



Specially designed for road signs and control of street lighting, these units are ideally suited for security lighting applications where space is limited or low visibility an advantage.

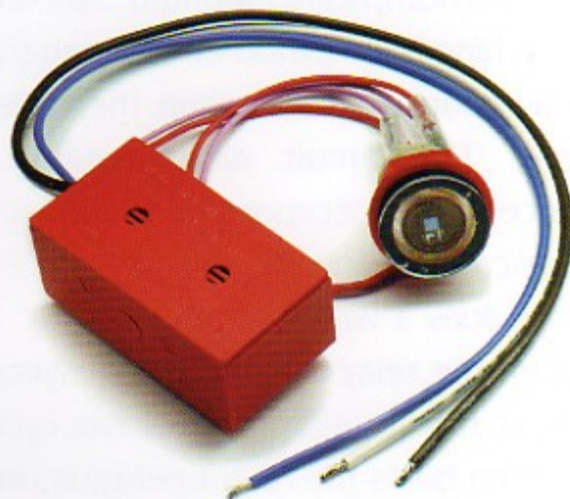
The unit embodies state of the art technology recently developed by Royce Thompson Limited. The new patent pending synchronous switching technology controls and reduces high inrush currents.

At the centre of this pioneering technology is our advanced circuitry with a new Application Specific Integrated Circuit, (ASIC), which controls sensing, time delay and synchronous load switching.

The unfiltered silicon photodiode, gives reliable drift free photometric performance, with excellent unit to unit consistency. This ensures that all lanterns will switch on and off together.

Engineered for value, with a 20 year expected life and carrying a 6 year guarantee, these controls are rated for 20,000 cycles of switching. Load handling is 3 x 400W HPS and the units have the lowest night and day power consumption of their type which means reduced energy costs.

The Microstar 2000 and ER12RN represent outstanding value, with extreme reliability and accuracy of switching.



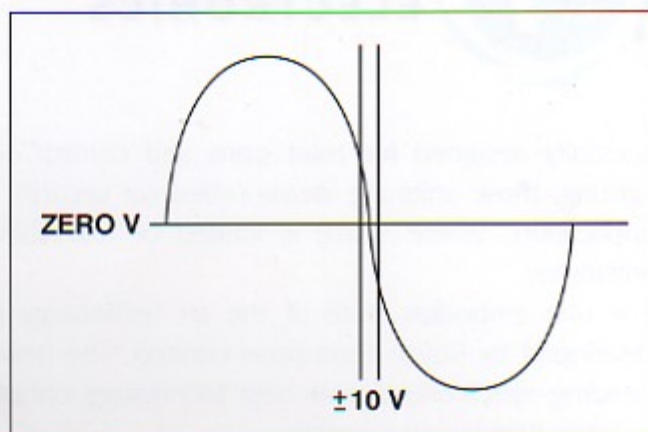
Technical Specification

Description	MICROSTAR 2000	ER12RN
Sensor - silicon photodiode	Filtered	Unfiltered
Sensor Drift	Zero over 10 years	Zero over 6 years
Switching Level 70 Lux (Standard, others available)	●	●
State Machine (see reverse)	●	
Switching Differential Negative (Positive on request)	1:0.5	1:0.5
Voltage - 50Hz 230V	+/-10%	+/-10%
Maximum Lamp Load 3 x 400W HPS 96 µF PFC	●	●
Maximum Resistive Load	8 Amps	8 Amps
Switching Delay		15-30 seconds
Switching Cycles	20,000	20,000
Power Consumption	0.25 Watt	0.25 Watt
Operating Temperature	-20°C to +80°C	-20°C to +80°C
Certified to - EMC Emission to EN 50081-1	●	●
EMC Immunity to EN 50081-2		
BS 2011 Vibration, BS 5972-1980		

SYNCHRONOUS SWITCHING

Royce Thompsons Patented Synchronous Switching is a method of ensuring that the relay contacts close when the cycle is at zero. The circuit which enables this procedure is incorporated in the patented *Application Specific Integrated Circuit*. How does it work?

When the relay is required to switch, the circuit monitors the part of the cycle it is in, then holds the relay operation until the relay can operate with the contact voltage at zero.



STATE MACHINE

The State Machine incorporated in the patented ASIC enables the units to be set to greater accuracy. It consists of four states, 'DAY', 'DUSK', 'NIGHT' & 'DAWN'. The *DAY* state is any light level over 250 lux and the unit will stay in this state until the light level reaches the pre-set *DUSK* state (5-240 Lux) the load will switch instantly, and will remain in this state unless daylight goes back to the *DAY* state and the load will switch *OFF*. If daylight keeps dropping until the *NIGHT* state then the unit will be set for the *DAWN* state (5-240 Lux) when this preset level is reached after a delay the unit will switch *OFF*.



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