Remote Input Output DALI

The Pharos RIO D (Remote Input Output DALI) device provides a convenient and scalable way to control DALI fixtures and ballasts from Pharos Designer Controllers. Each RIO D supports a single DALI bus, which can be used as an output for control and as an input for triggering. Each device can be placed where it is needed and connected to a Pharos Designer Controller over an Ethernet network.

RIO D Features

DALI Control
Control up to 64 DALI devices from each RIO D, 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. Multiple RIO D units can be used together as part of a single Pharos Designer system to provide distributed DALI control over an Ethernet network.

Emergency Lighting
DALI Ballasts for emergency lighting have special requirements for regular testing, error detection and fault reporting. Pharos Designer supports this 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.

Scalable
Up to 200 Remote Devices can be combined with one or more Pharos Designer Controllers on the same network to build the ideal system for your installation. Each RIO is easily addressed using a convenient thumb wheel. Whether one Controller or many, it's all easily programmed using our Designer software.

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.

Designer Trigger
Timing is everything. Whatever the stimulus, Designer Trigger can handle it. You can control your lighting with responsive, reactive software. 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.

Power-over-Ethernet
As a Power-over-Ethernet (PoE) device, the RIO can be placed at any remote location and only needs a single Ethernet cable that provides both power and data.

Pharos Designer
Programmed and configured using the free Pharos Designer software – available for Windows or macOS – with upload over Ethernet.

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.

Network
Works with any Pharos Designer Controller and links to it using standard protocols over an Ethernet network.

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Specifications subject to change without notice.

Capabilities

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

Ethernet	RJ45 socket for 10/100Base-TX Ethernet with Link/Data LEDs; Static IP or DHCP; Power-over-Ethernet (PoE)
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

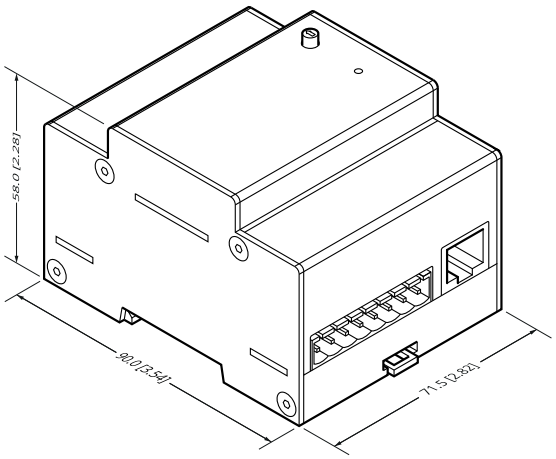
System Limits

Remote Device system limit count includes all RIO, EDN, TPS and BPS in project.

In Project	Maximum 200 remote devices across multiple controllers in a single Pharos Designer project.
Per Controller	Maximum remote device limits assigned to controllers depend on controller type: 64 for each LPC 1, 2, 4, and TPC 100 for each LPC X, VLC and VLC+
DALI Interface per Controller	Maximum total configured DALI ports assigned to controllers depends on controller type: 16 for each LPC 1 and TPC 32 for each LPC 2 64 for each LPC 4 100 for each LPC X 100 for each VLC and VLC+ (for triggering only)

Specifications

Power	PoE (IEEE802.3af, Class 1), 1.5W typical
Required	Any Pharos Designer Controller
Configuration	Pharos Designer 2
Addressing	By rotary selector switch
Temperature	0°C to 50°C (32°F to 122°F)
Humidity	10-50% relative, non-condensing
Ingress	IP40
Physical	4 unit wide DIN rail mounting enclosure (DIN43880 / EN60715 (35/7.5 rail)) 7.2 x 9 x 5.8 cm (2.8 x 3.5 x 2.3 in) 0.3 kg (0.7 lbs)
Shipping	20 x 15 x 12 cm (8 x 6 x 5 in) 0.5 kg (1.1 lbs)
Recovery	Hardware watchdog and recessed reset button



Order Code & Variants

RIO D	Designer Remote DALI Device (DALI)

Pharos Designer Controller 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)

RIOD24001

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