

	COMMUNICATION BACNET PROTOCOL	PR142
NEMO-D4Le NEMO MD (IF96014)		20/07/2018 Pag. 1/9

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Rev	DESCRIPTION	Date	Sw
A	Formal revision	21/02/2018	➤ 2.3.1

1. BACnet Protocol Implementation Conformance Statement

Date: February 21st, 2018
Vendor Name: IME
Product Name: NEMO D4Le / NEMO MD
Product Model Number: MFD44B1 – MFD44B2 / IF96014
Applications Software Version:
Firmware Revision: 2.3.1
BACnet Protocol Revision: 1.12 (ANSI/ASHRAE 135/2010)
Multifunction meter

BACnet Standardized Device Profile (Annex L):
BACnet Application Specific Controller (B-ASC)

List all BACnet Interoperability Building Blocks Supported (Annex K):

- Data Sharing-ReadProperty-B (DS-RP-B)
- Data Sharing-ReadPropertyMultiple-B (DS-RPM-B)
- Data Sharing-WriteProperty-B (DS-WP-B)
- Device Management-Dynamic Device Binding-B (DM-DDB-B)
- Device Management-Dynamic Object Binding-B (DM-DOB-B)
- Device Communication Control (DM-DCC-B)

Segmentation Capability:
Segmentation not supported

Standard Object Types Supported:
No dynamic Creation or Deletion supported
No proprietary object type supported

Device Object		Notes
Optional Properties Supported	Description	
	Protocol_Conformance_Class	
Standard Properties Used in a Non-standard Way	None	
Proprietary Properties Supported	None	
Writable Properties	Object_Identifier	
	Object_Name	Max. length: 45 bytes
	Number_Of_APDU_Retries	Valid values: from 0 to 10
	APDU_Timeout	Valid values: from 0 to 65535
	Max master	Valid values: from 1 to 127
	Max info frames	Valid values: from 1 to 255

Analog Input Objects	
Optional Properties Supported	Description
Standard Properties Used in a Non-standard Way	None
Proprietary Properties Supported	None
Writable Properties	Description

MultiState Input Objects	
Optional Properties Supported	Description
Standard Properties Used in a Non-standard Way	None
Proprietary Properties Supported	None
Writable Properties	Description

Binary Value Objects	
Optional Properties Supported	Description
Standard Properties Used in a Non-standard Way	None
Proprietary Properties Supported	None
Writable Properties	Description Present_Value

Analog Value Objects	
Optional Properties Supported	Description
Standard Properties Used in a Non-standard Way	None
Proprietary Properties Supported	None
Writable Properties	Description Present_Value

Binary Input Objects	None
Optional Properties Supported	Description
Standard Properties Used in a Non-standard Way	None
Proprietary Properties Supported	None
Writable Properties	Description Present_Value

Data Link Layer Options:

BACnet MS/TP master (clause 9)
Supported baudrates: 9600, 19200, 38400, 76800

Device Address Binding:

Static device binding is not supported. (No client functionality is included).

Character Sets Supported:

ANSI X3.4

List of objects

The IME NEMO multifunction meter allows the following data to be read

2. SUPPORTED DEVICES

NEMO D4Le	- MFD44B1 and MFD44B2
NEMO MD	- IF96014

3. OBJECTS

Analogue Inputs

Instance	Description	Base Unit	Notes
0	Phase 1 Voltage	V	
1	Phase 2 Voltage	V	
2	Phase 3 Voltage	V	
3	Phase 1 Current	A	
4	Phase 2 Current	A	
5	Phase 3 Current	A	
6	Neutral Current	A	
7	L1-L2 Voltage	V	
8	L2-L3 Voltage	V	
9	L1-L3 Voltage	V	
10	3-Phase Active Power	W	Unsigned
11	3-Phase Reactive Power	var	Unsigned
12	3-Phase Apparent Power	VA	
13	3-Phase Positive Active Energy L	Wh	
14	3-Phase Positive Active Energy H	MWh	
15	3-Phase Positive Reactive Energy L	varh	
16	3-Phase Positive Reactive Energy H	Mvarh	
17	3-Phase Negative (exported) Active Energy L	Wh	
18	3-Phase Negative (exported) Active Energy H	MWh	
19	3-Phase Negative (exported) Reactive Energy L	varh	
20	3-Phase Negative (exported) Reactive Energy H	Mvarh	
21	3-Phase Power Factor	(2 decimals) e.g. 1.00 => 1.00 0.944 => 0.94 -0.98 => -0.98	Signed
22	Frequency	Hz (1 decimal)	
23	3-phase Active Average Power	W	
24	3-phase Active PMD Power	W	
25	Average Power TimeCounter	Minutes	
26	Phase 1 Active Power	W	Unsigned
27	Phase 2 Active Power	W	Unsigned
28	Phase 3 Active Power	W	Unsigned
29	Phase 1 Reactive Power	var	Unsigned
30	Phase 2 Reactive Power	var	Unsigned
31	Phase 3 Reactive Power	var	Unsigned
32	Phase 1 Apparent Power	VA	
33	Phase 2 Apparent Power	VA	
34	Phase 3 Apparent Power	VA	
35	Phase 1 Power Factor	x.yy (2 decimals)	Signed
36	Phase 2 Power Factor	x.yy (2 decimals)	Signed
37	Phase 3 Power Factor	x.yy (2 decimals)	Signed
38	Phase 1 Voltage THD	% (1 decimal)	
39	Phase 2 Voltage THD	% (1 decimal)	
40	Phase 3 Voltage THD	% (1 decimal)	
41	Phase 1 Current THD	% (1 decimal)	
42	Phase 2 Current THD	% (1 decimal)	
43	Phase 3 Current THD	% (1 decimal)	
44	Phase 1 Average Current	A	
45	Phase 2 Average Current	A	
46	Phase 3 Average Current	A	
47	Phase 1 Peak Current	A	
48	Phase 2 Peak Current	A	
49	Phase 3 Peak Current	A	
50	Currents Average	A	
51	Phase 1 Voltage Minimum	V	

52	Phase 2 Voltage Minimum	V	
53	Phase 3 Voltage Minimum	V	
54	Phase 1 Voltage Maximum	V	
55	Phase 2 Voltage Maximum	V	
56	Phase 3 Voltage Maximum	V	
57	3-Phase Active Partial Energy L	Wh	
58	3-Phase Active Partial Energy H	MWh	
59	3-Phase Reactive Partial Energy L	varh	
60	3-Phase Reactive Partial Energy H	Mvarh	
61	Run Hour Meter	Hours	
62	3-phase Active Average Power	W	
63	3-phase Reactive Average Power	var	
64	3-phase Apparent Average Power	var	
65	3-phase Active PMD Power	W	
66	3-phase Reactive PMD Power	var	
67	3-phase Apparent PMD Power	VA	
68	3-Phase Apparent Energy L	VAh	
69	3-Phase Apparent Energy H	MVAh	

Analog Values

Instance	Description	Unit	Notes
0	CT (Current) ratio	No unit	Valid range: 1...9999 Only integer part of the value being written is stored
1	PT (Voltage) ratio	x.y (1 decimal) e.g 1.00 => 1.0 6.43 => 6.4 10.00 => 10.0	Read-only

MultiState Inputs

Instance	Description	Values
0	3-Phase Active Power Sign	0 = positive 1 = negative
1	3-Phase Reactive Power Sign	0 = positive 1 = negative
2	3-Phase Power Factor Sector	0 = PF = 1 or PF = 0 1 = inductive 2 = capacitive
3	Phase 1 Active Power Sign	0 = positive 1 = negative
4	Phase 2 Active Power Sign	0 = positive 1 = negative
5	Phase 3 Active Power Sign	0 = positive 1 = negative
6	Phase 1 Reactive Power Sign	0 = positive 1 = negative
7	Phase 2 Reactive Power Sign	0 = positive 1 = negative
8	Phase 3 Reactive Power Sign	0 = positive 1 = negative
9	Phase 1 – Power Factor Sector	1 = inductive 2 = capactive
10	Phase 2 – Power Factor	1 = inductive 2 = capactive

11	Phase 3 – Power Factor	1 = inductive 2 = capacitive
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Binary Values

Instance	Description	Notes
0	Reset Hour Meter	Write-only: always read as 0, write 1 to reset hour meter
1	Reset Maximum Powers	Write-only: always read as 0, write 1 to reset all maximum power values (P, Q, S)
2	Reset max peak of voltages	Write-only: always read as 0, write 1 to reset all maximum peak voltages
3	Reset max peak of currents	Write-only: always read as 0, write 1 to reset all maximum peak currents
4	Reset min value of voltages	Write-only: always read as 0, write 1 to reset all minimum voltages
5	Reset Active Partial Energy value	Write-only: always read as 0, write 1 to reset active partial energy value
6	Reset Reactive Partial Energy value	Write-only: always read as 0, write 1 to reset reactive partial energy value

Binary Inputs

Instance	Description	Device
0	Alarm 0 Active	NEMO 96HD / HD+ / NEMO D4Le
1	Alarm 1 Active	NEMO 96HD / HD+
2	Alarm 2 Active	NEMO 96HD / HD+
3	Alarm 3 Active	NEMO 96HD / HD+

Binary inputs are only readable.