

SDT-2 and SDT-3RT Digital TIMER .

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



Front view of the SD-2 or SDT-3RT timer (with Grey and Black face plate). The LED display colors available in Super RED, Green or Blue.

The Timer is programmed with one rotary pot located on the face. Models are available with 1, 2, 5, 10 or 15 minutes, seconds, or hours increments. Custom modifications upon request.

To Start the timer, the knob has to be first turned to the fully counterclockwise position and then rotated to reach the desired preset value. For as long as the knob is being rotated the timer will remain in the preset mode.

After a few seconds the preset value is locked-in and the timer will start automatically.

Alternately, in the models with the remote start/stop input, the same effect can be achieved by activating that input.

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 indicates the text “OFF” or “0”.

After the timer has been started, the user cannot alter the timer preset or the current count. To do that, the knob has to be turned to the fully counterclockwise position .

The face knob, when placed in the fully counter-clockwise position, will always Stop the timer and cause the on-board relay to be deenergized .

The user preset value is retained in the internal memory for as long as the power is present. If the remote start/stop input is installed, the timer may be restarted to/from the preset value by activating the remote start.

In models with the “Delay-Before-Start” option, the delay value is preset first then the timer interval count up (or down) value can be set.

In these models the on-board relay usually remain deenergized during the delay period.

The delay values can range up to many hours or days.

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 reversed relay action may be requested by customers.

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-3RT timer with Semi-Flush face and with Black Label.



SDT-2 Digital Timer Set including the in-line fuse holder and the mounting hardware. Stainless Steel face plate shown.



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



SDT-3RT Flush face plate with Grey Label.

Electrical:

SDT-2 and SDT-3RT 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-2 and SDT-3RT 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...

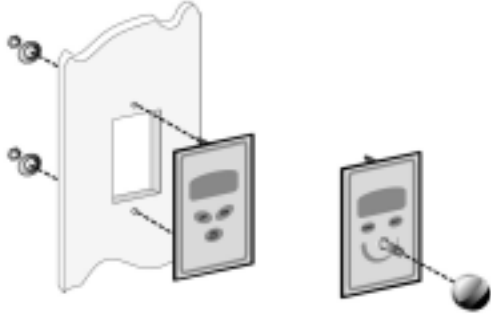
See the Complete "List of Options" for details.

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

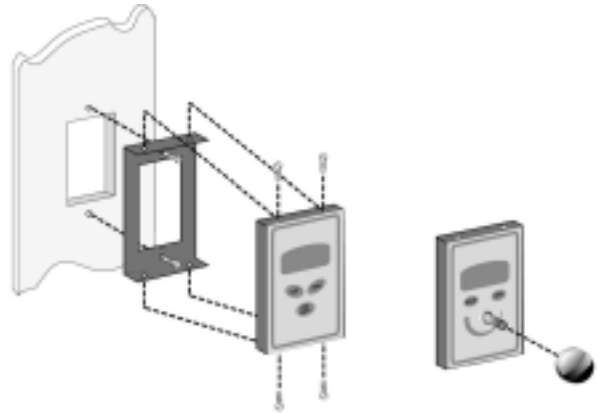
Installation:

SDT-2 and SDT-3RT 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.

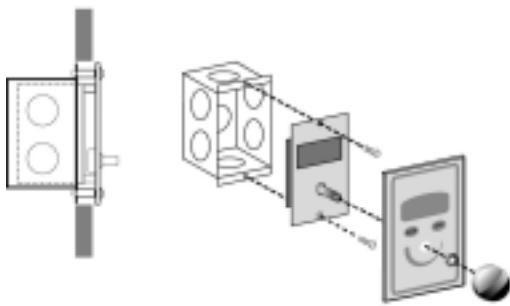
Applications: Sauna, Heaters, Coolers, Steam rooms, Light Control etc...



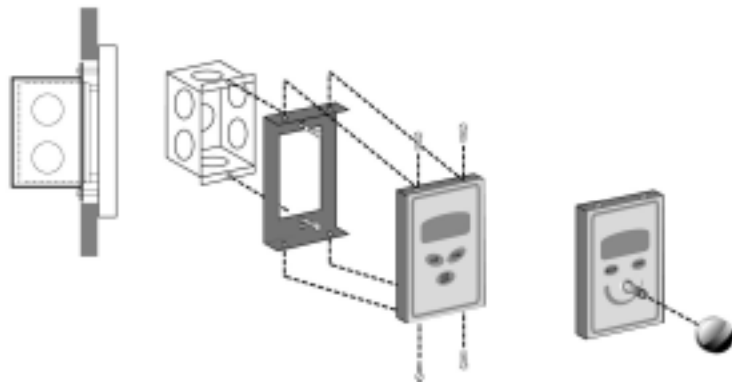
INSTALLATION EXAMPLE: FLUSH IN A WALL



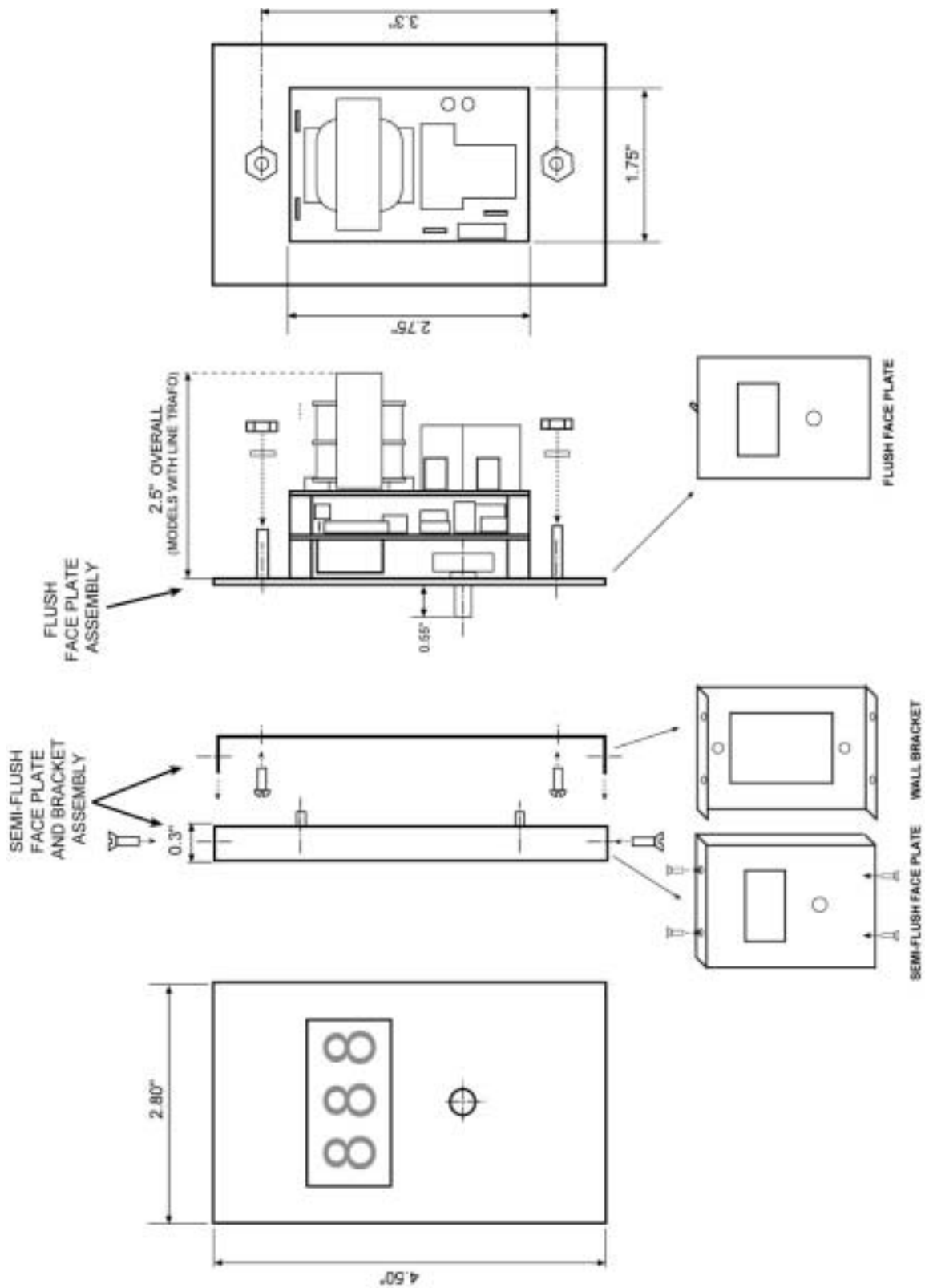
INSTALLATION EXAMPLE: SEMI-FLUSH IN A WALL

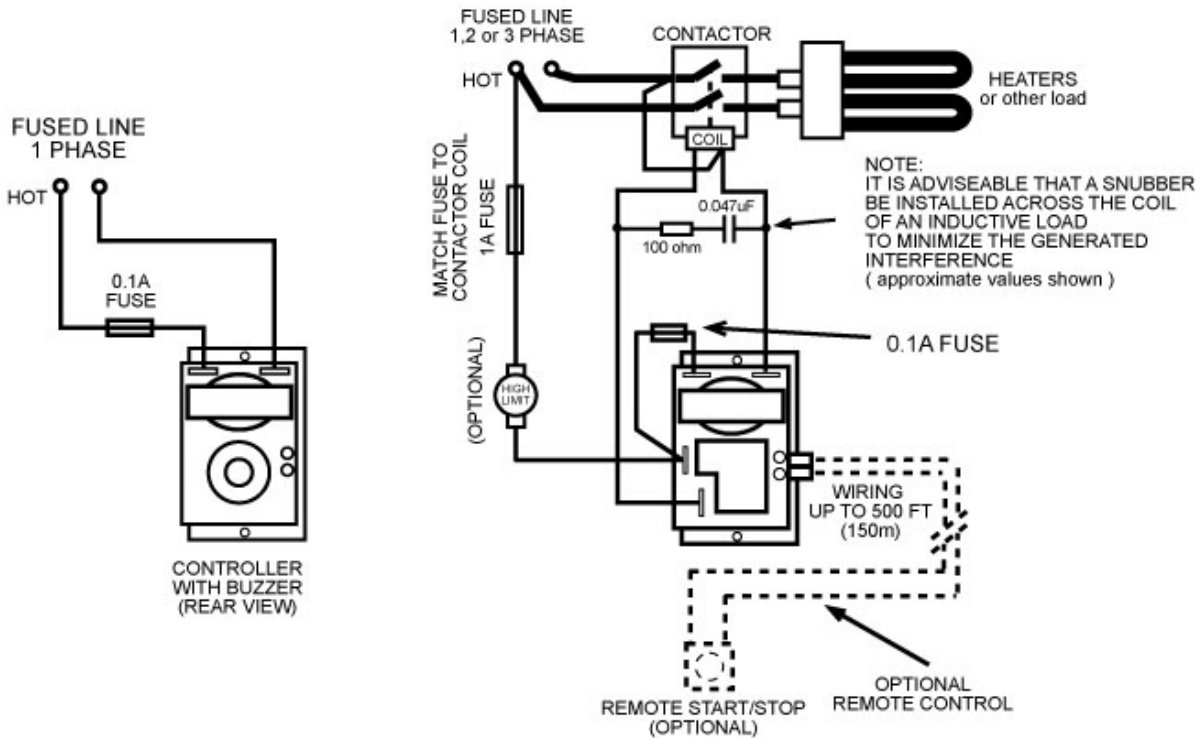


INSTALLATION EXAMPLE: SDT-2 FLUSH IN A BOX



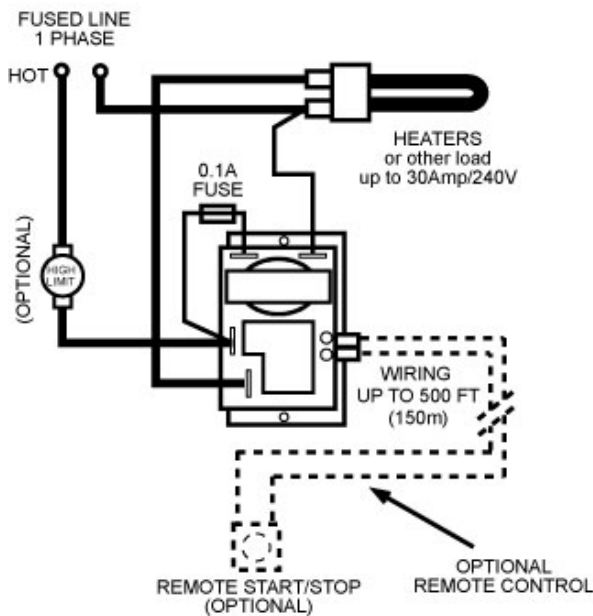
INSTALLATION EXAMPLE: SEMI-FLUSH IN A BOX



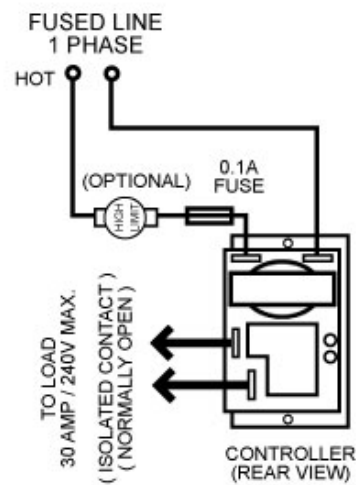


WIRING EXAMPLE WITH ON-BOARD BUZZER

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:

1. Turn the preset knob to "OFF" then rotate it until the display reads the desired time preset. The preset mode will be maintained for as long as the knob is being operated.
2. When satisfied with the preset value, stop rotating the knob. After several seconds the preset time will be locked-in automatically and the controller will start.

TIME ADJUSTMENT DURING OPERATION:

User may restart the timer by first rotating the control knob to "OFF" and then setting a new value.

CONTROL OPERATION:

1. The controller's relay switches ON the load when the timer counts and turns it OFF when the preset time expires.
2. In models with Delay-Before-Start option, the load is switched OFF during the delay count-down.

MANUAL STOP:

Turn the knob to "OFF" or activate the optional REMOTE STOP switch for a few seconds. The controller will stop automatically. The load will be switched OFF.

AUTOMATIC STOP:

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

IDLE/MONITORING OPERATION:

The display shows the text "OFF" or "0" 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 the 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-3RT-I-HP-120-56-RM0M60**

SPECIFICATIONS:	VALUE	NOTES, COMMENTS
Electrical:		
Supply Voltage:	105-130Vac, 50/60 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
Mechanical:		
Face plate:	Painted Metal or Stainless Steel	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	