SKAN-A-MATIC®

CLAROSTAT SENSORS AND CONTROLS GROUP

CONTROLS

Photoelectric Amplifier with Time Delay T36 Series

Features:

- Open collector output
- Output indicator LED
- 6 time delay modes available
- 5, 12 and 24 VDC input

Description:

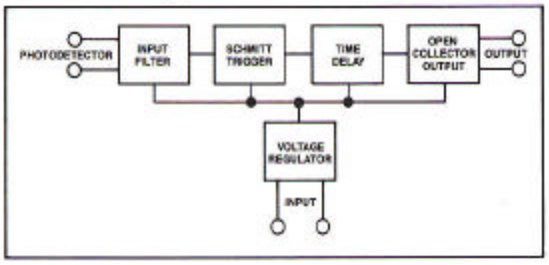
The T36 Series are time delay photoelectric controls designed to operate one reflective skanner or thrubeam pair. Each unit amplifies the photodetector signal actuating the timer which switches the output transistor. These controls do not supply power for the lamp or LED portion of the photoelectric device. Sensitivity and time delay adjustments are provided on the module.

Power input can be 5, 12 or 24 VDC to be specified by the catalog part number. The output is a diode protected NPN collector capable of driving loads up to 250 milliamps at a maximum voltage equal to the power input voltage. Positive switching is effected by the Schmitt Trigger and the low voltage regulated logic circuitry assures consistent time delay performance.

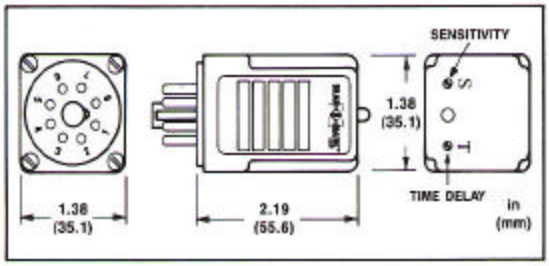
Specifications: (at 25°C)

POWER INPUT	5, 12, or 24 VDC, 18 mA. Voltage specified by part number
SENSOR VOLTAGE	5 VDC, 1 mA max., supplied by unit.
OUTPUT	Diode protected open collector to switch supply voltage at 250 mA max.
SENSITIVITY ADJUSTMENT	15 turn
TIME DELAY ADJUSTMENT	15 turn. Mode and delay range must be specified.
RESPONSE TIME	See Standard Amplifier under Response Time Chart in *Technical Information*
TEMPERATURE	Operating: 0° to 50°C Storage: −40° to 70°C
ENCLOSURE	8 pin plug-in module, .687" pin circle dia.; black molded plastic case. Socket not included.

Block Diagram:



Dimensions:



Compatibility With Sensors:

The T36 Series controls are designed to be used with most Skan-A-Matic reflective skanners and thrubeam combinations. Lamp and LED power, however, must be provided from a separate power source. For proper connection of LED light sources calculate resistor values using formula under Wiring section of *Technical Information*.

Model Selection Guide:

To specify a T36 Series control, the part number must consist of a type letter and five digits, denoting series, input voltage, delay or pulse mode and timing range. Construct the part number as follows:

Part #	T	3	6			

Series

Input Voltage

5 VDC	1
12 VDC	2
24 VDC	3

Timing Range (See Range Chart)

Time Delay	1,2 or 3
Pulse Width	1,2 or 3

Delay Mode (See Mode Chart)

Time Delay	1,2,3 or 4
Adjustable Pulse	5 or 6

Example: T36213 denotes a control with 12 volt input wiring for LIGHT energize, delay ON operation in the 1 to 60 second timing range.

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T36 Series

Accessories:

RELAYS

The T36 Series control may be used to drive an external relay or solid state relay. The following are available:

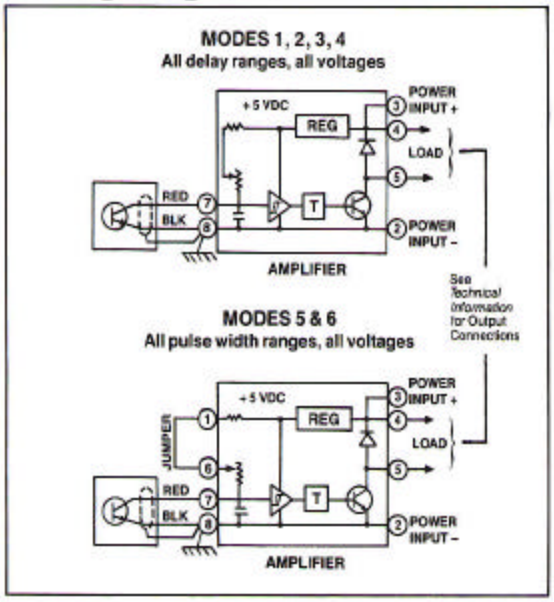
R02003 Solid State Relay rated 2.0 amps at 20–140VAC. Life is 10 million operations at rated load.

R00030 DPDT Relay rated 5 amps at 115VAC or 28 VDC resistive load. Life is 100,000 operations at rated load.

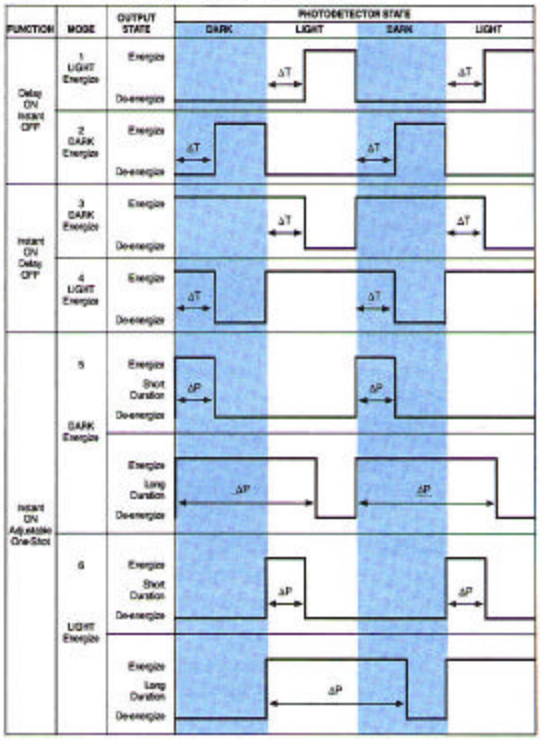
R00031 DPDT Relay rated 10 amps at 115VAC or 28VDC resistive load. Life is 25,000 operations at rated load.

All are 8 pin, plug-in modules. Sockets are not included.

Wiring Diagram:



Time Delay Mode Chart:



Time Delay Modes:

MODE 1 is LIGHT, delay ON. If the photodetector is LIGHT for a period of time greater than set with the adjustment, the output will energize. It will remain energized until the photodetector is DARK, then it will immediately de-energize.

MODE 2 is the same as MODE 1 except it will energize when the photodetector is DARK and will remain energized until the photodetector is LIGHT, then it will immediately de-energize.

MODE 3 is LIGHT, delay OFF. If the photodetector is DARK the output will energize instantly. It will remain energized as long as the photodetector is DARK. When the photodetector is LIGHT for the period of time set with the adjustment, the output will de-energize.

MODE 4 is the same as MODE 3 except it will energize when the photodetector is LIGHT and will remain energized as long as the photodetector is LIGHT. When the photodetector is DARK for the period of time set with the adjustment, the output will de-energize.

ONE-SHOT ADJUSTABLE PULSE MODES 5 AND 6

MODE 5 will output a pulse when the photodetector is DARK. The output pulse will always be of the same preset duration, regardless of the state of the photodetector.

MODE 6 is the same as MODE 5 except the output is energized when the photodetector is LIGHT.

Time Delay Range Chart:

Modes 1, 2, 3, 4 (ΔT)	
Range 1	.05 to 3.0 sec.
Range 2	.25 to 15.0 sec.
Range 3	1.0 to 60.0 sec.

Modes 5, 6 (ΔP)	
Range 1	.002 to .100 sec.
Range 2	.020 to 1.0 sec.
Range 3	.200 to 10.0 sec.

Repeatability of time delay and adjustable pulse width ranges is 2% to 15 seconds, 5% to 1 minute.