

# Horstmann Timers and Controls

## HORSTMANN THERMAL STREET LIGHTING CONTROLS T14, T16, T24 & T26

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 versions are available, the T14 and T16 are one part units and the T24 and T26 are two part units. All are manufactured to very high engineering standards.

### **Type T16 (one part) Switch — Low Ratio 1 : 1.5**

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 T14 (one part) Switch — Ratio 1 : 2**

Similar to the T16 but catering for the different switching ratio.

### **Type T26 (two part) Switch — Low Ratio 1 : 1.5**

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 neoprene retainer which is fitted with a moulded Diakon cell cap. The retainer is stepped to give a force fit in a 13 mm (0.5") hole. The switch unit is housed in a plug-in moulded case and is supplied with an override switch.

### **Type T24 (two part) Switch — Ratio 1 : 2**

Similar to the T26 but catering for the different switching ratio.

### **Operation**

A hermetically sealed cadmium sulphide cell is connected in series with a thermally operated, ambient compensated, snap action switch mechanism. During daylight hours the resistance of the cell is low enough to allow sufficient current to flow in the heater to open the switch contacts. When ambient illumination falls below the pre-set value the heater current is reduced below that required to hold the switch open. Protection against switching under transient light conditions is provided by the slow response of the thermally operated load switch.

As no British Standard exists for photo-electric controls the switch has been designed to exceed the engineering and safety standards of BS.3955.

By using a compensating heater (patent applied for) the switching ratio has been reduced to 1 — 1.5.

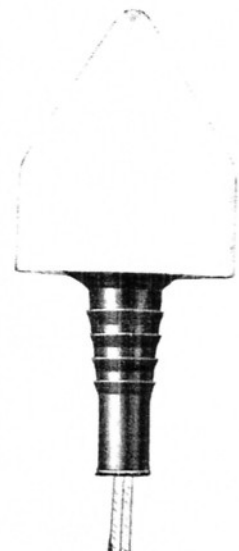
### **Ordering**

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

Type T14 and T16 (one part) switches will be supplied without mating socket unless this is specified on the order.



*One Part Series  
N.E.M.A. socket not shown*

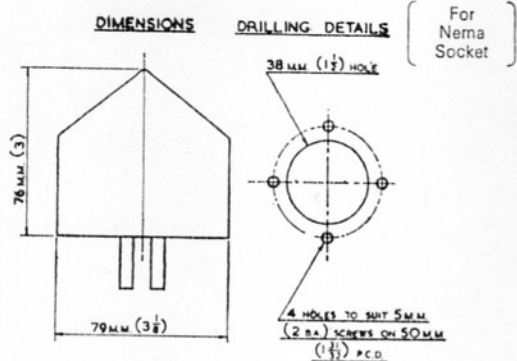


*Two Part Series*

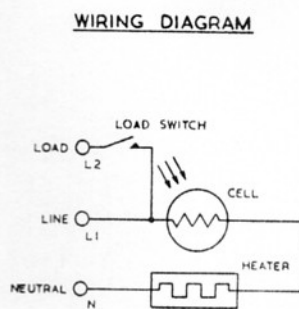
# TECHNICAL SPECIFICATION

<b>Operation voltage</b>	200/225 or 225/250
<b>Switch rating</b>	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.	
<b>Maximum power dissipation</b>	2.8 watts
<b>Operating temperature range</b>	Ambient—15°C to +55°C
<b>Mounting surface temperature</b> (T14 & T16 only)	120°C
<b>Operating light level</b>	Switches are supplied set to 55 Lux as standard but can be factory preset, in the range 10—120 Lux.
<b>Switching ratio</b>	The 'OFF' level is 1.5 times the 'ON' level except T14 which is 1 : 2.
<b>Materials</b>	T14, T16  T24, T26
	Base: Cellulose filled phenolic moulding Cover: Moulded Diakon, which does not discolour or craze due to weathering and U.V. radiation.  Cell Cover: Moulded Diakon Cell Housing: Neoprene Switch Unit: Cellulose filled phenolic
<b>Shock</b>	The complete switch is capable of withstanding a 40G shock without damage or alteration to the operating levels
<b>Socket (T14 &amp; T16 only)</b>	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.
<b>Dimensions (T24 &amp; T26 only)</b>	Switch Unit: Overall height 51 mm (2") Overall length 79 mm (3⅛") Overall depth 60 mm (2⅜") from base board when plugged into socket  Sensor head: Overall height 55 mm (2⅛") above mounting surface Overall diameter 44.5 mm (1¾")

## T14 Dimensions & Drilling Details T16

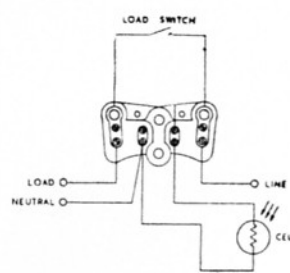


## T14 Wiring Diagram T16



Note: Heater omitted on T14.

## T24 Wiring Diagram T26



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