

**PICS**

**Vendor Name:** CIRCUTOR

**Product Name:** NRG96 BAC | MINI BAC

**Product Model Number:** 398 | 409

**Application Software Version:** 1.0

**Firmware Revision:** v2.00 – 0.8.3

**BACnet Protocol Revision:** 12

**Product Description:**

Electrical energy meter

**BACnet Standardized Device Profile (Annex L)**

X	BACnet Application Specific Controller (B-ASC)
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**List all BACnet Interoperability Building supported (see Annex K in BACnet Addendum 135d):**

DS-RP-B Read Property  
 DS-WP-B Write Property  
 DS-RPM-B Read Property Multiple  
 DM-DDB-B Dynamic Device Binding  
 DM-DOB-B Dynamic Object Binding  
 DM-DCC-B Device Communication Control  
 DM-RD-B Reinitialize Device

**Which of the following device binding methods does the product support? (check one or more)**

X	Recive Who-Is, send I-Am (BIBB DM-DDB-B)
X	Recive Who-Has, send I-Have (BIBB DM-DOB-B)

**Standard Object Types Supported:**

**Analog Input Object Type**

1. Dynamically creatable using BACnet's CreateObject service?	No
2. Dynamically deletable using BACnet's DeleteObject service?	No
3. List of optional properties supported:	max_pres_value   min_pres_value
4. List of all properties that are writable where not otherwise required by this standard	
5. List of proprietary properties:	
6. List of any property value range restrictions:	

**Properly Identifier**

Object_Name	max 6 characters
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DESCRIPTION	SYMBOL	ID OBJECTS NRG96	ID OBJECTS MINI	OBJECT NAME	UNITS
Tensión fase-neutro	Voltage phase to neutral	V 1	AI0	Ph2NU1	V
Corriente	Current	A 1	AI1	Ph1Current	A
Potencia activa	Active power	kW 1	AI2	ActPwrPh1	kW
Potencia reactiva	Reactive power	kvar 1	AI3	ReactPwrPh1	kvar
Factor de potencia	Power factor	PF 1	AI4	PwrFactPh1	PF
Tensión fase-neutro	Voltage phase to neutral	V 2	AI5	Ph2NU2	V
Corriente	Current	A 2	AI6	Ph2Current	A
Potencia activa	Active power	kW 2	AI7	ActPwrPh2	kW
Potencia reactiva	Reactive power	kvar 2	AI8	ReactPwrPh2	kvar
Factor de potencia	Power factor	PF 2	AI9	PwrFactPh2	PF
Tensión fase-neutro	Voltage phase to neutral	V 3	AI10	Ph2NU3	V
Corriente	Current	A 3	AI11	Ph3Current	A
Potencia activa	Active power	kW 3	AI12	ActPwrPh3	kW
Potencia reactiva	Reactive power	kvar 3	AI13	ReactPwrPh3	kvar
Factor de potencia	Power factor	PF 3	AI14	PwrFactPh3	PF
Potencia activa trifásica	Three phase active power	kW III	AI15	ActPwOn3Ph	kW
Potencia inductiva trifásica	Three phase reactive inductive power	kvarL III	AI16	InductPwOn3Ph	kvarL
Potencia capacitiva trifásica	Three phase capacitive inductive power	kvarC III	AI17	CapPwOn3Ph	kvarC
Potencia aparente trifásica	Three phase aparent power	kVAIII	AI33	AppPwOn3Ph	kVA
Cos φ trifásico	Three phase cos φ	Cos φ III	AI18	Cosphi	Cos φ
Factor de potencia trifásico	Three phase power factor	PFIII	AI19	PwFactOn3Ph	PF
Frecuencia (L2)	Frequency	Hz	AI20	Frecuency	Hz
Tensión fase-fase	Voltage phase to phase	V12	AI21	Ph2PhU12	V
Tensión fase-fase	Voltage phase to phase	V23	AI22	Ph2PhU23	V
Tensión fase-fase	Voltage phase to phase	V31	AI23	Ph2PhU31	V

%THD V	%THD V	%THD V1	AI24	AI24	THDVal_U1	%THD
%THD V	%THD V	%THD V2	AI25	AI25	THDVal_U2	%THD
%THD V	%THD V	%THD V3	AI26	AI26	THDVal_U3	%THD
%THD A	%THD A	%THD A1	AI27	AI27	THDVal_I1	%THD
%THD A	%THD A	%THD A2	AI28	AI28	THDVal_I2	%THD
%THD A	%THD A	%THD A3	AI29	AI29	THDVal_I3	%THD
Energía activa	Active energy	kWh III	AI30	AI30	ActEnergy	kWh
Energía reactiva inductiva	Reactive inductive energy	kvarL-h III	AI31	AI31	InductEnergy	kvarL-h
Energía reactiva capacitiva	Reactive capacitive energy	kvarC-h III	AI32	AI32	CapEnergy	kvarC-h
Potencia aparente L1	Aparent power L1	kVA	x	AI37	AppPwrPh1	kVA
Potencia aparente L2	Aparent power L2	kVA	x	AI38	AppPwrPh2	kVA
Potencia aparente L3	Aparent power L3	kVA	x	AI39	AppPwrPh3	kVA
Temperatura interna	Internal temperature	°C / °F	x	AI40	Temperature	°C / °F
Energía Aparente trifásica	Three phase aparent energy	kVA-h III	AI39	AI43	AppEnergy	kVA-h
Máxima demanda	Maximum demand	Md (Pd)	AI34	AI34	MaxDemand_A1	A
Corriente trifásica (media)	Three phase average current	L_AVG	AI35	AI35	AvgValCurr3Ph	L_AVG
Corriente de neutro	Neutral current	In	AI36	AI36	NeutralCurrent	In
Máxima demanda I2	Maximum demand I2	Md(Pd)	AI37	AI41	MaxDemand_A2	A
Máxima demanda I3	Maximum demand I3	Md(Pd)	AI38	AI42	MaxDemand_A3	A
Energía activa generada	Three phase generated active energy	kWh III (-)	AI40	AI44	ActEnergy_exp	kWh
Energía inductiva generada	Three phase generated reactive inductive energy	kvarL-h III (-)	AI41	AI45	InductEnergy_exp	kvarL-h
Energía capacitiva generada	Three phase generated reactive capacitive energy	kvarC-h III (-)	AI42	AI46	CapEnergy_exp	kvarC-h
Energía aparente generada	Three phase generated aparent energy	kVA-h III (-)	AI43	AI47	AppEnergy_exp	kVA-h
Máxima demanda I1 kW	Maximum demand I1 kW	kW	AI44	AI48	MaxDemand_kW	kW
Máxima demanda I1 kVA	Maximum demand I1 kVA	kVA	AI45	AI49	MaxDemand_kVA	kVA

#### Analog Value Object Type

1. Dynamically creatable using BACnet's CreateObject service?	No	
2. Dynamically deletable using BACnet's DeleteObject service?	No	
3. List of optional properties supported:		
4. List of all properties that are writable where not otherwise required by this standard		
5. List of proprietary properties:		
<b>Property Identifier</b>	<b>Property Datatype</b>	<b>Meaning</b>
5. List of object identifiers and their meaning in this device		
<b>Object ID</b>	<b>Object Name</b>	<b>Description</b>
AV1	MAC_Address	MAC
AV2	BaudRate	BAUD RATE
AV3	Device_ID	DEVICE ID

#### Device Object Type

1. Dynamically creatable using BACnet's CreateObject service?	No
2. Dynamically deletable using BACnet's DeleteObject service?	No
3. List of optional properties supported:	Description, Protocolo_Conformance_Class
4. List of all properties that are writable where not otherwise required by this standard	
Object_Name Max_Master Max_Info_Frames Object_Identifier	
5. List of proprietary properties:	
5. List of any property value range restrictions	
<b>Property Identifier</b>	<b>Restrictions</b>
Object_Name	< 32 bytes
Object_Identifier	Device Type only
Number_Of_APDU_Retries	0-255
APDU_Timeout	0-65535 milliseconds
Vendor_Identifier	0-65535

#### Data Link Layer Options (check all that supported):

X	MS/TP master (Clause 9), baud rate(s): 9.6, 19.2, 38.4, 57.6, 76.8kb/s
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#### Character Sets Supported (check all that apply):

Indicating support for multiple character set does not imply that they can all be supported simultaneously.

X	ANSI X3.4
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