✓	✓	✓			3420
6841-42	Active Energy Line 1+2+3 – Rate 1 – KWh (I)	R	✓	✓	✓		✓	✓	✓			3421
6843-44	Active Energy Line 1+2+3 – Rate 2 – KWh (I)	R	✓	✓	✓		✓	✓	✓			3422
6845-46	Active Energy Line 1+2+3 – Rate 3 – KWh	R	✓	✓	✓		✓	✓	✓			3423

MODBUS Register	Field Description	Type	GR	PQ	PICO	VIP-P	LT color	LT	MC	LTE	LTC	ITEM # UniArt \ BACnet AV
	(I)											
6847-48	ReActive Energy Line 1 –Rate 1 – KVARh (Imp)	R	✓	✓	✓		✓	✓	✓			3424
6849-50	ReActive Energy Line 2 –Rate 1 – KVARh (Imp)	R	✓	✓	✓		✓	✓	✓			3425
6851-52	ReActive Energy Line 3 –Rate 1 – KVARh (Imp)	R	✓	✓	✓		✓	✓	✓			3426
6853-54	ReActive Energy Line 1 –Rate 2 – KVARh (Imp)	R	✓	✓	✓		✓	✓	✓			3427
6855-56	ReActive Energy Line 2 –Rate 2 – KVARh (Imp)	R	✓	✓	✓		✓	✓	✓			3428
6857-58	ReActive Energy Line 3 –Rate 2 – KVARh (Imp)	R	✓	✓	✓		✓	✓	✓			3429
6859-60	ReActive Energy Line 1 –Rate 3 – KVARh (Imp)	R	✓	✓	✓		✓	✓	✓			3430
6861-62	ReActive Energy Line 2 –Rate 3 – KVARh (Imp)	R	✓	✓	✓		✓	✓	✓			3431
6863-64	ReActive Energy Line 3 –Rate 3 – KVARh (Imp)	R	✓	✓	✓		✓	✓	✓			3432
6865-66	ReActive E. Line 1+2+3 –Rate 1 – KVARh (I)	R	✓	✓	✓		✓	✓	✓			3433
6867-68	ReActive E. Line 1+2+3 –Rate 2 – KVARh (I)	R	✓	✓	✓		✓	✓	✓			3434
6869-70	ReActive E. Line 1+2+3 –Rate 3 – KVARh (I)	R	✓	✓	✓		✓	✓	✓			3435
6871-72	Combined Active Power Line 1+2 +3 (KW)	R	✓	✓			✓	✓	✓			3436



MODBUS Register	Field Description	Type	GR	PQ	PICO	VIP-P	LT color	LT	MC	LTE	LTC	ITEM # UniArt \ BACnet AV
6873-74	Combined Active Power 1+2 +3 (MW)	R	✓	✓			✓	✓	✓			3437
6875-76	Combined ReActive Power 1+2 +3 (MVAR)	R	✓	✓			✓	✓	✓			3438
6875-76	Combined ReActive Power 1+2 +3 (KVAR)	R	✓	✓			✓		✓			3439
6879-80	Active Total Energy (Wh) -Meter B	R					✓	✓				3440
6881-82	Reactive Total Energy (VARh) -Meter B	R					✓	✓				3441
6883-84	Apparent Total Energy (Vah) -Meter B	R					✓	✓				3442
6885-86	Combined Apparant Power 1+2 +3 (KVA)	R					✓	✓				3443
6887-88	Combined Apparant Power 1+2 +3 (MVA)	R					✓	✓				3444
6919-20	Active Energy Line 1 (W-Import) -Meter B	R					✓	✓				3460
6921-22	Active Energy Line 2 (W-Import) -Meter B	R					✓	✓				3461
6923-24	Active Energy Line 3 (W-Import) -Meter B	R					✓	✓				3462
6925-26	Reactive Energy Line 1 (VAR-Import) -Meter B	R					✓	✓				3463
6927-28	Reactive Energy Line 2 (VAR-Import) -Meter B	R					✓	✓				3464
6929-30	Reactive Energy Line 3 (VAR-Import) -Meter B	R					✓	✓				3465
6931-32	Apparant Energy Line 1 (VA-Import) -Meter B	R					✓	✓				3466
6933-34	Apparant Energy Line 2 (VA-Import) -Meter B	R					✓	✓				3467
6935-36	Apparant Energy Line 3 (VA-Import) -Meter	R					✓	✓				3468

MODBUS Register	Field Description	Type	GR	PQ	PICO	VIP-P	LT color	LT	MC	LTE	LTC	ITEM # UniArt \ BACnet AV
	B											
6937-38	Active Energy Line 1 – Rate 1 (Imp) -Meter B	R					✓	✓				3469
6939-40	Active Energy Line 2 – Rate 1 (Imp) -Meter B	R					✓	✓				3470
6941-42	Active Energy Line 3 – Rate 1 (Imp) -Meter B	R					✓	✓				3471
6943-44	Active Energy Line 1 – Rate 2 (Imp) -Meter B	R					✓	✓				3472
6945-46	Active Energy Line 2 – Rate 2 (Imp) -Meter B	R					✓	✓				3473
6947-48	Active Energy Line 3 – Rate 2 (Imp) -Meter B	R					✓	✓				3474
6949-50	Active Energy Line 1 – Rate 3 (Imp) -Meter B	R					✓	✓				3475
6951-52	Active Energy Line 2 – Rate 3 (Imp) -Meter B	R					✓	✓				3476
6953-54	Active Energy Line 3 – Rate 3 (Imp) -Meter B	R					✓	✓				3477
6955-56	Active Power Line 1 (KW)	R	✓	✓			✓					3478
6957-58	Active Power Line 2 (KW)	R	✓	✓			✓					3479
6959-60	Active Power Line 3 (KW)	R	✓	✓			✓					3480
6961-62	ReActive Power Line 1 (KVAR)	R	✓	✓			✓					3481
6963-64	ReActive Power Line 2 (KVAR)	R	✓	✓			✓					3482
6965-66	ReActive Power Line 3 (KVAR)	R	✓	✓			✓					3483
6967-68	Apparent Power Line 1 (KVA)	R	✓	✓			✓					3484

<b>MODBUS Register</b>	<b>Field Description</b>	<b>Type</b>	<b>GR</b>	<b>PQ</b>	<b>PICO</b>	<b>VIP-P</b>	<b>LT color</b>	<b>LT</b>	<b>MC</b>	<b>LTE</b>	<b>LTC</b>	<b>ITEM # UniArt \ BACnet AV</b>
6969-70	Apparent Power Line 2 (KVA)	R	✓	✓			✓					3485
6971-72	Apparent Power Line 3 (KVA)	R	✓	✓			✓					3486
7001-2	33 Harmonics for Volts <b>Line 1</b>	R	✓	✓								3501
7003-4	34 Harmonics for Volts <b>Line 1</b>	R	✓	✓								3502
↓	↓	↓										↓
7061-62	63 Harmonics for Volts <b>Line 1</b>	R	✓	✓								3531
7063-64	64 Harmonics for Volts <b>Line 1</b>	R	✓	✓								3532
7065-66	33 Harmonics for Volts <b>Line 2</b>	R	✓	✓								3533
7067-68	34 Harmonics for Volts <b>Line 2</b>	R	✓	✓								3534
↓	↓	↓										↓
7125-26	63 Harmonics for Volts <b>Line 2</b>	R	✓	✓								3563
7127-28	64 Harmonics for Volts <b>Line 2</b>	R	✓	✓								3564
7129-30	33 Harmonic for Volts <b>Line 3</b>	R	✓	✓								3565
7131-32	34 Harmonics for Volts <b>Line 3</b>	R	✓	✓								3566
↓	↓	↓										↓
7189-90	63 Harmonics for Vots <b>Line 3</b>	R	✓	✓								3595
7191-92	64 Harmonics for Volts <b>Line 3</b>	R	✓	✓								3596
7193-94	33 Harmonics for Current <b>Line 1</b>	R	✓	✓								3597
7195-96	34 Harmonics for Current <b>Line 1</b>	R	✓	✓								3598
↓	↓	↓										↓

<b>MODBUS Register</b>	<b>Field Description</b>	<b>Type</b>	<b>GR</b>	<b>PQ</b>	<b>PICO</b>	<b>VIP-P</b>	<b>LT color</b>	<b>LT</b>	<b>MC</b>	<b>LTE</b>	<b>LTC</b>	<b>ITEM # UniArt \ BACnet AV</b>
7253-54	63 Harmonics for Current <b>Line 1</b>	R	✓	✓								3627
7255-56	64 Harmonics for Current <b>Line 1</b>	R	✓	✓								3628
7257-58	33 Harmonics for Current <b>Line 2</b>	R	✓	✓								3629
7259-60	34 Harmonics for Current <b>Line 2</b>	R	✓	✓								3630
⇓	⇓	⇓										⇓
7317-18	63 Harmonics for Current <b>line 2</b>	R	✓	✓								3659
7319-20	64 Harmonicsfor Current <b>Line 2</b>	R	✓	✓								3660
7321-22	33 Harmonics for Current <b>Line 3</b>	R	✓	✓								3661
7323-24	34 Harmonics for Current <b>Line 3</b>	R	✓	✓								3662
⇓	⇓	⇓										⇓
7381-82	63 Harmonics for Current <b>Line 3</b>	R	✓	✓								3691
7383-84	64 Harmonics for Current <b>Line 3</b>	R	✓	✓								3692
7389-90	UnBalance % (Now)	R					✓					3695
7391-92	UnBalance % (Last 10 Minutes)	R		✓								3696
7393-94	PST (Last 10 Minutes) For Line 1	R		✓								3697
7395-96	PST (Last 10 Minutes) For Line 2	R		✓								3698
7397-98	PST (Last 10 Minutes) For Line 3	R		✓								3699
7401-02	XAOut 1 – Item #	R/W					✓	✓				3701
7403-04	XAOut 2 – Item #	R/W					✓	✓				3702
7405-06	XAOut 3 – Item #	R/W					✓	✓				3703

MODBUS Register	Field Description	Type	GR	PQ	PICO	VIP-P	LT color	LT	MC	LTE	LTC	ITEM # UniArt \ BACnet AV
7407-08	XAOut 4 – Item #	R/W					✓	✓				3704
7433-34	XAOut 1 – Mode	R/W					✓	✓				3717
7435-36	XAOut 2 – Mode	R/W					✓	✓				3718
7437-38	XAOut 3 – Mode	R/W					✓	✓				3719
7439-40	XAOut 4 – Mode	R/W					✓	✓				3720
7465-66	XAOut 1 – Measured value 1	R/W					✓	✓				3733
7467-68	XAOut 2 – Measured value 1	R/W					✓	✓				3734
7469-70	XAOut 3 – Measured value 1	R/W					✓	✓				3735
7471-72	XAOut 4 – Measured value 1	R/W					✓	✓				3736
7497-98	XAOut 1 – Measured value 2	R/W					✓	✓				3749
7499-00	XAOut 2 – Measured value 2	R/W					✓	✓				3750
7501-02	XAOut 3 – Measured value 2	R/W					✓	✓				3751
7503-04	XAOut 4 – Measured value 2	R/W					✓	✓				3752
7529-30	XAOut 1 – Output value 1	R/W					✓	✓				3765
7531-32	XAOut 2 – Output value 1	R/W					✓	✓				3766
7533-34	XAOut 3 – Output value 1	R/W					✓	✓				3767
7535-36	XAOut 4 – Output value 1	R/W					✓	✓				3768
7561-62	XAOut 1 – Output value 2	R/W					✓	✓				3781
7563-64	XAOut 2 – Output value 2	R/W					✓	✓				3782

MODBUS Register	Field Description	Type	GR	PQ	PICO	VIP-P	LT color	LT	MC	LTE	LTC	ITEM # UniArt \ BACnet AV
7565-66	XAOut 3 – Output value 2	R/W					✓	✓				3783
7567-68	XAOut 4 – Output value 2	R/W					✓	✓				3784
⇓	⇓	⇓										⇓
7591-92		R/W					✓	✓				3796
7599-00	Map Item 3900 (Reg 7799-7800)	R/W	✓	✓			✓	✓	✓			3800
7601-02	Map Item 3901 (Reg 7801-7802)	R/W	✓	✓			✓	✓	✓			3801
⇓	⇓	⇓										⇓
7797-98	Map Item 3999 (Reg 7997-7998)	R/W	✓	✓			✓	✓	✓			3899
7799-00	Maped Item 3800 (Reg 7599-7600)	R/W	✓	✓			✓	✓	✓			3900
7801-02	Maped Item 3801 (Reg 7601-7602)	R/W	✓	✓			✓	✓	✓			3901
⇓	⇓	⇓										⇓
7997-98	Maped Item 3899 (Reg 7797-7798)	R/W	✓	✓			✓	✓	✓			3999
8799-00	Alarm- High -Voltage L1	R/W			✓		✓	✓				4400
8801-02	Alarm- High -Voltage L2	R/W			✓		✓	✓				4401
8803-04	Alarm- High -Voltage L3	R/W			✓		✓	✓				4402
8805-06	Alarm- High -Current L1	R/W			✓		✓	✓				4403
8806-08	Alarm- High -Current L2	R/W			✓		✓	✓				4404
8809-10	Alarm- High -Current L3	R/W			✓		✓	✓				4405
8811-12	Alarm- High -Demand Total KW	R/W			✓		✓	✓				4406
8813-14	Alarm- High -Import Total KW	R/W			✓		✓	✓				4407

MODBUS Register	Field Description	Type	GR	PQ	PICO	VIP-P	LT color	LT	MC	LTE	LTC	ITEM # UniArt \ BACnet AV
8815-16	Alarm- High -Export Total KW	R/W			✓		✓	✓				4408
8817-18	Alarm- High -Temprature	R/W			✓		✓	✓				4409
8819-20	Alarm- High -kVarhC/kWh	R/W			✓		✓	✓				4410
8821-22	Alarm- High -kVarhL/kWh	R/W			✓		✓	✓				4411
8823-24	Alarm- High -No Volt L1	R/W			✓		✓	✓				4412
8825-26	Alarm- High -No Volt L2	R/W			✓		✓	✓				4413
8827-28	Alarm- High -No Volt L3	R/W			✓		✓	✓				4414
8829-30	Alarm- High -No Current L1	R/W			✓		✓	✓				4415
8831-32	Alarm- High -No Current L2	R/W			✓		✓	✓				4416
8833-34	Alarm- High -No Current L3	R/W			✓		✓	✓				4417
8835-36	Alarm- High -Leakage Current	R/W					✓	✓				4418
8837-38	Alarm- High -PF	R/W					✓	✓				4419
8839-40	Alarm- Low -Voltage L1	R/W			✓		✓	✓				4420
8841-42	Alarm- Low -Voltage L2	R/W			✓		✓	✓				4421
8843-44	Alarm- Low -Voltage L3	R/W			✓		✓	✓				4422
8845-46	Alarm- Low -Current L1	R/W			✓		✓	✓				4423
8846-48	Alarm- Low -Current L2	R/W			✓		✓	✓				4424
8849-50	Alarm- Low -Current L3	R/W			✓		✓	✓				4425
8851-52	Alarm- Low -Demand Total KW	R/W			✓		✓	✓				4426
8853-54	Alarm- Low -Import Total KW	R/W			✓		✓	✓				4427
8855-56	Alarm- Low -Export Total KW	R/W			✓		✓	✓				4428
8857-58	Alarm- Low -Temprature	R/W			✓		✓	✓				4429
8859-60	Alarm- Low -kVarhC/kWh	R/W			✓		✓	✓				4430
8861-62	Alarm- Low -kVarhL/kWh	R/W			✓		✓	✓				4431

MODBUS Register	Field Description	Type	GR	PQ	PICO	VIP-P	LT color	LT	MC	LTE	LTC	ITEM # UniArt \ BACnet AV
8863-64	Alarm- Low -No Volt L1	R/W			✓		✓	✓				4432
8865-66	Alarm- Low -No Volt L2	R/W			✓		✓	✓				4433
8867-68	Alarm- Low -No Volt L3	R/W			✓		✓	✓				4434
8869-70	Alarm- Low -No Current L1	R/W			✓		✓	✓				4435
8871-72	Alarm- Low -No Current L2	R/W			✓		✓	✓				4436
8873-74	Alarm- Low -No Current L3	R/W			✓		✓	✓				4437
8875-76	Alarm- Low -Leakage Current	R/W					✓	✓				4438
8877-78	Alarm- Low -PF	R/W					✓	✓				4439
8879-80	Alarm- Hysteresis -Voltage L1	R/W			✓		✓	✓				4440
8881-82	Alarm- Hysteresis -Voltage L2	R/W			✓		✓	✓				4441
8883-84	Alarm- Hysteresis -Voltage L3	R/W			✓		✓	✓				4442
8885-86	Alarm- Hysteresis -Current L1	R/W			✓		✓	✓				4443
8886-88	Alarm- Hysteresis -Current L2	R/W			✓		✓	✓				4444
8889-90	Alarm- Hysteresis -Current L3	R/W			✓		✓	✓				4445
8891-92	Alarm- Hysteresis -Demand Total KW	R/W			✓		✓	✓				4446
8893-94	Alarm- Hysteresis -Import Total KW	R/W			✓		✓	✓				4447
8895-96	Alarm- Hysteresis -Export Total KW	R/W			✓		✓	✓				4448
8897-98	Alarm- Hysteresis -Temperature	R/W			✓		✓	✓				4449
8899-00	Alarm- Hysteresis -kVarhC/kWh	R/W			✓		✓	✓				4450
8901-02	Alarm- Hysteresis -kVarhL/kWh	R/W			✓		✓	✓				4451
8903-04	Alarm- Hysteresis -No Volt L1	R/W			✓		✓	✓				4452
8905-06	Alarm- Hysteresis -No Volt L2	R/W			✓		✓	✓				4453
8907-08	Alarm- Hysteresis -No Volt L3	R/W			✓		✓	✓				4454
8909-10	Alarm- Hysteresis -No Current L1	R/W			✓		✓	✓				4455



MODBUS Register	Field Description	Type	GR	PQ	PICO	VIP-P	LT color	LT	MC	LTE	LTC	ITEM # UniArt \ BACnet AV
8911-12	Alarm- Hysteresis -No Current L2	R/W			✓		✓	✓				4456
8913-14	Alarm- Hysteresis -No Current L3	R/W			✓		✓	✓				4457
8915-16	Alarm- Hysteresis -Leakage Current	R/W					✓	✓				4458
8917-18	Alarm- Hysteresis -PF	R/W					✓	✓				4459
8919-20	Alarm- Delay On -Voltage L1	R/W			✓		✓	✓				4460
8921-22	Alarm- Delay On -Voltage L2	R/W			✓		✓	✓				4461
8923-24	Alarm- Delay On -Voltage L3	R/W			✓		✓	✓				4462
8925-26	Alarm- Delay On -Current L1	R/W			✓		✓	✓				4463
8926-28	Alarm- Delay On -Current L2	R/W			✓		✓	✓				4464
8929-30	Alarm- Delay On -Current L3	R/W			✓		✓	✓				4465
8931-32	Alarm- Delay On -Demand Total KW	R/W			✓		✓	✓				4466
8933-34	Alarm- Delay On -Import Total KW	R/W			✓		✓	✓				4467
8935-36	Alarm- Delay On -Export Total KW	R/W			✓		✓	✓				4468
8937-38	Alarm- Delay On -Temprature	R/W			✓		✓	✓				4469
8939-40	Alarm- Delay On -kVarhC/kWh	R/W			✓		✓	✓				4470
8941-42	Alarm- Delay On -kVarhL/kWh	R/W			✓		✓	✓				4471
8943-44	Alarm- Delay On -No Volt L1	R/W			✓		✓	✓				4472
8945-46	Alarm- Delay On -No Volt L2	R/W			✓		✓	✓				4473
8947-48	Alarm- Delay On -No Volt L3	R/W			✓		✓	✓				4474
8949-50	Alarm- Delay On -No Current L1	R/W			✓		✓	✓				4475
8951-52	Alarm- Delay On -No Current L2	R/W			✓		✓	✓				4476
8953-54	Alarm- Delay On -No Current L3	R/W			✓		✓	✓				4477
8955-56	Alarm- Delay On -Leakage Current	R/W					✓	✓				4478
8957-58	Alarm- Delay On -PF	R/W					✓	✓				4479

MODBUS Register	Field Description	Type	GR	PQ	PICO	VIP-P	LT color	LT	MC	LTE	LTC	ITEM # UniArt \ BACnet AV
8959-60	Alarm- Delay Off -Voltage L1	R/W			✓		✓	✓				4480
8961-62	Alarm- Delay Off -Voltage L2	R/W			✓		✓	✓				4481
8963-64	Alarm- Delay Off -Voltage L3	R/W			✓		✓	✓				4482
8965-66	Alarm- Delay Off -Current L1	R/W			✓		✓	✓				4483
8966-68	Alarm- Delay Off -Current L2	R/W			✓		✓	✓				4484
8969-70	Alarm- Delay Off -Current L3	R/W			✓		✓	✓				4485
8971-72	Alarm- Delay Off -Demand Total KW	R/W			✓		✓	✓				4486
8973-74	Alarm- Delay Off -Import Total KW	R/W			✓		✓	✓				4487
8975-76	Alarm- Delay Off -Export Total KW	R/W			✓		✓	✓				4488
8977-78	Alarm- Delay Off -Temprature	R/W			✓		✓	✓				4489
8979-80	Alarm- Delay Off -kVarhC/kWh	R/W			✓		✓	✓				4490
8981-82	Alarm- Delay Off -kVarhL/kWh	R/W			✓		✓	✓				4491
8983-84	Alarm- Delay Off -No Volt L1	R/W			✓		✓	✓				4492
8985-86	Alarm- Delay Off -No Volt L2	R/W			✓		✓	✓				4493
8987-88	Alarm- Delay Off -No Volt L3	R/W			✓		✓	✓				4494
8989-90	Alarm- Delay Off -No Current L1	R/W			✓		✓	✓				4495
8991-92	Alarm- Delay Off -No Current L2	R/W			✓		✓	✓				4496
8993-94	Alarm- Delay Off -No Current L3	R/W			✓		✓	✓				4497
8995-96	Alarm- Delay Off -Leakage Current	R/W					✓	✓				4498
8997-98	Alarm- Delay Off -PF	R/W					✓	✓				4499
8999-00	Alarm- Relay -Voltage L1	R/W					✓	✓				4500
9001-02	Alarm- Relay -Voltage L2	R/W					✓	✓				4501
9003-04	Alarm- Relay -Voltage L3	R/W					✓	✓				4502
9005-06	Alarm- Relay -Current L1	R/W					✓	✓				4503

MODBUS Register	Field Description	Type	GR	PQ	PICO	VIP-P	LT color	LT	MC	LTE	LTC	ITEM # UniArt \ BACnet AV
9006-08	Alarm- Relay -Current L2	R/W					✓	✓				4504
9009-10	Alarm- Relay -Current L3	R/W					✓	✓				4505
9011-12	Alarm- Relay -Demand Total KW	R/W					✓	✓				4506
9013-14	Alarm- Relay -Import Total KW	R/W					✓	✓				4507
9015-16	Alarm- Relay -Export Total KW	R/W					✓	✓				4508
9017-18	Alarm- Relay -Temperature	R/W					✓	✓				4509
9019-20	Alarm- Relay -kVarhC/kWh	R/W					✓	✓				4500
9021-22	Alarm- Relay -kVarhL/kWh	R/W					✓	✓				4511
9023-24	Alarm- Relay -No Volt L1	R/W					✓	✓				4512
9025-26	Alarm- Relay -No Volt L2	R/W					✓	✓				4513
9027-28	Alarm- Relay -No Volt L3	R/W					✓	✓				4514
9029-30	Alarm- Relay -No Current L1	R/W					✓	✓				4515
9031-32	Alarm- Relay -No Current L2	R/W					✓	✓				4516
9033-34	Alarm- Relay -No Current L3	R/W					✓	✓				4517
9035-36	Alarm- Relay -Leakage Current	R/W					✓	✓				4518
9037-38	Alarm- Relay -PF	R/W					✓	✓				4519
9039-40	Alarm- High -Digital In 1	R/W					✓	✓				4520
9041-42	Alarm- High -Digital In 2	R/W					✓	✓				4521
9079-80	Alarm- Low -Digital In 1	R/W					✓	✓				4540
9081-82	Alarm- Low -Digital In 2	R/W					✓	✓				4541
9119-20	Alarm- Hysteresis -Digital In 1	R/W					✓	✓				4560

MODBUS Register	Field Description	Type	GR	PQ	PICO	VIP-P	LT color	LT	MC	LTE	LTC	ITEM # UniArt \ BACnet AV
9121-22	Alarm- Hysteresis -Digital In 2	R/W					✓	✓				4561
9159-60	Alarm- Delay On -Digital In 1	R/W					✓	✓				4580
9161-62	Alarm- Delay On -Digital In 2	R/W					✓	✓				4581
9199-00	Alarm- Delay Off -Digital In 1	R/W					✓	✓				4600
9201-02	Alarm- Delay Off -Digital In 2	R/W					✓	✓				4601
9239-40	Alarm- Relay -Digital In 1	R/W					✓	✓				4620
9241-42	Alarm- Relay -Digital In 2	R/W					✓	✓				4621
10001-02	Trip Current – Amper (Point 1)	R/W		✓								5001
10003-04	Trip Current – Amper (Point 2)	R/W		✓								5002
↓	↓	↓										↓
10039-40	Trip Current – Amper (Point 20)	R/W		✓								5020
10041-42	Trip Current – Time (Point 1)	R/W		✓								5021
10043-44	Trip Current – Time (Point 2)	R/W		✓								5022
↓	↓	↓										↓
10079-80	Trip Current – Time (Point 20)	R/W		✓								5040
10081-82	Trip Current – Phase 1 DTE (Write To Clear)	R/W		✓								5041
10083-84	Trip Current – Phase 2 DTE (Write To Clear)	R/W		✓								5042

MODBUS Register	Field Description	Type	GR	PQ	PICO	VIP-P	LT color	LT	MC	LTE	LTC	ITEM # UniArt \ BACnet AV
10085-86	Trip Current – Phase 3 DTE (Write To Clear)	R/W		✓								5043
10087-88	Trip Current – Phase 1 Amper	R		✓								5044
10089-90	Trip Current – Phase 1 Time (Seconds)	R		✓								5045
10091-92	Trip Current – Phase 2 Amper	R		✓								5046
10093-94	Trip Current – Phase 2 Time (Seconds)	R		✓								5047
10095-96	Trip Current – Phase 3 Amper	R		✓								5048
10097-98	Trip Current – Phase 3 Time (Seconds)	R		✓								5049
10101-02	Simple Trip Current #1 – SetPoint (Amper)	R/W		✓								5051
10103-04	Simple Trip Current #1 – Time (Seconds)	R/W		✓								5052
10105-06	Simple Trip Current #1 – Relay (1-4)	R/W		✓								5053
10107-08	Simple Trip Current #1 – Status	R/W		✓								5054
10109-10	Simple Trip Current #2 – SetPoint (Amper)	R/W		✓								5055
10111-12	Simple Trip Current #2 – Time (Seconds)	R/W		✓								5056
10113-14	Simple Trip Current #2 – Relay (1-4)	R/W		✓								5057
10115-16	Simple Trip Current #2 – Status	R/W		✓								5058
10121-22	Dout Mode # 1	R/W	✓	✓								5061
10123-24	Dout Mode # 2	R/W	✓	✓								5062
10125-26	Dout Mode # 3	R/W	✓	✓								5063
10127-28	Dout Mode # 4	R/W	✓	✓								5064
10139-40	Demand – Current (A) AVR(L1+L2+L3)	R/W					✓					5070
10141-42	Demand – Current (A) L0	R/W					✓					5071

MODBUS Register	Field Description	Type	GR	PQ	PICO	VIP-P	LT color	LT	MC	LTE	LTC	ITEM # UniArt \ BACnet AV
10143-44	Demand – Current (A) AVR(L1+L2+L3) – Date	R					✓					5072
10145-46	Demand – Current (A) L0 – Date	R					✓					5073
10159-60	Demand – Current (A) L1 (Last)	R					✓					5080
10161-62	Demand – Current (A) L2 (Last)	R					✓					5081
10163-64	Demand – Current (A) L3 (Last)	R					✓					5082
10165-66	Demand – Current (A) L1+L2+L3 (Last)	R					✓					5083
10167-68	Demand – Current (A) AVR(L1+L2+L3) (Last)	R					✓					5084
10169-70	Demand – Current (A) L0 (Last)	R					✓					5085
10179-80	THD for Volts Lines 1+2+3	R					✓					5090
10181-82	THD forCurrent Lines 1+2+3	R					✓					5091
10199-00	Minimum Volt L1	R			✓		✓					5100
10201-02	Minimum Volt L2	R			✓		✓					5101
10203-04	Minimum Volt L3	R			✓		✓					5102
10205-06	Maximum Volt L1	R			✓		✓					5103
10207-08	Maximum Volt L2	R			✓		✓					5104
10209-10	Maximum Volt L3	R			✓		✓					5105
10211-12	Maximum Current L1	R			✓		✓					5106
10213-14	Maximum Current L2	R			✓		✓					5107
10215-16	Maximum Current L3	R			✓		✓					5108

MODBUS Register	Field Description	Type	GR	PQ	PICO	VIP-P	LT color	LT	MC	LTE	LTC	ITEM # UniArt \ BACnet AV
10217-18	Maximum Current L0	R			✓		✓					5109
10219-20	Minimum Volt L1-3	R			✓		✓					5110
10221-22	Minimum Volt L2-3	R			✓		✓					5111
10223-24	Minimum Volt L3-1	R			✓		✓					5112
10225-26	Maximum Volt L1-3	R			✓		✓					5113
10227-28	Maximum Volt L2-3	R			✓		✓					5114
10229-30	Maximum Volt L3-1	R			✓		✓					5115
10231-32	Maximum Active Power Total	R			✓		✓					5116
10233-34	Maximum Apparent Power Total	R			✓		✓					5117
10235-36	Maximum ReActive Power Total	R			✓		✓					5118
10237-38	Minimum PF. L1	R			✓		✓					5119
10239-40	Minimum PF. L2	R			✓		✓					5120
10241-42	Minimum PF. L3	R			✓		✓					5121
10243-44	Minimum PF. Total	R			✓		✓					5122
10245-46	Maximum PF. L1	R			✓		✓					5123
10247-48	Maximum PF. L2	R			✓		✓					5124
10249-50	Maximum PF. L3	R			✓		✓					5125
10251-52	Maximum PF. Total	R			✓		✓					5126
10253-54	Minimum Freq.	R			✓		✓					5127
10255-56	Maximum Freq.	R			✓		✓					5128
10257-58	Minimum Current L1	R					✓					5129
10259-60	Minimum Current L2	R					✓					5130
10261-62	Minimum Current L3	R					✓					5131
10263-64	Minimum Current L0	R					✓					5132

MODBUS Register	Field Description	Type	GR	PQ	PICO	VIP-P	LT color	LT	MC	LTE	LTC	ITEM # UniArt \ BACnet AV
10265-66	Maximum Active Power (W) L1	R					✓					5133
10267-68	Maximum Active Power (W) L2	R					✓					5134
10269-70	Maximum Active Power (W) L3	R					✓					5135
10271-72	Minimum Active Power (W) L1	R					✓					5136
10273-74	Minimum Active Power (W) L2	R					✓					5137
10275-76	Minimum Active Power (W) L3	R					✓					5138
10277-78	Maximum ReActive Power (VAR ) L1	R					✓					5139
10279-80	Maximum ReActive Power (VAR) L2	R					✓					5140
10281-82	Maximum ReActive Power (VAR) L3	R					✓					5141
10283-84	Minimum ReActive Power (VAR) L1	R					✓					5142
10285-86	Minimum ReActive Power (VAR) L2	R					✓					5143
10287-88	Minimum ReActive Power (VAR) L3	R					✓					5144
10289-90	Maximum Apparent Power (VA ) L1	R					✓					5145
10291-92	Maximum Apparent Power (VA) L2	R					✓					5146
10293-94	Maximum Apparent Power (VA) L3	R					✓					5147
10295-96	Minimum Apparent Power (VA) L1	R					✓					5148
10297-98	Minimum Apparent Power (VA) L2	R					✓					5149
10299-00	Minimum Apparent Power (VA) L3	R					✓					5150
10301-02	Minimum Active Power Total	R					✓					5151
10303-04	Minimum Apparent Power Total	R					✓					5152
10305-06	Minimum ReActive Power Total	R					✓					5153
10307-08	Minimum Displacement PF. L1	R					✓					5154
10309-10	Minimum Displacement PF. L2	R					✓					5155
10311-12	Minimum Displacement PF. L3	R					✓					5156



<b>MODBUS Register</b>	<b>Field Description</b>	<b>Type</b>	<b>GR</b>	<b>PQ</b>	<b>PICO</b>	<b>VIP-P</b>	<b>LT color</b>	<b>LT</b>	<b>MC</b>	<b>LTE</b>	<b>LTC</b>	<b>ITEM # UniArt \ BACnet AV</b>
10313-14	Maximum Displacement PF. L1	R					✓					5157
10315-16	Maximum Displacement PF. L2	R					✓					5158
10317-18	Maximum Displacement PF. L3	R					✓					5159
10319-20	Minimum THD V-L1	R					✓					5160
10321-22	Minimum THD V-L2	R					✓					5161
10323-24	Minimum THD V-L3	R					✓					5162
10325-26	Maximum THD V-L1	R					✓					5163
10327-28	Maximum THD V-L2	R					✓					5164
10329-30	Maximum THD V-L3	R					✓					5165
10331-32	Minimum THD I-L1	R					✓					5166
10333-34	Minimum THD I-L2	R					✓					5167
10335-36	Minimum THD I-L3	R					✓					5168
10337-38	Maximum THD I-L1	R					✓					5169
10339-40	Maximum THD I-L2	R					✓					5170
10341-42	Maximum THD I-L3	R					✓					5171
10399-00	Minimum Volt L1 (DTE)	R					✓					5200
10401-2	Minimum Volt L2 (DTE)	R					✓					5201
10403-4	Minimum Volt L3 (DTE)	R					✓					5202
10405-6	Maximum Volt L1 (DTE)	R					✓					5203
10407-8	Maximum Volt L2 (DTE)	R					✓					5204
10409-10	Maximum Volt L3 (DTE)	R					✓					5205
10411-12	Maximum Current L1 (DTE)	R					✓					5206
10413-14	Maximum Current L2 (DTE)	R					✓					5207

<b>MODBUS Register</b>	<b>Field Description</b>	<b>Type</b>	<b>GR</b>	<b>PQ</b>	<b>PICO</b>	<b>VIP-P</b>	<b>LT color</b>	<b>LT</b>	<b>MC</b>	<b>LTE</b>	<b>LTC</b>	<b>ITEM # UniArt \ BACnet AV</b>
10415-16	Maximum Current L3 (DTE)	R					✓					5208
10417-18	Maximum Current L0 (DTE)	R					✓					5209
10419-20	Minimum Volt L1-3 (DTE)	R					✓					5210
10421-22	Minimum Volt L2-3 (DTE)	R					✓					5211
10423-24	Minimum Volt L3-1 (DTE)	R					✓					5212
10425-26	Maximum Volt L1-3 (DTE)	R					✓					5213
10427-28	Maximum Volt L2-3 (DTE)	R					✓					5214
10429-30	Maximum Volt L3-1 (DTE)	R					✓					5215
10431-32	Maximum Active Power Total (DTE)	R					✓					5216
10433-34	Maximum Apparent Power Total (DTE)	R					✓					5217
10435-36	Maximum ReActive Power Total (DTE)	R					✓					5218
10437-38	Minimum PF. L1 (DTE)	R					✓					5219
10439-40	Minimum PF. L2 (DTE)	R					✓					5220
10441-42	Minimum PF. L3 (DTE)	R					✓					5221
10443-44	Minimum PF. Total (DTE)	R					✓					5222
10445-46	Maximum PF. L1 (DTE)	R					✓					5223
10447-48	Maximum PF. L2 (DTE)	R					✓					5224
10449-50	Maximum PF. L3 (DTE)	R					✓					5225
10451-52	Maximum PF. Total (DTE)	R					✓					5226
10453-54	Minimum Freq. (DTE)	R					✓					5227
10455-56	Maximum Freq. (DTE)	R					✓					5228
10457-58	Minimum Current L1 (DTE)	R					✓					5229
10459-60	Minimum Current L2 (DTE)	R					✓					5230
10461-62	Minimum Current L3 (DTE)	R					✓					5231

MODBUS Register	Field Description	Type	GR	PQ	PICO	VIP-P	LT color	LT	MC	LTE	LTC	ITEM # UniArt \ BACnet AV
10463-64	Minimum Current L0 (DTE)	R					✓					5232
10465-66	Maximum Active Power (W) L1 (DTE)	R					✓					5233
10467-68	Maximum Active Power (W) L2 (DTE)	R					✓					5234
10469-70	Maximum Active Power (W) L3 (DTE)	R					✓					5235
10471-72	Minimum Active Power (W) L1 (DTE)	R					✓					5236
10473-74	Minimum Active Power (W) L2 (DTE)	R					✓					5237
10475-76	Minimum Active Power (W) L3 (DTE)	R					✓					5238
10477-78	Maximum ReActive Power (VAR ) L1 (DTE)	R					✓					5239
10479-80	Maximum ReActive Power (VAR) L2 (DTE)	R					✓					5240
10481-82	Maximum ReActive Power (VAR) L3 (DTE)	R					✓					5241
10483-84	Minimum ReActive Power (VAR) L1 (DTE)	R					✓					5242
10485-86	Minimum ReActive Power (VAR) L2 (DTE)	R					✓					5243
10487-88	Minimum ReActive Power (VAR) L3 (DTE)	R					✓					5244
10489-90	Maximum Apparent Power (VA ) L1 (DTE)	R					✓					5245
10491-92	Maximum Apparent Power (VA) L2 (DTE)	R					✓					5246
10493-94	Maximum Apparent Power (VA) L3 (DTE)	R					✓					5247
10495-96	Minimum Apparent Power (VA) L1 (DTE)	R					✓					5248
10497-98	Minimum Apparent Power (VA) L2 (DTE)	R					✓					5249
10499-00	Minimum Apparent Power (VA) L3 (DTE)	R					✓					5250
10501-2	Minimum Active Power Total (DTE)	R					✓					5251
10503-4	Minimum Apparent Power Total (DTE)	R					✓					5252
10505-6	Minimum ReActive Power Total (DTE)	R					✓					5253
10507-8	Minimum Displacement PF. L1 (DTE)	R					✓					5254
10509-10	Minimum Displacement PF. L2 (DTE)	R					✓					5255

MODBUS Register	Field Description	Type	GR	PQ	PICO	VIP-P	LT color	LT	MC	LTE	LTC	ITEM # UniArt \ BACnet AV
10511-12	Minimum Displacement PF. L3 (DTE)	R					✓					5256
10513-14	Maximum Displacement PF. L1 (DTE)	R					✓					5257
10515-16	Maximum Displacement PF. L2 (DTE)	R					✓					5258
10517-18	Maximum Displacement PF. L3 (DTE)	R					✓					5259
10519-20	Minimum THD V-L1 (DTE)	R					✓					5260
10521-22	Minimum THD V-L2 (DTE)	R					✓					5261
10523-24	Minimum THD V-L3 (DTE)	R					✓					5262
10525-26	Maximum THD V-L1 (DTE)	R					✓					5263
10527-28	Maximum THD V-L2 (DTE)	R					✓					5264
10529-30	Maximum THD V-L3 (DTE)	R					✓					5265
10531-32	Minimum THD I-L1 (DTE)	R					✓					5266
10533-34	Minimum THD I-L2 (DTE)	R					✓					5267
10535-36	Minimum THD I-L3 (DTE)	R					✓					5268
10537-38	Maximum THD I-L1 (DTE)	R					✓					5269
10539-40	Maximum THD I-L2 (DTE)	R					✓					5270
10541-42	Maximum THD I-L3 (DTE)	R					✓					5271
10557-58	Last MinMax Table (DTE)	R										5279
10599-0	Fast Trend Type (0,1,2) 2=User	R/W	✓	✓								5300
10601-2	User Trend Item # 1	R/W	✓	✓								5301
10603-4	User Trend Item # 2	R/W	✓	✓								5302
↓	↓	↓										↓

MODBUS Register	Field Description	Type	GR	PQ	PICO	VIP-P	LT color	LT	MC	LTE	LTC	ITEM # UniArt \ BACnet AV
10629-30	User Trend Item # 15	R/W	✓	✓								5315
10639-40	Demand – PF L1	R	✓	✓								5320
10641-42	Demand – PF L2	R	✓	✓								5321
10643-44	Demand – PF L3	R	✓	✓								5322
10645-46	Demand – PF L1+2+3	R	✓	✓								5323
10647-48	Demand – Current (AVR) L1,L2,L3	R	✓	✓								5324
10649-50	Demand – Current L0	R	✓	✓								5325
10651-52	Demand – V- THD L1	R	✓	✓								5326
10653-54	Demand – V- THD L2	R	✓	✓								5327
10655-56	Demand – V- THD L3	R	✓	✓								5328
10657-58	Demand – V- THD (Max) L1,L2,L3	R	✓	✓								5329
10659-60	Demand – I- THD L1	R	✓	✓								5330
10661-62	Demand – I- THD L2	R	✓	✓								5331
10663-64	Demand – I- THD L3	R	✓	✓								5332
10665-66	Demand – I- THD (Max) L1,L2,L3	R	✓	✓								5333
10679-80	Voltage Line 1 (15 Mint Average)	R	✓	✓			✓					5340
10681-82	Voltage Line 2 (15 Mint Average)	R	✓	✓			✓					5341
10682-84	Voltage Line 3 (15 Mint Average)	R	✓	✓			✓					5342
10685-86	Voltage between line 1 and Line 3 (15 Mint Average)	R	✓	✓			✓					5343
10687-88	Voltage between line 2 and Line 3 (15 Mint Average)	R	✓	✓			✓					5344

<b>MODBUS Register</b>	<b>Field Description</b>	<b>Type</b>	<b>GR</b>	<b>PQ</b>	<b>PICO</b>	<b>VIP-P</b>	<b>LT color</b>	<b>LT</b>	<b>MC</b>	<b>LTE</b>	<b>LTC</b>	<b>ITEM # UniArt \ BACnet AV</b>
10689-90	Voltage between line 3 and Line 1 (15 Mint Average)	R	✓	✓			✓					5345
10691-92	Current in Line 1 (15 Mint Average)	R	✓	✓			✓					5346
10693-94	Current in Line 2 (15 Mint Average)	R	✓	✓			✓					5347
10695-96	Current in Line 3 (15 Mint Average)	R	✓	✓			✓					5348
10697-98	Active Power Line 1 -Watt (15 Mint Average)	R	✓	✓			✓					5349
10699-00	Active Power Line 2 -Watt (15 Mint Average)	R	✓	✓			✓					5350
10701-02	Active Power Line 3 -Watt (15 Mint Average)	R	✓	✓			✓					5351
10703-04	Active Power Line 1+2+3 -Watt (15 Mint Average)	R	✓	✓			✓					5352
10705-06	ReActive Power Line 1 -VAR (15 Mint Average)	R	✓	✓			✓					5353
10707-08	ReActive Power Line 2 -VAR (15 Mint Average)	R	✓	✓			✓					5354
10709-10	ReActive Power Line 3 -VAR (15 Mint Average)	R	✓	✓			✓					5355
10711-12	ReActive Power Line 1+2+3 -VAR (15 Mint Average)	R	✓	✓			✓					5356
10713-14	Power Factor Line 1 (PF) (15 Mint Average)	R	✓	✓			✓					5357
10715-16	Power Factor Line 2 (PF) (15 Mint Average)	R	✓	✓			✓					5358
10717-18	Power Factor Line 3 (PF) (15 Mint Average)	R	✓	✓			✓					5359
10719-20	Power Factor Line 1+2+3 (PF) (15 Mint Average)	R	✓	✓			✓					5360
10721-22	Current L0 (15 Mint Average)	R	✓	✓			✓					5361
10723-24	Frequency (15 Mint Average)	R	✓	✓			✓					5362

MODBUS Register	Field Description	Type	GR	PQ	PICO	VIP-P	LT color	LT	MC	LTE	LTC	ITEM # UniArt \ BACnet AV
10725-26	Apparent Power Line 1 -VA (15 Mint Average)	R	✓	✓			✓					5363
10727-28	Apparent Power Line 2 - VA (15 Mint Average)	R	✓	✓			✓					5364
10729-30	Apparent Power Line 3 - VA (15 Mint Average)	R	✓	✓			✓					5365
10731-32	Apparent Power Line 1+2+3 - VA (15 Mint Average)	R	✓	✓			✓					5366
10739-40	V1+V2+V3/3 (Average)	R					✓					5370
10741-42	V12+V23+V31/3 (Average)	R					✓					5371
10743-44	I1+I2+I3/3 (Average)	R					✓					5372
10745-46	f1+f2+f3/3 (Average)	R					✓					5373
10779-80	Demand – Cycle Time (Minutes)	R/W	✓	✓			✓					5390
10781-82	Demand – Type (0=Slide,1=Block,2=Therm)	R/W	✓	✓			✓					5391
10783-84	Demand – Sync (1=D.In,2=Comm,3=Clock)	R/W	✓	✓			✓					5392
10799-00	EN50160 Event 1: Id	R		✓								5400
10801-02	EN50160 Event 1: Event Num Code	R		✓								5401
10803-04	EN50160 Event 1: Date (Dte)	R		✓								5402
10805-06	EN50160 Event 1: MicroSecond	R		✓								5403
10807-08	EN50160 Event 1: Length	R		✓								5404
10809-10	EN50160 Event 1: Value	R		✓								5405
10811-12	EN50160 Event 1: Phase	R		✓								5406

MODBUS Register	Field Description	Type	GR	PQ	PICO	VIP-P	LT color	LT	MC	LTE	LTC	ITEM # UniArt \ BACnet AV
10715-16	EN50160 Event 2: Id	R		✓								5408
10817-18	EN50160 Event 2: Event Num Code	R		✓								5409
10819-20	EN50160 Event 2: Date (Dte)	R		✓								5410
10821-22	EN50160 Event 2: MicroSecond	R		✓								5411
10823-24	EN50160 Event 2: Length	R		✓								5412
10825-26	EN50160 Event 2: Value	R		✓								5413
10827-28	EN50160 Event 2: Phase	R		✓								5414
↓	↓	↓										↓
11583-84	EN50160 Event 50: Id	R		✓								5792
11585-86	EN50160 Event 50: Event Num Code	R		✓								5793
11587-88	EN50160 Event 50: Date (Dte)	R		✓								5794
11589-90	EN50160 Event 50: MicroSecond	R		✓								5795
11591-92	EN50160 Event 50: Length	R		✓								5796
11593-94	EN50160 Event 50: Value	R		✓								5797
11601-02	Option # 1	R/W		✓								5801
11603-04	Option # 2	R/W		✓								5802
↓	↓	↓										↓
11647-48	Option # 24	R/W		✓								5824
11699-00	Internal Use	R/W		✓								5850
↓	↓	↓										↓



MODBUS Register	Field Description	Type	GR	PQ	PICO	VIP-P	LT color	LT	MC	LTE	LTC	ITEM # UniArt \ BACnet AV
11819-20	Internal Use	R/W		✓								5910
11681-82	Pulse D.In 1 Rate 1	R					✓					5921
11683-84	Pulse D.In 1 Rate 2	R					✓					5922
11685-86	Pulse D.In 1 Rate 3	R					✓					5923
11687-88	Pulse D.In 2 Rate 1	R					✓					5924
11689-90	Pulse D.In 2 Rate 2	R					✓					5925
11691-92	Pulse D.In 2 Rate 3	R					✓					5926
11693-94	Pulse D.In 1 Rate 1 (x K)	R					✓					5927
11695-96	Pulse D.In 1 Rate 2 (x K)	R					✓					5928
11697-98	Pulse D.In 1 Rate 3 (x K)	R					✓					5929
11699-00	Pulse D.In 2 Rate 1 (x K)	R					✓					5930
11701-02	Pulse D.In 2 Rate 2 (x K)	R					✓					5931
11703-04	Pulse D.In 2 Rate 3 (x K)	R					✓					5932
11703-04	Pulse D.In1 (K)	R/W					✓					5933
11705-06	Pulse D.In2 (K)	R/W					✓					5934
11707-08	Pulse D.In 1 Rate 1+2+3	R					✓					5935
11709-10	Pulse D.In 2 Rate 1+2+3	R					✓					5936
11711-12	Pulse D.In 1 Rate 1+2+3 (x K)	R					✓					5937
11713-14	Pulse D.In 2 Rate 1+2+3 (x K)	R					✓					5938
11789-90	Flash Trend Time	R/W					✓					5940
11791-02	Flash Tend Day	R/W					✓					5941
11793-04	Flash Trend Month	R/W					✓					5942

MODBUS Register	Field Description	Type	GR	PQ	PICO	VIP-P	LT color	LT	MC	LTE	LTC	ITEM # UniArt \ BACnet AV
11795-06	Flash Trend Year	R/W					✓					5943
11797-08	Flash Trend Hour	R/W					✓					5944
11799-00	Flash Trend Minute	R/W					✓					5945
11801-02	Flash Trend Second	R/W					✓					5945
11901-02	User Flash Trend Item # 1	R/W					✓					5951
11903-04	User Flash Trend Item # 2	R/W					✓					5952
↓	↓	↓										↓
11935-36	User Flash Trend Item # 18	R/W					✓					5968
13981-82	GMT (Gps Offset)	R/W		✓								6991
13981-82	GMT Update Clock (Seconds)	R/W		✓								6992
13995-96	Historical Alarm – Current Record	R					✓					6998
13997-98	Historical Alarm – Total Records (200)	R					✓					6999
13999-00	Historical Alarm # 1 -Dte	R					✓					7000
14001-02	Historical Alarm # 2 -Dte	R					✓					7001
↓	↓	↓										↓
14397-98	Historical Alarm # 200 -Dte	R					✓					7199
14399-00	Historical Alarm # 1 -Date	R					✓					7200
↓	↓	↓										↓
14797-98	Historical Alarm # 200 -Date	R					✓					7399

MODBUS Register	Field Description	Type	GR	PQ	PICO	VIP-P	LT color	LT	MC	LTE	LTC	ITEM # UniArt \ BACnet AV
14799-00	Historical Alarm # 1 -Time	R					✓					7400
↓	↓	↓										↓
15197-98	Historical Alarm # 200 -Time	R					✓					7599
15199-00	Historical Alarm # 1 –Alarm Number	R					✓					7600
↓	↓	↓										↓
15597-98	Historical Alarm # 200 – Alarm Number	R					✓					7799
15599-00	Historical Alarm # 1 –Alarm Phase	R					✓					7800
↓	↓	↓										↓
15997-98	Historical Alarm # 200 – Alarm Phase	R					✓					7999
15999-00	Historical Alarm # 1 –Alarm Type	R					✓					8000
↓	↓	↓										↓
16397-98	Historical Alarm # 200 – Alarm Type	R					✓					8199
16399-00	Historical Alarm # 1 –Alarm On/Off	R					✓					8200
↓	↓	↓										↓
16797-98	Historical Alarm # 200 – Alarm On/Off	R					✓					8399
16799-00	Historical Alarm # 1 –Alarm Value	R					✓					8400
↓	↓	↓										↓
17197-98	Historical Alarm # 200 – Alarm Value	R					✓					8599
17199-00	I0 – First Wave Sample	R		✓								8600

MODBUS Register	Field Description	Type	GR	PQ	PICO	VIP-P	LT color	LT	MC	LTE	LTC	ITEM # UniArt \ BACnet AV
↓	↓	↓										↓
17597-98	I0 – Last Wave Sample	R		✓								8799
17599-00	I1 – First Wave Sample	R		✓								8800
↓	↓	↓										↓
17997-98	I1 – Last Wave Sample	R		✓								8999
17999-00	I2 – First Wave Sample	R		✓								9000
↓	↓	↓										↓
18397-98	I2 – Last Wave Sample	R		✓								9199
18399-00	I3 – First Wave Sample	R		✓								9200
↓	↓	↓										↓
18797-98	I3 – Last Wave Sample	R		✓								9399
18799-00	V1 – First Wave Sample	R		✓								9400
↓	↓	↓										↓
19197-98	V1 – Last Wave Sample	R		✓								9599
19199-00	V2 – First Wave Sample	R		✓								9600
↓	↓	↓										↓
19597-98	V2 – Last Wave Sample	R		✓								9799
19599-00	V3 – First Wave Sample	R		✓								9800
↓	↓	↓										↓

<b>MODBUS Register</b>	<b>Field Description</b>	<b>Type</b>	<b>GR</b>	<b>PQ</b>	<b>PICO</b>	<b>VIP-P</b>	<b>LT color</b>	<b>LT</b>	<b>MC</b>	<b>LTE</b>	<b>LTC</b>	<b>ITEM # UniArt \ BACnet AV</b>
19997-98	V3 – Last Wave Sample	R		✓								9999

Table 1-4 Registers Table

### 1.3 — UniArt Alarms for *ElNet* Multimeter

The *ElNet* Energy & Powermeter is capable of working with UNIART software. When working with UNIART software user can get specific alarms from the unit as described in Table 1-5.

Alarm #	Description	Phase	GR	LT	MC	PICO
1	Low Voltage (Line To N)	1	✓			
2	High Voltage (Line To N)	1	✓			
3	Low Voltage (Line To N)	2	✓			
4	High Voltage (Line To N)	2	✓			
5	Low Voltage (Line To N)	3	✓			
6	High Voltage (Line To N)	3	✓			
7	Low Voltage (Line To Line)	1-2	✓			
8	High Voltage (Line To Line)	1-2	✓			
9	Low Voltage (Line To Line)	2-3	✓			
10	High Voltage (Line To Line)	2-3	✓			
11	Low Voltage (Line To Line)	3-1	✓			
12	High Voltage (Line To Line)	3-1	✓			
13	Low Current	1	✓			
14	High Current	1	✓			
15	Low Current	2	✓			
16	High Current	2	✓			
17	Low Current	3	✓			
18	High Current	3	✓			
19	Low Current	L0 (N)	✓			
20	High Current	L0 (N)	✓			
21	Low Power Factor	1	✓			
22	High Power Factor	1	✓			

<b>Alarm #</b>	<b>Description</b>	<b>Phase</b>	<b>GR</b>	<b>LT</b>	<b>MC</b>	<b>PICO</b>
23	Low Power Factor	2	✓			
24	High Power Factor	2	✓			
25	Low Power Factor	3	✓			
26	High Power Factor	3	✓			
27	Low Power Factor	1+2+3	✓			
28	High Power Factor	1+2+3	✓			
39	High Power Period (Item 262)	1+2+3	✓			
40	Low Power Period (Item 263)	1+2+3	✓			
41	Low Voltage THD	1	✓			
42	High Voltage THD	1	✓			
43	Low Voltage THD	2	✓			
43	High Voltage THD	2	✓			
45	Low Voltage THD	3	✓			
46	High Voltage THD	3	✓			
47	Low Current THD	1	✓			
48	High Current THD	1	✓			
49	Low Current THD	2	✓			
50	High Current THD	2	✓			
51	Low Current THD	3	✓			
52	High Current THD	3	✓			
53	Low Current THD	L0 (N)	✓			
54	High Current THD	L0 (N)	✓			
55	Low Current TDD	1	✓			
56	High Current TDD	1	✓			
57	Low Current TDD	2	✓			

<b>Alarm #</b>	<b>Description</b>	<b>Phase</b>	<b>GR</b>	<b>LT</b>	<b>MC</b>	<b>PICO</b>
58	High Current TDD	2	✓			
59	Low Current TDD	3	✓			
60	High Current TDD	3	✓			
61	Low Current TDD	L0 (N)	✓			
62	High Current TDD	L0 (N)	✓			
63	Low Current K.Factor	1	✓			
64	High Current K.Factor	1	✓			
65	Low Current K.Factor	2	✓			
66	High Current K.Factor	2	✓			
67	Low Current K.Factor	3	✓			
68	High Current K.Factor	3	✓			
69	Low Current K.Factor	L0 (N)	✓			
70	High Current K.Factor	L0 (N)	✓			
81	U.Alarm – High Current	1		✓		✓
82	U.Alarm – High Current	2		✓		✓
83	U.Alarm – High Current	3		✓		✓
84	U.Alarm – High Voltage	1		✓		✓
85	U.Alarm – High Voltage	2		✓		✓
86	U.Alarm – High Voltage	3		✓		✓
87	U.Alarm – Low Voltage	1		✓		✓
88	U.Alarm – Low Voltage	2		✓		✓
89	U.Alarm – Low Voltage	3		✓		✓
90	U.Alarm – Low PF	1+2+3		✓		✓
91	U.Alarm – High V.THd	1+2+3		✓		✓
92	U.Alarm – High I.THd	1+2+3		✓		✓

Table 1-5 Alarm Table



Alarm #	Description	Phase	LT Color
1	High Voltage (Line To N)	1	✓
2	High Voltage (Line To N)	2	✓
3	High Voltage (Line To N)	3	✓
4	High Current	1	✓
5	High Current	2	✓
6	High Current	3	✓
7	Demand KW	Tot	✓
8	Import Power Total KW	Tot	✓
9	Export Power Total KW	Tot	✓
10	Temprature	---	✓
11	% kVarhC/kWh	Tot	✓
12	% kVarhL/kWh	Tot	✓
13	No Volt	1	✓
14	No Volt	2	✓
15	No Volt	3	✓
16	No Current	1	✓
17	No Current	1	✓
18	No Current	1	✓
19	High Leakage Current	---	✓
20	High General PF	---	✓
21	Digital In #1	---	✓
22	Digital In #2	---	✓
41	Low Voltage (Line To N)	1	✓
42	Low Voltage (Line To N)	2	✓

<b>Alarm #</b>	<b>Description</b>	<b>Phase</b>	<b>LT Color</b>
<b>43</b>	Low Voltage (Line To N)	3	✓
<b>44</b>	Low Current	1	✓
<b>45</b>	Low Current	2	✓
<b>46</b>	Low Current	3	✓
47	Low Demand KW	Tot	✓
48	Low Import Power Total KW	Tot	✓
49	Low Export Power Total KW	Tot	✓
50	Low Temperature	---	✓
51	Low % kVarhC/kWh	Tot	✓
52	Low % kVarhL/kWh	Tot	✓
<b>53</b>	Low No Volt	1	✓
<b>54</b>	Low No Volt	2	✓
<b>55</b>	Low No Volt	3	✓
<b>56</b>	Low No Current	1	✓
<b>57</b>	Low No Current	1	✓
<b>58</b>	Low No Current	1	✓
<b>59</b>	High Leakage Current	---	✓
<b>60</b>	Low General PF	---	✓

Table 1-6 LT (Color) **Alarm Table**

## What's New?

- 01.03.2010** : Add LT –Demand THD Values (2141-2157)
- 08.03.2010** : Add GR –KFactor (167-170)
- 31.05.2010** : Add MC
- 06.06.2010** : Add Temp Sensor (190)
- 22.07.2010** : Add Modbus Response Delay (290)
- 01.09.2010** : Add TOU Registers (3101-3328)
- 06.06.2010** : Add Energy in KW (3400-3435)
- 15.06.2010** : Add Energy in KW (3400-3411) in LTE
- 08.09.2011** : Add Total Q For C & L Mode (285 & 286)
- 12.09.2011** : Add Meter B (3440 & 3477)
- 10.11.2011** : Add Fast Trend Cycle (GR) (199)
- 23.11.2011** : Add Long Wave Events (PQ) (650-654)
- 10.12.2011** : Update Alarm Table
- 09.01.2012** : Add LTC16 Capacitors 8-16 (1981-1990)
- 16.02.2012** : Add MC & LT ModBus Index (ReMap Items 3800-3999)
- 19.02.2012** : Add LT Alarms (Items 4400-4519)
- 20.02.2012** : Add PQ/GR ModBus Index (ReMap Items 3800-3999)
- 06.05.2012** : Add PQ Trip Current
- 10.05.2012** : Add LT (Color) Reactive Four Quadrant (Items 295-298)
- 24.05.2012** : Add PST to PQ
- 17.06.2012** : Add Simple Trip Data (Items 5051-5058)
- 14.08.2012** : Add User Trend (Items 5301-5315)
- 14.08.2012** : Add Item 657
- 20.08.2012** : Add Items 5340-5360
- 29.08.2012** : Add Items 697-699
- 02.09.2012** : Add Items 5400-5798
- 02.09.2012** : Add Items 1991-1993
- 12.09.2012** : Add Items 3437-8
- 13.09.2012** : Add Items 5390-2
- 19.09.2012** : Add Items 5320-5333
- 05.11.2012** : Add Items 5801-5824
- 26.11.2012** : Add LT Color Alarms
- 02.12.2012** : Update Alarm Table
- 06.12.2012** : Add 2120 – Keyboard Lock
- 12.12.2012** : Add MSTP Parameters
- 27.12.2012** : Add Pulse Registers (5481)
- 09.01.2013** : Add MVAR Registers (3439)
- 17.01.2013** : Add Avr15M Registers (5360)
- 16.07.2013** : Add D.In Energy (LT)
- 31.07.2013** : Add User Flash Trend (LT TFT - Items 5900-5928)
- 20.08.2013** : Add Total D.In Energy
- 01.10.2013** : Add Combined Apparant Power (KVA) and (MVA) (Items 3443-3444)
- 03.10.2013** : Add Harmonics & Min/Max to Pico,
- 04.10.2013** : Add LT Historical Alarms
- 08.10.2013** : Add LTE VAR-LC
- 13.02.2014** : Add PQ – Crest Factor
- 16.02.2014** : Update Flash trend registers.
- 08.04.2014** : Update GPS Registers.
- 08.04.2014** : Add K power per line (LT 2013 - Items 3478-3486)
- 17.07.2014** : Update Alarm Table (Items 4400-4640)