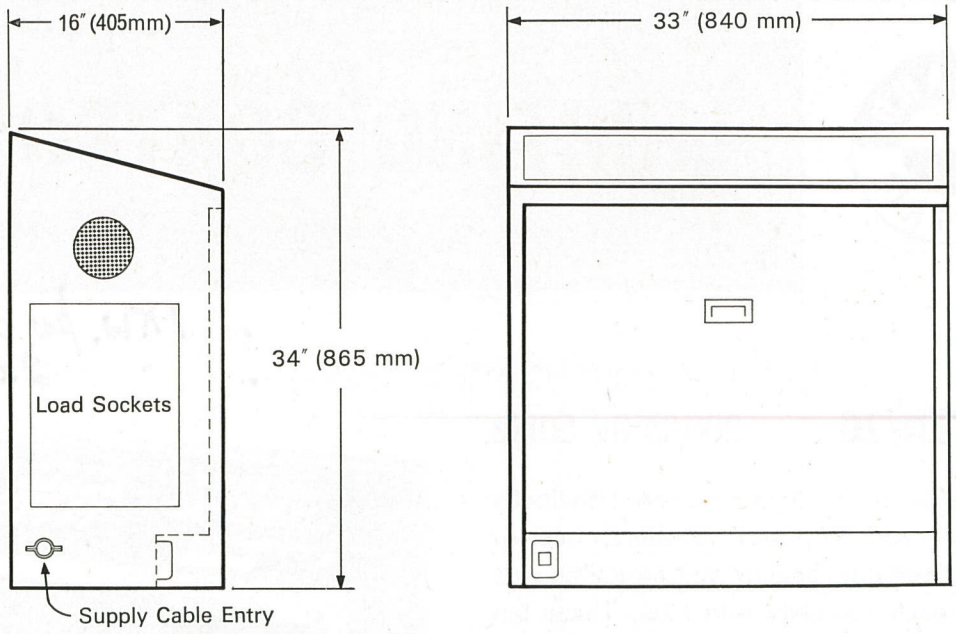

Type TEN/20

WEIGHT **155 lb. (70 Kilos)**

SPECIFICATION

The lighting control shall be internally wired for a 3-phase 4-wire 50Hz supply, but supplied with removable links fitted for single phase and neutral operation. It shall include ten 200/250 volt Thyristor dimmers, the first of 4000-watt maximum capacity and the remainder type JTM.20 2000-watt maximum. Each dimmer shall be associated with a pair of control channels.

Each of the 20 control channels shall have a flush-mounted three-position switch to group the channel full-on, off, or on-dimmer. Each channel shall be provided with a 15 amp. 3 pin socket outlet for the connection of the tungsten filament lamp load. These sockets shall be flush-mounted in the left-hand end. Twenty shrouded contact fuses shall be provided and fitted with quick-acting HRC fuse to give full load fault protection.

Each of the ten dimmers shall be controlled by two dimmer levers mounted one above the other. Both levers shall be provided with a bold indentification number. The two rows of dimmer levers shall be interconnected in a 2-preset network and each preset provided with a separate master dimmer at the right-hand side. Each master dimmer shall be fitted with a large moulded fingergrip knob, with scale, and shall provide proportional mastering independent of load.

The dimmer levers shall have a linear motion and shall consist of a precision black moulding with a fixed scale, in contrasting white, shared between two adjacent-numbered levers. The effective scale length shall not be less than $2\frac{1}{2}$–in. (60mm) and this shall be clearly graduated from 0 through to 10 with half divisions indicated. Each lever shall be fitted with a white moulded knob with a concave finger-rest and bold index line. This knob shall be fully insulated from the three-contact brush assembly of a continuously wound potentiometer.

The self-contained desk shall be constructed of preformed steel sections with the operational area recessed and angled 15° from the horizontal. Finish shall be two-tone hammer grey with a recessed dark front panel removable to provide access to the supply terminals and the dimmer. A silent dead blackout switch shall be fitted below this front panel.

The total heat dissipated shall not exceed 500-watt at maximum load and a quiet fan shall be fitted in the left-hand end to disperse this heat. The ambient temperature must not exceed 95°F (35°C). The phase to neutral voltage should be stated at time of order.

THYRISTOR DIMMERS

Each dimmer shall be a self-contained unit with a pressure-pad terminal block for all control and power connections. All terminals shall be labelled.

The regulation of the tungsten filament lamp load shall be wholly by a pair of thyristors (controlled rectifiers) and these shall be of a type which will allow the full tungsten surge current to flow. The output shall be AC with a waveform which is completely symmetrical with respect to the zero voltage and current. An inductive filter network shall be included to reduce the rise time of the output waveform to not less than 300 micro-seconds at the 90° conduction point in the power cycle at full load. The noise power, defined as all harmonics in the load waveform between 200Hz and 16Hz, shall be reduced by 3dB (a factor of 2 to 1) compared with an unfiltered channel at full load. This value of noise power shall not be exceeded when the dimmer loading is varied. The maximum output of the dimmer (including filter) shall not be less than 99% of the supply voltage.

The output voltage to any load between the minimum of 60-watt and the maximum rating of the dimmer shall follow the control signal is less than $\frac{1}{2}$ second without oscillation or any other form of transient disturbance. There shall be no restriction whatsoever on the addition of load to a partially loaded dimmer provided the total load does not then exceed the maximum rating.

Each dimmer shall generate its own circuit power and synchronizing supplies for the printed circuit trigger unit which shall include trimming adjustments for full-on and blackout. The control signal input shall be completely isolated from the load circuit and the signal shall not need to be related to the phase of the load circuit. The trigger unit shall provide S curve dimming characteristics.

VARIATIONS *available at time of manufacture.*

C-filters providing 600 micro-second risetime and noise power reduction 8dB (ratio 7:1) for television applications.

European or Australian 2-pole and earth socket outlets.

Similar equipment is available for 110/120v 60Hz supply.

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