

**Date:** 26.02.2020  
**Vendor Name:** Gesellschaft für Regelungstechnik und Energieeinsparung m.b.H.  
**Product Name:** ems5 building controller  
**Product Model Number:** Base product: ems5.CP05E  
 Derived product: ems5.CP06E

**Applications Software Version:**  
**Firmware Revision:** ems5-BACnet 1.3  
**BACnet Protocol Revision:** 1.15 (DIN EN ISO 16484-5)

**Product Description:**

The ems5 is a freely programmable compact controller that can be enhanced with I/O modules as well as interface modules of the ems4 series. As a freely programmable universal controller (CP05E and CP06E differs in Microcontroller speed and memory) for accommodating individual building automation concepts.

BACnet Standardized Device Profile (Annex L):	
<input type="checkbox"/>	BACnet Operator Workstation (B-OWS)
<input checked="" type="checkbox"/>	BACnet Building Controller (B-BC)
<input type="checkbox"/>	BACnet Advanced Application Controller (B-AAC)
<input type="checkbox"/>	BACnet Application Specific Controller (B-ASC)
<input type="checkbox"/>	BACnet Smart Sensor (B-SS)
<input type="checkbox"/>	BACnet Smart Actuator (B-SA)

Supported BACnet Interoperability Building Blocks (Annex K):				
Data Sharing	Alarm & Event Mgmt	Scheduling	Trending	Device & Network Mgmt
DS-RP-A	AE-N-I-B	SCHED-E-B	T-VMT-I-B	DM-DDB-A
DS-RP-B	AE-N-E-B	SCHED-I-B	T-VMT-E-B	DM-DDB-B
DS-RPM-A	AE-ACK-B		T-ATR-B	DM-DOB-A
DS-RPM-B	AE-ASUM-B		T-VMMV-I-B	DM-DOB-B
DS-WP-A	AE-ESUM-B		T-AMVR-B	DM-DCC-B
DS-WP-B	AE-INFO-B			DM-TS-B
DS-WPM-B	AE-CRL-B			DM-UTC-B
DS-COV-A				DM-RD-B
DS-COV-B				DM-BR-B
DS-COVU-A				DM-LM-B
DS-COVP-B				DM-OCD-B

<b>Segmentation Capability:</b>	
<input checked="" type="checkbox"/>	Segmented requests supported Window Size _____
<input checked="" type="checkbox"/>	Segmented responses supported Window Size _____

<b>Standard Object Types Supported:</b>				
<b>Object Type</b>	<b>Dynamically Creatable</b>	<b>Dynamically Deleteable</b>	<b>Optional Prop. Supported</b>	<b>Writable Properties</b>
Accumulator	<input type="checkbox"/>	<input type="checkbox"/>	Description Device_Type Reliability Prescale Value Change Time Value Before Change Value Set Pulse Rate High_Limit Low_Limit Limit Monitoring Interval Notification_Class Time_Delay Limit_Enable Event_Enable Acked_Transitions Notify_Type Event_Time_Stamps Event_Detection_Enable	Description Reliability Out_Of_Service Value Set Pulse Rate High_Limit Low_Limit Limit Monitoring Interval Notification_Class Time_Delay Limit_Enable Event_Enable Notify_Type
Analog Input	<input type="checkbox"/>	<input type="checkbox"/>	Description Device_Type Reliability Update_Interval Min_Pres_Value Max_Pres_Value Resolution COV_Increment Time_Delay Notification_Class High_Limit Low_Limit Deadband Limit_Enable Event_Enable Acked_Transitions Notify_Type Event_Time_Stamps Event_Detection_Enable	Present_Value Description Reliability Out_Of_Service COV_Increment Time_Delay Notification_Class High_Limit Low_Limit Deadband Limit_Enable Event_Enable Notify_Type

**Standard Object Types Supported:**

Object Type	Dynamically Creatable	Dynamically Deleteable	Optional Prop. Supported	Writable Properties
Analog Output	<input type="checkbox"/>	<input type="checkbox"/>	Description Device_Type Reliability Min_Pres_Value Max_Pres_Value Resolution COV_Increment Time_Delay Notification_Class High_Limit Low_Limit Deadband Limit_Enable Event_Enable Acked_Transitions Notify_Type Event_Time_Stamps Event_Detection_Enable	Present_Value Description Reliability Out_Of_Service Relinquish_Default COV_Increment Time_Delay Notification_Class High_Limit Low_Limit Deadband Limit_Enable Event_Enable Notify_Type
Analog Value	<input type="checkbox"/>	<input type="checkbox"/>	Description Reliability Priority_Array Relinquish_Default COV_Increment Time_Delay Notification_Class High_Limit Low_Limit Deadband Limit_Enable Event_Enable Acked_Transitions Notify_Type Event_Time_Stamps Event_Detection_Enable Min_Pres_Value Max_Pres_Value Resolution	Present_Value Description Reliability Out_Of_Service Relinquish_Default COV_Increment Time_Delay Notification_Class High_Limit Low_Limit Deadband Limit_Enable Event_Enable Notify_Type

**Standard Object Types Supported:**

Object Type	Dynamically Creatable	Dynamically Deleteable	Optional Prop. Supported	Writable Properties
Binary Input	<input type="checkbox"/>	<input type="checkbox"/>	Description Device_Type Reliability Inactive_Text Active_Text 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 Event_Detection_Enable	Present_Value Description Reliability Out_Of_Service Polarity Change_Of_State_Count Elapsed_Active_Time Time_Delay Notification_Class Alarm_Value Event_Enable Notify_Type
Binary Output	<input type="checkbox"/>	<input type="checkbox"/>	Description Device_Type Reliability Inactive_Text Active_Text 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 Time_Delay Notification_Class Feedback_Value Event_Enable Acked_Transitions Notify_Type Event_Time_Stamps Event_Detection_Enable	Present_Value Description Reliability Out_Of_Service Polarity Change_Of_State_Count Elapsed_Active_Time Relinquish_Default Time_Delay Notification_Class Feedback_Value Event_Enable Notify_Type

Standard Object Types Supported:				
Object Type	Dynamically Creatable	Dynamically Deleteable	Optional Prop. Supported	Writable Properties
Binary Value	<input type="checkbox"/>	<input type="checkbox"/>	Description Reliability Inactive_Text Active_Text 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 Relinquish_Default Time_Delay Notification_Class Alarm_Value Event_Enable Acked_Transitions Notify_Type Event_Time_Stamps Event_Detection_Enable	Present_Value Description Reliability Out_Of_Service Change_Of_State_Count Elapsed_Active_Time Relinquish_Default Time_Delay Notification_Class Alarm_Value Event_Enable Notify_Type
Calendar	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Description	Description Date_List
Device	<input type="checkbox"/>	<input type="checkbox"/>	Location Description Max_Segments_Accepted Local_Time Local_Date UTC_Offset Daylight_Savings_Status APDU_Segment_Timeout Max_Master Max_Info_Frames Configuration_Files Last_Restore_Time Backup_Failure_Timeout Backup_Preparation_Time Restore_Preparation_Time Restore_Completion_Time Backup_And_Restore_State Active_COV_Subscriptions Serial_Number	Description Backup_Failure_Timeout Backup_Preparation_Time Restore_Preparation_Time Restore_Completion_Time
Event Enrollment	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Description	Description Notify_Type Event_Parameters Object_Property_Reference Event_Enable Notification_Class

Standard Object Types Supported:				
Object Type	Dynamically Creatable	Dynamically Deleteable	Optional Prop. Supported	Writable Properties
File	<input type="checkbox"/>	<input type="checkbox"/>	Description	Description File_Size Archive
Loop	<input type="checkbox"/>	<input type="checkbox"/>	Description Reliability Update_Interval Proportional_Constant Proportional_Constant_Units Integral_Constant Integral_Constant_Units Derivative_Constant Derivative_Constant_Units Bias Maximum_Output Minimal_Output COV_Increment Time_Delay Notification_Class Error_Limit Deadband Event_Enable Acked_Transitions Notify_Type Event_Time_Stamps Event_Detection_Enable	Present_Value Description Reliability Out_Of_Service Proportional_Constant Integral_Constant Derivative_Constant Bias Maximum_Output Minimal_Output COV_Increment Time_Delay Notification_Class Error_Limit Event_Enable Notify_Type
Multi-State Input	<input type="checkbox"/>	<input type="checkbox"/>	Description Device_Type Reliability State_Text Time_Delay Notification_Class Alarm_Values Fault_Values Event_Enable Acked_Transitions Notify_Type Event_Time_Stamps Event_Detection_Enable	Present_Value Description Reliability Out_Of_Service Time_Delay Notification_Class Alarm_Values Fault_Values Event_Enable Notify_Type
Multi-State Output	<input type="checkbox"/>	<input type="checkbox"/>	Description Device_Type Reliability State_Text Time_Delay Notification_Class Feedback_Value Event_Enable Acked_Transitions Notify_Type Event_Time_Stamps Event_Detection_Enable	Present_Value Description Reliability Out_Of_Service Relinquish_Default Time_Delay Notification_Class Feedback_Value Event_Enable Notify_Type

**Standard Object Types Supported:**

Object Type	Dynamically Creatable	Dynamically Deleteable	Optional Prop. Supported	Writable Properties
Multi-State Value	<input type="checkbox"/>	<input type="checkbox"/>	Description Reliability State_Text Priority_Array Relinquish_Default Time_Delay Notification_Class Alarm_Values Fault_Values Event_Enable Acked_Transitions Notify_Type Event_Time_Stamps Event_Detection_Enable	Present_Value Description Reliability Out_Of_Service Relinquish_Default Time_Delay Notification_Class Alarm_Values Fault_Values Event_Enable Notify_Type
Notification Class	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Description	Description Priority Ack_Required Recipient_List
Pulse Converter	<input type="checkbox"/>	<input type="checkbox"/>	Description Input Reference Reliability COV_Increment COV_Period Notification_Class Time_Delay High_Limit Low_Limit Deadband Limit_Enable Event_Enable Acked_Transitions Notify_Type Event_Time_Stamps Event_Detection_Enable	Description Reliability Out_Of_Service Adjust_Value COV_Increment COV_Period Notification_Class Time_Delay High_Limit Low_Limit Deadband Limit_Enable Event_Enable Notify_Type
Schedule	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Description Weekly_Schedule Exception_Schedule	Present_Value Description Effective_Period Weekly_Schedule Exception_Schedule Schedule_Default List_Of_Obj_Prop_Ref. Priority_For_Writing Reliability Out_Of_Service
Structured View	<input type="checkbox"/>	<input type="checkbox"/>	Description	Description

**Standard Object Types Supported:**

Object Type	Dynamically Creatable	Dynamically Deleteable	Optional Prop. Supported	Writable Properties
Trend Log	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Description Start_Time Stop_Time Log_DeviceObjectProperty Log_Interval COV_Resubscription_Interval Client_COV_Increment Reliability Notification_Threshold Records_Since_Notification Last_Notify_Record Notification_Class Event_Enable Acked_Transitions Notify_Type Event_Time_Stamps Event_Detection_Enable Align_Intervals Interval_Offset	Description Enable Start_Time Stop_Time Log_Interval COV_Resubscription_Interval Client_COV_Increment Stop_When_Full Record_Count Logging_Type Notification_Threshold Notification_Class Event_Enable Notify_Type Align_Intervals Interval_Offset
Trend Log Multiple	<input type="checkbox"/>	<input type="checkbox"/>	Description Reliability Start_Time Stop_Time Notification_Threshold Records_Since_Notification Last_Notify_Record Notification_Class Event_Enable Acked_Transitions Notify_Type Event_Time_Stamps Event_Detection_Enable Align_Intervals Interval_Offset	Description Enable Start_Time Stop_Time Logging_Type Log_Interval Stop_When_Full Record_Count Notification_Threshold Notification_Class Event_Enable Notify_Type Align_Intervals Interval_Offset



Data Link Layer Options:
<input checked="" type="checkbox"/> BACnet IP, (Annex J), Foreign Device
<input type="checkbox"/> ISO 8802-3, Ethernet (Clause 7)
<input type="checkbox"/> ANSI/ATA 878.1, 2.5 Mb. ARCNET (Clause 8)
<input type="checkbox"/> ANSI/ATA 878.1, RS-485 ARCNET (Clause 8), baud rate(s)
<input checked="" type="checkbox"/> MS/TP master (Clause 9), baud rate(s): 9600, 19200, 38400
<input type="checkbox"/> MS/TP slave (Clause 9), baud rate(s):
<input type="checkbox"/> Point-To-Point, EIA 232 (Clause 10), baud rate(s):
<input type="checkbox"/> Point-To-Point, modem, (Clause 10), baud rate(s):
<input type="checkbox"/> LonTalk, (Clause 11), medium:
<input type="checkbox"/> Other:

**Device Address Binding:**

Is static device binding supported? (This is currently necessary for two-way communication with MS/TP slaves and certain other devices.)

- Yes  No

**Networking Options:**

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

**Character Sets Supported:**

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

- |   |   |                                     |
|---|---|-------------------------------------|
| <input type="checkbox"/> ANSI X3.4                    | <input type="checkbox"/> IBM/Microsoft DBCS | <input type="checkbox"/> ISO 8859-1 |
| <input checked="" type="checkbox"/> ISO 10646 (UTF-8) | <input type="checkbox"/> ISO 10646 (UCS-4)  | <input type="checkbox"/> JIS C 6226 |

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

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