



TDE-lighttech
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IZI-Powercom+ Manual





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General

The IZI-PowerCom+ is the successor to the IZI-Link Master Dmx Interface. While the original interface was built for IZI-Link, the new IZI-PowerCom+ is designed for the advanced IZI-Link+ platform and connects directly to the IZI-Access or IZI-Access Pro.

With support for up to 32 IZI-Link+ fixtures, this module delivers reliable two-wire powerline communication and now offers an impressive 720W of output power. It receives two DMX universes and can transmit up to 256 channels, giving you the performance and capacity needed for modern lighting installations.

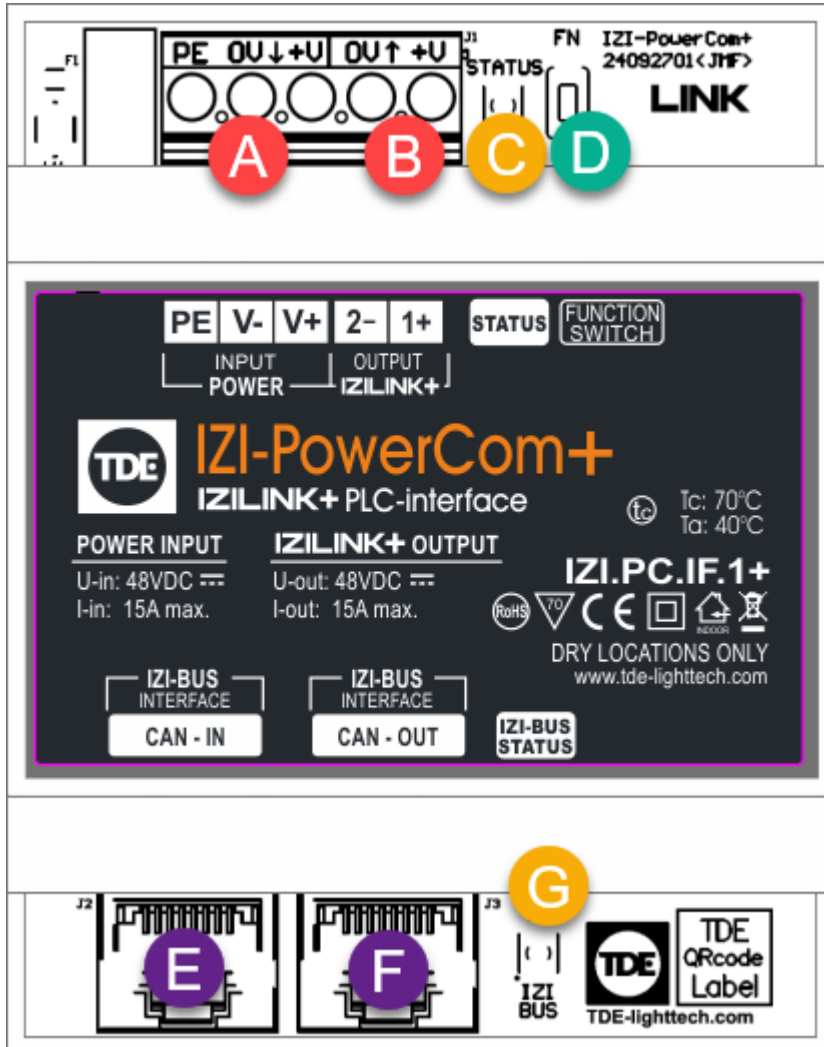


Version

Version	Author	Date	Firmware	Changes
0.1	MZ	8-6-2024		Initial document
1.0	MZ	1-2-2026		Update specs
1.1	MZ	17-6-2026		Minor changes



Overview



- A. Power connector in
- B. Power connector out
- C. Status LED
- D. Function switch
- E. IZI-BUS in
- F. IZI-BUS out
- G. IZI-BUS Status LED

IZI-Bus

The IZI-Bus is used to exchange data between the IZI-Access(Pro) and IZI-Bus devices such as the IZI-PowerCom+. A maximum of 16 IZI-PowerCom+ modules is supported per IZI-Access(Pro). The total IZI-Bus cable length may not exceed 40 m.

IZI-Link+

The IZI-PowerCom+ is a powerline communication interface which can drive up to 32 IZI-Link+ fixtures or LED-drivers with a maximum output current of 15 A, including cable losses.

A maximum of 256 channels can be transmitted. When 32 fixtures are connected, each fixture can use up to 8 channels (32 × 8 = 256 channels). The 256 transmitted channels may be mapped from either or both DMX universes.

Limits

Power

If more than 15A is required by the system, the IZI-PowerCom+ will try to reduce the power by decreasing DMX values. The IZI-PowerCom+ has no knowledge about modes and channels, so all channels with a value greater than 0% will be scaled down proportionally. If the power stays too high, the module will shut down.

Overcurrent Protection

The IZI-PowerCom+ includes overcurrent protection that immediately shuts down the output if a short circuit is detected on the IZI-Link+ system. Once the fault has been removed, the IZI-PowerCom+ automatically attempts to restore operation within 5 seconds.

Note that the overcurrent protection may also be triggered temporarily when one or more fixtures are connected while the system is powered. This is caused by the inrush current generated during fixture startup.

Temperature

The IZI-PowerCom+ continuously monitors its internal temperature, if temperature gets too high, the IZI-PowerCom+ will try to reduce the power by decreasing DMX values. If the temperature stays too high, the module will shut down.

In practice, the ambient temperature should stay beyond 40 degrees at high power output. If this is not possible, it has to be actively cooled.

Max output current	Internal temperature
10.0A	78 °C
12.5A	71 °C
15.0A	55 °C

The internal temperature can be monitored in the IZI-Supervisor.

Status

The IZI-PowerCom+ has two LEDs:

- Status LED
- IZI-Bus LED

Status LED

The status LED is a RGB LED which will reflect the state of the IZI-PowerCom+. If multiple colours are specified in the table below, the LEDs alternate between these colours. In this case, the IZI-Bus LED participates in the alternating pattern.

Color	Pattern	State	Description
Blue	Blink fast	Init	Initialising after start-up or reset
Blue	Heart beat	Idle	All OK
Orange	Blink pattern	Warning(s) pending	Can be shown during all states above, a blink pattern every 10 seconds. Count blinks for specific warning.
Red	Blink pattern	Error(s) pending	A continuous blink pattern with pause for error indication. Count blinks for specific error.
Magenta		Boot	Bootloader state
Blue/ Magenta	Toggle	Identify	Module is identifying
Aqua/ Yellow	Toggle	Discover	A discover is busy (when ready GREEN or RED is shortly displayed to indicate the result.
Blue/ Green	Toggle	Updating	Module is receiving update information for itself or a IZI-Link+ module

Errors

If an error is detected the LED will blink red only (no other colours). An error is a severe malfunction, meaning the IZI-Access cannot function normally.

A blink pattern will show the error with the highest priority (lowest number). A pause will be in between the blink pattern, count the blinks for the specific error.

Blink	Error	Description
1	Hardware error	Could not initialise Powerline communication
2	Overcurrent protection	Overcurrent detected. Power off for 5 sec
3	Supply over voltage	Supply voltage too high (> 52V)
4	Intern temperature too high	Ambient temperature too high, shutdown
5	Supply voltage too low	The supply voltage is under 18V
6	OS assert	Problems with operating system
7	Output current too high	Current above 15A too long
8	Too many modules	More than 32 IZI-Link+ modules detected (not supported)
9	NTC error	NTC hardware error

Warnings

If a warning is detected the LED will blink orange only. The blue communication state will also be shown, the highest warning will be shown every 10 seconds. Warnings can be cancelled by software, if the warning has been solved.

A warning is an indication to the user not everything is operating as expected, but the operation can continue. A blink pattern will show the warning with the highest priority (lowest number). A pause will be in between the blink pattern, count the blinks for the specific warning.

Blink	Warning	Description
1	Output current high	Current higher than 15A (limiter active)
2	Intern temperature high	Ambient temperature high
3	Bad com quality	Less than 25% response by modules, bad communication quality.
4	Module(s) missing	One or more modules missing
5	No IZI-Bus master	No communication with the IZI-Access(Pro)
6	OS warning	Stack problems OS
7	Supply volage too high	Supply volage above 53V
8	To many master in band	More than 3 masters in same frequency band
9	Powerline send problems	Error when sending messages.

Function Switch

The function switch is the only switch that can be reached without opening the housing. The function switch depends on the length and number of presses.

When performing a long press multiple LED blink sequences appear to indicate what action will be executed when the switch is released.

Press	Function	Description	LED Pattern
Release between: 2s -4s	Discover Replace	If only one module is missing, the PowerCom+ will start to search for a (single) replacement. No IZI-Supervisor needed when a module is exchanged.	Blink: Aqua/Yellow
Release between: 8s -10s	Discover Clean	Start a clean discover locally. All settings will be based on content of modules found.	Blink: White/Yellow
Release between: 20s -22s	Factory default	Reset all settings and erase all modules.	Blink: White/Red
Single click (short press on/off 0.1s – 0.5s)	Test mode	Go into test mode, overrule output for 1 minute	Blink: Light Magenta/Blue (after click)