Digi 20 Program Schedules

Prog	ON/OFF	h	m	Day(s)
1	On	7 am	30	Mon., Tue., Wed., Thurs, Fri.

Other Intermatic Time Control Products

MIL 72 Series
ELECTROMECHANICAL 24 HOUR & 7 DAY TIME SWITCHES
Same panel or flush mount configuration as the Digi 20.
21Amp, 2HP SPDT Switch.
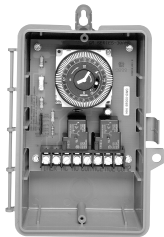
GM & GMX Series
GM MULTIVOLT
  1 time switch for 4 voltages:
  120V, 208/240V, 277V

MECHANICAL & ELECTRONIC 24 HOUR AND 7 DAY TIME SWITCHES

KM2 In-Wall Timer
24 HOUR OR 7 DAY
Replaces standard wall switch.
20Amp, 120VAC.

FrostKing Refrigeration Defrost Timers
Two models replace all standard Paragon or Precision models.

Digi 42
7 DAY ELECTRONIC TIME SWITCH
Similar to Digi 20, except has Holiday program and automatic daylight time changeover.

Digi 42/2
TWO CHANNEL TIME SWITCH
Same features as Digi 42 except it has two channels.

Digi 322
ONE, TWO OR FOUR CHANNEL 365 DAY ELECTRONIC PROGRAMMABLE TIME CONTROL
Automatic Daylight Time changeover and many other features.

KLT 2005
MECHANICAL SPRING WOUND COUNTDOWN TIMER
Mounts in single or multi-gang electrical boxes with standard or decorator wall-plates

INTERMATIC®

Digi 20 Series
One Circuit Electronic
24 Hour or 7 Day Time Switches

Digi 20E
(flush mounting)

Digi 20A
(surface mounting)

APPLICATION

Time based control of lighting, ventilating, heating, cooling or other electrical loads in commercial and industrial applications. The Digi 20 time switches are programmable for 24-hour or 7-day schedules.

The Digi 20A is intended for either surface or rail mounting. The control is completely enclosed in a plastic housing and includes a terminal cover and sub-base for installation and hard wiring.

The Digi 20E is intended for flush (panel) mounting.

All units are supplied with a clear plastic dust cover. They are also available with an enclosure for stand-alone applications. (GM and GMX models)

TECHNICAL DATA

Output–1 SPDT relay with dry contacts
Switch Rating: 16A/277VAC resistive
               1000W tungsten @ 240VAC; 500W @ 120VAC
               1/2 hp @ 120VAC; 1 hp @ 240VAC
150 hour battery back-up of memory and display
Supply voltages: Separate Models – 24VAC/DC, 120VAC,
     208/240VAC, all 50/60Hz (refer to product label)
Shortest switch time–1 minute
Ambient Temperature Range –20°F to 140°F (–28°C to 60°C)
VA required: 120V & 240V models: 4VA
           24V model: 2VA @ 24VAC, 1VA @ 24VDC
Screw terminal connections (Digi 20A)
1/4" quick connects (Digi 20E)
Accuracy ± 4 minutes per year

Installation

To the installer:
1. Read operating instructions carefully.
2. Check the input and output ratings marked on the unit to make sure this product is suitable for your power supply and application.
3. Disconnect power supply prior to installation to prevent electrical shock.
4. Wire in accordance with National and Local electrical code requirements.

SURFACE MOUNTING—Digi 20A

Remove dust cover, loosen two screws on opposite corners. Remove the housing that surrounds the time switch and the terminal cover away from the base. Remove timer module by pulling straight out.
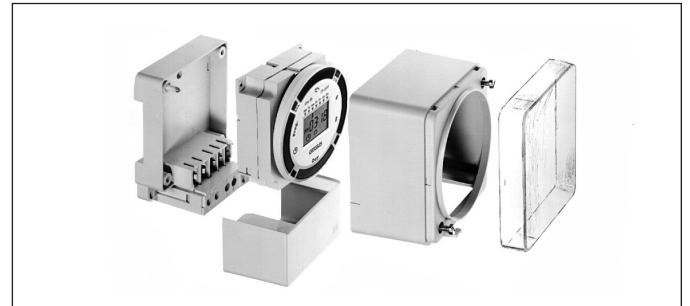

Place screws through 3 mounting holes in base and screw to back panel or wall.

Wire in accordance with instructions. Replace terminal cover and push timer firmly onto base. Now replace housing and secure with screws.

NOTE: The Digi 20A is also suitable for DIN rail mounting. Break out housing part on each side that fits over rail.

PANEL MOUNTING—Digi 20E

Cut a square hole 2-5/8" x 2-5/8" (66mm x 66mm) in the front of the panel. Insert the time switch through the opening. With a screwdriver, press down and turn outer screws (A) until flanges are in position to fasten the unit in front panel, then release. Insert plugs into holes (B).
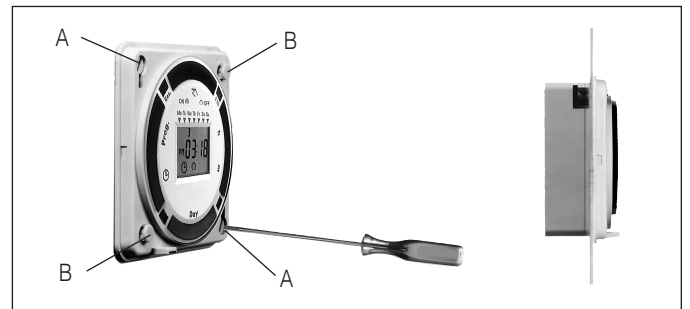
Use 1/4" quick connects and make connections in accordance with the wiring diagram shown and applicable code requirements.

WIRING

1. Disconnect the power.
2. Wire input to timer, ⓜ, with the proper voltage marked on the unit. Wiring to incorrect voltage will void the warranty.
3. Connect wiring according to the wiring diagram. The terminals on the Digi 20A sub-base will accommodate 10 to 24 AWG wire.

Terminal Connections
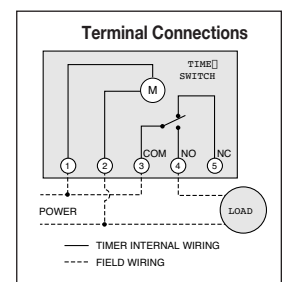
■ KEYPAD DESCRIPTION

⊕   Setting the Time/Automatic Run Mode

Prog.   Program Mode

Res.*   Reset: Clears all programs and time

✍   Select ON or OFF in Prog. Mode, Manual Override in Run Mode

±1h*   Manual Daylight Change Key

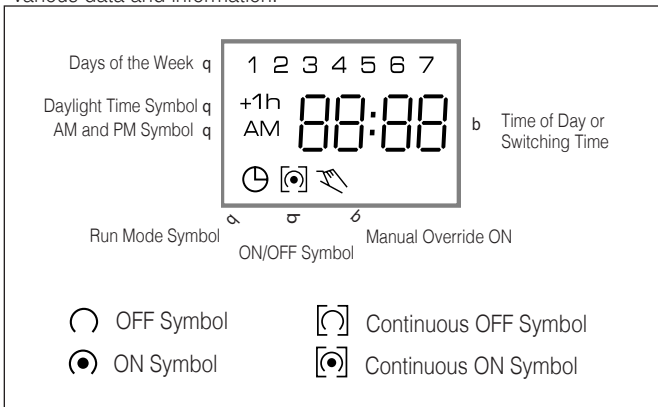**h**   Setting the Hour (12:– – AM)

m   Setting the Minute (12:01 AM)

Day   Set Day(s) for time and programs

*Recessed keys; use a pen point to press

■ LCD DISPLAY ELEMENTS

The LCD incorporates a number of different elements to display various data and information.

Days of the Week   q   1 2 3 4 5 6 7

Daylight Time Symbol q   +1h

AM and PM Symbol   q   AM   **88:88**   b   Time of Day or Switching Time

⊕ ⊙ ✍

Run Mode Symbol   q   σ   b   Manual Override ON

ON/OFF Symbol

⌒   OFF Symbol   [⌒]   Continuous OFF Symbol

⊙   ON Symbol   [⊙]   Continuous ON Symbol

■ PROGRAMS

The Digi 20 will accept up to 20 programs

A program consists of:

     1. An ON or OFF command
     2. Time of day (Hour **and** Minute)
     3. Single day or multiple days

A program is required for each ON event, and a program is required for each OFF event.

NOTE: MULTIPLE ON OR OFF EVENTS MAY BE PROGRAMMED. For example, Program 1 may turn the office air conditioning ON at 8AM Mon.-Fri. Program 2 may turn the air conditioning OFF at 5PM Mon.-Fri.

If someone is working late, they may press the override key to turn on the air conditioning. If they forget to press the override key again when they leave, the air conditioning will stay on all night (or all weekend).

To prevent this from occurring, **additional OFF times may be programmed.**

• Program 3 can turn the air conditioning OFF at 6PM.
• Program 4 can turn the air conditioning OFF at 7PM.
• Program 5 can turn the air conditioning OFF at 8PM., etc.

❗IMPORTANT: BEFORE PROCEEDING WITH SETTING THE TIME AND PROGRAMMING THE UNIT, PRESS THE RESET ■ KEY TO CLEAR ALL DATA FROM THE MEMORY.

■ SELECTING AM/PM OR MILITARY TIME

After pressing reset, the display may show AM (right). The numbered day symbols will be flashing on and off. If the display does not show AM, it is in military time mode (24:00 hr.) To change to AM/PM mode, press and hold the **h** key and press the **±1h** key once. AM will appear in display. If display is in AM mode and military mode is desired, press and hold the **h** key, press the **±1h** key once.
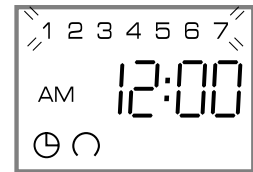
■ SETTING THE TIME

NOTE: If the **h** and **m** keys are held down longer than 2 seconds, the numbers will advance rapidly.

Press and hold the ⊕ key during the following:
(If Daylight Savings Time is in effect, press ±1h first)

     1. Press **h** to advance to the current hour (while holding down the ⊕ key)

     2. Press **m** to advance to the current minute (while holding down the ⊕ key)

     3. Press **Day** repeatedly to advance to current day (while holding down the ⊕ key)

NOTE: If the days are flashing, it indicates the day of the week was not set when setting the time. The timer cannot be programmed unless the day of the week is entered.

■ MANUAL DAYLIGHT TIME CHANGEOVER

Each year, in the Spring, press **±1h** to advance the time an hour. In the Fall, press **±1h** to set back an hour.

■ PROGRAMMING 24 HOUR OR 7 DAY SCHEDULES

It is helpful to write out the program schedules *before* beginning. See last page.

❗IMPORTANT: THE CURRENT TIME OF DAY AND DAY OF WEEK MUST BE SET PRIOR TO PROGRAMMING. SEE ■ "SETTING THE TIME"
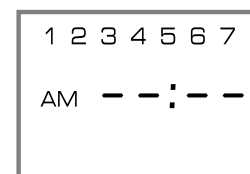
Example

Program 1: ON at 7:00AM Monday thru Saturday
Program 2: OFF at 5:00PM Monday thru Friday
Program 3: OFF at 7:00PM Saturday

Three programs need to be entered.

Press **Prog.** key only once. Display shows:

     1 2 3 4 5 6 7

     AM   – –:– –

Program 1 (ON at 7:00AM Monday thru Saturday)

Press ✍ key once   ON symbol ⊙ appears
Press **h** key   to 07AM
Press **m** key once   to 00
Press **Day** key once   1 2 3 4 5 6 is displayed
Press **Prog.** key to enter

Program 2 (OFF at 5:00PM Monday thru Friday)

Press ✍ key twice	OFF symbol ◯ appears
Press **h** key	to 05PM
Press **m** key once	to 00
Press **Day** key two times	1 2 3 4 5 is displayed
Press **Prog.** key to enter	

Program 3 (OFF at 7:00PM Saturday)

Press ✍ key twice	OFF symbol ◯ appears
Press **h** key	to 07PM
Press **m** key once	to 00
Press **Day** key 9 times	until only 6 is displayed
Press **Prog.** key to enter	
Press ◷ key to enter Run Mode	

! **IMPORTANT:** IF AN "ON" TIME WAS PROGRAMMED THAT IS EARLIER IN THE DAY THAN THE CURRENT TIME, PRESS ✍ ONCE TO TURN ■ THE TIMER "ON". (IT DOES NOT "LOOK BACK" TO DETERMINE IF IT SHOULD BE ON OR OFF AFTER PROGRAMMING)

NOTE: If 24 hour time control (same schedule every day of the week) is desired, ignore **Day** key.

If a ON or OFF symbol is not entered, the ON symbol will flash, and program will not be accepted.

■ DAY KEY SELECTIONS

Press Day Key	Display Shows							Days
0 times	1	2	3	4	5	6	7	Every Day
1 time	1	2	3	4	5	6		Mon.–Sat.
2 times	1	2	3	4	5			Mon.–Fri.
3 times						6	7	Sat. & Sun.
4 times	1							Monday
5 times		2						Tuesday
6 times			3					Wednesday
7 times				4				Thursday
8 times					5			Friday
9 times						6		Saturday
10 times							7	Sunday

■ REVIEWING PROGRAMS

To review the programs at any time, press **Prog.** key. Programs will appear in the order they were entered with repeated presses of the **Prog.** key. After all programs have been reviewed, the blank display will appear to allow entering another program. Another press of the **Prog.** key will display the number of free programs available, such as **Fr 16** if 4 programs have been entered.

■ MANUAL OVERRIDE

TEMPORARY: While in the Run Mode, pressing the ✍ key once will reverse the output; ON to OFF or OFF to ON. The ✍ symbol appears in the display to indicate a temporary override. At the next scheduled switching time, automatic control resumes, eliminating the override.

CONTINUOUS: While in the Run Mode...

• Pressing the ✍ key twice will turn the output to ON permanently. ⊡ symbol appears in display.

• Pressing the ✍ key three times will turn the output OFF permanently. ⊡ symbol appears in display.

• To terminate a continuous override, press the ✍ key until ◷ appears in the display.

■ CHANGING A PROGRAM

Select the program to be changed with the **Prog.** key. A new set of days may be selected with the **Day** key just as in initial programming. Hour and minute can be changed with the **h** and **m** keys.

Press **Prog.** or ◷ key to store the new program.

■ DELETING A PROGRAM

To delete only one or a few programs: Press **Prog.** key until the desired program is displayed.

Press **m** key to **:59** and press once more to blank out.

Press **h** key to **11PM** and press once more to blank out.

Press ◷ key, display will flash for several seconds and then enter the Run Mode.

Using the reset key will delete ALL programs, the time of day, and day of the week.

■ TROUBLESHOOTING

PROBLEM: Days are flashing, pressing any key does nothing except ✍ key turns output ON and OFF.

SOLUTION: **Time of Day** and **Day of Week** have not been set. See "SETTING THE TIME"

NOTE: This is the condition after a reset. If the timer is found in this condition after it has been installed, programmed and operating for a while, it may indicate that electrical noise or voltage transients have disrupted the microprocessor causing a loss of program information. Call 1-815-675-7000 and request that a no-charge "Snubber Filter" be sent to you to place across the input to the timer, which may solve the problem.

A second, but very unlikely cause of loss of program is a power failure with the backup battery low or dead. Check by disconnecting power and monitoring how long the battery keeps the time of day in the display. Typically, the battery will maintain the time and programs for 4 days, but not more than 5 days.

PROBLEM: Time of day was set while holding the ◷ key down, but days are still flashing.

SOLUTION: Current day of week was not set **while holding down the ◷ key.** See "SETTING THE TIME"

PROBLEM: It is 10AM and a ON program for 8AM was entered, but the output is not ON. Display shows the ◷ and ◯ symbols.

SOLUTION: After programming, the timer does not "look back" to determine if it should be ON. Press the ✍ key (temporary override) to turn the output ON; ✍ ⊙ appears in display. The timer will assume automatic operation at the next programmed event.

PROBLEM: A program for 8AM Monday thru Friday was entered, but it will not accept it and ⊙ is flashing.

SOLUTION: The ON ⊙ or OFF ◯ was not entered as part of the program. ON or OFF **must be selected.**