

## Desigo<sup>™</sup> CC MP 4.0 BACnet Protocol Implementation Conformance Statement (PICS) Basic documentation

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# 1 Desigo CC Workstation

Date	: August 22, 2018
Vendor name	: Siemens Building Technologies (Vendor ID 7)
Product name	: Desigo CC Workstation
Product model number	: 4.0
BACnet protocol version	: 15
Application software version	: 4.0
Firmware revision	: n/a

### 1.1 **Product Description**

The Desigo CC management platform presents a single point of entry for users to operate, monitor and optimize building automation, fire safety and security systems or a combination thereof.

Desigo CC is a flexible, full client-server architecture allowing scalability from small and medium to large and complex systems. The platform provides customizable and market-specific distributions.

#### 1.2 **BACnet Standardized Device Profile (Annex L)**

Devices may claim to be multiple device types. For example, a device may claim to be both a B-BC and the B-RTR. Devices that claim multiple device profiles shall only combine capabilities from different device families, with the exception that multiple profiles may be selected from the Miscellaneous family. For example, a device may claim the B-BC, B-RTR, and BBMD profiles, but a device may not claim both the B-BC and B-SS profiles.

Operat	or Interfaces	
	BACnet Cross-Domain Advanced Operator Workstation	(B-XAWS)
×	BACnet Advanced Operator Workstation	(B-AWS)
	BACnet Operator Workstation	(B-OWS)
	BACnet Operator Display	(B-OD)
Life Sa	fety Operator Interfaces.	
	BACnet Advanced Life Safety Workstation	(B-ALSWS)
	BACnet Life Safety Workstation	(B-LSWS)
	BACnet Life Safety Annunciator Panel	(B-LSAP)
Access	Control Operator Interfaces.	
	BACnet Advanced Access Control Workstation	(B-AACWS)
	BACnet Access Control Workstation	(B-ACWS)
	BACnet Access Control Security Display	(B-ACSD)
Contro	llers	
	BACnet Building Controller	(B-BC)
	BACnet Advanced Application Controller	(B-AAC)
	BACnet Application Specific Controller	(B-ASC)
	BACnet Smart Actuator	(B-SA)
	BACnet Smart Sensor	(B-SS)
Life Sa	fety Controllers	
	BACnet Advanced Life Safety Controller	(B-ALSC)
	BACnet Life Safety Controller	(B-LSC)
Access	Control Controllers	
	BACnet Advanced Access Control Controller	(B-AACC)
	BACnet Access Control Controller	(B-ACC)
Miscell	aneous	
	BACnet Router	(B-RTR)
	BACnet Gateway	(B-GW)
	BACnet Broadcast Management Device	(B-BBMD)
	BACnet Access Control Door Controller	(B-ACDC)
	BACnet Access Control Credential Reader	(B-ACCR)
The B-GENERAL device profile is not included in any of the profile families and is never claimed in conjunction with any other device profile, except those from the Miscellaneous family.		
	BACnet General	(B-GENERAL)

### 1.3 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
	Data Sharing – WriteGroup-A	DS-WG-A
	Data Sharing – WriteGroup-Internal-B	DS-WG-I-B
	Data Sharing – WriteGroup-External-B	DS-WG-E-B
	Data Sharing – Value Source Information-B	DS-VSI-B
	Data Sharing – Change Of Value Multiple-A	DS-COVM-A
	Data Sharing – Change Of Value Multiple-B	DS-COVM-B
	Data Sharing – Life Safety View-A	DS-LSV-A
	Data Sharing – Life Safety Advanced View-A	DS-LSAV-A
	Data Sharing – Life Safety Modify-A	DS-LSM-A
	Data Sharing – Life Safety Advanced Modify-A	DS-LSAM-A
	Data Sharing – Access Control View-A	DS-ACV-A
	Data Sharing – Access Control Advanced View-A	DS-ACAV-A
	Data Sharing – Access Control Modify-A	DS-ACM-A
	Data Sharing – Access Control Advanced Modify-A	DS-ACAM-A
	Data Sharing – Access Control User Configuration-A	DS-ACUC-A
	Data Sharing – Access Control User Configuration-B	DS-ACUC-B
	Data Sharing – Access Control Site Configuration-A	DS-ACSC-A
	Data Sharing – Access Control Site Configuration-B	DS-ACSC-B
	Data Sharing – Access Control Access Door-A	DS-ACAD-A
	Data Sharing – Access Control Access Door-B	DS-ACAD-B
	Data Sharing – Access Control Credential Data Input-A	DS-ACCDI-A
	Data Sharing – Access Control Credential Data Input-B	DS-ACCDI-B

#### 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 – Acknowledge-A	AE-ACK-A
	Alarm and Event – Acknowledge-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
	Alarm and Event – Notification Forwarder-B	AE-NF-B
	Alarm and Event – Notification Forwarder-Internal-B	AE-NF-I-B
	Alarm and Event – Configurable Recipient Lists-B	AE-CRL-B
	Alarm and Event – Temporary Event Subscription-A	AE-TES-A
	Alarm and Event – Life Safety View Notifications-A	AE-LSVN-A
	Alarm and Event – Life Safety Advanced View Notifications-A	AE-LSAVN-A
	Alarm and Event – Life Safety View and Modify-A	AE-LSVM-A
	Alarm and Event – Life Safety Advanced View and Modify-A	AE-LSAVM-A
	Alarm and Event – Access Control-A	AE-AC-A
	Alarm and Event – Access Control-B	AE-AC-B
	Alarm and Event – Access Control Advanced View Notifications-A	AE-ACAVN-A
	Alarm and Event – Access Control View and Modify-A	AE-ACVM-A
	Alarm and Event – Access Control Advanced View and Modify-A	AE-ACAVM-A

#### Historical/Deprecated BIBBs

×	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 – Readonly-B	SCHED-R-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 – Timer-Internal-B	SCHED-TMR-I-B
	Scheduling – Timer-External-B	SCHED-TMR-E-B

#### Historical/Deprecated BIBBs

×	Scheduling – A	SCHED-A
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#### Trending

	Trending – Viewing and Modifying Internal-B	T-VMT-I-B
	Trending – Viewing and Modifying External-B	T-VMT-E-B
×	Trending – Automated Trend Retrieval-A	T-ATR-A
	Trending – Automated Trend Retrieval-B	T-ATR-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

#### 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 – 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
	Device Management – Slave Proxy-View and Modify-A	DM-SP-VM-A
	Device Management – Slave Proxy-B	DM-SP-B

#### **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
	Network Management – BBMD Configuration-A	NM-BBMDC-A
	Network Management – BBMD Configuration-B	NM-BBMDC-B
	Network Management – Foreign Device Registration-A	NM-FDR-A

### Gateway

Gateway – Virtual Network-B	GW-VN-B
Gateway – Embedded Objects-B	GW-EO-B

#### **Network Security**

Network Security – Secure Device	NS-SD
Network Security – Encrypted Device	NS-ED
Network Security – Multi-Application Device	NS-MAD
Network Security – Device Master Key-A	NS-DMK-A
Network Security – Device Master Key-B	NS-DMK-B
Network Security – Key Server	NS-KS
Network Security – Temporary Key Server	NS-TKS
Network Security – Secure Router	NS-SR
Network Security – Security Proxy	NS-SP

Object type	Supported	Can be created dynamically	Can be deleted dynamically
Analog Input	×		
Analog Output	×		
Analog Value	×		
Averaging	×		
Binary Input	×		
Binary Output	×		
Binary Value	×		
Calendar	×	×	×
Command	×	×	×
Device	×		
Event Enrollment	×	×	×
File	×		
Group	×		
Life-Safety-Point	×		
Life-Safety-Zone	×		
Loop	×		
Multi-State Input	×		
Multi-State Output	×		
Multi-State Value	×		
Notification Class	×	×	×
Program	×		
Pulse-Converter	×		
Schedule	×	×	×
Trend Log	×	×	×
Access Door			
Event Log	×		
Load Control	×		
Structured-View	×		
Trend Log Multiple	×	×	×
Access Point			
Access Zone			
Access User			
Access Rights			
Access Credential			
Credential Data Input			
Characterstring Value	×		
Datetime Value	×		
Large Analog Value	×		
Bitstring Value	×		
Octetstring Value	×		
Time Value	×		
Integer Value	×		
Positive Integer Value			

## 1.4 Client Supported Object Types

Object type	Supported	Can be created dynamically	Can be deleted dynamically
Date Value	×		
Datetime Pattern Value	×		
Time Pattern Value	×		
Date Pattern Value	×		
Network Security	×		
Global Group	×		
Notification Forwarder	×		
Alert Enrollment	×		
Channel	×		
Lighting Output	×		
Binary Lighting Output			
Network Port			
Timer			
Elevator Group			
Lift			
Escalator			
Accumulator	×		

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		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	
		R	
Daylight_Savings_Status	×	R	
APDU_Segment_Timeout	×	R	
APDU_Timeout	×	R	
Number_Of_APDU_Retries		IX IX	
List_Of_Session_Keys		W	
Time_Synchronization_Recipients		vv	
Max_Master			
Max_Info_Frames		R	
Device_Address_Binding			
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			
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	

### 1.5 Segmentation Capability

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

### 1.6 Data Link Layer Options

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

	ARCNET (ATA 878.1), 2.5 Mb. (Clause 8)	
	ARCNET (ATA 878.1), EIA-485 (Clause 8),	
	baud rate(s)	
×	BACnet IP, (Annex J)	
×	BACnet IP, (Annex J),	BDT entries: 250
	BACnet Broadcast Management Device (BBMD)	FDT entries: 16
	BACnet IP, (Annex J),	
	Network Address Translation (NAT Traversal)	
	BACnet IPv6, (Annex U)	
	BACnet IPv6, (Annex U),	BDT entries:
	BACnet Broadcast Management Device (BBMD)	FDT entries:
	BACnet/ZigBee (Annex O)	
×	Ethernet, ISO 8802-3 (Clause 7)	
	LonTalk, ISO/IEC 14908.1 (Clause 11), medium:	: TP/FT-10
	ISO 8802-3, Ethernet (Clause 7)	
	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
	Other	

### 1.7 Device Address Binding

Is static device binding supported?	X Yes	
8 11		

### 1.8 Networking Options

Router, Clause 6 - List all routing configurations,
e.g., ARCNET-Ethernet, Ethernet-MS/TP, etc.
Annex H, BACnet Tunnelling Router over IP

### 1.9 Character Sets Supported

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

ISO 10646 (UTF-8)	IBM / Microsoft DBCS	ISO 8859-1
ISO 10646 (UCS-2)	ISO 10646 (UCS-4)	□ JIS X 0208

### 1.10 Gateway Options

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

If this product is a communication gateway which presents a network of virtual BACnet devices, a separate PICS shall be provided that describes the functionality of the virtual BACnet devices. That PICS shall describe a superset of the functionality of all types of virtual BACnet devices that can be presented by the gateway.

### 1.11 Network Security Options

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