

OPERATING INSTRUCTIONS

PT380



SPECIFICATIONS

DISPLAY

6 Digit (2 + 4), 0.3" Height, 7 segment LED.

SUPPLY VOLTAGE

85 to 270 VAC/DC (AC@50 or 60Hz).

FUNCTION MODES

1. Parallel.
2. Sequential.

DELAY MODES

ON Delay, Interval, Cyclic ON first, Cyclic OFF first.

TIME RANGES

99.99 sec, 999.9 sec, 99.59min.sec, 99.59hr.min, 999.9hr.

LED INDICATION

Output status, Cascade output status, Time range, ON / OFF time, Timing in progress.

INPUT

Start, Hold.

COUNTING DIRECTION

Up.

OUTPUT

Channels: 8 (NO).
Cascade output: 1.

RESET INPUT

1. Front panel.(selectable)
2. Remote reset.
3. On power interruption.(selectable)

RESET TIME

Less than 100 msec.

ACCURACY

0.5%.

MEMORY RETENTION

10 years (User selectable).

CONFIGURATION LOCK

via rear terminals.

TEMPERATURE

Operating : 0 to 50°C.
Storage: - 5 to 50°C.

SIZE

96 x 96.

HOUSING

ABS.

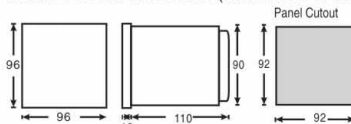
MOUNTING

Panel mounting.

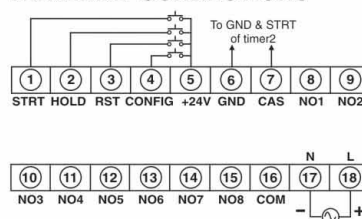
WEIGHT

420 grams.

PANEL DIMENSIONS(dimensions in mm)

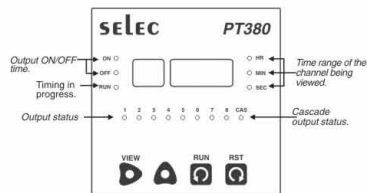


TERMINAL CONNECTIONS



Terminal	Description
1	Start
2	Hold
3	Reset
4	Configuration
5	+24VDC for Start, Hold, Reset and Configuration inputs.
6	GND for Proximity switches & for Cascading.
7	Cascade Output
8 - 15	NO Contacts for 8 relays
16	COM for 8 relays
17	N (Neutral)
18	L (Live)

FRONT PANEL IDENTIFICATION



KEYS	FUNCTIONS
VIEW	<ol style="list-style-type: none"> 1. Selects the digit to be altered. Selected digit blinks. With every press of VIEW key, next digit towards the right starts blinking. 2. In combination with VIEW key to enter online programming. 3. Displays elapsed time of the channel selected. (Valid only in parallel function)
▲	<ol style="list-style-type: none"> 1. Increments value of blinking digit. 2. Scrolls up to next option for parameter.
RUN	<ol style="list-style-type: none"> 1. Scrolls to previous parameter (not option) in programming. 2. Selects program to be run.
RST	<ol style="list-style-type: none"> 1. Scrolls to next parameter in programming and stores value of previous parameter. 2. Front panel RST.

CONFIGURATION

To enter configuration, short terminals 4 and 5 and turn power on.

Display	Descriptions
1. Reset Configuration.	<i>Default: No.</i>
 	<p>Reset all: No / Yes. No: All parameters in configuration are maintained to previous settings. Yes: All parameters in configuration are set to factory set values. Note: Select the required option and press VIEW key to set to default.</p>

Display	Descriptions
Press VIEW key.	
2. Default Programs.	<i>Default: None.</i>
 	<p>Default: None / All / Program1 / Program2 / Program9. None: All parameters in all 9 programs are maintained to previous settings. All: All parameters in all 9 programs are set to factory set values. Program1 / Program2... Program9: All parameters of the selected program no. are set to factory set values. Note: Select the required option and press VIEW key to set to default.</p>
Press VIEW key.	
2. Function.	<i>Default: Serial</i>
 	<p>Function: Serial / Parallel. Refer waveforms for details.</p>
Press VIEW key.	
3. Program repeat cycle.	<i>Default: 0000</i> Note: Valid only in Serial function.
	<p>Program repeat cycle: 0000-9999. Cont. cycle: 0000-9999 cycles: The sequential switching of outputs repeats for the selected no. of cycles. If 0000 is selected, the sequential switching of outputs repeats continuously.</p>
Press VIEW key.	
4. Memory retention.	<i>Default: Yes</i>
 	<p>Memory retention: Yes / No. Yes: In case of power failure the elapsed time is retained. No: In case of power failure elapsed time is reset</p>

To exit configuration, turn power off, remove link between terminals 4 and 5 and turn power on.

Display	Description
Press Q key.	
5. Front panel reset enable. <i>Default: Yes</i>	
	Front panel reset enable: Yes / No. Yes: Unit can be reset from front panel. No: Front panel reset key is disabled.
Press Q key.	
6. Programming enable. <i>Default: No.</i>	
	Online programming enable: Yes / No. Yes: Parameters in programming can only be read from the front panel but cannot be altered. No: Unit can be programmed from the front panel.
<small>Note: Initially, set this parameter as NO. After completing programming, enter configuration again and then set this parameter as YES if required.</small>	

Programming:

Press **▶** + **▲** key to enter / exit programming through front panel for 3 secs.

Display	Descriptions
1. Program number. <i>Default: 01</i>	
	Select the program no. to be run by pressing the ▲ key. 9 user settable programs are available. The 8 channels can be pre programmed differently in different programs. User can directly run the preset program instead of changing the settings in the same program.
Press Q key.	
2. Time range. <i>Default: 999.9sec</i>	
	Time range: 99.99 / 999.9 sec / 99.59min.sec / 99.59 hr.min / 999.9hr / User Selectable. 99.99 / 999.9sec / 99.59 min.sec / 99.59hr.min / 999.9hr: The range selected will remain fixed for all channels in all programs. Hence, time range selection will not be prompted separately for all channels. User selectable: Range can be separately selected for all channels during programming.
<small>Note: During time range selection the respective time range LEDs glow.</small>	

Display	Description
Press Q key.	
3. Mode. <i>Default: ON</i>	
	Mode: On delay / Interval / Cyclic On first / Cyclic Off first / User Selectable. On delay / Interval / Cyclic first / Cyclic Off first: The mode selected will remain fixed for all channels in the selected program. Hence, mode selection will not be prompted separately for all channels. User selectable: Mode can be separately selected for all channels during online programming.
Press Q key.	
4. Number of channels <i>Default: 8</i>	
	Select the no. of channels required by pressing the ▲ key. This function limits the no. of channels prompted during programming, to the no. of channels actually required.
Press Q key.	
5. Channel number. <i>Default: 01</i>	
	Select the channel no. to be programmed by pressing the ▲ key. 8 channels are available. This function allows you to directly select the channel no. whose settings have to be changed.
Press Q key.	
6. Mode. <i>Default: ON</i>	
	Mode: On delay / Interval / Cyclic On first / Cyclic Off first. This mode selection is valid only for the particular channel selected.

Display	Descriptions
Press Q key.	
7. Number of cycles <i>Default: 0000</i>	
	Number of cycles: 0000 to 9999. This indicates the no. of cyclic operations. No. of cycles = 0000 indicates continuous cyclic operation. Press ▶ to select the digit and ▲ key to change the value of the digit.
Press Q key.	
8. Start time range. <i>Default: 999.9sec</i>	
	Start time range: 99.99sec, 999.9sec, 99.59min.sec, 99.59hr.min, 999.9hr.
<small>Note: During time range selection the respective time range LEDs glow.</small>	
Press Q key.	
9. Set start time. <i>Default: 10.0sec</i>	
	Press ▶ key to select the digit and ▲ key to change the value of the digit.

Display	Descriptions
Press Q key.	<i>Default: 999.9sec</i>
10. ON time range.	
	On time range: 99.99sec, 999.9sec, 99.59min.sec, 99.59hr.min, 999.9hr.
<small>Note: Valid only if time range is made selectable in Step 3.</small>	
<small>Note: During time range selection the respective time range LEDs glow.</small>	
Press Q key.	
11. Set ON time. <i>Default: 10.0sec</i>	
	Press ▶ key to select the digit and ▲ key to change the value of the digit.
Press Q key.	
12. OFF time range. <i>Default: 999.9sec</i>	
	Off time range: 99.99sec, 999.9sec, 99.59min.sec, 99.59hr.min, 999.9hr.
<small>Note: Valid only if time range is made selectable in Step 3 & mode selected is cyclic.</small>	
<small>Note: During time range selection the respective time range LEDs glow.</small>	
Press Q key.	
13. Set OFF time. <i>Default: 10.0sec</i>	
	Press ▶ key to select the digit and ▲ key to change the value of the digit.

Pressing **RST** key now will take you back to **Channel no.** selection (step 5).

Select the next channel no. by using the **▲** key and program the settings for that channel. Step 5 to 13 will keep repeating till the selected no. of channels are programmed.

After one program is over, display will go back to **Program no.** selection (step 1).

Select the next program no. if required by using the **▲** key. Now you can do the settings for the next program or you can exit programming by pressing **▶** + **▲** keys for 3sec.

After coming out of programming select the program no. to be run and then give the Start pulse.

To view elapsed time for particular channel
(This function is valid only for parallel mode)

To view elapsed time for any particular channel:

1. Press **▶** key momentarily each time till the

- elapsed time for the required channel is displayed.
- Left 2 digits of the display show the channel no. and the other 4 digits show the elapsed time.

Select program no. to be run

- Press **RUN** momentarily to enter RUN mode.
- Press **▲** key each time to select the required program no. and press **RST**.

Now give Start pulse.

Running program cannot be changed once the timing operation has started.

Reset the unit: To reset the unit, press **RST** key continuously for 3sec or short terminals 3 & 5 momentarily.

FUNCTIONS

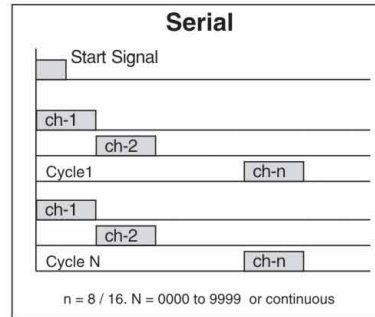
Serial

1. Serial continuous cycle mode:

The sequential switching of outputs will repeat continuously after the end of each cycle.

2. Serial selectable cycle mode:

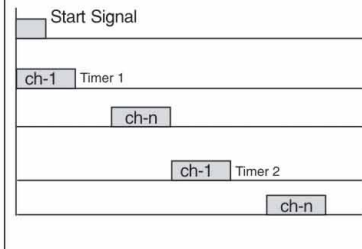
The sequential switching of outputs will repeat for the selected no. of cycles after the end of each cycle.



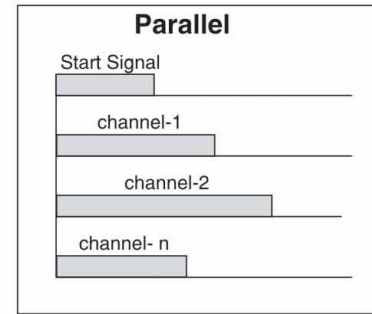
Cascading the timer: Connect the CAS and GND terminals of the first timer to the STRT and GND terminals of the second timer respectively.

Cascade output is valid only in case of Serial function. In Serial continuous cycle mode, the cascade output remains de-activated. In Serial selectable cycle mode, after the end of the set no. of cycles, the cascade output will be activated.

Serial (with cascading)

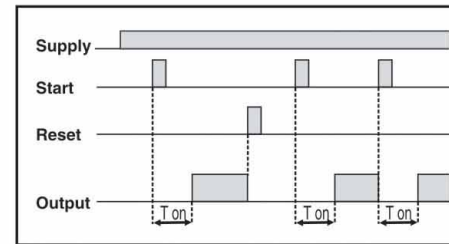


Parallel

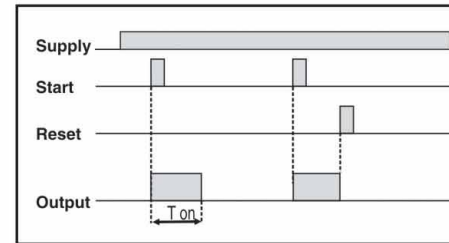


MODES OF OPERATION

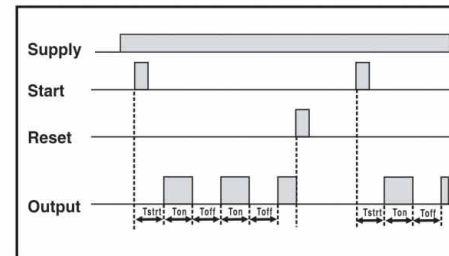
1. On delay



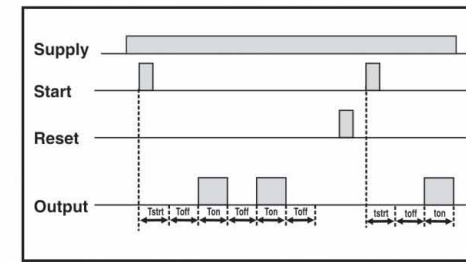
2. Interval



3. Cyclic ON - First



4. Cyclic OFF - First



(Specifications subject to change as development is a continuous process)