

ONE-PART AND TWO-PART PHOTOCELLS



Reducing impact on the environment by ensuring ultra-efficient energy consumption whilst keeping streets and roads safe

ZODION PRECISION SWITCHING

One of the UK's foremost technology specialists, Zodion enjoys a worldwide reputation for innovative, advanced photoelectric control units (PECUs).

Used to switch street lights on and off with great precision, these units are designed and manufactured to meet three essential criteria:

- > To keep streets well lit and safe
- > To reduce impact on the environment by ensuring maximum efficiency
- > To save money as a consequence of increased switching accuracy

The Zodion range is extensive and can be customised to meet an even wider range of applications. In addition to the one-part and two-part photocells shown here, we also manufacture a miniature and sub-miniature range and have recently introduced SmartCELL incorporating our most advanced photocell technology to date.

HOW ZODION PECUs WORK

Zodion PECUs – photoelectric control units – are essentially light-operated switches. They respond to changing light levels with exceptional sensitivity, switching street lights on just before dusk (to allow for warm-up) and off as soon as there is sufficient daylight next morning. Because lamps are only activated when light is needed and switched off when it isn't, Zodion advanced functionality keeps energy consumption to a minimum and therefore minimises environmental impact.



SUPER 6 ONE PART SOLID STATE SWITCHING

10 YEAR WARRANTY

Especially designed to guarantee maximum operating life through use of the highest grade components including ultra long-life capacitors and through-hole plating.

TECHNICAL SUMMARY

Type: Fully electronic solid state
Sensor: Filtered Photodiode

Filter type: BG 18

Voltage: 198V to 264V 50Hz

Switch on level: 70 LUX Switching diff: 1:0.5 NEG Typical load: $3 \times 400W$ Operating temperature: -20°C to $+80^{\circ}\text{C}$

Max switching capacity: 10A or 90μF (subject to derating at higher temps)

Switching delay: 15 secs approx Enclosure material: Polycarbonate Power consumption: <0.25W

Approvals: EN 50081 - I EMISSIONS EN 50082 - I IMMUNITY

UMSUG CODE 9400011 1/4 WATT

IP rating: IP67



SS9 / SONTEK PART NIGHT SWITCHING

An innovative solution for areas where all-night lighting is not necessary

Incorporating an advanced timing algorithm that runs on a microprocessor and constantly adjusts to changing light patterns throughout the year, the SS9 controls the light source by switching off the lantern during the hours of least traffic flow. (Between the middle of the night and 5.30am GMT approximately. Other switching options are available on request.)

Fully interchangeable with conventional all-night photocells and easily fitted, the SS9 eliminates the need for all time clocks and other real-time devices. In the case of a power failure, the unit recalibrates itself automatically – no attention is needed.



TECHNICAL SUMMARY

Type: Dual circuit switching timed changeover midnight*

SS9: Switch to off at midnight*

On at 5.30 am if below 35 LUX

Sontek: Switch to control signal at midnight* (dim mode)

On at 5.00 am if below 35 LUX (bright mode)

Sensor: Filtered Photodiode (photopic response)

Voltage: 198V to 264V 50Hz

Switch on level: Standard 70 LUX (other levels on request)
Switching diff: On 70 LUX - off timed (1:0.5 for full cycle)

Typical load: 400W

Operating temperature: -20°C to +60°C Switching delay: 20 secs approx

Enclosure material: UV Stabalised Polycarbonate

Power consumption: <0.25W

Fitting: 20mm dia conduit with trailing leads

Approvals: EN 50081 - I EMISSIONS EN 50082 - I IMMUNITY

*Middle of night (hours of darkness)



In response to environmental concerns, Zodion has developed an energy saving dimming photocell. In conjunction with our SONTEK units, dimmable lanterns dramatically reduce the amount of energy consumed.*

*Please note The Control signal voltage must be supplied at time of order.



SS6 ONE PART SOLID STATE SWITCHING

A technical breakthrough in photocell technology utilising the finest optical photodiode to ensure extremely accurate switching. Incorporates state-of-the-art circuit design



TECHNICAL SUMMARY

Type: Fully electronic solid state
Sensor: Filtered Photodiode

Filter type: BG 18

Voltage: 198V to 264V 50Hz

Switch on level: 70 LUX
Switching diff: 1:0.5 NEG
Typical load: 3 x 400W
Operating temperature: -20°C to +80°C

Max switching capacity: 10A or 90µF (subject to derating at higher temps)

Switching delay: 20 secs approx Enclosure material: Polycarbonate Power consumption: <0.25W

Approvals: EN 50081 - I EMISSIONS EN 50082 - I IMMUNITY

UMSUG CODE 9400011 1/4 WATT

IP rating: IP65

SS3 ONE PART SOLID STATE SWITCHING

TECHNICAL SUMMARY

Type: Fully electronic solid state
Sensor: Filtered Photodiode
Voltage: 198V to 264V 50Hz

Switch on level: 70 LUX Switching diff: 1:0.5 NEG Typical load: $2 \times 400W$ Operating temperature: -20°C to $+80^{\circ}\text{C}$

Max switching capacity: 7.5A or 90µF (subject to derating at higher temps)

Switching delay: 15 secs approx Enclosure material: Polycarbonate Power consumption: <0.25W

Approvals: EN 50081 - I EMISSIONS EN 50082 - I IMMUNITY

UMSUG CODE 9400011 1/4 WATT

IP rating: IP65

Robust and proven circuitry (similar to that of the SS6) ensures long, accurate and trouble-free life whilst incorporating a filter system that results in reduced manufacturing costs and a corresponding price benefit.



SS55B TWO PART SOLID STATE SWITCHING





This two part photocell is the ideal alternative where one part photocells are undesireable. The SS55B incorporates the precise filtered photodiode sensor as standard. Sensors and bases are not matched and may be freerly interchangeable*.

*Please Note SS55B is not compatible with older units fitted with Cadmium Sulphide Sensors

TECHNICAL SUMMARY

Type: Fully electronic solid state
Sensor: Filtered Photo Intergated Circuit

Voltage: 198V to 264V 50Hz Switch on level: Standard 70 LUX Switching diff: 1:0.5 NEG Typical load: $2 \times 250W$ Operating temperature: -20°C to $+55^{\circ}\text{C}$

Operating temperature: -20°C to +55°C
Max switching capacity: 5A or 60µF
Switching delay: 15 secs approx
Enclosure material: Polycarbonate
Power consumption: <0.25W

Approvals: EN 50081 - I EMISSIONS EN 50082 - I IMMUNITY

SS5 DR / SS5 DR/HD

ONE PART ELECTRO-MAGNETIC SWITCHING





SS5 DR

Fitted with the finest optical photodiode sensor for long-term accuracy and a quality electro-magnetic relay for improved switching performance.

In addition, the SS5 DR's unique circuitry incorporates a predictive transfer algorithm that protects the contacts when switching, reducing wear and improving cell life.

SS5 DR/HD

Offers increased load switching to 8 amps thanks to a heavy duty single pole magnetic relay. Supplied at 70 Lux switch on value and a 1:05 negative ratio, provides maximum saving on burning hours.

TECHNICAL SUMMARY

Electronic electro magnetic relay load switching Туре:

Sensor: Filtered Photodiode

Filter type:

198V to 264V 50Hz Voltage:

Switch on level: 70 LUX Switching diff: 1:0.5 NEG

Typical load: SS5 DR $2 \times 250W$ (5A or $60\mu F$)

SS5 DR/HD $3 \times 400W$ (8A or $90\mu F$)

-20°C to +80°C Operating temperature:

SS5 DR Max switching capacity: 5A or 60µF SS5 DR/HD 8A or 90µF

10-15 secs

Switching delay: Enclosure material: Polycarbonate <0.25W Power consumption:

EN 50081 - I EMISSIONS Approvals: EN 50082 - I IMMUNITY

SS5 DR UMSUG CODE 9400011 1/4 WATT

IP rating:

SS3 DR ONE PART ELECTRO-MAGNETIC SWITCHING

TECHNICAL SUMMARY

Electronic electro magnetic relay load switching Туре:

Sensor: Filtered Photodiode Voltage: 198V to 264V 50Hz

Switch on level: 70 LUX 1:0.5 NEG Switching diff: Typical load: $2 \times 250W$ -20°C to +80°C Operating temperature: 5A or 60µF Max switching capacity: Switching delay: 15 secs approx Polycarbonate Enclosure material: < 0.25W Power consumption:

EN 50081 - I EMISSIONS EN 50082 - I IMMUNITY Approvals:

UMSUG CODE 9400011 1/4 WATT

IP rating:

Utilises a high grade electro - magnetic relay for load switching that allows the unit to withstand the most arduous operating conditions. SS3 DR incorporates a premium filter system that reduces manufacturing costs and delivers a corresponding price benefit. In addition, the SS3 DR includes a predictive transfer algorithm that protects the contacts when switching, reduces wear and improves cell life.



SS4 D / SS4 ED / SS4 DN ONE PART ELECTRO-MAGNETIC SWITCHING





SS4 D

A breakthrough in low cost photcell technology that includes an electro-magnetic relay and a photodiode sensor that reduces burning hours, lowers power consumption and ensures lifetime switching accuracy.

Electronic circuit delivers extremely accurate and reliable switching control. Also includes a VDR (Voltage Dependent Resistor) as standard, protecting the circuit from high transient voltages.

SS4 DN

Adds a low cost negative switching ratio option to the SS4 range. Has the capacity to cut burning costs significantly, saving power consumption and associated costs.

TECHNICAL SUMMARY

Electronic electro magnetic relay load switching Туре:

Sensor: Photodiode Filter type: Photodiode 198V to 264V 50Hz Voltage:

Switch on level: 70 LUX

Switching diff: SS4 D / SS4 ED 1:1.5 POS 1:05 NEG SS4 DN

 $2 \times 250W$ Typical load: -20°C to +70°C Operating temperature: 5A or 60µF Max switching capacity: Switching delay: 15 secs approx Enclosure material: Polycarbonate

Power consumption: < 0.5W EN 50081 - I EMISSIONS Approvals:

EN 50082 - I IMMUNITY



MINIATURE RANGE

Please contact our Sales Team for a Miniature brochure





ONE OF THE UK'S FOREMOST TECHNOLOGY SPECIALISTS

With over thirty years of experience, Zodion enjoys a worldwide reputation for the manufacture and supply of advanced electronic photo control units and lamp ballasts. These include:

- > The breakthrough Patented SmartCELL, an outstanding development that delivers power factor correction through innovation.
- The pioneering ZEBC Electronic Ballast, a diverse management solution designed to offer a variable lighting feature.

Our technologies are used extensively by local authorities, utility companies, original equipment manufacturers and contractors. We also provide lighting controls for highway signage applications.







Intelligent Street Lighting Management System

Zodion has continued its commitment with developing innovative solutions by launching Vizion.

Vizion is an intelligent Central Management System designed for the central control of your street lighting.

Vizion provides advanced wireless technology giving you unparalleled control to optimise energy usage or reduce CO_2 emissions.



FM 09458

Zodion pursue a policy of continuous product improvement and reserve the right to change technical specifications without notice.

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WWW.CABLEJOINTS.CO.UK
THORNE & DERRICK UK
TEL 0044 191 490 1547 FAX 0044 477 5371
TEL 0044 117 977 4647 FAX 0044 977 5582
WWW.THORNEANDDERRICK.CO.UK