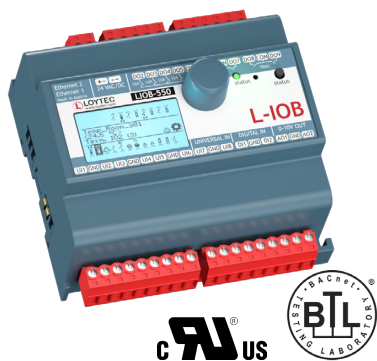


# LIOB-550/551/552/553/554 V2

Datasheet #89027123



The LIOB-55x Modules communicate over Ethernet/IP in the BACnet/IP and BACnet/SC network. They adhere to the BACnet Building Controller Profile (B-BC) and either expose their I/O data points through BACnet server objects or actively fetch them from a BACnet server via BACnet client maps.

According to the B-BC profile, the LIOB-55x Modules support BACnet alarming, scheduling, and trending. They are BTL tested and certified.

### Communication

The LIOB-55x I/O Modules are equipped with two Ethernet ports including a built-in Ethernet switch. This allows for building a daisy chained line topology of up to 20 devices, which reduces costs for network installation. Dual Ethernet port devices also allow the setup of a redundant Ethernet installation (ring topology), which increases reliability. The redundant Ethernet topology is enabled by the Rapid Spanning Tree Protocol (RSTP), which is supported by most managed switches.

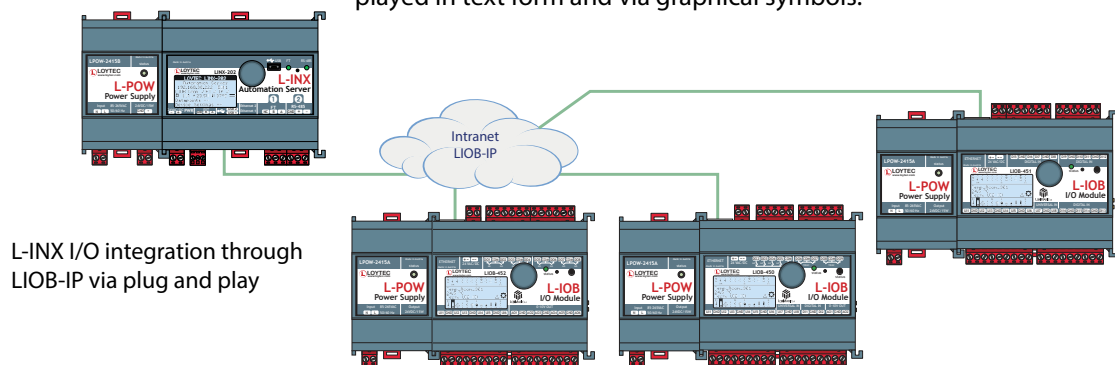
The LIOB-55x Modules are equipped with a web interface to query the device status and display or change each data point of the module. In addition to the BACnet object interface, the I/O data points are exposed by the integrated OPC server providing TSL encrypted web services (OPC XML-DA) or UA Secure Conversation (OPC UA). The local display can be accessed via VNC.

### LIOB-IP Mode

The LIOB-55x Modules can be switched to LIOB-IP mode using manual local operation. In LIOB-IP mode, the LIOB-55x Modules extend L-INX Automation Servers, L-ROC Room Controllers, L-IOB I/O Controllers, and LIOB-AIR I/O Controllers with physical inputs and outputs via plug and play.

### Local Operation and Override

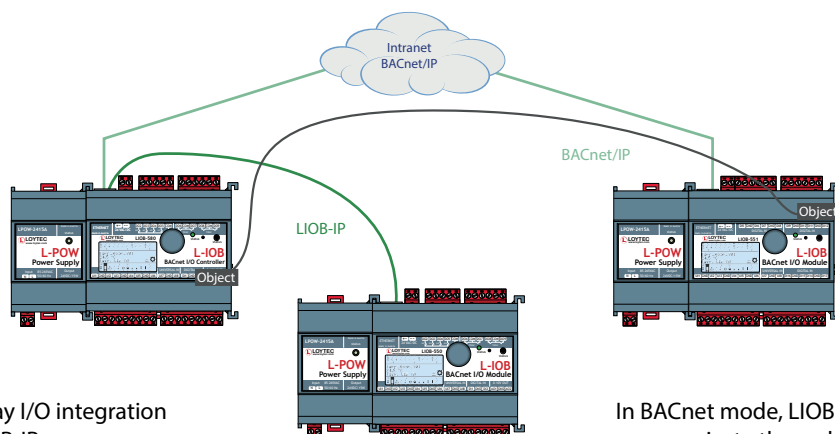
All L-IOB I/O Modules are equipped with an LCD display (128x64) with backlight and jog dial for manual local operation. Device and data point information is displayed in text form and via graphical symbols.



### Features

- I/O module with physical inputs and outputs
- Dual Ethernet/IP interface
- BACnet objects for integration in BACnet/IP, BACnet/SC channels
- BACnet Client Mappings to access to BACnet/IP, BACnet/SC objects
- Fulfills the BACnet Building Controller Profile (B-BC)
- Manual operation using the jog dial or VNC client
- 128x64 graphic display with backlight
- Local access to information about device status and data points in clear text and symbols
- Integrated web server for device configuration and monitoring data points
- Compliant with ANSI/ASHRAE 135-2012 and ISO 16484-5:2012 standard
- B-BC (BACnet Building Controller) functionality, BTL certified
- Supports BACnet Alarming, Scheduling, and Trending
- Connected to the L-INX Automation Server, L-ROC Room Controller, L-IOB I/O Controller, and LIOB-AIR I/O Controller via LIOB-IP
- Automatic integration into device configurations with L-INX, L-ROC, L-IOB I/O Controller, and LIOB-AIR
- Easy device replacement without any additional software
- Built-in OPC XML-DA and OPC UA server
- Math objects to execute mathematical operations on data points

# LIQB-550/551/552/553/554 V2



Plug and play I/O integration through LIQB-IP

In BACnet mode, LIQB-BIP devices communicate through BACnet/IP

## General Specifications

|                      |  |
|----------------------|--|
| Dimensions (mm)      | 107 x 100 x 75 (L x W x H), DIM018, DIM019, DIM020, DIM021, DIM022                     |
| Installation         | DIN rail mounting following DIN 43880, top hat rail EN 50022                           |
| Operating conditions | 0 °C to 50 °C, 10–90 % RH, noncondensing, degree of protection: IP40, IP20 (terminals) |
| Power supply         | 24 VDC / 24 VAC ±10 % via L-INX, L-ROC, L-POW or LIQB-A2/A4 via LIQB-Connect           |
| Interface            | 2 x Ethernet (100Base-T):<br>OPC XML-DA, OPC UA, LIQB-IP, BACnet/IP, BACnet/SC         |

## Specifications LIQB-BIP I/O Module (LIQB-55x)

| Type                         | LIQB-550   | LIQB-551 | LIQB-552          | LIQB-553                          | LIQB-554                           |
|------------------------------|--|----------|-------------------|-----------------------------------|------------------------------------|
| Power consumption            | 4.5 W (Relays on)  | 4.5 W    | 4.5 W (Relays on) | 4.5 W (Relays on)                 | 4.5 W (Relays on)                  |
| Universal Input (UI)         | 8  | 8        | 6                 | 6                                 | 7                                  |
| Digital Input (DI)           | 2  | 12       | -                 | -                                 | -                                  |
| Analog Output (AO)           | 2  | -        | 6                 | 6                                 | 4                                  |
| Digital Output (DO)          | 8 (4 x Relay 6 A, 4 x TRIAC 0.5 A)   | -        | 8 (8 x Relay 6 A) | 5 (4 x Relay 16 A, 1 x Relay 6 A) | 7 (5 x Relay 6 A, 2 x Triac 0.5 A) |
| Digital Output specification | Please refer to the <a href="#">"General Input and Output Specification of LOYTEC devices"</a> at the end of the L-IOB section for more details. |          |                   |                                   |                                    |
| Differential Pressure Sensor | -  | -        | -                 | -                                 | ±500 Pa                            |

## Resource limits

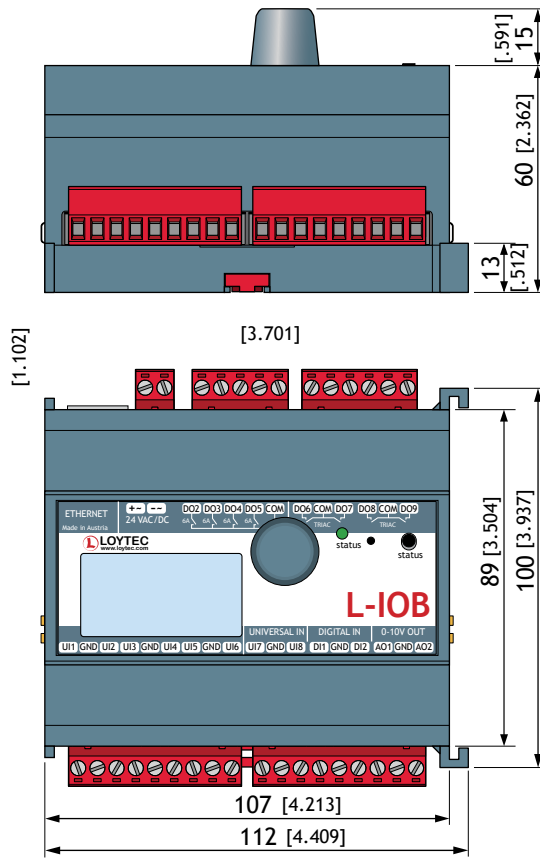
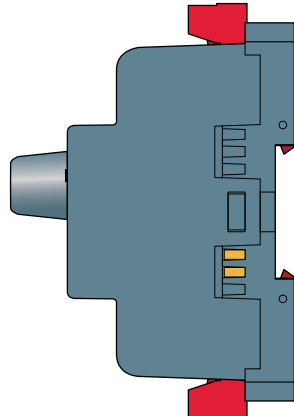
|                          |           |                                |                              |
|--------------------------|-----------|--------------------------------|------------------------------|
| OPC data points          | 100       | BACnet notification classes    | 32                           |
| BACnet objects           | 1 per I/O | Trend logs (BACnet or generic) | 10 (130 000 entries, ≈ 2 MB) |
| BACnet client mappings   | 20        | Total trended data points      | 10                           |
| BACnet calendar objects  | 10        | Alarm logs                     | 5                            |
| BACnet scheduler objects | 5         | Connections (Local / Global)   | 200 / 100                    |
| Math objects             | 20        |                                |                              |

## Order number Product description

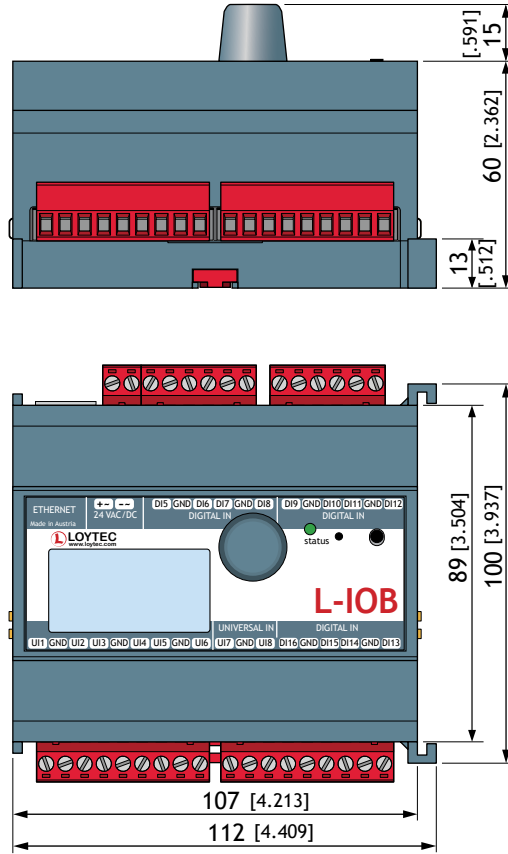
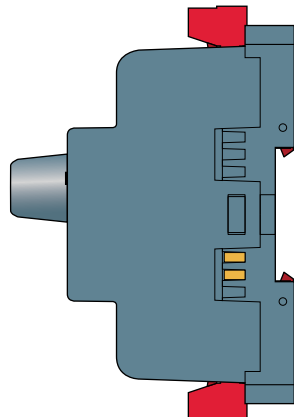
|            |   |
|------------|---|
| LIQB-550   | LIQB-BIP I/O Module: 8 UI, 2 DI, 2 AO, 8 DO (4 x Relay 6 A, 4 x Triac 0.5 A)              |
| LIQB-551   | LIQB-BIP I/O Module: 8 UI, 12 DI  |
| LIQB-552   | LIQB-BIP I/O Module: 6 UI, 6 AO, 8 DO (8 x Relay 6 A)                                     |
| LIQB-553   | LIQB-BIP I/O Module: 6 UI, 6 AO, 5 DO (4 x Relay 16 A, 1 x Relay 6 A)                     |
| LIQB-554   | LIQB-BIP I/O Module: 7 UI, 4 AO, 7 DO (5 x Relay 6 A, 2 x Triac 0.5 A), 1 Pressure Sensor |
| LPOW-2415A | LIQB-Connect power supply unit, 24 VDC, 15 W  |
| LPOW-2415B | Power supply unit with power connector 24 VDC, 15 W                                       |
| L-TEMP2    | External temperature sensor (NTC10K) for use with L-IOB Universal Inputs                  |

# Dimensions of the devices in mm and [inch]

**DIM018** LIOB-450  
LIOB-480  
LIOB-550  
LIOB-580

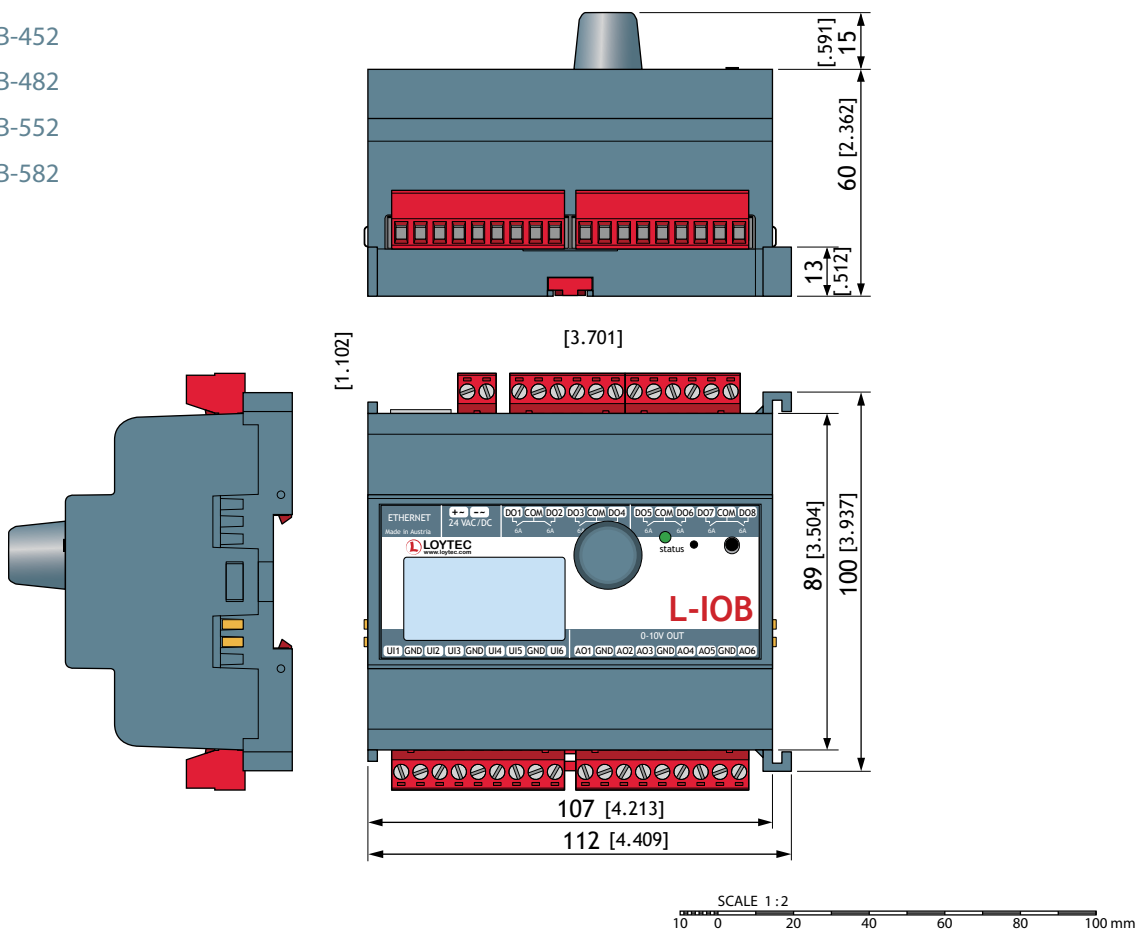


**DIM019** LIOB-451  
LIOB-481  
LIOB-551  
LIOB-581

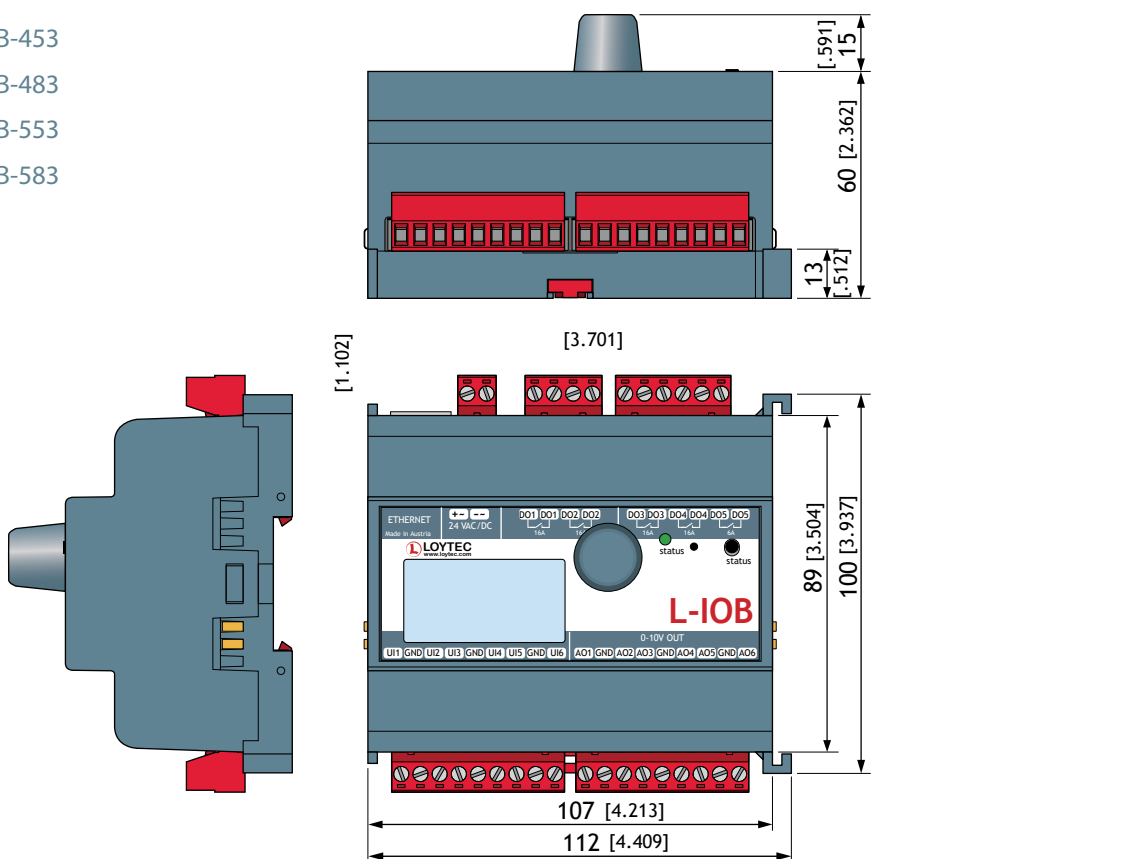


## Dimensions of the devices in mm and [inch]

**DIM020** LIOB-452  
LIOB-482  
LIOB-552  
LIOB-582

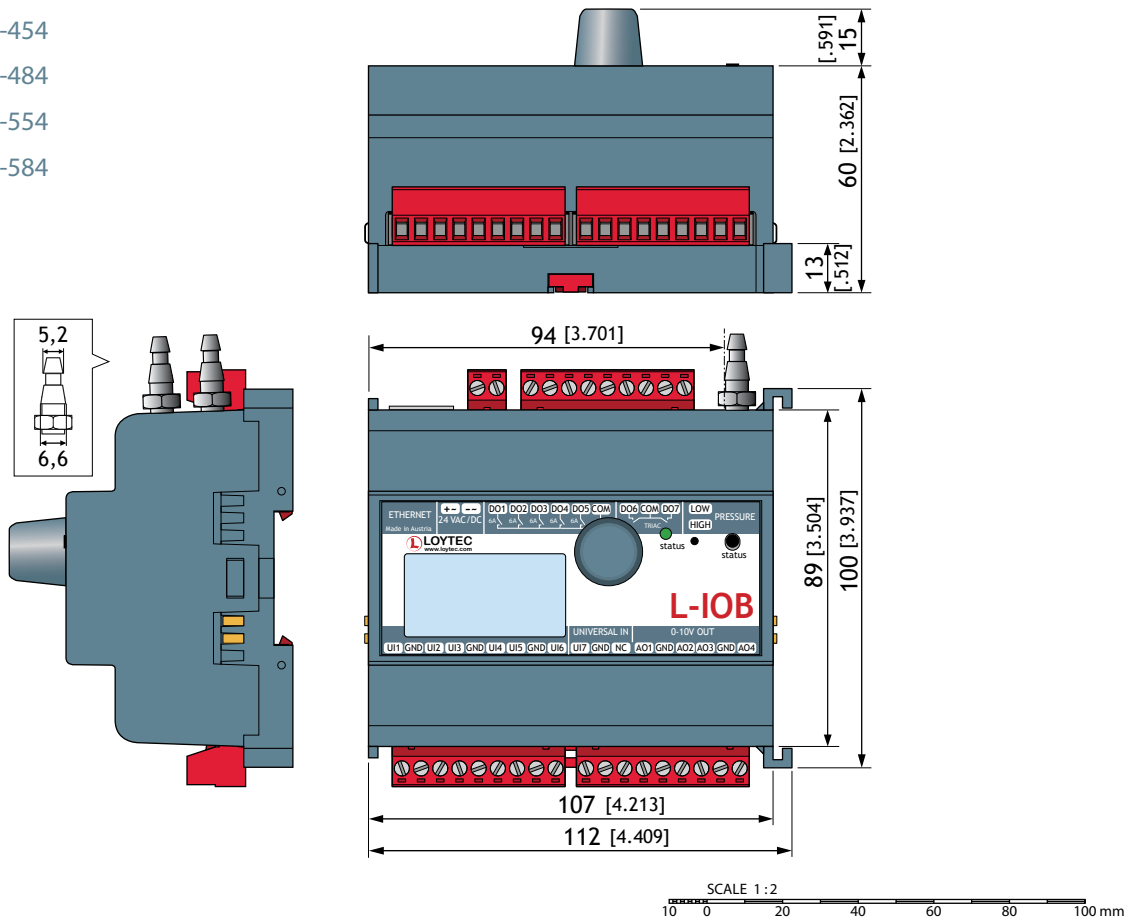


**DIM021** LIOB-453  
LIOB-483  
LIOB-553  
LIOB-583



# Dimensions of the devices in mm and [inch]

**DIM022** LIOB-454  
 LIOB-484  
 LIOB-554  
 LIOB-584



The products of LOYTEC electronics GmbH are subject to constant development. Therefore, LOYTEC reserves the right to modify technical specifications at any time without prior notice. The most recent datasheet can be downloaded from [www.loytec.com](http://www.loytec.com).