

Date: Jan 24, 2022

Vendor Name: LOYTEC electronics GmbH

Product Name: BACnet LCD touch panel

Product Model Number: LVIS-ME2xx/3MEx, LPAD-7

Applications Software Version: V7

Firmware Revision: 7.6

BACnet Protocol Revision: 135-2020 (1.16)

Product Description:

This product is a BACnet enabled, freely configurable LCD touch panel. It allows visualizing and changing the values of BACnet properties on a high-resolution color LCD. The touch panel offers easy navigation through pages of information and is used to control temperature set points, lighting, sun blinds, and so on. The L-VIS configuration tool supplied with the unit is used to create the menu structure and design graphical pages, which can be downloaded into the device via TCP/IP network connection. The LC touch panel shows numbers, text, bar graphs, symbols, graphics, trend logs, and many other items.

Available models:

LVIS-3ME7	7"	800x480 touch display
LVIS-3ME12	12"	800x600 touch display
LVIS-3ME15	15"	1024x768 touch display
LPAD7	7"	1024x600 touch display

BACnet Standardized Device Profile (Annex L):

- BACnet Building Controller (B-BC)
- BACnet Router (B-RTR)¹
- BACnet Broadcast Management Device (B-BBMD)

BACnet Interoperability Building Blocks Supported (Annex K):

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-B (DS-WPM-B)
Data Sharing – COV-A (DS-COV-A)
Data Sharing – COV-B (DS-COV-B)
Data Sharing – COVP-A (DS-COVP-A)
Data Sharing – COVP-B (DS-COVP-B)
Data Sharing – COV Unsubscribed-B (DS-COVU-B)
Alarm and Event Management – Notification Internal-B (AE-N-I-B)
Alarm and Event Management – Notification External-B (AE-N-E-B)
Alarm and Event Management – Acknowledge-B (AE-ACK-B)
Alarm and Event Management – Alarm Summary-B (AE-ASUM-B)
Alarm and Event Management – Enrollment Summary-B (AE-ESUM-B)
Alarm and Event Management – Information-B (AE-INFO-B)
Alarm and Event Management – Configurable Recipient Lists-B (AE-CRL-B)
Scheduling – Internal-B (SCHED-I-B)
Scheduling – External-B (SCHED-E-B)
Trending – Viewing and Modifying Trends Internal-B (T-VMT-I-B)

¹ If MS/TP is enabled on the device.

Trending – Viewing and Modifying Trends External-B (T-VMT-E-B)
Trending – Automated Trend Retrieval-B (T-ATR-B)
Device Management – Dynamic Device Binding-A (DM-DDB-A)
Device Management – Dynamic Device Binding-B (DM-DDB-B)
Device Management – Dynamic Object Binding-B (DM-DOB-B)
Device Management – DeviceCommunicationControl-B (DM-DCC-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-B (DM-RD-B)
Device Management – Backup and Restore (DM-BR-B)
Device Management – Restart A (DM-R-A)
Device Management – Restart B (DM-R-B)
Device Management – List Manipulation-B (DM-LM-B)
Device Management – Object Creation and Deletion-B (DM-OCD-B)
Device Management – Automatic Time Synchronization-A (DM-ATS-A)
Device Management – Slave Proxy-B (DM-SP-B)²
Network Management – Connection Establishment-A (NM-CE-A)²
Network Management – Router Configuration-B (NM-RC-B)²
Network Management – BBMD Configuration-B (NM-BBMD-B)
Network Management – Foreign Device Registration-A (NM-FDR-A)

Segmentation Capability:

Segmented requests supported, window size: 4
Segmented responses supported, window size: 4

Standard Object Types Supported:

For all object types listed below the following applies if not stated otherwise:

- 1) Does not support the CreateObject and DeleteObject services
- 2) Properties Object_Name, Description support up to 64 characters
- 3) Includes the required properties as specified for the object type
- 4) All commandable objects support the Priority_Array and Relinquish_Default with 16 freely usable priorities
- 5) All Analog, Binary, Multi-state object types support COV subscriptions
- 6) Additional writeable properties: Description
- 7) No proprietary properties exist
- 8) No range restrictions exist
- 9) Analog, binary, and multi-state objects are limited to 1000 objects in total

Device Object

List of optional properties supported:

Location, Description, Max_Segments_Accepted, APDU_Segment_Timeout, Max_Master, Max_Info_Frames, Active_COV_Subscriptions, Configuration_Files, Last_Restore_Time, Backup_Failure_Timeout, Local_Time, Local_Date, UTC_Offset, Daylight_Saving_Status, Last_Restart_Reason, Time_Of_Device_Restart, Restart_Notification_Recipients, Time_Synchronization_Recipients, UTC_Time_Synchronization_Recipients, Time_Synchronization_Interval, Align_Intervals, Interval_Offset, Serial_Number, Backup_Preparation_Time, Restore_Preparation_Time, Restore_Completion_Time, Backup_And_Restore_State, Slave_Proxy_Enable², Manual_Slave_Address_Binding², Auto_Slave_Discovery², Slave_Address_Binding²

² If MS/TP is enabled on the device.

Analog Input, Analog Output, Analog Value

List of optional properties supported:

Description, Device_Type, Reliability, Update_Interval, Min_Pres_Value, Max_Pres_Value, Resolution, COV_Increment, Time_Delay, Notification_Class, Low_Limit, High_Limit, Deadband, Limit_Enable, Event_Enable, Acked_Transitions, Notify_Type, Event_Time_Stamps, Event_Message_Texts, Event_Message_Texts_Config, Event_Detection_Enable, Event_Algorithm_Inhibit, Event_Algorithm_Inhibit_Ref, Time_Delay_Normal, Reliability_Evaluation_Inhibit, Interface_Value, Fault_High_Limit, Fault_Low_Limit

Binary Input, Binary Output, Binary Value

List of optional properties supported:

Description, Device_Type, Reliability, Active_Text, Inactive_Text, Time_Delay, 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, Notification_Class, Alarm_Value, Feedback_Value, Event_Enable, Acked_Transitions, Notify_Type, Event_Time_Stamps, Event_Message_Texts, Event_Message_Texts_Config, Event_Detection_Enable, Event_Algorithm_Inhibit, Event_Algorithm_Inhibit_Ref, Time_Delay_Normal, Reliability_Evaluation_Inhibit, Interface_Value

Multi-State Input, Multi-state Output, Multi-State Value

List of optional properties supported:

Description, Device_Type, Reliability, State_Text, Time_Delay, Notification_Class, Alarm_Values, Fault_Values, Feedback_Values, Event_Enable, Acked_Transitions, Notify_Type, Event_Time_Stamps, Event_Message_Texts, Event_Message_Texts_Config, Event_Detection_Enable, Event_Algorithm_Inhibit, Event_Algorithm_Inhibit_Ref, Time_Delay_Normal, Reliability_Evaluation_Inhibit, Interface_Value

Large Analog Value, Integer Value, Positive Integer Value

List of optional properties supported (as applies):

Description, Out_Of_Service, Event_State, Reliability, Min_Pres_Value, Max_Pres_Value, Resolution, COV_Increment, Time_Delay, Notification_Class, Low_Limit, High_Limit, Deadband, Limit_Enable, Event_Enable, Acked_Transitions, Notify_Type, Event_Time_Stamps, Event_Message_Texts, Event_Message_Texts_Config, Event_Detection_Enable, Event_Algorithm_Inhibit, Event_Algorithm_Inhibit_Ref, Time_Delay_Normal, Reliability_Evaluation_Inhibit, Fault_High_Limit, Fault_Low_Limit

CharacterString Value, OctetString Value

List of optional properties supported (as applies):

Description, Out_Of_Service, Reliability

Notification Class Object, Schedule Object, Calendar Object

Supports the CreateObject and DeleteObject service

List of optional properties supported:

Description, Weekly_Schedule, Exception_Schedule

Object limit: 32 Notification Class, 100 Schedule, 25 Calendar objects.

Event Enrollment Object

Supports the CreateObject and DeleteObject service.

List of optional properties supported (as applies):

Description, Event_Message_Texts, Event_Message_Texts_Config, Event_Detection_Enable, Event_Algorithm_Inhibit, Event_Algorithm_Inhibit_Ref, Time_Delay_Normal, Reliability_Evaluation_Inhibit

Trend Log Object

Supports the *CreateObject* and *DeleteObject* service.

List of optional properties supported:

Description, Start_Time, Stop_Time, Log_DeviceObjectProperty, Log_Interval, COV_Resubscription_Interval, Client_COV_Increment, Align_Intervals, Interval_Offset, Trigger, Notification_Threshold, Records_Since_Notification, Last_Notify_Record, Notification_Class, Event_Enable, Acked_Transitions, Notify_Type, Event_Time_Stamps, Event_Message_Texts, Event_Detection_Enable, Reliability

Object limit: 100 Trend Log objects. There is a limit of 4,000,000 log records in total.

Accumulator

List of optional properties supported:

Description, Device_Type, Reliability, Value_Change_Time, Value_Before_Change, Value_Set, Pulse_Rate, Limit_Monitoring_Interval, Time_Delay, Notification_Class, Low_Limit, High_Limit, Limit_Enable, Event_Enable, Acked_Transitions, Notify_Type, Event_Time_Stamps, Event_Message_Texts, Event_Message_Texts_Config, Event_Detection_Enable, Event_Algorithm_Inhibit, Event_Algorithm_Inhibit_Ref, Time_Delay_Normal, Reliability_Evaluation_Inhibit, Fault_High_Limit, Fault_Low_Limit

Pulse Converter

List of optional properties supported:

Description, Input_Reference, Reliability, COV_Increment, COV_Period, Time_Delay, Notification_Class, Low_Limit, High_Limit, Deadband, Limit_Enable, Event_Enable, Acked_Transitions, Notify_Type, Event_Time_Stamps, Event_Message_Texts, Event_Message_Texts_Config, Event_Detection_Enable, Event_Algorithm_Inhibit, Event_Algorithm_Inhibit_Ref, Time_Delay_Normal, Reliability_Evaluation_Inhibit

Loop

List of optional properties supported:

Description, Reliability, COV_Increment, Update_Interval, Proportional_Constant, Proportional_Constant_Units, Integral_Constant, Integral_Constant_Units, Derivative_Constant, Derivative_Constant_Units, Bias, Maximum_Output, Minimum_Output, Time_Delay, Notification_Class, Error_Limit, Deadband, Event_Enable, Acked_Transitions, Notify_Type, Event_Time_Stamps, Event_Message_Texts, Event_Message_Texts_Config, Event_Detection_Enable, Event_Algorithm_Inhibit, Event_Algorithm_Inhibit_Ref, Time_Delay_Normal, Reliability_Evaluation_Inhibit, Low_Diff_Limit

File Object

List of optional properties supported:

Description

Object limit: 1 File object. This object is used for configuration backup and restore.

Data Link Layer Options:

- BACnet IP, (Annex J)
- BACnet IP, (Annex J), Foreign Device
- MS/TP master (Clause 9), baud rate(s): 9600, 19200, 38400, 57600, 76800, 115200
- MS/TP master (Clause 9) supports extended length BACnet frames

Device Address Binding:

Static device address binding is supported.

Networking Options:

- Router, Clause 6 – MS/TP to BACnet/IP³
 Annex H, BACnet Tunneling Router over IP

Character Sets Supported:

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

- | | | |
|---|---|--|
| <input checked="" type="checkbox"/> ANSI X3.4/UTF-8 | <input type="checkbox"/> IBM™/Microsoft™ DBCS | <input checked="" type="checkbox"/> ISO 8859-1 |
| <input checked="" type="checkbox"/> ISO 10646 (UCS-2) | <input type="checkbox"/> ISO 10646 (UCS-4) | <input type="checkbox"/> JIS C 6226 |

Additional Information and Contact:

Further Information, a detailed User Manual and firmware updates can be obtained from our website
<http://www.loytec.com>.

For information and technical support, please contact us at the following address:

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³ If MS/TP is enabled on the device.