OP138-V02

selec **PT380**
Operating Instructions

96 x 96

SPECIFICATIONS

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

SUPPLY VOLTAGE
85 to 270V AC/DC(AC@50 or 60Hz).

FUNCTION MODES
1. Parallel.
2. Sequential.

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

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

LED INDICATION
Output status, Time range, ON/ OFF time, Cascade output status, 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.

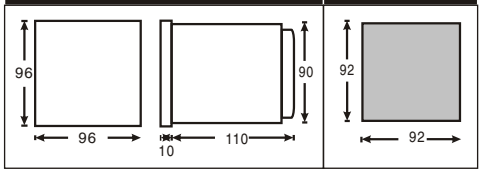
HOUSING
ABS.

MOUNTING
Panel mounting.

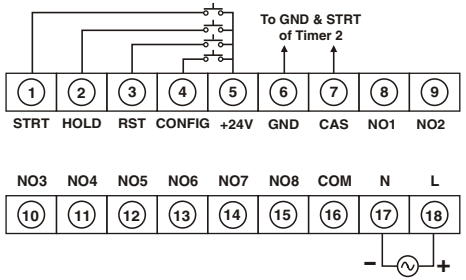
WEIGHT
420 grams.

MECHANICAL INSTALLATION

Outline Dimensions (in mm)	Panel cutout (in mm)

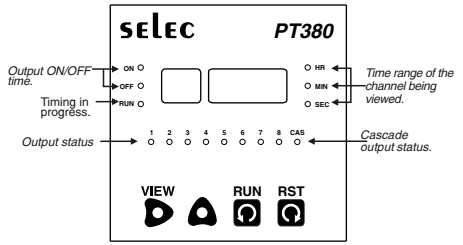


TERMINAL CONNECTIONS



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)

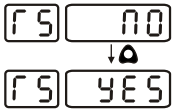
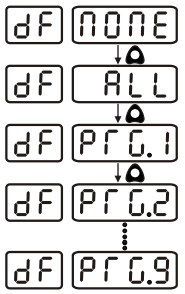
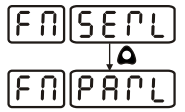
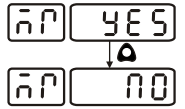
FRONT PANEL IDENTIFICATION



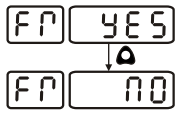
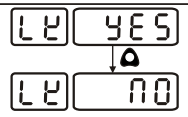
KEYS	FUNCTIONS
VIEW	1. Selects the digit to be altered. Selected digit blinks. With every press of key, next digit towards the right starts blinking. 2. In combination with key to enter online programming. 3. Displays elapsed time of the channel selected. (Valid only in parallel function)
	1. Increments value of blinking digit. 2. Scrolls up to next option for parameter.
RUN	1. Scrolls to previous parameter (not option) in programming. 2. Selects program to be run.
RST	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.

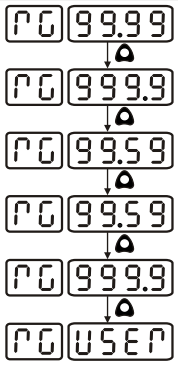
Display	Descriptions
1. Reset Configuration.	*Default: No.*
	**Reset all:** No / Yes. **No:** All parameters in configuration are maintained to previous settings. **Yes:** All parameters in configuration are set to factory set values. **Note:** Select the required option and press key to set to default.
Press key.	
2. Default Programs.	*Default: None.*
	**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 key to set to default.
Press key.	
2. Function.	*Default: Serial*
	**Function:** Serial / Parallel. Refer waveforms for details.
Press key.	
3. Program repeat cycle. Note: Valid only in Serial function.	*Default: 0000*
	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.
Press key.	
4. Memory retention.	*Default: Yes*
	**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

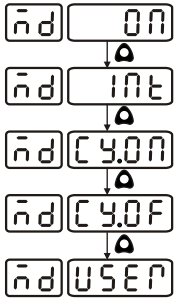
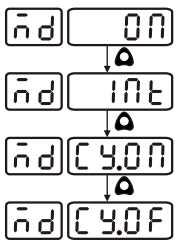
To exit configuration, turn power off, remove link between terminals 4 and 5 and turn power on.

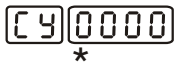
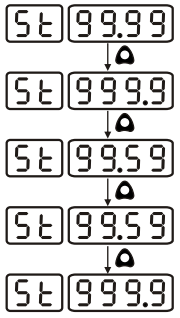
Display	Description
Press key.	
5. Front panel reset enable. *Default: Yes*	
	**Front panel reset enable:** Yes / No. **Yes:** Unit can be reset from front panel. **No:** Front panel reset key is disabled.
Press key.	
6. Programming enable. *Default: No.*	
 **Note:** Initially, set this parameter as NO. After completing programming, enter configuration again and then set this parameter as YES if required.	**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.

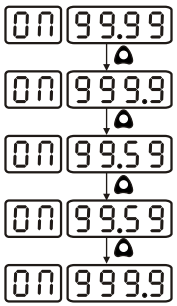
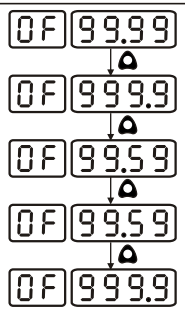
Programming:

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

Display	Descriptions
1. Program number. *Default: 01*	
	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 key.	
2. Time range. *Default: 999.9sec*	
 Note: During time range selection the respective time range LEDs glow.	**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.

Display	Description
Press key.	
3. Mode. *Default: ON*	
	**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 key.	
4. Number of channels *Default: 8*	
	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 key.	
5. Channel number. *Default: 01*	
	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 key.	
6. Mode. **Note:** Valid only if mode is made user selectable in Step 2. *Default: ON*	
	**Mode:** On delay / Interval / Cyclic On first / Cyclic Off first. This mode selection is valid only for the particular channel selected.

Display	Descriptions
Press key.	
7. Number of cycles *Default: 0000* **Note:** This parameter is prompted only for channel1 if channel1 is in cyclic mode in parallel function.	
 *	**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 key.	
8. Start time range. *Default: 999.9sec* **Note:** This parameter is valid only if time range is made selectable Step 3 & mode selected is cyclic.	
 Note: During time range selection the respective time range LEDs glow.	**Start time range:** 99.99sec, 999.9sec, 99.59min.sec, 99.59hr.min, 999.9hr.
Press key.	
9. Set start time. *Default: 10.0sec*	
*	Press key to select the digit and key to change the value of the digit.

Display	Descriptions
Press key. *Default: 999.9sec*	
10. ON time range. **Note:** Valid only if time range is made selectable in Step 3.	
 Note: During time range selection the respective time range LEDs glow.	**On time range:** 99.99sec, 999.9sec, 99.59min.sec, 99.59hr.min, 999.9hr.
Press key.	
11. Set ON time. *Default: 10.0sec*	
	Press key to select the digit and key to change the value of the digit.
Press key.	
12. OFF time range. **Note:** Valid only if time range is made selectable in Step 3 & mode selected is cyclic. *Default: 999.9sec*	
 Note: During time range selection the respective time range LEDs glow.	**Off time range:** 99.99sec, 999.9sec, 99.59min.sec, 99.59hr.min, 999.9hr.
Press key.	
13. Set OFF time. *Default: 10.0sec*	
	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 D + ▲ 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 D key momentarily each time till the elapsed time for the required channel is displayed.
2. 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

1. Press RUN momentarily to enter RUN mode.
2. 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.

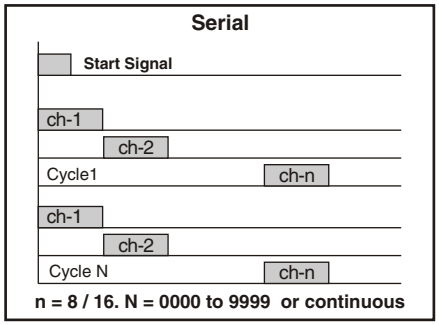
Reset the unit: To reset the unit, press RST key continuously for 3sec. or short terminals 3 & 5 momentarily.

FUNCTIONS

Serial

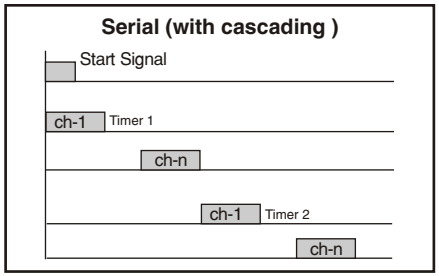
1. Serial continuous cycle mode:
The sequential switching of outputs will repeat continuously after the end of each cycle.

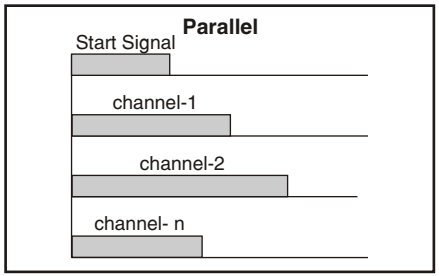
2. Serial selectable cycle mode:
The sequential switching of outputs will repeat for the selected no. of cycles after the end of each cycle.



n = 8 / 16. N = 0000 to 9999 or continuous

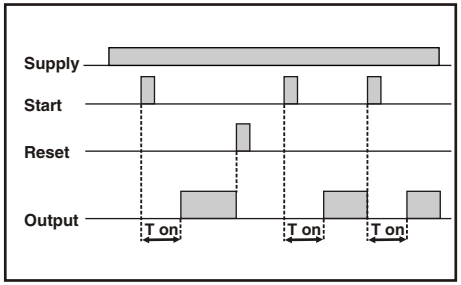
Cascading the timer: Connect the CAS and GND terminals of the first timer to the STRT and GND terminals of the second timer respectively. Cascade output is valid only in case of Serial function. In Serial continuous cycle mode, the cascade output remains de-activated. In Serial selectable cycle mode, after the end of the set no. of cycles, the cascade output will be activated.



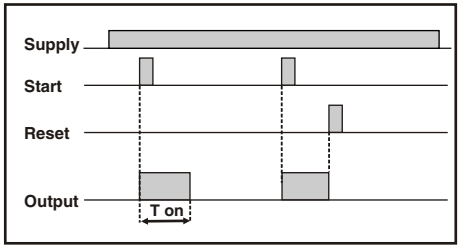


MODES OF OPERATION

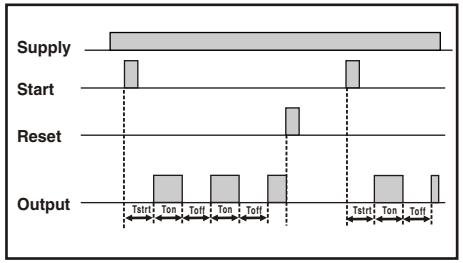
1. On delay



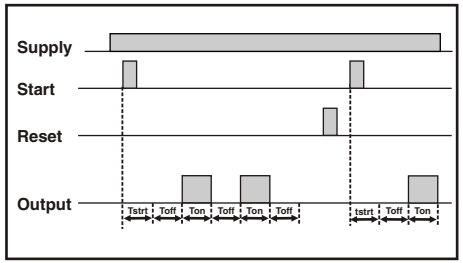
2. Interval



3. Cyclic ON - First



4. Cyclic OFF - First



(Specifications are subject to change, since development is a continuous process)

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