

# DT20

## Day Timer with 20 Programmable Presets Installation and Operating Manual

### Description

The DT20 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. All models feature large keys with unique "circular programming" for easy programming, a large LCD display and battery backup.

### Features

- 24 Hour (AM & PM), 7 Day Programming
- 3 Common Preset or Custom Timing Programs
- 20 Programs Provide Up To 10 ON & 10 OFF Events Per Day / Week!
- Rechargeable Battery Backup With 100 Hour Carry-Over
- 16 Amp, SPDT Relay
- Manual Override Capability
- Several Mounting Styles Available
- Daylight Savings Key



DT20

### Application

Time based control of lighting, ventilating, heating, cooling or other electrical loads in commercial and industrial applications. The DT20 time switches are programmable for 24-hour or 7-day schedules. Mounting options are available for surface or DIN rail mounting. The control can be completely enclosed in a plastic housing with an optional terminal cover and sub-base for installation and hard wiring. They are also available with a din rail mount within an enclosure for stand-alone outdoor applications.



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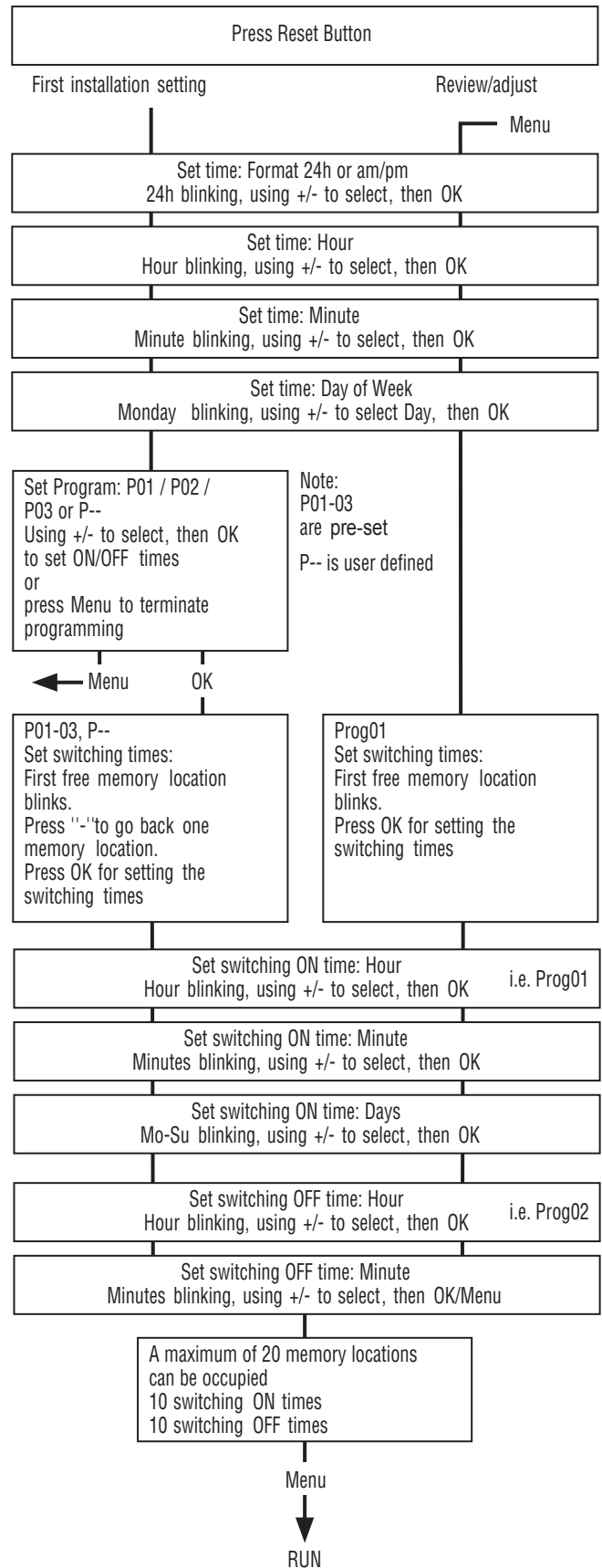
## Safety Precautions

### Safety precautions

- The connection and installation of electrical devices may only be carried out by a qualified electrician.
- Interventions in and changes to the device result in the voiding of the warranty claim.
- Observe your national regulations and the respective safety provisions.
- Switch-off commands have priority over switch-on commands.



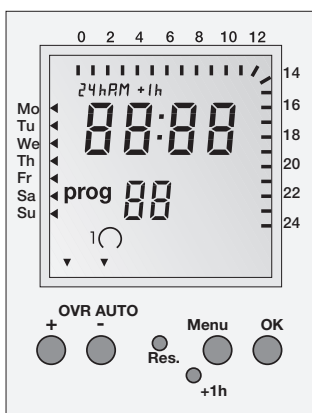
## Program Structure





## Symbol Keys

- ⏏ : Overview of daily switching program
- 24hPM : Setting of 24h or am/pm
- +1h : Summer/winter clock changes
- ◀ : Weekday display
- ⊕ : Switching status display ON/OFF
- ▼ : Pointer to Mode OVERRIDE/AUTO



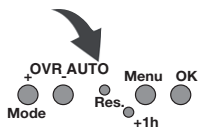
- +/- : Adjustment keys: By pressing the key longer than 2 sec. you can adjust the timer in steps of 5 units
- Res. : Reset
- Menu : By pressing the menu key programming is terminated and the system reverts to automatic operation
- OK : Confirmation of programming



## Setting The Timer

Setting of this programmable timer is depending of the user preference to use pre-set programs or defining own programming.

Using Pre-set programs (first time installation)



Using Reset key you can adjust the following values:

- 24h or am/pm: see pg 1
- Time (hour and minutes): see pg 1
- Week day: see pg 1
- Pre-set programs P01 to P03: see pg 1

User defined programming by Menu mode



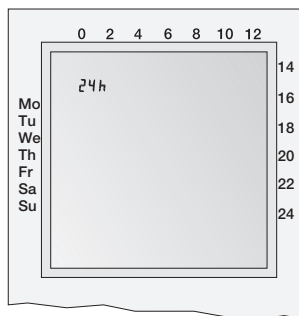
Using Menu key you can adjust / review the following values:

- 24h or am/pm: see pg 1
- Time (hour and minutes): see pg 1
- Week day: see pg 1
- Programs P--: see pg 1

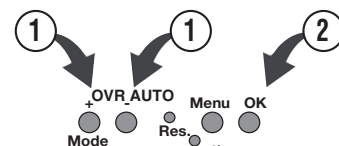


## Setting The Clock, Time & Day

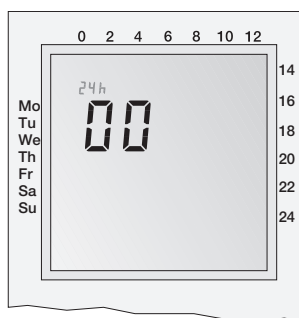
Sequence to follow after selecting programming by pre-set programs or Menu mode.



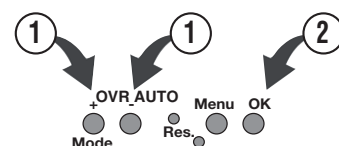
Set display format 24h or am/pm



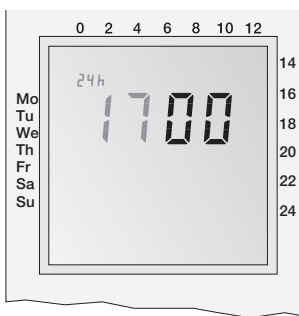
Select 24h or am/pm (+/-) and confirm with OK.



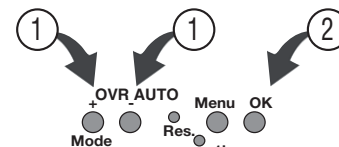
Set hour



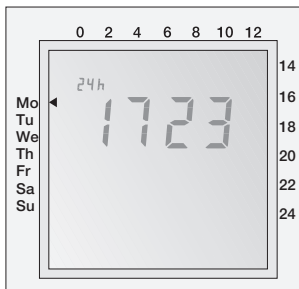
Select hour (+/-) and confirm with OK.



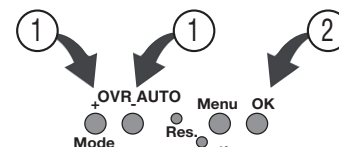
Set minutes



Select minutes (+/-) and confirm with OK.



Set week day



Select week day (+/-) and confirm with OK.

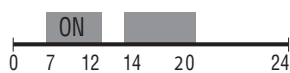
# Prog.

## Preset Programs

P01: Mo - Su, 1 x ON/OFF



P02: Mo - Su, 2 x ON/OFF



P03: Mo - Su, 3 x ON/OFF



Programs P01-03 (If Used)  
The switching on and off times for programs P01 to P03 are preset (pre).  
The user can change these programs.

Individual (custom) program, P--  
Under the menu option P-- you have the option of creating a user-defined program.

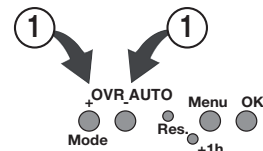
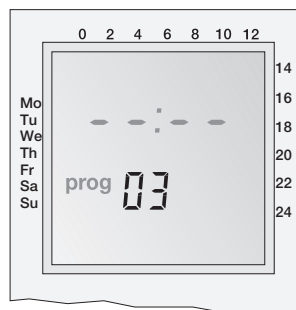
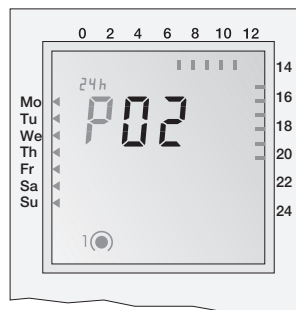
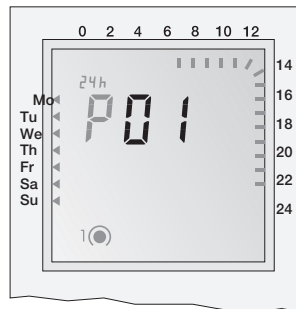
This program can be changed at any time. There are up to 20 memory locations available for 10 OFF and 10 ON commands.

You can allocate a corresponding weekday or week block to each memory location.

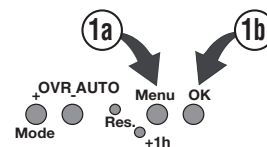
# P0x

## Using / Selecting Preset Programs P01-P03

Sequence to follow after initially setting time in the Reset mode.



Select pre-set program (+/-).



Once selected the program desired there are following options:

Menu: terminate programming

OK: Going through pre-set programs to modify selection (any program ON or OFF can be modified by using "+" or "-" keys and confirming with OK) or accept it with OK key to go the next free memory location in order to add new user defined programs.

e.g. after selecting P02 you should also program:

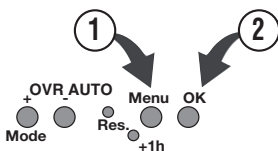
Sa-Su 22:30 ON (prog05)  
23:00 OFF (prog06)



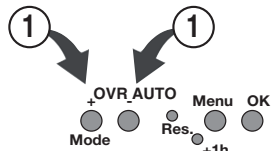
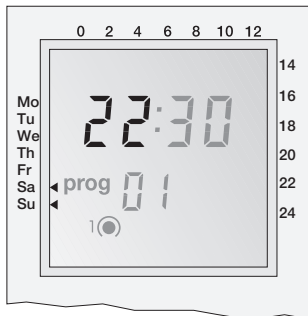


# del

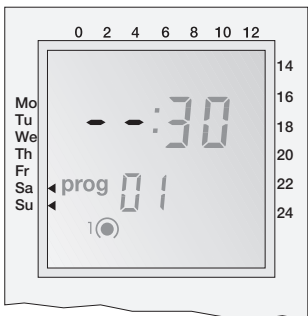
## Deleting Programs



Select Menu, then select OK key until getting onto the ON time of the program you want to delete.



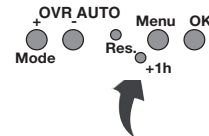
Select "--" with (+/-) key and confirm with OK.



Note:  
Switching programmes are deleted in ON-OFF pairs. If you delete a single ON instruction, the corresponding OFF instruction is also deleted.

# +1h

## Summer/Winter Time Switching by Activating / Deactivating Daylight Savings Time

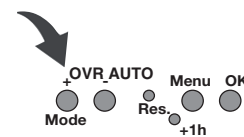


The +1h key is for the change to daylight savings time.

- By pressing the +1h key 1 hour is added to the current time.
- +1h is shown on the display.
- By pressing +1h again 1 hour is subtracted from the current time.

# Mode

## Automatic Operation



The "+" key serves to change over between automatic, AUTO to override (OVR) ON and override (OVR) OFF (CH1).



Automatic Operation is indicated when the "down" arrow is over AUTO label.



Override Operation is indicated when the "down" arrow is over OVR label.

# Mode

## OVR - Manual Override Operation



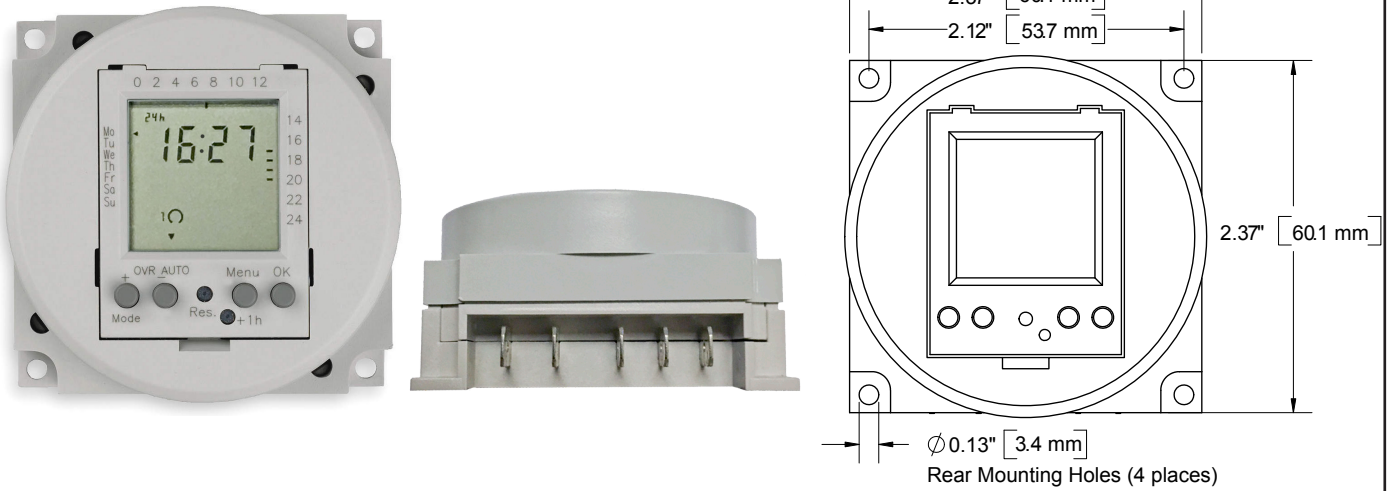
Press "Mode" to activate relay manually. The "down" arrow over OVR label will indicate Override is in force and indicates that the relay is active.



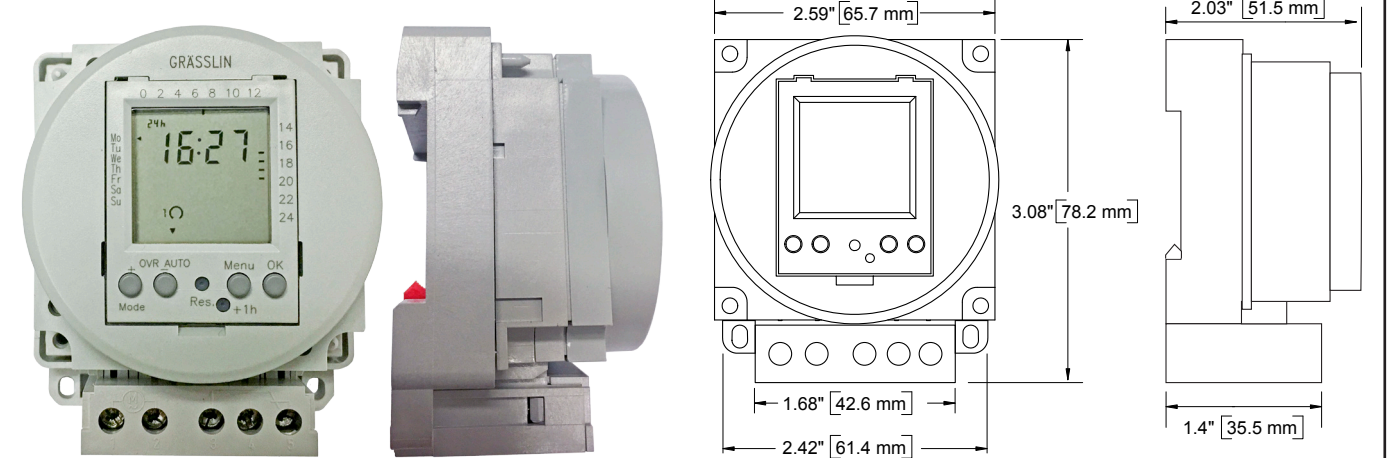
NOTE: You can switch back to AUTO mode by pressing the "Mode" button. Automatic Operation is indicated when the "down" arrow is over AUTO label.

## MOUNTING OPTIONS

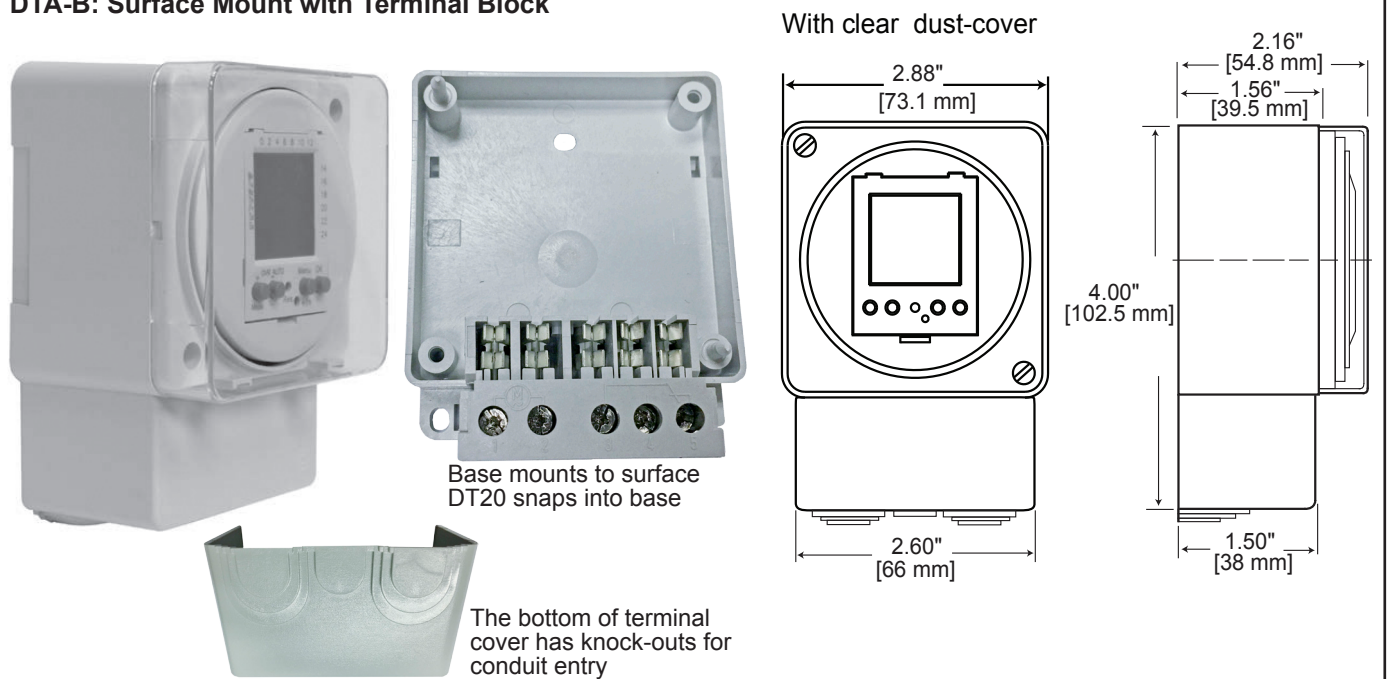
### DT20: Standard Module Only with Spade Lugs



### DTA-D: DIN Rail Mount with Terminal Block



### DTA-B: Surface Mount with Terminal Block



## Warranty

This product is warranted against defects in materials and workmanship for a period of one (1) years from the date of shipment to Buyer.

The Warranty is limited to repair or replacement of the defective unit at the option of the manufacturer. This warranty is void if the product has been altered, misused, dismantled, or otherwise abused.

ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, ARE EXCLUDED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

## Decoding Part Number

### DT20 Day Timer

#### How To Order:

Example: DT20 A

Series: DT20 = Day Timer

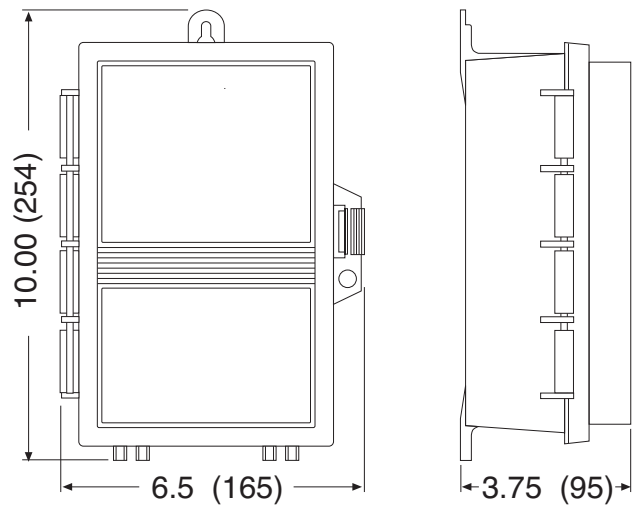
Operating Voltage:

- A= 110 VAC
- B= 220 VAC
- C= 24 V AC/DC

#### Mounting Accessories

- DTA-D= DIN Rail Mount Housing
- DTA-B= Surface Mount Housing
- DTA-E200= Outdoor Enclosure

#### ADDITIONAL MOUNTING OPTIONS: E200 (Outdoor NEMA 3R Raintight Enclosure)



**Appendix-A: Program Schedules Worksheet**

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