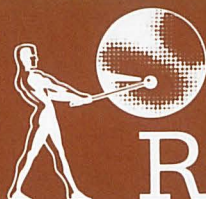


Permus Dimmer Racks

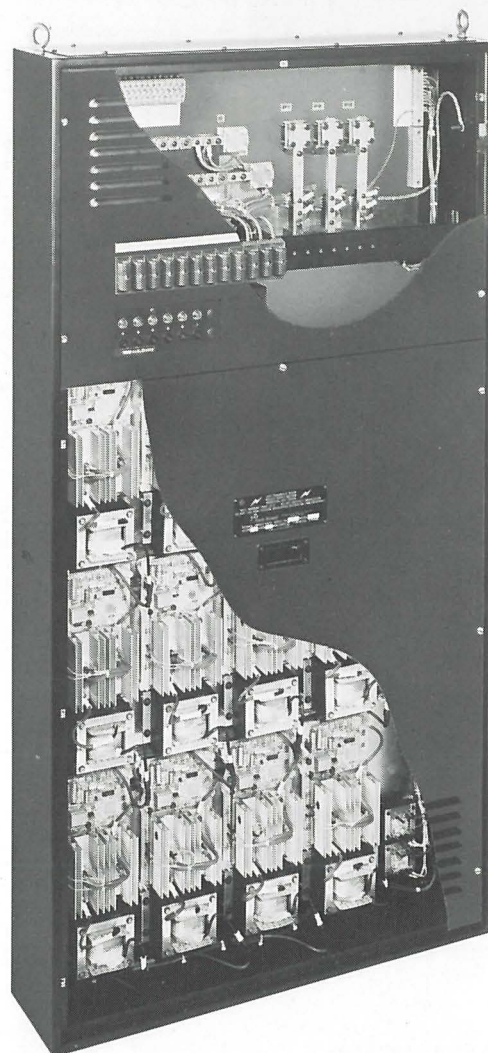


Rank Strand

The new Permuis Dimmer Racks, embodying Permuis Thyristor dimmer modules, are the economic power-handling component for permanent, hard-wired lighting control systems. These shallow racks require only front access, plus top access for the electrical contractor, and can be mounted side by side against a wall, or mounted back to back; either method ensures that only the very minimum of valuable floor space is required.

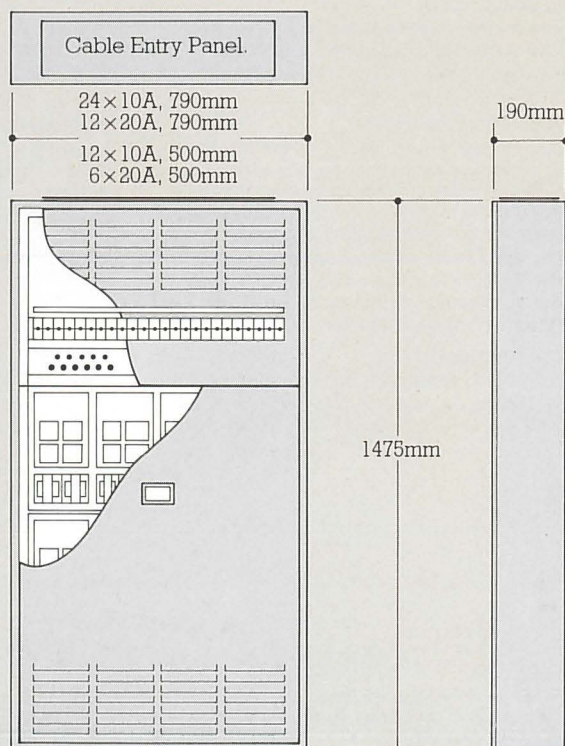
The rugged and reliable Permuis dimmer modules incorporate a temperature-stable trigger card with hard-firing of each pair of tungsten surge-rated Thyristors mounted on generous heat-sinks. Hard-firing ensures stable operation on loads as low as 40 watts and for transformer-fed lamps. A new transfer characteristic has been incorporated to give increased control sensitivity, and improved standards of reliability, and safety, are ensured by elimination of the bottom-set potentiometer.

The standard width Permuis racks, stocked and ready for despatch, contain either 24x10A dimmers in twin module format, or alternatively 12x20/25A single dimmer modules. For maximum flexibility of the total number of dimmer channels, and to allow mixed ratings in a multiple-rack installation, there is also a narrower rack available housing either 12x10A, or 6x20/25A dimmers. All Permuis dimmer racks employ natural air-flow ventilation, are available with either Reyrolle or Neozed close-excess current protection, and are internally wired for a three phase and neutral incoming supply. Provision is made to allow each two adjacent dimmer modules (4x10A) to be changed, on site, to a different phase, or to change to a single phase and neutral supply.



Dimensions

Scale 1:20



Order Codes

Permuis Dimmer Racks, full-width

24x10A dimmers, Reyrolle fused	06 020 11
24x10A dimmers, Neozed fused	06 021 09
12x20A dimmers, Reyrolle fused	06 050 05
12x25A dimmers, Neozed fused	06 051 00

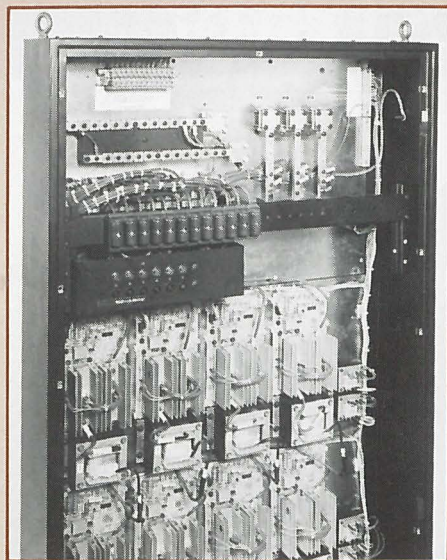
Permuis Dimmer Racks, narrow

12x10A dimmers, Reyrolle fused	06 020 03
12x10A dimmers, Neozed fused	06 021 17
6x20A dimmers, Reyrolle fused	06 050 13
6x25A dimmers, Neozed fused	06 051 19

Weights

24x10A, 12x20A:	90kg
12x10A, 6x20A:	65kg

Specification



Rack Construction

Totally enclosed, with 2-part rebated front cover. External cable entry through large top panel, removable to adapt to different cabling systems. Top front cover provides tool-access to full width area for all external connections. Top fitted with lifting eyes to facilitate transport and on-site positioning. Wall mounting, and back-to-back mounting brackets, supplied in internal packet to replace lifting eyes.

Ventilation

Natural air-flow ventilation through multiple louvres at bottom and top front of each rack. Air inlet temperature must not exceed 35°C. In exceptional situations, and climates, it may be necessary for others to provide dimmer room ventilation to achieve 35°C max. ambient.

Close Excess Current Protection

Single pole Reyrolle 440v rated Pullcap with shrouded contacts, or Neozed DO 2, as ordered. HBC fuse links and carriers supplied in internal packet to prevent transit damage.

Control Fuses

Common to no more than 2 modules (4×10A). 100mA 20×5mm fuse links.

Internal Wiring

All internal wiring provided from 3 phase, neutral and earth busbars to numbered terminals for load connections and control signal connections.

Power Terminations

Full-width racks (24×10A or 12×20/25A) have large capacity compression clamps allowing vertical or horizontal alignment of power cables to busbars. Adaptor supplied to link the 3 phase busbars for a single phase supply (adaptable 2 phase).

Narrow racks (12×10A or 6×20/25A) have heavy duty clamp terminals for vertical entry tightened by Allan key (supplied).

Load Terminals

Pressure-pad terminals, accepting up to 4mm² conductors on 10A dimmer racks, up to 10mm² conductors on 20/25A racks.

Dimmer Ratings

10A max at 220/240v, 40W min.
20A max at 240v, 40W min.
25A max at 220v, 40W min. (Neozed-fused)

Line Frequency

45/65 Hz

Output Voltage

Continuously variable between zero and 5v below line voltage.

Efficiency

Greater than 98%.

R.F.I. Suppression

To BS 800 Part 3, VDE 0875/7.71, grade N for supply terminals, and grade G for load terminals.

Risetime filter adjacent to module.

Greater than 250 microsecond for 10A and 900 microsecond for 20A at rated full load and at 90° conduction angle.

Control Voltage

–10v via 10k ohm resistor and silicon diode
= Full. 0V = off.

Control Current

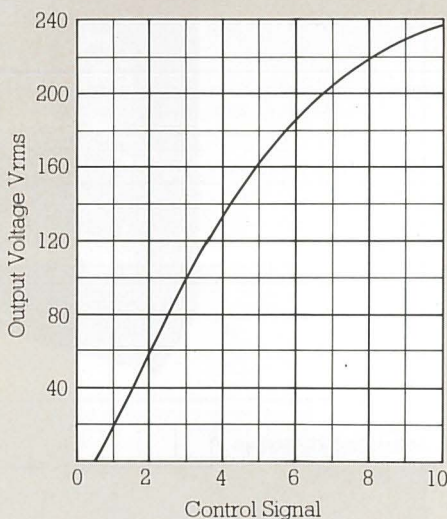
2mA max.

Response Time

Virtually instantaneous — thermal lag of tungsten filament lamp loads more significant.

Dimmer Law

Transfer developed to embody best features of 'S' law and Square law.



Alignment

Top set only to determine maximum output voltage. Automatic bottom set ensures safety from mis-alignment.

Thyristor Firing

Hard-fired 5kV r.m.s. insulation, transformer isolation.



Accessories

Tempus Control Desks

Permuss dimmers can be interfaced with any current, or recent, Rank Strand control desks, but Tempus desks require a Power Supply Unit to be fitted to the nut-inserts provided within a Permuss dimmer rack. This is supplied as a sub-assembly, complete with cartridge fuse, for fitting on-site, or it can be fitted by Rank Strand before delivery.

Tempus desks also have a 2m long flexible control cable with an 8-pin DIN plug for the output of each multiple of six control channels. Twin or Quad control socket boxes enable 'hard' wired control cables from Permuss racks to mate with the flexible control cables of a Tempus desk.

Power Supply Unit, add-on for Tempus desk	08 841 10
Twin 8-pin control socket box	04 372 01
Quad 8-pin control socket box	04 373 07

Ripple Rejection

If control signals for other equipment (such as street lighting) are superimposed upon the mains supply this ripple control can cause instability of Thyristor dimmers. If necessary the plug-on addition, on-site, of a Ripple Rejection Card to each Permuss dimmer module filters out ripple control frequencies above 300 Hz, and voltages up to 20v r.m.s.

Ripple Rejection Card, plug-on 08 814 07

Other Accessories

1-240 channel number pack, in strips.	Reyrolle fused 06 055 10
	Neozed fused 06 055 29

Custom-built 10kW dimmer modules (replacing two standard modules) can be fitted as a custom-built option, also dimmer modules for control of fluorescent lamp loads.