



BACnet PICS & Object tables



BACnet Protocol Implementation Conformance Statement (PICS)

IER Humidifier BACnet is build from a solid and experienced architecture from PicoPort.

This allowed IER humidifier to be fully compliant to BACnet standards.

The PicoPort is a miniature serial communications engine-on-module for OEM applications. This product supports native BACnet, connecting directly to the MS/TP LAN using baud rates of 9600, 19200, 38400, 57600, 76800, and 115200.

Date: April 27, 2020

Vendor Name: ICC, Inc.

Product Name: PicoPort Communications Module

Product Model Number: PicoPort

Applications Software Version: V4.200

Firmware Revision: V4.200

BACnet Protocol Revision: 12

Product Description:

The PicoPort is a miniature serial communications engine-on-module for OEM applications. This product supports native BACnet, connecting directly to the MS/TP LAN using baud rates of 9600, 19200, 38400, 57600, 76800, and 115200.

The device is configured as a BACnet Client for IER humidifier use.

BACnet Standard Device Profile (Annex L):

- BACnet Operator Workstation (B-OWS)
- BACnet Building Controller (B-BC)
- BACnet Advanced Application Controller (B-AAC)
- BACnet Application Specific Controller (B-ASC)
- BACnet Smart Sensor (B-SS)
- BACnet Smart Actuator (B-SA)

BACnet Interoperability Building Blocks Supported (Annex K):

- ☒ Data Sharing – ReadProperty-A (DS-RP-A)
- ☒ Data Sharing – ReadProperty-B (DS-RP-B)
- ☒ Data Sharing – ReadPropertyMultiple-B (DS-RPM-B)
- ☒ Data Sharing – WriteProperty-A (DS-WP-A)
- ☒ Data Sharing – WriteProperty-B (DS-WP-B)
- ☒ Data Sharing – WritePropertyMultiple-B (DS-WPM-B)
- ☒ Data Sharing – COV-B (DS-COV-B)
- ☒ Device Management – Dynamic Device Binding-A (DM-DDB-A)
- ☒ Device Management – Dynamic Device Binding-B (DM-DDB-B)
- ☒ Device Management – Dynamic Object Binding-B (DM-DOB-B)
- ☒ Device Management – DeviceCommunicationControl-B (DM-DCC-B)
- ☒ Device Management – ReinitializeDevice-B (DM-RD-B)
- ☒ Device Management – TimeSynchronization-B (DM-TS-B)*
- ☒ Device Management – UTCTimeSynchronization-B (DM-UTC-B)*

* Available only when Real-time Clock Settings are enabled

Binary inputs

Line	Object Type	Object Name	Object Description	Object Group	Access	Units
01	Binary Input	On Status	IER humidifier is ON	Status	R	
02	Binary Input	Armed Status	IER humidifier is ready to operate waiting for a demand	Status	R	
03	Binary Input	Steam On Status	IER humidifier is producing steam or heating up water	Status	R	
04	Binary Input	Drain Status	IER is draining	Status	R	
05	Binary Input	Draining Status	Drain pump is ON	Status	R	
06	Binary Input	Add Water Status	IER is adding water in steam cylinder	Status	R	
07	Binary Input	Debug Status	IER is in Debug mode	Status	R	
08	Binary Input	Service Status	User has ordered a drain for service.	Status	R	
09	Binary Input	Heating Status	IER is heating up water	Status	R	
10	Binary Input	Auto Dilu Status	IER is draining and filling small amount of water to reduce mineral concentration in water	Status	R	
11	Binary Input	Fan on Status	IER has detected low enclosure temperature and is heating-up water cylinder	Status	R	
12	Binary Input	Local Ctl Status	BMS have no control on parameter (only screen)	Status	R	
13	Binary Input	BMS Ctl Status	BMS override all parameter	Status	R	
14	Binary Input	Alarms Status	An alarm is active	Alarm1	R	

I E R B A C N E T P I C S & O B J E C T T A B L E S

Line	Object Type	Object Name	Object Description	Object Group	Access	Units
15	Binary Input	ET Sensor Def	Enclosure Temperature sensor defect or not connected	Alarm1	R	
16	Binary Input	ET Temp Too High	Enclosure Temperature too high	Alarm1	R	
17	Binary Input	Water Level Def	Water level sensor defect or not connected	Alarm1	R	
18	Binary Input	Water Level err	water level error	Alarm1	R	
19	Binary Input	Water too high	Water Level too high	Alarm1	R	
20	Binary Input	WT Sensor Def	Water temperature sensor defect or not connected	Alarm1	R	
21	Binary Input	WT sensor err	Water temperature measured is abnormal - outside range	Alarm1	R	
22	Binary Input	Foam Detected	Foam have been detected	Alarm1	R	
23	Binary Input	High RH in Duct	High RH detected in Duct	Alarm1	R	
24	Binary Input	Air Flow err	Air flow switch	Alarm1	R	
25	Binary Input	Enable switch	Enable switch is open	Alarm1	R	
26	Binary Input	Water Feed Err	No water is supplied	Alarm1	R	
27	Binary Input	Pump err	Drain pump is not able to empty cylinder	Alarm1	R	
28	Binary Input	CTank Freezing	critical tank freezing	Alarm1	R	
29	Binary Input	CET Freezing	critical enclosure freezing	Alarm1	R	
30	Binary Input	Water level low	Water level is below low level	Alarm2	R	
31	Binary Input	Water level high	Water level is above high level	Alarm2	R	
32	Binary Input	Htank Freezing	hazard tank freezing	Alarm2	R	
33	Binary Input	HET Freezing	Hazard enclosure freezing	Alarm2	R	
34	Binary Input	Inlet Low Flow	Water inlet low flow	Alarm2	R	
35	Binary Input	ET Hot	Enclosure Temperature Hot	Alarm2	R	
36	Binary Input	Service alarm	Alarm for service if set	Alarm2	R	

Binary values

Line	Object Type	Object Name	Object Description	Object Group	Access	Units
37	Binary Value	On REQ	Request to put IER ON	REQ	R/W	
38	Binary Value	Off REQ	Request to put IER OFF	REQ	R/W	
39	Binary Value	Drain Cycle REQ	Request for Drain	REQ	R/W	
40	Binary Value	Clear Alarm REQ	Request to clear alarm	REQ	R/W	
41	Binary Value	Service REQ	Request for service	REQ	R/W	
42	Binary Value	BMS Control REQ	Request for BMS control	REQ	R/W	
43	Binary Value	Inac Drain Conf	Inactivity Drain Configuration	Configuration	R/W	
44	Binary Value	Drain Conf	Drain Configuration	Configuration	R/W	
45	Binary Value	Auto Dilu Conf	Auto Dilution Configuration	Configuration	R/W	
46	Binary Value	Drain Cool Conf	Drain cooling configuration	Configuration	R/W	
47	Binary Value	Preheat Conf	Preheat configuration	Configuration	R/W	
48	Binary Value	Ext Fan Conf	External Fan Configuration (blower pack)	Configuration	R/W	
49	Binary Value	Ant-Freeze Conf	Anti freezing configuration	Configuration	R/W	
50	Binary Value	Service off conf	Service Auto off Configuration	Configuration	R/W	

Analog input

Line	Object Type	Object Name	Object Description	Object Group	Access	Units
51	Analog Input	Water level	Tank Water Level	Humdifier Information	R	%
52	Analog Input	Water Temp	Tank Water Temperature	Humdifier Information	R	C
53	Analog Input	Humidity	humidity	Humdifier Information	R	%
54	Analog Input	Output	Humidity Output	Humdifier Information	R	%
55	Analog Input	Output_SSR	Electric Output on SSR	Humdifier Information	R	Kilowatt
56	Analog Input	Enclosure Temp	Enclosure Temperature	Humdifier Information	R	C
57	Analog Input	Controller Temp	CPU and PCB temperature	Humdifier Information	R/W	C

Analog value

Line	Object Type	Object Name	Object Description	Object Group	Access	Units
58	Analog Value	Demand	Demand in %	Parameter	R/W	%
59	Analog Value	Output Reduction	Steam capacity reduction	Parameter	R/W	%
60	Analog Value	Control P	Control PID Prop factor	Parameter	R/W	
61	Analog Value	Control I	Control PID Integral factor	Parameter	R/W	
62	Analog Value	Control D	Control PID Derivative factor	Parameter	R/W	
63	Analog Value	Control Pband	Control Proportional Band	Parameter	R/W	
64	Analog Value	Control Dband	Control Dead band	Parameter	R/W	
65	Analog Value	Setpoint Value	Set point value in %RH	Parameter	R/W	
66	Analog Value	Hilim P	High limit RH% PID Prop factor	Parameter	R/W	
67	Analog Value	Hilim I	High limit RH% PID Integral factor	Parameter	R/W	
68	Analog Value	Hilim D	High limit RH% PID Derivative factor	Parameter	R/W	

I E R B A C N E T P I C S & O B J E C T T A B L E S

Line	Object Type	Object Name	Object Description	Object Group	Access	Units
69	Analog Value	Hilim Pband	High limit RH% Proportional Band	Parameter	R/W	
70	Analog Value	Hilim Dband	High limit RH% Dead band	Parameter	R/W	
71	Analog Value	Water Preheat T	Water pre-heat temperature	Parameter	R/W	
72	Analog Value	Water Temp cal	Water temperature sensor calibration	Parameter	R/W	
73	Analog Value	Drain Frequency	Drain frequency	Parameter	R/W	
74	Analog Value	Inactivity Hours	Time delay to empty cylinder when there is no demand	Parameter	R/W	
75	Analog Value	Prop. Hilim	Proportional High limit RH%	Parameter	R/W	
76	Analog Value	Service Hours	Time delay in hours between call for service	Parameter	R/W	
77	Analog Value	Fan Delay	Fan delay in sec	Parameter	R/W	

Multistate input

Line	Object Type	Object Name	Object Description	Object Group	Access	Units
78	Multi-State Input	IER state	Humidifier state	Parameter	R	
79	Multi-State Value	Control Source	refer to IER IOM for list of values	Parameter	R/W	
80	Multi-State Value	Control Range	refer to IER IOM for list of values	Parameter	R/W	
81	Multi-State Value	RH/Temp Range	refer to IER IOM for list of values	Parameter	R/W	
82	Multi-State Value	Setpoint Source	refer to IER IOM for list of values	Parameter	R/W	
83	Multi-State Value	Setpoint Range	refer to IER IOM for list of values	Parameter	R/W	
84	Multi-State Value	Hilim Source	refer to IER IOM for list of values	Parameter	R/W	
85	Multi-State Value	Hilim Range	refer to IER IOM for list of values	Parameter	R/W	
86	Multi-State Value	Output Range	refer to IER IOM for list of values	Parameter	R/W	



2020 © steamOvap technologies inc.
1490 Mazurette
Montreal, Qc, H4N 1H2
Canada

Tel.: +1-844-357-4477
info@steamOvap.com
www.steamOvap.com

Information contained in this manual is subject to change without notice.
To obtain the latest technical information visit our website at www.steamOvap.com