

The multiswitch is a weatherproof integrated controller designed for energy management switching applications of infra red, halogen, fluorescent, neon, metal halide or high pressure sodium lights. The unit also interfaced with 12 VDC for normally open or normally closed devices required for CCTV applications, voice enunciator and all other ancillary switching equipment.

As this product has been designed for exterior and interior energy management applications. The circuitry has been conformally coated for increased stability. However it is advisable at appropriate intervals to conduct an inspection of the equipment to visually check the unit for any physical damage or water ingress, in particular ensuring the seal is correctly in place when any modifications to the settings are made.

MULTI-PURPOSE APPLICATIONS

1. Dusk to dawn

Triggers the two volt free relay outputs at dusk and switches the relays 'off' at dawn.

2. Event activated (24 hours)

An alarm activated control with volt free relay timer option of 1 to 24 minutes

3. Event activated (Lux level control)

An alarm activated control with volt free relays timer option of 1 to 24 minutes

4. Dusk to time 'off'

Triggers the two volt free relay outputs at dusk with optional 'off' timer setting of 1 to 8 hours

5. Dusk to time 'off' with event activation

Triggers the two volt free relay outputs at dusk for a timed period followed by alarm activation of relays until dawn



WARNING

- **ENSURE CABLE ENTRY AND SCREW HOLES ARE SEALED WITH WATER BASED SEALANT OR SUITABLE CABLE GLAND**
- **DO NOT USE SILICONE BASED SEALANT**



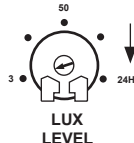
IMPORTANT SAFETY REQUIREMENTS

The Multiswitch must be installed by a suitably qualified engineer and comply with all the relevant codes of practice. The mains supply to the Multiswitch must be connected via a Residual Current Device (RCD), overload protection device and the equipment must be earth/ grounded. An RCD will prevent a person from being subjected to a lethal shock from a fault current. However, an RCD will give no protection from a live to neutral contact. Every RCD unit is fitted with a test button which should be operated regularly to prove breaker operation.

This is a IP65 mains powered device, do not install if the weather proof housing is damaged in any way as this could result in water entering the unit. Water ingress inside the unit could make it possible for the volt free relay outputs to become live. This would be critical as moisture can induce flash-over and short circuits leading to severe malfunction, subsequently they must not be connected to any equipment which could case an electric shock under fault conditions.

MULTISWITCH 3000 SETTINGS

If using the integral photocell to trigger the power relays at dusk, select 'LDR' jumper and ensure that the unit is mounted in a position away from any artificial light source and does not share the same area as the lighting to be controlled by the Multiswitch

SYMBOL	DESCRIPTION	APPLICATION
 <p>LIGHT ON TIME MINS</p>	<p>Walk Test - disables dusk until dawn operation</p> <p>1 to 24 minutes light on time</p>	<p>Select the walk test function when using presence detectors to assist in location/alignment of detectors beams during daylight installation. When the detector beams are activated the power relays will stay on for 8 seconds on detection day and night.</p> <p>Select the length of the light on time after last detection during darkness when using presence detection</p>
 <p>LIGHT ON TIME MINS</p>	<p>Dusk to Dawn (factory set)</p> <p>0 to 8 hours</p>	<p>Lighting/power relays will activate at Dusk (determined by the lux level setting) and switch off again at Dawn.</p> <p>Lighting/power relays will activate at Dusk (lux level setting) and switch off after this pre-set period.</p>
 <p>LUX LEVEL</p>	<p>Lux Level - Optional 3 lux to 24 hour switching (factory setting 3 lux = Dusk)</p>	<p>The light level at which the light dependent resistor (LDR) allows the power relays to activate.</p> <p>IMPORTANT: Do not install the Multiswitch in areas where there are artificial light sources as this will impede the function of the integral photocell</p>
'+' output	12VDC 500mA	To provide power for presence detectors, CCTV camera and other ancillary equipment
'S' Input	Integral photocell override only	Use this input when installing the Multiswitch internally and using a remote day/night sensor or utilising GJD's external detectors IMPORTANT: When utilising this input select 'S' position on the LDR's jumper link
'A' Input	normally open negative applied trigger	Compatible with any normally open device and GJD external detection equipment
N/C	normally closed negative removed trigger	Compatible with any normally closed device
MAN Input	Manual override of power relays	General remote override of lighting. Apply a negative switch to 'MAN' to override power relays remove negative to switch off override
EN Input	Changeover signal relay enable	Alarm panel system set. Compatible with any normally open device. Apply a negative switch to 'EN' to enable remove negative to disable
N/O Output or	Normally open for 2 seconds	Alarm relay output which activates when an alarm device triggers day or night
NC	Normally closed for 2 seconds	
N/C LID	Front and rear housing tamper	Will activate when the housing cover or housing is removed from the mounting surface

INSTALLATION

The unit must be fitted to a secure vertical surface with the cable entering at the bottom of the housing. If utilising the on board photocell (LDR) inspect the area to be illuminated and mount the Multiswitch in a location away from any potential artificial light source. Any artificial light in the area of the Multiswitch would inhibit the function of the integral photocell.

NOTE: If the Multiswitch, using the on-board photocell, is situated too close to the light fittings being controlled it could present a problem of the power relays switching repeatedly 'off' and 'on' immediately after activation by dusk.

Only install this equipment if the mains supply to the Multiswitch is connect via a suitable RCD and overload protection device and earth/grounded.

FLOODLIGHT CONNECTIONS

The Multiswitch has two volt free relay outputs. Lighting can be Mains or Ballast Driven or a combination of both.

DO NOT EXCEED THE RATING SPECIFIED BELOW

Mains Driven Loads

Each volt free relay output is rated @
1500 Resistive @240VAC maximum

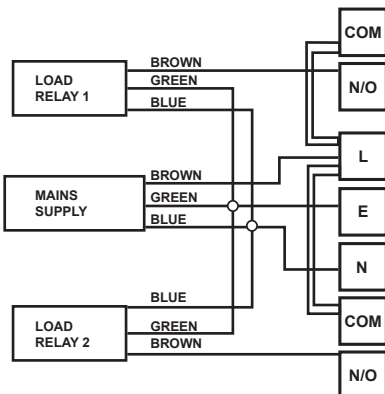
Ballast Driven Loads (Inductive)

*Inductive load switching may require a 'snubber' to manage the lamp discharge current.

Each volt free relay output is rated @1000W
@240VAC maximum

Low Voltage Loads

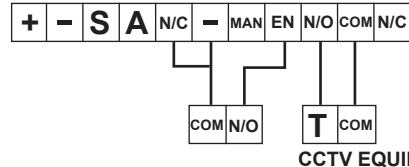
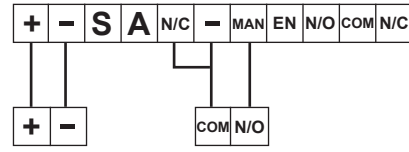
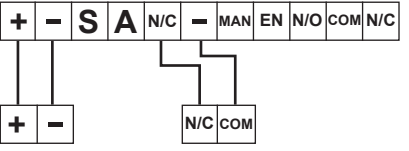
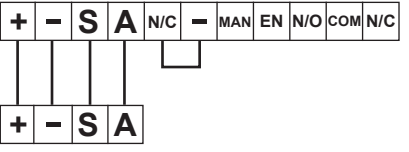
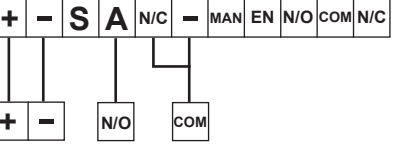
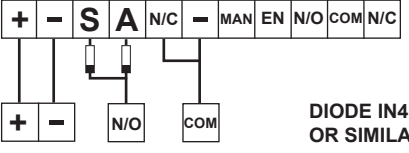
Each volt free relay output 8Amp rated @12VDC
maximum




Voltage through any alarm trigger can be utilised to activate the power relays and or sequentially trigger the signal contacts for CCTV activation and many ancillary applications.

The Multiswitch can be installed externally or internally as the on board photocell can be overridden by selecting LRD (on board photocell) or 'S' (independent photocell).

Below are some wiring examples to demonstrate the flexibility of the outputs/inputs.

	Applications	Setting	Mounting	Connections Low Voltage MAINTAIN THE SHORTING LINK BETWEEN N/C AND '-' UNLESS USING NORMALLY CLOSED DEVICES
1	Remote enabling of signal contacts and using signal contacts to activate a normally open device.	Any	External or Internal	 <p style="text-align: right;">CCTV EQUIPMENT</p>
2	Manual override of power relays	Any	Any	
3	Active Infra-Red beam connections or any normally closed device to activate the power relays for a timed period The signal contacts will operate on alarm day and night	LDR	External	
4	GJD external detection systems to trigger the power relays for the timer period. The signal contacts will operate on alarm day and night	'S' + Timer Setting	Internal or External	
5	Activation from a Remote Video Response Centre (RVRC) or any normally open device to trigger the power relays for a timed period. The signal contacts will operate on alarm during darkness.	LDR + Timer Setting	External	
6	Activation from a Remote Video Response Centre (RVRC) or any normally open device to trigger the power relays for a timed period. The signal contacts will operate on alarm day and night.	'S' + Timer Setting	Internal or External	 <p style="text-align: right;">DIODE IN4148 OR SIMILAR</p>

MULTISWITCH SPECIFICATIONS	
Mains Supply	230 Volts ac @ 50Hz
Output	Two volt free power relay contacts rated 230VAC @ 1500W Resistive
Power	12VDC @ 500 mA for: CCTV Cameras & ancillary equipment GJD External PIR Detectors GJD RFX Wireless PIR Detection system Note: Up to 1000W of inductive load can be connected. The inductive load may require a 'Snubber' (suppressor) to manage the lamp discharge current.
Dusk to Dawn	Volt free outputs will activate at 3 lux and switch 'off' when the light level registers approximately 3 lux or over (dawn). Adjustable override from 3 lux to 24 hour activation of outputs
Optional Timer (1)	Volt free relay alarm activated timer adjustment 1 to 24 minutes
Dusk/Time 'Off'	Volt free relays will automatically activate at dusk and switch off, after a pre-set timed period. Pre-set timer options are 1 to 8 hours
Dusk/Time 'Off' Plus	Volt free relays will automatically activate at dusk and switch off after a timed period followed by event activation until dawn.
Alarm/CCTV Output	Volt free relay changeover signal contact (form C) 24 VAC/DC @ 50mA with an integral 30R series resistor. Activates for 2 seconds on detection day or night Must not be used to switch 240V/110V circuits.
Input 'A'	Normally open alarm triggers. Will activate power relays and alarm/CCTV outputs
Input 'S'	External photocell required when mounting the Multiswitch internally. (Requires Internal light dependent resistor to be disabled)
Input 'N/C'	Normally closed triggers. Will activate power relays and alarm/CCTV outputs
Input 'MAN'	Manual override of power relays
Input 'EN'	Remote enable/disable operation of CCTV output (alarm panel set)
Walk test	Power relays operate for 8 seconds (when Incorporating event detection equipment)
Tamper	Front and rear tamper protection volt free output (form B)
Control	Digital ASIC/microprocessor
Operating Temp.	-20 to +55 centigrade Conformally coated electronics for increased stability
Protection Rating	IP65 - High Impact ABS
Dimension	210 x 180 x 80 mm
Weight	635 grams
Certifications	

ENGINEER NOTES

w: www.gjd.co.uk ■ **t:** +44 (0) 1706 363 998 ■ **f:** +44 (0) 1706 363 991

Unit 2, Birch Business Park, Whittle Lane, Heywood, Greater Manchester, OL10 2SX, UK