BACnet Protocol Implementation Conformance Statement

Date: 22 September 2017
Vendor Name: WindowMaster A/S
Product Name: CompactSmoke™ / Comfort
Product Model Number: WSC 3xx / WCC 3xx
Firmware Revision: v1
BACnet Protocol Version: 1
BACnet Protocol Revision: 10

Product Description:

This PICS covers WindowMaster's CompactSmoke™ series of smoke control panels (WSC 3xx) and the comfort series control panels (WCC 3xx).

The WxC 3xx include a LCD with touch used to manipulate relevant device parameters such as BACnet Device ID's, UDP port number, baud rate and Max_Master.

The WxC 3xx can be configured with a motor module. The BACnet objects support the maximum configuration of 10 motor lines. For those objects where the motor module is not present will the object be indicated Out Of Service.

BACnet Standardized 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):

BIBB	Description
DS-RP-B	Data Sharing – ReadProperty - B
DS-RPM-B	Data Sharing – ReadPropertyMultiple - B
DS-WP-B	Data Sharing – WriteProperty - B
DS-COV-B	Data Sharing – Change of value – B
DM-DDB-B	Device Management – Dynamic Device Binding – B
DM-DOB-B	Device Management – Dynamic Object Binding – B

Segmentation Capability:

- ☐ Segmented requests supported Window Size _____
- ☐ Segmented responses supported Window Size _____

Standard Object Types Supported:
Object instantiation is static; i.e. objects cannot be created or deleted. Refer to table at end of this document for object details.

	Device	Analog			Binary			BitString
Property		**In**	**Out**	**Value**	**In**	**Out**	**Value**	**(In)**
Object Identifier	R	R	R	R	R	R	R	R
Object Name	R	R	R	R	R	R	R	R
Object Type	R	R	R	R	R	R	R	R
Description	R	R	R	R	R	R	R	R
System Status	R							
Vendor Name	R							
Vendor Identifier	R							
Model Name	R							
Firmware Revision	R							
Application Software Version	R							
Protocol Version	R							
Protocol Revision	R							
Protocol Services Supported	R							
Protocol Object Types Supported	R							
Object List	R							
Max APDU Length	R							
Segmentation Support	R							
APDU Timeout	R							
Number APDU Retries	R							
Device Address Binding	R							
Database Revision	R							
Active COV Subscriptions	R							
Max master[1]	R							
Max Info Frames[1]	R							
Present Value		R[2]	W	W	R[2]	W	W	R[2]
Status Flags		R	R	R	R	R	R	R
Event State		R	R	R	R	R	R	R
Reliability		R		R	R			R
Out Of Service		R	R	R	R	R	R	R
Units		R	R	R				
Min Pres Value		R	R					
Max Pres Value		R	R					
Priority Array			R			R		
Relinquish Default			R			R		
COV Increments		R						
Polarity					R	R		
Inactive Text					R	R		
Active Text					R	R		
Bit Text								R

[1] Only MS/TP
[2] Writable when Out Of Service is true

Analog Output Objects Instance Summary:

ID	Objects Name	Description	Unit	Present Value Access
AO 1..10	Max_position_motor_group_1..10	Sets the maximum allowed position for motor group <n>	Percent	C
AO 11..20	Auto_position_motor_group_1..10	Sets the target position with auto speed for motor group <n>	Percent	C
AO 21..22	Max_position_motor_line_S1_X1..2	Sets the maximum allowed position for motor line S1 X<n>	Percent	C
AO 23..30	Max_position_motor_line_S2_X1..8	Sets the maximum allowed position for motor line S2 X<n>	Percent	C
AO 31..32	Auto_position_motor_line_S1_X1..2	Set the target position of motor line S1 X<n> using auto speed	Percent	C
AO 33..40	Auto_position_motor_line_S2_X1..8	Set the target position of motor line S2 X<n> using auto speed	Percent	C

Analog Input Objects Instance Summary:

ID	Objects Name	Description	Unit	Present Value Access
AI 1..2	Actual_position_motor_line_S1_X1..2	Contains the actual position for line S1 X<n>	Percent	R, COV
AI 3..10	Actual_position_motor_line_S2_X1..8	Contains the actual position for line S2 X<n>	Percent	R, COV
AI 11..12	Actual_max_position_motor_line_S1_X1..2	Contains the actual max position for motor line S1 X<n>	Percent	R, COV
AI 13..20	Actual_max_position_motor_line_S2_X1..8	Contains the actual max position for motor line S2 X<n>	Percent	R, COV
AI 21..30	Alarm_wind_direction_smoke_zone_1..10	Contains the actual alarm wind direction for smoke zone <n>		R, COV
AI 31	Wind_speed	Actual wind speed	m/s	R, COV
AI 32	Wind_speed_filtered	Actual filtered wind speed	m/s	R, COV
AI 33	Wind_direction	Actual wind direction	Deg	R, COV
AI 34	Wind_direction_filtered	Actual filtered wind direction	Deg	R, COV

Analog Value Objects Instance Summary:

ID	Objects Name	Description	Unit	Present Value Access
AV 1..10	Hand_position_motor_group_1..10	Set the target position of motor group <n> using hand speed	Percent	W
AV11..20	Hand_relative_position_motor_group_1..10	Set the hand relative position for motor group <n>	Percent	W
AV 21..22	Hand_position_motor_line_S1_X1..2	Set the target position of motor line S1 X<n> using hand speed	Percent	W
AV 23..30	Hand_position_motor_line_S2_X1..8	Set the target position of motor line S2 X<n> using hand speed	Percent	W
AV 31..32	Hand_relative_position_motor_line_S1_X1..2	Set the relative position of motor line S1 X<n> using hand speed	Percent	W
AV 33..40	Hand_relative_position_motor_line_S2_X1..8	Set the relative position of motor line S2 X<n> using hand speed	Percent	W

Binary Output Objects Instance Summary:

ID	Objects Name	Description	Active / inactive Text	Present Value Access
BO 1..2	Close_motor_line_S1_X1..2	Set that motor line S1 X<n> must be closed	Close. All motors on the motor line must be closed / No close	C
BO 3..10	Close_motor_line_S2_X1..8	Set that motor line S2 X<n> must be closed	Close. All motors on the motor line must be closed / No close	C

Binary Input Objects Instance Summary:

ID	Objects Name	Description	Active / inactive Text	Present Value Access
BI 1..2	Closed_motor_line_S1_X1..2	Indicates closed / not closed status for actuators on motor line S1 X<n>	Closed. All motors on the motor line are closed / Not closed. One or more motors on the motor line are open	R, COV
BI 3..10	Closed_motor_line_S2_X1..8	Indicates closed / not closed status for actuators on motor line S2 X<n>	Closed. All motors on the motor line are closed / Not closed. One or more motors on the motor line are open	R, COV
BI 11..12	Error_motor_line_S1_X1..2	Indicates error condition for motor line S1 X<n>	Error. An error was detected on the motor line / No error. No errors detected on the motor line	R, COV
BI 13..20	Error_motor_line_S2_X1..8	Indicates error condition for motor line S2 X<n>	Error. An error was detected on the motor line / No error. No errors detected on the motor line	R, COV
BI 21..30	Alarm_smoke_zone_1..10	Smoke zone <n> alarm condition.	Alarm active in the smoke zone / No alarm active in the smoke zone	R, COV
BI 31..40	Error_smoke_zone_1..10	Smoke zone <n> error	Error. An error was detected on the smoke zone / No error. No errors detected on the smoke zone	R, COV
BI 41	Error_system	System error status	System error. One or more error in the system / System ok. No errors active in the system	R, COV

Binary Value Objects Instance Summary:

ID	Objects Name	Description	Active / inactive Text	Present Value Access
BV1..10	Connection_1..10	Object that can be associated to an input or output of the system		R/W

Bit String Value Objects Instance Summary:

ID	Objects Name	Description	Bit_Text	Present Value Access
BS 1..10	Status_motor_group_1..10	Indicate status of the motor group <n>	Bit 0: 1 = Error. One of more motor lines associated with the motor groups have an error. Bit 1: 1 = Closed. All motor lines associated with the motor group is closed. Bit 2: 1 = Max. wind speed active. The configured max. wind speed of the motor group is exceeded. Bit 3: 1 = Safety active. The safety function of the motor group is active. Bit 4: 1 = Open active. One or more motor line in the group is open more than the configured threshold. Bit 5: 1 = Alarm. The motor group is in smoke alarm state.	R
BS 11..12	Status_motor_line_S1_X1..2	Indicate status for motor line S1 X<n>	Bit 0: 1 = Communication error. Communication error detected while communicating with one or more motors. Only applicable for MotorLink™ output. Bit 1: 1 = Cable error. Broken cable detected. Only applicable for standard motor output. Bit 2: 1 = No. of. motors error. Expected no. of motors differs from the number of motors found on the motor line. Bit 3: 1 = Team size error. Team size value in the motors does not match. Bit 4: 1 = Motor parameter error. Key motor parameters differ between the motors. Bit 5: 1 = No. of locking motors error. Expected no of WMB motors differ from number found. Bit 6: 1 = Locking motors team size error. Team size value in the locking motors does not match. Bit 7: 1 = Locking motor parameter error. Key locking motor parameters differs between the locking motors. Bit 8: 1 = Closed. All actuators on motor line are closed. Bit 9: 1 = Locked. All locking motors are locked. If no locking motors are present the bit has the same value as "Closed". Bit 10: 1 = Position error. The actual position differs from the expected position. Bit 11: 1 = Motor moving. Motors are moving. Bit 12: 1 = Motor over current. The motors reported a too high current. Bit 13: 1 = Output over current. A too high current detected on the motor line output. Bit 14: 1 = Hand grace timer active. An automatic operation has started the grace timer. Bit 15: 1 = Hand timer active. A hand operation has started the temporary hand timer. Bit 16: 1 = Open. The actuators are more open than a threshold. Bit 17: 1 = Power supply overcurrent. Accumulator switch opened due to overcurrent. Bit 18: 1 = Motor safety edge sensor input active. Bit 19: 1 = Motor ID 1 communication error. Bit 20: 1 = Motor ID 2 communication error. Bit 21: 1 = Motor ID 3 communication error. Bit 22: 1 = Motor ID 4 communication error. Bit 23: 1 = Motor ID 5 communication error. Bit 24: 1 = Motor ID 6 communication error. Bit 25: 1 = Communication warning. Bit 26: 1 = Watchdog timeout.	R

ID	Objects Name	Description	Bit_Text	Present Value Access
BS 13..20	Status_motor_line_S2_X1..8	Indicate status for motor line S2 X<n>	Please see BS 11	R
BS 21..30	Status_smoke_zone_1..10	Indicate status of smoke zone <n>	Bit 0: 1 = Line A alarm active. Bit 1: 1 = Line B alarm active. Bit 2: 1 = Reset active. Bit 3: 1 = Line C alarm active. Bit 4: 1 = Line D alarm active. Bit 5: 1 = Line E alarm active. Bit 6: 1 = Line F alarm active. Bit 7: 1 = Line A error. Bit 8: 1 = Line B error. Bit 9: 1 = Line C error. Bit 10: 1 = Line D error. Bit 11: 1 = Line E error. Bit 12: 1 = Line F error. Bit 13: 1 = Break glass unit error. Error effecting the break glass units associated with the smoke zone. Bit 14: 1 = Motor group error. Error effecting the motor groups associated with the smoke zone. Bit 15: 1 = Master / slave error. Error effecting a master or slave connection on the smoke zone. Bit 16: 1 = Power supply error. No mains power or PS module error. Bit 17: 1 = Mains power warning. Mains power has been missing for less than (*) minutes. Bit 18: 1 = Weather data error.	R
BS 31	Status_system	Indicates the detailed status of the system.	Bit 0: 1 = Alarm. Alarm is active in one or more smoke zone. Bit 1: 1 = System error. Errors active in the system. Bit 2: 1 = Mains error. Mains power is ok. The first (*) min. of a mains failure is shown as a warning. Bit 3: 1 = Mains warning. Mains power failure for less than (*) minutes. Bit 4: 1 = Accumulator error. An accumulator error is detected. Bit 5: 1 = Weather data error. Bit 6: 1 = Time for service. The system maintenance timer is expired.	R

(*) is the value of parameter 1.9.0.38 “Mains error time”.

Present Value Access types Legend: R = Read-only, W (Note1) = Writeable, C = Commandable. Commandable values supports priority arrays 16 relinquish defaults.

Data Link Layer Options:

☒ BACnet IP, (Annex J)
☐ BACnet IP, (Annex J), Foreign Device
☐ ISO 8802-3, Ethernet (Clause 7)
☐ ANSI/ATA 878.1, 2.5 Mb. ARCNET (Clause 8)
☐ ANSI/ATA 878.1, RS-485 ARCNET (Clause 8), baud rate(s): _____
☒ MS/TP master (Clause 9), baud rate(s): 9600, 19200, 38400, 57600, 76800, 115200
☐ MS/TP slave (Clause 9), baud rate(s): _____
☐ Point-To-Point, EIA 232 (Clause 10), baud rate(s):_____
☐ Point-To-Point, modem, (Clause 10), baud rate(s): _____
☐ LonTalk, (Clause 11), medium: _____
☐ Other: _____

Device Address Binding:

Is static device binding supported? (This is currently necessary for two-way communication with MS/TP slaves and certain other devices.) ☐Yes ☒ No

Networking Options:

☐ Router, Clause 6 - List all routing configurations, e.g., ARCNET-Ethernet, Ethernet-MS/TP, etc.
☐ Annex H, BACnet Tunnelling Router over IP
☐ BACnet/IP Broadcast Management Device (BBMD)
Does the BBMD support registrations by Foreign Devices? ☐ Yes ☐ No

Character Sets Supported:

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

☒ ISO 10646 (UTF-8)	☐ IBM™/Microsoft™ DBCS	☐ ISO 8859-1
☐ ISO 10646 (UCS-2)	☐ ISO 10646 (UCS-4)	☐ JIS C 6226