

## EXPERT REPEAT

### EXPERT REPEAT INSTALLATION

The Pharos 1+4 port DMX512 Expert Repeat is designed to be permanently installed in a central control room/cupboard or DIN consumer unit for remote deployment.

The unit is 100% solid state and has been qualified to operate in a dry environment:

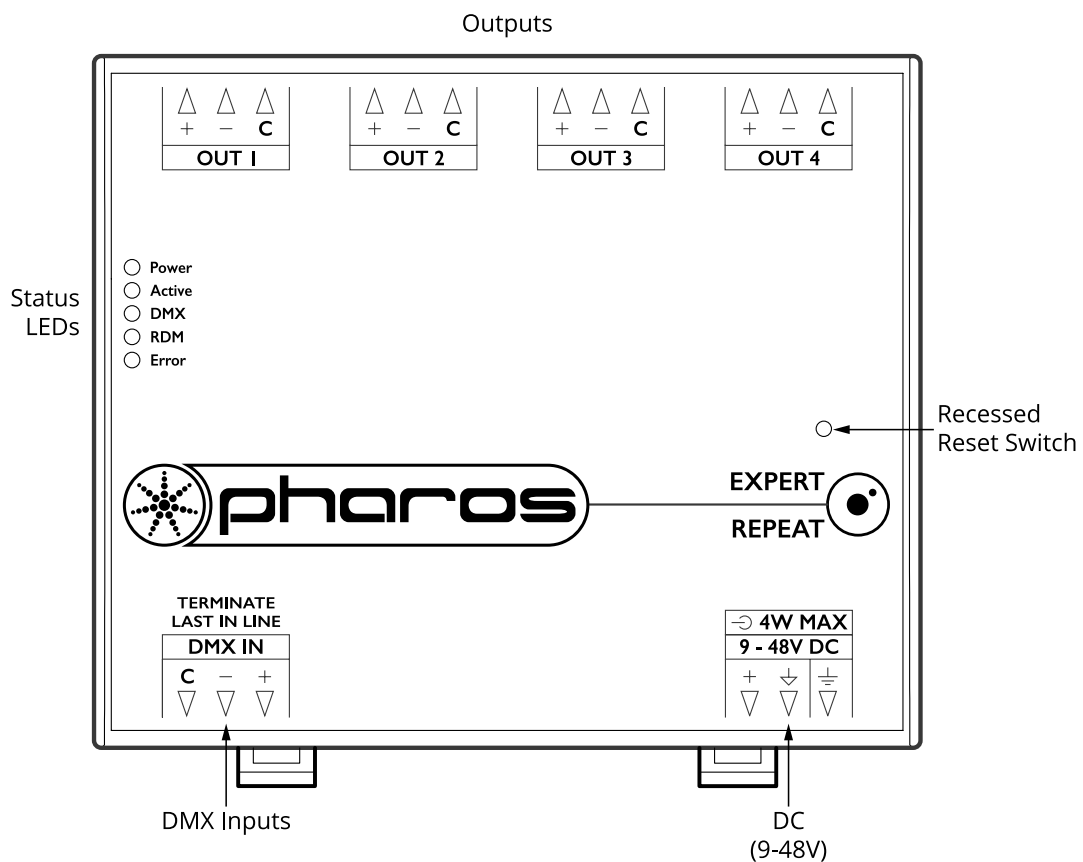
- Temperature range 0°C to 50°C (32°F to 122°F)
- Humidity 10-90% relative, non-condensing
- Ingress IP40

Sealed IP65 rated consumer units are available for outdoor use, please consult your Pharos distributor or representative.

**NOTE:** This equipment is not suitable for use in locations where children are likely to be present.

### EXPERT REPEAT LAYOUT

The following drawing illustrates the layout of the repeater, refer to the following sections for details:



## POWER SUPPLY

- DC power (9 to 48V)

A limited power source approved to UL60950-1 2 Edition, CAN/CSA C22.2 No. 60950nd1.07 2 Edition MUST be used, with an output voltage of 9 to 48V DC.

Such a power supply can be connected directly to the Expert Repeat using the DC Input connector. The pins on this connector are marked:

- + Positive input (9 to 48V DC)
- ⚡ Signal ground (0V)
- ⊥ Earth

The power supply should be connected to the Positive and Signal ground inputs, ensuring the polarity is correct.

The Expert Repeat will typically consume 4W with all ports fully loaded.

## GROUNDING

A dedicated earth terminal is provided which should be connected to a suitable earth.

## STATUS LEDS

The red LEDs on the top of the Expert Repeat indicate the unit's status:

- |           |   |
|-----------|---|
| Power:    | Indicates that power has been applied.                          |
| Active:   | Indicates that the unit is functional.                          |
| DMX data: | Illuminates when DMX data is being routed (input to all ports). |
| RDM data: | Illuminates when RDM data is being routed (a port to input).    |
| Error:    | Flashes to indicate an error condition.                         |

## PORTS

- DMX Input

One DMX In port is provided for the universe that is to be repeated.

The pins on these connectors are marked:

- C Data common
- Data - ('Cold' or 'Complement')
- + Data + ('Hot' or 'True')

- DMX Outputs

Four DMX output ports are provided.

The pins on these connectors are marked:

- + Data + ('Hot' or 'True')
- Data - ('Cold' or 'Complement')
- C Data common

To make up a cable to a 5 pin XLR the following connections should be made:

|        | LPC: | 5 pin XLR: |
|--------|------|------------|
| Data + | +    | 3          |
| Data - | -    | 2          |
| Shield | ↕    | 1          |

The DMX ports are by default not isolated from the Repeat's ground connection which is the recommended configuration for driving isolated inputs - the majority of DMX receivers.

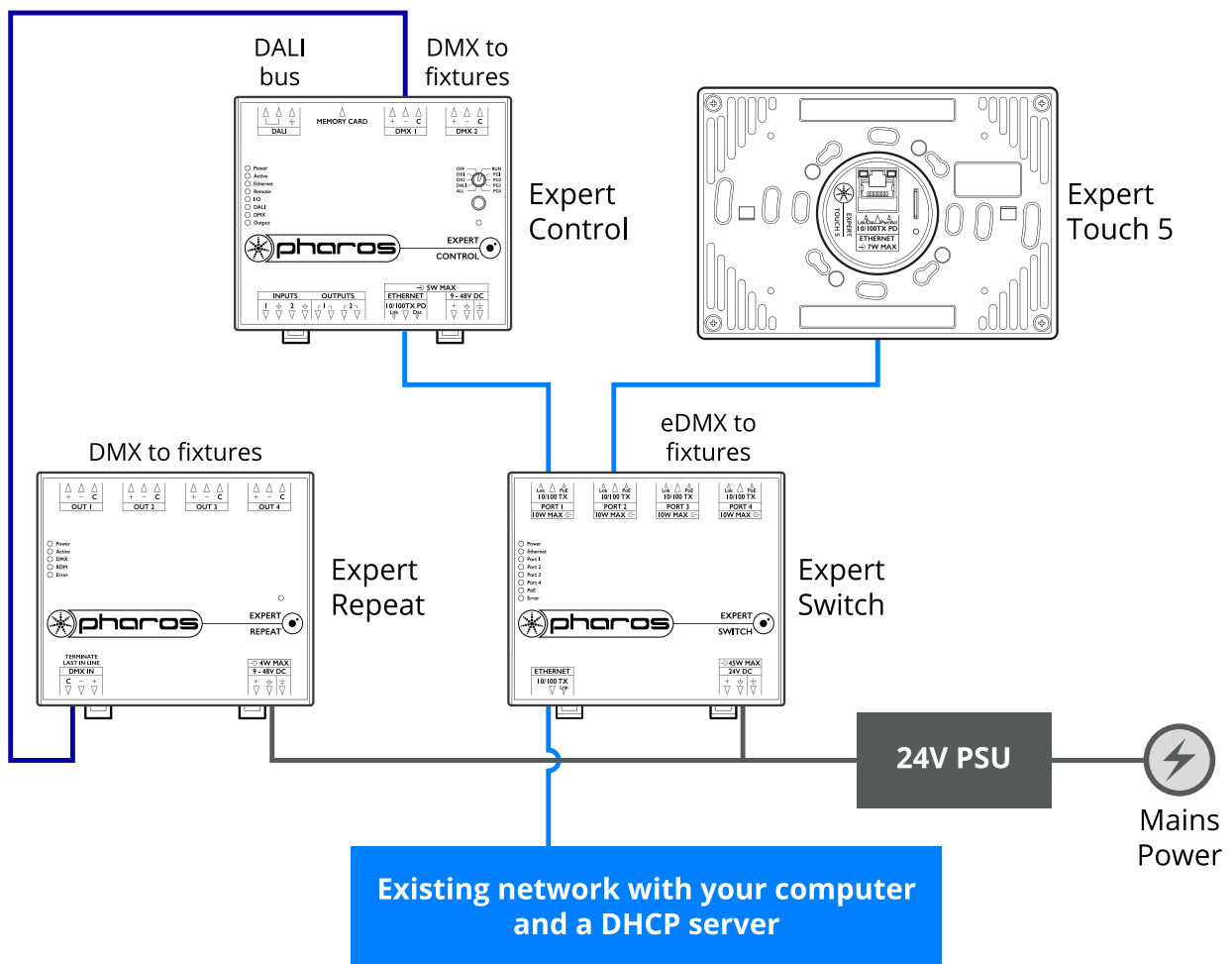
### **DMX & EXPERT REPEAT GUIDELINES**

Expert Repeat is compatible with the DMX512, DMX512(1990), DMX512-A and RDM 1.0 standards and care should be taken to ensure that your cabling, wiring topology and termination also complies with these standards.

Such compliance is beyond the scope of this document but a good resource is "Recommended Practice in DMX 512" by Adam Bennette which is available through PLASA and USITT .

## WIRING DIAGRAM

Illustrative example of possible wiring for an Expert control system, including all Expert accessory devices.



## WARRANTY

This Pharos Architectural Controls Limited ("Pharos") product is warranted for the period of five (5) years from the original date of purchase against defective materials and workmanship.

In the event that warranty service is required, you should contact your dealer or Pharos technical support at the following email address: [support@pharoscontrols.com](mailto:support@pharoscontrols.com).

## CONDITIONS

1. The warranty is only valid if the Pharos software registration is fully and properly completed, Pharos is presented with the original invoice or sales confirmation, Pharos has received payment in full and the serial number on the product has not been defaced.
2. Pharos' obligations are limited to the repair or, at its discretion, replacement of the product or the defective part.
3. It is the consumer's obligation to notify Pharos within one week of any suspected defect, and to return the goods prepaid to Pharos' authorised service address. Goods will only be received under warranty when they are returned with a recognised RMA number that has been issued by Pharos.
4. Warranty repairs must be carried out by a nominated Pharos employee or Pharos approved service technician. No reimbursement will be made for repairs carried out by non-Pharos personnel or dealers, and any such repair work or damage to the product caused by such repair work will not be covered by this warranty.
5. This product is not considered to be defective in materials or workmanship by reason that it requires adaptation in order to conform to national or local technical or safety standards in force in any country other than the one for which the product was originally designed or manufactured. This warranty will not cover, and no reimbursement will be made for such adaptation or any damage which may result.
6. This warranty covers none of the following:
  - a. Maintenance and repair or replacement of parts due to normal wear and tear.
  - b. Cost relating to transport, removal or installation of the product.
  - c. Misuse, including the failure to use this product for its normal purposes or incorrect installation.
  - d. Damage caused by lightning, water, fire, acts of God, war, public disturbances, incorrect supply voltage, improper ventilation or any other cause beyond the control of Pharos.
7. This warranty is valid for any person who legally acquired possession of the product during the warranty period.
8. The consumer's statutory rights in any applicable national legislation arising from the purchase are not affected by this warranty. The rights under this warranty are the consumer's sole rights and Pharos, its subsidiaries or distributors shall not be liable for any indirect or consequential loss, damages for any loss of use, time, profits or income, or any damage to related equipment, materials or consumable parts.