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.

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Specifications subject to change without notice.

Capabilities

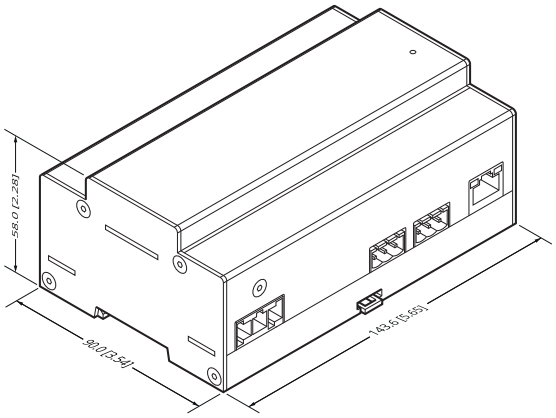
Contact Closure	Connect an external volt-free switch between input and ground (internal 2.2k pull-up to 5V)
Digital In	Connect an external voltage source between input and ground (24V maximum; internal 2MOhm pull-down to 0V); software configurable low/high threshold
Analog In	Connect an external voltage 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

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 Inputs	RS232 * Individually selectable operating mode for contact closure, digital or analog input (24V maximum) *

Specifications

Power	100-240V AC *, 50-60Hz, 0.1A, 10W typical
Required Configuration	Pharos TPC 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)) 14.4 x 9 x 5.8 cm (5.7 x 3.5 x 2.3 in) 0.5 kg (1.1 lbs)
Shipping	20 x 15 x 12 cm (8 x 6 x 5 in) 0.7 kg (1.6 lbs)
Recovery	Hardware watchdog and recessed reset button



Order Code & Variants

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

Pharos Designer TPC required

Warranty & Certifications

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

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

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