

## BACnet Protocol Implementation Conformance Statement

**Date:** 10/21/2014

**Vendor Name:** The S4 Group, Inc.

**Product Name:** S4 Open: BACnet-N2 Router

**Product Model Number:** -16, -32, -64, -128, or -256

**Application Software Version:** 1.21 **Firmware Revision:** 2817 **BACnet Protocol Revision:** 2012

### Product Description:

The S4 Open: BACnet-N2 Router acts as a gateway between the Johnson Controls Metasys® N2 based systems and BACnet applications or devices. The function of the product is to enhance legacy Metasys® Building Automation Systems by enabling them to participate in BACnet open system interfaces, allowing them to become part of best in breed building automation, asset management, continuous commissioning, analytics, energy monitoring and control, and other value added solutions.

BACnet-N2 Routers Auto Discover and Auto Configure all devices on a Metasys® N2 bus. The BAS application loaded into each N2 device is identified and appropriate points lists assigned and published to BACnet. Multiple N2 buses are supported and duplicate N2 addresses automatically translated to unique addresses by the Configure Wizard.

All variations of the N2 protocol and all families of N2 products are supported including N2 Open, System-91, VMA, and Metasys® Compatible 3rd party (VND) devices. BACnet applications and devices can co-exist with the Metasys® legacy supervisory controller and operator workstation of any generation as long as it supports the N2 field bus.

All basic N2 point operations are supported including N2 Read, N2 Write, N2 Override, and N2 Release.

Product brochures, white papers, and Quick Start Guides provide more details at <http://www.thes4group.com>.

### BACnet Standardized Device Profile (Annex L):

- BACnet Operator Workstation (B-OWS)
- BACnet Advanced Operator Workstation (B-AWS)
- BACnet Operator Display (B-OD)
- 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)

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

BACnet Interoperability Building Block Supported	Reference	Initiate	Execute
<b>Data Sharing</b>			
ReadProperty-A (DS-RP-A)	K.1.1	<input type="checkbox"/>	<input type="checkbox"/>
ReadProperty-B (DS-RP-B)	K.1.2	<input type="checkbox"/>	<input checked="" type="checkbox"/>

<b>BACnet Interoperability Building Block Supported</b>	<b>Reference</b>	<b>Initiate</b>	<b>Execute</b>
<b>Data Sharing</b>			
ReadPropertyMultiple-A (DS-RPM-A)	K.1.3	<input type="checkbox"/>	<input type="checkbox"/>
ReadPropertyMultiple-B (DS-RPM-B)	K.1.4	<input type="checkbox"/>	<input checked="" type="checkbox"/>
WriteProperty-A (DS-WP-A)	K.1.7	<input type="checkbox"/>	<input type="checkbox"/>
WriteProperty-B (DS-WP-B)	K.1.8	<input type="checkbox"/>	<input checked="" type="checkbox"/>
WritePropertyMultiple-A (DS-WPM-A) ?	K.1.9	<input type="checkbox"/>	<input type="checkbox"/>
WritePropertyMultiple-B (DS-WPM-B)	K.1.10	<input type="checkbox"/>	<input checked="" type="checkbox"/>
COV-A (DS-COV-A)	K.1.11		
SubscribeCOV		<input type="checkbox"/>	<input type="checkbox"/>
ConfirmedCOVNotification		<input type="checkbox"/>	<input type="checkbox"/>
UnconfirmedCOVNotification		<input type="checkbox"/>	<input type="checkbox"/>
COV-B (DS-COV-B)	K.1.12		
SubscribeCOV		<input type="checkbox"/>	<input checked="" type="checkbox"/>
ConfirmedCOVNotification		<input type="checkbox"/>	<input type="checkbox"/>
UnconfirmedCOVNotification		<input type="checkbox"/>	<input checked="" type="checkbox"/>
COVP-A (DS-COVP-A) ?	K.1.13		
SubscribeCOV		<input type="checkbox"/>	<input type="checkbox"/>
ConfirmedCOVNotification		<input type="checkbox"/>	<input type="checkbox"/>
UnconfirmedCOVNotification		<input type="checkbox"/>	<input type="checkbox"/>
COVP-B (DS-COVP-B) ?	K.1.14		
SubscribeCOV		<input type="checkbox"/>	<input checked="" type="checkbox"/>
ConfirmedCOVNotification		<input type="checkbox"/>	<input type="checkbox"/>
UnconfirmedCOVNotification		<input type="checkbox"/>	<input checked="" type="checkbox"/>
COV-Unsubscribed-A (DS-COVU-A)	K.1.15	<input type="checkbox"/>	<input type="checkbox"/>
COV-Unsubscribed-B (DS-COVU-B)	K.1.16	<input type="checkbox"/>	<input checked="" type="checkbox"/>
View-A (DS-V-A)	K.1.17	<input type="checkbox"/>	<input type="checkbox"/>
Advanced View-A (DS-AV-A)	K.1.18	<input type="checkbox"/>	<input type="checkbox"/>
Modify-A (DS-M-A)	K.1.19	<input type="checkbox"/>	<input type="checkbox"/>
Advanced Modify-A (DS-AM-A)	K.1.20	<input type="checkbox"/>	<input type="checkbox"/>
WriteGroup-A (DS-WG-A)	K.1.21	<input type="checkbox"/>	<input type="checkbox"/>
WriteGroup-Internal-B (DS-WG-I-B)	K.1.22	<input type="checkbox"/>	<input type="checkbox"/>
WriteGroup-External-B (DS-WG-I-B)	K.1.23		
WriteGroup		<input type="checkbox"/>	<input type="checkbox"/>
WriteProperty		<input type="checkbox"/>	<input type="checkbox"/>

<b>BACnet Interoperability Building Block Supported</b>	<b>Reference</b>	<b>Initiate</b>	<b>Execute</b>
<b>Alarm and Event Management</b>			
Notification-A (AE-N-A)	K.2.1		
ConfirmedEventNotification		<input type="checkbox"/>	<input type="checkbox"/>

BACnet Interoperability Building Block Supported Alarm and Event Management	Reference	Initiate	Execute
UnconfirmedEventNotification		<input type="checkbox"/>	<input type="checkbox"/>
Notification Internal-B (AE-N-I-B)	K.2.2		
ConfirmedEventNotification		<input type="checkbox"/>	<input type="checkbox"/>
UnconfirmedEventNotification		<input type="checkbox"/>	<input type="checkbox"/>
Notification External-A (AE-N-E-B)	K.2.3	<input type="checkbox"/>	<input type="checkbox"/>
ACK-A (AE-ACK-A) ☒	K.2.4	<input type="checkbox"/>	<input type="checkbox"/>
ACK-B (AE-ACK-B)	K.2.5	<input type="checkbox"/>	<input type="checkbox"/>
Alarm Summary-A (AE-ASUM-A) ☒	K.2.6	<input type="checkbox"/>	<input type="checkbox"/>
Alarm Summary-B (AE-ASUM-B)	K.2.7	<input type="checkbox"/>	<input type="checkbox"/>
Enrollment Summary-A (AE-ESUM-A) ☒	K.2.8	<input type="checkbox"/>	<input type="checkbox"/>
Enrollment Summary-B (AE-ESUM-B)	K.2.9	<input type="checkbox"/>	<input type="checkbox"/>
Information-A (AE-INFO-A) ☒	K.2.10	<input type="checkbox"/>	<input type="checkbox"/>
Information-B (AE-INFO-B)	K.2.11	<input type="checkbox"/>	<input type="checkbox"/>
LifeSafety-A (AE-LS-A) ☒	K.2.12		
LifeSafetyOperation		<input type="checkbox"/>	<input type="checkbox"/>
ConfirmedEventNotification		<input type="checkbox"/>	<input type="checkbox"/>
UnconfirmedEventNotification		<input type="checkbox"/>	<input type="checkbox"/>
AcknowledgeAlarm		<input type="checkbox"/>	<input type="checkbox"/>
LifeSafety-B (AE-LS-B) ☒	K.2.13		
LifeSafetyOperation		<input type="checkbox"/>	<input type="checkbox"/>
ConfirmedEventNotification		<input type="checkbox"/>	<input type="checkbox"/>
UnconfirmedEventNotification		<input type="checkbox"/>	<input type="checkbox"/>
View Notifications-A (AE-VN-A)	K.2.14		
ConfirmedEventNotification		<input type="checkbox"/>	<input type="checkbox"/>
UnconfirmedEventNotification		<input type="checkbox"/>	<input type="checkbox"/>
Advanced View Notifications-A (AE-AVN-A)	K.2.15		
ConfirmedEventNotification		<input type="checkbox"/>	<input type="checkbox"/>
UnconfirmedEventNotification		<input type="checkbox"/>	<input type="checkbox"/>
View and Modify-A (AE-VM-A)	K.2.16		
ReadProperty		<input type="checkbox"/>	<input type="checkbox"/>
WriteProperty		<input type="checkbox"/>	<input type="checkbox"/>
Advanced View and Modify-A (AE-AVM-A)	K.2.17		


BACnet Interoperability Building Block Supported Alarm and Event Management	Reference	Initiate	Execute
CreateObject		<input type="checkbox"/>	<input type="checkbox"/>
DeleteObject		<input type="checkbox"/>	<input type="checkbox"/>
ReadProperty		<input type="checkbox"/>	<input type="checkbox"/>
WriteProperty		<input type="checkbox"/>	<input type="checkbox"/>
Alarm Summary View-A (AE-AS-A)	K.2.18		
GetEventInformation		<input type="checkbox"/>	<input type="checkbox"/>
GetEnrollmentSummary		<input type="checkbox"/>	<input type="checkbox"/>
GetAlarmSummary		<input type="checkbox"/>	<input type="checkbox"/>
Event Log View (AE-ELV-A)	K.2.19	<input type="checkbox"/>	<input type="checkbox"/>
Event Log View and Modify(AE-ELVM-A)	K.2.20		
ReadRange		<input type="checkbox"/>	<input type="checkbox"/>
ReadProperty		<input type="checkbox"/>	<input type="checkbox"/>
WriteProperty		<input type="checkbox"/>	<input type="checkbox"/>
Event Log – Internal-B (AE-EL-I-B)	K.2.21	<input type="checkbox"/>	<input type="checkbox"/>
Event Log – External-B (AE-EL-E-B)	K.2.22		
Read Range		<input type="checkbox"/>	<input type="checkbox"/>
ConfirmedEventNotification		<input type="checkbox"/>	<input type="checkbox"/>
UnconfirmedEventNotification		<input type="checkbox"/>	<input type="checkbox"/>
Notification Forwarder-B (AE-NF-B)	K.2.23		
ConfirmedEventNotification		<input type="checkbox"/>	<input type="checkbox"/>
UnconfirmedEventNotification		<input type="checkbox"/>	<input type="checkbox"/>
AddListElement			
RemoveListElement			
Notification Forwarder-Internal-B (AE-NF-I-B)	K.2.24		
ConfirmedEventNotification		<input type="checkbox"/>	<input type="checkbox"/>
UnconfirmedEventNotification		<input type="checkbox"/>	<input type="checkbox"/>

BACnet Interoperability Building Block Supported Alarm and Event Management	Reference	Initiate	Execute
AddListElement		<input type="checkbox"/>	<input type="checkbox"/>
RemoveListElement		<input type="checkbox"/>	<input type="checkbox"/>

BACnet Interoperability Building Block Supported Scheduling	Reference	Initiate	Execute
Internal-B (SCHED-I-B)	K.3.2	<input type="checkbox"/>	<input type="checkbox"/>
External-A (SCHED-E-B)	K.3.3	<input type="checkbox"/>	<input type="checkbox"/>
Readonly-B (SCHED-R-B)	K.3.4	<input type="checkbox"/>	<input type="checkbox"/>
Advanced View and Modify-A (SCHED-AVM-A)	K.3.5		
CreateObject		<input type="checkbox"/>	<input type="checkbox"/>
DeleteObject		<input type="checkbox"/>	<input type="checkbox"/>
ReadProperty		<input type="checkbox"/>	<input type="checkbox"/>
WriteProperty		<input type="checkbox"/>	<input type="checkbox"/>
View and Modify-A (SCHED-VM-A)	K.3.6		
ReadProperty		<input type="checkbox"/>	<input type="checkbox"/>
WriteProperty		<input type="checkbox"/>	<input type="checkbox"/>
Weekly Schedule-A (SCHED-WS-A)	K.3.7		
ReadProperty		<input type="checkbox"/>	<input type="checkbox"/>
WriteProperty		<input type="checkbox"/>	<input type="checkbox"/>
Weekly Schedule Internal-B (CHED-WS-I-B)	K.3.8		
ReadProperty		<input type="checkbox"/>	<input type="checkbox"/>
WriteProperty		<input type="checkbox"/>	<input type="checkbox"/>
TimeSynchronization		<input type="checkbox"/>	<input type="checkbox"/>
UTCTimeSynchronization		<input type="checkbox"/>	<input type="checkbox"/>

BACnet Interoperability Building Block Supported Trending	Reference	Initiate	Execute
Viewing and Modifying Trends-A (T-VMT-A) <sup>2</sup>	K.4.1	<input type="checkbox"/>	<input type="checkbox"/>
Viewing and Modifying Trends-Internal-B (T-VMT-I-B)	K.4.2	<input type="checkbox"/>	<input type="checkbox"/>
Viewing and Modifying Trends-External-B (T-VMT-E-B)	K.4.3	<input type="checkbox"/>	<input type="checkbox"/>
Automated Trend Retrieval-A (T-ATR-A) <sup>2</sup>	K.4.4		
ConfirmedEventNotification		<input type="checkbox"/>	<input type="checkbox"/>
UnconfirmedEventNotification		<input type="checkbox"/>	<input type="checkbox"/>
ReadRange		<input type="checkbox"/>	<input type="checkbox"/>
Automated Trend Retrieval-B (T-ATR-B)	K.4.5		
ConfirmedEventNotification		<input type="checkbox"/>	<input type="checkbox"/>
UnconfirmedEventNotification		<input type="checkbox"/>	<input type="checkbox"/>

BACnet Interoperability Building Block Supported	Reference	Initiate	Execute
<b>Trending</b>			
ReadRange		<input type="checkbox"/>	<input type="checkbox"/>
Viewing and Modifying Multiple Values-A (T-VMMV-A)	K.4.6	<input type="checkbox"/>	<input type="checkbox"/>
Viewing and Modifying Multiple Values Internal-B (T-VMMV-A)	K.4.7	<input type="checkbox"/>	<input type="checkbox"/>
Viewing and Modifying Multiple Values External-B (T-VMMV-E-B)	K.4.8	<input type="checkbox"/>	<input type="checkbox"/>
Automated Multiple Value Retrieval-A (T-AMVR-A)	K.4.9		
ConfirmedEventNotification		<input type="checkbox"/>	<input type="checkbox"/>
UnconfirmedEventNotification		<input type="checkbox"/>	<input type="checkbox"/>
ReadRange		<input type="checkbox"/>	<input type="checkbox"/>
Automated Multiple Value Retrieval-B (T-AMVR-B)	K.4.10		
ConfirmedEventNotification		<input type="checkbox"/>	<input type="checkbox"/>
UnconfirmedEventNotification		<input type="checkbox"/>	<input type="checkbox"/>
ReadRange		<input type="checkbox"/>	<input type="checkbox"/>
Trending View-A (T-V-A)	K.4.11	<input type="checkbox"/>	<input type="checkbox"/>
Advanced View and Modify-A (T-AVM-A)	K.4.12		
CreateObject		<input type="checkbox"/>	<input type="checkbox"/>
DeleteObject		<input type="checkbox"/>	<input type="checkbox"/>
ReadProperty		<input type="checkbox"/>	<input type="checkbox"/>
ReadRange		<input type="checkbox"/>	<input type="checkbox"/>
WriteProperty		<input type="checkbox"/>	<input type="checkbox"/>
Archival (T-A-A)	K.4.13	<input type="checkbox"/>	<input type="checkbox"/>

BACnet Interoperability Building Block Supported	Reference	Initiate	Execute
<b>Device and Network Management</b>			
Dynamic Device Binding-A (DM-DDB-A)	K.5.1		
Who-Is		<input type="checkbox"/>	<input type="checkbox"/>
I-Am		<input type="checkbox"/>	<input type="checkbox"/>
Dynamic Device Binding-B (DM-DDB-B)	K.5.2		
Who-Is		<input type="checkbox"/>	<input checked="" type="checkbox"/>
I-Am		<input checked="" type="checkbox"/>	<input type="checkbox"/>
Dynamic Object Binding-A (DM-DOB-A)	K.5.3		
Who-Has		<input type="checkbox"/>	<input type="checkbox"/>
I-Have		<input type="checkbox"/>	<input type="checkbox"/>
Dynamic Object Binding-B (DM-DOB-B)	K.5.4		
Who-Has		<input type="checkbox"/>	<input type="checkbox"/>
I-Have		<input type="checkbox"/>	<input type="checkbox"/>
DeviceCommunicationControl-A (DM-DCC-A) 	K.5.5	<input type="checkbox"/>	<input type="checkbox"/>

BACnet Interoperability Building Block Supported Device and Network Management	Reference	Initiate	Execute
DeviceCommunicationControl-B (DM-DCC-B)	K.5.6	<input type="checkbox"/>	<input type="checkbox"/>
Text Message-A (DM-TM-A)	K.5.9		
ConfirmedTextMessage		<input type="checkbox"/>	<input type="checkbox"/>
UnconfirmedTextMessage		<input type="checkbox"/>	<input type="checkbox"/>
Text Message-B (DM-TM-B) ☒	K.5.10		
ConfirmedTextMessage		<input type="checkbox"/>	<input type="checkbox"/>
UnconfirmedTextMessage		<input type="checkbox"/>	<input type="checkbox"/>
TimeSynchronization-A (DM-TS-A)	K.5.11	<input type="checkbox"/>	<input type="checkbox"/>
TimeSynchronization-B (DM-TS-B)	K.5.12	<input type="checkbox"/>	<input type="checkbox"/>
UTCTimeSynchronization-A (DM-UTC-A)	K.5.13	<input type="checkbox"/>	<input type="checkbox"/>
UTCTimeSynchronization-B (DM-UTC-B)	K.5.14	<input type="checkbox"/>	<input type="checkbox"/>
ReinitializeDevice-A (DM-RD-A) ☒	K.5.15	<input type="checkbox"/>	<input type="checkbox"/>
ReinitializeDevice-B (DM-RD-B)	K.5.16	<input type="checkbox"/>	<input type="checkbox"/>
Backup and Restore-A (DM-BR-A) ☒	K.5.17		
AtomicReadFile		<input type="checkbox"/>	<input type="checkbox"/>
AtomicWriteFile		<input type="checkbox"/>	<input type="checkbox"/>
CreateObject		<input type="checkbox"/>	<input type="checkbox"/>
ReinitializeDevice		<input type="checkbox"/>	<input type="checkbox"/>
Backup and Restore-B (DM-BR-B)	K.5.18		
AtomicReadFile		<input type="checkbox"/>	<input type="checkbox"/>
AtomicWriteFile		<input type="checkbox"/>	<input type="checkbox"/>
ReinitializeDevice		<input type="checkbox"/>	<input type="checkbox"/>
Restart-A (DM-R-A)	K.5.19	<input type="checkbox"/>	<input type="checkbox"/>
Restart-B (DM-R-B)	K.5.20	<input type="checkbox"/>	<input type="checkbox"/>
List Manipulation-A (DM-LM-A) ☒	K.5.21		
AddListElement		<input type="checkbox"/>	<input type="checkbox"/>
RemoveListElement		<input type="checkbox"/>	<input type="checkbox"/>
List Manipulation-B (DM-LM-B) ☒	K.5.22		
AddListElement		<input type="checkbox"/>	<input type="checkbox"/>
RemoveListElement		<input type="checkbox"/>	<input type="checkbox"/>
Object Creation and Deletion-A (DM-OCD-A) ☒	K.5.23		
CreateObject		<input type="checkbox"/>	<input type="checkbox"/>
DeleteObject		<input type="checkbox"/>	<input type="checkbox"/>
Object Creation and Deletion-B (DM-OCD-B)	K.5.24		
CreateObject		<input type="checkbox"/>	<input checked="" type="checkbox"/>
DeleteObject		<input type="checkbox"/>	<input checked="" type="checkbox"/>
Virtual Terminal-A (DM-VT-A) ☒	K.5.25		

BACnet Interoperability Building Block Supported Device and Network Management	Reference	Initiate	Execute
VT-Open		<input type="checkbox"/>	<input type="checkbox"/>
VT-Close		<input type="checkbox"/>	<input type="checkbox"/>
VT-Data		<input type="checkbox"/>	<input type="checkbox"/>
Virtual Terminal-B (DM-VT-B) <sup>2</sup>	K.5.26		
VT-Open		<input type="checkbox"/>	<input type="checkbox"/>
VT-Close		<input type="checkbox"/>	<input type="checkbox"/>
VT-Data		<input type="checkbox"/>	<input type="checkbox"/>
Connection Establishment-A (NM-CE-A)	K.5.27		
Establish-Connection-To-Network		<input type="checkbox"/>	<input type="checkbox"/>
Disconnect-Connection-To-Network		<input type="checkbox"/>	<input type="checkbox"/>
Connection Establishment-B (NM-CE-B)	K.5.28		
Establish-Connection-To-Network		<input type="checkbox"/>	<input type="checkbox"/>
Disconnect-Connection-To-Network		<input type="checkbox"/>	<input type="checkbox"/>
Router Configuration-A (NM-RC-A) <sup>2</sup>	K.5.29		
Who-Is-Router-To-Network		<input type="checkbox"/>	<input type="checkbox"/>
I-Am-Router-To-Network		<input type="checkbox"/>	<input type="checkbox"/>
I-Could-Be-Router-To-Network		<input type="checkbox"/>	<input type="checkbox"/>
Initialize-Routing-Table		<input type="checkbox"/>	<input type="checkbox"/>
Initialize-Routing-Table-Ack		<input type="checkbox"/>	<input type="checkbox"/>
Router Configuration-B (NM-RC-B) <sup>2</sup>	K.5.30		
Who-Is-Router-To-Network		<input type="checkbox"/>	<input checked="" type="checkbox"/>
I-Am-Router-To-Network		<input checked="" type="checkbox"/>	<input type="checkbox"/>
Initialize-Routing-Table		<input type="checkbox"/>	<input type="checkbox"/>
Initialize-Routing-Table-Ack		<input type="checkbox"/>	<input type="checkbox"/>
Automatic Network Mapping-A (DM-ANM-A)	K.5.31	<input type="checkbox"/>	<input type="checkbox"/>
Automatic Network Mapping-B (DM-ANM-B)	K.5.32	<input type="checkbox"/>	<input type="checkbox"/>
Automatic Time Synchronization-A (DM-ATS-A)	K.5.33		
TimeSynchronization		<input type="checkbox"/>	<input type="checkbox"/>
UTCTimeSynchronization		<input type="checkbox"/>	<input type="checkbox"/>
Manual Time Synchronization-A (DM-MTS-A)	K.5.34		
TimeSynchronization		<input type="checkbox"/>	<input type="checkbox"/>
UTCTimeSynchronization		<input type="checkbox"/>	<input type="checkbox"/>

BACnet Interoperability Building Block Supported Network Security	Reference	Initiate	Execute
Secure Device (NS-SD)	K.5.35.1		
Challenge-Request		<input type="checkbox"/>	<input type="checkbox"/>
Security-Payload		<input type="checkbox"/>	<input type="checkbox"/>



BACnet Interoperability Building Block Supported Network Security	Reference	Initiate	Execute
Security-Response		<input type="checkbox"/>	<input type="checkbox"/>
Request-Key-Update		<input type="checkbox"/>	<input type="checkbox"/>
Update-Key-Set		<input type="checkbox"/>	<input type="checkbox"/>
Update-Distribution-Key		<input type="checkbox"/>	<input type="checkbox"/>
What-Is-Network-Number		<input type="checkbox"/>	<input type="checkbox"/>
Network-Number-Is		<input type="checkbox"/>	<input type="checkbox"/>
Encrypted Device (NS-ED)	K.5.35.2	<input type="checkbox"/>	<input type="checkbox"/>
Multi-Application Device (NS-MAD)	K.5.35.3	<input type="checkbox"/>	<input type="checkbox"/>
Device Master Key-A (NS-DMK-A)	K.5.35.4		
Request-Master-Key		<input type="checkbox"/>	<input type="checkbox"/>
Set-Master-Key		<input type="checkbox"/>	<input type="checkbox"/>
Device Master Key-B (NS-DMK-B)	K.5.35.5		
Request-Master-Key		<input type="checkbox"/>	<input type="checkbox"/>
Set-Master-Key		<input type="checkbox"/>	<input type="checkbox"/>
Key Server (NS-KS)	K.5.35.6		
Request-Key-Update		<input type="checkbox"/>	<input type="checkbox"/>
Update-Key-Set		<input type="checkbox"/>	<input type="checkbox"/>
Update-Distribution-Key		<input type="checkbox"/>	<input type="checkbox"/>
Request-Master-Key		<input type="checkbox"/>	<input type="checkbox"/>
Set-Master-Key		<input type="checkbox"/>	<input type="checkbox"/>
Temporary Key Server (NS-TKS)	K.5.35.7		
Request-Key-Update		<input type="checkbox"/>	<input type="checkbox"/>
Update-Key-Set		<input type="checkbox"/>	<input type="checkbox"/>
Update-Distribution-Key		<input type="checkbox"/>	<input type="checkbox"/>
Request-Master-Key		<input type="checkbox"/>	<input type="checkbox"/>
Set-Master-Key		<input type="checkbox"/>	<input type="checkbox"/>
Secure Router (NS-SR)	K.5.35.8	<input type="checkbox"/>	<input type="checkbox"/>
Security Proxy (NS-SP)	K.5.35.9	<input type="checkbox"/>	<input type="checkbox"/>

### Segmentation Capability:

- Able to transmit segmented messages Window Size 1024
- Able to receive segmented messages Window Size 1024

### Standard Object Types Supported:

STANDARD OBJECT	SUPPORTED	CREATE OBJECT	DELETE OBJECT	OPTIONAL PROPERTIES	WRITEABLE	PROPRIETARY	RANGE REASTRICTIONS	COMMENTS
Device Object	X	Yes	Yes		Yes	No		
Analog Input	X	Yes	Yes		Yes	No		
Analog Output	X	Yes	Yes		Yes	No		
Analog Value	X	Yes	Yes		Yes	No		
Binary Input	X	Yes	Yes		Yes	No		

## Protocol Implementation Conformance Statement

Binary Output	X	Yes	Yes		Yes	No		
Binary Value	X	Yes	Yes		Yes	No		
Multi State Input Object	X	Yes	Yes		Yes	No		
Multi State Output	X	Yes	Yes		Yes	No		
Multi State Value	X	Yes	Yes		Yes	No		
Notification Class Object	X	Yes	Yes		Yes	No		

### Data Link Layer Options:

- BACnet IP, (Annex J)
- BACnet IP, (Annex J), Foreign Device
- ISO 8802-3, Ethernet (Clause 7)
- ATA 878.1, 2.5 Mb. ARCNET (Clause 8)
- ATA 878.1, EIA-485 ARCNET (Clause 8), baud rate(s) \_\_\_\_\_
- MS/TP master (Clause 9), baud rate(s): \_\_\_\_\_
- 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: \_\_\_\_\_
- BACnet/ZigBee (ANNEX O)
- 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.  
The S4 Open: BACnet-N2 Router acts as a gateway between the proprietary Johnson Controls Metasys® N2 field bus protocol and BACnet. See related Gateway notes below.
- Annex H, BACnet Tunneling Router over IP
- BACnet/IP Broadcast Management Device (BBMD)
  - Does the BBMD support registrations by Foreign Devices?  Yes  No
  - Does the BBMD support network address translation?  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 X 0208

### If this product is a communication gateway, describe the types of non-BACnet equipment/networks(s) that the gateway supports:

The S4 Open: BACnet-N2 Router acts as a gateway between the proprietary Johnson Controls Metasys® N2 field bus protocol and BACnet. Today, the product supports the spirit addendum Add-135-2010a1.

### Protocol Implementation Conformance Statement

The S4 Open: BACnet-N2 Router itself sits on the primary enterprise backbone and is assigned a BACnet network number and Device ID by the integrator. The only object published from the BACnet N2 Router is its device object.

The S4 Open: BACnet-N2 Router hosts a virtual BACnet network which the integrator assigns a unique BACnet network number. Each discovered N2 device is published as a virtual BACnet device with the same device characteristics as the BACnet-N2 Router. The BACnet Device ID for each virtual device is derived from its native N2 address.

The S4 Open: BACnet-N2 Router enables co-existence with the Metasys® supervisory controller and operator workstation. The supervisory controller N2 transactions can participate in the BACnet priority array mechanism.

Visit <http://www.thes4group.com> for more details about features and options.

#### Network Security Options:

- Non-secure Device - is capable of operating without BACnet Network Security
- Secure Device - is capable of using BACnet Network Security (NS-SD BIBB)
  - Multiple Application-Specific Keys:
  - Supports encryption (NS-ED BIBB)
  - Key Server (NS-KS BIBB)