

# BACnet Automation Server LINX-210, LINX-211 IEC 61131-3 Programmable

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#### Features

- ♦ IEC61131-3 programming languages (FBD, ST, LD/KOP, SFC, C)
- Online testing via RS-232 or TCP/IP (Ethernet)
- ♦ Offline simulation
- ♦ Tracability of IEC 61131-3 variables via the L-logiCAD programming tool
- Program download without interruption of the currently executed application program
- Program download in the field via LINX-210 configuration tool or Web interface
- Unicode support for IEC61131-3 project documentation
- Fully complient with ANSI/ASHRAE–135-2004 and ISO 16484-5 standard
- Access enabled to BACnet objects
- ♦ Automatic mapping of BACnet objects to IEC 61131-3 variables
- ♦ Support of BACnet/IP or BACnet MS/TP
- ♦ M-Bus Master according to EN 13757-3
- Modbus Master
- Integrated Router between BACnet/IP and BACnet MS/TP (LINX-211 only)
- BBMD (LINX-211 only)
- Event-driven e-mail notification
- ◆ Supports Alarming, Scheduling, and Trending (AST™)
- Supports up to 750 BACnet server objects
- ♦ RTC support
- Build-in Web server for device configuration and data point monitoring
- NTP support for time synchronization
- Status and activity LED (BACnet/IP and BACnet MS/TP)
- Network diagnostic LEDs
- Ethernet link and activity LED
- ♦ IEC 61131-3 status LED (PLC)
- Supports firmware update via serial port or Ethernet
- Supply voltage: 12-35 VDC or 12-24 VAC, power consumption typical 3 W
- ♦ 105 x 86 x 60 (L x W x H in mm) i.e. 6 TE
- ♦ DIN rail mountable

## Description

LINX-210 and LINX-211 are BACnet compliant programmable devices. The graphical tool L-logiCAD (IEC 61131-3) is used for programming. It offers a number of programming languages including Function Block Diagram (FBD), Structured Text (ST), Ladder Diagram (LD, KOP), Sequential Function Chart (SFC), and C. All of them can be used in combination within a single project. To map BACnet objects

networks under control



to IEC 61131-3 variables, the Configurator tool is used.

The device supports access to analog, binary and multi-state objects. It can handle up to 750 BACnet server objects. Several devices can be installed in a network at the same time.

Also supported are automation fuctions such as Alarming, Scheduling, and Trending which are accessible via the integrated Web server using a standard browser. Schedulers can be configured from remote using the configuration tool, the Web interface, or by downloading an XML file onto the device. Alarming includes functionality to generate, deliver, acknowledge, and display alarm conditions. The trend data and logged information are available throught CSV file export for third party applications. In addition, event-driven e-mail notifications are supported.

LINX-210 and LINX-211 are fully complient M-Bus Masters according to EN 13757-3. An additional converter (RS-232 to M-Bus) is required for operation.

Additionally, the device supports ModbusTCP Master functionality. With LINX-210, it is possible to operate Modbus RTU instead of BACnet MS/TP via the EIA-485 (RS-485) terminal.

Order Number Configuration	
LINX-210	1 x Ethernet 1 x EIA-485 (RS-485) either BAC-
	net MS/TP or Modbus RTU
LINX-211	1 x Ethernet
	1 x EIA-485 (RS-485) for MS/TP
	incl. BACnet Router
L-logiCAD	IEC 61131-3 programming tool



#### Communication

LINX-210/211 represents a BACnet Advanced Application Controller (B-AAC). It can be connected either to a BACnet/IP or BACnet MS/TP channel (configurable). In addition, LINX-211 implements a Router between BACnet/IP and BACnet MS/TP. From the BACnet network, it is possible to access BACnet server objects via the BACnet/IP or BACnet MS/TP channel. Additionally, client functions may be used. For each server object a "client mapping" can be defined. Both device types can be used to integrate M-Bus devices (EN 13757-3). To work with M-Bus, an additional converter (RS-232 to M-Bus) is required. Modus devices can be integrated with Modbus TCP over Ethernet or Modbus RTU (LINX-210 only) instead of the BACnet MS/TP channel. In the latter case, the Modbus RTU is directly connected to the EIA-485 port of the device.



## Easy and Fast Programming

Easy and fast programming of IEC 61131-3 function blocks is accomplished with the L-logiCAD programming tool. The drawing area is organized in pages for the sake of clarity. Off-page connec-



tors are used to connect between the pages. The configuration tool is used to create data points and connect BACnet objects to IEC 61131-3 variables.

Multiple IEC 61131-3 programs can be executed in parallel with different cycle times down to 10 ms. The programming tool allows online testing of the IEC 61131-3 application over the TCP/IP network (Ethernet). New IEC 61131-3 applications can be downloaded onto the device without interrupting the current program execution.

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