SIEMENS

Desigo™ V6.1
BACnet Protocol Implementation Conformance Statement (PICS)
Basic documentation

CM110665en_11
2017-05-01

Building Technologies

Contents

1	**Desigo PX Automation Station**	**4**
1.1	Product model number	4
1.2	Product description	5
1.3	BACnet standardized device profile (Annex L)	5
1.4	BACnet interoperability building blocks supported (Annex K)	6
1.5	Standard object types supported	9
1.6	Segmentation capability	32
1.7	Data Link Layer options	32
1.8	Device address binding	32
1.9	Networking options	32
1.10	Character sets supported	33
2	**Desigo PXC3 and DXR2 Automation Stations**	**34**
2.1	Product model number	34
2.2	Product description	34
2.3	BACnet standardized device profile (Annex L)	34
2.4	BACnet standardized device profile (Annex L)	35
2.5	BACnet interoperability building blocks supported (Annex K)	36
2.6	Standard object types supported	39
2.7	Segmentation capability	58
2.8	Data Link Layer options	58
2.9	Device address binding	58
2.10	Networking options	59
2.11	Character sets supported	59
3	**Desigo CC Workstation**	**60**
3.1	Product description	60
3.2	BACnet standardized device profile (Annex L)	60
3.3	BACnet interoperability building blocks supported (Annex K)	61
3.4	Standard object types supported	64
3.5	Client supported object types	66
3.6	Segmentation capability	68
3.7	Data Link Layer options	68
3.8	Device address binding	68
3.9	Networking options	68
3.10	Character sets supported	68
4	**Desigo Insight Workstation**	**69**
4.1	Product description	69
4.2	BACnet standardized device profile (Annex L)	69
4.3	BACnet interoperability building blocks supported (Annex K)	70
4.4	Standard object types supported	73
4.5	Client supported object types	75
4.6	Segmentation capability	77
4.7	Data Link Layer options	77
4.8	Device address binding	77

4.9 Networking options 77
4.10 Character sets supported 77
5 Desigo PXM20 Operator Unit 78
5.1 Product description 78
5.2 BACnet standardized device profile (Annex L) 78
5.3 BACnet interoperability building blocks supported (Annex K) 79
5.4 Standard object types supported 82
5.5 Client supported object types 86
5.6 Segmentation capability 88
5.7 Data Link Layer options 88
5.8 Device address binding 88
5.9 Networking options 88
5.10 Character sets supported 88
6 Desigo PXG3.M BACnet Router 89
6.1 Product description 89
6.2 BACnet standardized device profile (Annex L) 89
6.3 BACnet interoperability building blocks supported (Annex K) 90
6.4 Standard object types supported 93
6.5 Segmentation capability 97
6.6 Data Link Layer options 97
6.7 Device address binding 97
6.8 Networking options 97
6.9 Character sets supported 97
7 Desigo PXG3.L BACnet Router 98
7.1 Product description 98
7.2 BACnet standardized device profile (Annex L) 98
7.3 BACnet interoperability building blocks supported (Annex K) 99
7.4 Standard object types supported 102
7.5 Segmentation capability 105
7.6 Data Link Layer options 105
7.7 Device address binding 105
7.8 Networking options 105
7.9 Character sets supported 105
8 SX Open 106
8.1 Product description 106
8.2 BACnet standardized device profile (Annex L) 106
8.3 BACnet interoperability building blocks supported (Annex K) 107
8.4 Standard object types supported 110
8.5 Segmentation capability 125
8.6 Data Link Layer options 125
8.7 Device address binding 125
8.8 Networking options 125
8.9 Character sets supported 125

1 Desigo PX Automation Station

Date	: 24.2.2017
Vendor name	: Siemens Building Technologies (Vendor ID 7)
Product name	: Desigo PX automation station
Product model number	: PX… (see table below)
BACnet protocol version	: 1.12
Application software version	–
Firmware revision	: FW=V6

1.1 Product model number

The Desigo PX automation station is a range of products based on the same software. The PICS are the same for all products listed below. The simultaneously supported Data Link Layers of a product are different and also listed.

Product	Description	Data Link Layer
PXC00.D	Modular automation station	LON
PXC00-E.D	Modular automation station	IP
PXC50.D	Modular automation station	LON
PXC50-E.D	Modular automation station	IP
PXC100.D	Modular automation station	LON
PXC100-E.D	Modular automation station	IP
PXC200.D	Modular automation station	LON
PXC200-E.D	Modular automation station	IP
PXC12.D	Compact automation station	LON
PXC12-E.D	Compact automation station	IP
PXC12-T.D	Compact automation station	LON, PTP
PXC22.D	Compact automation station	LON
PXC22.1.D	Compact automation station	LON
PXC22-E.D	Compact automation station	IP
PXC22.1-E.D	Compact automation station	IP
PXC22-T.D	Compact automation station	LON, PTP
PXC36.D	Compact automation station	LON
PXC36.1.D	Compact automation station	LON
PXC36-E.D	Compact automation station	IP
PXC36.1-E.D	Compact automation station	IP
PXC22-E.D	Compact automation station	IP
PXC22-T.D	Compact automation station	LON, PTP
PXC36.D	Compact automation station	LON
PXC36-E.D	Compact automation station	IP
PXC36-T.D	Compact automation station	LON, PTP
PXC52	Compact automation station	LON
PXC-NRUF	Compact automation station	LON
PXC00-U	Modular automation station	LON/IP[1)], PTP[2)]
PXC64-U	Modular automation station	LON/IP[1)], PTP[2)]
PXC128-U	Modular automation station	LON/IP[1)], PTP[2)]
PXC001.D	Compact automation station	LON
PXC001-E.D	Compact automation station	IP

[1)] Only LON or IP possible; depends on configuration and extension modules.

[2)] Additional PTP for half-router function possible; depends on configuration and extension modules.

1.2 Product description

The Desigo PXC is a freely configurable process unit with focus on HVAC. The process unit as a system platform can be used in the Desigo product range as a stand-alone or network device with BACnet communication.

1.3 BACnet standardized device profile (Annex L)

☐	BACnet Advanced Workstation	(B-AWS)
☐	BACnet Operator Workstation	(B-OWS)
☐	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)

1.4 BACnet interoperability building blocks supported (Annex K)

Data sharing

☒	Data Sharing – Read Property-A	DS-RP-A
☒	Data Sharing – Read Property-B	DS-RP-B
☒	Data Sharing – Read Property Multiple-A	DS-RPM-A
☒	Data Sharing – Read Property Multiple-B	DS-RPM-B
☒	Data Sharing – Write Property-A	DS-WP-A
☒	Data Sharing – Write Property-B	DS-WP-B
☐	Data Sharing – Write Property Multiple-A	DS-WPM-A
☒	Data Sharing – Write Property Multiple-B	DS-WPM-B
☒	Data Sharing – Change of Value -A	DS-COV-A
☒	Data Sharing – Change of Value -B	DS-COV-B
☒	Data Sharing – Change of Value Property -A	DS-COVP-A
☒	Data Sharing – Change of Value Property -B	DS-COVP-B
☐	Data Sharing – Change of Value-Unsolicited-A	DS-COVU-A
☐	Data Sharing – Change of Value-Unsolicited-B	DS-COVU-B
☐	Data Sharing – View-A	DS-V-A
☐	Data Sharing – Advanced View-A	DS-AV-A
☐	Data Sharing – Modify-A	DS-M-A
☐	Data Sharing – Advanced Modify-A	DS-AM-A

Alarm and event management

☐	Alarm and Event – Notification-A	AE-N-A
☒	Alarm and Event – Notification Internal-B	AE-N-I-B
☒	Alarm and Event – Notification External-B	AE-N-E-B
☐	Alarm and Event – ACK-A	AE-ACK-A
☒	Alarm and Event – ACK-B	AE-ACK-B
☒	Alarm and Event – Alarm Summary-B	AE-ASUM-B
☒	Alarm and Event – Enrollment Summary-B	AE-ESUM-B
☒	Alarm and Event – Information-B	AE-INFO-B
☐	Alarm and Event – Life Safety-A	AE-LS-A
☐	Alarm and Event – Life Safety-B	AE-LS-B
☐	Alarm and Event – View Notifications-A	AE-VN-A
☐	Alarm and Event – Advanced View Notifications-A	AE-AVN-A
☐	Alarm and Event – View and Modify-A	AE-VM-A
☐	Alarm and Event – Advanced View and Modify-A	AE-AVM-A
☐	Alarm and Event – Alarm Summary View-A	AE-AS-A
☐	Alarm and Event – Event Log View-A	AE-ELV-A
☐	Alarm and Event – Event Log View and Modify-A	AE-ELVM-A
☒	Alarm and Event – Event Log Internal-B	AE-EL-I-B
☒	Alarm and Event – Event Log External-B	AE-EL-E-B

Historical/Deprecated BIBBs

Alarm and event management	☐	Alarm and Event – Alarm Summary-A	AE-ASUM-A
	☐	Alarm and Event – Enrollment Summary-A	AE-ESUM-A
	☐	Alarm and Event – Information-A	AE-INFO-A

Scheduling	☒	Scheduling – Internal-B	SCHED-I-B
	☒	Scheduling – External-B	SCHED-E-B
	☐	Scheduling – Advanced View Modify-A	SCHED-AVM-A
	☐	Scheduling – View Modify-A	SCHED-VM-A
	☐	Scheduling – Weekly Schedule-A	SCHED-WS-A
	☐	Scheduling – Weekly Schedule Internal-B	SCHED-WS-I-B
	☐	Scheduling – Readable-B	SCHED-R-B

Historical/Deprecated BIBBs

	☐	Scheduling – A	SCHED-A

Trending	☐	Trending – Viewing and Modifying Trends-A	T-VMT-A
	☒	Trending – Viewing and Modifying Internal-B	T-VMT-I-B
	☒	Trending – Viewing and Modifying External-B	T-VMT-E-B
	☐	Trending – Viewing and Modifying Multiple Values-A	T-VMMV-A
	☒	Trending – Viewing and Modifying Multiple Values Internal-B	T-VMMV-I-B
	☒	Trending – Viewing and Modifying Multiple Values External -B	T-VMMV-E-B
	☐	Trending – Automated Multiple Value Retrieval-A	T-AMVR-A
	☒	Trending – Automated Multiple Value Retrieval-B	T-AMVR-B
	☐	Trending – View-A	T-V-A
	☐	Trending – Advanced View and Modify-A	T-AVM-A
	☐	Trending – Archival-A	T-A-A
	☐	Trending – Automated Trend Retrieval-A	T-ATR-A
	☒	Trending – Automated Trend Retrieval-B	T-ATR-B

Historical/Deprecated BIBBs

	☐	Trending – Viewing and Modifying Trends-A	T-VMT-A
	☐	Trending – Viewing and Modifying Multiple Values-A	T-VMMV-A

Device management	☒	Device Management – Dynamic Device Binding-A	DM-DDB-A
	☒	Device Management – Dynamic Device Binding-B	DM-DDB-B
	☒	Device Management – Dynamic Object Binding-A	DM-DOB-A
	☒	Device Management – Dynamic Object Binding-B	DM-DOB-B
	☐	Device Management – Device Communication Control-A	DM-DCC-A
	☒	Device Management – Device Communication Control-B	DM-DCC-B
	☐	Device Management – Text Message-A	DM-TM-A
	☐	Device Management – Text Message-B	DM-TM-B
	☒	Device Management – Time Synchronization-A	DM-TS-A
	☒	Device Management – Time Synchronization-B	DM-TS-B
	☒	Device Management – UTC Time Synchronization-A	DM-UTC-A
	☒	Device Management – UTC Time Synchronization-B	DM-UTC-B

Device management

☐	Device Management – Reinitialize Device-A	DM-RD-A
☒	Device Management – Reinitialize Device-B	DM-RD-B
☐	Device Management – Backup and Restore-A	DM-BR-A
☒	Device Management – Backup and Restore-B	DM-BR-B
☐	Device Management – Restart-A	DM-R-A
☒	Device Management – Restart-B	DM-R-B
☐	Device Management – List Manipulation-A	DM-LM-A
☒	Device Management – List Manipulation-B	DM-LM-B
☐	Device Management – Object Creation and Deletion-A	DM-OCD-A
☒	Device Management – Object Creation and Deletion-B	DM-OCD-B
☐	Device Management – Virtual Terminal-A	DM-VT-A
☐	Device Management – Virtual Terminal-B	DM-VT-B
☐	Device Management – Automatic Network Mapping-A	DM-ANM-A
☐	Device Management – Automatic Device Mapping-A	DM-ADM-A
☐	Device Management – Automatic Time Synchronization-A	DM-ATS-A
☐	Device Management – Manual Time Synchronization-A	DM-MTS-A

Historical/Deprecated BIBBs

☒	Device Management – Private Transfer-A	DM-PT-A
☒	Device Management – Private Transfer-B	DM-PT-B

Network management

☒	Network Management – Connection Establishment-A	NM-CE-A[1)]
☒	Network Management – Connection Establishment-B	NM-CE-B[2)]
☐	Network Management – Router Configuration-A	NM-RC-A
☐	Network Management – Router Configuration-B	NM-RC-B

[1)] establish connection only

[2)] if product supports PTP

1.5 Standard object types supported

Object type	Supported	Can be created dynamically	Can be deleted dynamically
Analog Input	☒	☐	☐
Analog Output	☒	☐	☐
Analog Value	☒	☐	☐
Binary Input	☒	☐	☐
Binary Output	☒	☐	☐
Binary Value	☒	☐	☐
Calendar	☒	☒	☒
Command	☒	☐	☐
Device	☒	☐	☐
Event Enrollment	☒	☒	☒
File	☒	☐	☐
Group	☐	☐	☐
Loop	☒	☐	☐
Multi-State Input	☒	☐	☐
Multi-State Output	☒	☐	☐
Notification Class	☒	☒	☒
Program	☒	☐	☐
Schedule	☒	☒	☒
Averaging	☐	☐	☐
Multi-State Value	☒	☐	☐
Trend Log	☒	☒	☒
Life-Safety-Point	☐	☐	☐
Life-Safety-Zone	☐	☐	☐
Accumulator	☒	☐	☐
Pulse-Converter	☒	☐	☐
Event Log	☒	☐	☐
Global Group	☐	☐	☐
Trend Log Multiple	☒	☒	☒
Load Control	☒	☐	☐
Structured-View	☒	☐	☐
Access Door	☐	☐	☐
(unassigned)	☐	☐	☐
Access Credential	☐	☐	☐
Access Point	☐	☐	☐
Access Rights	☐	☐	☐
Access User	☐	☐	☐
Access Zone	☐	☐	☐
Credential Data Input	☐	☐	☐
Network Security	☐	☐	☐
Bitstring Value	☐	☐	☐
Characterstring Value	☐	☐	☐

Object type	Supported	Can be created dynamically	Can be deleted dynamically
Date Pattern Value	☐	☐	☐
Date Value	☐	☐	☐
Datetime Pattern Value	☐	☐	☐
Datetime Value	☐	☐	☐
Integer Value	☐	☐	☐
Large Analog Value	☐	☐	☐
Octetstring Value	☐	☐	☐
Positive Integer Value	☐	☐	☐
Time Pattern Value	☐	☐	☐
Time Value	☐	☐	☐

Details

Notes on the specification of the following object types:

Writable properties are read only if they are under program control.

Variants of object types (different set of properties) are possible in the case of value objects (e.g. Analog Value). The variants are distinguished by the object tag. The object tag is listed as additional information in the EDE file.

Analog Input

Properties	supported	Readable/ Writable	Range restrictions
Object_Identifier	☒	R	
Object_Name	☒	R	
Object_Type	☒	R	
Present_Value	☒	R	
Description	☒	W	
Device_Type	☒	R	
Status_Flags	☒	R	
Event_State	☒	R	
Reliability	☒	R	
Out_Of_Service	☒	W	
Update_Interval	☒	R	
Units	☒	R	
Min_Pres_Value	☒	R	
Max_Pres_Value	☒	R	
Resolution	☒	R	
COV_Increment	☒	W	0.000001...3.402822e+038
Time_Delay	☒	W	0…65535
Notification_Class	☒	W	
High_Limit	☒	W	
Low_Limit	☒	W	
Deadband	☒	W	0...maxReal
Limit_Enable	☒	W	
Event_Enable	☒	W	
Acked_Transitions	☒	R	
Notify_Type	☒	W	
Event_Time_Stamps	☒	R	
Profile_Name	☒	R	
Event_Message_Texts	☒	R	

Analog Output

Properties	supported	Readable/ Writable	Range restrictions
Object_Identifier	☒	R	
Object_Name	☒	R	
Object_Type	☒	R	
Present_Value	☒	W	
Description	☒	W	
Device_Type	☒	R	
Status_Flags	☒	R	
Event_State	☒	R	
Reliability	☒	R	
Out_Of_Service	☒	W	
Units	☒	R	
Min_Pres_Value	☒	R	
Max_Pres_Value	☒	R	
Resolution	☒	R	
Priority_Array	☒	R	
Relinquish_Default	☒	W	
COV_Increment	☒	W	0.000001...3.402822e+038
Time_Delay	☒	W	0…65535
Notification_Class	☒	W	
High_Limit	☒	W	
Low_Limit	☒	W	
Deadband	☒	W	0...maxReal
Limit_Enable	☒	W	
Event_Enable	☒	W	
Acked_Transitions	☒	R	
Notify_Type	☒	W	
Event_Time_Stamps	☒	R	
Profile_Name	☒	R	
Event_Message_Texts	☒	R	

Analog Value

Properties	supported	Readable/ Writable	Range restrictions
Object_Identifier	☒	R	
Object_Name	☒	R	
Object_Type	☒	R	
Present_Value	☒	W	
Description	☒	W	
Status_Flags	☒	R	
Event_State	☒	R	
Reliability	☒	R	
Out_Of_Service	☒	W	
Units	☒	R	
Priority_Array	☒	R	
Relinquish_Default	☒	W	
COV_Increment	☒	W	0.000001...3.402822e+038
Time_Delay	☒	W	0…65535
Notification_Class	☒	W	
High_Limit	☒	W	
Low_Limit	☒	W	
Deadband	☒	W	0...maxReal
Limit_Enable	☒	W	
Event_Enable	☒	W	
Acked_Transitions	☒	R	
Notify_Type	☒	W	
Event_Time_Stamps	☒	R	
Profile_Name	☒	R	
Event_Message_Texts	☒	R	

Binary Input

Properties	supported	Readable/ Writable	Range restrictions
Object_Identifier	☒	R	
Object_Name	☒	R	
Object_Type	☒	R	
Present_Value	☒	R	
Description	☒	W	
Device_Type	☒	R	
Status_Flags	☒	R	
Event_State	☒	R	
Reliability	☒	R	
Out_Of_Service	☒	W	
Polarity	☒	W	
Inactive_Text	☒	R	
Active_Text	☒	R	
Change_Of_State_Time	☒	R	
Change_Of_State_Count	☒	W	
Time_Of_State_Count_Reset	☒	R	
Elapsed_Active_Time	☒	W	
Time_Of_Active_Time_Reset	☒	R	
Time_Delay	☒	W	0…65535
Notification_Class	☒	W	
Alarm_Value	☒	W	
Event_Enable	☒	W	
Acked_Transitions	☒	R	
Notify_Type	☒	W	
Event_Time_Stamps	☒	R	
Profile_Name	☒	R	
Event_Message_Texts	☒	R	

Binary Output

Properties	supported	Readable/ Writable	Range restrictions
Object_Identifier	☒	R	
Object_Name	☒	R	
Object_Type	☒	R	
Present_Value	☒	W	
Description	☒	W	
Device_Type	☒	R	
Status_Flags	☒	R	
Event_State	☒	R	
Reliability	☒	R	
Out_Of_Service	☒	W	
Polarity	☒	W	
Inactive_Text	☒	R	
Active_Text	☒	R	
Change_Of_State_Time	☒	R	
Change_Of_State_Count	☒	W	
Time_Of_State_Count_Reset	☒	R	
Elapsed_Active_Time	☒	W	
Time_Of_Active_Time_Reset	☒	R	
Minimum_Off_Time	☒	W	0…65535
Minimum_On_Time	☒	W	0…65535
Priority_Array	☒	R	
Relinquish_Default	☒	W	
Time_Delay	☒	W	0…65535
Notification_Class	☒	W	
Feedback_Value	☒	R	
Event_Enable	☒	W	
Acked_Transitions	☒	R	
Notify_Type	☒	W	
Event_Time_Stamps	☒	R	
Profile_Name	☒	R	
Event_Message_Texts	☒	R	

Binary Value

Properties	supported	Readable/ Writable	Range restrictions
Object_Identifier	☒	R	
Object_Name	☒	R	
Object_Type	☒	R	
Present_Value	☒	W	
Description	☒	W	
Status_Flags	☒	R	
Event_State	☒	R	
Reliability	☒	R	
Out_Of_Service	☒	W	
Inactive_Text	☒	R	
Active_Text	☒	R	
Change_Of_State_Time	☒	R	
Change_Of_State_Count	☒	W	
Time_Of_State_Count_Reset	☒	R	
Elapsed_Active_Time	☒	W	
Time_Of_Active_Time_Reset	☒	R	
Minimum_Off_Time	☒	W	0…65535
Minimum_On_Time	☒	W	0…65535
Priority_Array	☒	R	
Relinquish_Default	☒	W	
Time_Delay	☒	W	0…65535
Notification_Class	☒	W	
Alarm_Value	☒	W	
Event_Enable	☒	W	
Acked_Transitions	☒	R	
Notify_Type	☒	W	
Event_Time_Stamps	☒	R	
Profile_Name	☒	R	
Event_Message_Texts	☒	R	

Calendar

Properties	supported	Readable/ Writable	Range restrictions
Object_Identifier	☒	R	
Object_Name	☒	R	
Object_Type	☒	R	
Description	☒	W	
Present_Value	☒	R	
Date_List	☒	W	Max. 30
Profile_Name	☒	R	

Command

Properties	supported	Readable/ Writable	Range restrictions
Object_Identifier	☒	R	
Object_Name	☒	R	
Object_Type	☒	R	
Description	☒	W	
Present_Value	☒	W	0…15
In_Process	☒	R	
All_Writes_Successful	☒	R	
Action	☒	R	
Action_Text	☒	R	
Profile_Name	☒	R	

Device

Properties	supported	Readable/ Writable	Range restrictions
Object_Identifier	☒	R	
Object_Name	☒	R	
Object_Type	☒	R	
System_Status	☒	R	
Vendor_Name	☒	R	
Vendor_Identifier	☒	R	
Model_Name	☒	R	
Firmware_Revision	☒	R	
Application_Software_Version	☒	R	
Location	☒	R	
Description	☒	W	
Protocol_Version	☒	R	
Protocol_Revision	☒	R	
Protocol_Services_Supported	☒	R	
Protocol_Object_Types_Supported	☒	R	
Object_List	☒	R	
Structured_Object_List	☒	R	
Max_APDU_Length_Accepted	☒	R	
Segmentation_Supported	☒	R	
Max_Segments_Accepted	☒	R	
VT_Classes_Supported	☐		
Active_VT_Sessions	☐		
Local_Time	☒	R	
Local_Date	☒	R	
UTC_Offset	☒	W	-780…780
Daylight_Savings_Status	☒	R	
APDU_Segment_Timeout	☒	R	
APDU_Timeout	☒	R	
Number_Of_APDU_Retries	☒	R	
List_Of_Session_Keys	☐		
Time_Synchronization_Recipients	☒	W	
Max_Master	☐		
Max_Info_Frames	☐		
Device_Address_Binding	☒	R	
Database_Revision	☒	R	
Configuration_Files	☒	R	
Last_Restore_Time	☒	R	
Backup_Failure_Timeout	☒	W	0...65535
Backup_Preparation_Time	☒	R	
Restore_Preparation_Time	☒	R	
Restore_Completion_Time	☒	R	
Backup_And_Restore_State	☒	R	
Active_COV_Subscriptions	☒	R	
Slave_Proxy_Enable	☐		
Manual_Slave_Adress_Binding	☐		

Properties	supported	Readable/ Writable	Range restrictions
Auto_Slave_Discovery	☐		
Slave_Address_Binding	☐		
Last_Restart_Reason	☒	R	
Time_Of_Device_Restart	☒	R	
Restart_Notification_Recipients	☒	W	
UTC_Time_Synchronization_Recipients	☒	W	
Time_Synchronization_Interval	☒	W	
Align_Intervals	☒	W	
Interval_Offset	☒	W	
Profile_Name	☒	R	

Event Enrollment

Properties	supported	Readable/ Writable	Range restrictions
Object_Identifier	☒	R	
Object_Name	☒	R	
Object_Type	☒	R	
Description	☒	W	
Event_Type	☒	R	
Notify_Type	☒	W	
Event_Parameters	☒	W	
Object_Property_Reference	☒	W	
Event_State	☒	R	
Event_Enable	☒	W	
Acked_Transitions	☒	R	
Notification_Class	☒	W	
Event_Time_Stamps	☒	R	
Profile_Name	☒	R	
Event_Message_Texts	☒	R	

File

Properties	supported	Readable/ Writable	Range restrictions
Object_Identifier	☒	R	
Object_Name	☒	R	
Object_Type	☒	R	
Description	☒	W	
File_Type	☒	R	
File_Size	☒	R	
Modification_Date	☒	R	
Archive	☒	W	
Read_Only	☒	R	
File_Access_Method	☒	R	
Record_Count	☐		
Profile_Name	☒	R	

Loop

Properties	supported	Readable/ Writable	Range restrictions
Object_Identifier	☒	R	
Object_Name	☒	R	
Object_Type	☒	R	
Present_Value	☒	R	
Description	☒	W	
Status_Flags	☒	R	
Event_State	☒	R	
Reliability	☒	R	
Out_Of_Service	☒	W	
Update_Interval	☒	R	
Output_Units	☒	R	
Manipulated_Variable_Reference	☒	R	
Controlled_Variable_Reference	☒	R	
Controlled_Variable_Value	☒	R	
Controlled_Variable_Units	☒	R	
Setpoint_Reference	☒	R	
Setpoint	☒	W	-50...150
Action	☒	W	
Proportional_Constant	☒	W	0…3.402822e+038 / res.: 1
Proportional_Constant_Units	☒	R	
Integral_Constant	☒	W	0…65535 / res.: 1
Integral_Constant_Units	☒	R	
Derivative_Constant	☒	W	0…65535 / res.: 1
Derivative_Constant_Units	☒	R	
Bias	☒	W	-50...150
Maximum_Output	☒	W	50...150
Minimum_Output	☒	W	50...150
Priority_For_Writing	☒	R	
COV_Increment	☒	W	0.000001...3.402822e+038
Time_Delay	☒	W	0…65535
Notification_Class	☒	W	
Error_Limit	☒	W	
Deadband	☒	W	0…(Error_Limit / 2)
Event_Enable	☒	W	
Acked_Transitions	☒	R	
Notify_Type	☒	W	
Event_Time_Stamps	☒	R	
Profile_Name	☒	R	
Event_Message_Texts	☒	R	

Multistate Input

Properties	supported	Readable/ Writable	Range restrictions
Object_Identifier	☒	R	
Object_Name	☒	R	
Object_Type	☒	R	
Present_Value	☒	R	
Description	☒	W	
Device_Type	☒	R	
Status_Flags	☒	R	
Event_State	☒	R	
Reliability	☒	R	
Out_Of_Service	☒	W	
Number_Of_States	☒	R	
State_Text	☒	R	
Time_Delay	☒	W	0...65535
Notification_Class	☒	W	
Alarm_Values	☒	W	Max. 16
Fault_Values	☒	R	
Event_Enable	☒	W	
Acked_Transitions	☒	R	
Notify_Type	☒	W	
Event_Time_Stamps	☒	R	
Profile_Name	☒	R	
Event_Message_Texts	☒	R	

Multistate Output

Properties	supported	Readable/ Writable	Range restrictions
Object_Identifier	☒	R	
Object_Name	☒	R	
Object_Type	☒	R	
Present_Value	☒	W	1…Number_Of_States
Description	☒	W	
Device_Type	☒	R	
Status_Flags	☒	R	
Event_State	☒	R	
Reliability	☒	R	
Out_Of_Service	☒	W	
Number_Of_States	☒	R	
State_Text	☒	R	
Priority_Array	☒	R	
Relinquish_Default	☒	W	1…Number_Of_States
Time_Delay	☒	W	0...65535
Notification_Class	☒	W	
Feedback_Value	☒	R	
Event_Enable	☒	W	
Acked_Transitions	☒	R	
Notify_Type	☒	W	
Event_Time_Stamps	☒	R	
Profile_Name	☒	R	
Event_Message_Texts	☒	R	

Multistate Value

Properties	supported	Readable/ Writable	Range restrictions
Object_Identifier	☒	R	
Object_Name	☒	R	
Object_Type	☒	R	
Present_Value	☒	W	1…Number_Of_States
Description	☒	W	
Status_Flags	☒	R	
Event_State	☒	R	
Reliability	☒	R	
Out_Of_Service	☒	W	
Number_Of_States	☒	R	
State_Text	☒	R	
Priority_Array	☒	R	
Relinquish_Default	☒	W	1…Number_Of_States
Time_Delay	☒	W	0...65535
Notification_Class	☒	W	
Alarm_Values	☒	W	Max. 16
Fault_Values	☒	R	
Event_Enable	☒	W	
Acked_Transitions	☒	R	
Notify_Type	☒	W	
Event_Time_Stamps	☒	R	
Profile_Name	☒	R	
Event_Message_Texts	☒	R	

Notification Class

Properties	supported	Readable/ Writable	Range restrictions
Object_Identifier	☒	R	
Object_Name	☒	R	
Object_Type	☒	R	
Description	☒	W	
Notification_Class	☒	R	
Priority	☒	W	
Ack_Required	☒	W	
Recipient_List	☒	W	Max. 20
Profile_Name	☒	R	

Schedule

Properties	supported	Readable/ Writable	Range restrictions
Object_Identifier	☒	R	
Object_Name	☒	R	
Object_Type	☒	R	
Present_Value	☒	R	
Description	☒	W	
Effective_Period	☒	W	
Weekly_Schedule	☒	W	Max. 10 per day
Exception_Schedule	☒	W	Max. 20
Schedule_Default	☒	W	
List_Of_Object_Property_References	☒	W	
Priority_For_Writing	☒	W	
Status_Flags	☒	R	
Reliability	☒	R	
Out_Of_Service	☒	W	
Profile_Name	☒	R	

Program

Properties	supported	Readable/ Writable	Range restrictions
Object_Identifier	☒	R	
Object_Name	☒	R	
Object_Type	☒	R	
Program_State	☒	R	
Program_Change	☒	W	
Reason_For_Halt	☒	R	
Description_Of_Halt	☒	R	
Program_Location	☒	R	
Description	☒	W	
Instance_Of	☒	R	
Status_Flags	☒	R	
Reliability	☒	R	
Out_Of_Service	☒	R	
Profile_Name	☒	R	

Trend Log

Properties	supported	Readable/ Writable	Range restrictions
Object_Identifier	☒	R	
Object_Name	☒	R	
Object_Type	☒	R	
Description	☒	W	
Enable	☒	W	
Start_Time	☒	W	
Stop_Time	☒	W	
Log_DeviceObjectProperty	☒	W	
Log_Interval	☒	W	0; 1 sec…720 h
COV_Resubscription_Interval	☒	W	60…86400
Client_COV_Increment	☒	W	0…maxReal
Stop_When_Full	☒	W	
Buffer_Size	☒	W	0…5000
Log_Buffer	☒	R	
Record_Count	☒	W	0…0
Total_Record_Count	☒	R	
Notification_Threshold	☒	W	0…5000
Records_Since_Notification	☒	R	
Last_Notify_Record	☒	R	
Event_State	☒	R	
Notification_Class	☒	W	
Event_Enable	☒	W	
Acked_Transitions	☒	R	
Notify_Type	☒	W	
Event_Time_Stamps	☒	R	
Profile_Name	☒	R	
Logging_Type	☒	W	
Align_Intervals	☒	W	
Interval_Offset	☒	W	
Trigger	☒	W	
Status_Flags	☒	R	
Reliability	☒	R	
Event_Message_Texts	☒	R	

Accumulator

Properties	supported	Readable/ Writable	Range restrictions
Object_Identifier	☒	R	
Object_Name	☒	R	
Object_Type	☒	R	
Present_Value	☒	R	
Description	☒	R	
Device_Type	☒	R	
Status_Flags	☒	R	
Event_State	☒	R	
Reliability	☒	R	
Out_Of_Service	☒	W	
Scale	☒	W	
Units	☒	W	
Prescale	☒	W	
Max_Pres_Value	☒	R	
Value_Change_Time	☒	R	
Value_Before_Change	☒	R	
Value_Set	☒	W	
Logging_Record	☒	R	
Logging_Object	☒	R	
Pulse_Rate	☒	R	
High_Limit	☒	W	
Low_Limit	☒	W	
Limit_Monitoring_Interval	☒	W	0…65535
Notification_Class	☒	W	
Time_Delay	☒	W	0…65535
Limit_Enable	☒	W	
Event_Enable	☒	W	
Acked_Transitions	☒	R	
Notify_Type	☒	W	
Event_Time_Stamps	☒	R	
Event_Message_Texts	☒	R	
Profile_Name	☒	R	

Pulse-Converter

Properties	supported	Readable/ Writable	Range restrictions
Object_Identifier	☒	R	
Object_Name	☒	R	
Object_Type	☒	R	
Description	☒	W	
Present_Value	☒	R	
Input_Reference	☒	R	
Status_Flags	☒	R	
Event_State	☒	R	
Reliability	☒	R	
Out_Of_Service	☒	W	
Units	☒	R	
Scale_Factor	☒	W	
Adjust_Value	☒	W	
Count	☒	R	
Update_Time	☒	R	
Count_Change_Time	☒	R	
Count_Before_Change	☒	R	
COV_Increment	☒	W	0.000001...3.402822e+038
COV_Period	☒	W	0...65535
Notification_Class	☒	W	
Time_Delay	☒	W	0...65535
High_Limit	☒	W	
Low_Limit	☒	W	
Deadband	☒	W	0…maxReal
Limit_Enable	☒	W	
Event_Enable	☒	W	
Acked_Transitions	☒	R	
Notify_Type	☒	W	
Event_Time_Stamps	☒	R	
Profile_Name	☒	R	
Event_Message_Texts	☒	R	

Event-Log

Properties	supported	Readable/ Writable	Range restrictions
Object_Identifier	☒	R	
Object_Name	☒	R	
Object_Type	☒	R	
Description	☒	W	
Status_Flags	☒	R	
Event_State	☒	R	
Reliability	☒	R	
Enable	☒	W	
Start_Time	☒	W	
Stop_Time	☒	W	
Stop_When_Full	☒	W	
Buffer_Size	☒	W	0…120
Log_Buffer	☒	R	
Record_Count	☒	W	0…0
Total_Record_Count	☒	R	
Notification_Threshold	☒	W	0…120
Records_Since_Notification	☒	R	
Last_Notify_Record	☒	R	
Notification_Class	☒	W	
Event_Enable	☒	W	
Acked_Transitions	☒	R	
Notify_Type	☒	W	
Event_Time_Stamps	☒	R	
Profile_Name	☒	R	
Event_Message_Texts	☒	R	

Trend Log Multiple

Properties	supported	Readable/ Writable	Range restrictions
Object_Identifier	☒	R	
Object_Name	☒	R	
Object_Type	☒	R	
Description	☒	W	
Status_Flags	☒	R	
Event_State	☒	R	
Reliability	☒	R	
Enable	☒	W	
Start_Time	☒	W	
Stop_Time	☒	W	
Log_DeviceObjectProperty	☒	W	
Logging_Type	☒	W	
Log_Interval	☒	W	0; 1 sec…720 h
Align_Intervals	☒	W	
Interval_Offset	☒	W	
Trigger	☒	W	
Stop_When_Full	☒	W	
Buffer_Size	☒	W	0…5000
Log_Buffer	☒	R	
Record_Count	☒	W	0…0
Total_Record_Count	☒	R	
Notification_Threshold	☒	W	0…5000
Records_Since_Notification	☒	R	
Last_Notify_Record	☒	R	
Notification_Class	☒	W	
Event_Enable	☒	W	
Acked_Transitions	☒	R	
Notify_Type	☒	W	
Event_Time_Stamps	☒	R	
Profile_Name	☒	R	
Event_Message_Texts	☒	R	

Load Control

Properties	supported	Readable/ Writable	Range restrictions
Object_Identifier	☒	R	
Object_Name	☒	R	
Object_Type	☒	R	
Description	☒	R	
Present_Value	☒	R	
State_Description	☒	R	
Status_Flags	☒	R	
Event_State	☒	R	
Reliability	☒	R	
Requested_Shed_Level	☒	W	
Start_Time	☒	W	
Shed_Duration	☒	W	
Duty_Window	☒	W	
Enable	☒	W	
Full_Duty_Baseline	☒	R	
Expected_Shed_Level	☒	R	
Actual_Shed_Level	☒	R	
Shed_Levels	☒	W	
Shed_Levels_Descriptions	☒	W	
Notification_Class	☒	W	
Time_Delay	☒	W	1…65535
Event_Enable	☒	W	
Acked_Transitions	☒	R	
Notify_Type	☒	W	
Event_Time_Stamps	☒	R	
Profile_Name	☒	R	
Event_Message_Texts	☒	R	

Structured View

Properties	supported	Readable/ Writable	Range restrictions
Object_Identifier	☒	R	
Object_Name	☒	R	
Object_Type	☒	R	
Description	☒	R	
Node_Type	☒	R	
Node_Subtype	☒	R	
Subordinate_List	☒	R	
Subordinate_Annotations	☒	R	
Profile_Name	☒	R	

1.6 Segmentation capability

☒	Able to transmit segmented messages	Window size	4
☒	Able to receive segmented messages	Window size	4

1.7 Data Link Layer options

The supported Data Link Layers of a product are listed with the product model number.

☒	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)	
☐	MS/TP slave (Clause 9), baud rate(s)	
☒	Point-To-Point, EIA 232 (Clause 10), baud rate(s)	: 38400
☒	Point-To-Point, modem, (Clause 10), baud rate(s)	: 38400
☒	LonTalk, (Clause 11), medium	: TP/FT-10
☐	Other	

1.8 Device address binding

Is static device binding supported?	☐ Yes	☒ No

1.9 Networking options

☒	Router, Clause 6 (remote management functionality/BACnet PTP)		
☐	Annex H, BACnet Tunnelling Router over IP		
☒	BACnet/IP Broadcast Management Device (BBMD) [1)] Number of BDT entries: 50 Number of FDT entries: 50		
	Does the BBMD support registrations by foreign devices?	☒ Yes	☐ No

1) if product supports IP

1.10 Character sets supported

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

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

2 Desigo PXC3 and DXR2 Automation Stations

Date	: 1 May 2015
Vendor name	: Siemens Building Technologies (Vendor ID 7)
Product name	: Desigo PXC3 and DXR2 Automation Stations
Product model number	: PXC3 and DXR2
BACnet protocol version	: 1:13
Application software version	: TBD
Firmware revision	: TBD

2.1 Product model number

The Desigo PXC3 and DXR2 Automation stations are a range of products based on the same software. The PICS are the same for all products listed below:

PXC3.E72	Modular automation station	IP	
PXC3.E72-100A	Modular automation station	IP	
PXC3.E72A	Modular automation station	IP	
PXC3.E72A-100A	Modular automation station	IP	
PXC3.E75	Modular automation station	IP	
PXC3.E75-100A	Modular automation station	IP	
PXC3.E75A	Modular automation station	IP	
PXC3.E75A-100A	Modular automation station	IP	
DXR2.E18	Modular automation station	IP	
DXR2.E12P	Modular automation station	IP	
DXR2.E10	Modular automation station	IP	
DXR2.E09	Modular automation station	IP	
DXR2.E09T	Modular automation station	IP	
DXR2.M11	Modular automation station		MSTP
DXR2.M18	Modular automation station		MSTP
DXR2.M12P	Modular automation station		MSTP
DXR2.M10	Modular automation station		MSTP
DXR2.M09	Modular automation station		MSTP
DXR2.M09T	Modular automation station		MSTP

2.2 Product description

The Desigo PXC3 and DXR2 is a freely configurable process unit. The process unit as a system platform can be used in the Desigo product range as a stand-alone or network device with BACnet communication.

2.3 BACnet standardized device profile (Annex L)

The Desigo PXC3 automation station is a range of products based on the same software. The PICS are the same for all products listed below.

2.4 BACnet standardized device profile (Annex L)

☐	BACnet Advanced Workstation	(B-AWS)
☐	BACnet Operator Workstation	(B-OWS)
☐	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)

2.5 BACnet interoperability building blocks supported (Annex K)

Data sharing

☒	Data Sharing – Read Property-A	DS-RP-A
☒	Data Sharing – Read Property-B	DS-RP-B
☒	Data Sharing – Read Property Multiple-A	DS-RPM-A
☒	Data Sharing – Read Property Multiple-B	DS-RPM-B
☒	Data Sharing – Write Property-A	DS-WP-A
☒	Data Sharing – Write Property-B	DS-WP-B
☒	Data Sharing – Write Property Multiple-A	DS-WPM-A
☒	Data Sharing – Write Property Multiple-B	DS-WPM-B
☒	Data Sharing – Change of Value -A	DS-COV-A
☒	Data Sharing – Change of Value -B	DS-COV-B
☒	Data Sharing – Change of Value Property -A	DS-COVP-A
☒	Data Sharing – Change of Value Property -B	DS-COVP-B
☐	Data Sharing – Change of Value-Unsolicited-A	DS-COVU-A
☐	Data Sharing – Change of Value-Unsolicited-B	DS-COVU-B
☐	Data Sharing – View-A	DS-V-A
☐	Data Sharing – Advanced View-A	DS-AV-A
☐	Data Sharing – Modify-A	DS-M-A
☐	Data Sharing – Advanced Modify-A	DS-AM-A

Alarm and event management

☐	Alarm and Event – Notification-A	AE-N-A
☒	Alarm and Event – Notification Internal-B	AE-N-I-B
☐	Alarm and Event – Notification External-B	AE-N-E-B
☐	Alarm and Event – ACK-A	AE-ACK-A
☒	Alarm and Event – ACK-B	AE-ACK-B
☒	Alarm and Event – Alarm Summary-B	AE-ASUM-B
☒	Alarm and Event – Enrollment Summary-B	AE-ESUM-B
☒	Alarm and Event – Information-B	AE-INFO-B
☐	Alarm and Event – Life Safety-A	AE-LS-A
☐	Alarm and Event – Life Safety-B	AE-LS-B
☐	Alarm and Event – View Notifications-A	AE-VN-A
☐	Alarm and Event – Advanced View Notifications-A	AE-AVN-A
☐	Alarm and Event – View and Modify-A	AE-VM-A
☐	Alarm and Event – Advanced View and Modify-A	AE-AVM-A
☐	Alarm and Event – Alarm Summary View-A	AE-AS-A
☐	Alarm and Event – Event Log View-A	AE-ELV-A
☐	Alarm and Event – Event Log View and Modify-A	AE-ELVM-A
☒	Alarm and Event – Event Log Internal-B	AE-EL-I-B
☐	Alarm and Event – Event Log External-B	AE-EL-E-B

Historical/Deprecated BIBBs

Alarm and event management		
☐	Alarm and Event – Alarm Summary-A	AE-ASUM-A
☐	Alarm and Event – Enrollment Summary-A	AE-ESUM-A
☐	Alarm and Event – Information-A	AE-INFO-A

Scheduling		
☐	Scheduling – Internal-B	SCHED-I-B
☐	Scheduling – External-B	SCHED-E-B
☐	Scheduling – Advanced View Modify-A	SCHED-AVM-A
☐	Scheduling – View Modify-A	SCHED-VM-A
☐	Scheduling – Weekly Schedule-A	SCHED-WS-A
☐	Scheduling – Weekly Schedule Internal-B	SCHED-WS-I-B
☐	Scheduling – Readable-B	SCHED-R-B

Historical/Deprecated BIBBs

☐	Scheduling – A	SCHED-A

Trending		
☐	Trending – Viewing and Modifying Trends-A	T-VMT-A
☒	Trending – Viewing and Modifying Internal-B	T-VMT-I-B
☐	Trending – Viewing and Modifying External-B	T-VMT-E-B
☐	Trending – Viewing and Modifying Multiple Values-A	T-VMMV-A
☐	Trending – Viewing and Modifying Multiple Values Internal-B	T-VMMV-I-B
☐	Trending – Viewing and Modifying Multiple Values External -B	T-VMMV-E-B
☐	Trending – Automated Multiple Value Retrieval-A	T-AMVR-A
☐	Trending – Automated Multiple Value Retrieval-B	T-AMVR-B
☐	Trending – View-A	T-V-A
☐	Trending – Advanced View and Modify-A	T-AVM-A
☐	Trending – Archival-A	T-A-A
☐	Trending – Automated Trend Retrieval-A	T-ATR-A
☒	Trending – Automated Trend Retrieval-B	T-ATR-B

Historical/Deprecated BIBBs

☐	Trending – Viewing and Modifying Trends-A	T-VMT-A
☐	Trending – Viewing and Modifying Multiple Values-A	T-VMMV-A

Device management		
☒	Device Management – Dynamic Device Binding-A	DM-DDB-A
☒	Device Management – Dynamic Device Binding-B	DM-DDB-B
☐	Device Management – Dynamic Object Binding-A	DM-DOB-A
☒	Device Management – Dynamic Object Binding-B	DM-DOB-B
☐	Device Management – Device Communication Control-A	DM-DCC-A
☒	Device Management – Device Communication Control-B	DM-DCC-B
☐	Device Management – Private Transfer-A	DM-PT-A
☐	Device Management – Private Transfer-B	DM-PT-B
☐	Device Management – Text Message-A	DM-TM-A
☐	Device Management – Text Message-B	DM-TM-B
☐	Device Management – Time Synchronization-A	DM-TS-A
☒	Device Management – Time Synchronization-B	DM-TS-B

Device management

☐	Device Management – UTC Time Synchronization-A	DM-UTC-A
☒	Device Management – UTC Time Synchronization-B	DM-UTC-B
☐	Device Management – Reinitialize Device-A	DM-RD-A
☒	Device Management – Reinitialize Device-B	DM-RD-B
☐	Device Management – Backup and Restore-A	DM-BR-A
☒	Device Management – Backup and Restore-B	DM-BR-B
☐	Device Management – Restart-A	DM-R-A
☒	Device Management – Restart-B	DM-R-B
☐	Device Management – List Manipulation-A	DM-LM-A
☒	Device Management – List Manipulation-B	DM-LM-B
☐	Device Management – Object Creation and Deletion-A	DM-OCD-A
☐	Device Management – Object Creation and Deletion-B	DM-OCD-B
☐	Device Management – Virtual Terminal-A	DM-VT-A
☐	Device Management – Virtual Terminal-B	DM-VT-B
☐	Device Management – Automatic Network Mapping-A	DM-ANM-A
☐	Device Management – Automatic Device Mapping-A	DM-ADM-A
☐	Device Management – Automatic Time Synchronization-A	DM-ATS-A
☐	Device Management – Manual Time Synchronization-A	DM-MTS-A

Network management

☐	Network Management – Connection Establishment-A	NM-CE-A
☐	Network Management – Connection Establishment-B	NM-CE-B
☐	Network Management – Router Configuration-A	NM-RC-A
☐	Network Management – Router Configuration-B	NM-RC-B

2.6 Standard object types supported

Object type	Supported	Can be created dynamically	Can be deleted dynamically
Analog Input	☒	☐	☐
Analog Output	☒	☐	☐
Analog Value	☒	☐	☐
Binary Input	☒	☐	☐
Binary Output	☒	☐	☐
Binary Value	☒	☐	☐
Calendar	☐	☐	☐
Command	☒	☐	☐
Device	☒	☐	☐
Event Enrollment	☒	☐	☐
File	☒	☐	☐
Group	☐	☐	☐
Loop	☒	☐	☐
Multi-State Input	☒	☐	☐
Multi-State Output	☒	☐	☐
Notification Class	☒	☐	☐
Program	☒	☐	☐
Schedule	☐	☐	☐
Averaging	☐	☐	☐
Multi-State Value	☒	☐	☐
Trend Log	☒	☐	☐
Life-Safety-Point	☐	☐	☐
Life-Safety-Zone	☐	☐	☐
Accumulator	☐	☐	☐
Pulse-Converter	☐	☐	☐
Event Log	☒	☐	☐
Global Group	☐	☐	☐
Trend Log Multiple	☐	☐	☐
Load Control	☐	☐	☐
Structured-View	☒	☐	☐
Access Door	☐	☐	☐
(unassigned)	☐	☐	☐
Access Credential	☐	☐	☐
Access Point	☐	☐	☐
Access Rights	☐	☐	☐
Access User	☐	☐	☐
Access Zone	☐	☐	☐
Credential Data Input	☐	☐	☐
Network Security	☐	☐	☐
Bitstring Value	☐	☐	☐
Characterstring Value	☐	☐	☐

Object type	Supported	Can be created dynamically	Can be deleted dynamically
Date Pattern Value	☐	☐	☐
Date Value	☐	☐	☐
Datetime Pattern Value	☐	☐	☐
Datetime Value	☐	☐	☐
Integer Value	☐	☐	☐
Large Analog Value	☐	☐	☐
Octetstring Value	☐	☐	☐
Positive Integer Value	☒	☐	☐
Time Pattern Value	☐	☐	☐
Time Value	☐	☐	☐

Analog Input

Properties	Supported	Readable/ Writable	Range restrictions
Object_Identifier	☒	R	
Object_Name	☒	W	
Object_Type	☒	R	
Present_Value	☒	W	
Description	☒	W	
Device_Type	☒	W	
Status_Flags	☒	R	
Event_State	☒	R	
Reliability	☒	W	
Out_Of_Service	☒	W	
Update_Interval	☐		
Units	☒	W	
Min_Pres_Value	☒	W	
Max_Pres_Value	☒	W	
Resolution	☒	W	
COV_Increment	☒	W	
Time_Delay	☐		
Notification_Class	☐		
High_Limit	☐		
Low_Limit	☐		
Deadband	☐		
Limit_Enable	☐		
Event_Enable	☐		
Acked_Transitions	☐		
Notify_Type	☐		
Event_Time_Stamps	☐		
Profile_Name	☒	R	

Analog Output

Properties	Supported	Readable/ Writable	Range restrictions
Object_Identifier	☒	R	
Object_Name	☒	W	
Object_Type	☒	R	
Present_Value	☒	W	
Description	☒	W	
Device_Type	☒	W	
Status_Flags	☒	R	
Event_State	☒	R	
Reliability	☒	W	
Out_Of_Service	☒	W	
Update_Interval	☐		
Units	☒	W	
Min_Pres_Value	☒	W	
Max_Pres_Value	☒	W	
Resolution	☒	W	
Priority_Array	☒	R	
Relinquish_Default	☒	W	
COV_Increment	☒	W	
Time_Delay	☐		
Notification_Class	☐		
High_Limit	☐		
Low_Limit	☐		
Deadband	☐		
Limit_Enable	☐		
Event_Enable	☐		
Acked_Transitions	☐		
Notify_Type	☐		
Event_Time_Stamps	☐		
Profile_Name	☒	R	

Analog Value

Properties	Supported	Readable/ Writable	Range restrictions
Object_Identifier	☒	R	
Object_Name	☒	W	
Object_Type	☒	R	
Present_Value	☒	W	
Description	☒	W	
Status_Flags	☒	R	
Event_State	☒	R	
Reliability	☒	W	
Out_Of_Service	☒	W	
Units	☒	W	
Priority_Array	☒	R	
Relinquish_Default	☒	W	
COV_Increment	☒	W	
Time_Delay	☐		
Notification_Class	☐		
High_Limit	☐		
Low_Limit	☐		
Deadband	☐		
Limit_Enable	☐		
Event_Enable	☐		
Acked_Transitions	☐		
Notify_Type	☐		
Event_Time_Stamps	☐		
Profile_Name	☒	R	

Binary Input

Properties	Supported	Readable/ Writable	Range restrictions
Object_Identifier	☒	R	
Object_Name	☒	W	
Object_Type	☒	R	
Present_Value	☒	W	
Description	☒	W	
Device_Type	☒	W	
Status_Flags	☒	R	
Event_State	☒	R	
Reliability	☒	W	
Out_Of_Service	☒	W	
Polarity	☒	W	
Inactive_Text	☒	W	
Active_Text	☒	W	
Change_Of_State_Time	☐		
Change_Of_State_Count	☐		
Time_Of_State_Count_Reset	☐		
Elapsed_Active_Time	☐		
Time_Of_Active_Time_Reset	☐		
Time_Delay	☐		
Notification_Class	☐		
Alarm_Value	☐		
Event_Enable	☐		
Acked_Transitions	☐		
Notify_Type	☐		
Event_Time_Stamps	☐		
Profile_Name	☒	W	

Binary Output

Properties	Supported	Readable/ Writable	Range restrictions
Object_Identifier	☒	R	
Object_Name	☒	W	
Object_Type	☒	R	
Present_Value	☒	W	
Description	☒	W	
Device_Type	☒	W	
Status_Flags	☒	R	
Event_State	☒	R	
Reliability	☒	W	
Out_Of_Service	☒	W	
Polarity	☒	W	
Inactive_Text	☒	W	
Active_Text	☒	W	
Change_Of_State_Time	☐		
Change_Of_State_Count	☐		
Time_Of_State_Count_Reset	☐		
Elapsed_Active_Time	☐		
Time_Of_Active_Time_Reset	☐		
Minimum_Off_Time	☐		
Minimum_On_Time	☐		
Priority_Array	☒	R	
Relinquish_Default	☒	W	
Time_Delay	☐		
Notification_Class	☐		
Feedback_Value	☐		
Event_Enable	☐		
Acked_Transitions	☐		
Notify_Type	☐		
Event_Time_Stamps	☐		
Profile_Name	☒	R	

Binary Value

Properties	supported	Readable/ Writable	Range restrictions
Object_Identifier	☒	R	
Object_Name	☒	W	
Object_Type	☒	R	
Present_Value	☒	W	
Description	☒	W	
Status_Flags	☒	R	
Event_State	☒	R	
Reliability	☒	W	
Out_Of_Service	☒	W	
Inactive_Text	☒	W	
Active_Text	☒	W	
Change_Of_State_Time	☐		
Change_Of_State_Count	☐		
Time_Of_State_Count_Reset	☐		
Elapsed_Active_Time	☐		
Time_Of_Active_Time_Reset	☐		
Minimum_Off_Time	☐		
Minimum_On_Time	☐		
Priority_Array	☒	R	
Relinquish_Default	☒	W	
Time_Delay	☐		
Notification_Class	☐		
Alarm_Value	☐		
Event_Enable	☐		
Acked_Transitions	☐		
Notify_Type	☐		
Event_Time_Stamps	☐		
Profile_Name	☒	R	

Command

Properties	supported	Readable/ Writable	Range restrictions
Object_Identifier	☒	R	
Object_Name	☒	W	
Object_Type	☒	R	
Description	☒	W	
Present_Value	☒	W	
In_Process	☒	R	
All_Writes_Successful	☒	R	
Action	☒	W	
Action_Text	☒	W	
Profile_Name	☒	R	

Device

Properties	supported	Readable/ Writable	Range restrictions
Object_Identifier	☒	R	
Object_Name	☒	R	
Object_Type	☒	R	
System_Status	☒	R	
Vendor_Name	☒	R	
Vendor_Identifier	☒	R	
Model_Name	☒	R	
Firmware_Revision	☒	R	
Application_Software_Version	☒	R	
Location	☒	W	
Description	☒	W	
Protocol_Version	☒	R	
Protocol_Revision	☒	R	
Protocol_Services_Supported	☒	R	
Protocol_Object_Types_Supported	☒	R	
Object_List	☒	R	
Structured_Object_List	☒	R	
Max_APDU_Length_Accepted	☒	R	
Segmentation_Supported	☒	R	
Max_Segments_Accepted	☒	R	
VT_Classes_Supported	☐		
Active_VT_Sessions	☐		
Local_Time	☒	R	
Local_Date	☒	R	
UTC_Offset	☒	R	
Daylight_Savings_Status	☒	R	
APDU_Segment_Timeout	☒	R	
APDU_Timeout	☒	R	
Number_Of_APDU_Retries	☒	R	
List_Of_Session_Keys	☐		
Time_Synchronization_Recipients	☐		
Max_Master	☒	R	
Max_Info_Frames	☒	R	
Device_Address_Binding	☒	R	
Database_Revision	☒	R	
Configuration_Files	☒	R	
Last_Restore_Time	☒	R	
Backup_Failure_Timeout	☒	W	
Backup_Preparation_Time	☒	R	
Restore_Preparation_Time	☒	R	
Restore_Completion_Time	☒	R	
Backup_And_Restore_State	☒	R	
Active_COV_Subscriptions	☒	R	
Slave_Proxy_Enable	☒	W	
Manual_Slave_Adress_Binding	☒	W	

Properties	supported	Readable/ Writable	Range restrictions
Auto_Slave_Discovery	☒	W	
Slave_Address_Binding	☒	R	
Last_Restart_Reason	☒	R	
Time_Of_Device_Restart	☒	R	
Restart_Notification_Recipients	☒	W	
UTC_Time_Synchronization_Recipients	☐		
Time_Synchronization_Interval	☐		
Align_Intervals	☐		
Interval_Offset	☐		
Profile_Name	☒	R	

Event Enrollment

Properties	supported	Readable/ Writable	Range restrictions
Object_Identifier	☒	R	
Object_Name	☒	W	
Object_Type	☒	R	
Description	☒	W	
Event_Type	☒	R	
Event_Parameters	☒	W	
Notify_Type	☒	W	
Object_Property_Reference	☒	W	
Event_State	☒	R	
Event_Enable	☒	W	
Event_Detection_Enable	☒	W	
Acked_Transitions	☒	R	
Time_Delay_Normal	☒	W	
Notification_Class	☒	W	
Event_Time_Stamps	☒	R	
Event_Message_Texts	☒	R	
Event_Message_Texts_Config	☒	W	
Event_Algorithm_Inhibit	☒	W	
Status_Flags	☒	R	
Reliability	☒	R	
Profile_Name	☒	R	

File

Properties	supported	Readable/ Writable	Range restrictions
Object_Identifier	☒	R	
Object_Name	☒	W	
Object_Type	☒	R	
Description	☒	W	
File_Type	☒	R	
File_Size	☒	W	
Modification_Date	☒	R	
Archive	☒	W	
Read_Only	☒	R	
File_Access_Method	☒	R	
Profile_Name	☒	R	

Loop

Properties	supported	Readable/ Writable	Range restrictions
Object_Identifier	☒	R	
Object_Name	☒	W	
Object_Type	☒	R	
Present_Value	☒	W	
Description	☒	W	
Status_Flags	☒	R	
Event_State	☒	R	
Reliability	☒	W	
Out_Of_Service	☒	W	
Output_Units	☒	W	
Manipulated_Variable_Reference	☒	R	
Controlled_Variable_Reference	☒	R	
Controlled_Variable_Value	☒	R	
Controlled_Variable_Units	☒	W	
Setpoint_Reference	☒	R	
Setpoint	☒	R	
Action	☒	R	
Proportional_Constant	☒	W	
Proportional_Constant_Units	☒	W	
Integral_Constant	☒	W	
Integral_Constant_Units	☒	W	
Derivative_Constant	☒	W	
Derivative_Constant_Units	☒	W	
Bias	☒	W	
Maximum_Output	☒	W	
Minimum_Output	☒	W	
Priority_For_Writing	☒	R	
COV_Increment	☒	W	
Profile_Name	☒	R	

Multistate Input

Properties	supported	Readable/ Writable	Range restrictions
Object_Identifier	☒	R	
Object_Name	☒	W	
Object_Type	☒	R	
Present_Value	☒	W	
Description	☒	W	
Device_Type	☒	W	
Status_Flags	☒	R	
Event_State	☒	R	
Reliability	☒	W	
Out_Of_Service	☒	W	
Number_Of_States	☒	R	
State_Text	☒	W	
Profile_Name	☒	R	

Multistate Output

Properties	supported	Readable/ Writable	Range restrictions
Object_Identifier	☒	R	
Object_Name	☒	W	
Object_Type	☒	R	
Present_Value	☒	W	
Description	☒	W	
Device_Type	☒	W	
Status_Flags	☒	R	
Event_State	☒	R	
Reliability	☒	W	
Out_Of_Service	☒	W	
Priority_Array	☒	R	
Relinquish_Default	☒	W	
Number_Of_States	☒	R	
State_Text	☒	W	
Profile_Name	☒	R	

Multistate Value

Properties	supported	Readable/ Writable	Range restrictions
Object_Identifier	☒	R	
Object_Name	☒	W	
Object_Type	☒	R	
Present_Value	☒	W	
Description	☒	W	
Status_Flags	☒	R	
Event_State	☒	R	
Reliability	☒	R	
Out_Of_Service	☒	W	
Priority_Array	☒	R	
Relinquish_Default	☒	W	
Number_Of_States	☒	R	
State_Text	☒	W	
Profile_Name	☒	R	

Notification Class

Properties	supported	Readable/ Writable	Range restrictions
Object_Identifier	☒	R	
Object_Name	☒	W	
Object_Type	☒	R	
Description	☒	W	
Notification_Class	☒	R	
Priority	☒	W	
Ack_Required	☒	W	
Recipient_List	☒	W	
Profile_Name	☒	R	

Program

Properties	supported	Readable/ Writable	Range restrictions
Object_Identifier	☒	R	
Object_Name	☒	W	
Object_Type	☒	R	
Program_State	☒	R	
Program_Change	☒	W	
Reason_For_Halt	☒	R	
Description_Of_Halt	☒	R	
Description	☒	W	
Status_Flags	☒	R	
Reliability	☒	R	
Out_Of_Service	☒	R	
Profile_Name	☒	R	

Trend Log

Properties	supported	Readable/ Writable	Range restrictions
Object_Identifier	☒	R	
Object_Name	☒	W	
Object_Type	☒	R	
Description	☒	W	
Enable	☒	W	
Start_Time	☒	W	
Stop_Time	☒	W	
Log_DeviceObjectProperty	☒	W	
Log_Interval	☒	W	
Stop_When_Full	☒	W	
Buffer_Size	☒	W	
Log_Buffer	☒	R	
Record_Count	☒	W	
Total_Record_Count	☒	R	
Notification_Threshold	☒	W	
Records_Since_Notification	☒	R	
Last_Notify_Record	☒	R	
Event_State	☒	R	
Notification_Class	☒	W	
Event_Enable	☒	W	
Acked_Transitions	☒	R	
Notify_Type	☒	R	
Event_Time_Stamps	☒	R	
Logging_Type	☒	W	
Align_Intervals	☒	W	
Interval_Offset	☒	W	
COV_Resubscription_Interval	☒	R	
Reliability	☒	R	
Status_Flags	☒	R	
Profile_Name	☒	R	

Event-Log

Properties	supported	Readable/ Writable	Range restrictions
Object_Identifier	☒	R	
Object_Name	☒	W	
Object_Type	☒	R	
Description	☒	W	
Status_Flags	☒	R	
Event_State	☒	R	
Reliability	☒	R	
Enable	☒	W	
Start_Time	☒	W	
Stop_Time	☒	W	
Stop_When_Full	☒	W	
Buffer_Size	☒	W	
Log_Buffer	☒	R	
Record_Count	☒	W	
Total_Record_Count	☒	R	
Notification_Threshold	☒	W	
Records_Since_Notification	☒	R	
Last_Notify_Record	☒	R	
Notification_Class	☒	W	
Event_Enable	☒	W	
Acked_Transitions	☒	R	
Notify_Type	☒	R	
Event_Time_Stamps	☒	R	
Profile_Name	☒	R	

Structured View

Properties	supported	Readable/ Writable	Range restrictions
Object_Identifier	☒	R	
Object_Name	☒	W	
Object_Type	☒	R	
Description	☒	W	
Node_Type	☒	R	
Node_Subtype	☒	W	
Subordinate_List	☒	W	
Subordinate_Annotations	☒	W	
Profile_Name	☒	R	

2.7 Segmentation capability

☒	Able to transmit segmented messages	Window size	32
☒	Able to receive segmented messages	Window size	32

2.8 Data Link Layer options

The simultaneously supported Data Link Layers of a product are listed with the product model number.

☐	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 : 76800 : 115200
☒	MS/TP slave (Clause 9), baud rate(s)	
☐	Point-To-Point, EIA 232 (Clause 10), baud rate(s)	: 38400
☐	Point-To-Point, modem, (Clause 10), baud rate(s)	: 38400
☐	LonTalk, (Clause 11), medium	: TP/FT-10
☐	Other	

2.9 Device address binding

Is static device binding supported?	☐ Yes	☒ No

2.10 Networking options

☐	Router, Clause 6 (remote management functionality/BACnet PTP)		
☐	Annex H, BACnet Tunnelling Router over IP		
☐	BACnet/IP Broadcast Management Device (BBMD) Number of BDT entries: Number of FDT entries:		
	Does the BBMD support registrations by foreign devices?	☐ Yes	☐ No

2.11 Character sets supported

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

☒ UTF-8 (or ANSI X3.4)	☐ IBM / Microsoft DBCS	☐ ISO 8859-1
☐ ISO 10646 (UCS-2)	☐ ISO 10646 (UCS-4)	☐ JIS C 6226

3 Desigo CC Workstation

Date	: October 6, 2014
Vendor name	: Siemens Building Technologies (Vendor ID 7)
Product name	: Desigo CC Workstation
Product model number	: 2.1
BACnet protocol version	: 1.13
Application software version	: 2.1
Firmware revision	: n/a

3.1 Product description

Desigo CC from Siemens is an integration platform for managing facility systems and enterprise applications. Optimized as an extension of the powerful APOGEE automation system, Desigo CC allows full building operation as well as complete system configuration from the convenience of a standard web browser, from a dedicated console for mission-critical applications, or from a Windows Desktop App for optimal mobile performance. Users find the workflow driven interface, designed around role-based profiles and flexible user-defined views, easy to learn and easy to use as it grows with their expertise. Desigo CC is built on building automation, fire safety, security, video, and IT standards, and provides the application support necessary for automating intelligent control and providing actionable information.

3.2 BACnet standardized device profile (Annex L)

☒	BACnet Advanced Workstation	(B-AWS)
☐	BACnet Operator Workstation	(B-OWS)
☐	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)

3.3 BACnet interoperability building blocks supported (Annex K)

Data sharing

☒	Data Sharing – ReadProperty-A	DS-RP-A
☒	Data Sharing – ReadProperty-B	DS-RP-B
☒	Data Sharing – ReadPropertyMultiple-A	DS-RPM-A
☒	Data Sharing – ReadPropertyMultiple-B	DS-RPM-B
☒	Data Sharing – WriteProperty-A	DS-WP-A
☒	Data Sharing – WriteProperty-B	DS-WP-B
☒	Data Sharing – WritePropertyMultiple-A	DS-WPM-A
☐	Data Sharing – WritePropertyMultiple-B	DS-WPM-B
☒	Data Sharing – ChangeofValue -A	DS-COV-A
☐	Data Sharing – ChangeofValue -B	DS-COV-B
☒	Data Sharing – ChangeofValueProperty -A	DS-COVP-A
☐	Data Sharing – ChangeofValueProperty -B	DS-COVP-B
☒	Data Sharing – View-A	DS-V-A
☒	Data Sharing – Advanced View-A	DS-AV-A
☒	Data Sharing – Modify-A	DS-M-A
☒	Data Sharing – Advanced Modify-A	DS-AM-A

Alarm and event management

☒	Alarm and Event – Notification-A	AE-N-A
☐	Alarm and Event – Notification Internal-B	AE-N-I-B
☐	Alarm and Event – Notification External-B	AE-N-E-B
☒	Alarm and Event – ACK-A	AE-ACK-A
☐	Alarm and Event – ACK-B	AE-ACK-B
☐	Alarm and Event – Alarm Summary-B	AE-ASUM-B
☐	Alarm and Event – Enrollment Summary-B	AE-ESUM-B
☐	Alarm and Event – Information-B	AE-INFO-B
☒	Alarm and Event – LifeSafety-A	AE-LS-A
☐	Alarm and Event – LifeSafety-B	AE-LS-B
☒	Alarm and Event – View Notifications-A	AE-VN-A
☒	Alarm and Event – Advanced View Notifications-A	AE-AVN-A
☒	Alarm and Event – View and Modify-A	AE-VM-A
☒	Alarm and Event – Advanced View and Modify-A	AE-AVM-A
☒	Alarm and Event – Alarm Summary View-A	AE-AS-A
☒	Alarm and Event – Event Log View-A	AE-ELV-A
☒	Alarm and Event – Event Log View and Modify-A	AE-ELVM-A
☐	Alarm and Event – Event Log-Internal-B	AE-EL-I-B
☐	Alarm and Event – Event Log-External-B	AE-EL-E-B

Historical/Deprecated BIBBs

Alarm and event management	☒	Alarm and Event – Alarm Summary-A	AE-ASUM-A
	☒	Alarm and Event – Enrollment Summary-A	AE-ESUM-A
	☒	Alarm and Event – Information-A	AE-INFO-A

Scheduling	☐	Scheduling – Internal-B	SCHED-I-B
	☐	Scheduling – External-B	SCHED-E-B
	☒	Scheduling – View Modify-A	SCHED-VM-A
	☒	Scheduling – Advanced View Modify-A	SCHED-AVM-A
	☒	Scheduling – Weekly Schedule-A	SCHED-WS-A
	☐	Scheduling – Weekly Schedule Internal-B	SCHED-WS-I-B
	☐	Scheduling – Readable-B	SCHED-R-B

Historical/Deprecated BIBBs

☐	Scheduling – A	SCHED-A

Trending	☐	Trending – Viewing and Modifying Trends Internal-B	T-VMT-I-B
	☐	Trending – Viewing and Modifying Trends External-B	T-VMT-E-B
	☐	Trending – Viewing and Modifying Multiple Values Internal-B	T-VMMV-I-B
	☐	Trending – Viewing and Modifying Multiple Values External-B	T-VMMV-E-B
	☒	Trending – Automated Multiple Value Retrieval-A	T-AMVR-A
	☐	Trending – Automated Multiple Value Retrieval-B	T-AMVR-B
	☒	Trending – View-A	T-V-A
	☒	Trending – Advanced View and Modify-A	T-AVM-A
	☒	Trending – Archival-A	T-A-A
	☒	Trending – Automated Trend Retrieval-A	T-ATR-A
	☐	Trending – Automated Trend Retrieval-B	T-ATR-B

Historical/Deprecated BIBBs

☐	Trending – Viewing and Modifying Trends-A	T-VMT-A
☐	Trending – Viewing and Modifying Multiple Values-A	T-VMMV-A

Device management	☒	Device Management – Dynamic Device Binding-A	DM-DDB-A
	☒	Device Management – Dynamic Device Binding-B	DM-DDB-B
	☒	Device Management – Dynamic Object Binding-A	DM-DOB-A
	☒	Device Management – Dynamic Object Binding-B	DM-DOB-B
	☒	Device Management – DeviceCommunicationControl-A	DM-DCC-A
	☐	Device Management – DeviceCommunicationControl-B	DM-DCC-B
	☐	Device Management – Private Transfer-A	DM-PT-A
	☐	Device Management – Private Transfer-B	DM-PT-B
	☒	Device Management – Text Message-A	DM-TM-A
	☐	Device Management – Text Message-B	DM-TM-B
	☒	Device Management – TimeSynchronization-A	DM-TS-A

Device management

☐	Device Management – TimeSynchronization-B	DM-TS-B
☒	Device Management – UTCTimeSynchronization-A	DM-UTC-A
☐	Device Management – UTCTimeSynchronization-B	DM-UTC-B
☒	Device Management – ReinitializeDevice-A	DM-RD-A
☐	Device Management – ReinitializeDevice-B	DM-RD-B
☒	Device Management – Backup and Restore-A	DM-BR-A
☐	Device Management – Backup and Restore-B	DM-BR-B
☐	Device Management – Restart-A	DM-R-A
☐	Device Management – Restart-B	DM-R-B
☒	Device Management – List Manipulation-A	DM-LM-A
☒	Device Management – List Manipulation-B	DM-LM-B
☒	Device Management – Object Creation and Deletion-A	DM-OCD-A
☐	Device Management – Object Creation and Deletion-B	DM-OCD-B
☐	Device Management – Virtual Terminal-A	DM-VT-A
☐	Device Management – Virtual Terminal-B	DM-VT-B
☒	Device Management – Automatic Network Mapping-A	DM-ANM-A
☒	Device Management – Automatic Device Mapping-A	DM-ADM-A
☒	Device Management – Automatic Time Synchronization-A	DM-ATS-A
☒	Device Management – Manual Time Synchronization-A	DM-MTS-A

Network management

☒	Network Management – Connection Establishment-A	NM-CE-A
☐	Network Management – Connection Establishment-B	NM-CE-B
☐	Network Management – Router Configuration-A	NM-RC-A
☐	Network Management – Router Configuration-B	NM-RC-B

3.4 Standard object types supported

Only the device object is supported.

Device

Properties	monitor	modify
Object_Identifier	☒	☐
Object_Name	☒	☐
Object_Type	☒	☐
System_Status	☒	☐
Vendor_Name	☒	☐
Vendor_Identifier	☒	☐
Model_Name	☒	☐
Firmware_Revision	☒	☐
Application_Software_Version	☒	☐
Location	☒	☐
Description	☒	☐
Protocol_Version	☒	☐
Protocol_Revision	☒	☐
Protocol_Services_Supported	☒	☐
Protocol_Object_Types_Supported	☒	☐
Object_List	☒	☐
Structured_Object_List	☐	☐
Max_APDU_Length_Accepted	☒	☐
Segmentation_Supported	☒	☐
Max_Segments_Accepted	☒	☐
VT_Classes_Supported	☐	☐
Active_VT_Sessions	☐	☐
Local_Time	☐	☐
Local_Date	☐	☐
UTC_Offset	☒	☐
Daylight_Savings_Status	☐	☐
APDU_Segment_Timeout	☒	☐
APDU_Timeout	☒	☐
Number_Of_APDU_Retries	☒	☐
List_Of_Session_Keys	☐	☐
Time_Synchronization_Recipients	☐	☒
Max_Master	☐	☐
Max_Info_Frames	☐	☐
Device_Address_Binding	☒	☐
Database_Revision	☒	☐
Configuration_Files	☐	☐
Last_Restore_Time	☐	☐
Backup_Failure_Timeout	☐	☐
Active_COV_Subscriptions	☐	☐
Slave_Proxy_Enable	☐	☐
Manual_Slave_Adress_Binding	☐	☐
Auto_Slave_Discovery	☐	☐

Properties	monitor	modify
Slave_Address_Binding	☐	☐
Last_Restart_Reason	☐	☐
Time_Of_Device_Restart	☐	☐
Restart_Notification_Recipients	☐	☐
UTC_Time_Synchronization_Recipients	☐	☒
Time_Synchronization_Interval	☐	☐
Align_Intervals	☐	☐
Interval_Offset	☐	☐
Serial_Number	☐	☐
Property_List	☐	☐
Profile_Name	☒	☐

3.5 Client supported object types

Object type	Supported	Can be created dynamically	Can be deleted dynamically
Analog Input	☒	☐	☐
Analog Output	☒	☐	☐
Analog Value	☒	☐	☐
Binary Input	☒	☐	☐
Binary Output	☒	☐	☐
Binary Value	☒	☐	☐
Calendar	☒	☒	☒
Command	☒	☒	☒
Device	☒	☐	☐
Event Enrollment	☒	☒	☒
File	☒	☐	☐
Group	☒	☐	☐
Loop	☒	☐	☐
Multi-State Input	☒	☐	☐
Multi-State Output	☒	☐	☐
Notification Class	☒	☒	☒
Program	☒	☐	☐
Schedule	☒	☒	☒
Averaging	☒	☐	☐
Multi-State Value	☒	☐	☐
Trend Log	☒	☒	☒
Life-Safety-Point	☒	☐	☐
Life-Safety-Zone	☒	☐	☐
Accumulator	☒	☐	☐
Pulse-Converter	☒	☐	☐
Event Log	☒	☐	☐
Global Group	☒	☐	☐
Trend Log Multiple	☒	☒	☒
Load Control	☒	☐	☐
Structured-View	☒	☐	☐
Access Door	☐	☐	☐
Access Credential	☐	☐	☐
Access Point	☐	☐	☐
Access Rights	☐	☐	☐
Access User	☐	☐	☐
Access Zone	☐	☐	☐
Credential Data Input	☐	☐	☐
Network Security	☒	☐	☐
Bitstring Value	☒	☐	☐
Characterstring Value	☒	☐	☐

Object type	Supported	Can be created dynamically	Can be deleted dynamically
Date Pattern Value	☒	☐	☐
Date Value	☒	☐	☐
Datetime Pattern Value	☒	☐	☐
Datetime Value	☒	☐	☐
Integer Value	☒	☐	☐
Large Analog Value	☒	☐	☐
Octetstring Value	☒	☐	☐
Positive Integer Value	☒	☐	☐
Time Pattern Value	☒	☐	☐
Time Value	☒	☐	☐
Notification Forwarder	☒	☐	☐
Alert Enrollment	☒	☐	☐
Channel	☐	☐	☐
Lighting Output	☐	☐	☐

3.6 Segmentation capability

☒	Able to transmit segmented messages	Window size	32
☒	Able to receive segmented messages	Window size	32

3.7 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)	
☐	MS/TP slave (Clause 9), baud rate(s)	
☐	Point-To-Point, EIA 232 (Clause 10), baud rate(s)	: Max. 38400
☐	Point-To-Point, modem, (Clause 10), baud rate(s)	: Max. 38400
☐	LonTalk, (Clause 11), medium:	: TP/FT-10
☐	Other	

3.8 Device address binding

Is static device binding supported?	☒ Yes	No

3.9 Networking options

☐	Router, Clause 6		
☐	Annex H, BACnet Tunnelling Router over IP		
☒	BACnet/IP Broadcast Management Device (BBMD)		
	Does the BBMD support registrations by Foreign Devices?	☒ Yes	☐ No

3.10 Character sets supported

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

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

4 Desigo Insight Workstation

Date	:
Vendor name	: Siemens Building Technologies (Vendor ID 7)
Product name	: Desigo Insight Workstation
Product model number	: -
BACnet protocol version	: 1.13
Application software version	: -
Firmware revision	: INSIGHT Rel 6

4.1 Product description

Desigo Insight is the BACnet management station for the Desigo system. Desigo Insight is represented in the network as a BACnet device, which contains a device object only.

4.2 BACnet standardized device profile (Annex L)

☒	BACnet Advanced Workstation	(B-AWS)
☐	BACnet Operator Workstation	(B-OWS)
☐	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)

4.3 BACnet interoperability building blocks supported (Annex K)

Data sharing

☒	Data Sharing – ReadProperty-A	DS-RP-A
☒	Data Sharing – ReadProperty-B	DS-RP-B
☒	Data Sharing – ReadPropertyMultiple-A	DS-RPM-A
☒	Data Sharing – ReadPropertyMultiple-B	DS-RPM-B
☒	Data Sharing – WriteProperty-A	DS-WP-A
☒	Data Sharing – WriteProperty-B	DS-WP-B
☒	Data Sharing – WritePropertyMultiple-A	DS-WPM-A
☐	Data Sharing – WritePropertyMultiple-B	DS-WPM-B
☒	Data Sharing – ChangeofValue-A	DS-COV-A
☐	Data Sharing – ChangeofValue-B	DS-COV-B
☒	Data Sharing – ChangeofValueProperty-A	DS-COVP-A
☐	Data Sharing – ChangeofValueProperty-B	DS-COVP-B
☐	Data Sharing – ChangeofValue-Unsolicited-A	DS-COVU-A
☐	Data Sharing – ChangeofValue-Unsolicited-B	DS-COVU-B
☒	Data Sharing – View-A	DS-V-A
☒	Data Sharing – Advanced View-A	DS-AV-A
☒	Data Sharing – Modify-A	DS-M-A
☒	Data Sharing – Advanced Modify-A	DS-AM-A

Alarm and event management

☒	Alarm and Event – Notification-A	AE-N-A
☐	Alarm and Event – Notification Internal-B	AE-N-I-B
☐	Alarm and Event – Notification External-B	AE-N-E-B
☒	Alarm and Event – ACK-A	AE-ACK-A
☐	Alarm and Event – ACK-B	AE-ACK-B
☐	Alarm and Event – Alarm Summary-B	AE-ASUM-B
☐	Alarm and Event – Enrollment Summary-B	AE-ESUM-B
☐	Alarm and Event – Information-B	AE-INFO-B
☐	Alarm and Event – LifeSafety-A	AE-LS-A
☐	Alarm and Event – LifeSafety-B	AE-LS-B
☒	Alarm and Event – View Notifications-A	AE-VN-A
☒	Alarm and Event – Advanced View Notifications-A	AE-AVN-A
☒	Alarm and Event – View and Modify-A	AE-VM-A
☒	Alarm and Event – Advanced View and Modify-A	AE-AVM-A
☒	Alarm and Event – Alarm Summary View-A	AE-AS-A
☒	Alarm and Event – Event Log View-A	AE-ELV-A
☒	Alarm and Event – Event Log View and Modify-A	AE-ELVM-A
☐	Alarm and Event – Event Log-Internal-B	AE-EL-I-B
☐	Alarm and Event – Event Log-External-B	AE-EL-E-B

Historical/Deprecated BIBBs

Alarm and event management		
☒	Alarm and Event – Alarm Summary-A	AE-ASUM-A
☒	Alarm and Event – Enrollment Summary-A	AE-ESUM-A
☒	Alarm and Event – Information-A	AE-INFO-A

Scheduling		
☐	Scheduling – Internal-B	SCHED-I-B
☐	Scheduling – External-B	SCHED-E-B
☒	Scheduling – View Modify-A	SCHED-VM-A
☒	Scheduling – Advanced View Modify-A	SCHED-AVM-A
☒	Scheduling – Weekly Schedule-A	SCHED-WS-A
☐	Scheduling – Weekly Schedule Internal-B	SCHED-WS-I-B
☐	Scheduling – Readable-B	SCHED-R-B

Historical/Deprecated BIBBs

☒	Scheduling – A	SCHED-A

Trending		
☐	Trending – Viewing and Modifying Trends Internal-B	T-VMT-I-B
☐	Trending – Viewing and Modifying Trends External-B	T-VMT-E-B
☐	Trending – Viewing and Modifying Multiple Values Internal-B	T-VMMV-I-B
☐	Trending – Viewing and Modifying Multiple Values External-B	T-VMMV-E-B
☒	Trending – Automated Multiple Value Retrieval-A	T-AMVR-A
☐	Trending – Automated Multiple Value Retrieval-B	T-AMVR-B
☒	Trending – View-A	T-V-A
☒	Trending – Advanced View and Modify-A	T-AVM-A
☒	Trending – Archival-A	T-A-A
☒	Trending – Automated Trend Retrieval-A	T-ATR-A
☐	Trending – Automated Trend Retrieval-B	T-ATR-B

Historical/Deprecated BIBBs

☒	Trending – Viewing and Modifying Trends-A	T-VMT-A
☒	Trending – Viewing and Modifying Multiple Values-A	T-VMMV-A

Device management		
☒	Device Management – Dynamic Device Binding-A	DM-DDB-A
☒	Device Management – Dynamic Device Binding-B	DM-DDB-B
☒	Device Management – Dynamic Object Binding-A	DM-DOB-A
☒	Device Management – Dynamic Object Binding-B	DM-DOB-B
☒	Device Management – DeviceCommunicationControl-A	DM-DCC-A
☐	Device Management – DeviceCommunicationControl-B	DM-DCC-B
☐	Device Management – Private Transfer-A	DM-PT-A
☐	Device Management – Private Transfer-B	DM-PT-B
☐	Device Management – Text Message-A	DM-TM-A
☐	Device Management – Text Message-B	DM-TM-B
☒	Device Management – TimeSynchronization-A	DM-TS-A

Device management

☐	Device Management – TimeSynchronization-B	DM-TS-B
☒	Device Management – UTCTimeSynchronization-A	DM-UTC-A
☐	Device Management – UTCTimeSynchronization-B	DM-UTC-B
☒	Device Management – ReinitializeDevice-A	DM-RD-A
☐	Device Management – ReinitializeDevice-B	DM-RD-B
☒	Device Management – Backup and Restore-A	DM-BR-A
☐	Device Management – Backup and Restore-B	DM-BR-B
☒	Device Management – Restart-A	DM-R-A
☐	Device Management – Restart-B	DM-R-B
☒	Device Management – List Manipulation-A	DM-LM-A
☐	Device Management – List Manipulation-B	DM-LM-B
☒	Device Management – Object Creation and Deletion-A	DM-OCD-A
☐	Device Management – Object Creation and Deletion-B	DM-OCD-B
☐	Device Management – Virtual Terminal-A	DM-VT-A
☐	Device Management – Virtual Terminal-B	DM-VT-B
☒	Device Management – Automatic Network Mapping-A	DM-ANM-A
☒	Device Management – Automatic Device Mapping-A	DM-ADM-A
☐	Device Management – Automatic Time Synchronization-A	DM-ATS-A
☒	Device Management – Manual Time Synchronization-A	DM-MTS-A

Network management

☐	Network Management – Connection Establishment-A	NM-CE-A
☐	Network Management – Connection Establishment-B	NM-CE-B
☐	Network Management – Router Configuration-A	NM-RC-A
☐	Network Management – Router Configuration-B	NM-RC-B

4.4 Standard object types supported

Only the device object is supported.

Device

Properties	Supported	Readable/ Writeable
Object_Identifier	☒	R
Object_Name	☒	R
Object_Type	☒	R
System_Status	☒	R
Vendor_Name	☒	R
Vendor_Identifier	☒	R
Model_Name	☒	R
Firmware_Revision	☒	R
Application_Software_Version	☒	R
Location	☒	R
Description	☒	R
Protocol_Version	☒	R
Protocol_Revision	☒	R
Protocol_Services_Supported	☒	R
Protocol_Object_Types_Supported	☒	R
Object_List	☒	R
Structured_Object_List	☐	R
Max_APDU_Length_Accepted	☒	R
Segmentation_Supported	☒	R
Max_Segments_Accepted	☒	R
VT_Classes_Supported	☐	R
Active_VT_Sessions	☐	R
Local_Time	☐	R
Local_Date	☐	R
UTC_Offset	☐	R
Daylight_Savings_Status	☐	R
APDU_Segment_Timeout	☒	R
APDU_Timeout	☒	R
Number_Of_APDU_Retries	☒	R
List_Of_Session_Keys	☐	R
Time_Synchronization_Recipients	☐	W
Max_Master	☐	R
Max_Info_Frames	☐	R
Device_Address_Binding	☒	R
Database_Revision	☒	R
Configuration_Files	☐	R
Last_Restore_Time	☐	R
Backup_Failure_Timeout	☐	R
Active_COV_Subscriptions	☐	R
Slave_Proxy_Enable	☐	R
Manual_Slave_Adress_Binding	☐	R

Properties	Supported	Readable/ Writeable
Auto_Slave_Discovery	☐	R
Slave_Address_Binding	☐	R
Last_Restart_Reason	☐	R
Time_Of_Device_Restart	☐	R
Restart_Notification_Recipients	☐	R
UTC_Time_Synchronization_Recipients	☐	W
Time_Synchronization_Interval	☐	R
Align_Intervals	☐	R
Interval_Offset	☐	R
Serial_Number	☐	R
Profile_Name	☐	R

4.5 Client supported object types

Object type	Supported	Can be created dynamically	Can be deleted dynamically
Analog Input	☒	☐	☐
Analog Output	☒	☐	☐
Analog Value	☒	☐	☐
Binary Input	☒	☐	☐
Binary Output	☒	☐	☐
Binary Value	☒	☐	☐
Calendar	☒	☒	☒
Command	☒	☐	☐
Device	☒	☐	☐
Event Enrollment	☒	☒	☒
File	☒	☒	☒
Group	☒	☐	☐
Loop	☒	☐	☐
Multi-State Input	☒	☐	☐
Multi-State Output	☒	☐	☐
Notification Class	☒	☒	☒
Program	☒	☐	☐
Schedule	☒	☒	☒
Averaging	☒	☐	☐
Multi-State Value	☒	☐	☐
Trend Log	☒	☒	☒
Life-Safety-Point	☐	☐	☐
Life-Safety-Zone	☐	☐	☐
Accumulator	☒	☐	☐
Pulse-Converter	☒	☐	☐
Event Log	☒	☒	☒
Global Group	☒	☐	☐
Trend Log Multiple	☒	☒	☒
Load Control	☒	☐	☐
Structured-View	☒	☐	☐
Access Door	☐	☐	☐
Access Credential	☐	☐	☐
Access Point	☐	☐	☐
Access Rights	☐	☐	☐
Access User	☐	☐	☐
Access Zone	☐	☐	☐
Credential Data Input	☐	☐	☐
Network Security	☒	☐	☐
Bitstring Value	☒	☐	☐
Characterstring Value	☒	☐	☐

Object type	Supported	Can be created dynamically	Can be deleted dynamically
Date Pattern Value	☒	☐	☐
Date Value	☒	☐	☐
Datetime Pattern Value	☒	☐	☐
Datetime Value	☒	☐	☐
Integer Value	☒	☐	☐
Large Analog Value	☒	☐	☐
Octetstring Value	☒	☐	☐
Positive Integer Value	☒	☐	☐
Time Pattern Value	☒	☐	☐
Time Value	☒	☐	☐
Notification Forwarder	☒	☐	☐
Alert Enrollment	☒	☐	☐

4.6 Segmentation capability

☒	Able to transmit segmented messages	Window size	4
☒	Able to receive segmented messages	Window size	4

4.7 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)	
☐	MS/TP slave (Clause 9), baud rate(s)	
☒	Point-To-Point, EIA 232 (Clause 10), baud rate(s)	: Max. 38400
☒	Point-To-Point, modem, (Clause 10), baud rate(s)	: Max. 38400
☒	LonTalk, (Clause 11), medium:	: TP/FT-10
☐	Other	

4.8 Device address binding

Is static device binding supported?	☐ Yes	☒ No

4.9 Networking options

☐	Router, Clause 6		
☐	Annex H, BACnet Tunnelling Router over IP		
☐	BACnet/IP Broadcast Management Device (BBMD)		
	Does the BBMD support registrations by Foreign Devices?	☐ Yes	☐ No

4.10 Character sets supported

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

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

5 Desigo PXM20 Operator Unit

Date	: 21 June 2013
Vendor name	: Siemens Building Technologies (Vendor ID 7)
Product name	: Desigo PX automation station
Product model number	: PXM20, PXM20-E
BACnet protocol version	: 1.12
Application software version	–
Firmware revision	: V5.10

5.1 Product description

The Desigo PXM20 operator unit ensures the convenient display and operation of Desigo PXC automation stations via BACnet network communication. The graphics based display with clear text and direct access via the keyboard ensures a most user-friendly operation.

All values visible in the system can be displayed in accordance with the defined operator profile. Typical displays: display of current values, set point and parameter settings, maintenance and error messages, alarm lists and single alarm messages with acknowledgement option and/or reset, definition of time schedulers (7-day schedules and exception programs), plant switching, login and password inputs. An integrated common alarm message system with acoustic and visual indication is provided.

5.2 BACnet standardized device profile (Annex L)

☐	BACnet Advanced Workstation	(B-AWS)
☐	BACnet Operator Workstation	(B-OWS)
☐	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)

5.3 BACnet interoperability building blocks supported (Annex K)

Data sharing

☒	Data Sharing – ReadProperty-A	DS-RP-A
☒	Data Sharing – ReadProperty-B	DS-RP-B
☒	Data Sharing – ReadPropertyMultiple-A	DS-RPM-A
☒	Data Sharing – ReadPropertyMultiple-B	DS-RPM-B
☒	Data Sharing – WriteProperty-A	DS-WP-A
☒	Data Sharing – WriteProperty-B	DS-WP-B
☐	Data Sharing – WritePropertyMultiple-A	DS-WPM-A
☐	Data Sharing – WritePropertyMultiple-B	DS-WPM-B
☒	Data Sharing – ChangeofValue -A	DS-COV-A
☐	Data Sharing – ChangeofValue -B	DS-COV-B
☒	Data Sharing – ChangeofValueProperty -A	DS-COVP-A
☐	Data Sharing – ChangeofValueProperty -B	DS-COVP-B
☐	Data Sharing – ChangeofValue-Unsolicited-A	DS-COVU-A
☐	Data Sharing – ChangeofValue-Unsolicited-B	DS-COVU-B
☐	Data Sharing – View-A	DS-V-A
☐	Data Sharing – Advanced View-A	DS-AV-A
☐	Data Sharing – Modify-A	DS-M-A
☐	Data Sharing – Advanced Modify-A	DS-AM-A

Alarm and event management

☒	Alarm and Event – Notification-A	AE-N-A
☐	Alarm and Event – Notification Internal-B	AE-N-I-B
☐	Alarm and Event – Notification External-B	AE-N-E-B
☒	Alarm and Event – ACK-A	AE-ACK-A
☐	Alarm and Event – ACK-B	AE-ACK-B
☐	Alarm and Event – Alarm Summary-A	AE-ASUM-A
☐	Alarm and Event – Alarm Summary-B	AE-ASUM-B
☐	Alarm and Event – Enrollment Summary-A	AE-ESUM-A
☐	Alarm and Event – Enrollment Summary-B	AE-ESUM-B
☒	Alarm and Event – Information-A	AE-INFO-A
☐	Alarm and Event – Information-B	AE-INFO-B
☐	Alarm and Event – LifeSafety-A	AE-LS-A
☐	Alarm and Event – LifeSafety-B	AE-LS-B
☐	Alarm and Event – View Notifications-A	AE-VN-A
☐	Alarm and Event – Advanced View Notifications-A	AE-AVN-A
☐	Alarm and Event – View and Modify-A	AE-VM-A
☐	Alarm and Event – Advanced View and Modify-A	AE-AVM-A
☐	Alarm and Event – Alarm Summary View-A	AE-AS-A
☐	Alarm and Event – Event Log View-A	AE-ELV-A
☐	Alarm and Event – Event Log View and Modify-A	AE-ELVM-A
☐	Alarm and Event – Event Log-Internal-B	AE-EL-I-B
☐	Alarm and Event – Event Log-External-B	AE-EL-E-B

Scheduling

☒	Scheduling – A	SCHED-A
☐	Scheduling – Internal-B	SCHED-I-B
☐	Scheduling – External-B	SCHED-E-B
☐	Scheduling – Advanced View Modify-A	SCH-AVM-A
☐	Scheduling – View Modify-A	SCH-VM-A
☐	Scheduling – Weekly Schedule-A	SCH-WS-A
☐	Scheduling – Weekly Schedule Internal-B	SCH-WS-I-B
☐	Scheduling – Readable-B	SCH-R-B

The A device is capable to present and modify Schedule objects of the forms defined in Protocol_Revision 0 and Protocol_Revision 4.

Trending

☐	Trending – Viewing and Modifying Trends-A	T-VMT-A
☐	Trending – Viewing and Modifying Internal-B	T-VM-I-B
☐	Trending – Viewing and Modifying External-B	T-VM-E-B
☐	Trending – Viewing and Modifying Multiple Values-A	T-VMMV-A
☐	Trending – Viewing and Modifying Multiple Values Internal-B	T-VMMV-I-B
☐	Trending – Viewing and Modifying Multiple Values External -B	T-VMMV-E-B
☐	Trending – Automated Multiple Value Retrieval-A	T-AMVR-A
☐	Trending – Automated Multiple Value Retrieval-B	T-AMVR-B
☐	Trending – View-A	T-V-A
☐	Trending – Advanced View and Modify-A	T-AVM-A
☐	Trending – Archival-A	T-A-A
☐	Trending – Automated Trend Retrieval-A	T-ATR-A
☐	Trending – Automated Trend Retrieval-B	T-ATR-B

Device management

☒	Device Management – Dynamic Device Binding-A	DM-DDB-A
☒	Device Management – Dynamic Device Binding-B	DM-DDB-B
☒	Device Management – Dynamic Object Binding-A	DM-DOB-A
☒	Device Management – Dynamic Object Binding-B	DM-DOB-B
☐	Device Management – DeviceCommunicationControl-A	DM-DCC-A
☐	Device Management – DeviceCommunicationControl-B	DM-DCC-B
☐	Device Management – Private Transfer-A	DM-PT-A
☐	Device Management – Private Transfer-B	DM-PT-B
☐	Device Management – Text Message-A	DM-TM-A
☐	Device Management – Text Message-B	DM-TM-B
☐	Device Management – TimeSynchronization-A	DM-TS-A
☐	Device Management – TimeSynchronization-B	DM-TS-B
☒	Device Management – UTCTimeSynchronization-A	DM-UTC-A
☐	Device Management – UTCTimeSynchronization-B	DM-UTC-B
☐	Device Management – ReinitializeDevice-A	DM-RD-A
☐	Device Management – ReinitializeDevice-B	DM-RD-B
☐	Device Management – Backup and Restore-A	DM-BR-A
☐	Device Management – Backup and Restore-B	DM-BR-B
☐	Device Management – Restart-A	DM-R-A
☐	Device Management – Restart-B	DM-R-B
☐	Device Management – List Manipulation-A	DM-LM-A
☐	Device Management – List Manipulation-B	DM-LM-B
☐	Device Management – Object Creation and Deletion-A	DM-OCD-A
☐	Device Management – Object Creation and Deletion-B	DM-OCD-B
☐	Device Management – Virtual Terminal-A	DM-VT-A
☐	Device Management – Virtual Terminal-B	DM-VT-B
☐	Device Management – Automatic Network Mapping-A	DM-ANM-A
☐	Device Management – Automatic Device Mapping-A	DM-ADM-A
☐	Device Management – Automatic Time Synchronization-A	DM-ATS-A
☐	Device Management – Manual Time Synchronization-A	DM-MTS-A

Network management

☐	Network Management – Connection Establishment-A	NM-CE-A
☐	Network Management – Connection Establishment-B	NM-CE-B
☐	Network Management – Router Configuration-A	NM-RC-A
☐	Network Management – Router Configuration-B	NM-RC-B

5.4 Standard object types supported

Object type	Supported	Can be created dynamically	Can be deleted dynamically
Analog Input	☐	☐	☐
Analog Output	☐	☐	☐
Analog Value	☐	☐	☐
Binary Input	☐	☐	☐
Binary Output	☐	☐	☐
Binary Value	☐	☐	☐
Calendar	☐	☐	☐
Command	☐	☐	☐
Device	☒	☐	☐
Event Enrollment	☐	☐	☐
File	☐	☐	☐
Group	☐	☐	☐
Loop	☐	☐	☐
Multi-State Input	☐	☐	☐
Multi-State Output	☐	☐	☐
Notification Class	☐	☐	☐
Program	☐	☐	☐
Schedule	☐	☐	☐
Averaging	☐	☐	☐
Multi-State Value	☐	☐	☐
Trend Log	☐	☐	☐
Life-Safety-Point	☐	☐	☐
Life-Safety-Zone	☐	☐	☐
Accumulator	☐	☐	☐
Pulse-Converter	☐	☐	☐
Event Log	☐	☐	☐
Global Group	☐	☐	☐
Trend Log Multiple	☐	☐	☐
Load Control	☐	☐	☐
Structured-View	☐	☐	☐
Access Door	☐	☐	☐
(unassigned)	☐	☐	☐
Access Credential	☐	☐	☐
Access Point	☐	☐	☐
Access Rights	☐	☐	☐
Access User	☐	☐	☐
Access Zone	☐	☐	☐
Credential Data Input	☐	☐	☐
Network Security	☐	☐	☐
Bitstring Value	☐	☐	☐
Characterstring Value	☐	☐	☐

Object type	Supported	Can be created dynamically	Can be deleted dynamically
Date Pattern Value	☐	☐	☐
Date Value	☐	☐	☐
Datetime Pattern Value	☐	☐	☐
Datetime Value	☐	☐	☐
Integer Value	☐	☐	☐
Large Analog Value	☐	☐	☐
Octetstring Value	☐	☐	☐
Positive Integer Value	☐	☐	☐
Time Pattern Value	☐	☐	☐
Time Value	☐	☐	☐

Device

Properties	supported	Readable/ Writable	Range restrictions
Object_Identifier	☒	R	
Object_Name	☒	R	
Object_Type	☒	R	
System_Status	☒	R	
Vendor_Name	☒	R	
Vendor_Identifier	☒	R	
Model_Name	☒	R	
Firmware_Revision	☒	R	
Application_Software_Version	☒	R	
Location	☒	R	
Description	☒	R	
Protocol_Version	☒	R	
Protocol_Revision	☒	R	
Protocol_Services_Supported	☒	R	
Protocol_Object_Types_Supported	☒	R	
Object_List	☐		
Structured_Object_List	☐		
Max_APDU_Length_Accepted	☒	R	
Segmentation_Supported	☒	R	
Max_Segments_Accepted	☒	R	
VT_Classes_Supported	☐		
Active_VT_Sessions	☐		
Local_Time	☐		
Local_Date	☐		
UTC_Offset	☐		
Daylight_Savings_Status	☐		
APDU_Segment_Timeout	☒	R	
APDU_Timeout	☒	R	
Number_Of_APDU_Retries	☒	R	
List_Of_Session_Keys	☐		
Time_Synchronization_Recipients	☐		
Max_Master	☐		
Max_Info_Frames	☐		
Device_Address_Binding	☒	R	
Database_Revision	☒	R	
Configuration_Files	☐		
Last_Restore_Time	☐		
Backup_Failure_Timeout	☐		
Active_COV_Subscriptions	☐		
Slave_Proxy_Enable	☐		
Manual_Slave_Adress_Binding	☐		
Auto_Slave_Discovery	☐		
Slave_Address_Binding	☐		

Device

Properties	supported	Readable/ Writable	Range restrictions
Last_Restart_Reason	☐		
Time_Of_Device_Restart	☐		
Restart_Notification_Recipients	☐		
UTC_Time_Synchronization_Recipients	☐		
Time_Synchronization_Interval	☐		
Align_Intervals	☐		
Interval_Offset	☐		
Profile_Name	☐		

5.5 Client supported object types

Object type	Supported	Can be created dynamically	Can be deleted dynamically
Analog Input	☒	☐	☐
Analog Output	☒	☐	☐
Analog Value	☒	☐	☐
Binary Input	☒	☐	☐
Binary Output	☒	☐	☐
Binary Value	☒	☐	☐
Calendar	☒	☐	☐
Command	☒	☐	☐
Device	☒	☐	☐
Event Enrollment	☒	☐	☐
File	☐	☐	☐
Group	☐	☐	☐
Loop	☒	☐	☐
Multi-State Input	☒	☐	☐
Multi-State Output	☒	☐	☐
Notification Class	☒	☐	☐
Program	☒	☐	☐
Schedule	☒	☐	☐
Averaging	☐	☐	☐
Multi-State Value	☒	☐	☐
Trend Log	☒	☐	☐
Life-Safety-Point	☐	☐	☐
Life-Safety-Zone	☐	☐	☐
Accumulator	☒	☐	☐
Pulse-Converter	☒	☐	☐
Event Log	☒	☐	☐
Global Group	☐	☐	☐
Trend Log Multiple	☒	☐	☐
Load Control	☒	☐	☐
Structured-View	☐	☐	☐
Access Door	☐	☐	☐
(unassigned)	☐	☐	☐
Access Credential	☐	☐	☐
Access Point	☐	☐	☐
Access Rights	☐	☐	☐
Access User	☐	☐	☐
Access Zone	☐	☐	☐
Credential Data Input	☐	☐	☐
Network Security	☐	☐	☐
Bitstring Value	☐	☐	☐
Characterstring Value	☐	☐	☐

Object type	Supported	Can be created dynamically	Can be deleted dynamically
Date Pattern Value	☐	☐	☐
Date Value	☐	☐	☐
Datetime Pattern Value	☐	☐	☐
Datetime Value	☐	☐	☐
Integer Value	☐	☐	☐
Large Analog Value	☐	☐	☐
Octetstring Value	☐	☐	☐
Positive Integer Value	☐	☐	☐
Time Pattern Value	☐	☐	☐
Time Value	☐	☐	☐

5.6 Segmentation capability

☒	Able to transmit segmented messages	Window size	4
☒	Able to receive segmented messages	Window size	4

5.7 Data Link Layer options

PXM20	PXM20-E		
☐	☒	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)	
☐	☐	MS/TP slave (Clause 9), baud rate(s)	
☒	☐	Point-To-Point, EIA 232 (Clause 10), baud rate(s)	: Max. 38400
☐	☐	Point-To-Point, modem, (Clause 10), baud rate(s)	: Max. 38400
☒	☐	LonTalk, (Clause 11), medium:	: TP/FT-10
☐	☐	Other	

5.8 Device address binding

Is static device binding supported?	☐ Yes	☒ No

5.9 Networking options

☐	Router, Clause 6		
☐	Annex H, BACnet Tunnelling Router over IP		
☐	BACnet/IP Broadcast Management Device (BBMD)		
	Does the BBMD support registrations by Foreign Devices?	☐ Yes	☐ No

5.10 Character sets supported

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

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

Note

- Outgoing character strings are communicated in the selected character set.
- Incoming character strings with character sets other than ISO 8859-1 will be mapped to ISO8859-1 internally. If the mapping is not possible, the character string is not accepted.

6 Desigo PXG3.M BACnet Router

Date	: 28 April 2017
Vendor name	: Siemens Building Technologies (Vendor ID 7)
Product name	: Desigo BACnet Router
Product model number	: PXG3.M-1
BACnet protocol version	: 1.13
Application software version	: –
Firmware revision	: V1.21.xx.xx

6.1 Product description

The DESIGO PXG3-M BACnet router connects a BACnet MS/TP channel to a BACnet/IP network. In addition, the BACnet router supports the functionality of the BBMD (BACnet Broadcast Management Device) in order to distribute the BACnet broadcast messages across the IP routers including foreign device support.
The configuration can be performed through the built-in Web server using a standard Web browser.

6.2 BACnet standardized device profile (Annex L)

☐	BACnet Advanced Workstation	(B-AWS)
☐	BACnet Operator Workstation	(B-OWS)
☐	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)

6.3 BACnet interoperability building blocks supported (Annex K)

Data sharing

☐	Data Sharing – ReadProperty-A	DS-RP-A
☒	Data Sharing – ReadProperty-B	DS-RP-B
☐	Data Sharing – ReadPropertyMultiple-A	DS-RPM-A
☒	Data Sharing – ReadPropertyMultiple-B	DS-RPM-B
☐	Data Sharing – WriteProperty-A	DS-WP-A
☒	Data Sharing – WriteProperty-B	DS-WP-B
☐	Data Sharing – WritePropertyMultiple-A	DS-WPM-A
☒	Data Sharing – WritePropertyMultiple-B	DS-WPM-B
☐	Data Sharing – ChangeofValue -A	DS-COV-A
☐	Data Sharing – ChangeofValue -B	DS-COV-B
☐	Data Sharing – ChangeofValueProperty -A	DS-COVP-A
☒	Data Sharing – ChangeofValueProperty -B	DS-COVP-B
☐	Data Sharing – ChangeofValue-Unsolicited-A	DS-COVU-A
☐	Data Sharing – ChangeofValue-Unsolicited-B	DS-COVU-B
☐	Data Sharing – View-A	DS-V-A
☐	Data Sharing – Advanced View-A	DS-AV-A
☐	Data Sharing – Modify-A	DS-M-A
☐	Data Sharing – Advanced Modify-A	DS-AM-A

DS-COV-B is not supported because the supported objects of this device do not have a primary value

Alarm and event management

☐	Alarm and Event – Notification-A	AE-N-A
☐	Alarm and Event – Notification Internal-B	AE-N-I-B
☐	Alarm and Event – Notification External-B	AE-N-E-B
☐	Alarm and Event – ACK-A	AE-ACK-A
☐	Alarm and Event – ACK-B	AE-ACK-B
☐	Alarm and Event – Alarm Summary-A	AE-ASUM-A
☐	Alarm and Event – Alarm Summary-B	AE-ASUM-B
☐	Alarm and Event – Enrollment Summary-A	AE-ESUM-A
☐	Alarm and Event – Enrollment Summary-B	AE-ESUM-B
☐	Alarm and Event – Information-A	AE-INFO-A
☐	Alarm and Event – Information-B	AE-INFO-B
☐	Alarm and Event – LifeSafety-A	AE-LS-A
☐	Alarm and Event – LifeSafety-B	AE-LS-B
☐	Alarm and Event – View Notifications-A	AE-VN-A
☐	Alarm and Event – Advanced View Notifications-A	AE-AVN-A
☐	Alarm and Event – View and Modify-A	AE-VM-A
☐	Alarm and Event – Advanced View and Modify-A	AE-AVM-A
☐	Alarm and Event – Alarm Summary View-A	AE-AS-A
☐	Alarm and Event – Event Log View-A	AE-ELV-A
☐	Alarm and Event – Event Log View and Modify-A	AE-ELVM-A
☐	Alarm and Event – Event Log-Internal-B	AE-EL-I-B
☐	Alarm and Event – Event Log-External-B	AE-EL-E-B

Scheduling

☐	Scheduling – A	SCHED-A
☐	Scheduling – Internal-B	SCHED-I-B
☐	Scheduling – External-B	SCHED-E-B
☐	Scheduling – Advanced View Modify-A	SCH-AVM-A
☐	Scheduling – View Modify-A	SCH-VM-A
☐	Scheduling – Weekly Schedule-A	SCH-WS-A
☐	Scheduling – Weekly Schedule Internal-B	SCH-WS-I-B
☐	Scheduling – Readable-B	SCH-R-B

Trending

☐	Trending – Viewing and Modifying Trends-A	T-VMT-A
☐	Trending – Viewing and Modifying Internal-B	T-VM-I-B
☐	Trending – Viewing and Modifying External-B	T-VM-E-B
☐	Trending – Viewing and Modifying Multiple Values-A	T-VMMV-A
☐	Trending – Viewing and Modifying Multiple Values Internal-B	T-VMMV-I-B
☐	Trending – Viewing and Modifying Multiple Values External -B	T-VMMV-E-B
☐	Trending – Automated Multiple Value Retrieval-A	T-AMVR-A
☐	Trending – Automated Multiple Value Retrieval-B	T-AMVR-B
☐	Trending – View-A	T-V-A
☐	Trending – Advanced View and Modify-A	T-AVM-A
☐	Trending – Archival-A	T-A-A
☐	Trending – Automated Trend Retrieval-A	T-ATR-A
☐	Trending – Automated Trend Retrieval-B	T-ATR-B

Device management

☐	Device Management – Dynamic Device Binding-A	DM-DDB-A
☒	Device Management – Dynamic Device Binding-B	DM-DDB-B
☐	Device Management – Dynamic Object Binding-A	DM-DOB-A
☒	Device Management – Dynamic Object Binding-B	DM-DOB-B
☐	Device Management – DeviceCommunicationControl-A	DM-DCC-A
☒	Device Management – DeviceCommunicationControl-B	DM-DCC-B
☐	Device Management – Private Transfer-A	DM-PT-A
☐	Device Management – Private Transfer-B	DM-PT-B
☐	Device Management – Text Message-A	DM-TM-A
☐	Device Management – Text Message-B	DM-TM-B
☐	Device Management – TimeSynchronization-A	DM-TS-A
☒	Device Management – TimeSynchronization-B	DM-TS-B
☐	Device Management – UTCTimeSynchronization-A	DM-UTC-A
☒	Device Management – UTCTimeSynchronization-B	DM-UTC-B
☐	Device Management – ReinitializeDevice-A	DM-RD-A
☒	Device Management – ReinitializeDevice-B	DM-RD-B
☐	Device Management – Backup and Restore-A	DM-BR-A
☒	Device Management – Backup and Restore-B	DM-BR-B
☐	Device Management – Restart-A	DM-R-A
☒	Device Management – Restart-B	DM-R-B
☐	Device Management – List Manipulation-A	DM-LM-A
☒	Device Management – List Manipulation-B	DM-LM-B
☐	Device Management – Object Creation and Deletion-A	DM-OCD-A
☐	Device Management – Object Creation and Deletion-B	DM-OCD-B
☐	Device Management – Virtual Terminal-A	DM-VT-A
☐	Device Management – Virtual Terminal-B	DM-VT-B
☐	Device Management – Automatic Network Mapping-A	DM-ANM-A
☐	Device Management – Automatic Device Mapping-A	DM-ADM-A
☐	Device Management – Automatic Time Synchronization-A	DM-ATS-A
☐	Device Management – Manual Time Synchronization-A	DM-MTS-A

Network management

☐	Network Management – Connection Establishment-A	NM-CE-A
☐	Network Management – Connection Establishment-B	NM-CE-B
☐	Network Management – Router Configuration-A	NM-RC-A
☐	Network Management – Router Configuration-B	NM-RC-B

6.4 Standard object types supported

Object type	Supported	Can be created dynamically	Can be deleted dynamically
Analog Input	☐	☐	☐
Analog Output	☐	☐	☐
Analog Value	☐	☐	☐
Binary Input	☐	☐	☐
Binary Output	☐	☐	☐
Binary Value	☐	☐	☐
Calendar	☐	☐	☐
Command	☐	☐	☐
Device	☒	☐	☐
Event Enrollment	☐	☐	☐
File	☒	☐	☐
Group	☐	☐	☐
Loop	☐	☐	☐
Multi-State Input	☐	☐	☐
Multi-State Output	☐	☐	☐
Notification Class	☐	☐	☐
Program	☐	☐	☐
Schedule	☐	☐	☐
Averaging	☐	☐	☐
Multi-State Value	☐	☐	☐
Trend Log	☐	☐	☐
Life-Safety-Point	☐	☐	☐
Life-Safety-Zone	☐	☐	☐
Accumulator	☐	☐	☐
Pulse-Converter	☐	☐	☐
Event Log	☐	☐	☐
Global Group	☐	☐	☐
Trend Log Multiple	☐	☐	☐
Load Control	☐	☐	☐
Structured-View	☐	☐	☐
Access Door	☐	☐	☐
(unassigned)	☐	☐	☐
Access Credential	☐	☐	☐
Access Point	☐	☐	☐
Access Rights	☐	☐	☐
Access User	☐	☐	☐
Access Zone	☐	☐	☐
Credential Data Input	☐	☐	☐
Network Security	☐	☐	☐
Bitstring Value	☐	☐	☐
Characterstring Value	☐	☐	☐

Object type	Supported	Can be created dynamically	Can be deleted dynamically
Date Pattern Value	☐	☐	☐
Date Value	☐	☐	☐
Datetime Pattern Value	☐	☐	☐
Datetime Value	☐	☐	☐
Integer Value	☐	☐	☐
Large Analog Value	☐	☐	☐
Octetstring Value	☐	☐	☐
Positive Integer Value	☐	☐	☐
Time Pattern Value	☐	☐	☐
Time Value	☐	☐	☐

Device

Properties	supported	Readable/ Writable	Range restrictions
Object_Identifier	☒	R	
Object_Name	☒	R	
Object_Type	☒	R	
System_Status	☒	R	
Vendor_Name	☒	R	
Vendor_Identifier	☒	R	
Model_Name	☒	R	
Firmware_Revision	☒	R	
Application_Software_Version	☒	R	
Location	☒	W	
Description	☒	W	
Protocol_Version	☒	R	
Protocol_Revision	☒	R	
Protocol_Services_Supported	☒	R	
Protocol_Object_Types_Supported	☒	R	
Object_List	☒	R	
Structured_Object_List	☐		
Max_APDU_Length_Accepted	☒	R	
Segmentation_Supported	☒	R	
Max_Segments_Accepted	☒	R	
VT_Classes_Supported	☐		
Active_VT_Sessions	☐		
Local_Time	☒	R	
Local_Date	☒	R	
UTC_Offset	☒	R	
Daylight_Savings_Status	☒	R	
APDU_Segment_Timeout	☒	R	
APDU_Timeout	☒	R	
Number_Of_APDU_Retries	☒	R	
List_Of_Session_Keys	☐		
Time_Synchronization_Recipients	☐		
Max_Master	☒	R	
Max_Info_Frames	☒	R	
Device_Address_Binding	☒	R	
Database_Revision	☒	R	
Configuration_Files	☒	R	
Last_Restore_Time	☒	R	
Backup_Failure_Timeout	☒	W	0…65535
Backup_Preparation_Time	☒	R	
Restore_Preparation_Time	☒	R	
Restore_Completion_Time	☒	R	
Backup_And_Restore_State	☒	R	
Active_COV_Subscriptions	☒	R	
Slave_Proxy_Enable	☒	W	

Device

Manual_Slave_Adress_Binding	☒	W	
Auto_Slave_Discovery	☒	W	
Slave_Address_Binding	☒	R	
Last_Restart_Reason	☒	R	
Time_Of_Device_Restart	☒	R	
Restart_Notification_Recipients	☒	W	
UTC_Time_Synchronization_Recipients	☐		
Time_Synchronization_Interval	☐		
Align_Intervals	☐		
Interval_Offset	☐		
Profile_Name	☒	R	

File

Properties	supported	Readable/ Writable	Range restrictions
Object_Identifier	☒	R	
Object_Name	☒	W	
Object_Type	☒	R	
Description	☒	W	
File_Type	☒	R	
File_Size	☒	W	
Modification_Date	☒	R	
Archive	☒	W	
Read_Only	☒	R	
File_Access_Method	☒	R	
Profile_Name	☒	R	

6.5 Segmentation capability

☒	Able to transmit segmented messages	Window size	configurable
☒	Able to receive segmented messages	Window size	configurable

6.6 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 : 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	

6.7 Device address binding

Is static device binding supported?	☐ Yes	☒ No

6.8 Networking options

☒	Router, Clause 6		
☐	Annex H, BACnet Tunnelling Router over IP		
☒	BACnet/IP Broadcast Management Device (BBMD)		
	Does the BBMD support registrations by Foreign Devices?	☒ Yes	☐ No

6.9 Character sets supported

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

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

7 Desigo PXG3.L BACnet Router

Date	: 28 April 2017
Vendor name	: Siemens Building Technologies (Vendor ID 7)
Product name	: Desigo BACnet Router
Product model number	: PXG3.L-1
BACnet protocol version	: 1.13
Application software version	: –
Firmware revision	: V1.21.xx.xx

7.1 Product description

The DESIGO PXG3-L BACnet router connects:

- a BACnet MS/TP channel to a BACnet/IP network
- a BACnet MS/TP channel to a BACnet/Lon network
- a BACnet/Lon network to a BACnet/IP network

In addition, the BACnet router supports the functionality of the BBMD (BACnet Broadcast Management Device) in order to distribute the BACnet broadcast messages across the IP routers including foreign device support.
The configuration can be performed through the built-in Web server using a standard Web browser.

7.2 BACnet standardized device profile (Annex L)

☐	BACnet Advanced Workstation	(B-AWS)
☐	BACnet Operator Workstation	(B-OWS)
☐	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)

7.3 BACnet interoperability building blocks supported (Annex K)

Data sharing

☐	Data Sharing – ReadProperty-A	DS-RP-A
☒	Data Sharing – ReadProperty-B	DS-RP-B
☐	Data Sharing – ReadPropertyMultiple-A	DS-RPM-A
☒	Data Sharing – ReadPropertyMultiple-B	DS-RPM-B
☐	Data Sharing – WriteProperty-A	DS-WP-A
☒	Data Sharing – WriteProperty-B	DS-WP-B
☐	Data Sharing – WritePropertyMultiple-A	DS-WPM-A
☒	Data Sharing – WritePropertyMultiple-B	DS-WPM-B
☐	Data Sharing – ChangeofValue -A	DS-COV-A
☐	Data Sharing – ChangeofValue -B	DS-COV-B
☐	Data Sharing – ChangeofValueProperty -A	DS-COVP-A
☒	Data Sharing – ChangeofValueProperty -B	DS-COVP-B
☐	Data Sharing – ChangeofValue-Unsolicited-A	DS-COVU-A
☐	Data Sharing – ChangeofValue-Unsolicited-B	DS-COVU-B
☐	Data Sharing – View-A	DS-V-A
☐	Data Sharing – Advanced View-A	DS-AV-A
☐	Data Sharing – Modify-A	DS-M-A
☐	Data Sharing – Advanced Modify-A	DS-AM-A

DS-COV-B is not supported because the supported objects of this device do not have a primary value

Alarm and event management

☐	Alarm and Event – Notification-A	AE-N-A
☐	Alarm and Event – Notification Internal-B	AE-N-I-B
☐	Alarm and Event – Notification External-B	AE-N-E-B
☐	Alarm and Event – ACK-A	AE-ACK-A
☐	Alarm and Event – ACK-B	AE-ACK-B
☐	Alarm and Event – Alarm Summary-A	AE-ASUM-A
☐	Alarm and Event – Alarm Summary-B	AE-ASUM-B
☐	Alarm and Event – Enrollment Summary-A	AE-ESUM-A
☐	Alarm and Event – Enrollment Summary-B	AE-ESUM-B
☐	Alarm and Event – Information-A	AE-INFO-A
☐	Alarm and Event – Information-B	AE-INFO-B
☐	Alarm and Event – LifeSafety-A	AE-LS-A
☐	Alarm and Event – LifeSafety-B	AE-LS-B
☐	Alarm and Event – View Notifications-A	AE-VN-A
☐	Alarm and Event – Advanced View Notifications-A	AE-AVN-A
☐	Alarm and Event – View and Modify-A	AE-VM-A
☐	Alarm and Event – Advanced View and Modify-A	AE-AVM-A
☐	Alarm and Event – Alarm Summary View-A	AE-AS-A
☐	Alarm and Event – Event Log View-A	AE-ELV-A
☐	Alarm and Event – Event Log View and Modify-A	AE-ELVM-A
☐	Alarm and Event – Event Log-Internal-B	AE-EL-I-B
☐	Alarm and Event – Event Log-External-B	AE-EL-E-B

Scheduling

☐	Scheduling – A	SCHED-A
☐	Scheduling – Internal-B	SCHED-I-B
☐	Scheduling – External-B	SCHED-E-B
☐	Scheduling – Advanced View Modify-A	SCH-AVM-A
☐	Scheduling – View Modify-A	SCH-VM-A
☐	Scheduling – Weekly Schedule-A	SCH-WS-A
☐	Scheduling – Weekly Schedule Internal-B	SCH-WS-I-B
☐	Scheduling – Readable-B	SCH-R-B

Trending

☐	Trending – Viewing and Modifying Trends-A	T-VMT-A
☐	Trending – Viewing and Modifying Internal-B	T-VM-I-B
☐	Trending – Viewing and Modifying External-B	T-VM-E-B
☐	Trending – Viewing and Modifying Multiple Values-A	T-VMMV-A
☐	Trending – Viewing and Modifying Multiple Values Internal-B	T-VMMV-I-B
☐	Trending – Viewing and Modifying Multiple Values External -B	T-VMMV-E-B
☐	Trending – Automated Multiple Value Retrieval-A	T-AMVR-A
☐	Trending – Automated Multiple Value Retrieval-B	T-AMVR-B
☐	Trending – View-A	T-V-A
☐	Trending – Advanced View and Modify-A	T-AVM-A
☐	Trending – Archival-A	T-A-A
☐	Trending – Automated Trend Retrieval-A	T-ATR-A
☐	Trending – Automated Trend Retrieval-B	T-ATR-B

Device management

☐	Device Management – Dynamic Device Binding-A	DM-DDB-A
☒	Device Management – Dynamic Device Binding-B	DM-DDB-B
☐	Device Management – Dynamic Object Binding-A	DM-DOB-A
☒	Device Management – Dynamic Object Binding-B	DM-DOB-B
☐	Device Management – DeviceCommunicationControl-A	DM-DCC-A
☒	Device Management – DeviceCommunicationControl-B	DM-DCC-B
☐	Device Management – Private Transfer-A	DM-PT-A
☐	Device Management – Private Transfer-B	DM-PT-B
☐	Device Management – Text Message-A	DM-TM-A
☐	Device Management – Text Message-B	DM-TM-B
☐	Device Management – TimeSynchronization-A	DM-TS-A
☒	Device Management – TimeSynchronization-B	DM-TS-B
☐	Device Management – UTCTimeSynchronization-A	DM-UTC-A
☒	Device Management – UTCTimeSynchronization-B	DM-UTC-B
☐	Device Management – ReinitializeDevice-A	DM-RD-A
☒	Device Management – ReinitializeDevice-B	DM-RD-B
☐	Device Management – Backup and Restore-A	DM-BR-A
☒	Device Management – Backup and Restore-B	DM-BR-B
☐	Device Management – Restart-A	DM-R-A
☐	Device Management – Restart-B	DM-R-B
☐	Device Management – List Manipulation-A	DM-LM-A
☒	Device Management – List Manipulation-B	DM-LM-B
☐	Device Management – Object Creation and Deletion-A	DM-OCD-A
☐	Device Management – Object Creation and Deletion-B	DM-OCD-B
☐	Device Management – Virtual Terminal-A	DM-VT-A
☐	Device Management – Virtual Terminal-B	DM-VT-B
☐	Device Management – Automatic Network Mapping-A	DM-ANM-A
☐	Device Management – Automatic Device Mapping-A	DM-ADM-A
☐	Device Management – Automatic Time Synchronization-A	DM-ATS-A
☐	Device Management – Manual Time Synchronization-A	DM-MTS-A

Network management

☐	Network Management – Connection Establishment-A	NM-CE-A
☐	Network Management – Connection Establishment-B	NM-CE-B
☐	Network Management – Router Configuration-A	NM-RC-A
☐	Network Management – Router Configuration-B	NM-RC-B

7.4 Standard object types supported

Object type	Supported	Can be created dynamically	Can be deleted dynamically
Analog Input	☐	☐	☐
Analog Output	☐	☐	☐
Analog Value	☐	☐	☐
Binary Input	☐	☐	☐
Binary Output	☐	☐	☐
Binary Value	☐	☐	☐
Calendar	☐	☐	☐
Command	☐	☐	☐
Device	☒	☐	☐
Event Enrollment	☐	☐	☐
File	☒	☐	☐
Group	☐	☐	☐
Loop	☐	☐	☐
Multi-State Input	☐	☐	☐
Multi-State Output	☐	☐	☐
Notification Class	☐	☐	☐
Program	☐	☐	☐
Schedule	☐	☐	☐
Averaging	☐	☐	☐
Multi-State Value	☐	☐	☐
Trend Log	☐	☐	☐
Life-Safety-Point	☐	☐	☐
Life-Safety-Zone	☐	☐	☐
Accumulator	☐	☐	☐
Pulse-Converter	☐	☐	☐
Event Log	☐	☐	☐
Global Group	☐	☐	☐
Trend Log Multiple	☐	☐	☐
Load Control	☐	☐	☐
Structured-View	☐	☐	☐
Access Door	☐	☐	☐
(unassigned)	☐	☐	☐
Access Credential	☐	☐	☐
Access Point	☐	☐	☐
Access Rights	☐	☐	☐
Access User	☐	☐	☐
Access Zone	☐	☐	☐
Credential Data Input	☐	☐	☐
Network Security	☐	☐	☐
Bitstring Value	☐	☐	☐
Characterstring Value	☐	☐	☐

Object type	Supported	Can be created dynamically	Can be deleted dynamically
Date Pattern Value	☐	☐	☐
Date Value	☐	☐	☐
Datetime Pattern Value	☐	☐	☐
Datetime Value	☐	☐	☐
Integer Value	☐	☐	☐
Large Analog Value	☐	☐	☐
Octetstring Value	☐	☐	☐
Positive Integer Value	☐	☐	☐
Time Pattern Value	☐	☐	☐
Time Value	☐	☐	☐

Device

Properties	supported	Readable/ Writable	Range restrictions
Object_Identifier	☒	R	
Object_Name	☒	R	
Object_Type	☒	R	
System_Status	☒	R	
Vendor_Name	☒	R	
Vendor_Identifier	☒	R	
Model_Name	☒	R	
Firmware_Revision	☒	R	
Application_Software_Version	☒	R	
Location	☒	W	
Description	☒	W	
Protocol_Version	☒	R	
Protocol_Revision	☒	R	
Protocol_Services_Supported	☒	R	
Protocol_Object_Types_Supported	☒	R	
Object_List	☒	R	
Structured_Object_List	☐		
Max_APDU_Length_Accepted	☒	R	
Segmentation_Supported	☒	R	
Max_Segments_Accepted	☒	R	
VT_Classes_Supported	☐		
Active_VT_Sessions	☐		
Local_Time	☒	R	
Local_Date	☒	R	
UTC_Offset	☒	R	
Daylight_Savings_Status	☒	R	
APDU_Segment_Timeout	☒	R	
APDU_Timeout	☒	R	
Number_Of_APDU_Retries	☒	R	
List_Of_Session_Keys	☐		
Time_Synchronization_Recipients	☐		
Max_Master	☒	R	
Max_Info_Frames	☒	R	

Device

Properties	supported	Readable/ Writable	Range restrictions
Device_Address_Binding	☒	R	
Database_Revision	☒	R	
Configuration_Files	☒	R	
Last_Restore_Time	☒	R	
Backup_Failure_Timeout	☒	W	0...65535
Backup_Preparation_Time	☒	R	
Restore_Preparation_Time	☒	R	
Restore_Completion_Time	☒	R	
Backup_And_Restore_State	☒	R	
Active_COV_Subscriptions	☒	R	
Slave_Proxy_Enable	☒	W	
Manual_Slave_Adress_Binding	☒	W	
Auto_Slave_Discovery	☒	W	
Slave_Address_Binding	☒	R	
Last_Restart_Reason	☒	R	
Time_Of_Device_Restart	☒	R	
Restart_Notification_Recipients	☒	W	
UTC_Time_Synchronization_Recipients	☐		
Time_Synchronization_Interval	☐		
Align_Intervals	☐		
Interval_Offset	☐		
Profile_Name	☒	R	

File

Properties	supported	Readable/ Writable	Range restrictions
Object_Identifier	☒	R	
Object_Name	☒	W	
Object_Type	☒	R	
Description	☒	W	
File_Type	☒	R	
File_Size	☒	W	
Modification_Date	☒	R	
Archive	☒	W	
Read_Only	☒	R	
File_Access_Method	☒	R	
Profile_Name	☒	R	

7.5 Segmentation capability

☒	Able to transmit segmented messages	Window size	configurable
☒	Able to receive segmented messages	Window size	configurable

7.6 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 : 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:	: TP/FT-10
☐	Other	

7.7 Device address binding

Is static device binding supported?	☐ Yes	☒ No

7.8 Networking options

☒	Router, Clause 6		
☐	Annex H, BACnet Tunnelling Router over IP		
☒	BACnet/IP Broadcast Management Device (BBMD)		
	Does the BBMD support registrations by Foreign Devices?	☒ Yes	☐ No

7.9 Character sets supported

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

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

8 SX Open

Date	: 22 February 2012
Vendor name	: Siemens Building Technologies (Vendor ID 7)
Product name	: Desigo SX-Open
Product model number	: V2.1
BACnet protocol version	: 1.5
Application software version	: –
Firmware revision	: 2.01.xx

8.1 Product description

SX Open is a generic framework to develop gateways from several field buses to BACnet in an efficient way. SX Open provides server-functionality but act as BACnet client as well for real peer-to-peer communication.

8.2 BACnet standardized device profile (Annex L)

☐	BACnet Advanced Workstation	(B-AWS)
☐	BACnet Operator Workstation	(B-OWS)
☐	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)

8.3 BACnet interoperability building blocks supported (Annex K)

Data sharing

☒	Data Sharing – ReadProperty-A	DS-RP-A
☒	Data Sharing – ReadProperty-B	DS-RP-B
☐	Data Sharing – ReadPropertyMultiple-A	DS-RPM-A
☒	Data Sharing – ReadPropertyMultiple-B	DS-RPM-B
☒	Data Sharing – WriteProperty-A	DS-WP-A
☒	Data Sharing – WriteProperty-B	DS-WP-B
☐	Data Sharing – WritePropertyMultiple-A	DS-WPM-A
☐	Data Sharing – WritePropertyMultiple-B	DS-WPM-B
☒	Data Sharing – ChangeofValue -A	DS-COV-A
☒	Data Sharing – ChangeofValue -B	DS-COV-B
☐	Data Sharing – ChangeofValueProperty -A	DS-COVP-A
☐	Data Sharing – ChangeofValueProperty -B	DS-COVP-B
☐	Data Sharing – ChangeofValue-Unsolicited-A	DS-COVU-A
☐	Data Sharing – ChangeofValue-Unsolicited-B	DS-COVU-B
☐	Data Sharing – View-A	DS-V-A
☐	Data Sharing – Advanced View-A	DS-AV-A
☐	Data Sharing – Modify-A	DS-M-A
☐	Data Sharing – Advanced Modify-A	DS-AM-A

Alarm and event management

☐	Alarm and Event – Notification-A	AE-N-A
☒	Alarm and Event – Notification Internal-B	AE-N-I-B
☐	Alarm and Event – Notification External-B	AE-N-E-B
☐	Alarm and Event – ACK-A	AE-ACK-A
☒	Alarm and Event – ACK-B	AE-ACK-B
☐	Alarm and Event – Alarm Summary-A	AE-ASUM-A
☒	Alarm and Event – Alarm Summary-B	AE-ASUM-B
☐	Alarm and Event – Enrollment Summary-A	AE-ESUM-A
☐	Alarm and Event – Enrollment Summary-B	AE-ESUM-B
☐	Alarm and Event – Information-A	AE-INFO-A
☒	Alarm and Event – Information-B	AE-INFO-B
☐	Alarm and Event – LifeSafety-A	AE-LS-A
☐	Alarm and Event – LifeSafety-B	AE-LS-B
☐	Alarm and Event – View Notifications-A	AE-VN-A
☐	Alarm and Event – Advanced View Notifications-A	AE-AVN-A
☐	Alarm and Event – View and Modify-A	AE-VM-A
☐	Alarm and Event – Advanced View and Modify-A	AE-AVM-A
☐	Alarm and Event – Alarm Summary View-A	AE-AS-A
☐	Alarm and Event – Event Log View-A	AE-ELV-A
☐	Alarm and Event – Event Log View and Modify-A	AE-ELVM-A
☐	Alarm and Event – Event Log-Internal-B	AE-EL-I-B
☐	Alarm and Event – Event Log-External-B	AE-EL-E-B

Scheduling

☐	Scheduling – A	SCHED-A
☒	Scheduling – Internal-B	SCHED-I-B
☐	Scheduling – External-B	SCHED-E-B
☐	Scheduling – Advanced View Modify-A	SCH-AVM-A
☐	Scheduling – View Modify-A	SCH-VM-A
☐	Scheduling – Weekly Schedule-A	SCH-WS-A
☐	Scheduling – Weekly Schedule Internal-B	SCH-WS-I-B
☐	Scheduling – Readable-B	SCH-R-B

Trending

☐	Trending – Viewing and Modifying Trends-A	T-VMT-A
☒	Trending – Viewing and Modifying Internal-B	T-VM-I-B
☐	Trending – Viewing and Modifying External-B	T-VM-E-B
☐	Trending – Viewing and Modifying Multiple Values-A	T-VMMV-A
☐	Trending – Viewing and Modifying Multiple Values Internal-B	T-VMMV-I-B
☐	Trending – Viewing and Modifying Multiple Values External -B	T-VMMV-E-B
☐	Trending – Automated Multiple Value Retrieval-A	T-AMVR-A
☐	Trending – Automated Multiple Value Retrieval-B	T-AMVR-B
☐	Trending – View-A	T-V-A
☐	Trending – Advanced View and Modify-A	T-AVM-A
☐	Trending – Archival-A	T-A-A
☐	Trending – Automated Trend Retrieval-A	T-ATR-A
☒	Trending – Automated Trend Retrieval-B	T-ATR-B

Device management

☒	Device Management – Dynamic Device Binding-A	DM-DDB-A
☒	Device Management – Dynamic Device Binding-B	DM-DDB-B
☒	Device Management – Dynamic Object Binding-A	DM-DOB-A
☒	Device Management – Dynamic Object Binding-B	DM-DOB-B
☐	Device Management – DeviceCommunicationControl-A	DM-DCC-A
☒	Device Management – DeviceCommunicationControl-B	DM-DCC-B
☐	Device Management – Private Transfer-A	DM-PT-A
☐	Device Management – Private Transfer-B	DM-PT-B
☐	Device Management – Text Message-A	DM-TM-A
☐	Device Management – Text Message-B	DM-TM-B
☐	Device Management – TimeSynchronization-A	DM-TS-A
☒	Device Management – TimeSynchronization-B	DM-TS-B
☐	Device Management – UTCTimeSynchronization-A	DM-UTC-A
☒	Device Management – UTCTimeSynchronization-B	DM-UTC-B
☐	Device Management – ReinitializeDevice-A	DM-RD-A
☒	Device Management – ReinitializeDevice-B	DM-RD-B
☐	Device Management – Backup and Restore-A	DM-BR-A
☐	Device Management – Backup and Restore-B	DM-BR-B

Device management

☐	Device Management – Restart-A	DM-R-A
☐	Device Management – Restart-B	DM-R-B
☐	Device Management – List Manipulation-A	DM-LM-A
☒	Device Management – List Manipulation-B	DM-LM-B
☐	Device Management – Object Creation and Deletion-A	DM-OCD-A
☐	Device Management – Object Creation and Deletion-B	DM-OCD-B
☐	Device Management – Virtual Terminal-A	DM-VT-A
☐	Device Management – Virtual Terminal-B	DM-VT-B
☐	Device Management – Automatic Network Mapping-A	DM-ANM-A
☐	Device Management – Automatic Device Mapping-A	DM-ADM-A
☐	Device Management – Automatic Time Synchronization-A	DM-ATS-A
☐	Device Management – Manual Time Synchronization-A	DM-MTS-A

Network management

☐	Network Management – Connection Establishment-A	NM-CE-A[1)]
☐	Network Management – Connection Establishment-B	NM-CE-B[2)]
☐	Network Management – Router Configuration-A	NM-RC-A
☒	Network Management – Router Configuration-B	NM-RC-B

8.4 Standard object types supported

Object type	Supported	Can be created dynamically	Can be deleted dynamically
Analog Input	☒	☐	☐
Analog Output	☒	☐	☐
Analog Value	☒	☐	☐
Binary Input	☒	☐	☐
Binary Output	☒	☐	☐
Binary Value	☒	☐	☐
Calendar	☒	☐	☐
Command	☐	☐	☐
Device	☒	☐	☐
Event Enrollment	☐	☐	☐
File	☐	☐	☐
Group	☐	☐	☐
Loop	☐	☐	☐
Multi-State Input	☒	☐	☐
Multi-State Output	☒	☐	☐
Notification Class	☒	☐	☐
Program	☐	☐	☐
Schedule	☒	☐	☐
Averaging	☐	☐	☐
Multi-State Value	☒	☐	☐
Trend Log	☒	☐	☐
Life-Safety-Point	☐	☐	☐
Life-Safety-Zone	☐	☐	☐
Accumulator	☐	☐	☐
Pulse-Converter	☐	☐	☐
Event Log	☐	☐	☐
Global Group	☐	☐	☐
Trend Log Multiple	☐	☐	☐
Load Control	☐	☐	☐
Structured-View	☐	☐	☐
Access Door	☐	☐	☐
(unassigned)	☐	☐	☐
Access Credential	☐	☐	☐
Access Point	☐	☐	☐
Access Rights	☐	☐	☐
Access User	☐	☐	☐
Access Zone	☐	☐	☐
Credential Data Input	☐	☐	☐
Network Security	☐	☐	☐
Bitstring Value	☐	☐	☐
Characterstring Value	☐	☐	☐

Object type	Supported	Can be created dynamically	Can be deleted dynamically
Date Pattern Value	☐	☐	☐
Date Value	☐	☐	☐
Datetime Pattern Value	☐	☐	☐
Datetime Value	☐	☐	☐
Integer Value	☐	☐	☐
Large Analog Value	☐	☐	☐
Octetstring Value	☐	☐	☐
Positive Integer Value	☐	☐	☐
Time Pattern Value	☐	☐	☐
Time Value	☐	☐	☐

Analog Input

Properties	supported	Readable/ Writable	Range restrictions
Object_Identifier	☒	R	
Object_Name	☒	R	
Object_Type	☒	R	
Present_Value	☒	W	
Description	☒	R	
Device_Type	☐		
Status_Flags	☒	R	
Event_State	☒	R	
Reliability	☒	W	
Out_Of_Service	☒	W	
Update_Interval	☐		
Units	☒	R	
Min_Pres_Value	☒	R	
Max_Pres_Value	☒	R	
Resolution	☒	R	
COV_Increment	☒	W	0 ... Max_Pres_Value
Time_Delay	☒	W	
Notification_Class	☒	W	
High_Limit	☒	W	Min_Pres_Value ... Max_Pres_Value *and* High_Limit > Low_Limit
Low_Limit	☒	W	Min_Pres_Value ... Max_Pres_Value *and* High_Limit > Low_Limit
Deadband	☒	W	0 ... Max_Pres_Value
Limit_Enable	☒	W	
Event_Enable	☒	W	
Acked_Transitions	☒	R	
Notify_Type	☒	W	
Event_Time_Stamps	☒	R	
Profile_Name	☒	R	

Analog Output

Properties	supported	Readable/ Writable	Range restrictions
Object_Identifier	☒	R	
Object_Name	☒	R	
Object_Type	☒	R	
Present_Value	☒	W	
Description	☒	R	
Device_Type	☐		
Status_Flags	☒	R	
Event_State	☒	R	
Reliability	☒	W	
Out_Of_Service	☒	W	
Units	☒	R	
Min_Pres_Value	☒	R	
Max_Pres_Value	☒	R	
Resolution	☒	R	
Priority_Array	☒	R	
Relinquish_Default	☒	W	Min_Pres_Value ... Max_Pres_Value
COV_Increment	☒	R	0 ... Max_Pres_Value
Time_Delay	☒	W	
Notification_Class	☒	W	
High_Limit	☒	W	Min_Pres_Value ... Max_Pres_Value *and* High_Limit > Low_Limit
Low_Limit	☒	W	Min_Pres_Value ... Max_Pres_Value *and* High_Limit > Low_Limit
Deadband	☒	W	0 ... Max_Pres_Value
Limit_Enable	☒	W	
Event_Enable	☒	W	
Acked_Transitions	☒	R	
Notify_Type	☒	W	
Event_Time_Stamps	☒	R	
Profile_Name	☒	R	

Analog Value

Properties	supported	Readable/ Writable	Range restrictions
Object_Identifier	☒	R	
Object_Name	☒	R	
Object_Type	☒	R	
Present_Value	☒	W	
Description	☒	R	
Status_Flags	☒	R	
Event_State	☒	R	
Reliability	☒	W	
Out_Of_Service	☒	W	
Units	☒	R	
Priority_Array	☒	R	
Relinquish_Default	☒	W	Min_Pres_Value ... Max_Pres_Value
COV_Increment	☒	W	0 .. Max_Pres_Value
Time_Delay	☒	W	
Notification_Class	☒	W	
High_Limit	☒	W	Min_Pres_Value ... Max_Pres_Value *and* High_Limit > Low_Limit
Low_Limit	☒	W	Min_Pres_Value ... Max_Pres_Value *and* High_Limit > Low_Limit
Deadband	☒	W	0 ... Max_Pres_Value
Limit_Enable	☒	W	
Event_Enable	☒	W	
Acked_Transitions	☒	R	
Notify_Type	☒	W	
Event_Time_Stamps	☒	R	
Profile_Name	☒	R	

Analog Value (object tag = 300)

Properties	supported	Readable/ Writable	Range restrictions
Object_Identifier	☒	R	
Object_Name	☒	R	
Object_Type	☒	R	
Present_Value	☒	W	
Description	☒	R	
Status_Flags	☒	R	
Event_State	☒	R	
Out_Of_Service	☒	R	
Units	☒	R	
COV_Increment	☒	R	
Profile_Name	☒	R	

Binary Input

Properties	supported	Readable/ Writable	Range restrictions
Object_Identifier	☒	R	
Object_Name	☒	R	
Object_Type	☒	R	
Present_Value	☒	W	
Description	☒	R	
Device_Type	☐		
Status_Flags	☒	R	
Event_State	☒	R	
Reliability	☒	W	
Out_Of_Service	☒	W	
Polarity	☒	W	
Inactive_Text	☒	R	
Active_Text	☒	R	
Change_Of_State_Time	☒	R	
Change_Of_State_Count	☒	W	
Time_Of_State_Count_Reset	☒	R	
Elapsed_Active_Time	☒	R	
Time_Of_Active_Time_Reset	☒	R	
Time_Delay	☒	W	0 .. 65535
Notification_Class	☒	W	
Alarm_Value	☒	W	
Event_Enable	☒	W	
Acked_Transitions	☒	R	
Notify_Type	☒	W	
Event_Time_Stamps	☒	R	
Profile_Name	☒	R	

Binary Output

Properties	supported	Readable/ Writable	Range restrictions
Object_Identifier	☒	R	
Object_Name	☒	R	
Object_Type	☒	R	
Present_Value	☒	W	
Description	☒	R	
Device_Type	☐		
Status_Flags	☒	R	
Event_State	☒	R	
Reliability	☒	W	
Out_Of_Service	☒	W	
Polarity	☒	W	
Inactive_Text	☒	R	
Active_Text	☒	R	
Change_Of_State_Time	☒	R	
Change_Of_State_Count	☒	W	
Time_Of_State_Count_Reset	☒	R	
Elapsed_Active_Time	☒	W	
Time_Of_Active_Time_Reset	☒	R	
Minimum_Off_Time	☒	W	0 .. 65535
Minimum_On_Time	☒	W	0 .. 65535
Priority_Array	☒	R	
Relinquish_Default	☒	W	
Time_Delay	☒	W	0 .. 65535
Notification_Class	☒	W	
Feedback_Value	☒	R	
Event_Enable	☒	W	
Acked_Transitions	☒	R	
Notify_Type	☒	W	
Event_Time_Stamps	☒	R	
Profile_Name	☒	R	

Binary Value

Properties	supported	Readable/ Writable	Range restrictions
Object_Identifier	☒	R	
Object_Name	☒	R	
Object_Type	☒	R	
Present_Value	☒	W	
Description	☒	R	
Status_Flags	☒	R	
Event_State	☒	R	
Reliability	☒	W	
Out_Of_Service	☒	W	
Inactive_Text	☒	R	
Active_Text	☒	R	
Change_Of_State_Time	☒	R	
Change_Of_State_Count	☒	W	
Time_Of_State_Count_Reset	☒	R	
Elapsed_Active_Time	☒	W	
Time_Of_Active_Time_Reset	☒	R	
Minimum_Off_Time	☒	W	0 .. 65535
Minimum_On_Time	☒	W	0 .. 65535
Priority_Array	☒	R	
Relinquish_Default	☒	W	
Time_Delay	☒	W	0 .. 65535
Notification_Class	☒	W	
Alarm_Value	☒	W	
Event_Enable	☒	W	
Acked_Transitions	☒	R	
Notify_Type	☒	R	
Event_Time_Stamps	☒	R	
Profile_Name	☒	R	

Binary Value (object tag = 301)

Properties	supported	Readable/ Writable	Range restrictions
Object_Identifier	☒	R	
Object_Name	☒	R	
Object_Type	☒	R	
Present_Value	☒	W	
Description	☒	R	
Status_Flags	☒	R	
Event_State	☒	R	
Out_Of_Service	☒	R	
Profile_Name	☒	R	

Calendar

Properties	supported	Readable/ Writable	Range restrictions
Object_Identifier	☒	R	
Object_Name	☒	R	
Object_Type	☒	R	
Description	☒	R	
Present_Value	☒	R	
Date_List	☒	W	Max. 20
Profile_Name	☒	R	

Device

Properties	supported	Readable/ Writable	Range restrictions
Object_Identifier	☒	R	
Object_Name	☒	R	
Object_Type	☒	R	
System_Status	☒	R	
Vendor_Name	☒	R	
Vendor_Identifier	☒	R	
Model_Name	☒	R	
Firmware_Revision	☒	R	
Application_Software_Version	☒	R	
Location	☒	R	
Description	☒	R	
Protocol_Version	☒	R	
Protocol_Revision	☒	R	
Protocol_Services_Supported	☒	R	
Protocol_Object_Types_Supported	☒	R	
Object_List	☒	R	
Structured_Object_List	☐		
Max_APDU_Length_Accepted	☒	R	
Segmentation_Supported	☒	R	
Max_Segments_Accepted	☒	R	
VT_Classes_Supported	☐		
Active_VT_Sessions	☐		
Local_Time	☒	R	
Local_Date	☒	R	
UTC_Offset	☒	R	
Daylight_Savings_Status	☒	R	
APDU_Segment_Timeout	☒	R	
APDU_Timeout	☒	R	
Number_Of_APDU_Retries	☒	R	
List_Of_Session_Keys	☐		
Time_Synchronization_Recipients	☐		
Max_Master	☐		
Max_Info_Frames	☐		
Device_Address_Binding	☒	R	
Database_Revision	☒	R	
Configuration_Files	☐		
Last_Restore_Time	☐		
Backup_Failure_Timeout	☐		
Active_COV_Subscriptions	☒	R	
Slave_Proxy_Enable	☐		
Manual_Slave_Adress_Binding	☐		
Auto_Slave_Discovery	☐		
Slave_Address_Binding	☐		

Device

Properties	supported	Readable/ Writable	Range restrictions
Last_Restart_Reason	☐		
Time_Of_Device_Restart	☐		
Restart_Notification_Recipients	☐		
UTC_Time_Synchronization_Recipients	☐		
Time_Synchronization_Interval	☐		
Align_Intervals	☐		
Interval_Offset	☐		
Profile_Name	☒	R	

Multistate Input

Properties	supported	Readable/ Writable	Range restrictions
Object_Identifier	☒	R	
Object_Name	☒	R	
Object_Type	☒	R	
Present_Value	☒	W	1 … Number_Of_States
Description	☒	R	
Device_Type	☒	R	
Status_Flags	☒	R	
Event_State	☒	R	
Reliability	☒	W	
Out_Of_Service	☒	W	
Number_Of_States	☒	R	
State_Text	☒	R	
Time_Delay	☒	W	0 .. 65535
Notification_Class	☒	W	
Alarm_Values	☒	W	
Fault_Values	☒	W	
Event_Enable	☒	W	
Acked_Transitions	☒	R	
Notify_Type	☒	W	
Event_Time_Stamps	☒	R	
Profile_Name	☒	R	

Multistate Output

Properties	supported	Readable/ Writable	Range restrictions
Object_Identifier	☒	R	
Object_Name	☒	R	
Object_Type	☒	R	
Present_Value	☒	W	1 .. Number_Of_States
Description	☒	R	
Device_Type	☒	R	
Status_Flags	☒	R	
Event_State	☒	R	
Reliability	☒	W	
Out_Of_Service	☒	W	
Number_Of_States	☒	R	
State_Text	☒	R	
Priority_Array	☒	R	
Relinquish_Default	☒	W	1 .. Number_Of_States
Time_Delay	☒	W	0 .. 65535
Notification_Class	☒	W	
Feedback_Value	☒	R	
Event_Enable	☒	W	
Acked_Transitions	☒	R	
Notify_Type	☒	W	
Event_Time_Stamps	☒	R	
Profile_Name	☒	R	

Multistate Value

Properties	supported	Readable/ Writable	Range restrictions
Object_Identifier	☒	R	
Object_Name	☒	R	
Object_Type	☒	R	
Present_Value	☒	W	1 .. Number_Of_States
Description	☒	R	
Status_Flags	☒	R	
Event_State	☒	R	
Reliability	☒	W	
Out_Of_Service	☒	W	
Number_Of_States	☒	R	
State_Text	☒	R	
Priority_Array	☒	R	
Relinquish_Default	☒	W	1 .. Number_Of_States
Time_Delay	☒	W	0 .. 65535
Notification_Class	☒	W	
Alarm_Values	☒	W	
Fault_Values	☒	W	
Event_Enable	☒	W	
Acked_Transitions	☒	R	
Notify_Type	☒	W	
Event_Time_Stamps	☒	R	
Profile_Name	☒	R	

Multistate Value (object tag = 302)

Properties	supported	Readable/ Writable	Range restrictions
Object_Identifier	☒	R	
Object_Name	☒	R	
Object_Type	☒	R	
Present_Value	☒	W	1…Number_Of_States
Description	☒	R	
Status_Flags	☒	R	
Event_State	☒	R	
Out_Of_Service	☒	R	
Number_Of_States	☒	R	
Profile_Name	☒	R	

Notification Class

Properties	supported	Readable/ Writable	Range restrictions
Object_Identifier	☒	R	
Object_Name	☒	R	
Object_Type	☒	R	
Description	☒	R	
Notification_Class	☒	R	
Priority	☒	W	
Ack_Required	☒	W	
Recipient_List	☒	W	Max. 20
Profile_Name	☒	R	

Schedule

Properties	supported	Readable/ Writable	Range restrictions
Object_Identifier	☒	R	
Object_Name	☒	R	
Object_Type	☒	R	
Present_Value	☒	R	
Description	☒	R	
Effective_Period	☒	W	
Weekly_Schedule	☒	W	Max. 6 per day
Exception_Schedule	☒	W	Max. 10, max. 4 per exception
Schedule_Default	☒	W	
List_Of_Object_Property_References	☒	W	1 ref
Priority_For_Writing	☒	W	
Status_Flags	☒	R	
Reliability	☒	W	
Out_Of_Service	☒	W	
Profile_Name	☒	R	

Trend Log

Properties	supported	Readable/ Writable	Range restrictions
Object_Identifier	☒	R	
Object_Name	☒	R	
Object_Type	☒	R	
Description	☒	R	
Enable	☒	W	
Start_Time	☒	W	
Stop_Time	☒	W	
Log_DeviceObjectProperty	☒	R	
Log_Interval	☒	W	
COV_Resubscription_Interval	☒	W	
Client_COV_Increment	☒	W	
Stop_When_Full	☒	W	
Buffer_Size	☒	R	
Log_Buffer	☒	R	
Record_Count	☒	W	
Total_Record_Count	☒	R	
Notification_Threshold	☒	W	
Records_Since_Notification	☒	R	
Last_Notify_Record	☒	R	
Event_State	☒	R	
Notification_Class	☒	W	
Event_Enable	☒	R	
Acked_Transitions	☒	R	
Notify_Type	☒	R	
Event_Time_Stamps	☒	R	
Profile_Name	☒	R	
Logging_Type	☒	R	
Align_Intervals	☐		
Interval_Offset	☐		
Trigger	☐		
Status_Flags	☒	R	
Reliability	☒	R	

8.5 Segmentation capability

☒	Able to transmit segmented messages	Window size	4
☒	Able to receive segmented messages	Window size	4

8.6 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)	
☐	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	:

8.7 Device address binding

Is static device binding supported?	☐ Yes	☒ No

8.8 Networking options

☐	Router, Clause 6 (remote management functionality/BACnet PTP)		
☐	Annex H, BACnet Tunnelling Router over IP		
☒	BACnet/IP Broadcast Management Device (BBMD) Number of BDT entries: 10		
	Does the BBMD support registrations by foreign devices?	☒ Yes	☐ No

8.9 Character sets supported

Note

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

☒ ANSI X3.4	☐ IBM / Microsoft DBCS	☒ ISO 8859-1[1)]
☒ ISO 10646 (UCS-2)	☐ ISO 10646 (UCS-4)	☐ JIS C 6226

Siemens Switzerland Ltd
Building Technologies Division
International Headquarters
Gubelstrasse 22
6301 Zug
Switzerland
Tel. +41 41-724 24 24
www.siemens.com/buildingtechnologies

© Siemens Switzerland Ltd, 2013
Subject to change