

Operating Instructions

FM/1 digi 12

One Channel Electronic Time Switch

The FM/1 digi 12 is a compact electronic 24 hour/7 day time switch module, with heavy duty relay contacts for switching low or line voltage loads. Applicable for time of day control of pumps, fans, heaters, HVAC control circuits, lighting, machinery and many other types of commercial, industrial, and agricultural equipment.

6 ON and 6 OFF programs assignable to a day or combination of days make the FM/1 digi 12 easy to program. The LCD displays time, day, and load status.

TECHNICAL DATA:

Channels: 1
Programs: 6 ON, 6 OFF
Holiday Program: No
Daylight time changeover: Manual
Manual override
Shortest switching time: 1 minute
Reserve carryover: Minimum 2 weeks
Input voltage models available: 6VDC; 12VDC;
24VAC/DC; 120VAC; 208/240VAC
Switching output: SPDT relay
Switch ratings:
16A res. @ 240VAC

SPECIFICATIONS:

Input draw: 4VA or less
Input frequency: 50 or 60Hz
Wiring connections: 1/4" quick connects
Ambient temperature: -20°F to 140°F (-28°C to 60°C)
UL recognized

INSTALLATION & WIRING:

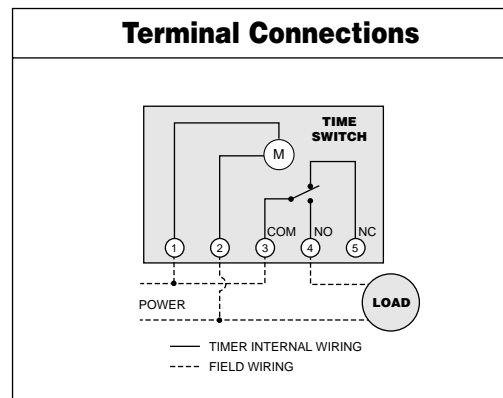
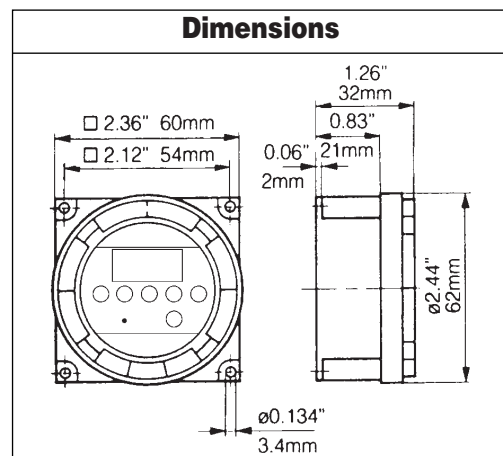
Note: Although the FM models contain some degree of spike and electrical noise protection, as with all electronic devices, these units can be affected by electrical noise. Therefore, it is recommended that they be powered from a voltage source that has no switching devices or inductive loads connected.

1. Check the input and output ratings marked on the unit to make sure this product is suitable for your supply voltage, load, and application.
2. Disconnect supply power prior to installation to prevent electrical shock.
3. Wire in accordance with National and Local electrical code requirements.

MOUNTING OPTIONS:

The standard FM/1 models may be surface mounted inside a panel or flush mounted with MK-FM mounting kit, available from Grasslin. Indoor NEMA 1 (E150), and outdoor NEMA 3R (E200) enclosures are available for stand-alone mounting.

A mounting base (MB-FMPC) is available for printed circuit board mounting. A clear plastic dust cover (DC-FM12) is also available.



Programming

The FM/1 digi 12 incorporates a 24 hour and 7 day time base. Therefore each day of the week can be uniquely programmed. For convenience, Block Programming is also provided, whereby up to seven days can be grouped together if the "on" and "off" times are the same. The FM/1 digi 12 displays in AM/PM format. When setting the hours, be sure the "A" is displayed for AM time, and the "P" is displayed for PM time.

SETTING THE TIME

1. Depress the reset button.
2. Depress clock symbol key "⌚" during entire time setting procedure.
3. Press **Day** key to bring the actual day of the week into display.
4. Press **h+** and **m+** keys to set the actual time of day. If keys are depressed for more than a second, the digits will advance rapidly.
5. Release the "⌚" key when the correct time and day are shown in the display. The colon between the hours and minutes will be flashing indicating the timer has started.

ENTERING PROGRAMS

1. Press **Timer** key once (do not keep depressed). The display will show "ON" and "- :- -" for the time.
2. Press **h+** and **m+** keys to set ON time.
3. If the event is to occur every day, proceed to step 5.
4. If the event is to occur only on selected days of the week, press **Day** key to select the desired days of the week. Successive depressing of the **Day** key beyond Sunday will bring the following blocks of days into the display.

Monday through Friday
Monday through Saturday
Saturday and Sunday

All days shown in the respective blocks will be switched on (or off) at the selected hour and minute.

5. Press **Timer** key to enter program. The display will show "OFF".
6. Program OFF command using steps 1-5 above.
7. Repeat for up to 12 programs (6 ON and 6 OFF)
8. Press "⌚" key to return to time of day display.

CHANGING OR CHECKING PROGRAMS

By operating the **Timer** key, the individual commands as programmed can, at any time, be brought consecutively into the display for revision or checking. Revisions are carried out by writing over the existing programs using the steps outlined above.

CANCELING PROGRAMS

Use procedure above to bring program to be canceled into display. Use **h+** and **m+** keys to set hours and minutes to null. (symbol "- :- -" will be in display). This program has been made ineffective and will no longer be carried out. To cancel all programs, depress **Reset** key. This clears entire memory, including time of day and program.

MANUAL SWITCH

Press override key "⏏" to turn load ON or OFF without affecting the stored programs (temporary override).

LOAD STATUS INDICATION

The load status is shown in the display as ON or OFF.

BATTERY POWERED RESERVE

In case of power failure, the built-in nickel-cadmium battery maintains the time of day, program storage and LCD display for a minimum of 2 weeks. During power outage relay is de-energized (off).