FMS Sign Products Division

Model 22 Flashers

The Model 22 has proven itself over many years to be a very reliable and economical way to add on-off, alternating, or color changing effects to a sign or other device. Cams and points are out in the open for easy replacement or adjustment. The ball bearing mounted, sealed cam shaft with large fly wheel makes for years of smooth, quiet, maintenance-free service. Contacts are rated to handle 15 amps, except on the chaser action units, whose contacts are rated at 10 amps due to the high flashing speed. 115-Volt motor, 50/60 cycle. UL and cUL listed. *Also available in 220-Volt models*.

MW Part Number	Circuits	Flashing Action	Cam Cut	Flashers/Circuit per Minute
FMS2201	1	Off and On	50/50 Synchronous	20-30
FMS2202	2	Off and On	50/50 Synchronous	20-30
FMS22A2	2	Alternate	50/50 Alternating	40

Model 1-01 Flasher

The Model 1-01 timer is the most basic in the line. It features a single rotating cam and a single set of contact points. A synchronous motor drives the cam at one steady speed, but the frequency of the contact action can be varied by altering the cam cut. The standard cam cut on the Model 1-01 is a 50/50 cam, which provides slow on-off action. The cycle time for the standard 1-01 motor is five seconds, so a five-lobe cam would yield on-off action every second. One circuit. UL listed.

Model 1-A2 Flasher

The Model 1-A2 timer is identical to our Model 1-01, except that it has two rotating cams and two sets of contact points. Like the 1-01, its synchronous motor has a set cycle time of five seconds, but flashing action can be controlled by varying the cam cut. The Model 1-A2 is constructed in one of three basic cam cuts, including eight lobe alternating, four lobe alternating and steady arrow. Special cam cuts are available at the customer's request. Two circuits. UL Listed.

MW Part Number	Circuits	Cam Cut	Flashing Action Per Minute
FMS101	1	Fifty/Fifty Quarter/Quarter 4 Lobe 8 Lobe	On-Off 12 Times On-Off 24 Times On-Off 48 Times On-Off 96 Times
FMS1A2	2	Fifty/Fifty Quarter/Quarter 4 Lobe 8 Lobe Steady Arrow	Alternate 12 Times Alternate 24 Times Alternate 48 Times Alternate 96 Times Alternate/Steady 5 Times

Model 55 High Voltage Flasher

Model 55 is specifically designed to distribute the secondary voltage of a neon transformer. The unit will handle from 7,500 to 15,000 volts and distribute this high voltage to up to 8 circuits from a single transformer. For this reason the Model 55 is occasionally referred to as a "neon animator". The Model 55 is housed in a stainless steel cabinet with insulation of electrical quality glazed porcelain. By adjusting the magnetic speed, you can vary the flashing speed from 35 to 300 flashes per minute. Interruption if high voltage current causes small amounts of ozone gas to be produced. Install the Model 55 in well-ventilated areas that will allow the ozone to dissipate. 115-Volt motor, 50/60 cycle. UL and cUL listed. *Also available in 220-Volt models*.

Model 66 High Speed Scintillator & Chaser

The Model 66 is generally used to create a scintillating or "twinkling" action. Constructed of heavy-duty materials to stand up under constant use with heavy loads. Features a simple wiring design for easy installation and three shielded, maintenance-free ball bearings. The contacts are formed of a special silver alloy that performs better than pure silver. The flashing speed is easily adjusted by removing motor shades, using a screw driver (removing shades decreases the flashing speed). When operating with shades on (430 flashes per circuit per minute) the contacts on all Model 66 units are rated at 12.5 amps each. When operating with shades off (250 flashes per circuit per minute) the contact on the 3- and 4-point units are rated at 20 amps each, while the contacts on the 5- and 6-point units are rated at 17.5 amps each. 115-volt motor, 50/60 cycle. UL and cUL listed. *Also available in 220-volt models*.

MW Part Number	Circuits	Shade On	Shade Off
FMS66C3	3	4300	6900
FMS66C4	4	5750	9200
FMS66C5	5	7125	10050
FMS66C6	6	8625	12075

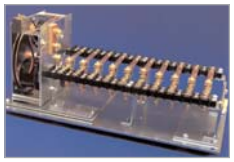
FMS Sign Products Division

Model 33 Chasers

Model 33 chasers are most commonly used on flashing incandescent bulb signs where "dark spots" chase around a border or directional motion is incorporated into a field of bulbs. Like all FMS flashers, Model 33 chasers are ruggedly constructed to provide years of smooth, quiet, trouble-free services. The Model 33 chaser features molded terminal blocks, permanently lubricated bearings, and all corrosion resistant surfaces. Contacts on the Model 33 chasers are rated to handle 10 amps each and are accessible for easy replacement. 115-Volt motor, 50/60 cycle. UL and cUL listed. *Also available in 220-Volt models.*

MW Part Number	Circuits	Cam Cut	Flashes (Shade On)	Circuit/Minute (Shade Off)
FMS33C3	3	8 lobe	270	210
FMS33C4	4	8 lobe	270	210
FMS22A2	5	7 lobe	215	190

Model 33 Spellers



Model 33 spellers are designed for applications where electric circuits are to be flashed in custom sequences, such as with spelling or other animation. Variable in both cycle speed and cam cut, Model 33 spellers are some of the most versatile sign controllers available. The flashing sequence on each Model 33 speller is custom made to customer specifications. The units can be built with as few as one circuit, or as many as necessary to accommodate the requested flashing sequence. Neon can be controlled by installing the speller on the primary side of transformers.

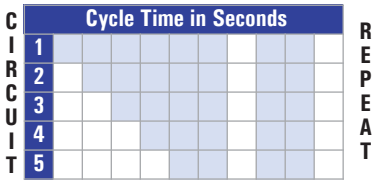
Part Number	Circuits	Speed (Sec. per Cycle)
FMS33S3F	3	2-8
FMS33S4F	4	2-8

Rocox Inc. Spellers

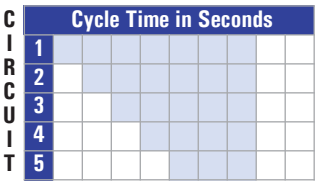
Rocox makes a large selection of solid-state spellers. These units feature easy speed control, silent operation and relatively low power consumption. Great for indoor or outdoor operation. *Available in 110V or 120V and 1- to 6-contact point models.*

Guide for Constructing Speller Sequences

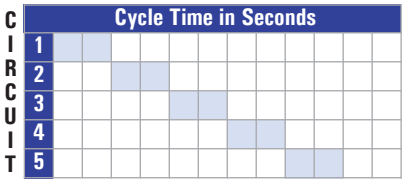
To aid customers in ordering Model 33 spellers, FMS has developed the charting system explained below. When the term “cycle” is used, it refers to the interval required for the flashing action to go through its complete performance and then start to repeat. Cycle time is expressed in seconds. The term “circuit” refers to the current controlled by one cam and one set of contact points. The time on for a circuit is indicated by a blue-shaded square; the time off by a blank square. The shortest off segment obtainable on any circuit is approximately 4% of its cycle. The charts below denote some of the more popular sequences, but nearly any sequence can be constructed. Draw your own chart for a custom sequence.



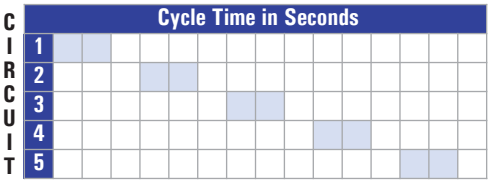
SEQUENCE 1
1 on 2 on 3 on 4 on 5 on. All off. All on. All off. Repeat.



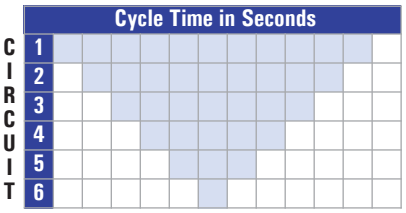
SEQUENCE 2
1 on 2 on 3 on 4 on 5 on. All off. Repeat.



SEQUENCE 3
1 on and off. 2 on and off. 3 on and off. 4 on and off. 5 on and off. All off. Repeat.



SEQUENCE 4
Same as Sequence 3, except minimum off period between each period.



SEQUENCE 5
Wipe on and wipe off lighting effect.

INTERMATIC®

24-Hour Electronic Time Switches

Model ET101

This heavy-duty mechanical time switch is designed for industrial, commercial and residential applications. This time switch has the highest horsepower ratings in the industry for loads up to 40 amps resistive from 120 to 480 volts, providing direct 24-hour time switch control of most loads. This series provides 1 to 12 “ON/OFF” operations each day with minimum ON/OFF times of 1 hour. All models are equipped with one “ON” and one “OFF” tripper.

Model ET103

These time switches provide the same dependable and uncomplicated performance as the T101 mechanical time switch, plus to-the-minute programming for accurate load control and reduced energy costs. Programming and clock setting is accomplished with the use of two slide switches and four pushbuttons. Up to 8 set points or events (4 ON/4 OFF) can be preset to automatically repeat on a daily basis. The program can be overridden at any time by placing the selector switch in the Manual position.

Trippers are also available. Ask Midwest for additional information.

K1121 Photocontrol–Swivel Mount

This series features "instant ON/OFF switching" in two mounting types. The K1100 series features an adjustable stem for mounting at almost any angle up to 80°. Equipped with three 6" color coded leads. The K1200 series features an easy-to install NEMA Plug-in Locking Type connection. Equipped with 2400-volt open type spark gap arrestor and standard 3-prong connector. *Available in 105-130v or 210-240v.*

PRECISION

Lumatrol® T Series Photocontrols

These wire-in photocontrols feature a weatherproof LEXAN® housing, 1-inch cadmium sulfide light-sensitive element with moisture-proof, color coded lead-in wires. The standard turn-on is 1 to 3 ft-candles.

Part Number	Voltage	Rating
T-15	120	2000
T-30	120	3000

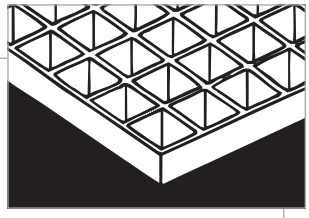
MIDGET LOUVER

RLS Series Aluminum Louver

The RLS Series Louvers are especially adaptable to a wide range of industrial, manufacturing and building construction uses. The grilled face—which is tooled and die-stamped for superior strength and durability—serves a dual purpose as a water deflector and an insect shield. The width of the opening between grills is no larger than 16" x 18" commercial screening, offering a maximum of ventilation and protection. *Available with standard collar or with six tabs for thin wall installation.*

Available Sizes: *1", 1.5", 2", 2.5", 3", or 4" diameter*

AMERICAN LOUVER COMPANY®



Eggcrate Louvers

These louvers are injection-molded in a single piece for added strength and are destaticized to repel and retard dust accumulation. The panel edges have a ship-lap fit for a uniform appearance when panels are joined. *Available in 2' x 4' panels.*