

# EURORACK 60

## Intelligent Digital Dimmer Rack

Very compact, intelligent, all-digital dimmer rack for **wall mounting**, designed for professional applications in stage, TV studio and architectural lighting, whenever high performance, space and cost are the prime considerations.

### Standard Configurations:

- 24 x 3 kW
- 12 x 5 kW
- (12 x 3 kW) + (6 x 5 kW)
- 12 x 3 kVA industrial contactors

### Set-up Functions

- 5-key keypad, 12-character LED display and user-friendly scrolling menu for easy access to all dimmer functions.
- Menu with different levels of access for different levels of users, protected against tampering.
- 10 user-selectable dimmer laws: linear r.m.s voltage, linear r.m.s to 120 V, TV laws (BBC, TV1, TV2), non-dim with hysteresis, fluorescent, linear r.m.s voltage with preheating, square law, user-programmable custom law.
- Voltage reduction factor for extended lamp life or variable load cable length compensation.
- 4000-step fade resolution, for noticeably smoother fades.
- Global or individual programming of dimmer law, patching, voltage reduction factor and smoothing.
- Creation and storage of 20 lighting cues (19 + Priority) each with fade and wait times, for back-up cues, architectural lighting, or stand-alone operation.
- Memories set by recording DMX levels or via the menu.
- After loss of DMX data: maintain last levels, or wait and fade to one of the internal cues, or wait and fade to black.
- All programmed data saved for unlimited time.

### Electrical Protection

- Individual dimmer protection by single pole MCB (standard).
- Optional 1P+N protection (N disconnected but not protected) by MCB or HRC-100 kA fuse with "fuse OK" neon indicator and slot for spare fuse.
- Optional **RCD protection** (Residual Current Device):
  - RCD - 30 mA (1P+N) supply protection per group of 10 kW (4 x 3 kW or 2 x 5 kW) compulsory for IT/TT supply. Required quantity: 6 for 60 kW
  - RCD - 30 mA (3P+N) supply protection per group of 30 kW (12 x 3 kW or 6 x 5 kW). Required quantity: 2 for 60 kW
  - RCD+MCB/1P+N-30mA - 6kA **per individual dimmer**
- Optional main isolator switch 4P-100A.

### Residual Current Monitoring (option)

Each supply line to a EURORACK 60 can be equipped with a residual current (earth leakage) monitoring system, which measures and displays the leakage current without tripping any rcd or mcd. Latched and non-latched alarms are available for remote display panels.

### Filtering

- Professional quality filtering (200  $\mu$ s rise time).

### Cooling

- Convection cooling via the lateral aluminium extrusions (heat sinks) and forced air cooling through two low noise, 12 V brushless DC fans with automatic ON-OFF switching.
- Overtemperature protection through gradual fade-out.



### Power Supply

- 230 V/400 V Star 3NPE (TN-S), 50/60 Hz with max. 90 A per phase. Phase voltage 200-264 V.
- Star/Delta and single-phase supply upon request.

### Power Rating

- Individual dimmers are suitable for continuous duty at their rated power of 3 kW or 5 kW.
- Max. load per cabinet is 60 kW at +35°C ambient temperature (air intake).

### Control Signals

- DMX512/1990 and optional analogue 0/+10 V or 0/370  $\mu$ A inputs. Simultaneous DMX and analogue inputs: Highest Takes Precedence (HTP). The analogue inputs can be connected to an analogue desk or to remote switches for memory control.
- DMX512/1990 and/or Local Memories: local memories are either played back simultaneously with the DMX signal on a HTP basis, or override the DMX signal.
- ADN bidirectional serial port (EIA-485) for system-wide communication.
- Optional dual DMX input, each with patch.

### Type of Loads

- Hard-fired **thyristors** for control of 220/240 V tungsten halogen lamps, resistive and inductive loads, transformer-fed low voltage lamps, fluorescent lighting with suitable ballasts.
- Cold tungsten lamp allowed without damage to the thyristors.
- Special loads which are not compatible with thyristor dimmers, such as HMI ballasts or electronic equipment, can be DMX-controlled by the 12-channel Relay Version. The 12 industrial contactors are rated for 3 kVA or 5 kVA, inductive and capacitive loads.

# ADB

Lighting Technologies



## Presentation

Compact rack enclosure made of a very rigid assembly of steel plates and anodised aluminium extrusions, primarily intended for wall mounting. The front panel is divided into 3 removable parts providing easy access for maintenance.

## Front Panel LED Indicators

- Presence of DMX signal
- Microprocessor running
- Error messages in clear (for ex. temperature warning, DMX error, ...)
- Display of DMX or analogue levels in %.

## Diagnostics Functions

**Standard functions** include presence of mains and DMX signal, processor check, 400 V wiring error, overtemperature, fan failure, DMX and analogue control levels, local test of a dimmer (steady, flash or chaser) and automatic self-test of control electronics, all information reported in real time.

**Extended diagnostics functions** (option) further include **Scan Load**, a pre-show test routine providing additional information on the status of each dimmer, i.e. value of the load (kW), deviation from reference load, no load, overload, short-circuit, thyristor failure.

Error messages appear in clear on the LED display and all events/parameters are available on the ADN network for display on the NETBUS Remote Dimmer Controller and/or the Dimmer Manager PC.

## Advanced Dimmer Network (ADN)

Dimmers of the MEMOPACK / MEMORACK / EURORACK 60 / EURODIM 3 families can be networked over the DMX cable via a proprietary bidirectional protocol for the purpose of remote programming, monitoring, fault reporting and memory management via the NETBUS Dimmer Controller or a laptop PC with the Dimmer Manager kit, which also provides a gateway to an **Ethernet** network. See relevant brochure.

## NETBUS (option)

NETBUS is a small (340 x 285 x 75 mm), portable **Remote Dimmer Controller** which can be inserted anywhere in the ADN network and provides:

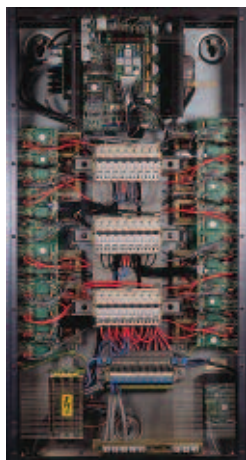
- Access to programming, test and diagnostics functions of any dimmer.
- 23 direct access keys for the management of dimmer memories: back-up cues, basic rehearsal, house lights, working lights, emergency.
- System-wide overview of dimmer status information.

## Safety

- Opto-isolated DMX and ADN inputs.
- Protection circuitry against accidental 400 V wiring.
- Cables, PCB's and insulating materials with self-extinguishing properties according to UL 94v.0 standard.

This equipment complies with all applicable European directives and carries a CE mark.

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## Dimmer Manager Kit (option)

The kit consists of a NETPORT/XT Ethernet to DMX+ADN converter, which can be inserted anywhere in the ADN network, and "Dimmer Manager", a programming and reporting software for PC which, in addition to the NETBUS functions, provides:

- Graphical user interface
- Graphical representation of the complete dimmer system layout
- Storage of system configurations per show, per venue
- Off-line editing of lay-out and dimmer parameters
- Storage of dimmer parameters (patch, dimmer names, dimmer laws, reference loads, library of custom laws, ...)
- Upload and download of dimmer parameters

## Architectural Applications

EURORACK 60, with its 20 local memories, provides an integrated solution for architectural applications such as conference rooms, reception areas, exterior lighting, sound-and-light shows. Local memories and DMX control can be combined, so that a EURORACK 60 can be shared between the stage and the foyer, or the houselights. Remote control of the memories is via the ADN network, or by simple switches/contacts, or analogue control desk over the analogue inputs (option) of the dimmer.



## Installation

EURORACK 60 is shipped as a complete unit, factory tested and ready for installation. No further assembling is required on site. EURORACK 60 can be mounted directly onto a wall, or with optional stand-off brackets to create 10 cm of trunking space behind the unit. The mains supply terminals, DIN rail mounted load terminals, connections for DMX and ADN, analogue inputs and memory control connector are conveniently grouped in the cabling compartment. The load terminals are "N-disconnected" so periodical isolation testing of each outgoing N-wire can be performed without removal of the load wiring. The blank cable entry panel at the bottom is removable. Option: extra installation hardware and bottom panel fitted with 27 universal seals for output and data cables, and a steel PG31 supply cable gland.

**Dimensions (mm):** 1022 x 555 x 132

**Net Weight (kg) :** 43

## Packing

**Dimensions (mm) :** 1150 x 685 x 265

**Gross Weight (kg) :** 48

ISO 9001 : 2000 certified

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