

## ***SDT-3PB Digital TIMER .***

This microcomputer based controller is a 100% duty programmable, UP or DOWN timer .



Front view of the SDT-3PB timer ( with Grey and Black face plate ). The LED display colors available in Super RED, Green and Blue.

The Timer is programmed with UP and DN keys located on the face. Models are available with 1, 2, 5, 10 or 15 minutes, seconds, or hours increments. Custom modifications upon request. The ON/OFF key when pressed, will Start or Stop the timer . After the power-up in standard models, the ON/OFF key will automatically preset the controller to either the maximum Time or a custom Default may be requested.

If the user alters the timer preset first, before start, then the ON/OFF key will start ( and restart ) the timer with the new value.

The user preset value is retained in the internal memory for as long as the power is present. After the power is removed, the default value will be used instead.

If the user alters the timer during the count-down ( or count-up ), the timer is immediately set to the new, selected value without interruption in counting.

NOTE, that the timer functions are customizable and may be changed upon request to perform differently.

After the counting starts, the display shows the current time count until it expires.

A flashing “-” , “.” or “On” sign indicates that the count-down ( or count-up ) is pending.

When the timer is not running the on-board relay is off and the display shows the text “OFF or “0”.

A reversed relay action may be requested by customers.

The Timer may be stopped or reset at any time by pressing the OFF key. Note, that a variety of standard and custom time ranges are available.

There are many other options available for this controller. Please see the “List of Options” document for details.



SDT-3PB timer with Semi-Flush face and with Black Label.



SDT-3PB Digital Timer Set including the in-line fuse holder and the mounting hardware. Model with Semi-Flush face shown.



Flush face plate with Grey Label.

**Electrical:**

SDT-3 controller models are available for 120Vac, 208-240Vac, 12Vac, 24Vac, 50Hz or 60Hz as well as 12V or 24V DC. The supply voltage must be specified when ordering. The controller electronics is protected by one on-board 20 mm, removable fuse that should be installed in the included in-line fuse holder.

Standard models have one on-board relay, Single Pole, Normally Open. The relay can switch loads up to 30Amp, 240Vac max. ( 40 Amp is optional ). The contacts of the relay may be completely isolated from the controller supply depending upon the chosen method of wiring.

The Power Relay switching may be synchronized with the power line "Zero-Crossing" points giving an increased reliability and eliminating the contacts arcing during the high power switching. This considerably limits any generated interference and increases the life of the relay contacts.

**Options:**

Various additional options are available for the SDT-3 controllers including:

*Count UP or DOWN*  
*Delay-Before-Start,*  
*High Limit Temperature Probe,*  
*Low Limit Temperature Probe,*  
*Remote Start/Stop,*  
*Remote Stop/Enable or Pause,*  
*Alarm Buzzer, etc...*

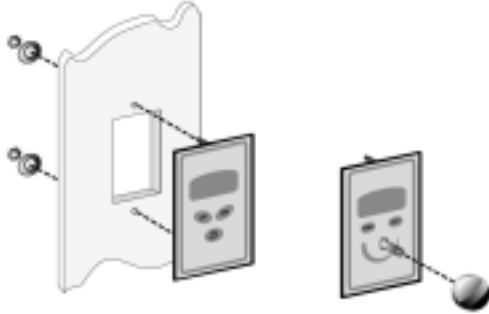
See the Complete "List of Options" for details.

Many Timer ranges, as well as various types of relays and wiring methods may be supplied upon the customer request.

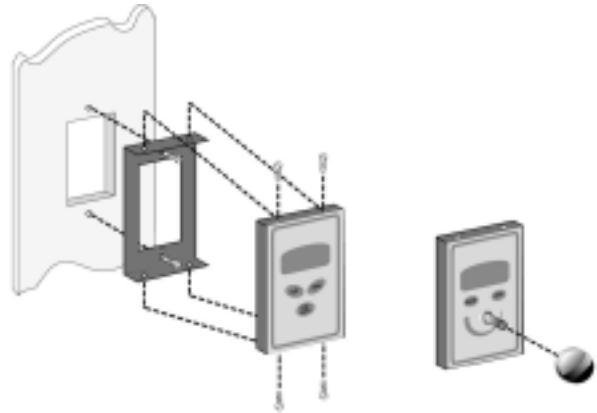
**Installation:**

SDT-3 controllers are normally shipped without enclosures (optional) and are designed to fit in a standard 1-gang electrical box or in a panel. The plastic overlay may be installed on either a customer supplied face plate or the standard Mounting Plate included in the kit. All mounting hardware, screws and wiring connectors are attached. When correctly installed, there are no screws visible on the face plate.

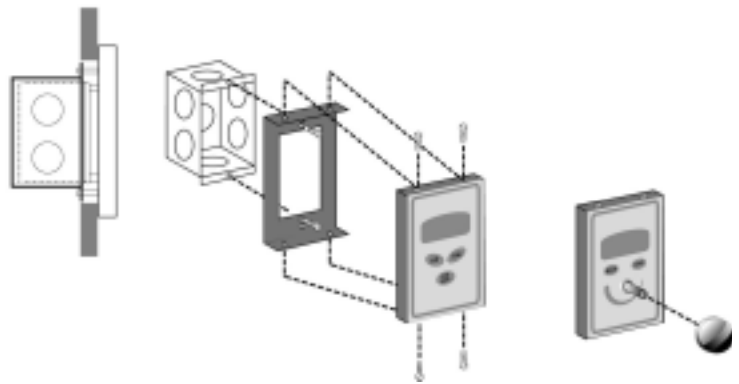
**Applications:** Sauna, Heaters, Coolers, Steam rooms, Smokers, etc...



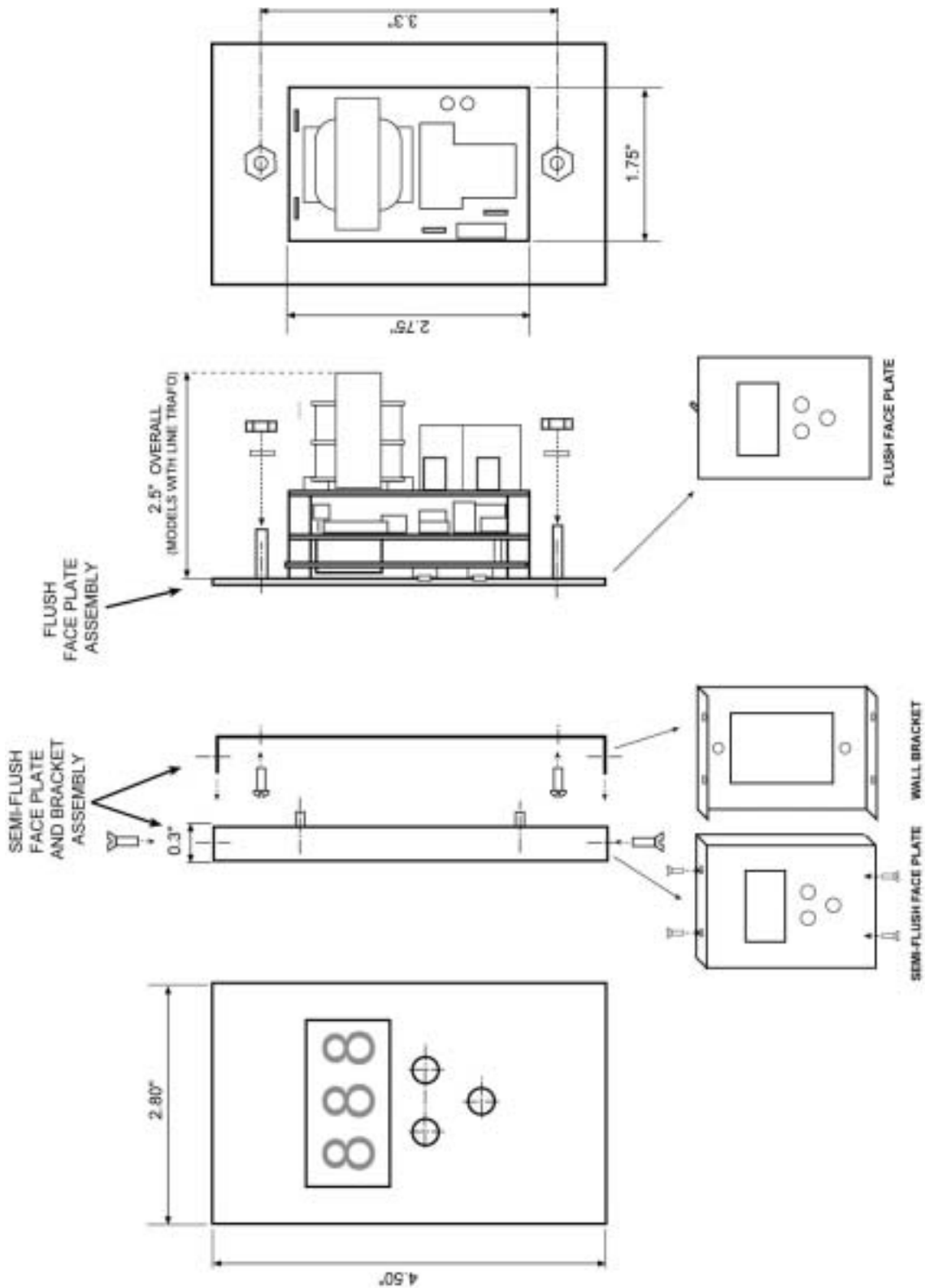
INSTALLATION EXAMPLE: FLUSH IN A WALL

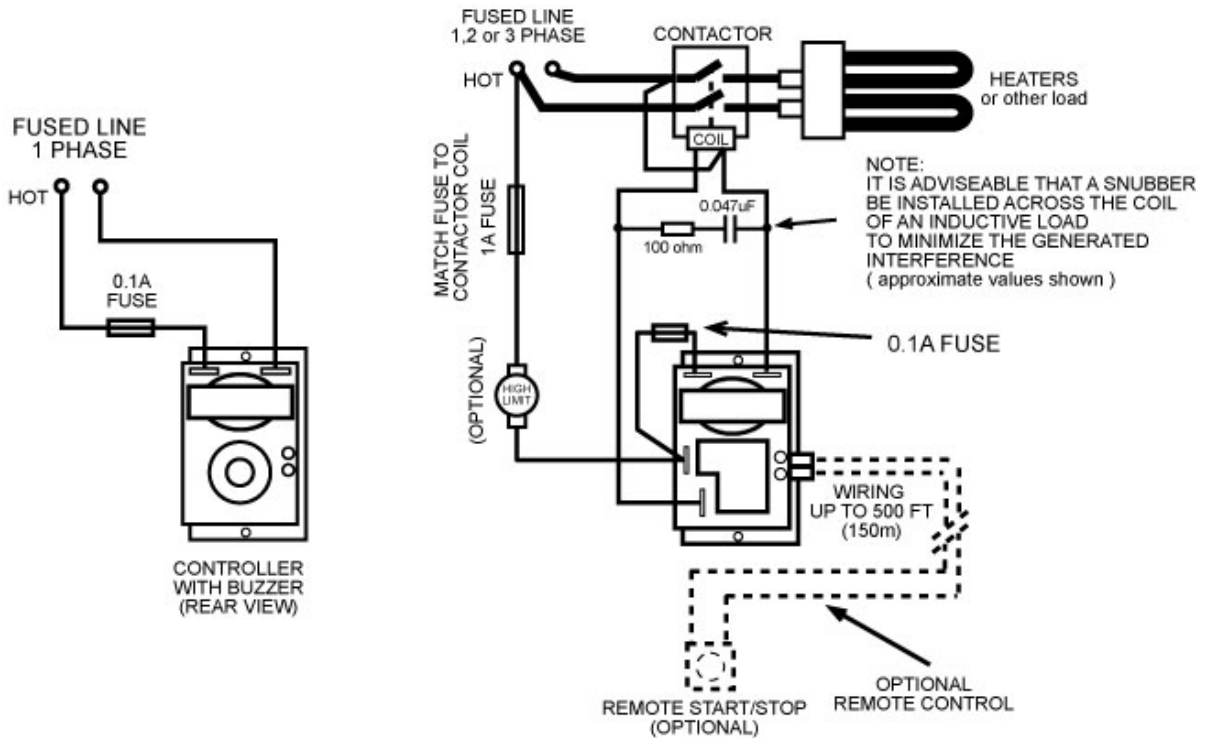


INSTALLATION EXAMPLE: SEMI-FLUSH IN A WALL



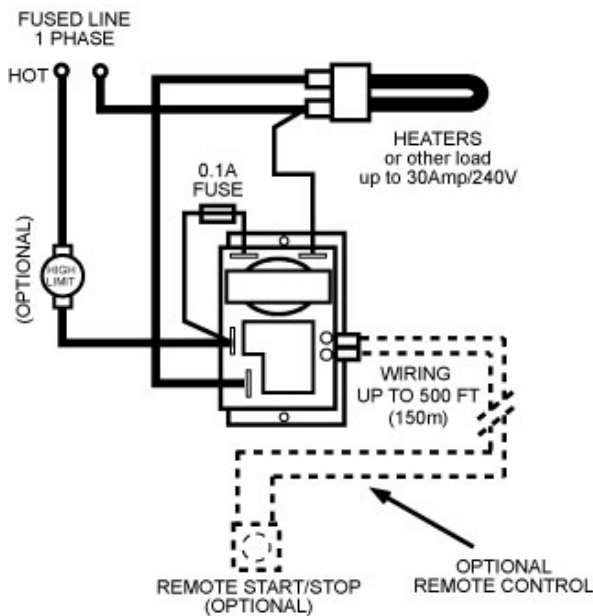
INSTALLATION EXAMPLE: SEMI-FLUSH IN A BOX



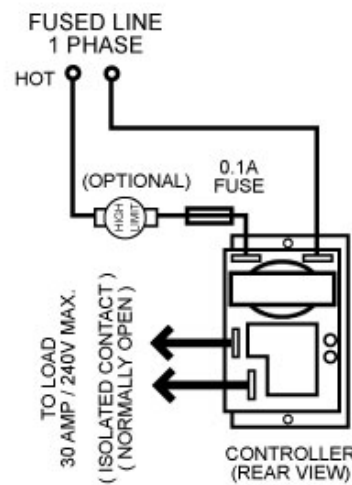


WIRING EXAMPLE WITH ON-BOARD BUZZER

WIRING EXAMPLE WITH EXTERNAL CONTACTOR TO BOOST THE LOAD POWER



WIRING EXAMPLE WITH POWER LINE SUPPLY COMMON FOR THE CONTROLLER AND THE LOAD



POWER LINE SUPPLY SEPARATE FOR THE CONTROLLER AND THE LOAD

***OPERATING INSTRUCTIONS:***

**HOW TO START and STOP:**

Press the "ON/OFF" key to Start or Stop the timer. The display will show the current time count. The "." or "-" sign on the left hand side of the display may be flashing when the timer is counting.

**TIMER PRESET:**

The user may preset the timer when it is not in the counting process. Press the UP or DN key to preset the desired time period.

NOTE: For as long as the supply power is present, the TIMER preset value is saved in a temporary memory and may be recalled later on by pressing a key on the keypad. After each new Power Up the Preset Time is automatically set to the maximum or to a Default value for the particular timer model.

NOTE: In models with the "Delay-Before-Start" option, the load is switched OFF during the delay count-down.

**AUTOMATIC STOP:**

The controller stops automatically and resets the timer to "0" when a malfunction is detected or the preset time expires.

**IDLE OPERATION:**

The display shows "OFF" to indicate that the controlled load is switched OFF.

**CAUTION:**

**All installation and adjustments of the controller options MUST be done ONLY when ALL POWER to the load and the controller is disconnected.**

**TROUBLESHOOTING:**

Optional sensor wiring and controls are continually checked for proper operation.

If a malfunction is detected, the controller will automatically switch OFF the load and deactivate itself. At the same time display will show "Err".

The controller cannot be reactivated until all causes of the malfunction are fixed.

Following is an example of specifications for a selected model. Note that all Timer ranges, electrical as well as mechanical specifications may be modified to the customer requirements.

Example model: **SDT-3PB-I-HP-120-56-RM0M60**

<b>SPECIFICATIONS:</b>	<b>VALUE</b>	<b>NOTES, COMMENTS</b>
<b>Electrical:</b>		
Supply Voltage:	105-130Vac, 60 Hz	208-240Vac, 50/60Hz, 12/24V AC/DC
Supply Current (controller):	25 mA RMS max.	May be lower for different voltages, relays and display brightness or color
Max. Switched Load:	30 Amp, 240Vac max.	May be different for other relay models
Switching Reliability:	10,000,000 electrical 10,000,000 mechanical	For AC load
Timer Preset Range:	0 to 60 minutes	Custom ranges available
Timer Display resolution:	1 minute	Custom resolutions on request
Display color:	Super RED, GREEN or BLUE	Different colors upon request
<b>Mechanical:</b>		
Face plate:	Painted Metal	Flush or Semi-Flush mounted face plate
Face plate dimensions:	70mm x 115mm ( 2.75" x 4.5" )	
Mounting Front plate:	Fiber Glass or Metal	Used to install, depending upon the model
Mounting plate dimensions:	70mm x 115mm ( 2.75" x 4.5" )	Flush or Semi-Flush face models
Controller dimensions::	115mm x 70mm x 64mm (HxWxD) ( 4.5" x 2.75" x 2.5" )	Models with line transformer
Overall weight:	300 gm	Models with line transformer
Accessories pack:	Mounting screws and nuts if needed, Face plate and Plastic Label: 1 pc each In-line fuse holder + 20mm fuse: 1 pc	