

Horstmann Timers and Controls

HORSTMANN ELECTRONIC- THERMAL STREET LIGHTING CONTROLS ET10 & ET22

Horstmann photo-electric switches have been designed for the control of street lighting and ensure that lights are switched ON automatically when daylight falls below the level recommended for road safety. Two models are available, the ET10 which is a one part unit and the ET22 which is a two part unit. Both are manufactured to very high engineering standards.

Type ET10 (one part) Switch—Low Ratio 1 : 0.5

This switch embodies the cell unit and switch gear in one assembly and is fitted to the top of the street lantern. It is constructed on a 3-pin plug designed to fit a N.E.M.A. standard socket (N.E.M.A. publication SH18—1959). The control is omnidirectional allowing the socket to be fitted to the lantern in any horizontal plane without regard to orientation. When plugged-in the switch makes a water-proof seal between the base and the socket.

Type ET22 (two part) Switch—Low Ratio 1 : 0.5

This two part unit comprises the sensor head which is fitted to the lantern top and the switch gear which is fitted into the base of the column. The small size of the sensor head is a considerable advantage when space is limited on the lantern top. It is omnidirectional and housed in a delrin retainer which is fitted with a moulded Polycarbonate cell cap. The retainer is threaded to give a fit in a 13 mm (0.5") diameter hole. The switch unit is housed in a plug-in moulded case and is supplied with an override switch.

OPERATION (inverse switching ratio)

The ET series are electronic control switches using a cadmium sulphide light sensor with snap action electro-thermal load switch.

An electronic circuit is used to detect the amount of light falling on the light sensor and to operate the load switch when the light level has reached the operating point.

Extra circuitry provides an inverse ratio such that the switch 'OFF' level is one half of the switch 'ON' level. The unit incorporates a built in delay to eliminate random switching operations due to cloud shadow, car headlights, etc. The circuit has been designed to provide a competitively priced control with a stable operating level with regard to temperature, supply voltage variations and life.

Ordering

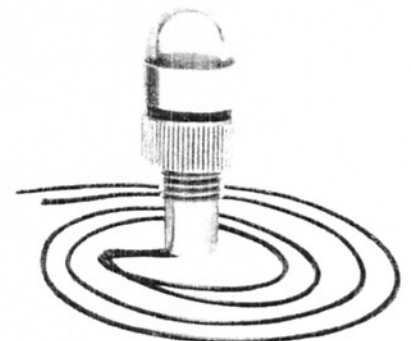
Please specify operating voltage range and 'ON' light level.

Type ET10 (one part) switches will be supplied without mating sockets unless this is specified on the order.



ET10, (one part)

N.E.M.A Socket not shown

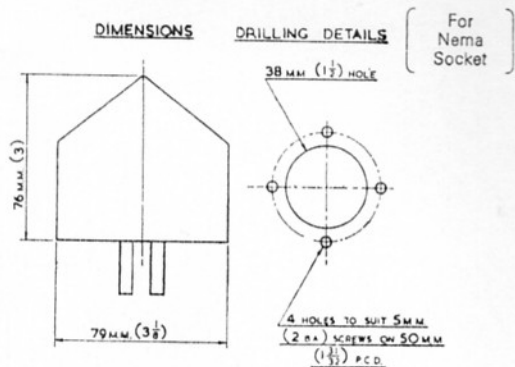


ET22 (two part)

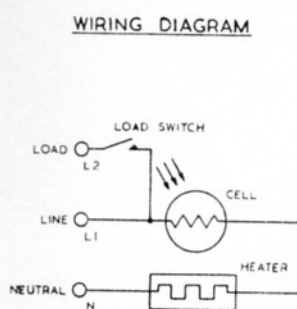
TECHNICAL SPECIFICATION

Operating voltage	200/250 volts 50/60Hz
Switch rating	1000 w or 1200 V.A.
This rating should be used only as a guide. Where multiple lamp switching is required the capacitive load should not exceed 50 microfarad	
Maximum power dissipation	2.0 watts
Operating temperature range	Ambient—15°C to + 60°C
Mounting surface temperature (ET10)	120°C
Operating light level	Switches are supplied set to 70 Lux as standard but can be factory preset, in the range 10—120 Lux.
Switching ratio	The 'OFF' level is 0.5 times the 'ON' level except ET11, ET23 which is 1:1.
Materials	<p>ET10 Base: Cellulose filled phenolic moulding Cover: Moulded Acrylic, which does not discolour or craze due to weathering and U.V. radiation.</p> <p>ET22 Cell cover: Polycarbonate Cell housing: Aluminium Switch Unit: Cellulose filled phenolic</p>
Shock	The complete switch is capable of withstanding a 40G shock without damage or alteration to the operating levels
Socket (ET10)	Manufactured to conform to N.E.M.A. specification SH 18-1959. Requires a 38 mm (1½") dia clearance hole. Supplied with a cork sealing gasket 6 mm (¼") nominal thickness.
Dimensions ET22	<p>Switch Unit: Overall height 51 mm (2") Overall length 79 mm (3½") Overall depth 80 mm (3⅛") from base board when plugged into socket</p> <p>Sensor Head: Overall height 21 mm (⅞") above mounting surface Overall diameter 19 mm (¾")</p>

ET10 Dimensions & Drilling Details

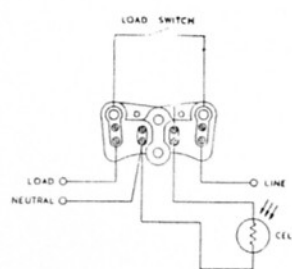


ET10 Wiring Diagram



Note: Heater omitted on T14.

ET22 Wiring Diagram



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