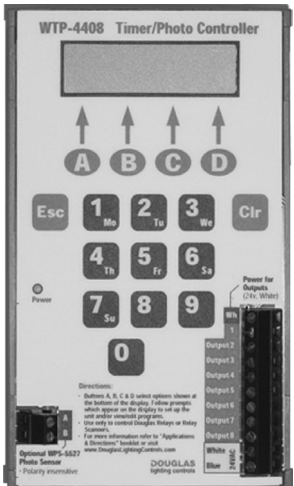
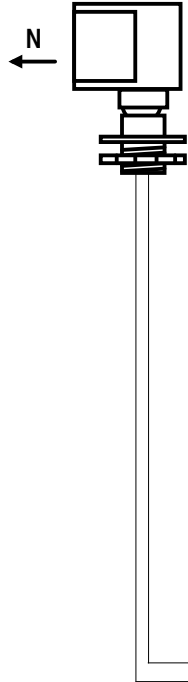


	PART No.	DESCRIPTION	SPECIFICATION
	<p>WTP-4408 Time / Photo Controller ONLY</p> <p>WPS-5527 Optional Remote Daylight Sensor</p>	<ul style="list-style-type: none"> Electronic 365 day astronomic time/photo controller for switching Douglas 2-wire relays and/or relay scanners. Controller is designed to fit in Douglas relay panels on center DIN rail. The Time/Photo Controller uses a LCD display and membrane keypad for programming. Each output is programmed to switch ON or OFF when an event occurs. Events can be: <ul style="list-style-type: none"> <i>Time Based:</i> Lights are turned ON or OFF at a specific time of day, <i>Astro Based:</i> Lights are turned ON or OFF depending on solar position of the sun <i>Photo Based:</i> Lights are turned ON or OFF depending on the true ambient light level (requires WPC-5527 sensor). 	<p>Inputs</p> <ul style="list-style-type: none"> Power: 24VAC / 100mA Class 2 Low Voltage device. Power rating does not include power for switching relays or scanners. Connect switches in parallel with controller outputs for remote override switching. Optional WPS-5527 Photo Sensor Range: 1 to 6,000 fc; Remote mount <p>Outputs</p> <ul style="list-style-type: none"> 8 time/photo controlled outputs for Douglas relays and scanners. Maximum relays per output is 4. Use #18 AWG wire. Maximum length for relay control: 500' Maximum scanners per output is 20. Use #18 AWG wire. Maximum length for scanner control: 2000' <p>Programming</p> <ul style="list-style-type: none"> Membrane key pad entry with LCD display graphic. Any output can be time, astro, photo controlled or combination time and photo/astro controlled. Using sensor, any output can be set to switch at a specific light level. <ul style="list-style-type: none"> (eg1: ON 10fc; OFF 40fc Day Night) (eg2: ON 2000fc; OFF 4000fc Skylight) Up to 600 events per week. Set any output schedule to run on any week day (Su-Mo-Tu-W-Th-F-Sa). 32 holiday dates are available. The controller's memory and time are not lost when power fails. Programs are held indefinitely and time is held for a minimum of 72 hours.

WPS-5527 Remote Sensor Head

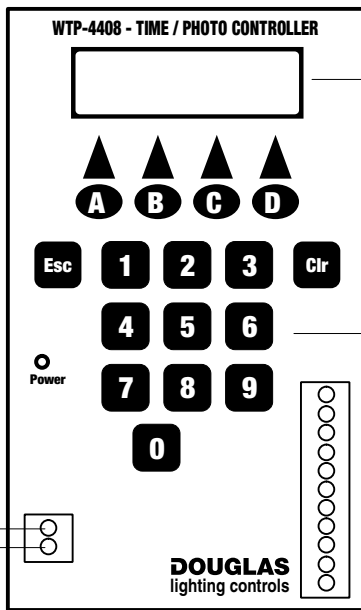
Point sensor to the Northern Sky for the most consistent readings.

Connect sensor to only one photo controller.



WTP-4408 8 Output Time/Photo Controller

Install Controller in relay panel. Connect to relays or relay scanners.



LCD Display
In normal operating mode the LCD display shows the present time. In all other modes, the LCD display shows various prompts to help guide viewing and editing the Controller's programs.

Membrane Keypad
Membrane Keypad is used to set the time clock's time and is used to enter the programs.

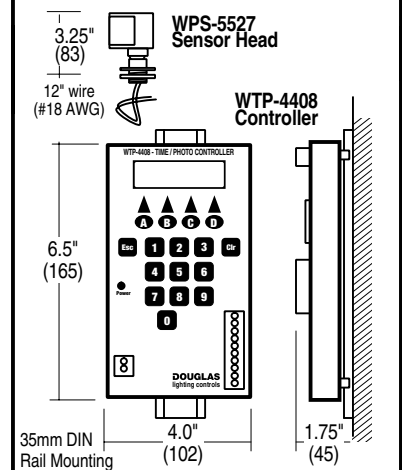
Outputs
There are 8 outputs designed to switch Douglas 2-wire relays or scanners.

Wiring
Wire length max: 500' (150M)
Use two #18 AWG, un-shielded wire

Environment

- Indoors, stationary, non-vibrating, non-corrosive atmosphere and non-condensing humidity.
- Ambient operating temperature: -15°F to +140°F (-25°C to +60°C)

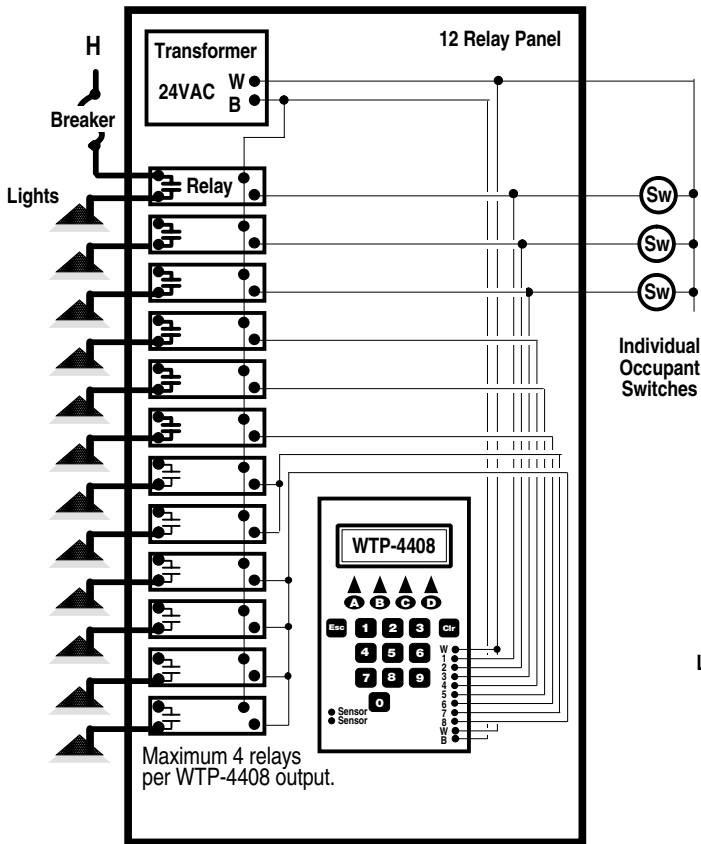
DIMENSIONS & MOUNTING



CONNECTIONS

Stand Alone Panels

- Determine how the relays are to be grouped and connect them to the Time/Photo Controller. A maximum of 4 relays can be controlled by each relay output. If occupant control is desired, connect 2-wire switches in parallel with the Controller outputs.
- If a larger group of relays is to be switched with a Controller output, use a relay scanner (WR-8812 or WR-8824). Connect a Controller output to the switch input of the scanner. Actuating this input will switch all relays connected to the scanner. Connecting a switch to the same input provides a manual occupant override.
- In panels that have several groups, use a programmable relay scanner (WRS-2224) to permit convenient, keypad assignment of relay groups to a Controller output.

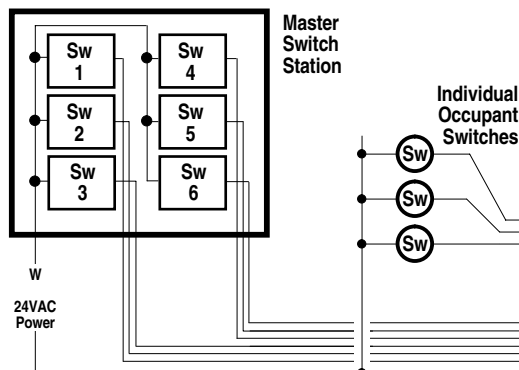
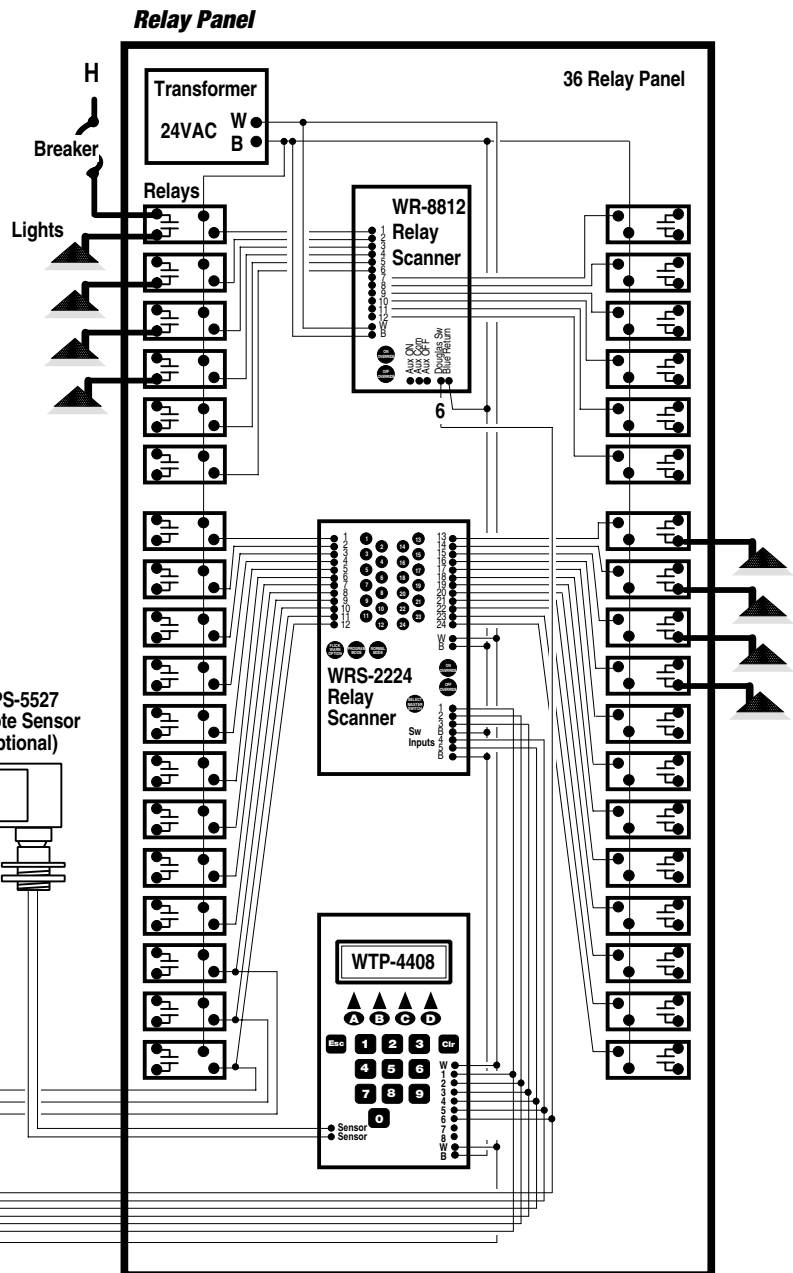


Time/Photo Controller: Small relay panels

For simple automation, connect Controller directly to relays.
For occupant control, connect Douglas 2-wire relay switches to the same relay in parallel with the Controller outputs.

Time/ Photo Controller: Large relay panels and relay scanners

To expand the number of relays switched by the Controller, use relay scanners.
Master switches can be connected in parallel to the Controller outputs to provide a manual override.



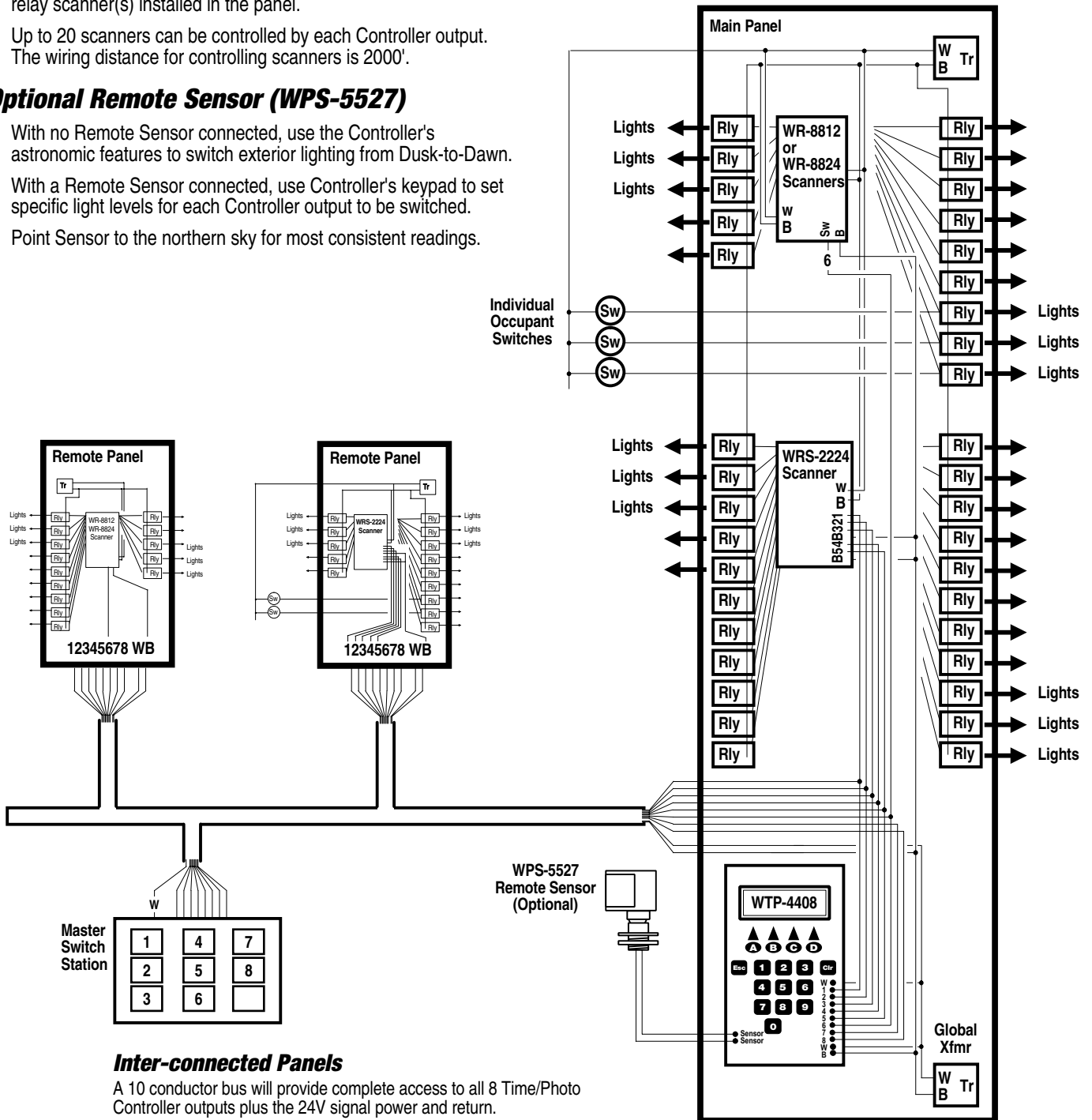
CONNECTIONS

Multiple Relay Panels

- Projects that have several panels can be controlled by one Time/Photo Controller signaling relay scanners which in turn switch the relays.
- A simple wiring strategy is to interconnect the relay panels with a multi-conductor bus. All of the Controller's outputs are then available in each panel. Connect the appropriate output(s) to the relay scanner(s) installed in the panel.
- Up to 20 scanners can be controlled by each Controller output. The wiring distance for controlling scanners is 2000'.

Optional Remote Sensor (WPS-5527)

- With no Remote Sensor connected, use the Controller's astronomic features to switch exterior lighting from Dusk-to-Dawn.
- With a Remote Sensor connected, use Controller's keypad to set specific light levels for each Controller output to be switched.
- Point Sensor to the northern sky for most consistent readings.



Inter-connected Panels

A 10 conductor bus will provide complete access to all 8 Time/Photo Controller outputs plus the 24V signal power and return. To provide convenient override, connect a master switch station in parallel with the 8 Time/Photo outputs.

INSTALLATION

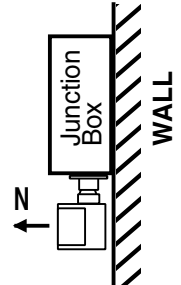
- First determine what the relay groups are and number them.
- Ensure that the WTP-4408's outputs are correctly connected to the relay groups - either a direct connection to a relay or a connection to a relay scanner controlling a group of relays.
- Manually actuate an output with the time Controller's override function. Use this feature to test the connections.

PROGRAMMING

- The following completed table represents a typical Light Industrial Office Building utilizing 5 of the timer's outputs.
- The Instruction Manual provided with the WTP-4408 includes blank programming schedules. Photocopy these schedules and make up tables similar to those shown below.
- Refer to the Instruction Manual for detailed programming directions.

OPTIONAL REMOTE SENSOR

- The sensor (WPS-5527) is weatherproof and is designed to withstand harsh climate. However, when possible mount the sensor either indoors pointing outward or in a sheltered area. The sensor's measurements will be less affected by dirt, ice or snow build-up. If mounting outdoors, try to shelter the sensor from the elements. For example, mount the sensor on the underside of the junction box.
- The sensor has a plastic mounting nipple that can be threaded to a 1/2" pipe thread. A mounting nut is also supplied to suit mounting to a 1/2" knock-out.
- Do not mount the sensor so that artificial light shines directly upon it.



Time / Photo Controller Schedule		
Comments	Event	Day of the Week
Channel 1 - Office Area - Lobby & Corridors		
First employee starts at 7:30am. Turn Lobby lights ON prior to first arrival	07:15 - ON	M, T, W, T, F, -, -
Last employee leaves at 6:45pm. Turn Lobby lights OFF after last departure	19:00 - OFF	M, T, W, T, F, S, S
Repeat OFF sweeps ensure that lights will be turned OFF even if they are manually switched ON	21, 23, 1, 3, 5 - OFF	M, T, W, T, F, S, S
Channel 2 - Office Area - Individually Switched Rooms		
Employees can turn their own individual lights ON as they arrive	no event	-, -, -, -, -, -
Last employee leaves at 6:45pm. Turn Office lights OFF after last departure	19:00 - OFF	M, T, W, T, F, S, S
Repeat OFF sweeps ensure that lights will be turned OFF even if they are manually switched ON	21, 23, 1, 3, 5 - OFF	M, T, W, T, F, S, S
Channel 3 - Warehouse Lights		
Shipping/Receiving opens at 7:00am. Ensure high bay HID lights are ON	06:30 - ON	M, T, W, T, F, -, -
Shipping/Receiving closes at 4:30pm. Turn high bay lights OFF an hour after closing.	17:30 - OFF	M, T, W, T, F, S, S
Repeat OFF sweeps ensure that lights will be turned OFF even if they are manually switched ON	19, 21, 23, 1, 3, - OFF	M, T, W, T, F, S, S
Channel 4 - Exterior Security Lights		
Turn all Security lights ON when dark	Below 30FC - ON	M, T, W, T, F, S, S
Turn all Security lights OFF when light	Above 50 FC - OFF	M, T, W, T, F, S, S
Channel 5 - Exterior Parking Lot Lights		
Turn Parking Lot lights ON during weekdays at Dusk	Below 20FC - ON	M, T, W, T, F, -, -
Cleaners leave by 9:30. Turn Parking Lot lights OFF	22:00 - OFF	M, T, W, T, F, -, -
First employees arrive at 6:45. Turn Parking Lot lights ON before arrival	06:30 - ON	M, T, W, T, F, -, -
Turn Parking Lot lights OFF at Dawn (if Dawn occurs before 6:30am, lights will not turn ON)	Above 30 FC - OFF	M, T, W, T, F, -, -