## TPC Extension

The Pharos EXT is an extension for the Pharos TPC and together they form a standalone, mains-powered lighting controller with versatile output and show control options. The TPC is a powerful lighting controller with Ethernet-based output and integration options. However, many DMX and DALI installations don't need the added complexity of network infrastructure. The EXT provides local DMX and DALI output for the TPC, as well as power and other hardware interfaces.



**LPC FAMILY**

## EXT Features

### Extend

The EXT is an optional extension for a single Pharos TPC. Together they can function as a standalone control system, or scale with other Designer devices over a network. The EXT supplies power and data to the TPC via a single cable, and provides physical interfaces including both DMX and DALI.

### Designer Trigger

Timing is everything. Whatever the stimulus, Designer Trigger can handle it. You can control your lighting with responsive, reactive programming. Designer Trigger is a rules engine that uses conditional logic and a broad range of interfaces and protocols. Send and receive any command, to and from any system. Conditional logic is supported, along with a powerful built-in scripting language for unlimited flexibility.

### DALI Control

Control up to 64 DALI devices from the EXT, with support for commissioning with DALI discovery and configuration commands. Pharos Designer includes a convenient drag-and-drop interface for DALI patching and timeline programming. DALI emergency ballasts are also supported with the ability to schedule automatic Function and Duration tests, automatic querying for battery level and lamp hours, and a full test result and error reporting web page.

### DALI Triggering

Pharos Designer can also integrate with an existing DALI installation by listening in to DALI control messages sent by another control system or a DALI wall panel and using these as triggers for actions within the Pharos Designer system.

### Serial Data

The EXT has an RS232 serial port, whose data rate and format settings (baud, parity, stop bits, etc.) are configurable in software.

### Pharos Designer

The EXT requires no additional configuration in the Pharos Designer 2 software – everything is programmed via the TPC in the Designer project file, as if the TPC supported all the additional hardware interfaces directly.

### Flexible Inputs

Each input is individually configurable in one of three modes. As a Contact Closure an external volt-free switch may be connected across the input. As a Digital Input an external voltage source (up to 24V) can be connected across the input and thresholds for 'high' and 'low' triggering can be set. As an Analog Input a variable external voltage can be measured within a configurable range.

### Installer Friendly

Made for permanent installation, with installer-friendly 0.200" (5.08mm) plug-in rising clamp terminals, a rugged, compact enclosure, and easy DIN rail mounting.
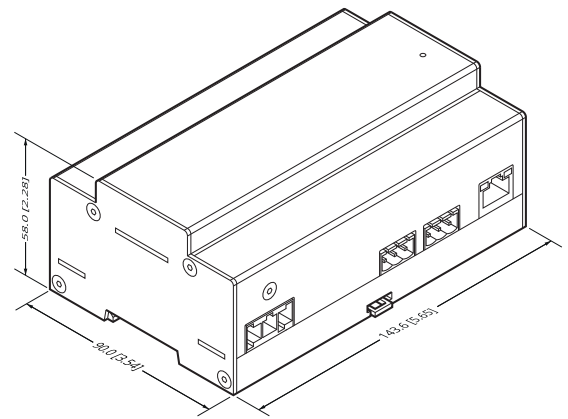
## Capabilities

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| **Contact Closure** | Connect an external volt-free switch between input and ground (internal 2.2k pull-up to 5V) |
| **Digital In** | Connect an external voltage source between input and ground (24V maximum; internal 2MOhm pull-down to 0V); software configurable low/high threshold |
| **Analog In** | Connect an external voltage source between input and ground (24V maximum); software-configurable range |
| **Serial Data** | RS232; configurable port; send/receive free syntax in ASCII, HEX or decimal |
| **DALI Control** | Control for up to 64 DALI devices including device discovery and configuration |
| **DALI Receive** | Receive DALI messages from other controllers such as wall panels or occupancy sensors |
| **Emergency Lighting** | Schedule automatic Function and Duration tests; automatic querying for battery level and lamp hours; test result and error reporting web page |
| **Bus Power Detection** | Detect and report bus power status, a separate DALI bus power supply is required |

## Interfaces

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| **TPC PoE** | RJ45 socket with Link/Data LEDs for direct connection to TPC only (100m max distance) |
| **Ethernet** | RJ45 socket for 10/100Base-TX Ethernet with Link/Data LEDs; Fixed IP or DHCP |
| **DMX512** | Isolated DMX port, RDM compatible * |
| **DALI** | Port can transmit and receive DALI commands * |
| | Supports DALI standards: EN 62386-101:2009, EN 62386-102:2009, EN 62386-202:2009, EN 62386-209:2011 |
| **Serial** | RS232 * |
| **Inputs** | Individually selectable operating mode for contact closure, digital or analog input (24V maximum) * |

## Specifications

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| **Power** | 100-240V AC *, 50-60Hz, 0.1A, 10W typical |
| **Required Configuration** | Pharos TPC<br>Pharos Designer 2 |
| **Temperature** | 0°C to 50°C (32°F to 122°F) |
| **Humidity** | 10-50% relative, non-condensing |
| **Ingress** | IP40 |
| **Physical** | 8 unit wide DIN rail mounting enclosure (DIN43880 / EN60715 (35/7.5 rail))<br>14.4 x 9 x 5.8 cm (5.7 x 3.5 x 2.3 in)<br>0.5 kg (1.1 lbs) |
| **Shipping** | 20 x 15 x 12 cm (8 x 6 x 5 in)<br>0.7 kg (1.6 lbs) |
| **Recovery** | Hardware watchdog and recessed reset button |



## Order Code & Variants

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|---|---|
| **EXT** | Designer Extension for TPC connectivity (DMX, DALI, IO, serial, mains-powered) |

*Pharos Designer TPC required*

## Warranty & Certifications

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|---|---|
| **Warranty** | 5 years |
| **Certifications** | CE compliant, UKCA compliant, ETL/cETL listed. |

* Install-friendly 0.200" (5.08mm) plug in rising clamp connectors (included)