

PROTOCOL IMPLEMENTATION CONFORMANCE STATEMENT  
PICS0005 rev 37

## CB Series

<b>Date</b>	March 2025
<b>Vendor Name</b>	ABB
<b>Product Name:</b>	CB Series
<b>Product Model Number:</b>	CBX, CBX-8R8, CBX-8R8-H CBV, CBV-2U4-3T, CBV-2U4-3T-N, CBT14, CBT-3T6-5R CBT-4T4-2U-1R
<b>Firmware Revision:</b>	CBX 9.3.0 25-01-26 Boot Ver:03.08.81
<b>BACnet Protocol Revision:</b>	20

### Product Description

The CB BACnet Field controller is part of the Cylon BACnet system. Plant HVAC control, monitoring and energy management functions via BACnet MS/TP. The CBT Series of BACnet Unitary Controllers are part of a Cylon BACnet system. CBT controllers can operate as stand-alone devices or can be networked to perform complex Unitary HVAC control, monitoring and energy management functions via BACnet MS/TP.

### BACnet Standardised Device Profile (Annex L)

- B-AAC



## BACnet Interoperability Building Blocks (BIBB) Supported (Annex K)

- ReadProperty-A (**DS-RP-A**)
- ReadProperty-B (**DS-RP-B**)
- ReadPropertyMultiple-B (**DS-RPM-B**)
- WriteProperty-A (**DS-WP-A**)
- WriteProperty-B (**DS-WP-B**)
- WritePropertyMultiple-B (**DS-WPM-B**)
- Change Of Value-A (**DS-COV-A**)
- Change Of Value-B (**DS-COV-B**)
- Notification-Internal-B (**AE-N-I-B**)
- Acknowledge-B (**AE-ACK-B**)
- Information-B (**AE-INFO-B**)
- Configurable Recipient Lists-B (**AE-CRL-B**)
- Internal-B (**SCHED-I-B**)
- Viewing and Modifying Trends-Internal-B (**T-VMT-I-B**)
- Automated Trend Retrieval-B (**T-ATR-B**)
- Dynamic Device Binding-A (**DM-DDB-A**)
- Dynamic Device Binding-B (**DM-DDB-B**)
- Dynamic Object Binding-B (**DM-DOB-B**)
- DeviceCommunicationControl-B (**DM-DCC-B**)
- ReinitializeDevice-B (**DM-RD-B**)
- TimeSynchronization-B (**DM-TS-B**)
- UTCTimeSynchronization-B (**DM-UTC-B**)

## BACnet Standard Application Services Supported

Service Group	Service	Feature	
Alarm/Event	AcknowledgeAlarm		Execute
File access	AtomicReadFile		Execute
File access	AtomicWriteFile		Execute
Alarm/Event	ConfirmedCOVNotification	Initiate	Execute
Alarm/Event	ConfirmedEventNotification	Initiate	
Alarm/Event	GetEventInformation		Execute
Object access	ReadProperty	Initiate	Execute
Object access	ReadPropertyMultiple		Execute
Object access	WriteProperty	Initiate	Execute
Object access	WritePropertyMultiple		Execute
Remote management	DeviceCommunicationControl		Execute
Remote management	ReinitializeDevice		Execute
Remote management	I-Am	Initiate	Execute
Remote management	I-Have	Initiate	
Alarm/Event	UnconfirmedCOVNotification	Initiate	Execute
Alarm/Event	UnconfirmedEventNotification	Initiate	
Remote management	unconfirmedPrivateTransfer	Initiate	Execute
Remote management	TimeSynchronization		Execute
Remote management	UTCTimeSynchronization		Execute
Remote management	Who-Has		Execute
Remote management	Who-Is	Initiate	Execute
Object access	ReadRange		Execute
Alarm/Event	SubscribeCOV	Initiate	Execute

## Standard Object Types Supported

- Accumulator
- Analog Input
- Analog Output
- Analog Value
- Binary Input
- Binary Output
- Binary Value
- Calendar
- Device
- File
- Multi-state Value
- Notification Class
- Schedule
- Trend Log
- Integer Value
- Network Port

### For all of these objects the following apply:

- The CreateObject and DeleteObject services are not supported, so no objects are dynamically creatable or deletable through BACnet service requests, although these objects are dynamically creatable and deletable through ABB's CXproá´´´ Software.
- Client functionality is used by the controller for reading and writing point objects present values between this controller and other BACnet controllers on the network. These transfers are set-up at engineering time using CXproá´´´.
- No general range restrictions exist.
- Not all instances support optional properties (see tables below).

## Data Link Layer Options

- MS/TP master. Baud rate(s): 9600, 19200, 38400, 76800, 57600, 115200

## Character Sets Supported

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

- ISO 10646 (UTF-8)

## Special Functionality

- Maximum APDU size in octets: 480

## Device Address Binding

Is static device binding supported? **YES**

(This is currently necessary for two-way communication with MS/TP slaves and certain other devices.)

## Supported Properties

For each of the Standard Object Types, the supported properties are listed below:

### device

Property	Feature
object-identifier	Writeable
object-name	Writeable
object-type	
system-status	
vendor-name	
vendor-identifier	
model-name	
firmware-revision	
application-software-version	
location	Writeable
description	Writeable
protocol-version	
protocol-revision	
protocol-services-supported	
protocol-object-types-supported	
object-list	
max-apdu-length-accepted	
segmentation-supported	
local-time	Writeable
local-date	Writeable
utc-offset	Writeable
daylight-savings-status	Writeable
apdu-timeout	Writeable
number-of-apdu-retries	Writeable
max-master	Writeable
max-info-frames	Writeable
device-address-binding	Writeable
database-revision	
active-cov-subscriptions	
profile-name	
property-list	

### accumulator

Property	Feature
object-identifier	
object-name	Writeable
object-type	
present-value	Writeable
status-flags	
event-state	
reliability	
out-of-service	Writeable
scale	Writeable
units	
prescale	
max-pres-value	
value-change-time	
value-before-change	
value-set	Writeable
pulse-rate	
limit-monitoring-interval	
property-list	
profile-name	

**analog-input**

Property	Feature
object-identifier	
object-name	Writeable
object-type	
present-value	
status-flags	
event-state	
reliability	
out-of-service	Writeable
units	Writeable
min-pres-value	Writeable
max-pres-value	Writeable
cov-increment	Writeable
time-delay	Writeable
notification-class	Writeable
high-limit	Writeable
low-limit	Writeable
deadband	Writeable
limit-enable	Writeable
event-enable	Writeable
acked-transitions	
notify-type	Writeable
event-time-stamps	
event-detection-enable	Writeable
property-list	
profile-name	

**analog-output**

Property	Feature
object-identifier	
object-name	Writeable
object-type	
present-value	Writeable
status-flags	
event-state	
reliability	
out-of-service	Writeable
units	
min-pres-value	Writeable
max-pres-value	Writeable
resolution	
priority-array	
relinquish-default	Writeable
cov-increment	Writeable
time-delay	Writeable
notification-class	Writeable
high-limit	Writeable
low-limit	Writeable
deadband	Writeable
limit-enable	Writeable
event-enable	Writeable
acked-transitions	
notify-type	Writeable
event-time-stamps	
event-detection-enable	Writeable
property-list	
profile-name	
current-command-priority	

**analog-value**

Property	Feature
object-identifier	
object-name	Writeable
object-type	
present-value	Writeable
status-flags	
event-state	
out-of-service	
units	
priority-array	
relinquish-default	Writeable
cov-increment	Writeable
time-delay	Writeable
notification-class	Writeable
high-limit	Writeable
low-limit	Writeable
deadband	Writeable
limit-enable	Writeable
event-enable	Writeable
acked-transitions	
notify-type	Writeable
event-time-stamps	
event-detection-enable	Writeable
property-list	
current-command-priority	
profile-name	

**binary-input**

Property	Feature
object-identifier	
object-name	Writeable
object-type	
present-value	
status-flags	
event-state	
reliability	
out-of-service	Writeable
polarity	Writeable
inactive-text	
active-text	
change-of-state-time	
change-of-state-count	Writeable
time-of-state-count-reset	
elapsed-active-time	Writeable
time-of-active-time-reset	
time-delay	Writeable
notification-class	Writeable
alarm-value	Writeable
event-enable	Writeable
acked-transitions	
notify-type	Writeable
event-time-stamps	
event-detection-enable	Writeable
property-list	
profile-name	

**binary-output**

Property	Feature
object-identifier	
object-name	Writeable
object-type	
present-value	Writeable
status-flags	
event-state	
reliability	Writeable
out-of-service	Writeable
polarity	Writeable
inactive-text	
active-text	
change-of-state-time	
change-of-state-count	Writeable
time-of-state-count-reset	
elapsed-active-time	Writeable
time-of-active-time-reset	
minimum-off-time	Writeable
minimum-on-time	Writeable
priority-array	
relinquish-default	Writeable
time-delay	Writeable
notification-class	Writeable
feedback-value	
event-enable	Writeable
acked-transitions	
notify-type	Writeable
event-time-stamps	
event-detection-enable	Writeable
property-list	
current-command-priority	
profile-name	

**binary-value**

Property	Feature
object-identifier	
object-name	Writeable
object-type	
present-value	Writeable
status-flags	
event-state	
out-of-service	
inactive-text	
active-text	
change-of-state-time	
change-of-state-count	Writeable
time-of-state-count-reset	
elapsed-active-time	Writeable
time-of-active-time-reset	
minimum-off-time	Writeable
minimum-on-time	Writeable
priority-array	
relinquish-default	Writeable
time-delay	Writeable
notification-class	Writeable
alarm-value	Writeable
event-enable	Writeable
acked-transitions	
notify-type	Writeable
event-time-stamps	
event-detection-enable	Writeable
property-list	
current-command-priority	
profile-name	

**calendar**

Property	Feature
object-identifier	
object-name	Writeable
object-type	
present-value	
date-list	Writeable
property-list	
profile-name	

**file**

Property	Feature
object-identifier	
object-name	
object-type	
file-type	
file-size	Writeable
modification-date	
archive	Writeable
read-only	
file-access-method	
property-list	
profile-name	

**multi-state-value**

Property	Feature
object-identifier	
object-name	Writeable
object-type	
present-value	Writeable
status-flags	
event-state	
out-of-service	Writeable
number-of-states	Writeable
acked-transitions	
notification-class	Writeable
event-enable	Writeable
notify-type	Writeable
state-text	Writeable
priority-array	
relinquish-default	Writeable
time-delay	Writeable
alarm-values	Writeable
event-time-stamps	
event-detection-enable	Writeable
current-command-priority	
property-list	
profile-name	

**notification-class**

Property	Feature
object-identifier	
object-name	Writeable
object-type	
priority	Writeable
ack-required	Writeable
recipient-list	Writeable
property-list	
profile-name	

**schedule**

Property	Feature
object-identifier	
object-name	Writeable
object-type	
present-value	
effective-period	Writeable
weekly-schedule	Writeable
exception-schedule	Writeable
schedule-default	Writeable
list-of-object-property-references	
priority-for-writing	
status-flags	
reliability	
out-of-service	Writeable
property-list	
profile-name	

**trend-log**

Property	Feature
object-identifier	
object-name	Writeable
object-type	
enable	Writeable
start-time	Writeable
stop-time	Writeable
log-device-object-property	
log-interval	Writeable
client-cov-increment	Writeable
stop-when-full	Writeable
buffer-size	Writeable
log-buffer	
record-count	Writeable
total-record-count	
logging-type	Writeable
status-flags	
trigger	Writeable
notification-threshold	Writeable
records-since-notification	
last-notify-record	
event-state	
notification-class	Writeable
event-enable	Writeable
acked-transitions	
notify-type	Writeable
event-time-stamps	
event-detection-enable	Writeable
property-list	
profile-name	

**integer-value**

Property	Feature
object-identifier	
object-name	
object-type	
present-value	Writeable
status-flags	
units	
property-list	
profile-name	

**network-port**

Property	Feature
object-identifier	
object-name	Writeable
object-type	
status-flags	
reliability	
out-of-service	
network-type	
description	
link-speed-autonegotiate	
network-interface-name	
protocol-level	
network-number	Writeable
network-number-quality	
changes-pending	
mac-address	Writeable
apdu-length	
link-speed	Writeable
link-speeds	
max-master	Writeable
max-info-frames	Writeable
property-list	
profile-name	Writeable