



Genesis *t-Fx45* Genesis *t-Fx60*

precision solid-state flasher

FEATURES

- 12VDC Solid-state Flasher - No Moving Parts
- Available in 45 FPM or 60 FPM High-Precision Flash Rates with 50% Duty Cycle
- Compatible with Relay Coils from 15Ω to 1000Ω
- Operating Voltage Range from 7VDC to 24VDC
- Mounting and Wiring Kit for Installation on Back of Plug-In Relay Base
- Internal Secondary Surge Suppression & Short-Circuit Protected

BENEFITS

- Ultra-reliable
- Drives wide range of relay coil resistances
- Easy mounting and hookup
- Operates reliably even when battery voltage is very low
- No change in flash rate or duty cycle when input voltage changes
- No change in flash rate or duty cycle with light or heavy load
- Competitively priced
- Three-year warranty

Why use the Genesis t-Fx45 or t-Fx60 Solid-State Flasher?

The Genesis t-Fx45 and t-Fx60 Solid-state Flashers are designed to alternately interrupt and energize the coil of plug-in relays used to flash the signals for railroad/roadway grade crossings (t-Fx45) and for flashing indications of railroad wayside signals (t-Fx60). The t-Fx45 flashes at 45 flashes per minute whereas the t-Fx60 flashes at 60 flashes per minute. Even when operating at very low voltages, the t-Fx Solid-State Flasher continues to operate at its designed flash rate and duty cycle.

The t-Fx45 and t-Fx60 offer several advantages over other available flasher-packs. The most obvious advantage is the high-precision of the flash-rate and duty-cycle. Another is its ability to reliably drive practically any relay without erratic behavior, out-of-tolerance flash rates or duty-cycles.

The t-Fx flasher is protected against output short-circuits and is also equipped with internal secondary surge suppression. It is therefore extremely reliable.

SPECIFICATIONS

OUTPUT (to load)

Output Current (absolute maximum)	5.0	ADC
Output Current (maximum operating)	2.5	ADC
Output Current (minimum operating)	0.01	ADC
Flash Rate (t-Fx45 ±0.3%)	45.0	FPM
Flash Rate (t-Fx60 ±0.3%)	60.0	FPM
Duty Cycle (t-Fx45, t-Fx60 ±0.3%)	50.0	%

INPUT

Input Voltage (absolute maximum)	32	VDC
Input Voltage (maximum continuous operating)	28	VDC
Input Voltage (minimum continuous operating)	5.0	VDC

ENVIRONMENT

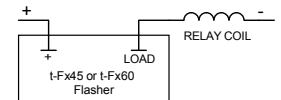
Operating Temperature	-40 (-40) - 160 (71)	°F (°C)
Humidity (maximum, non-condensing).....	95	% Relative

MEASUREMENTS (see reference drawings for details)

Height & Width	2.03 (5.16)	in (cm)
Thickness (not including terminals)	0.75 (1.91)	in (cm)
Mounting Screw Size (ANSI)	1/4-20 x 1.25 (M6 x 30)	in (mm)

INSTALLATION

The Genesis t-Fx45 or t-Fx60 is typically mounted to the back (wiring) side of the plug-in relay base. This is easily accomplished using the flasher mounting kit (included). The mounting kit includes a bracket, a flasher mounting screw with locking nut, and wire jumpers with push-on and ring-tongue type terminals. Instructions for mounting and wiring are also included.



The above wiring diagram shows the basic hookup of the t-Fx flasher. When the relay coil is to be alternately energized and non-energized at the designated flash-rate, +DC is applied to the "+" terminal of the flasher. The coil, or load, should be connected to the LOAD side of the flasher and the opposite side of the coil is connected to "-". When flashing operation is not wanted, simply remove +DC from the flasher "+" terminal.

Other Applications

The t-Fx45 and t-Fx60 flashers can also be used to drive loads other than relay coils, such as an incandescent or LED lamp or indicator. This is permissible as long as the maximum operating voltage and current are not exceeded. For other applications details and information, please contact Genesis.

ORDERING INFORMATION

- To order the t-Fx45 with B1 relay mounting kit specify: t-Fx45 part number 10039-45-MK
- To order the t-Fx60 with B1 relay mounting kit specify: t-Fx60 part number 10039-60-MK