

DATE: _____ LOCATION: _____
 TYPE: _____ PROJECT: _____
 CATALOG #: _____



INTRODUCTION

What is Pharos? Pharos is a lighting control solution for everything from simple outdoor lighting to the façade lighting of a whole city. The easy-to-use and adaptable controls give you the power and flexibility to meet the needs of your project. The intelligent Pharos Engine, found in each bundle, gives you complete control of your installation. Based on timelines and scenes, the engine lets you build dynamic, precise, fully customizable pre-programmed lighting displays, all while giving you the freedom of real-time manual overrides

FEATURES

CONTROLS INTERFACE

- Touch screen user interface is fully customizable using the free Pharos Designer software. The touch screen allows the user to create multiple pages of controls including buttons, sliders, keypads and color pickers.

PHAROS ENGINE

- The intelligent Pharos Engine gives you complete control of your installation. Based on individually controllable and independently running timelines and scenes, it permits the user to build dynamic, precise, fully customizable pre-programmed lighting display. The user has the freedom of real-time manual overrides, flexible multi-zone control, prioritization and more.

PHAROS TRIGGER

- Pharos Trigger can control Current lighting products with responsive, reactive programming. Pharos 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.

BUNDLES

There are four (4) bundles to choose from. Each bundle has its unique components which are used to scale potential projects and customize interface to the end users needs.

- **Bundle 1 (1 Universe DMX with Touchscreen)** - TPC, Back Box, EXT, RDM/PSU * (Optional)
- **Bundle 2 (2 Universe DMX with Touchscreen)** - TPC, LPC 1, PoE, PSU, RDM/PSU* (Optional)
- **Bundle 3 (1 Universe DMX without Touchscreen)** - LPC 1, PSU RDM/PSU* (Optional)
- **Bundle 4 (2 Universe DMX without Touchscreen)** - LPC 2, PSU RDM/PSU* (Optional)

The RDM is an optional DMX Splitter which is used when ordering more than 32 fixtures and/or more than 1,500 feet of DMX wires in each DMX Universe. Each RDM must be ordered with a 48vdc Power Supply Unit (PSU).

SPECIFICATIONS

FEATURES

- Programmed and configured using the free Pharos Designer software
- Realtime and astronomical clock functionality with daylight saving support
- Triggering and show control via touch screen, IR, Ethernet, real time and astronomical clocks
- Proximity sensor to wake up the display
- Use multiple units connected and synchronized over Ethernet to scale to larger installations
- Integrates with other Pharos Controllers (LPC, LPC X, AVC) and Remote Devices (RIO, BPS)

FEATURES (CONTINUED)

- Integrated web interface for remote management; custom pages supported

ELECTRICAL

- One universe of Ethernet based DMX512
- Other Outputs Supported: RDM, DALI, Art-Net, KiNet, sACN and Pathport
- Removeable SD memory card data storage (supplied)
- Power: PoE (IEEE802.3af, Class 2) 4W typical
- Operating temperatures: 0°C to 50°C (32°F to 122°F)
- Screen resolution: 480x272, color depth: 24-bit, brightness: 340 cd/ m²

ELECTRICAL (CONTINUED)

- Mounting: Wall mounted, partly recessed in UK 2-gang 35mm or custom US 2.5" backbox (supplied separately)
- Wiring: 14GA wires rated 150°C

CERTIFICATIONS AND LISTINGS

- Listed to UL1598 and CSA C22.2#250.0-24 for wet locations
- Ingress Protection Rating: IP40

WARRANTY

- 5 year warranty



COMPATIBLE PRODUCTS

Intent	KFL	Pavilion
Cypher	LTV8	

DATE:	LOCATION:
TYPE:	PROJECT:
CATALOG #:	

ORDERING GUIDE

Bundle 1

(1 Universe DMX with Touchscreen) - TPC, Back Box, EXT, RDM/PSU (Optional)

DMX Kit	Pharos Control Component	Description	
1 Universe DMX with Touchscreen All components must be ordered to complete the kit Example (in separate line items): 93126045-TPC-BB 93126048-TPC-FBB 93126046-EXT	93126045-TPC- BB BN CC WW WN	Touch Panel Controller with Black Overlay and Black Bezel	
		Touch Panel Controller with Black Overlay and Nickel Bezel	
		Touch Panel Controller with Cream Overlay and Cream Bezel	
		Touch Panel Controller with White Overlay and White Bezel	
		Touch Panel Controller with White Overlay and Nickel Bezel	
	93126048-TPC- 93126049-TPC-	FBB SBB	TPC with Flush Back Box TPC with Surface Back Box
	93126046-EXT 9315974-RDM 93128613-PSU		TPC Extension DMX Splitter ¹ Power Supply Unit (48vdc PSU) will be use to power RDM. Please order only if RDM is ordered. ²

Bundle 2

(2 Universe DMX with Touchscreen) - TPC, LPC 1, PoE, PSU, RDM/PSU (Optional)

DMX Kit	Pharos Control Component	Description	
2 Universe DMX with Touchscreen All components must be ordered to complete the kit Example (in separate line items): 93126045-TPC-BB 93126048-TPC-FBB 93126047-LPC-1 93128613-PSU 93128612-POE	93126045-TPC- BB BN CC WW WN	Touch Panel Controller with Black Overlay and Black Bezel	
		Touch Panel Controller with Black Overlay and Nickel Bezel	
		Touch Panel Controller with Cream Overlay and Cream Bezel	
		Touch Panel Controller with White Overlay and White Bezel	
		Touch Panel Controller with White Overlay and Nickel Bezel	
	93126048-TPC- 93126049-TPC-	FBB SBB	TPC with Flush Back Box TPC with Surface Back Box
	93126047-LPC-1 93128613-PSU 93128612-POE 9315974-RDM 93128613-PSU		Lighting Playback Controller LPC Power Supply Unit (48vdc PSU) Power-over-Ethernet Switch (PoE) DMX Splitter ^{1,2} Power Supply Unit (48vdc PSU) will be use to power RDM. Please order only if RDM is ordered. ^{1,2}

Bundle 3

(1 Universe DMX without Touchscreen) - LPC 1, PSU

DMX Kit	Pharos Control Component	Description
1 Universe DMX without Touchscreen All components must be ordered to complete the kit Example (in separate line items): 93126047-LPC-1 93128613-PSU	93126047-LPC-1	Lighting Playback Controller
	93128613-PSU	LPC Power Supply Unit (48vdc PSU)
	9315974-RDM	DMX Splitter ¹
	93128613-PSU	Power Supply Unit (48vdc PSU) will be use to power RDM. Please order only if RDM is ordered. ²

Bundle 4

(2 Universe DMX without Touchscreen) - LPC 2, PSU

DMX Kit	Pharos Control Component	Description
2 Universe DMX without Touchscreen All components must be ordered to complete the kit Example (in separate line items): 93126047-LPC-2 93128613-PSU	93126047-LPC-2	Lighting Playback Controller
	93128613-PSU	LPC Power Supply Unit (48vdc PSU)
	9315974-RDM	DMX Splitter ^{1,2}
	93128613-PSU	Power Supply Unit (48vdc PSU) will be use to power RDM. Please order only if RDM is ordered. ^{1,2}

The RDM is an optional DMX Splitter which is used when ordering more than 32 fixtures in each DMX Universe. Each RDM must be ordered with a 48vdc Power Supply Unit (PSU). For each bundle, please select the number of DMX Universe(s) first and if you would like it with or without a Touchscreen. After you select your bundle choice, please order and enter each and every component listed above (with the exception of the RDM) separately. Failure to do so will result in ordering an incomplete kit

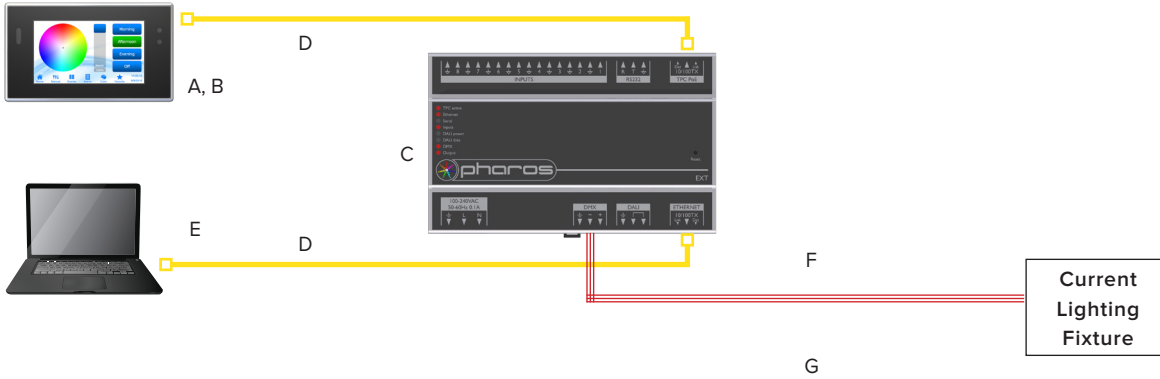
Notes:

- Optional. Will need to be used when ordering more than 32 fixtures for 4-channel fixture, 21 fixtures for 6-channel fixture, and/or 32 fixtures and/or more than 1,500 feet of DMX wires in a DMX universe. Must be ordered with Power Supply Unit (93128613-PSU)
- Need to order 2 sets of RDM & PSU additionally for 2 DMX Universe with Touchscreen if RDM is need

PRODUCT EXCEPTIONS & DETAILS

WIRING DIAGRAM/BUNDLE CONTENT
1 UNIVERSE DMX KIT WITH TOUCHSCREEN

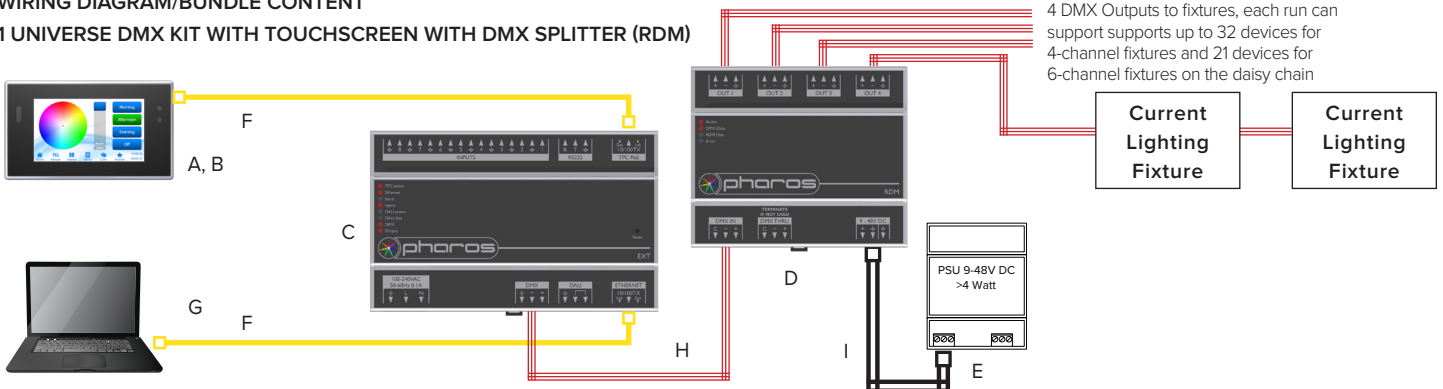
- █ Cat5e Cable
- █ Power Cord
- █ DMX Cable



Provide by Pharos	Part Number	Provided by Others
A. TPC	93126045-TPC-BN	D. Cat5e Cable
	93126045-TPC-BB	E. Computer
	93126045-TPC-CC	F. DMX Cable
	93126045-TPC-WW	G. Power Cord
	93126045-TPC-WN	
B. TPC Back Box	93126048-TPC-FBB	
	93126049-TPC-SBB	
C. EXT	93126046-EXT	

WIRING DIAGRAM/BUNDLE CONTENT
1 UNIVERSE DMX KIT WITH TOUCHSCREEN WITH DMX SPLITTER (RDM)




4 DMX Outputs to fixtures, each run can support up to 32 devices for 4-channel fixtures and 21 devices for 6-channel fixtures on the daisy chain

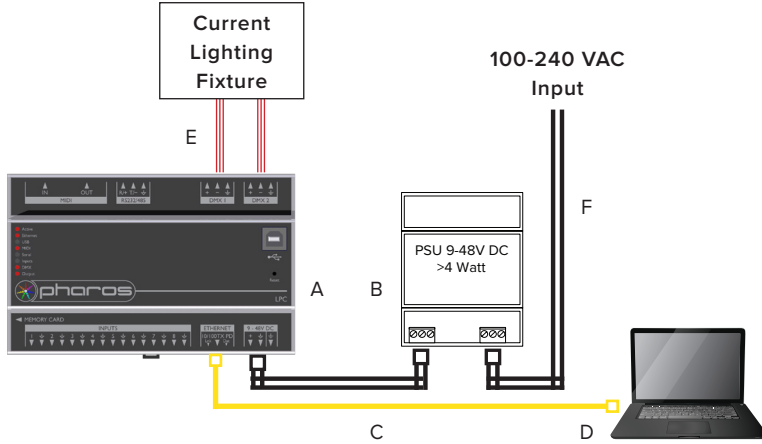


Provide by Pharos	Part Number	Provided by Others
A. TPC	93126045-TPC-BN	F. Cat5e Cable
	93126045-TPC-BB	G. Computer
	93126045-TPC-CC	H. DMX Cable
	93126045-TPC-WW	I. Power Cord
	93126045-TPC-WN	
B. TPC Back Box	93126048-TPC-FBB	
	93126049-TPC-SBB	
C. EXT	93126046-EXT	
D. RDM	9315974-RDM	
E. PSU	93128613-PSU	

PRODUCT EXCEPTIONS & DETAILS

1 UNIVERSE DMX KIT WITHOUT TOUCHSCREEN

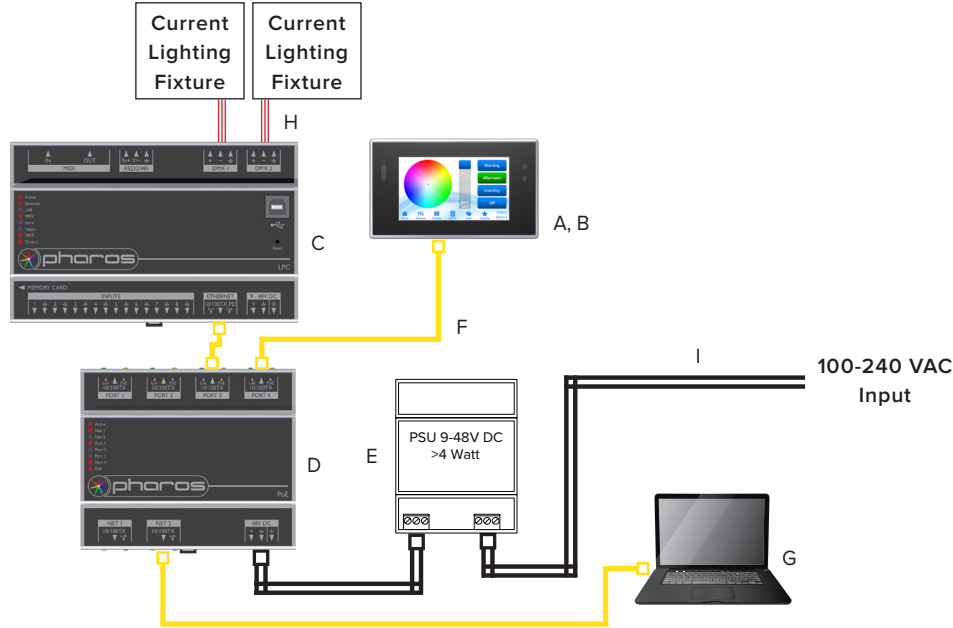
-  Cat5e Cable
-  Power Cord
-  DMX Cable



Provide by Pharos	Part Number	Provided by Others
A. LPC 1	93126047-LPC-1	C. Cat5e Cable
B. 48vdc PSU	93128613-PSU	D. Computer
		E. DMX Cable
		F. Power Cord

PRODUCT EXCEPTIONS & DETAILS (CONTINUED)

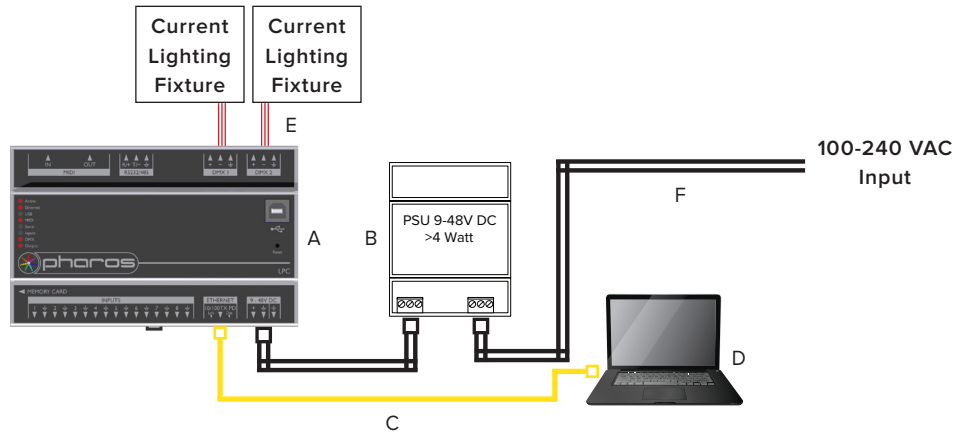
WIRING DIAGRAM/BUNDLE CONTENT
2 UNIVERSE DMX KIT WITH TOUCHSCREEN



- █ Cat5e Cable
- Power Cord
- DMX Cable

Provide by Pharos	Part Number	Provided by Others
A. TPC	93126045-TPC-BN	F. Cat5e Cable
	93126045-TPC-BB	G. Computer
	93126045-TPC-CC	H. DMX Cable
	93126045-TPC-WW	I. Power Cord
	93126045-TPC-WN	
B. TPC Back Box	93126048-TPC-FBB	
	93126049-TPC-SBB	
C. LPC 1	93126047-LPC-1	
D. PoE	93128612-POE	
E. 48vdc PSU	93128613-PSU	

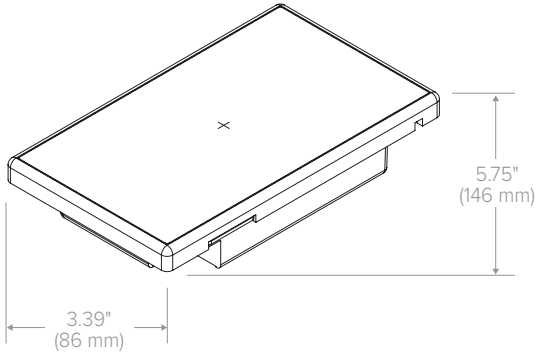
2 UNIVERSE DMX KIT WITHOUT TOUCHSCREEN



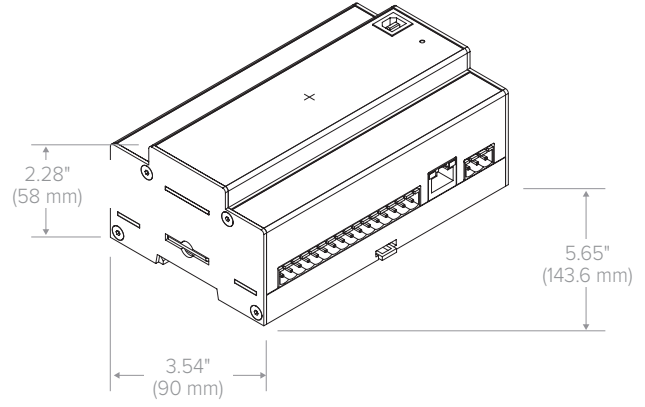
Provide by Pharos	Part Number	Provided by Others
A. LPC2	93126047-LPC-2	C. Cat5e Cable
B. 48vdc PSU	93128613-PSU	E. DMX Cable
		D. Computer
		F. Power Cord

DIMENSIONS

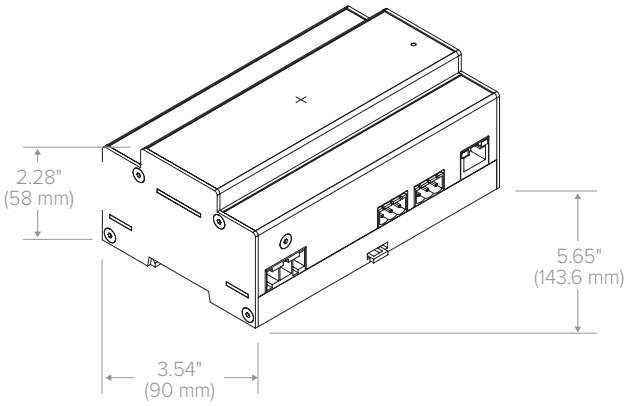
TPC
93126045-TPC



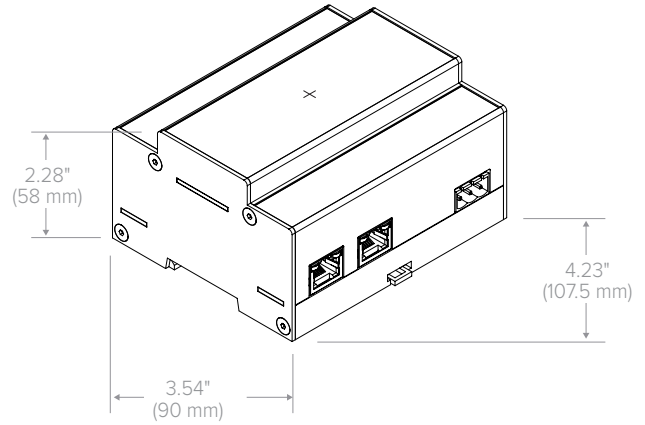
LPC
93126047-LPC-1



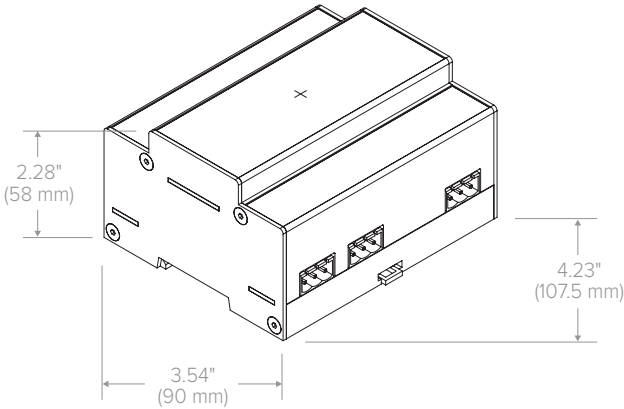
EXT
93126046-EXT



POE
93128612-POE



RDM
9315974-RDM



ADDITIONAL INFORMATION



TOUCH PANEL CONTROLLER (TPC) SPECIFICATIONS

- One universe of Ethernet based DMX512
- Other Outputs Supported: RDM, DALI, Art-Net, KiNet, sACN and Pathport
- Programmed and configured using the free Pharos Designer software
- Realtime and astronomical clock functionality with daylight saving support
- Triggering and show control via touch screen, IR, Ethernet, real time and astronomical clocks
- Proximity sensor to wake up the display
- Use multiple units connected and synchronized over Ethernet to scale to larger installations
- Integrates with other Pharos Controllers (LPC)
- Integrated web interface for remote management; custom pages supported
- Removeable SD memory card data storage (supplied)
- Power: PoE (IEEE802.3af, Class 2) 4W typical
- Operating temperatures: 0°C to 50°C (32°F to 122°F)
- Screen resolution: 480x272, color depth: 24-bit, brightness: 340 cd/ m²
- Mounting: Wall mounted, partly recessed in UK 2-gang 35mm or custom US 2.5" backbox (supplied separately)
- Ingress Protection Rating: IP40



CONTROL PHAROS EXT SPECIFICATIONS

- The EXT provides local DMX and DALI output for the TPC, as well as power and other hardware interfaces
- Control for up to 64 DALI devices or Slave; DALI discovery and configuration commands
- Isolated DMX port, RDM compatible RJ45 socket for 10/100Base-TX Ethernet with Link/Data LEDs; Fixed IP or DHCP; Power-over-Ethernet (PoE)
- RJ45 socket with Link/Data LEDs for direct connection to TPC only (100m max distance)
- Programmed and configured using the free Pharos Designer software
- Connect an external volt-free switch between input and ground (internal 2.2k pull-up to 5V)
- Connect an external voltage source between input and ground (24V maximum; internal 2MΩ pull-down to 0V); software configurable low/high threshold
- Connect an external voltage source between input and ground (24V maximum); software-configurable range
- The EXT has an RS232 serial port, whose data rate and format settings (baud, parity, stop bits, etc.) are configurable in software
- Emergency Lighting Schedule automatic Function and Duration tests; automatic querying for battery level and lamp hours; test result and error reporting web page
- Individually selectable operating mode for contact closure, digital or analog input (24V maximum)
- Power: Mains-powered; 100-240VAC / 50-60Hz/ 0.1A (10W typical)
- Operating temperatures: 0°C to 50°C (32°F to 122°F)
- Ingress Protection Rating: IP40

ADDITIONAL INFORMATION (CONTINUED)**PHAROS LIGHTING PLAYBACK CONTROLLER (LPC) SPECIFICATIONS**

- The LPC provides up to 4 universes of DMX512
- Other outputs Supported: RDM, DALI, Art-Net, KiNet, sACN and Pathport
- Integrates with other Pharos Controllers (TPC)
- Integrated real time and astronomical clock functionality with daylight saving support
- Use multiple units connected and synchronized over Ethernet to scale to larger installations
- Integrated web interface for remote management, custom pages supported
- Synchronizes with up to 40 Pharos Controllers over network
- Multiple protocols can be in operation simultaneously. Limited by patched channels, not universes used
- Interfaces supported:
 - RJ45 socket for 10/100Base-TX Ethernet,
 - Isolated DMX512 ports, RDM compatible (2),
 - RS232/485 serial port/ DMX in, IEEE 802.3af PoE powered device
 - USB-B socket for USB 1.1
 - 5-pin DIN socket for MIDI In
 - 5-pin DIN socket for MIDI Out
- Removeable SD memory card data storage
- Power: 9V to 48V DC or PoE (IEEE802.3af, Class 2) 4W typical
- Operating temperatures: 0°C to 50°C (32°F to 122°F)
- Ingress Protection Rating: IP40

**PHAROS POWER OVER ETHERNET SWITCH (POE) SPECIFICATIONS**

- Pharos PoE provides a simple power and networking solution for four Power-over-Ethernet devices with two separate Ethernet uplink ports.
- Four RJ45 sockets for 10/100Base-TX Ethernet with Power-over-Ethernet
- Two RJ45 sockets for 10/100Base-TX Ethernet
- The simple un-managed switch operates out of the box, with no commissioning required
- Compatible with all Pharos Devices, and can be used with other POEs to create larger networks
- Power: 48V DC * power consumption dependent on load, 100W maximum
- Operating temperatures: 0°C to 50°C (32°F to 122°F)
- Ingress Protection Rating: IP40

ADDITIONAL INFORMATION (CONTINUED)**PHAROS REMOTE DEVICE MANAGEMENT (RDM) SPLITTER SPECIFICATIONS**

- The Pharos RDM (Remote Device Management) is a 4 port DMX512 Splitter compatible with the RDM standard to provide DMX output to luminaires and other devices.
- DMX splitters are an essential requirement for most control systems, allowing multiple separate cable runs from a single DMX output and ensuring electrical isolation.
- Repeats a DMX signal to 4 outputs, each allowing for 32 DMX devices to be connected.
- Supports the Remote Device Management protocol (ANSI E1.20) allowing devices connected to any of the four outputs to communicate back to a Controller over the DMX link.
- Opto-isolated input and through connection for daisy-chaining the DMX connection.
- Power: 9V to 48V DC or PoE (IEEE802.3af, Class 2) 4W typical
- Operating temperatures: 0°C to 50°C (32°F to 122°F)