

L-IOB I/O Modules provide expansion to LOYTEC devices (L-INX Automation Server and L-ROC Room Controller) using LIOB Connect or LIOB FT with physical inputs and outputs.

The L-IOB Modules contain a 128x64 display with backlight. The display shows device and data point information. A jog dial is used for local operation by displaying detailed information on the display and for operation and override of data points.

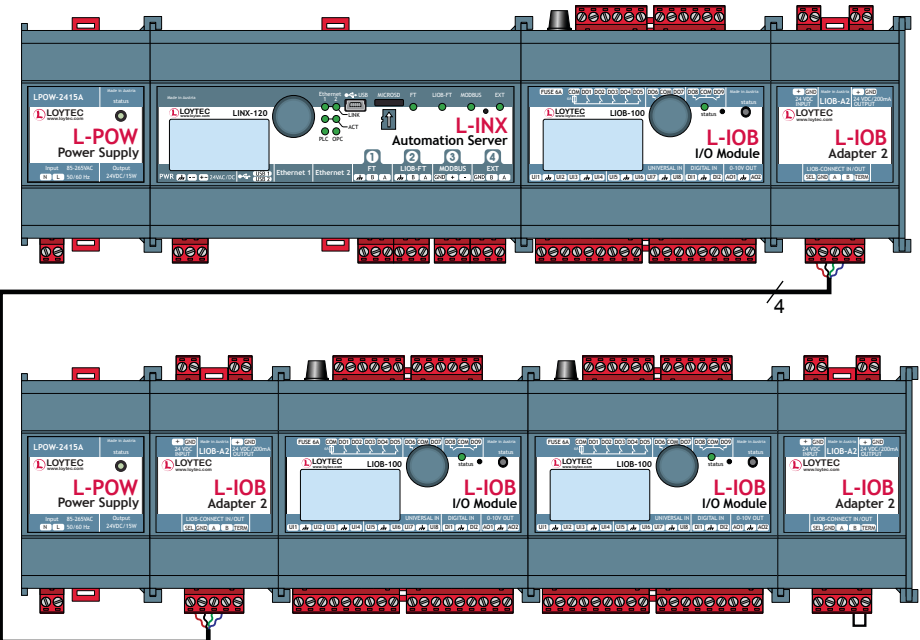
The Configuration of the L-IOB Modules happens with the L-INX Configuration Tool.

L-IOB Modules provide removable, vibration-proofed terminal screws with a clamping yoke connection in a 5.08 mm raster for wiring. These terminals can accommodate diameters from 0.2–2.5 mm² (26–12 AWG).

LIOB Connect I/O Modules

The L-IOB Modules have gold-plated LIOB Connect connectors to string multiple LIOB Connect I/O Modules together. LIOB Connect ensures the communication between the L-IOB Modules and the connected L-INX Automation Servers or the L-ROC Room Controllers as well as the supply voltage for the I/O modules.

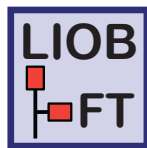
L-IOB I/O Modules are automatically identified and coupled once connected via LIOB Connect (Plug and Play). Any replacement of I/O modules is done with a few simple steps without configuration effort. LIOB Connect I/O Modules can be installed remotely (e.g. next row in a cabinet) by using the L-IOB Adapter LIOB-A2. The total length of LIOB Connect I/O Modules cannot exceed 50 m. 4 LIOB Connect I/O Modules can be directly coupled with LIOB Connect. Together, up to 8 LIOB Connect I/O Modules can be connected to a L-INX Automation Server or a L-ROC Room Controller.



Features:

- Stackable I/O Modules supporting LIOB Connect
- 128x64 display with backlight
- Local access to information about device status and data points
- Manual operation using the jog dial
- Configuration through L-IOB configuration tool
- Works with L-INX and L-ROC devices via LIOB Connect
- Simple device replacement without software tool

LOYTEC L-IOB I/O Module

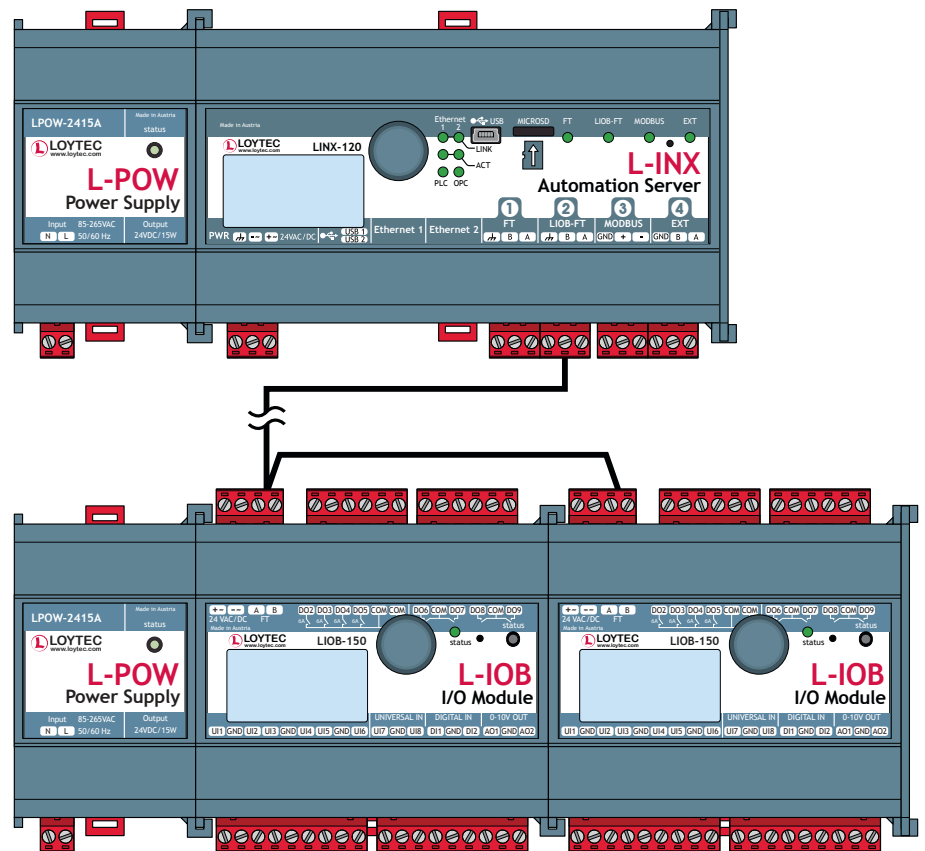


LIOB FT I/O Modules

L-IOB I/O Modules providing LIOB FT capability are connected through a twisted-pair cable to the L-INX Automation Server or L-ROC Controller. The LIOB FT connection corresponds to the LonMARK TP/FT-10 channel specification.

Up to 8 LIOB FT I/O Modules can be connected to an L-INX Automation Server or an L-ROC Room Controller. These I/O Modules have to be powered through an external power supply (e.g. L-POW).

After wiring of the LIOB FT I/O Modules, the station addresses have to be set up via the jog dial. Each module is properly recognized and integrated. Any replacement of I/O modules is done with the same process.



Features:

- Stackable I/O Modules supporting LIOB FT
- 128x64 display with backlight
- Local access to information about device status and data points
- Manual operation using the jog dial
- Configuration through L-IOB configuration tool
- Works with L-INX and L-ROC devices via LIOB FT
- Simple device replacement without software tool

LOYTEC L-IOB I/O Module



Input and Output specifications of L-IOB I/O Modules

UI - Universal Input

UIs are universal inputs for four different input types. Configuration is made via the L-IOB Configuration Software.

Corresponding to class 1 with 1 % accuracy and have an input voltage range of 0 to 30V.

Types of input:

- Binary Input (Digital Input)
 - Input Impedance: 10 k Ω
 - Sampling Rate: 10 ms
- Voltage Metering 0-10 V
 - Input Impedance: 10 k Ω
 - Sampling Rate: 1 s
- Current Loop 4-20 mA
 - Input Impedance: 249 Ω
 - Sampling Rate: 1 s
- Resistance Measurement
 - Input Impedance: 10 k Ω
 - Sampling Rate: 1 s

Resistors in the range of 1 k Ω to 100 k Ω can be measured. Already predefined sensor characteristics for known sensors e.g. Pt1000 and NTC10K temperature sensors are available. New characteristics can be defined or adjusted with the configuration tool.

DI - Digital Input, Counter Input (S0-Pulse)

DIs are fast binary inputs, which can also be used as counter inputs (S0).

Corresponding to class 1 with 1 % accuracy and have an input voltage range of 0 to 30V.

Input Impedance:	10 k Ω
Sampling Rate:	10 ms
S0-Pulse:	positive switching

AO - Analog Output

Resolution:	10 bit
Signal Range:	0...10 V, optional 0...12 V
Current:	max. 10 mA (short circuit proofed)
Input Impedance:	min. 1.2 k Ω for linear output

DO - Digital Output

- Relay Output
 - Switching capacity: 6 A, 250 VAC resp. 30 VDC
16 A, 250 VAC resp. 30 VDC
- TRIAC Output
 - Switching capacity: 1 A, 24 to 230 VAC

LOYTEC L-IOB I/O Module

Specifications LIOB Connect				
Dimensions (mm)	107 x 100 x 75 (L x W x H)			
Power supply	24 VDC, provided by L-INX, L-ROC, or L-POW through LIOB Connect			
Installation	Attachable (max. 4 modules) or connected with a 4-wire cable, max. 50 m			
Interface	1 x LIOB Connect			
Types	LIOB-100	LIOB-101	LIOB-102	LIOB-103
Power Consumption	1.7 W 2.6 W (all relays on)	1.7 W	1.7 W 2.7 W (all relays on)	1.7 W 2.5 W (all relays on)
Universal Input (UI)	8	8	6	6
Digital Input (DI)	2	16	-	-
Analog Output (AO)	2	-	6	6
Digital Output (DO)	9 (5 x Relay, 4 x Triac)	-	8 (8 x Relay)	5 (5 x Relay)
Digital Output Specification	Relay: 6 A Triac: 1 A @ 24–230 VAC		Relay: 6 A	Relay: 16 A
Resource limits				
L-IOB I/O Modules per controller	Max. 8 (4 direct coupled, next 4 modules via 2 x LIOB-A2 and power supply e.g. LPOW-2415A)			

Specifications LIOB FT				
Dimensions (mm)	107 x 100 x 75 (L x W x H)			
Power supply	24 VDC / 24 VAC ±10 %			
Installation	Connected with a twisted-pair cable (according to LONMARK TP/FT-10 channel)			
Interface	1 x LIOB FT			
Types	LIOB-150	LIOB-151	LIOB-152	LIOB-153
Power Consumption	1.7 W 2.6 W (all relays on)	1.7 W	1.7 W 2.7 W (all relays on)	1.7 W 2.5 W (all relays on)
Universal Input (UI)	8	8	6	6
Digital Input (DI)	2	12	-	-
Analog Output (AO)	2	-	6	6
Digital Output (DO)	8 (4 x Relay, 4 x Triac)	-	8 (8 x Relay)	5 (4 x Relay 16 A, 1 x Relay 6 A)
Digital Output Specification	Relay: 6 A Triac: 1 A @ 24–230 VAC		Relay: 6 A	Relay: 16 A and 6 A
Resource limits				
L-IOB I/O Modules per controller	Max. 8 with external power supply, e.g. LPOW-2415A or LPOW-2415B			

Order number	Configuration
LIOB-A2	L-IOB Adapter 2 to split the line of modules on the DIN rail for space and power considerations
LIOB-100	LIOB Connect I/O Module: 8 UI, 2 DI, 2 AO, 9 DO (4 x Triac, 5 x Relay 6 A)
LIOB-101	LIOB Connect I/O Module: 8 UI, 16 DI
LIOB-102	LIOB Connect I/O Module: 6 UI, 6 AO, 8 DO (Relay 6 A)
LIOB-103	LIOB Connect I/O Module: 6 UI, 6 AO, 5 DO (Relay 16 A)
LIOB-131	LIOB Connect DALI Controller, 1 x DALI channel, integrated DALI power supply
LIOB-150	LIOB FT I/O Module: 8 UI, 2 DI, 2 AO, 8 DO (4 x Triac, 4 x Relay 6 A)
LIOB-151	LIOB FT I/O Module: 8 UI, 12 DI
LIOB-152	LIOB FT I/O Module: 6 UI, 6 AO, 8 DO (Relay 6 A)
LIOB-153	LIOB FT I/O Module: 6 UI, 6 AO, 5 DO (4 x Relay 16 A, 1 x Relay 6 A)
LPOW-2415A	LIOB Connect power supply, 24 VDC, 15 W
LPOW-2415B	Power Supply with external power connector 24 VDC, 15 W
L-TEMP2	External temperature sensor (NTC10K) for use with L-IOB Universal Inputs