PROGRAMMABLE DIGITAL TIMER – ELIRO (33 Functions): V7DFTS3

Basic Features:

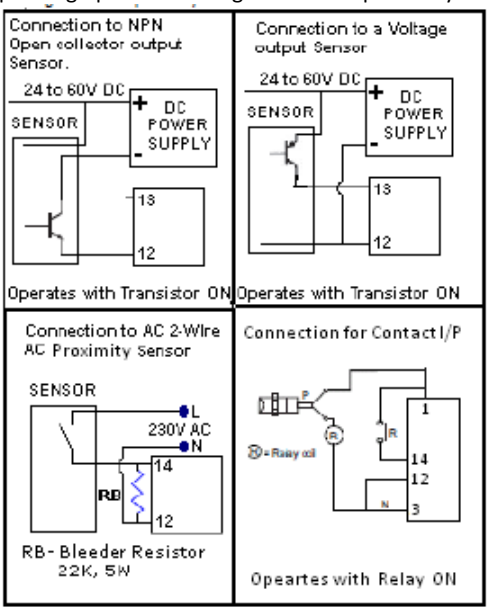
- **Luxurious look with 2x4 '7-Segment' Display.**
- **33 Default Modes.**
- **Modes can be Customized as per user's requirement.**
- **Wide range of Applications with multiple Operating Modes.**
- **Wide Timing Range 0.1 s to 999 Days.**
- **User Friendly Keys & Key Operations with Lock & Unlock.**
- **Two Timers with Two separate Relay Output.**
- **Preset Time Editable during Run Time.**
- **Modes can be saved & Re-called through two Profiles P1/P2.**
- **Wide Input Supply Range : 110-240V AC (Un) , -20% to +10% of Un**
- **Wide Signal Sensing Range: 85-265V AC/100-265V DC & 24-60V AC/DC.**
- **High Timing Accuracy.**
- **IP-30 Protection for front facial & Housing.**
- **Suitable for 48x48 Panel Mounting.**
- **IEC 61812-1, CE, RoHS Compliance.**

CAUTION:

1. Always follow instructions stated in the Product Leaflet. Before installation, ensure that specifications agree with intended application.
2. Installation must be done by skilled technician only.
3. Automation device must be properly installed so that they are protected against any risk of involuntary actuations.
4. Suitable dampers should be provided in event of excessive vibrations.
5. Use of 250mA fuse in series with product supply is recommended.

Note:

1. Product innovation being a continuous process, we reserve right to alter specifications without any prior notice.
2. Using of AC 2 Wire Proximity Sensor (Input signal range- 85-265V AC):
   Please add the input bleeder resistance across signal input terminals (12 & 14) to prevent false signal Sensing due to leakage current of proximity sensor. Generally suggested value of Bleeder resistance is 22K, 5W (Attached with the product as an accessory) Considering 2.5mA leakage current but it may vary depending upon the Leakage current of proximity sensor.



TERMINAL DETAILS:

	0.5 N. m (3.5 Lb.in) Terminal screw - M3
	1 x 0.12...2 mm^2 Solid Wire
AWG	1 x 26 to 14

AWG	CURRENT (A)
14	8
16	6.4
18	4.8
20	3.2
22	1.6

Use Cu wire of 75ºC only.

Product Specifications:

Parameter	Specifications									
Supply Characteristics:										
Input Supply Range	110-240V AC (Un) , -20% to +10% of Un									
Supply Frequency	47-63 Hz									
Power Consumption	9 VA max.									
Reset Time	< 200 ms @ Rated Supply for Both Relay ON condition.									
Initiate Time	< 100 ms									
Signal Characteristics:										
Input signals	High Range: 85-265V AC/ 100-265V DC, Low Range: 24-60V AC/DC									
Signal Sensing Time	Guaranteed signal Present/Absent detection within 50ms.									
Signal Wait Period	100ms @ Power On & for signal based modes only.									
Signal Isolation	2 KV									
Relay Output Characteristics:										
Contact Rating	5A NO & 3A NC @250VAC/30VDC Resistive.									
Utilization Category	AC 15: 250V AC/2A, Cos Ø = 0.6, 85ºc, 100000 Operations.									
	DC 13: Ue rated voltage V – 24; Ie rated current A – 2.0.									
Contact Material	Ag alloy (Cd free).									
Mechanical Life Expectancy	$5*10^6$ Operations.									
Electrical Life expectancy	$1*10^5$ Operations.									
Switching Frequency	1800 Operations/hour.									
Feature Characteristics:										
No. of Timers	2 (Independent)									
No. of Signal I/P	1									
No. of Relay O/P	2									
No. of Default Modes	33 (Run Time Editable)									
Customized Modes	Can be programmed as per customer requirement									
No. of Timing Profiles	2 profiles can be saved & Recall whenever required.									
Timing Resolution	Day	Day.	Hrs	Hrs.	Min	Min.	Sec	Sec.	Hr-Min	Min-Sec
Timing Range	999	99.9	999	99.9	999	99.9	999	99.9	9.99	9.99
Timing Accuracy	+/- 0.01%									
Display	7-Segment 2x4 digit common cathode type.									
Keypad	4 front key as Enter, Up, Down & Esc.									
Key De-bounce Time	100 ms Max.									
Time Counting Options	User Selectable : Elapsed Time (Up Counting) or Remaining Time (Down Counting)									

LED Indications	LED	Indication	Condition
	SV (Red)	Continuous ON	Set Value
	P1/P2 (Red)	Continuous ON	P1 Running
	Up/Down (Red)	Continuous ON	Up Counting
	SG (Green)	Continuous ON	Signal Present
	OP1 (Red)	Continuous ON	Relay OP1 ON
	OP2 (Red)	Continuous ON	Relay OP2 ON

Environmental Characteristics:	
Operating Temperature	-5 to +55º c
Storage Temperature	-10 to 60º c
Relative Humidity	5 to 95%
Operating Altitude	2000m
Enclosure Protection	IP 30 for Housing & front Facial and IP 20 for Terminals
Pollution Degree	II
Operating Position	Any
Mechanical Characteristics:	
Dimensions	48 x 48 x 91.5 mm (W x H x D)
Mounting Type	Panel/Flush
Weight (Packed)	160gms
Panel Cut-out	45 x 45
Case Material	UL 94 V0 Plastic

EMI/EMC Compliance:

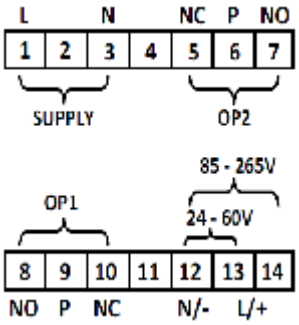
Test	**Compliance Standard**	**Edition**	**Level**
Harmonic Current Emission	IEC 61000-3-2	Ed. 3.0 (2005-11)	Class A
ESD Immunity	IEC 61000-4-2	Ed. 1.2 (2001-04)	II
Radiated Susceptibility	IEC 61000-4-3	Ed. 3.0 (2006-02)	III
Electrical Fast Transient (Power Port)	IEC 61000-4-4	Ed. 2.0 (2004-07)	IV
Electrical Fast Transient (Signal Port)	IEC 61000-4-4	Ed. 2.0 (2004-07)	IV
Surge Immunity (Power Port)	IEC 61000-4-5	Ed. 2.0 (2005-11)	IV
Surge Immunity (Signal Port)	IEC 61000-4-5	Ed. 2.0 (2005-11)	IV
Conducted Susceptibility	IEC 61000-4-6	Ed. 2.2 (2006-05)	III
Voltage Dips (AC)	IEC 61000-4-11	Ed. 2.0 (2004-03)	I, II, IV & V
Voltage Dips (DC) for Signal	IEC 61000-4-29	Ed. 2.0 (2004-03)	I & II
Conducted Emission	CISPR 14-1	Ed. 5.0 (2005-11)	Class A
Radiated Emission	CISPR 14-1	Ed. 5.0 (2005-11)	Class A

Safety Compliance:			
Test Voltage (I/P & O/P)	IEC 60947-5-1	Ed. 3.0 (2003-11)	2 KV
Test Voltage (All Terminals & Enclosure)	IEC 60255-5-1	Ed. 3.0 (2003-12)	4 KV
Impulse Voltage (I/P & O/P)	IEC 60947-5-1	Ed. 3.0 (2003-11)	Level IV
Single Fault	IEC 61010-1	Ed. 2.0 (2001-02)	-----
Insulation Resistance	UL 508	Ed. 17 (1999-01)	> 50 KΩ
Leakage Current	UL 508	Ed. 17 (1999-01)	< 3.5 mA

Environmental Compliance:			
Cold Heat	IEC 60068-2-1	Ed. 6.0 (2007-03)	-----
Dry Heat	IEC 60068-2-2	Ed. 5.0 (2007-07)	-----
Vibration	IEC 60068-2-6	Ed. 7.0 (2007-12)	5g
Repetitive Shock	IEC 60068-2-27	Ed. 4.0 (2008-02)	40g, 6 ms
Non-Repetitive Shock	IEC 60068-2-27	Ed. 4.0 (2008-02)	30g, 15 ms

Connections:

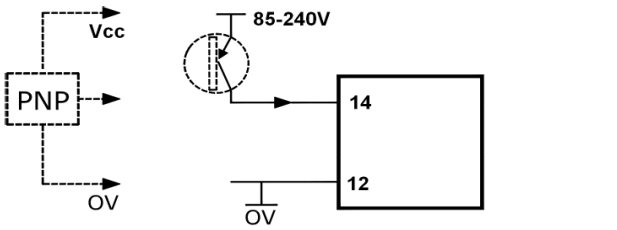
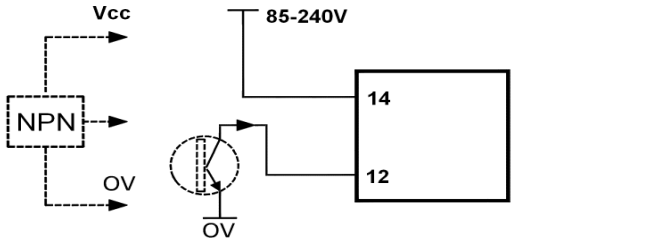
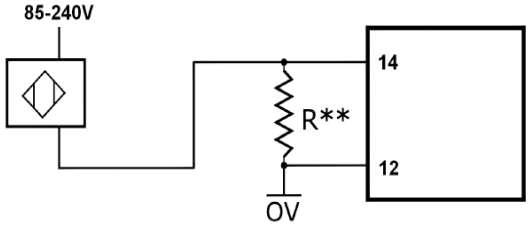
Connection Diagram:



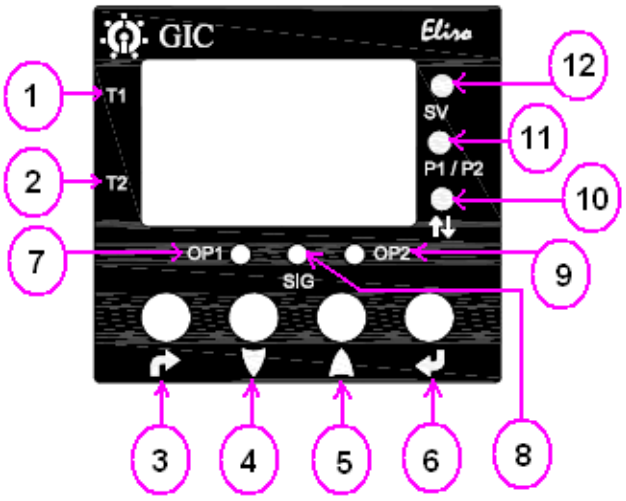
Signal Input:

While using Proximity or some other sensor problem of false signal detection may observed due to Leakage current of the Sensor in such a case bleeder resistor needs to be added between signal I/P Terminals. Refer following connections & calculations to use sensors.

Proximity Sensor connection : Table 1

1. For Signal sensing circuit with proximity sensor :		
Type	Connection Diagram	Remark / Note
PNP 3 Wire & 2 wire proximity switch	 PNP Transistor OR 3- Wire PNP proximity detector*	*Connection diagram for detector leakage current < 0.1mA
NPN 3 Wire & 2 wire proximity switch	 NPN Transistor OR 3- Wire NPN proximity detector*	*Connection diagram for detector leakage current < 0.1mA
PNP 2 wire Proximity switch	 2 Wire proximity detector	**Connection diagram for detector leakage current > 0.1mA Formula for calculating the R value : R (ohm)= 65V / (sensor leakage current) Rpower (W) > 2 (Vi/p)^2 / R

Nomenclature for Front Facia:



1. T1: Current Time (Process Time) of Timer 1
2. T2: Current Time (Process Time) of Timer 2
3. 'Esc' Key for Operation
4. 'Scroll Down' Key for Operation
5. 'Scroll Up' Key for Operation
6. 'Enter' Key for Operation
7. OP1: Relay Output 1 indication
8. SIG: Signal Input indication
9. OP2: Relay Output 2 indication
10. Down/Up counting indication
    LED ON: Up (Elapsed Time)Counting
    LED OFF: Down (Remaining Time) Counting
11. P1/P2: Running profile indication
    LED ON: Profile 'P1' running
    LED OFF: Profile 'P2' running
12. SV: Set Time of Timer 1 & Timer 2

Important Notes:

1. When only Timer 1 is selected by user then T1 shows Current Time (Running Value) of Timer 1 & T2 shows Set Value of Timer 1.
2. When both Timer 1 & Timer 2 are selected by user then T1 shows Current Time (Running Value) of Timer 1 & T2 shows Current Time (Running Value) of Timer 2. If user press the UP key during Run time then Set values of both Timer 1 & Timer 2 will be shown on respective Displays.

Meaning of notations of first digit of Seven segment display during run time:

'ח' - Time running on device is in Second scale.
'ב' - Time running on device is in Minutes scale.
'ב' - Time running on device is in Hours scale.
'ר'- Time running on device is in Hours: Minutes scale.
'U' - Time running on device is in Minutes: Seconds scale.
'ם' - Time running on device is in Days scale.

Key Conventions:

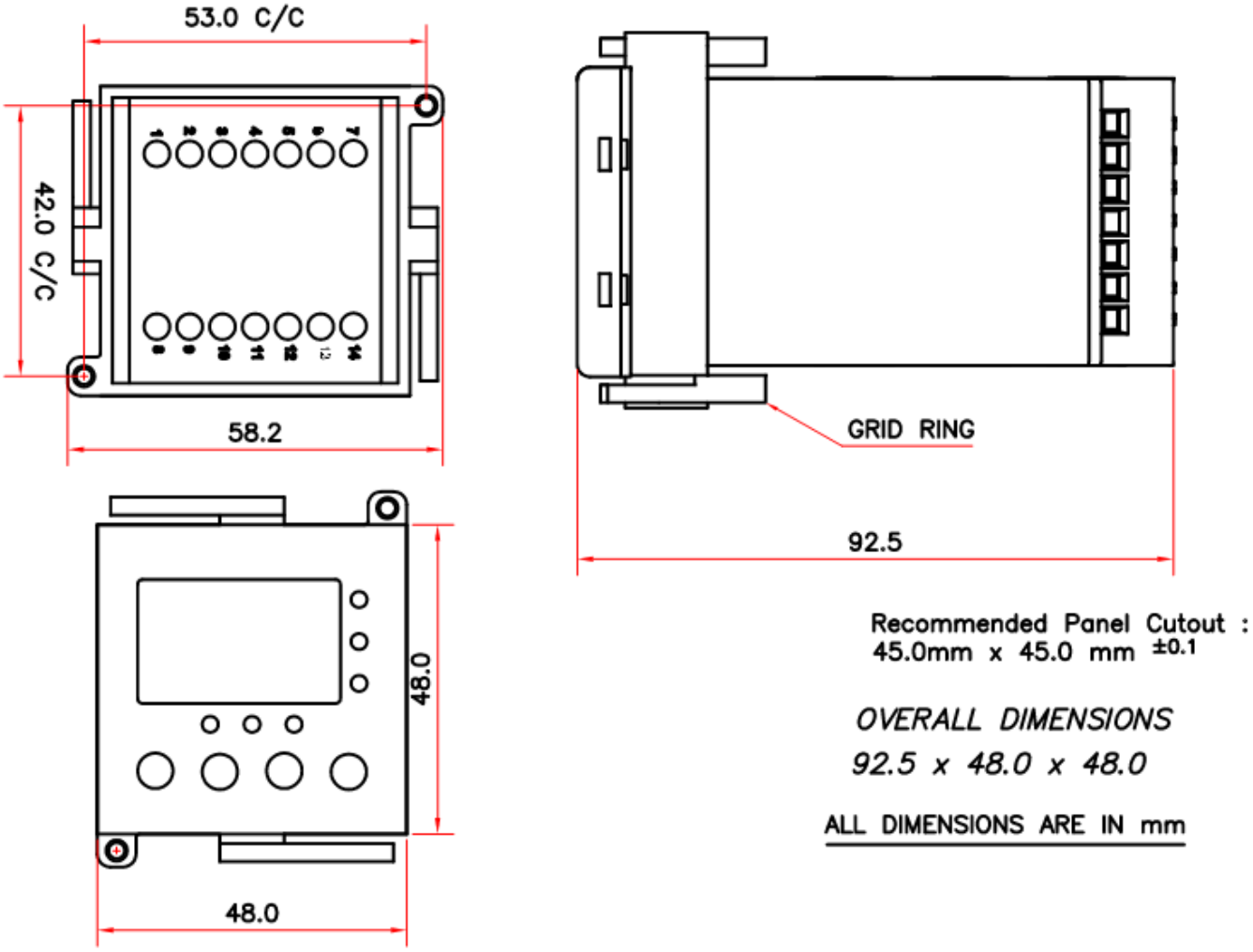
1. 'Enter' Key Long Presses at power on – Program mode (with version display).
2. 'Enter' key short press in Program mode – Value/parameter entered & Move to next menu.
3. 'Enter' short press during Run mode – Edit Preset Time during Timer Operation
4. 'ESC' key long press during Run mode – Edit mode.
5. 'ESC' key short press in Program mode – Return to previous menu.
6. 'ESC' key short press in online edit - Will come out of online edit
7. 'ESC + Enter' long pressed run mode - lock / unlock.
8. 'ESC + Up' key long press in run mode - Getting profile/Profile Recall & Run.
9. 'Down' key long press in Run mode - Resets timer1.
10. 'Down' Key short press in Online Program mode - Blinking preset digit gets decremented.
11. 'UP' key long press in run mode - Resets timer 2 (if both timers are selected).
12. 'UP' key short press during run mode – If both timers are configured then display will show Set value of both the timers for 2 sec. When only one timer is configured then it will have no effect on the screen
13. 'Up/down' short press in Program mode – Increment / Decrement the value or parameter.
14. 'Down + UP' key long press in run mode when both timers are selected – Reset the timer1 and timer2 both.

Timeout:

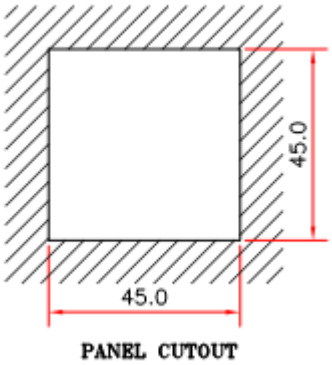
1. If user is in Program mode or in Profile selection, & there is no any single key press event for 2 minute, then device will RUN with previous settings (Restart the Operation).
2. If user is in Edit Preset Time during Timer Operation & there is no any single key press event for 2 minute, then device will RUN with previous settings (Resume the Operation).

Dimensions:

Mechanical Dimensions:



Panel Cut-out Dimensions:



Note:

1. The mounting panel thickness should be 1 to 5 mm.
2. To allow easier operation, it is recommended that Adapters be mounted so that the gap between sides with hooks is at least 15 mm (i.e. with the panel cutouts separated by at least 60 mm).
3. It is possible to horizontally mount Timers side by side. Attach the Flush Mounting Adapters so that the surfaces without hooks are on the sides of the Timers (However, if Timers are mounted side by side, water resistance will be lost).

Abbreviations used on seven segment Display during Programming & Operation:

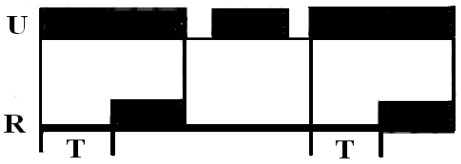
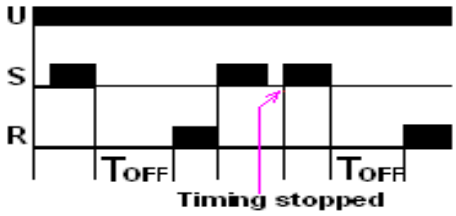
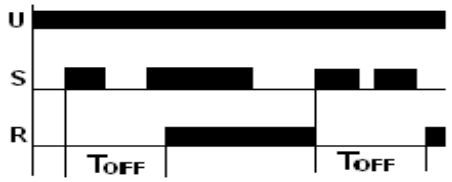
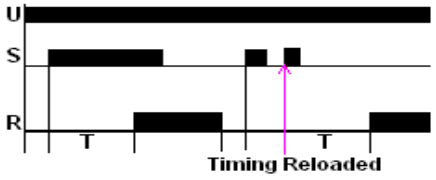
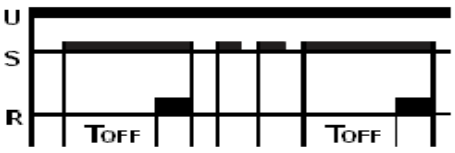
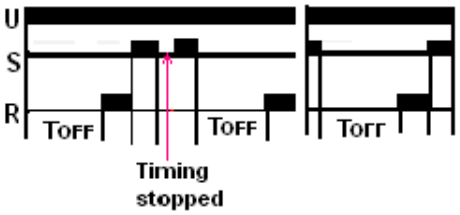
Abbreviation	Meaning
cnFg	Device Configuration - Timer1 or Timer1 & 2 both.
tim 1 or tim2	Timer 1 or Timer 2 - Selection/Setting/Configuration.
both	Both Timer 1 & Timer 2 Selection
dEFt	Default Mode Configuration/Selection - User can select different default Modes for Timer1 & Timer2. There are 33 inbuilt default modes.
cUSt	Customized Mode Configuration/Selection - User can built their own Mode/Profile as per their requirement.
irLS	Initial relay status before signal status detection.
rLYS	Relay Status after Power ON (For Non-signal based modes)
t mE or cont	Do you want to keep Relay ON/OFF for specific timing or Do you want to keep Relay ON/OFF continuously
S ig or nS ig	Signal Based Mode selection or Non-signal Based Mode Selection in customized Mode
SP or SA	Action to be taken on which signal transition – Signal Present/Signal Absent
rSP or rSA	Relay Status after transition of signal Present/Absent.
OFF or on	Relay OFF/ON selection.
OnoF or oFon	Relay ON-OFF/OFF-ON cycle selection.
trAn or LEvL	Action to be taken on signal transition or level.
CYcn	Number of cycles ON/OFF Cycles i.e. user can select the two cycles with different ON time & OFF time
CYcr	Cycle Repeat. Do you want repeat cycle? Select 'YES' or 'NO'.
dUrn	During on time or off time or both for cyclic mode.
tdt 1	Do you want to take Action if the transition of signal occurs during timing before 'Action after time Completion' or relay state changeover. Here user can define the action to be taken if Transition of the signal occurs during Run Time. Action can be taken on the SP or SA, user can take actions like 'Break'; 'Pause'; 'Reload'; 'Return' & 'Relay OFF'.
brEA	Break: If Break condition is selected in trdt1: ATT action is started, there are four ATT actions Reload, Relay Off, New time and No. Action will be taken after signal changes its state. If break is applied no ATT is selected then toggle relay1 status and stop the cycle.
PAUS	Pause -Pause the timing on selected signal Present /Absent action.
rLod	Reload the timing. When this action is selected the relay1 is kept ON for the time same as previous one.
rEt	Stops the timing/mode operation without changing output state and wait for signal state to start the mode/timing operation once again.
rLoF	Stop the timing/mode operation with changing output state to OFF state and wait for signal state to start mode/timing operation once again.
Att	Action after time Completion ,on opposite transition of signal i.e. if cycles starts on signal present then action for ATT is at signal absent.
tdt2	Transition of the signal during Run Timing after 'Action after time Completion'. Here user can define the action to be taken if Transition of the signal occurs during Run Time. Action can be taken on the SP or SA, user can take actions like 'No'; 'Reload'; 'New Time' & 'Relay OFF'.
rPtS	Repeat signal sensing or Cycle, after 1'st cycle completion.
coUn	Counting: Time counting method selection.
UP	Up or Elapsed counting selection.
do'n	Down (Remaining) counting selection.
PrFL	Profile selection

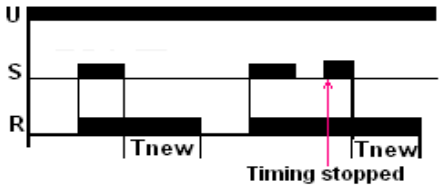
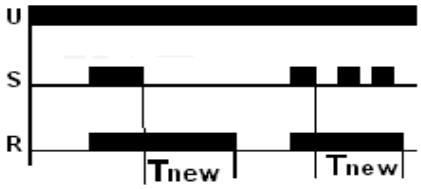
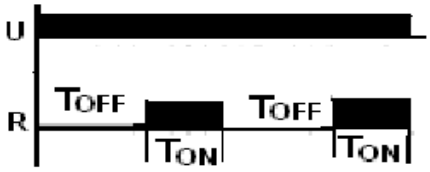
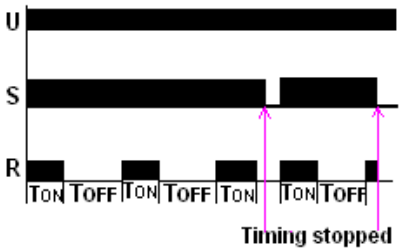
Mode Functionality:

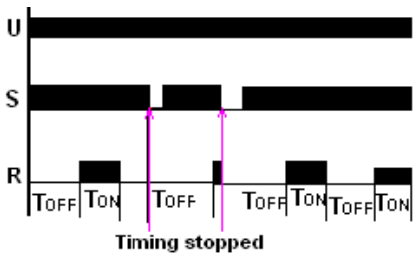
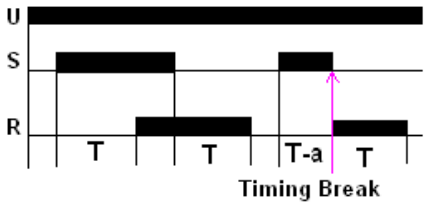
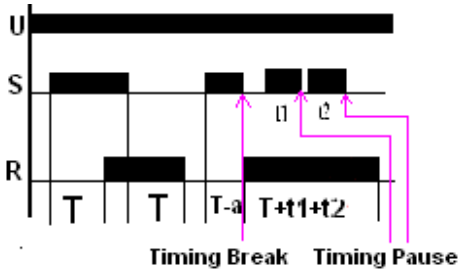
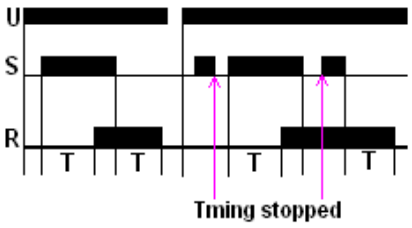
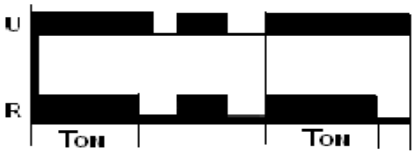
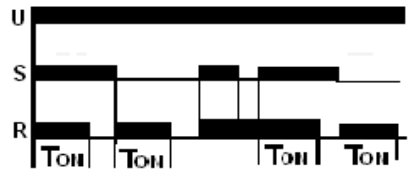
Timing Charts & Mode Description for Default Modes:

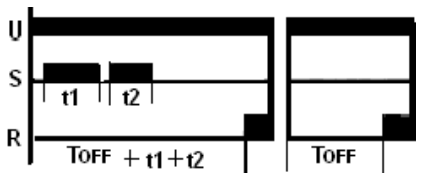
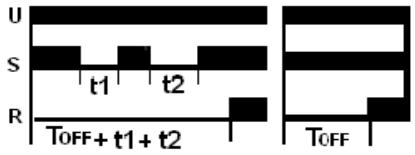
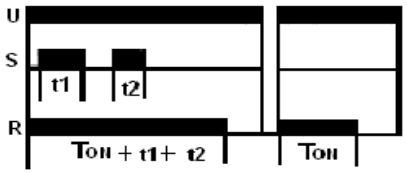
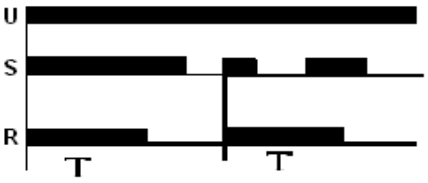
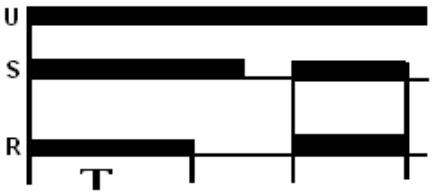
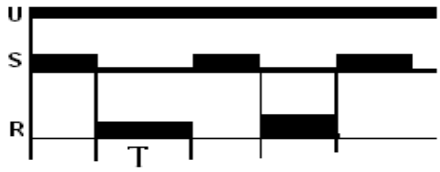
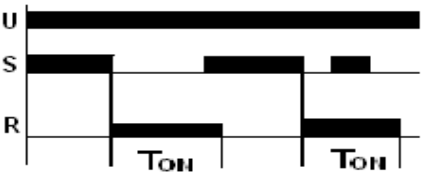
Note:

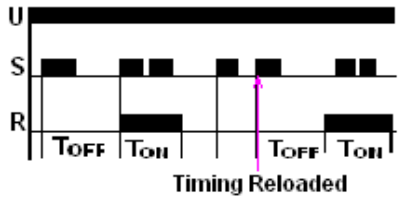
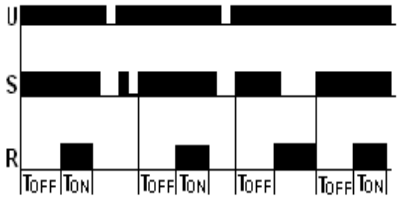
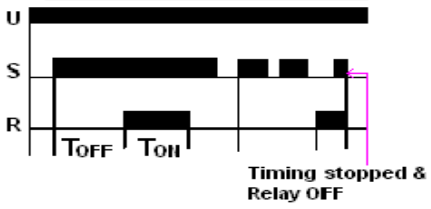
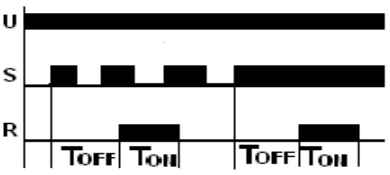
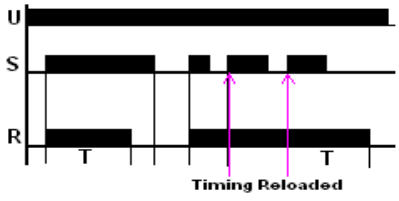
1. 'U' in timing diagram indicates Input Supply voltage.
2. 'S' in timing diagram indicates Input signal voltage.
3. 'R' in timing diagram indicates output relay status.

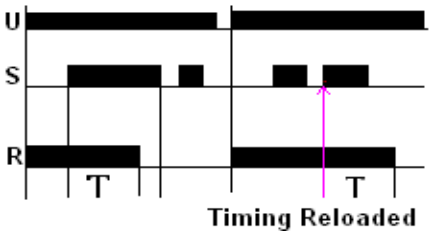
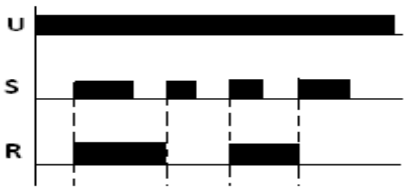
Sr. No.	Operating Mode	Mode Description	Timing Chart
1	**MODE - 00: ON DELAY**	On application of the supply voltage, the preset time duration (T) starts. On completion of the preset time, the output is switched ON & remains ON till the supply voltage is present.	
2	**MODE-01: ON DELAY CONSTANT SUPPLY TYPE 2**	Timing will commence when the supply is present and input signal is not applied. After the time period has elapsed, output is switched ON. If signal is applied then the timing period stops. Timing will restart only when signal is removed. Therefore there are two methods this timer can be controlled, either by application or removal of signal input and with the interruption of the supply voltage to the timer with signal removal.	
3	**MODE-02: ON DELAY CONSTANT SUPPLY TYPE 3**	A permanent supply is required. The timing period starts when the signal is applied and will continue irrespective of any further changes to signal input. After the time period has elapsed output is switched ON. Signal change has no effect during timing period. To reset the timer, signal must be removed and then applied.	
4	**MODE-03: ON DELAY (CONTROL SWITCH RESETTABLE)**	When the supply is connected and signal is applied, the timing function starts. If signal is removed and applied during the preset timing then timing is restarted and output stays OFF. After preset time has elapsed the output is ON.	
5	**MODE – 04: SIGNAL ON DELAY**	Time commences as supply and signal is present. When input signal is removed, the timing stopped. The output is switched ON at the end of the preset time duration (TOFF). When output is ON if signal is removed then output is switched OFF.	
6	**MODE - 05: INVERTED SIGNAL ON DELAY**	On application of supply voltage, if signal is absent then the preset time duration (TOFF) starts. On preset time completion, the output is switched ON. If signal is applied during timing period, then timing stops and timing restarts when signal is removed.	

7	**MODE -06:** **INVERTED SIGNAL ON DELAY TYPE 2**	When the supply is applied and input signal is removed, the preset 'OFF' time duration (TOFF) starts. After the time period has elapsed, the output is switched ON. Signal change has no effect during timing period. Output stays ON until supply voltage has been interrupted.	
8	**MODE – 07:** **SIGNAL OFF DELAY**	On application of supply voltage & input signal, the output is switched ON. When the signal is removed the preset time duration commences & the output is switched OFF at the end of the time duration. If signal is applied during timing period, then timing stops and timing restarts when signal is removed.	
9	**MODE-08:** **OFF DELAY CONST. SUPPLYTYPE 2**	A permanent supply is required. When the input signal is applied the output is switched ON immediately. When input signal is removed the timing period starts. After the time period has elapsed output is switched OFF. Once the timing period has started further actions of input signal will have no effect. However once the timing cycle has been completed the process may be started again applying input signal. While the timer is executing the only way to reset the timer is to interrupt the supply.	
10	**MODE - 09:** **CYCLIC ON/OFF**	On application of supply voltage, the output is initially switched ON for the preset 'ON' time duration (TON) after which it is switched OFF for the preset 'OFF' time duration (TOFF). This Cycle repeats and continues till supply is present.	
11	**MODE - 10:** **CYCLIC OFF/ON**	On application of supply voltage, the output is initially switched OFF for the preset 'OFF' time duration (TOFF), after which it is switched ON for the preset 'ON' time duration (TON). This Cycle repeats and continues till supply is present.	
12	**MODE-11:** **ASYMMETRIC CYCLE PULSE START**	A permanent supply is required. The timer function is triggered by the input signal. When input signal applied the output is switched ON while the first preset time period (TON) elapses. Once this time period (TON) has elapsed output is switched OFF for the second preset time (TOFF) period. Once this second time period (TOFF) had elapsed then output switched ON and the cycle will start from the beginning again. If input signal is removed during timing (TON or TOFF) the cycle will stop and output is switched OFF, cycle will start with output ON state when the input signal applied again.	

13	**MODE-12: ASYMMETERIC RECYCLER PULSE START TYPE 2**	A permanent supply is required. The timer function is triggered by input signal. When input signal is applied the output is switched OFF while the first preset time period (TOFF) elapses. Once this time period has elapsed output is switched ON for the second preset time period (TON). Once this second time period (TON) had elapsed then output is switched OFF and the cycle will start from the beginning again. If input signal is removed during timing (TON or TOFF) the cycle will stop and output is switched OFF, cycle will start with output OFF state when the input signal applied again.	
14	**MODE – 13: SIGNAL ON OFF DELAY**	On application of signal the preset time (T) starts. After this preset time has elapsed, output is switched ON. During this timing, if signal is removed then output is switched ON immediately and OFF delay is started. Once this time period has elapsed the output is switched OFF. During this OFF delay if signal is reapplied the output switched OFF immediately and ON Delay restarted.	
15	**MODE –14: SIGNAL ON OFF DELAY TYPE 2**	On application of signal the preset time (T) starts. After this preset time has elapsed, output is switched ON. During this timing, if signal is removed then output is switched ON immediately and preset timing is restarted. Removing the signal during this timing suspends timing but does not reset the time sequence. Timing will resume immediately when signal is applied. Therefore, total time taken before the delayed contact changes state is the preset time plus any time that the signal is removed. Once this time period has elapsed the output is switched OFF.	
16	**MODE – 15: SIGNAL OFF/ON (NEW)**	On application of input signal, the preset delay time period (T) starts. During this timing if signal is removed then timing is stopped and timing will be restarted when signal applied again. After this time period has elapsed output is switched ON. On removal of input signal, the preset time period starts again & the output is switched OFF when the preset time duration is complete. Output stays OFF until supply voltage has been interrupted.	
17	**MODE - 16: IMPULSE ON ENERGIZING**	On application of supply voltage, the output is instantly switched ON for the preset time duration (TON) after it is switched OFF.	
18	**MODE - 17: IMPULSE ON/OFF**	On application or removal of input signal, the output is switched ON & the preset time duration (TON) starts. On completion of the time duration the output is switched OFF. During timing period, changing the state of the input signal dose not affects output but resets time.	

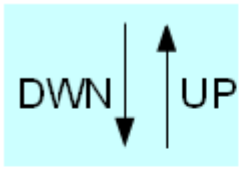
19	**MODE – 18: ACCUMULATIVE DELAY ON SIGNAL**	On application of supply voltage, the preset timing duration commences. When input signal is applied, the timing pauses & resumes only when the input signal is removed. The output is switched ON at the end of the preset time duration (TOFF).	
20	**MODE - 19: ACCUMULATIVE DELAY ON INVERTED SIGNAL**	Time commences as supply and signal is present. When input signal is removed, the timing pauses & resumes only when the input signal is applied. The output is switched ON at the end of the preset time duration.	
21	**MODE - 20: ACCUMULATIVE IMPULSE ON SIGNAL**	On application of supply voltage, the output is switch ON & the preset timing duration commences. When input signal is applied, the timing pauses & resumes only when the input signal is removed. The output is switched OFF at the end of the preset duration (TON).	
22	**MODE - 21: LEADING EDGE IMPULSE**	On application of supply voltage & input signal, the output is switched ON for preset time. After completion of preset time period, output is switched OFF. If the input signal is applied or removed during preset timing period, the output and timing remains unaffected.	
23	**MODE - 22: LEADING EDGE IMPULSE 2**	On application of the input signal the output is immediately switched ON. The output remains ON for the preset time duration (T) after which it is switched OFF. If the input signal is removed during the pre-set time, the output immediately switched OFF.	
24	**MODE - 23: TRAILING EDGE IMPULSE**	**MODE - 23: TRAILING EDGE IMPULSE** When the supply voltage is applied and input signal is removed, the output is switched ON for the preset time duration (T).After completion of preset time period, output is switched OFF. If I/p signal is applied during the preset timing period then output is switched OFF & timing stops.	
25	**MODE - 24: TRAILING EDGE IMPULSE 2**	When the input signal to the timer is removed, the output is immediately switched ON for the preset time duration (TON) after which it is switched OFF. If the input signal is applied during the pre-set time, the output remains unaffected.	

26	**MODE - 25: DELAYED IMPULSE**	On application of supply and input signal, the preset 'OFF' time duration (TOFF) starts. The output is switched ON at the end of preset 'OFF' time duration. Then the preset 'ON' time starts irrespective of the signal state & ON till the completion of ' TON'. During the output OFF period if signal is applied then timing is restarted, but output is unaffected. The signal change has no effect during time period TON.	
27	**MODE-26: DELAYED IMPULSE TYPE 2**	A permanent supply is required. When signal is applied the output will remain OFF while the first preset time period (TOFF) elapses. Once this time period has elapsed the output is switched ON for the second preset time period (TON). Once this second time period (TON) had elapsed then output is switched OFF and cycle stops. Output stays OFF until supply voltage has been interrupted. During timing period (TON or TOFF) if signal is removed then output is switched OFF and the cycle stops, cycle will start with output OFF state when the input signal applied again.	
28	**MODE-27: DELAYED PULSE (CONSTANT SUPPLY) POWER BASED**	The timing period (TOFF) starts when the supply is applied to the timer. After the preset has elapsed output is switched ON for the preset pulse (TON) duration. To reset the timer the supply has to be interrupted. If this interruption occurs during the pulsed output (TON) then the output is switched OFF and the timer will reset.	
29	**MODE-28: DELAYED PULSE (REMOTE TRIG.)**	The timing period (TOFF) will start when input signal is applied with the supply connected. After preset time (TOFF) has elapsed the output is switched ON for the per-selected pulse (TON) duration. To reset the timer either input signal needs to be removed or supply has to interrupt. If this action occurs during the pulsed output cycle (TON) then output is switched OFF and the timer will reset.	
30	**MODE-29: DELAYED PULSE (CONST. SUPPLY TYPE 1)**	Supply to the unit must be continuous. On application of input signal the time period 'TOFF' starts to run. On completion of 'TOFF', the relay output is switched ON immediately and the time period 'TON' starts to run. On completion of 'TON' the output is switched OFF. The input signal has no effect until' TOFF' + ' TON' have completely expired.	
31	**MODE-30: ON PULSE (CONTROL SWITCH RESETTABLE)/ WATCH DOG TYPE**	When the supply is connected and signal is applied, output is switched ON and the timing function starts. If signal is removed and applied during the preset timing then timing is restarted and output stays ON. After preset time(TON) has elapsed the output is switched OFF	

32	**MODE – 31:** **ON PULSE (SUPPLY RESET)**	On application of supply voltage the output is switched ON. The first pulse of input signal starts the preset time period. Receiving pulses during the time period extends it and output stays ON. Receiving no signal pulses during the time period completes it and output is switched OFF. Output stays OFF until supply voltage has been interrupted.	
33	**MODE – 32: Leading Edge Bi-stable or Step Relay**	After every signal, the output contact changes their states, alternately switching from open to close & vice versa.	

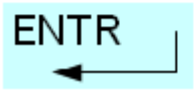
Operating Procedure:

User can use the Default Modes (33 Modes) or can built own modes as per their requirement. Following are the Operating Procedures for Default & Customized modes.



These Keys are used to scroll the submenu options of the main menu & to increament the time digit & mode number

Go to the Previous Menu



Go to the Next Menu

Every text box indicates as follows

Main menu caption

Sub menu caption

Press ESC key >3 sec After power ON to start editing

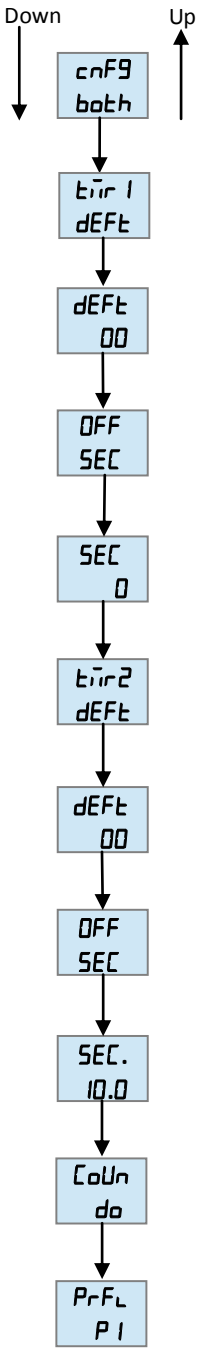
OR

Apply power and Hold ENTR key >3 sec to start editing

MODE NO. 00: ON DELAY

On application of the supply voltage, the preset time duration (T) starts. On completion of the preset time, the output is switched ON & remains on till the supply voltage is present.

Select the menu as given below to configure the Timer1 for ON Delay (Default)



Device configuration selection : Select Both (Both Timers will get configure)

Timer 1 Mode Selection – Select Default Mode

Select Default Mode - 00

Select the Time Scale for which O/P should remain OFF. Here selected in Sec as an example

Select the Time for which O/P should remain OFF. Here selected 10 Sec as an example

Timer 2 Mode Selection – Select Default Mode

Select Default Mode - 00

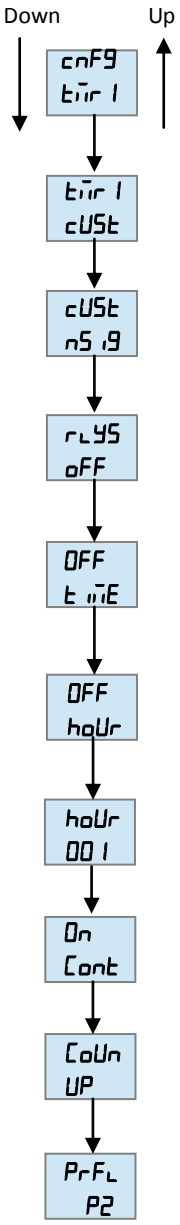
Select the Time Scale for which O/P should remain OFF. Here selected in Sec . as an example

Select the Time for which O/P should remain OFF. Here selected 10.0 Sec as an example

Time Counting Mode Up or Down
Here Down Counting selected as an example

Save these settings in Profile P1 or P2
Here P1 selected as an example

Select the menu as given below to configure the Timer1 for ON Delay (Customized)



Device configuration selection : Select Timer1 (Timer1 will get configure)

Timer 1 Mode Selection – Select Customized Mode

Select Customized Mode – Non Signal Based

Relay Status after Power ON – Select Relay OFF

Do you want O/P OFF for Specific time duration or continuously – Select for specific time

Select the Time Scale for which O/P should remain OFF. Here selected in Hour as an example

Select the Time for which O/P should remain OFF. Here selected 001 as an example

Do you want O/P ON for Specific time duration or continuously – Select Continuosly

Time Counting Mode Up or Down
Here Up Counting selected as an example

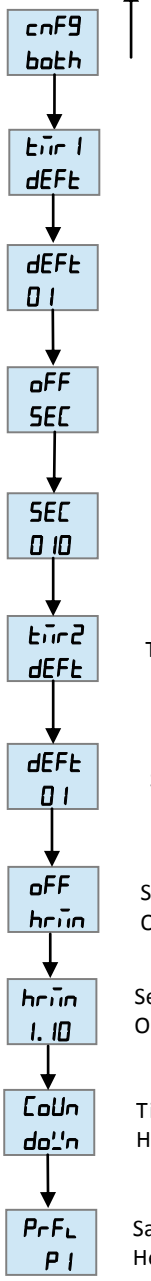
Save these settings in Profile P1 or P2
Here P2 selected as an example

MODE-01: ON DELAY CONSTANT SUPPLY TYPE 2

Timing will commence when the supply is present and input signal is not applied. After the time period has elapsed, output is switched ON. If signal is applied then the timing period stops. Timing will restart only when signal is removed. Therefore there are two methods this timer can be controlled, either by application or removal of signal input and with the interruption of the supply voltage to the timer with signal removal.

Select the menu as given below to configure the Timer1 for **ON DELAY CONSTANT SUPPLY TYPE 2** (Default)

Down Up



Device configuration selection : Select Both (Both Timers will get configure)

Timer 1 Mode Selection – Select Default Mode

Select Default Mode - 01

Select the Time Scale for which O/P should remain OFF. Here selected in Second as an example

Select the Time for which O/P should remain OFF. Here selected 10 Sec as an example

Timer 2 Mode Selection – Select Default Mode

Select Default Mode - 01

Select the Time Scale for which O/P should remain OFF. Here selected in Hour : Minute as an example

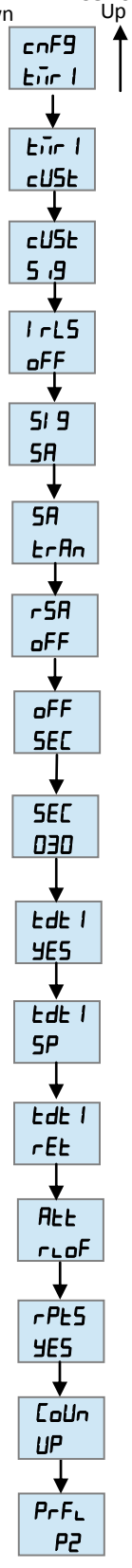
Select the Time for which O/P should remain OFF. Here selected 1 Hr : 10 Min as an example

Time Counting Mode Up or Down
Here Down Counting selected as an example

Save these settings in Profile P1 or P2
Here P1 selected as an example

Select the menu as given below to configure the Timer1 for **ON DELAY CONSTANT SUPPLY TYPE 22** (Customized)

Down Up



Device configuration selection : Select Timer1 (Timer1 will get configure)

Timer 1 Mode Selection – Select Customized Mode

Select Customized Mode – Signal Based

Initial Relay Status before signal status detection – Select OFF

On which signal condition do you want to take Action? Select Signal Absent

Action to be taken on signal transition or level – select Transition

Status of O/P after signal absent detection– select OFF

Select the Time Scale for which O/P should remain OFF. Here selected in Second as an example

Select the Time for which O/P should remain OFF. Here selected 30 sec as an example

Do you want take action if signal transition occurs during timing? - Select Yes

On which signal condition do you want to take Action? Select Signal Present

What Action do you want to take if signal transition occurs during timing – Select Return

Select the action after above time completion on signal present transition – Select Relay OFF

Do you want to repeat this cycle after every signal transition - Select Yes

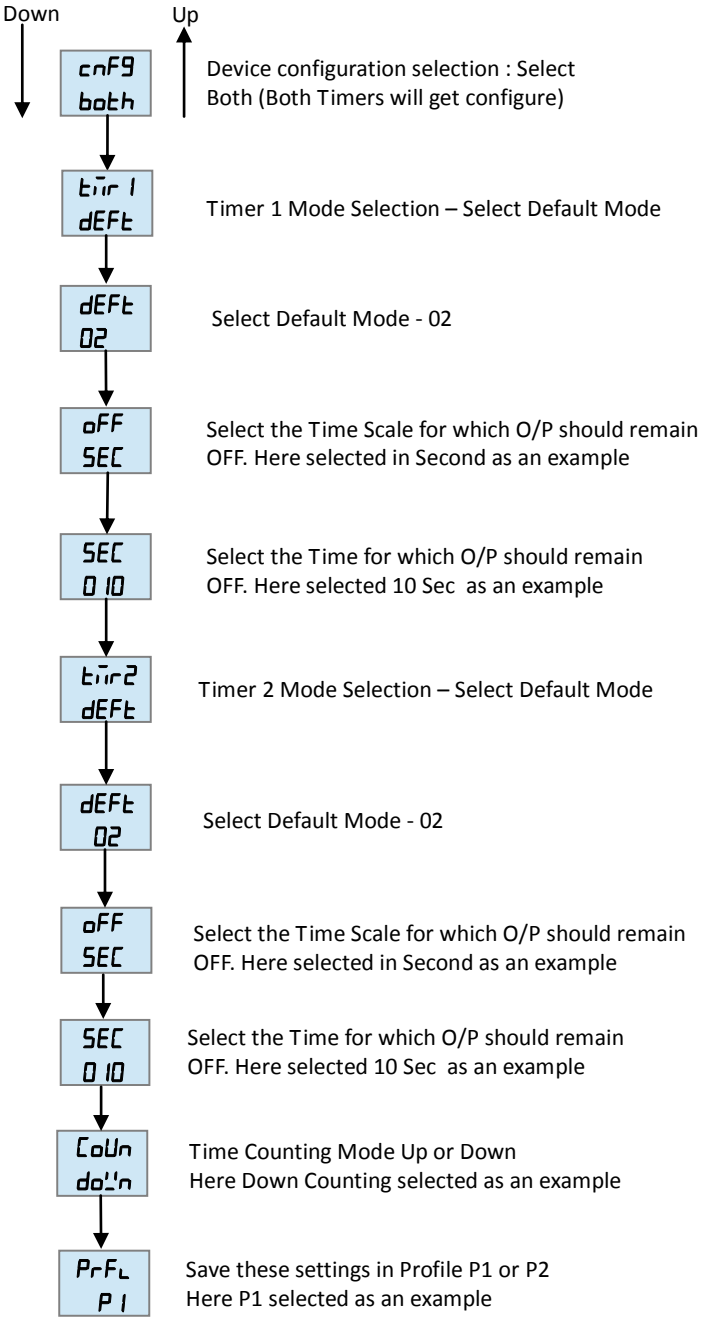
Time Counting Mode Up or Down
Here Up Counting selected as an example

Save these settings in Profile P1 or P2
Here P2 selected as an example

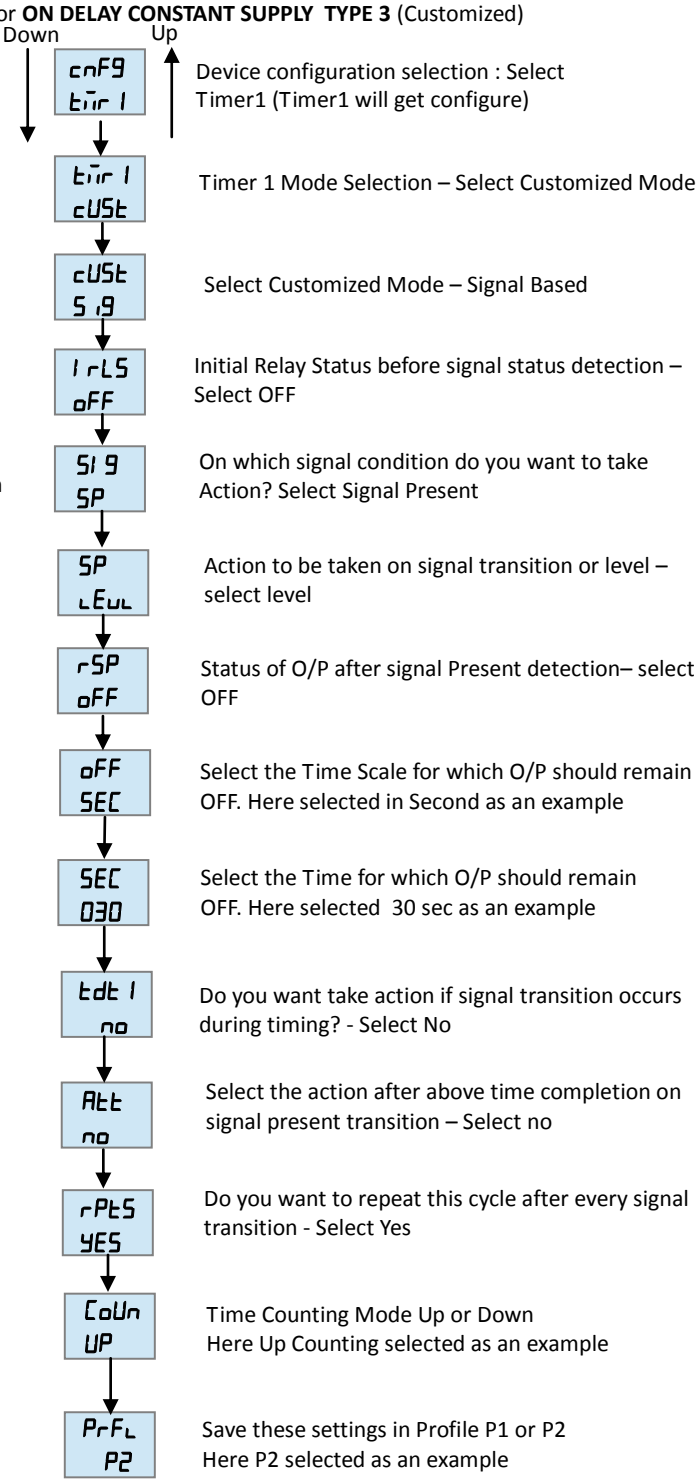
MODE-02: ON DELAY CONSTANT SUPPLY TYPE 3

A permanent supply is required. The timing period starts when the signal is applied and will continue irrespective of any further changes to signal input. After the time period has elapsed output is switched ON. Signal change has no effect during timing period. To reset the timer, signal must be removed and then applied.

Select the menu as given below to configure the Timer1 for **ON DELAY CONSTANT SUPPLY TYPE 3** (Default)

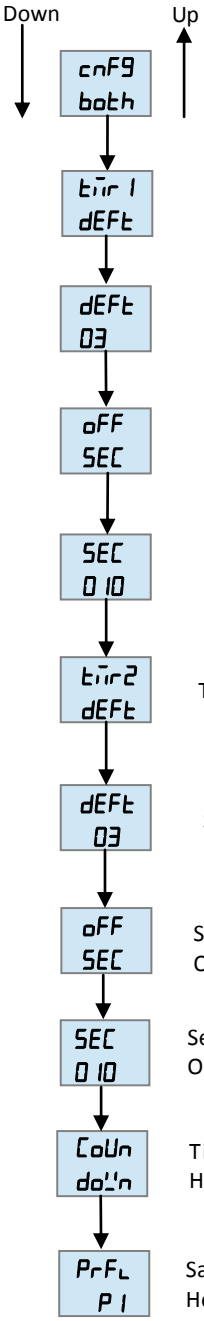


Select the menu as given below to configure the Timer1 for **ON DELAY CONSTANT SUPPLY TYPE 3** (Customized)



MODE-03: ON DELAY (CONTROL SWITCH RESETTABLE)
When the supply is connected and signal is applied, the timing function starts. If signal is removed and applied during the preset timing then timing is restarted and output stays OFF. After preset time has elapsed the output is ON.

Select the menu as given below to configure the Timer1 for **ON DELAY -** CONTROL SWITCH RESETTABLE (Default)



Device configuration selection : Select Both (Both Timers will get configure)

Timer 1 Mode Selection – Select Default Mode

Select Default Mode - 03

Select the Time Scale for which O/P should remain OFF. Here selected in Second as an example

Select the Time for which O/P should remain OFF. Here selected 10 Sec as an example

Timer 2 Mode Selection – Select Default Mode

Select Default Mode - 03

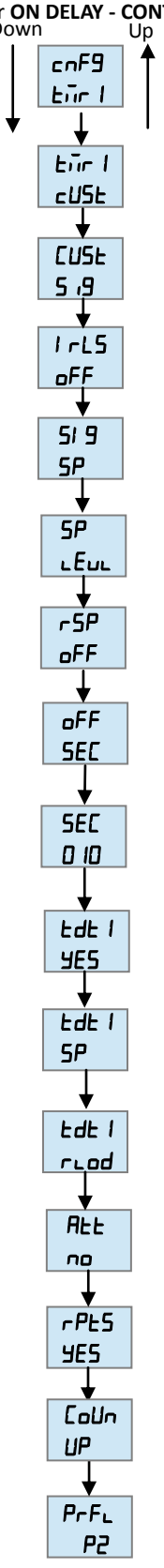
Select the Time Scale for which O/P should remain OFF. Here selected in Hour : Minute as an example

Select the Time for which O/P should remain OFF. Here selected 10 Second as an example

Time Counting Mode Up or Down
Here Down Counting selected as an example

Save these settings in Profile P1 or P2
Here P1 selected as an example

Select the menu as given below to configure the Timer1 for **ON DELAY - CONTROL SWITCH RESETTABLE** (Customized)



Device configuration selection : Select Timer1 (Timer1 will get configure)

Timer 1 Mode Selection – Select Customized Mode

Select Customized Mode – Signal Based

Relay Status after Power ON before signal detection – Select Relay OFF

On which signal condition do you want to take Action? Select Signal Present

Action to be taken on signal transition or level – select Level

Status of O/P after signal absent detection– select OFF

Select the Time Scale for which O/P should remain OFF. Here selected in Second as an example

Select the Time for which O/P should remain OFF. Here selected 10 sec as an example

Do you want take action if signal transition occurs during timing? - Select Yes

On which signal condition do you want to take Action? Select Signal Present

What Action do you want to take if signal transition occurs during timing – Select Reload

Select the action after above time completion on signal present transition – Select no

Do you want to repeat this cycle after every signal transition - Select Yes

Time Counting Mode Up or Down
Here Up Counting selected as an example

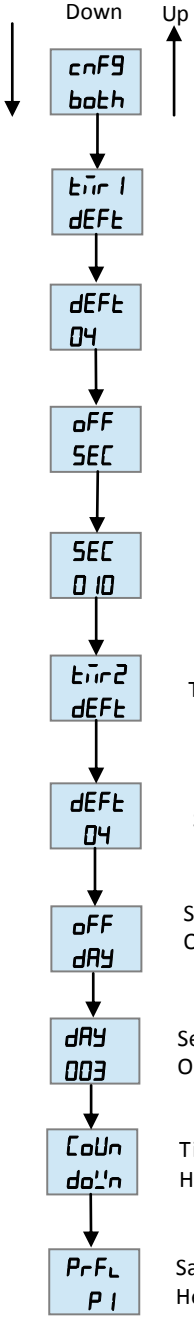
Save these settings in Profile P1 or P2
Here P2 selected as an example

MODE – 04: SIGNAL ON DELAY

Time commences as supply and signal is present. When input signal is removed, the timing stopped. The output is switched ON at the end of the preset time duration (TOFF). When output is ON if signal is removed then output is switched OFF.

Select the menu as given below to configure the Timer1 for **SIGNAL ON DELAY** (Default)

Down Up



Device configuration selection : Select Both (Both Timers will get configure)

Timer 1 Mode Selection – Select Default Mode

Select Default Mode - 04

Select the Time Scale for which O/P should remain OFF. Here selected in Second as an example

Select the Time for which O/P should remain OFF. Here selected 10 Sec as an example

Timer 2 Mode Selection – Select Default Mode

Select Default Mode - 04

Select the Time Scale for which O/P should remain OFF. Here selected in Days as an example

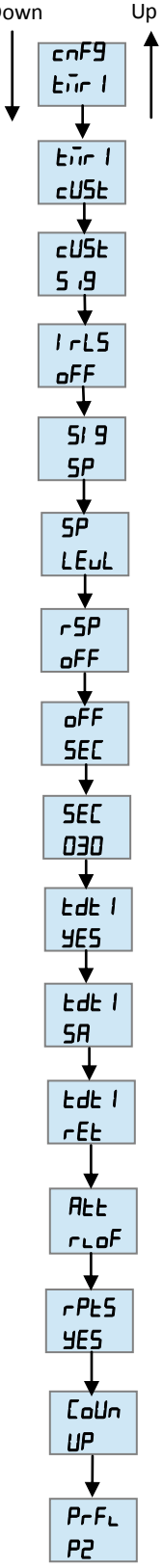
Select the Time for which O/P should remain OFF. Here selected 3 Day as an example

Time Counting Mode Up or Down
Here Down Counting selected as an example

Save these settings in Profile P1 or P2
Here P1 selected as an example

Select the menu as given below to configure the Timer1 for **SIGNAL ON DELAY** (Default)

Down Up



Device configuration selection : Select Timer1 (Timer1 will get configure)

Timer 1 Mode Selection – Select Customized Mode

Select Customized Mode – Signal Based

Initial Relay Status before signal status detection – Select OFF

On which signal condition do you want to take Action? Select Signal Present

Action to be taken on signal transition or level – select level

Status of O/P after signal absent detection– select OFF

Select the Time Scale for which O/P should remain OFF. Here selected in Second as an example

Select the Time for which O/P should remain OFF. Here selected 30 sec as an example

Do you want take action if signal transition occurs during timing? - Select Yes

On which signal condition do you want to take Action? Select Signal Absent

What Action do you want to take if signal transition occurs during timing – Select Return

Select the action after above time completion on signal present transition – Select Relay OFF

Do you want to repeat this cycle after every signal transition - Select Yes

Time Counting Mode Up or Down
Here Up Counting selected as an example

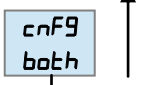
Save these settings in Profile P1 or P2
Here P2 selected as an example

MODE - 05: INVERTED SIGNAL ON DELAY

On application of supply voltage, if signal is absent then the preset time duration (TOFF) starts. On preset time completion, the output is switched ON. If signal is applied during timing period, then timing stops and timing restarts when signal is removed.

Select the menu as given below to configure the Timer1 for **INVERTED SIGNAL ON DELAY** (Default)

Down Up



Device configuration selection : Select Both (Both Timers will get configure)

Timer 1 Mode Selection – Select Default Mode

Select Default Mode - 05

Select the Time Scale for which O/P should remain OFF. Here selected in Second as an example

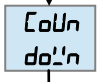
Select the Time for which O/P should remain OFF. Here selected 10 Sec as an example

Timer 2 Mode Selection – Select Default Mode

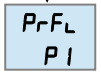
Select Default Mode - 08

Select the Time Scale for which O/P should remain OFF. Here selected in Hour : Minute as an example

Select the Time for which O/P should remain OFF. Here selected 1 Hr : 10 Min as an example



Time Counting Mode Up or Down
Here Down Counting selected as an example



Save these settings in Profile P1 or P2
Here P1 selected as an example

Select the menu as given below to configure the Timer1 for **INVERTED SIGNAL ON DELAY** (Customized)

Down Up

Device configuration selection : Select Timer1 (Timer 1 will get configure)

Timer 1 Mode Selection – Select Customized Mode

Select Customized Mode – Signal Based

Initial Relay Status before signal status detection – Select OFF

On which signal condition do you want to take Action? Select Signal Absent

Action to be taken on signal transition or level – select level

Status of O/P after signal absent detection– select OFF

Select the Time Scale for which O/P should remain OFF. Here selected in Second as an example

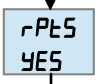
Select the Time for which O/P should remain OFF. Here selected 30 sec as an example

Do you want take action if signal transition occurs during timing? - Select Yes

On which signal condition do you want to take Action? Select Signal Present

What Action do you want to take if signal transition occurs during timing – Select Return

Select the action after above time completion on signal present transition – Select Relay OFF



Do you want to repeat this cycle after every signal transition - Select Yes

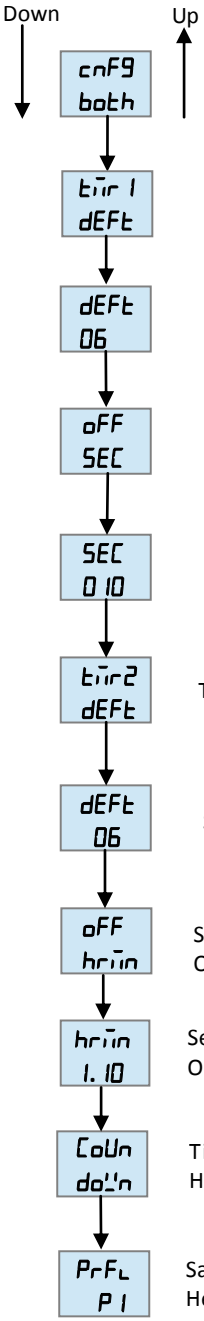
Time Counting Mode Up or Down
Here Up Counting selected as an example

Save these settings in Profile P1 or P2
Here P2 selected as an example

MODE -06: INVERTED SIGNAL DELAY TYPE 2

When the supply is applied and input signal is removed, the preset 'OFF' time duration (TOFF) starts. After the time period has elapsed, the output is switched ON. Signal change has no effect during timing period. Output stays ON until supply voltage has been interrupted.

Select the menu as given below to configure the Timer1 for **INVERTED SIGNAL DELAY TYPE 2** (Default)



Device configuration selection : Select Both (Both Timers will get configure)

Timer 1 Mode Selection – Select Default Mode

Select Default Mode - 06

Select the Time Scale for which O/P should remain OFF. Here selected in Second as an example

Select the Time for which O/P should remain OFF. Here selected 10 Sec as an example

Timer 2 Mode Selection – Select Default Mode

Select Default Mode - 06

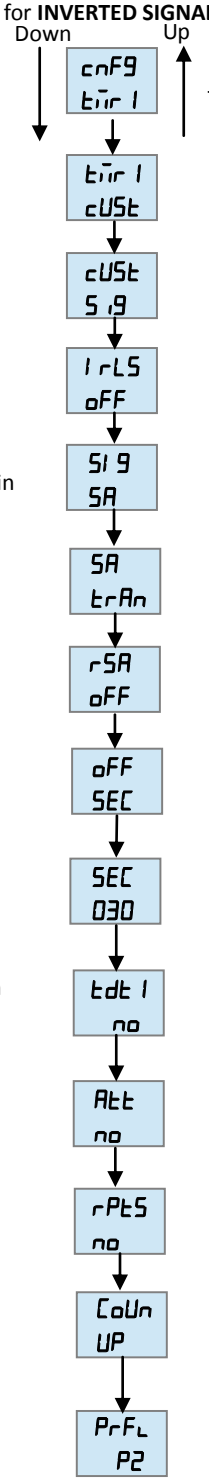
Select the Time Scale for which O/P should remain OFF. Here selected in Hour : Minute as an example

Select the Time for which O/P should remain OFF. Here selected 1 Hr : 10 Min as an example

Time Counting Mode Up or Down
Here Down Counting selected as an example

Save these settings in Profile P1 or P2
Here P1 selected as an example

Select the menu as given below to configure the Timer1 for **INVERTED SIGNAL DELAY TYPE 2** (Customized)



Device configuration selection : Select Timer1 (Timer1 will get configure)

Timer 1 Mode Selection – Select Customized Mode

Select Customized Mode – Signal Based

Initial Relay Status before signal status detection – Select OFF

On which signal condition do you want to take Action? Select Signal Absent

Action to be taken on signal transition or level – select Transition

Status of O/P after signal absent detection– select OFF

Select the Time Scale for which O/P should remain OFF. Here selected in Second as an example

Select the Time for which O/P should remain OFF. Here selected 30 sec as an example

Do you want take action if signal transition occurs during timing? - Select No

Select the action after above time completion on signal present transition – Select no

Do you want to repeat this cycle after every signal transition - Select No

Time Counting Mode Up or Down
Here Up Counting selected as an example

Save these settings in Profile P1 or P2
Here P2 selected as an example

MODE – 07: SIGNAL OFF DELAY

On application of supply voltage & input signal, the output is switched ON. When the signal is removed the preset time duration commences & the output is switched OFF at the end of the time duration. If signal is applied during timing period, then timing stops and timing restarts when signal is removed.

Select the menu as given below to configure the Timer1 for **SIGNAL OFF DELAY** (Default)

Down Up

cnF9 both	Device configuration selection : Select Both (Both Timers will get configure)
tim 1 dEFt	Timer 1 Mode Selection – Select Default Mode
dEFt 07	Select Default Mode - 07
nEUt SEC	Select the Time Scale for which O/P should remain ON. Here selected in Second as an example
SEC 0 10	Select the Time for which O/P should remain ON. Here selected 10 Sec as an example
tim2 dEFt	Timer 2 Mode Selection – Select Default Mode
dEFt 07	Select Default Mode - 07
nEUt hr:in	Select the Time Scale for which O/P should remain ON. Here selected in Hour : Minute as an example
hr:in 1. 10	Select the Time for which O/P should remain ON. Here selected 1 Hr : 10 Min as an example
CoUn do'In	Time Counting Mode Up or Down Here Down Counting selected as an example
PrFL P 1	Save these settings in Profile P1 or P2 Here P1 selected as an example

Select the menu as given below to configure the Timer1 for **SIGNAL OFF DELAY** (Customized)

Down Up

cnF9 tim 1	Device configuration selection : Select Timer1 (Timer1 will get configure)
tim 1 cUSt	Timer 1 Mode Selection – Select Customized Mode
cUSt SIG	Select Customized Mode – Signal Based
I rLS oFF	Initial Relay Status before signal status detection – Select OFF
SI G SP	On which signal condition do you want to take Action? Select Signal Present
SP LEuL	Action to be taken on signal transition or level – select level
rSP on	Status of O/P after signal Present detection– select ON
on cont	Do you want O/P ON for Specific time duration or continuously – Select for continuously
Att nE'Wt	Select the action after above time completion on signal present transition – Select New Time
nE'Wt SEC	Select the Time Scale for which O/P should remain ON. Here selected in Second as an example
SEC 030	Select the Time for which O/P should remain ON. Here selected 30 sec as an example
tdt2 YES	Do you want take action if signal transition occurs during timing after Relay changeover? - Select Yes
tdt2 SP	On which signal condition do you want to take Action? Select Signal Present
tdt2 rEt	What action do you want to take if the transition of signal present occurs after change in O/P state – Select Return
rPtS YES	Do you want to repeat this cycle after every signal transition - Select Yes
CoUn UP	Time Counting Mode Up or Down Here Up Counting selected as an example
PrFL P2	Save these settings in Profile P1 or P2 Here P2 selected as an example

MODE-08: OFF DELAY CONST. SUPPLY TYPE 2

A permanent supply is required. When the input signal is applied the output is switched ON immediately. When input signal is removed the timing period starts. After the time period has elapsed output is switched OFF. Once the timing period has started further actions of input signal will have no effect. However once the timing cycle has been completed the process may be started again applying input signal. While the timer is executing the only way to reset the timer is to interrupt the supply.

Select the menu as given below to configure the Timer1 for **OFF DELAY CONST. SUPPLY TYPE 2** (Default)

Down / Up

- cnF9 both — Device configuration selection : Select Both (Both Timers will get configure)
- tIr 1 dEFt — Timer 1 Mode Selection – Select Default Mode
- dEFt 08 — Select Default Mode - 08
- nE_t SEC — Select the Time Scale for which O/P should remain ON. Here selected in Second as an example
- SEC 0 10 — Select the Time for which O/P should remain ON. Here selected 10 Sec as an example
- tIr2 dEFt — Timer 2 Mode Selection – Select Default Mode
- dEFt 20 — Select Default Mode - 20
- nE_t SEC — Select the Time Scale for which O/P should remain ON. Here selected in Hour : Minute as an example
- SEC 0 10 — Select the Time for which O/P should remain ON. Here selected 10 Sec as an example
- CoUn do_n — Time Counting Mode Up or Down Here Down Counting selected as an example
- PrFL P1 — Save these settings in Profile P1 or P2 Here P1 selected as an example

Select the menu as given below to configure the Timer1 for **OFF DELAY CONST. SUPPLY TYPE 2** (Customized)

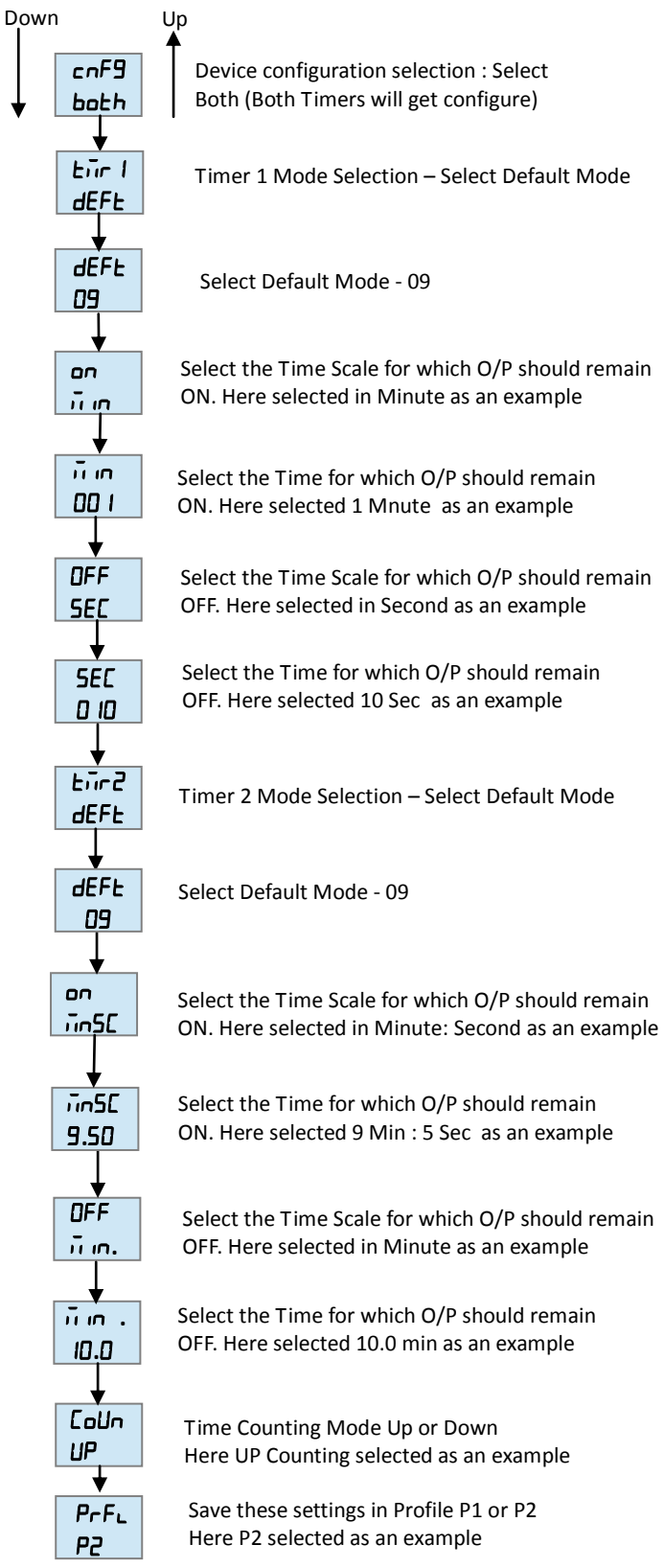
Down / Up

- cnF9 tIr 1 — Device configuration selection : Select Timer1 (Timer1 will get configure)
- tIr 1 CUSt — Timer 1 Mode Selection – Select Customized Mode
- CUSt SIG — Select Customized Mode – Signal Based
- InrLS oFF — Initial Relay Status before signal status detection – Select OFF
- SIG SP — On which signal condition do you want to take Action? Select Signal Present
- SP LEuL — Action to be taken on signal transition or level – select Level
- rSP on — Status of O/P after signal absent detection– select ON
- on cont — Do you want O/P ON for Specific time duration or continuously – Select for Specific Continuously
- Att nE_t — Select the action after above time completion on signal present transition – Select New Time
- nE_t SEC — Select the Time Scale for which O/P should remain ON. Here selected in Second as an example
- SEC 030 — Select the Time for which O/P should remain ON. Here selected 30 sec as an example
- tdt2 no — What Action do you want to take if signal transition occurs during timing after o/p relay changeover – Select No
- rPtS YES — Do you want to repeat this cycle after every signal transition - Select Yes
- CoUn UP — Time Counting Mode Up or Down Here Up Counting selected as an example
- PrFL P2 — Save these settings in Profile P1 or P2 Here P2 selected as an example

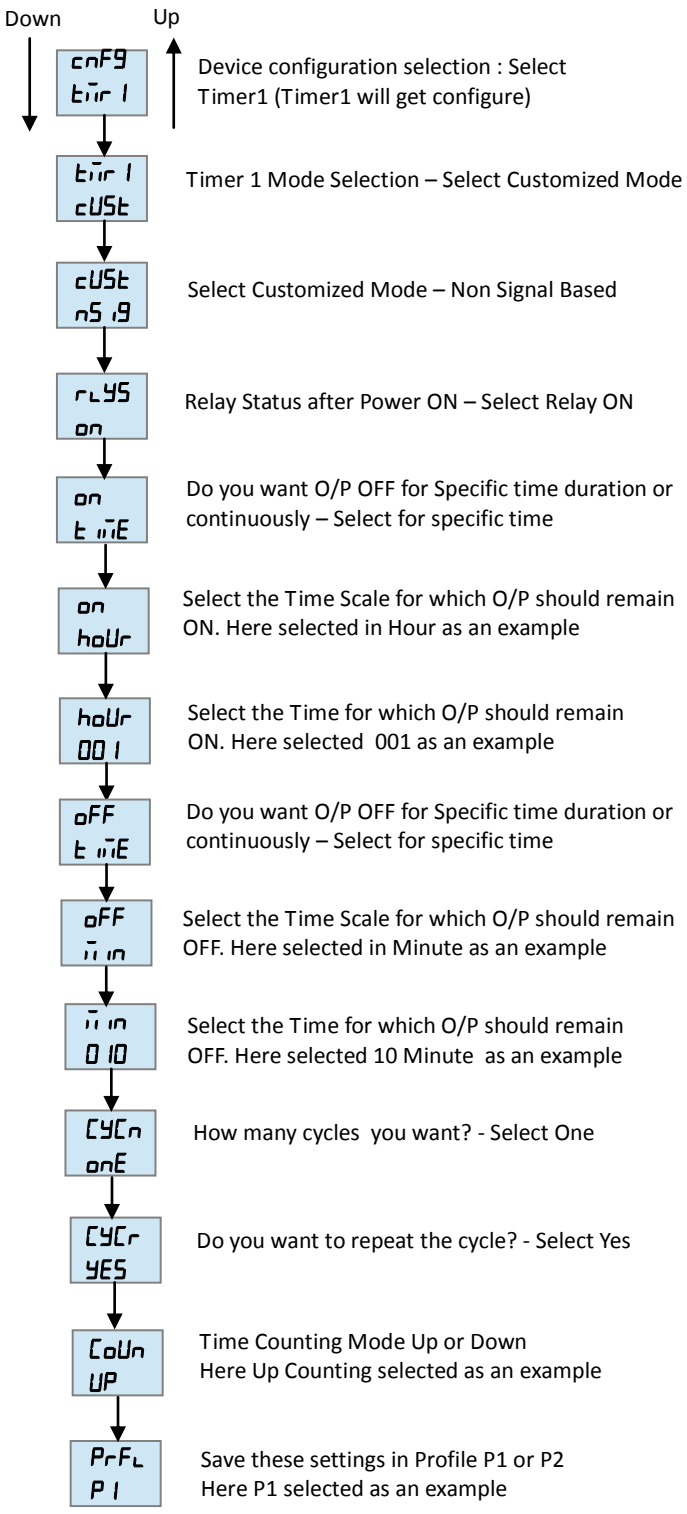
MODE - 09: CYCLIC ON/OFF

On application of supply voltage, the output is initially switched ON for the preset 'ON' time duration (TON) after which it is switched OFF for the preset 'OFF' time duration (TOFF). This Cycle repeats and continues till supply is present.

Select the menu as given below to configure the Timer1 for **CYCLIC ON/OFF** (Default)



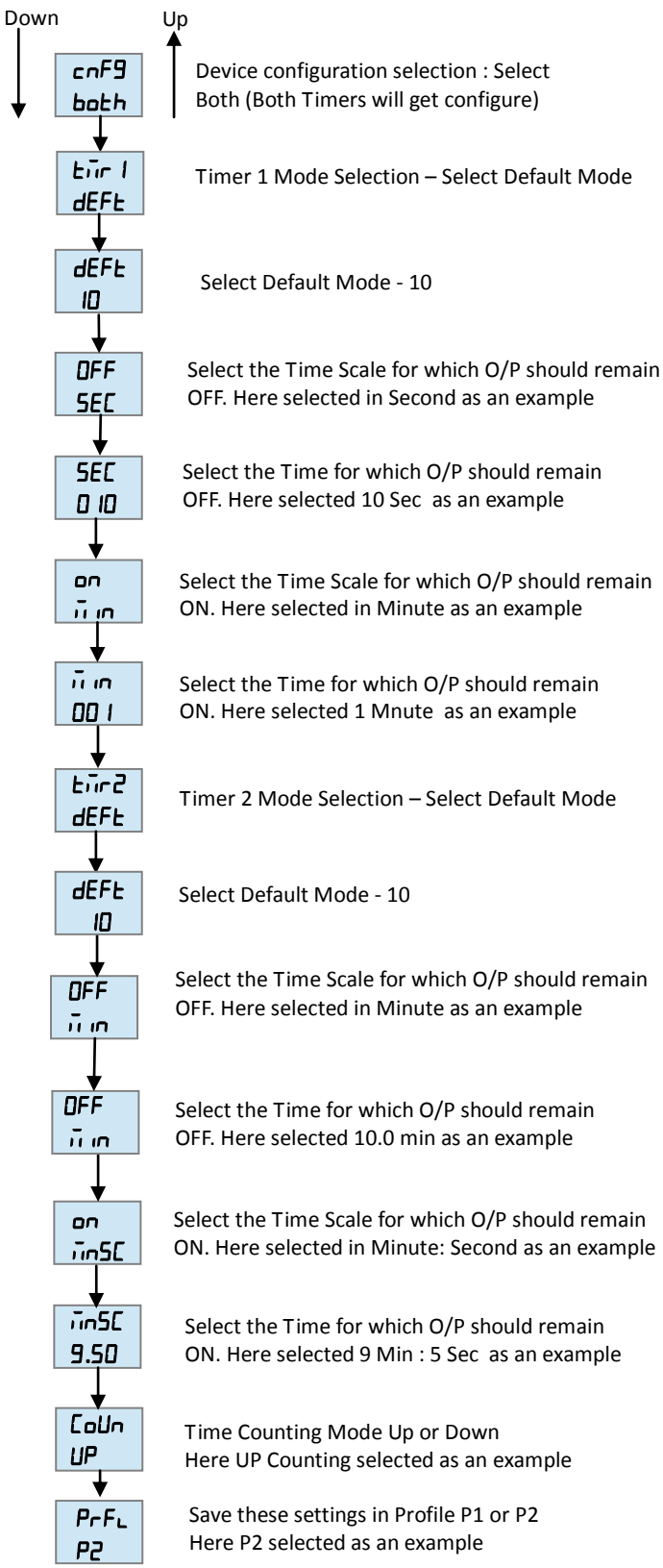
Select the menu as given below to configure the Timer1 for **CYCLIC ON/OFF** (Customized)



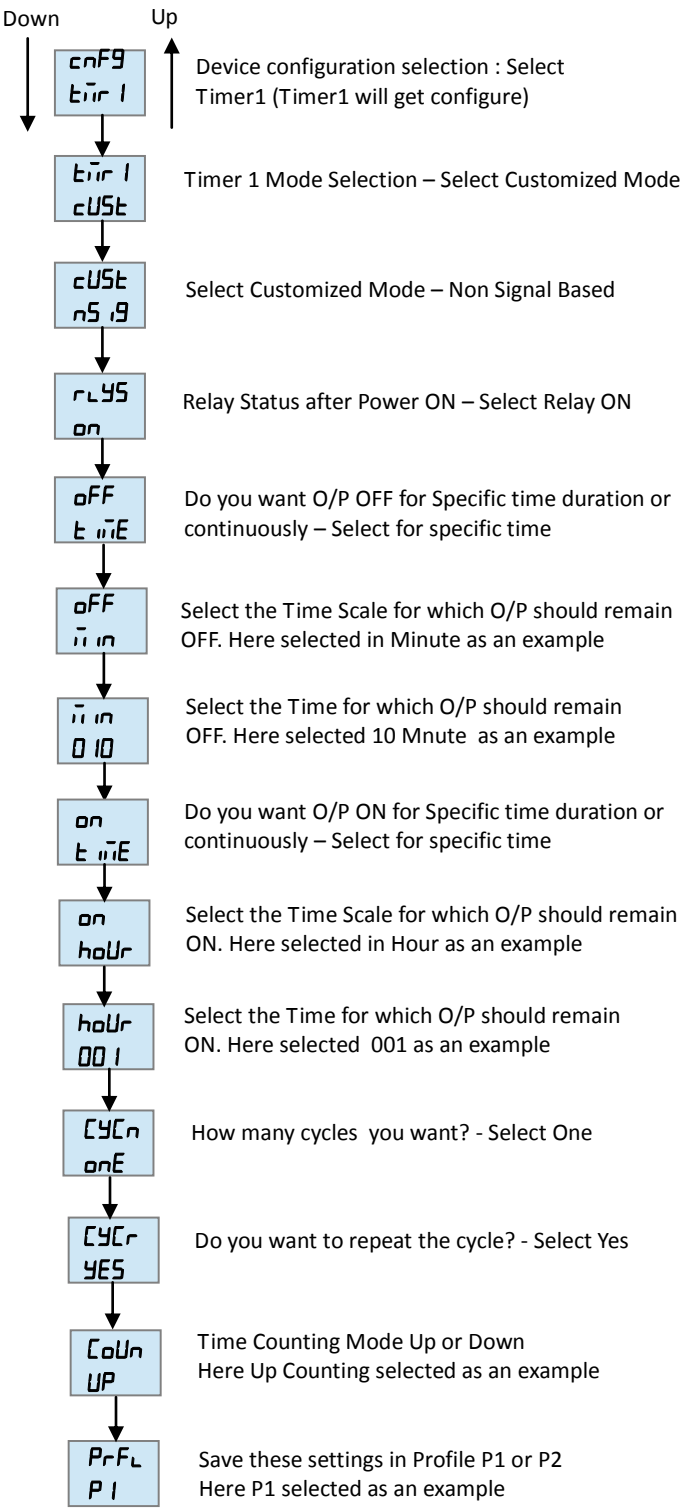
MODE - 10: CYCLIC OFF/ON

On application of supply voltage, the output is initially switched OFF for the preset 'OFF' time duration (TOFF), after which it is switched ON for the preset 'ON' time duration (TON). This Cycle repeats and continues till supply is present.

Select the menu as given below to configure the Timer1 for **CYCLIC OFF/ON** (Default)



Select the menu as given below to configure the Timer1 for **CYCLIC OFF/ON** (Customized)

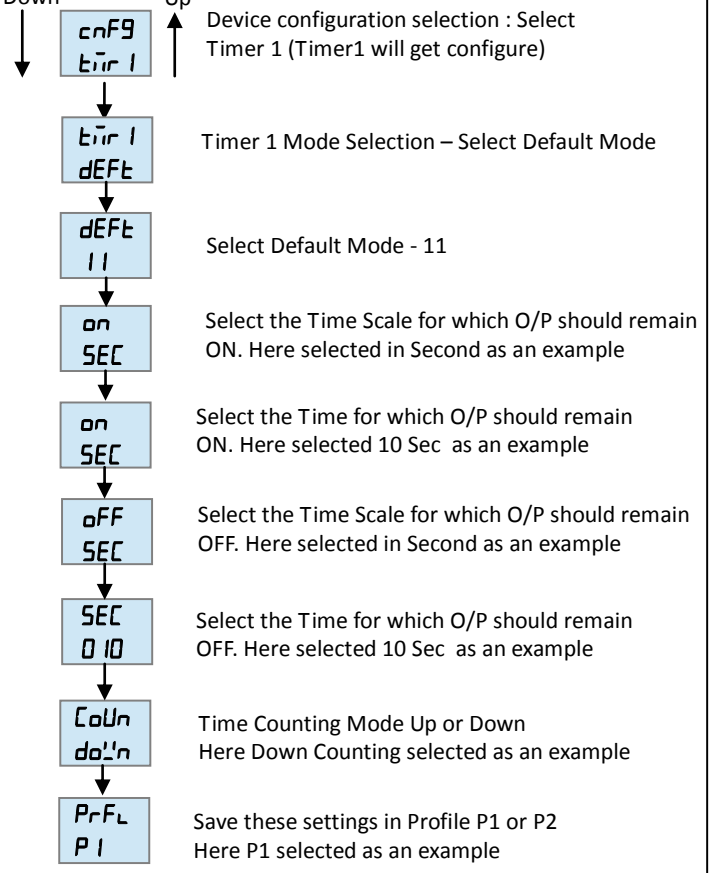


MODE-11: ASYMMETRIC CYCLE PULSE START

A permanent supply is required. The timer function is triggered by the input signal. When input signal applied the output is switched ON while the first preset time period (TON) elapses. Once this time period (TON) has elapsed output is switched OFF for the second preset time (TOFF) period. Once this second time period (TOFF) had elapsed then output switched ON and the cycle will start from the beginning again. If input signal is removed during timing (TON or TOFF) the cycle will stop and output is switched OFF, cycle will start with output ON state when the input signal applied again.

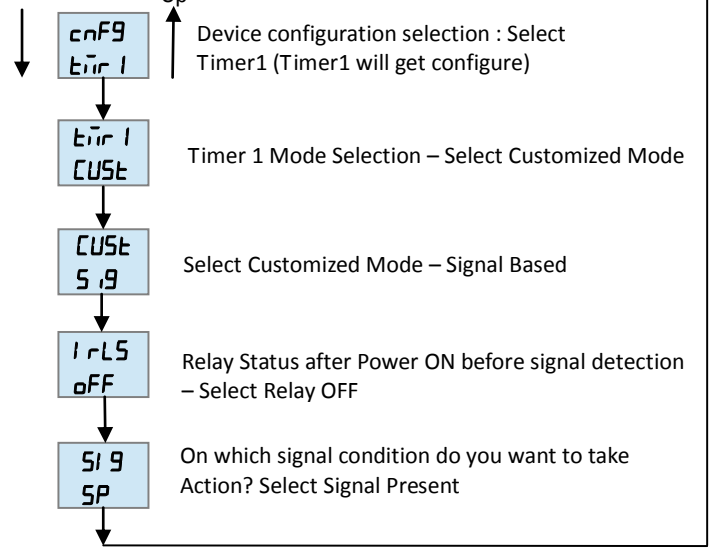
Select the menu as given below to configure the Timer1 for **ASYMMETRIC CYCLE PULSE START** (Default)

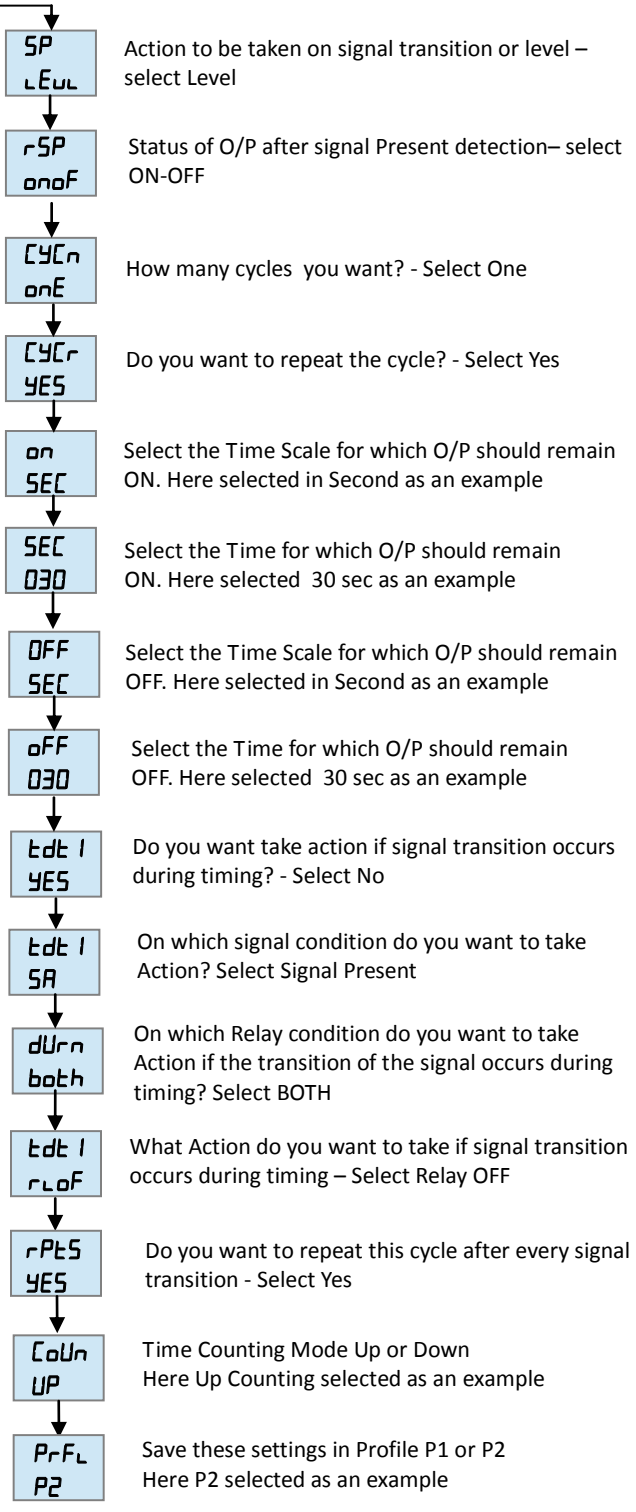
Down Up



Select the menu as given below to configure the Timer1 for **ASYMMETRIC CYCLE PULSE START** (Customized)

Down Up



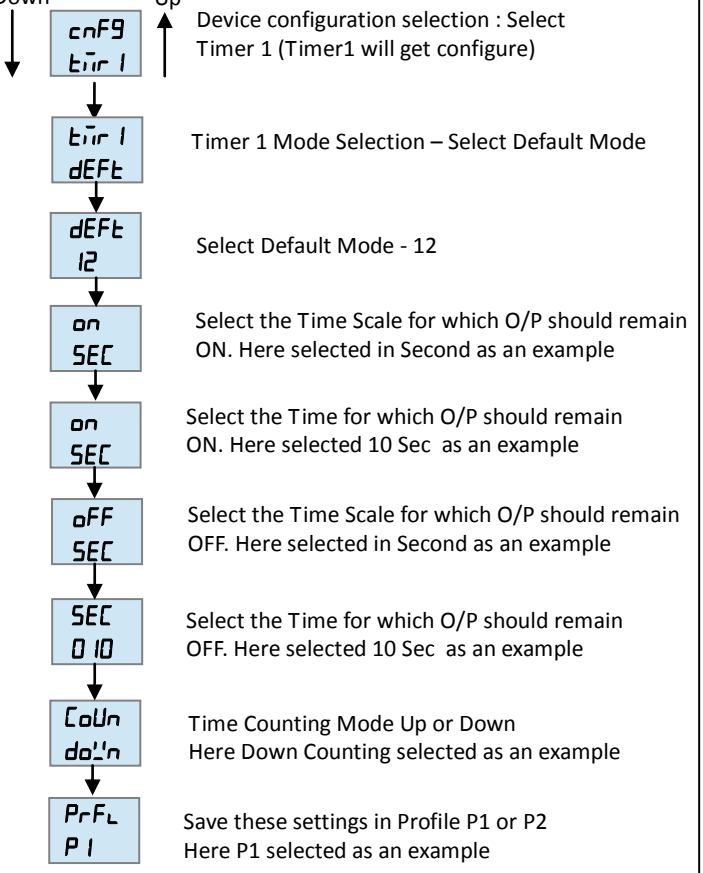


MODE-12: ASYMETERIC RECYCLER PULSE START TYPE 2

A permanent supply is required. The timer function is triggered by input signal. When input signal is applied the output is switched OFF while the first preset time period (TOFF) elapses. Once this time period has elapsed output is switched ON for the second preset time period (TON). Once this second time period (TON) had elapsed then output is switched OFF and the cycle will start from the beginning again. If input signal is removed during timing (TON or TOFF) the cycle will stop and output is switched OFF, cycle will start with output OFF state when the input signal applied again.

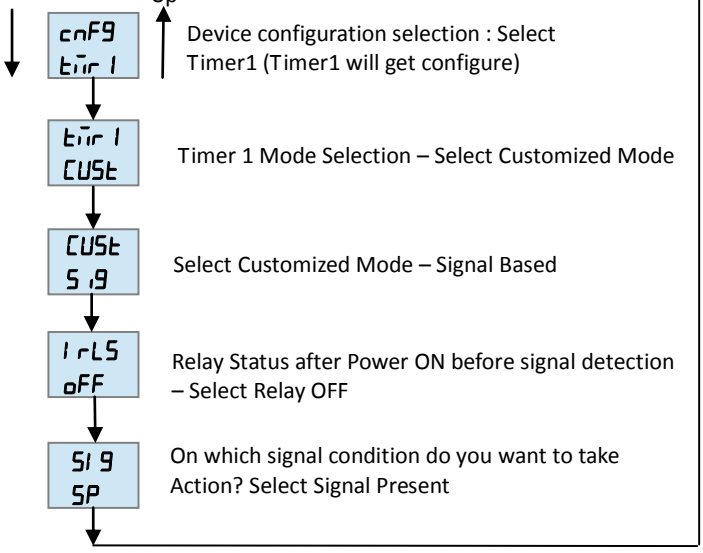
Select the menu as given below to configure the Timer1 for **ASYMETERIC RECYCLER PULSE START TYPE 2** (Default)

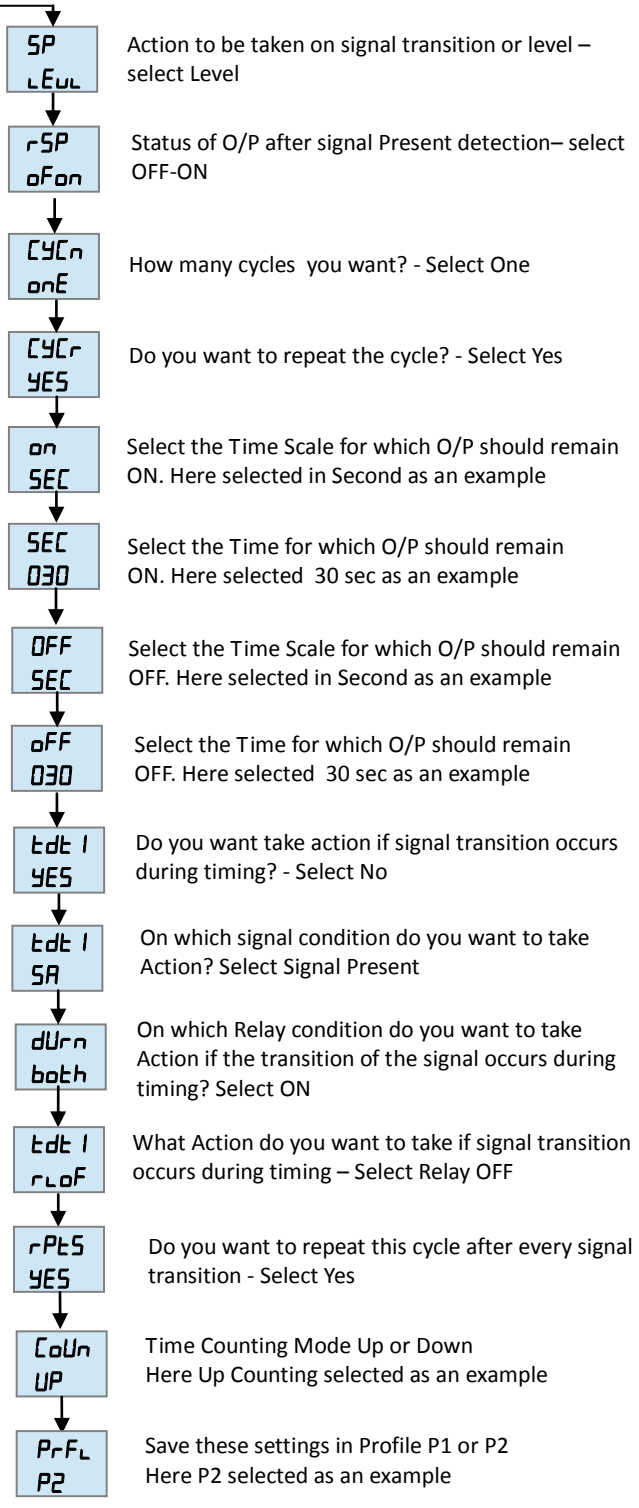
Down Up



Select the menu as given below to configure the Timer1 for **ASYMETERIC RECYCLER PULSE START TYPE 2** (Customized)

Down Up





MODE – 13: SIGNAL ON OFF DELAY TYPE 1

1) On application of signal the preset time (T) starts. After this preset time has elapsed, output is switched ON. During this timing, if signal is removed then output is switched ON immediately and preset timing is restarted. Signal has no effect during this timing. Once this time period has elapsed the output is switched OFF.

2) On application of signal the preset time (T) starts. After this preset time has elapsed, output is switched ON. When output is ON and signal is removed then preset timing is restarted (output stays ON). Signal has no effect during this timing. Once this time period has elapsed the output is switched OFF.

Select the menu as given below to configure the Timer1 for **SIGNAL ON OFF DELAY TYPE 1** (Default)

Down / Up

- cnFG both — Device configuration selection : Select Both (Both Timers will get configure)
- tiM 1 dEFt — Timer 1 Mode Selection – Select Default Mode
- dEFt 13 — Select Default Mode - 13
- oFF SEC — Select the Time Scale for which O/P should remain OFF. Here selected in Second as an example
- SEC 0 10 — Select the Time for which O/P should remain OFF. Here selected 10 Sec as an example
- tiM2 dEFt — Timer 2 Mode Selection – Select Default Mode
- dEFt 13 — Select Default Mode - 13
- on hrMn — Select the Time Scale for which O/P should remain OFF. Here selected in Hour : Minute as an example
- hrMn 1. 10 — Select the Time for which O/P should remain OFF. Here selected 1 Hr : 10 Min as an example
- CoUn doWn — Time Counting Mode Up or Down Here Down Counting selected as an example
- PrFL P1 — Save these settings in Profile P1 or P2 Here P1 selected as an example

Select the menu as given below to configure the Timer1 for **SIGNAL ON OFF DELAY TYPE 1** (Customized)

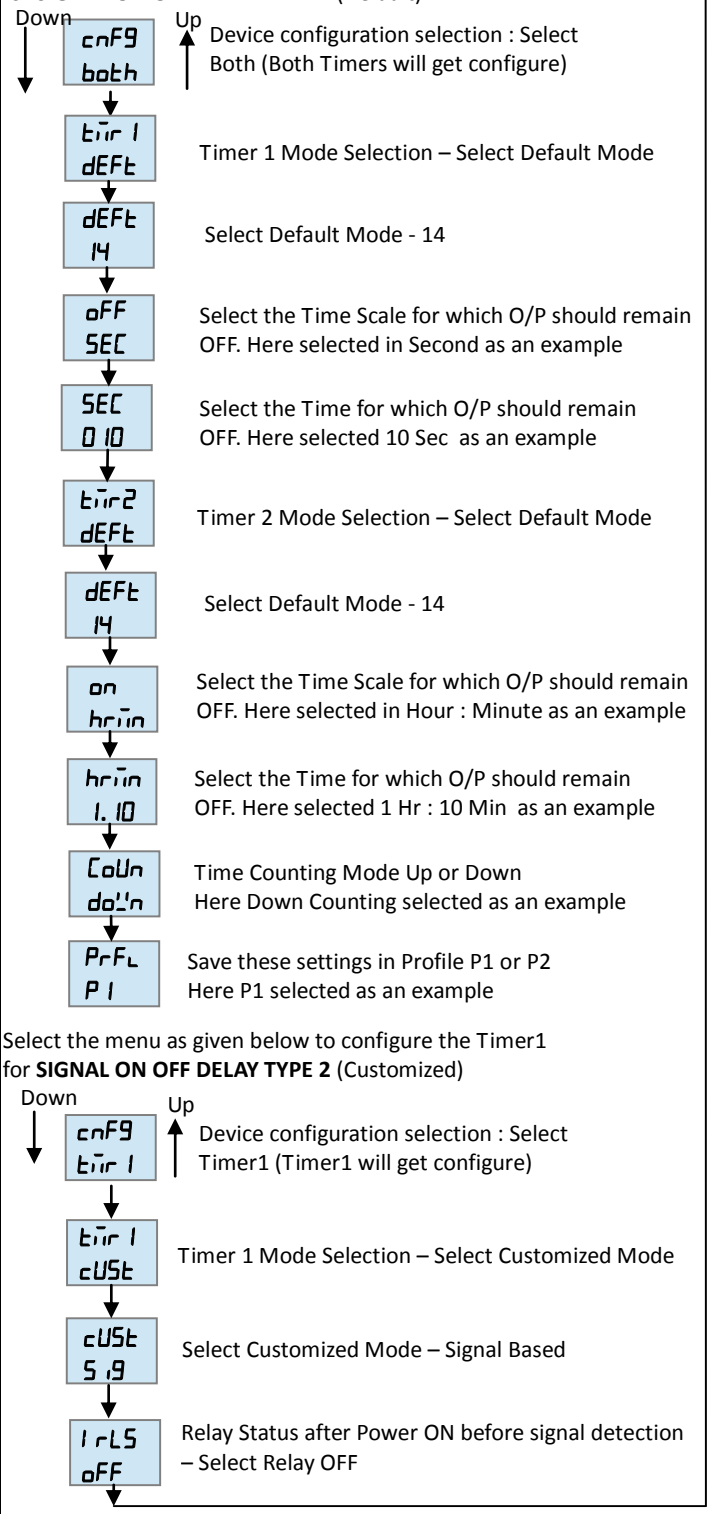
Down / Up

- cnFG tiM 1 — Device configuration selection : Select Timer1 (Timer1 will get configure)
- tiM 1 cUSt — Timer 1 Mode Selection – Select Customized Mode
- cUSt SIG — Select Customized Mode – Signal Based
- IrLS oFF — Relay Status after Power ON before signal detection – Select Relay OFF
- SIG SP — On which signal condition do you want to take Action? Select Signal Present
- SP LEvL — Action to be taken on signal transition or level – select level
- rSP oFF — Status of O/P after signal Present detection– select OFF
- oFF SEC — Select the Time Scale for which O/P should remain OFF. Here selected in Second as an example
- SEC 0 10 — Select the Time for which O/P should remain OFF. Here selected 10 Sec as an example
- tdt 1 YES — Do you want take action if signal transition occurs during timing? - Select Yes
- tdt 1 SA — On which signal condition do you want to take Action? Select Signal Absent
- tdt 1 brEA — Select the action after above time completion on signal present transition – Select Break
- Att rLod — Select the action after above time completion on signal present transition – Select Reload
- tdt2 YES — Do you want take action if signal transition occurs during timing after Relay changeover? - Select Yes
- tdt2 SP — On which signal condition do you want to take Action? Select Signal Prasent
- tdt2 brEA — What action do you want to take if the transition of signal Absent occurs after change in O/P state – Select Break
- rPtS YES — Do you want to repeat this cycle after every signal transition - Select Yes
- CoUn UP — Time Counting Mode Up or Down Here Up Counting selected as an example
- PrFL P2 — Save these settings in Profile P1 or P2 Here P2 selected as an example

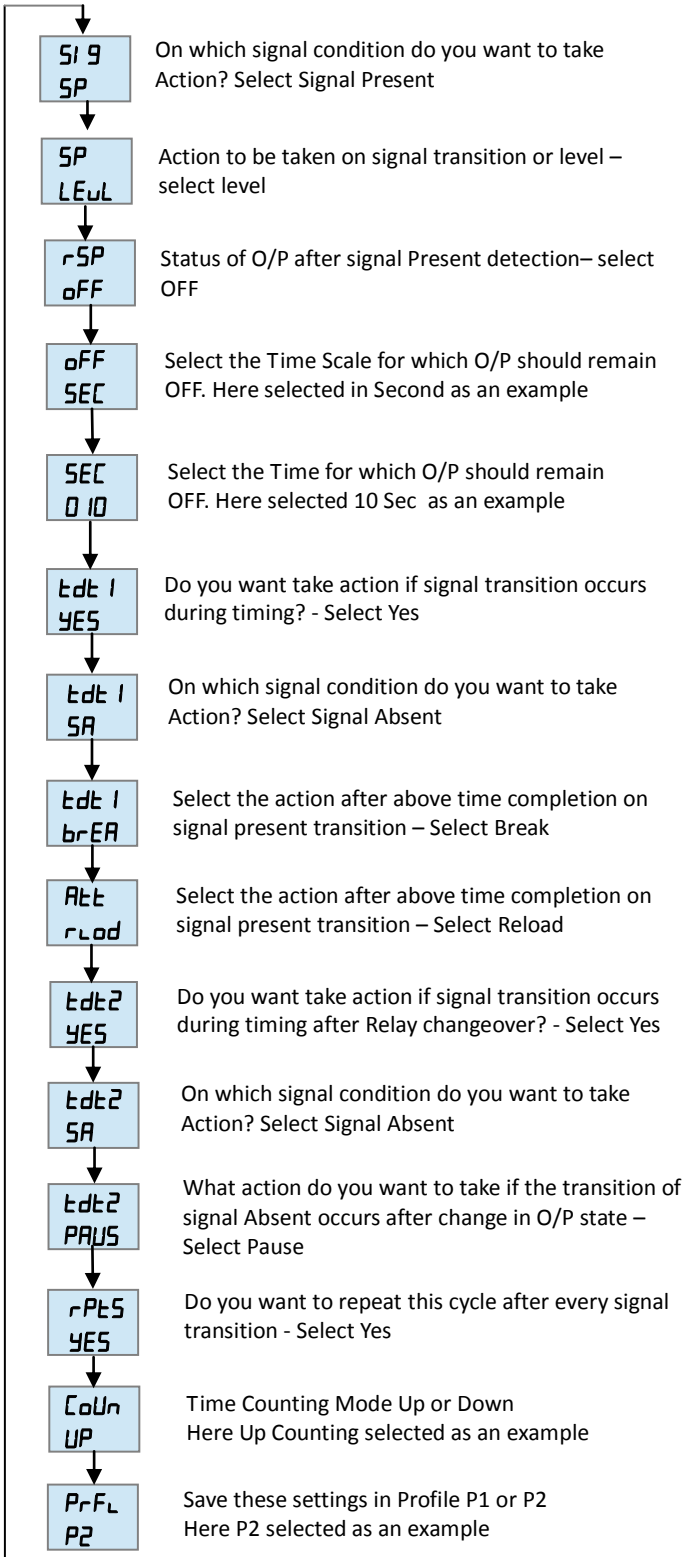
MODE – 14: SIGNAL ON OFF DELAY

On application of signal the preset time (T) starts. After this preset time has elapsed, output is switched ON. During this timing, if signal is removed then output is switched ON immediately and OFF delay is started. Once this time period has elapsed the output is switched OFF.
During this OFF delay if signal is reapplied the output switched OFF immediately and ON Delay restarted.

Select the menu as given below to configure the Timer1 for **SIGNAL ON OFF DELAY TYPE 2** (Default)



Select the menu as given below to configure the Timer1 for **SIGNAL ON OFF DELAY TYPE 2** (Customized)

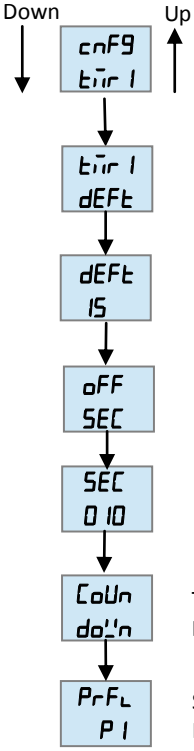


MODE – 15: SIGNAL OFF/ON (NEW)

On application of input signal, the preset delay time period (T) starts. During this timing if signal is removed then timing is stopped and timing will be restarted when signal applied again. After this time period has elapsed output is switched ON. **On removal of input signal, the preset time period starts again & the output is switched OFF when the preset time duration is complete. Output stays OFF until supply voltage has been interrupted.**

Select the menu as given below to configure the Timer1 for S**IGNAL OFF/ON (NEW)** (Default)

Down Up



Device configuration selection : Select Both (Timer1 will get configure)

Timer 1 Mode Selection – Select Default Mode

Select Default Mode - 15

Select the Time Scale for which O/P should remain OFF. Here selected in Second as an example

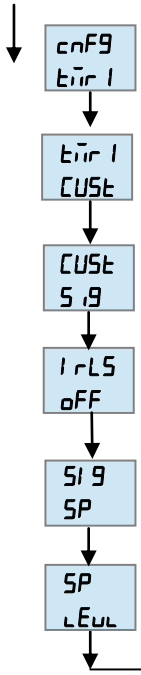
Select the Time for which O/P should remain OFF. Here selected 10 Sec as an example

Time Counting Mode Up or Down
Here Down Counting selected as an example

Save these settings in Profile P1 or P2
Here P1 selected as an example

Select the menu as given below to configure the Timer1 for **SIGNAL OFF/ON (NEW)** (Customized)

Down Up



Device configuration selection : Select Timer1 (Timer1 will get configure)

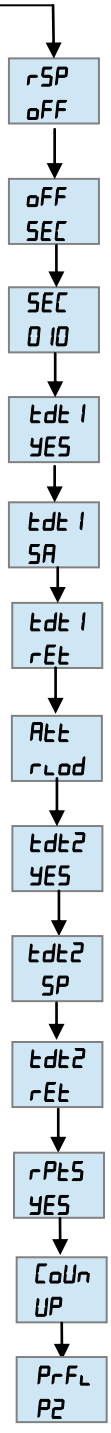
Timer 1 Mode Selection – Select Customized Mode

Select Customized Mode – Signal Based

Relay Status after Power ON before signal detection – Select Relay OFF

On which signal condition do you want to take Action? Select Signal Present

Action to be taken on signal transition or level – select Level



Status of O/P after signal Present detection– select OFF

Select the Time Scale for which O/P should remain OFF. Here selected in Second as an example

Select the Time for which O/P should remain OFF. Here selected 10 Sec as an example

Do you want take action if signal transition occurs during timing? - Select Yes

On which signal condition do you want to take Action? Select Signal Absent

What Action do you want to take if signal transition occurs during timing – Select Return

What Action do you want to take After above time completion on signal absent transition? – Select Reload

Do you want take action if signal transition occurs during timing after O/P relay changeover? - Select

On which signal condition do you want to take Action after O/P relay changeover ? Select Signal Present

What Action do you want to take if signal transition occurs during timing after O/P relay changeover –

Do you want to repeat this cycle after every signal transition - Select Yes

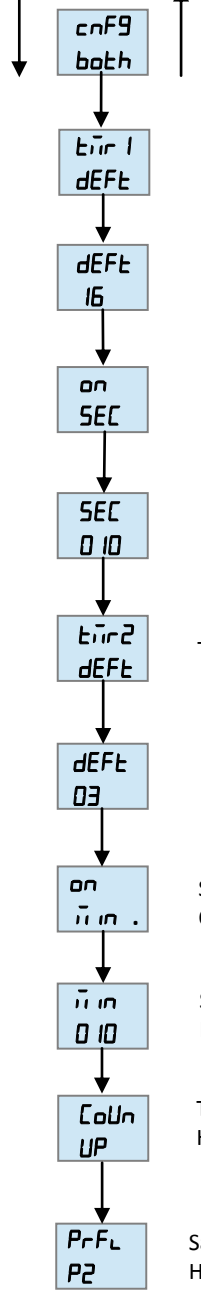
Time Counting Mode Up or Down
Here Up Counting selected as an example

Save these settings in Profile P1 or P2
Here P2 selected as an example

MODE - 16: IMPULSE ONENERGIZING
On application of supply voltage, the output is instantly switched ON for the preset time duration (TON) after it is switched OFF.

Select the menu as given below to configure the Timer1 for **IMPULSE ONENERGIZING** (Default)

Down Up



Device configuration selection : Select Both (Both Timers will get configure)

Timer 1 Mode Selection – Select Default Mode

Select Default Mode - 16

Select the Time Scale for which O/P should remain ON. Here selected in Second as an example

Select the Time for which O/P should remain ON. Here selected 10 Sec as an example

Timer 2 Mode Selection – Select Default Mode

Select Default Mode - 03

Select the Time Scale for which O/P should remain ON. Here selected Minute . as an example

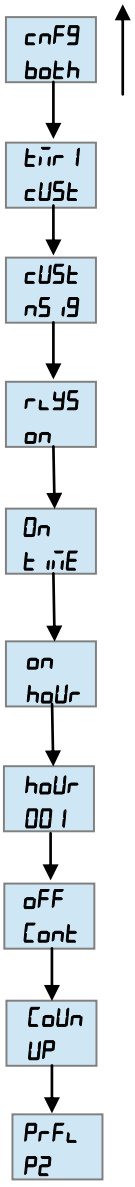
Select the Time for which O/P should remain ON. Here selected in 10 Minute. as an example

Time Counting Mode Up or Down
Here UP Counting selected as an example

Save these settings in Profile P1 or P2
Here P2 selected as an example

Select the menu as given below to configure the Timer1 for **IMPULSE ONENERGIZING** (Default)

Down Up



Device configuration selection : Select Both (Both Timers will get configure)

Timer 1 Mode Selection – Select Customized Mode

Select Customized Mode – Non Signal Based

Relay Status after Power ON – Select Relay ON

Do you want O/P ON for Specific time duration or continuously – Select for specific time

Select the Time Scale for which O/P should remain ON. Here selected in Hour as an example

Select the Time for which O/P should remain ON. Here selected 001 as an example

Do you want O/P OFF for Specific time duration or continuously – Select Continuosly

Time Counting Mode Up or Down
Here Up Counting selected as an example

Save these settings in Profile P1 or P2
Here P2 selected as an example

MODE - 17: IMPULSE ON/OFF

On application or removal of input signal, the output is switched ON & the preset time duration (TON) starts. On completion of the time duration the output is switched OFF. During timing period, changing the state of the input signal dose not affects output but resets time.

Select the menu as given below to configure the Timer1 for **IMPULSE ON/OFF** (Default)

Down / Up

- cnF9 both — Device configuration selection : Select Both (Both Timers will get configure)
- tiMr 1 dEFt — Timer 1 Mode Selection – Select Default Mode
- dEFt 17 — Select Default Mode - 17
- on SEC — Select the Time Scale for which O/P should remain ON. Here selected in Second as an example
- SEC 0 10 — Select the Time for which O/P should remain ON. Here selected 10 Sec as an example
- tiMr2 dEFt — Timer 2 Mode Selection – Select Default Mode
- dEF 10 — Select Default Mode - 10
- on hrMn — Select the Time Scale for which O/P should remain ON. Here selected in Hour : Minute as an example
- hrMn 1. 10 — Select the Time for which O/P should remain ON. Here selected 1 Hr : 10 Min as an example
- CoUn do'n — Time Counting Mode Up or Down Here Down Counting selected as an example
- PrFL P 1 — Save these settings in Profile P1 or P2 Here P1 selected as an example

Select the menu as given below to configure the Timer1 for **IMPULSE ON/OFF** (Customized)

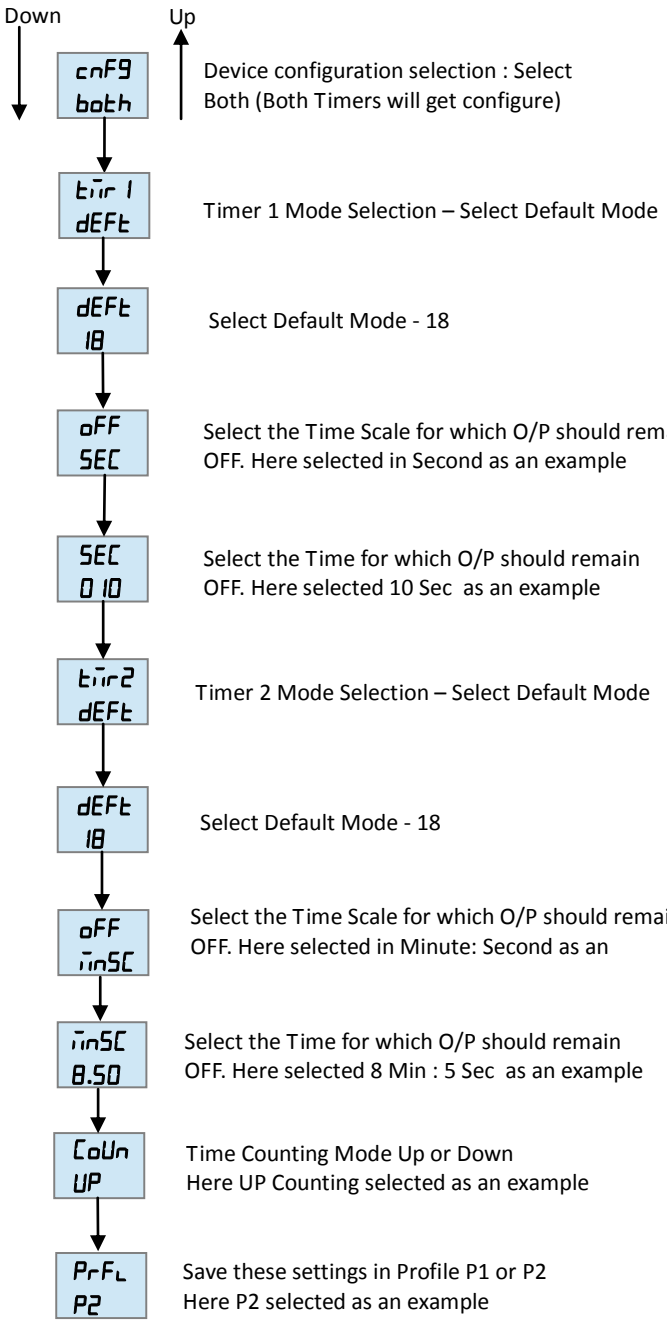
Down / Up

- cnF9 tiMr 1 — Device configuration selection : Select Timer1 (Timer1 will get configure)
- tiMr 1 cUSt — Timer 1 Mode Selection – Select Customized Mode
- cUSt SIG — Select Customized Mode – Signal Based
- IrLS oFF — Initial Relay Status before signal status detection – Select OFF
- SIG SP — On which signal condition do you want to take Action? Select Signal Present
- SP LEuL — Action to be taken on signal transition or level – select level
- rSP on — Status of O/P after signal Present detection– select ON
- on tiME — Do you want O/P ON for Specific time duration or continuously – Select for Specific Time
- on SEC — Select the Time Scale for which O/P should remain ON. Here selected in Second as an example
- SEC 030 — Select the Time for which O/P should remain ON. Here selected 10 Sec as an example
- tdt 1 YES — Do you want take action if signal transition occurs during timing? - Select Yes
- tdt 1 SA — On which signal condition do you want to take Action? Select Signal Absent
- tdt 1 brEA — Select the action after above time completion on signal present transition – Select Break
- Att rLod — Select the action after above time completion on signal present transition – Select Reload
- tdt2 YES — Do you want take action if signal transition occurs during timing after Relay changeover? - Select Yes
- tdt2 SP — On which signal condition do you want to take Action? Select Signal Present
- tdt2 brEA — What action do you want to take if the transition of signal present occurs after change in O/P state – Select Break
- rPtS YES — Do you want to repeat this cycle after every signal transition - Select Yes
- CoUn UP — Time Counting Mode Up or Down Here Up Counting selected as an example
- PrFL P2 — Save these settings in Profile P1 or P2 Here P2 selected as an example

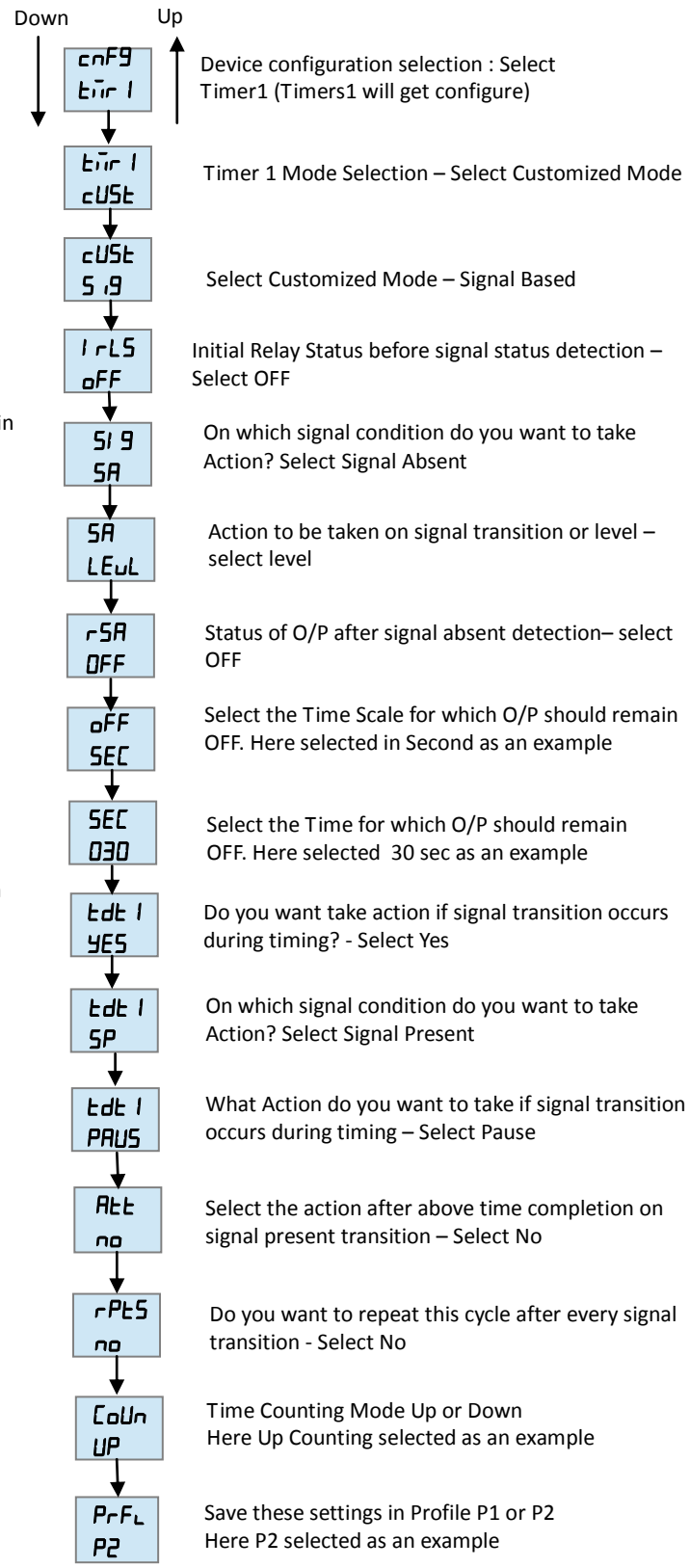
MODE – 18: ACCUMULATIVE DELAY ON SIGNAL

On application of supply voltage, the preset timing duration commences. When input signal is applied, the timing pauses & resumes only when the input signal is removed. The output is switched ON at the end of the preset time duration (TOFF).

Select the menu as given below to configure the Timer1 for **ACCUMULATIVE DELAY ON SIGNAL** (Default)



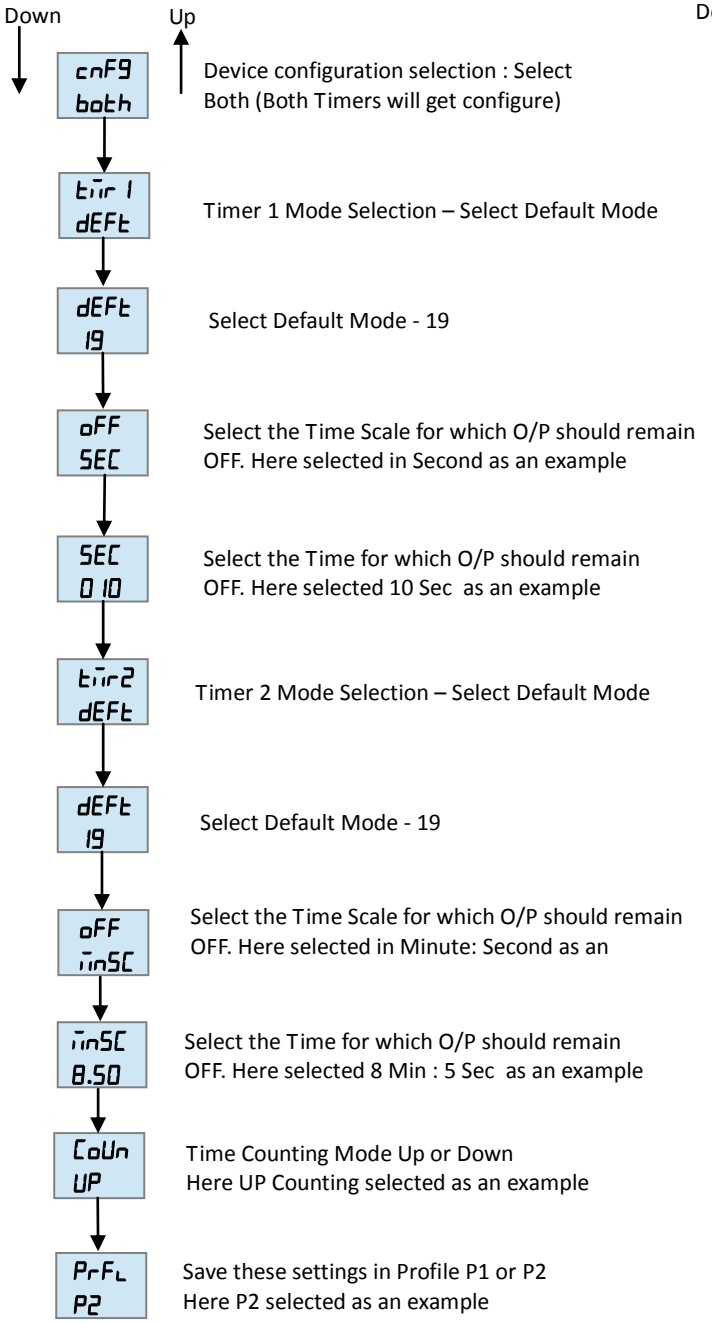
Select the menu as given below to configure the Timer1 for **ACCUMULATIVE DELAY ON SIGNAL** (Customized)



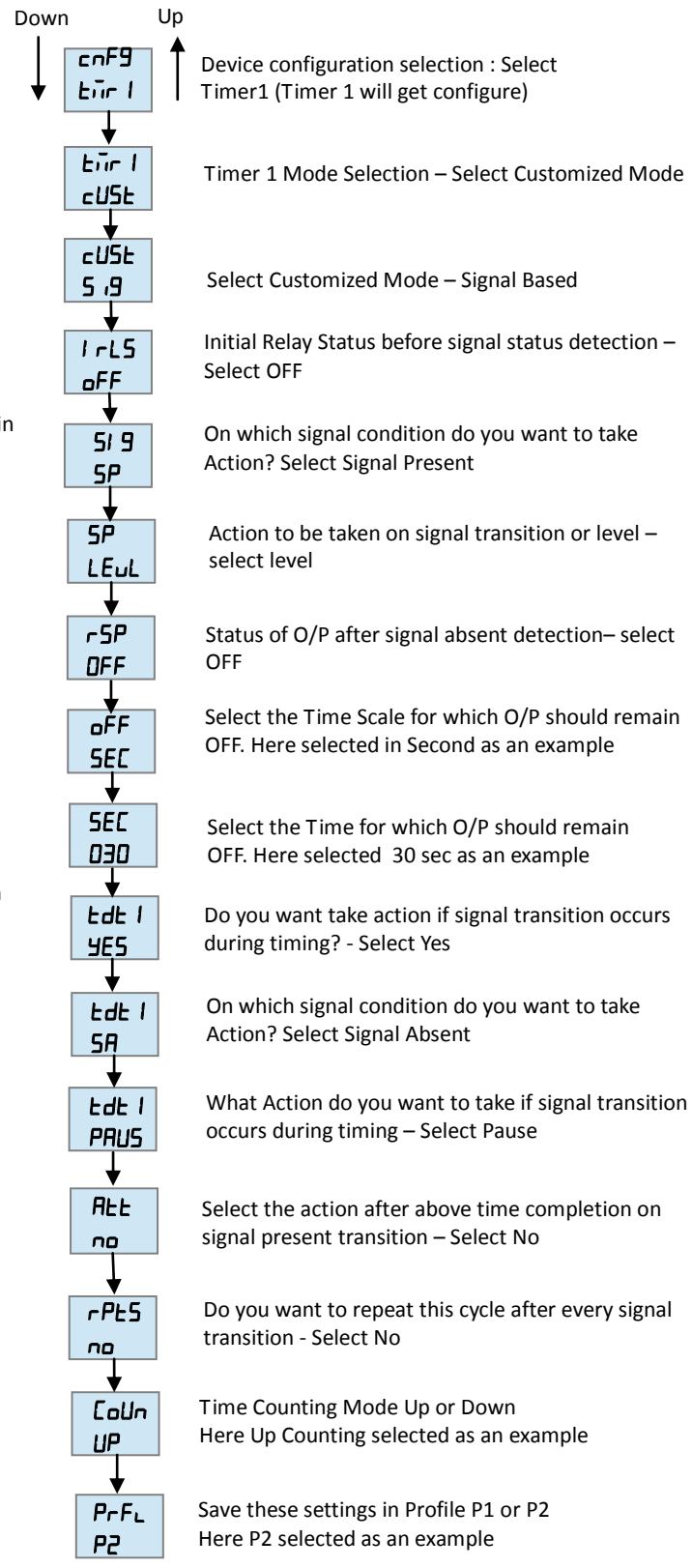
MODE - 19: ACCUMULATIVE DELAY ON INVERTED SIGNAL

Time commences as supply and signal is present. When input signal is removed, the timing pauses & resumes only when the input signal is applied. The output is switched ON at the end of the preset time duration (TOFF).

Select the menu as given below to configure the Timer1 for **ACCUMULATIVE DELAY ON INVERTED SIGNAL** (Default)



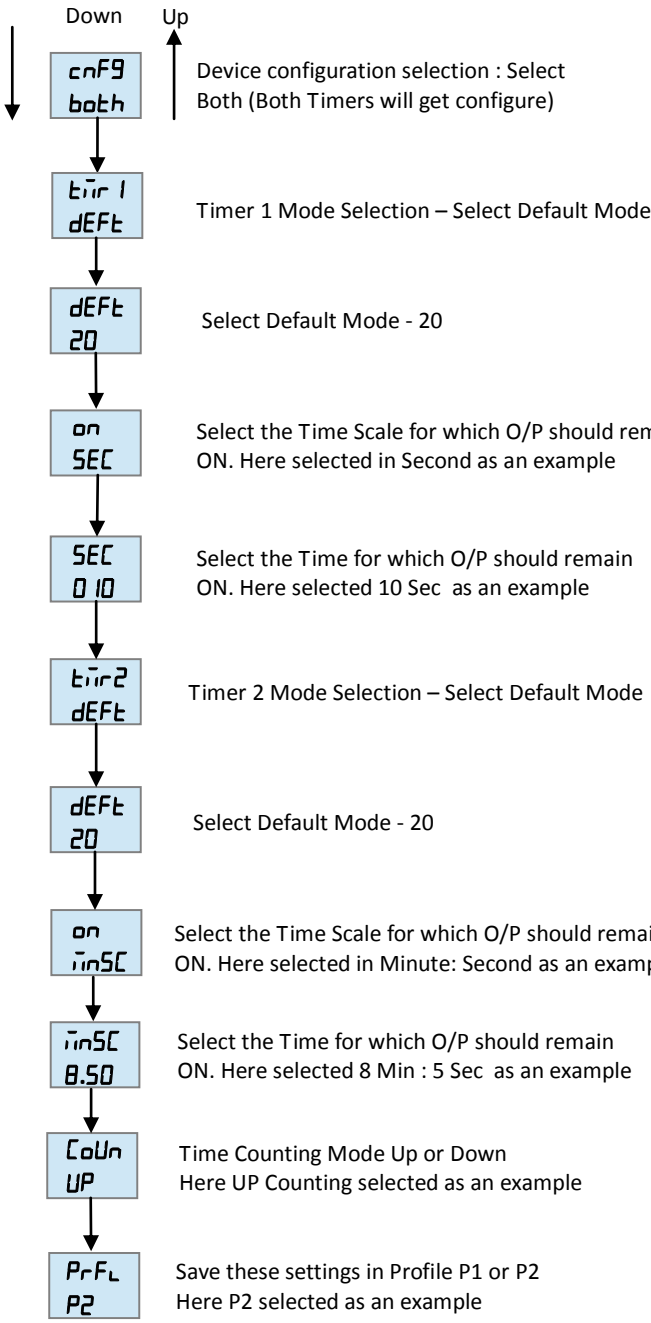
Select the menu as given below to configure the Timer1 for **ACCUMULATIVE DELAY ON INVERTED SIGNAL** (Customized)



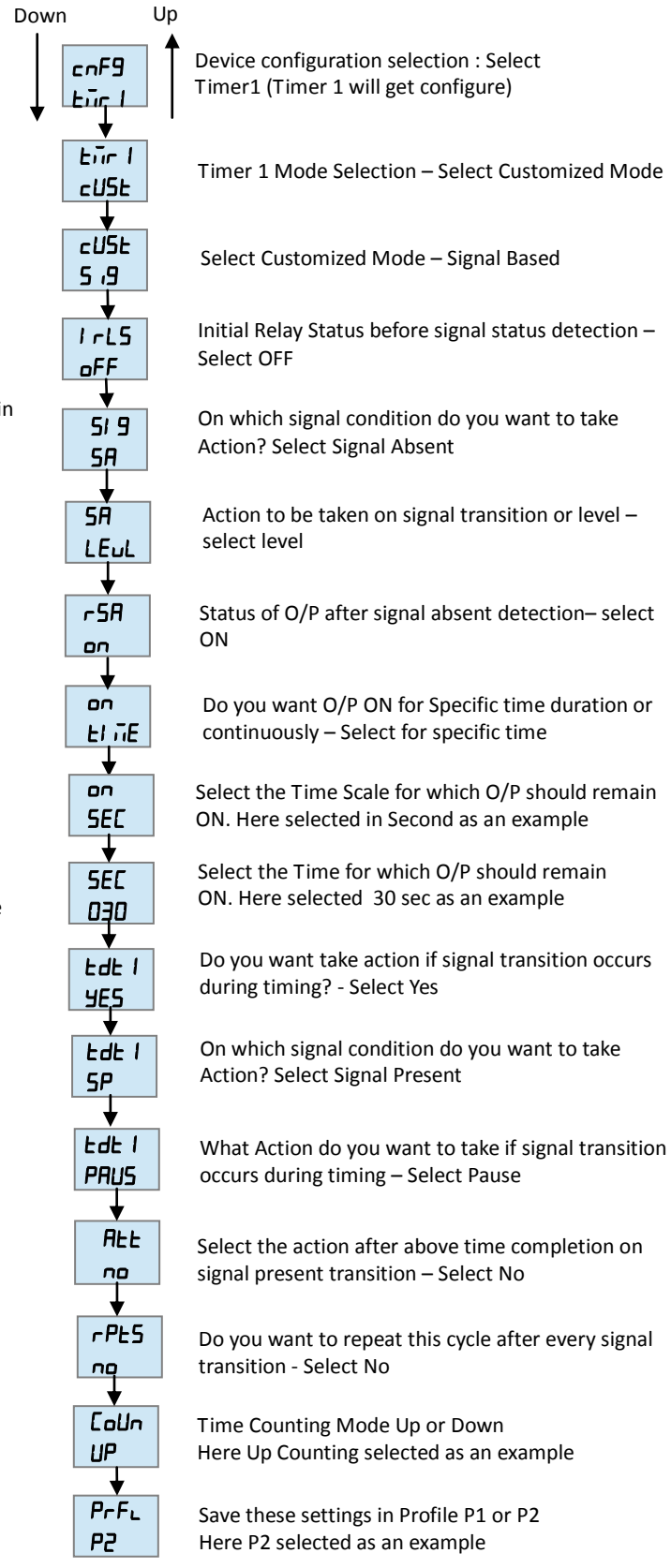
MODE - 20: ACCUMULATIVE IMPULSE ON SIGNAL

On application of supply voltage, the output is switch ON & the preset timing duration commences. When input signal is applied, the timing pauses & resumes only when the input signal is removed. The output is switched OFF at the end of the preset duration (TON).

Select the menu as given below to configure the Timer1 for **ACCUMULATIVE IMPULSE ON SIGNAL** (Default)



Select the menu as given below to configure the Timer1 for **ACCUMULATIVE IMPULSE ON SIGNAL** (Customized)

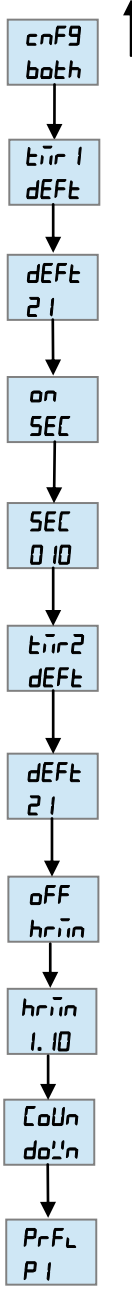


MODE - 21: LEADING EDGE IMPULSE 1

On application of supply voltage & input signal, the output is switched ON for preset time. After completion of preset time period, output is switched OFF. If the input signal is applied or removed during preset timing period, the output and timing remains unaffected.

Select the menu as given below to configure the Timer1 for **LEADING EDGE IMPULSE 1 (**Default)

Down Up



Device configuration selection : Select Both (Both Timers will get configure)

Timer 1 Mode Selection – Select Default Mode

Select Default Mode - 21

Select the Time Scale for which O/P should remain ON. Here selected in Second as an example

Select the Time for which O/P should remain ON. Here selected 10 Sec as an example

Timer 2 Mode Selection – Select Default Mode

--

Select Default Mode - 21

Select the Time Scale for which O/P should remain OFF. Here selected in Hour : Minute as an example

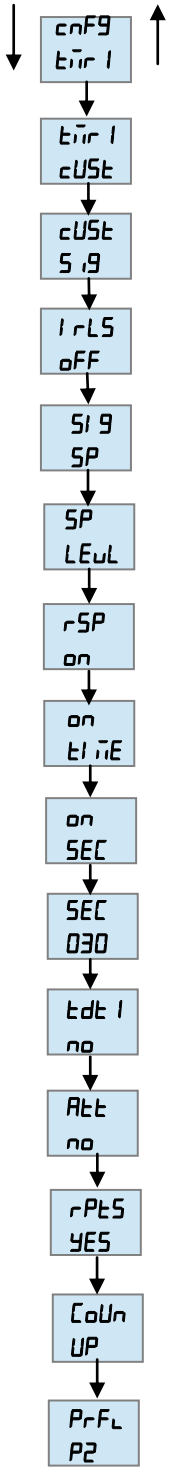
Select the Time for which O/P should remain OFF. Here selected 1 Hr : 10 Min as an example

Time Counting Mode Up or Down
Here Down Counting selected as an example

Save these settings in Profile P1 or P2
Here P1 selected as an example

Select the menu as given below to configure the Timer1 for **LEADING EDGE IMPULSE** (Customized)

Down Up



Device configuration selection : Select Timer1 (Timer1 will get configure)

Timer 1 Mode Selection – Select Customized Mode

Select Customized Mode – Signal Based

Initial Relay Status before signal status detection – Select OFF

On which signal condition do you want to take Action? Select Signal Present

Action to be taken on signal transition or level – select level

Status of O/P after signal Present detection– select ON

Do you want O/P ON for Specific time duration or continuously – Select for Specific Time

Select the Time Scale for which O/P should remain ON. Here selected in Second as an example

Select the Time for which O/P should remain ON. Here selected 30 sec as an example

Do you want take action if signal transition occurs during timing? - Select No

Select the action after above time completion on signal present transition – Select no

Do you want to repeat this cycle after every signal transition - Select Yes

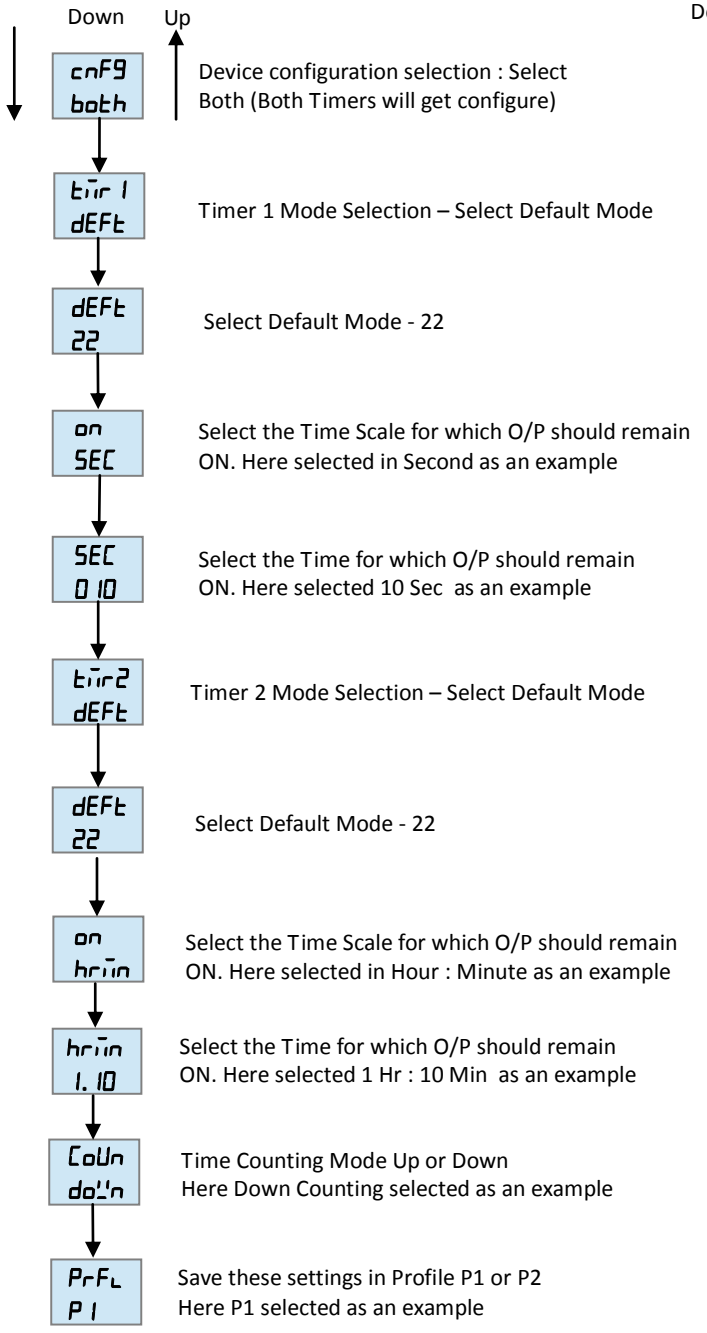
Time Counting Mode Up or Down
Here Up Counting selected as an example

Save these settings in Profile P1 or P2
Here P2 selected as an example

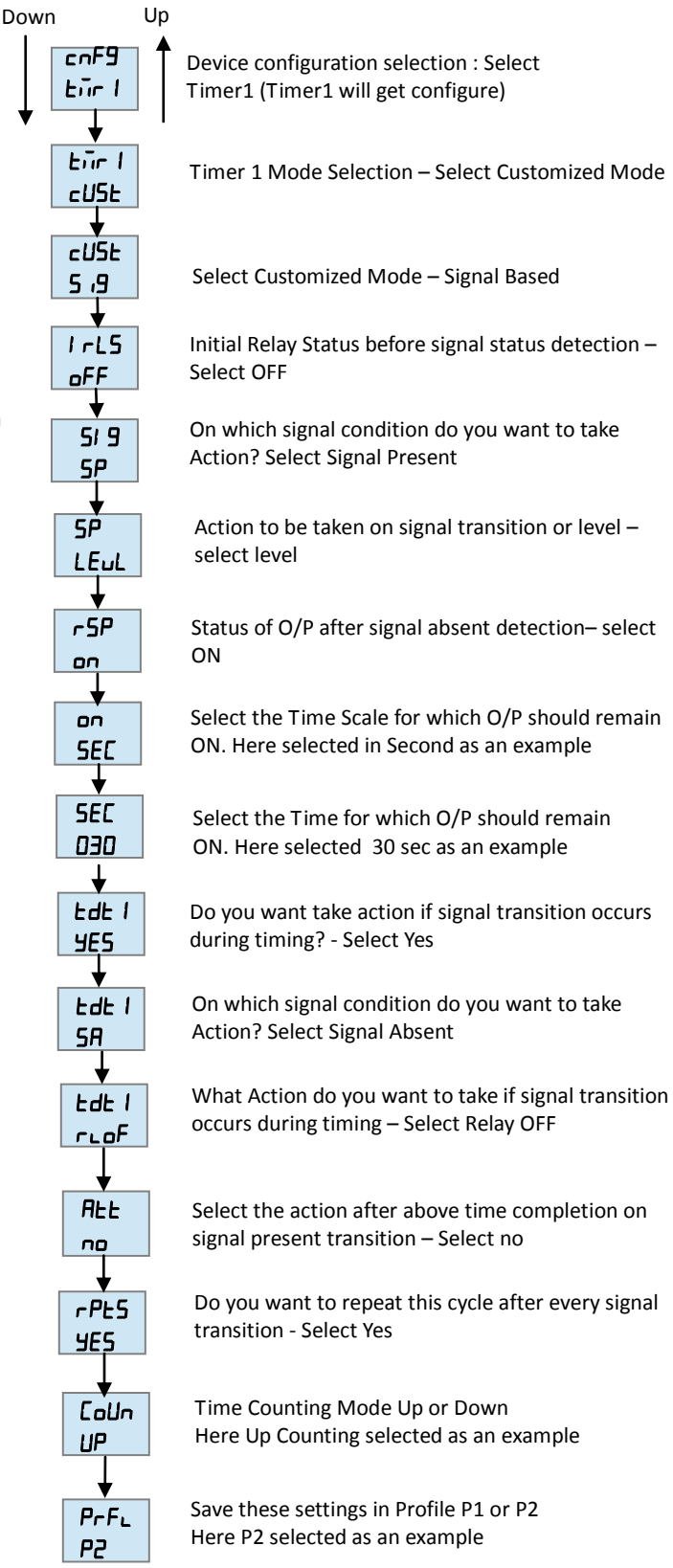
MODE - 22: LEADING EDGE IMPULSE 2

On application of the input signal the output is immediately switched ON. The output remains ON for the preset time duration (T) after which it is switched OFF. If the input signal is removed during the preset time, the output immediately switched OFF.

Select the menu as given below to configure the Timer1 for **LEADING EDGE IMPULSE 2** (Default)



Select the menu as given below to configure the Timer1 for **LEADING EDGE IMPULSE 2** (Customized)

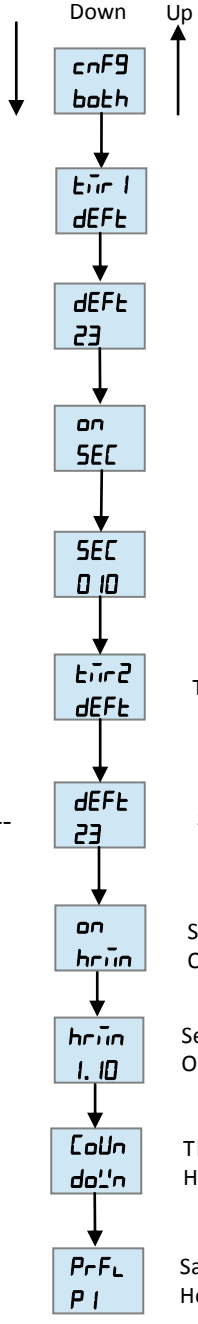


MODE - 23: TRAILING EDGE IMPULSE 1

When the supply voltage is applied and input signal is removed, the output is switched ON for the preset time duration (T).After completion of preset time period, output is switched OFF. If I/p signal is applied during the preset timing period then output is switched OFF & timing stops.

Select the menu as given below to configure the Timer1 for **TRAILING EDGE IMPULSE 1** (Default)

Down Up



Device configuration selection : Select Both (Both Timers will get configure)

Timer 1 Mode Selection – Select Default Mode

Select Default Mode - 23

Select the Time Scale for which O/P should remain ON. Here selected in Second as an example

Select the Time for which O/P should remain ON. Here selected 10 Sec as an example

Timer 2 Mode Selection – Select Default Mode

-- Select Default Mode - 23

Select the Time Scale for which O/P should remain ON. Here selected in Hour : Minute as an example

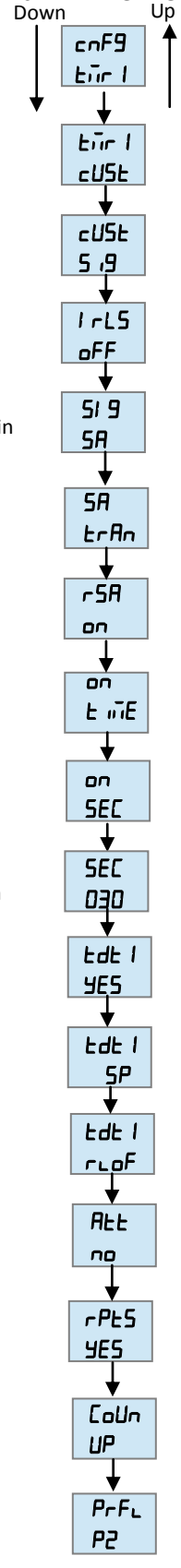
Select the Time for which O/P should remain ON. Here selected 1 Hr : 10 Min as an example

Time Counting Mode Up or Down
Here Down Counting selected as an example

Save these settings in Profile P1 or P2
Here P1 selected as an example

Select the menu as given below to configure the Timer1 for **TRAILING EDGE IMPULSE** (Customized)

Down Up



Device configuration selection : Select Timer1 (Timer1 will get configure)

Timer 1 Mode Selection – Select Customized Mode

Select Customized Mode – Signal Based

Initial Relay Status before signal status detection – Select OFF

On which signal condition do you want to take Action? Select Signal Absent

Action to be taken on signal transition or level – select Transition

Status of O/P after signal absent detection– select ON

Do you want O/P ON for Specific time duration or continuously – Select for Specific Time

Select the Time Scale for which O/P should remain ON. Here selected in Second as an example

Select the Time for which O/P should remain ON. Here selected 30 sec as an example

Do you want take action if signal transition occurs during timing? - Select Yes

On which signal condition do you want to take Action? Select Signal Present

What Action do you want to take if signal transition occurs during timing – Select Relay OFF

Select the action after above time completion on signal present transition – Select no

Do you want to repeat this cycle after every signal transition - Select Yes

Time Counting Mode Up or Down
Here Up Counting selected as an example

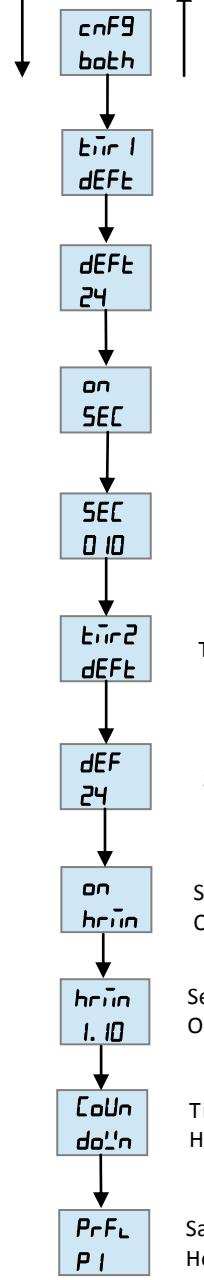
Save these settings in Profile P1 or P2
Here P2 selected as an example

MODE - 24: TRAILING EDGE IMPULSE 2

When the input signal to the timer is removed, the output is immediately switched ON for the preset time duration (TON) after which it is switched OFF. If the input signal is applied during the preset time, the output remains unaffected.

Select the menu as given below to configure the Timer1 for **TRAILING EDGE IMPULSE 2** (Default)

Down Up



Device configuration selection : Select Both (Both Timers will get configure)

Timer 1 Mode Selection – Select Default Mode

Select Default Mode - 24

Select the Time Scale for which O/P should remain ON. Here selected in Second as an example

Select the Time for which O/P should remain ON. Here selected 10 Sec as an example

Timer 2 Mode Selection – Select Default Mode

Select Default Mode - 24

Select the Time Scale for which O/P should remain ON. Here selected in Hour : Minute as an example

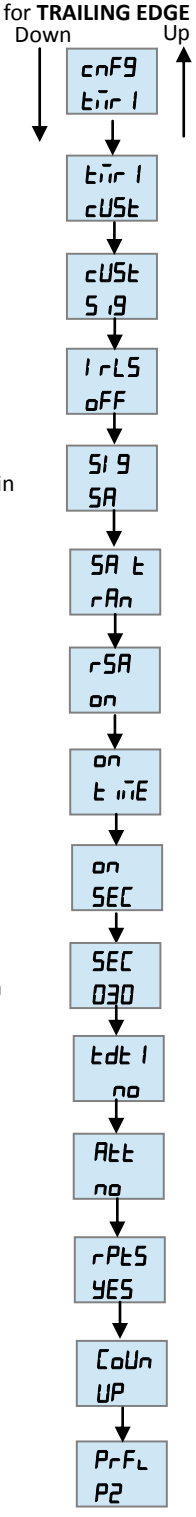
Select the Time for which O/P should remain ON. Here selected 1 Hr : 10 Min as an example

Time Counting Mode Up or Down
Here Down Counting selected as an example

Save these settings in Profile P1 or P2
Here P1 selected as an example

Select the menu as given below to configure the Timer1 for **TRAILING EDGE IMPULSE 2** (Customized)

Down Up



Device configuration selection : Select Timer1 (Timer1 will get configure)

Timer 1 Mode Selection – Select Customized Mode

Select Customized Mode – Signal Based

Initial Relay Status before signal status detection – Select OFF

On which signal condition do you want to take Action? Select Signal Absent

Action to be taken on signal transition or level – select Transition

Status of O/P after signal absent detection– select ON

Do you want O/P ON for Specific time duration or continuously – Select for Specific Time

Select the Time Scale for which O/P should remain ON. Here selected in Second as an example

Select the Time for which O/P should remain ON. Here selected 30 sec as an example

Do you want take action if signal transition occurs during timing? - Select No

Select the action after above time completion on signal present transition – Select no

Do you want to repeat this cycle after every signal transition - Select Yes

Time Counting Mode Up or Down
Here Up Counting selected as an example

Save these settings in Profile P1 or P2
Here P2 selected as an example

MODE - 25: DELAYED IMPULSE

On application of supply and input signal, the preset 'OFF' time duration (TOFF) starts. The output is switched ON at the end of preset 'OFF' time duration. Then the preset 'ON' time starts irrespective of the signal state & ON till the completion of ' TON'. During the output OFF period if signal is applied then timing is restarted, but output is unaffected. The signal change has no effect during time period TON.

Select the menu as given below to configure the Timer1 for **DELAYED IMPULSE** (Default)

Down Up

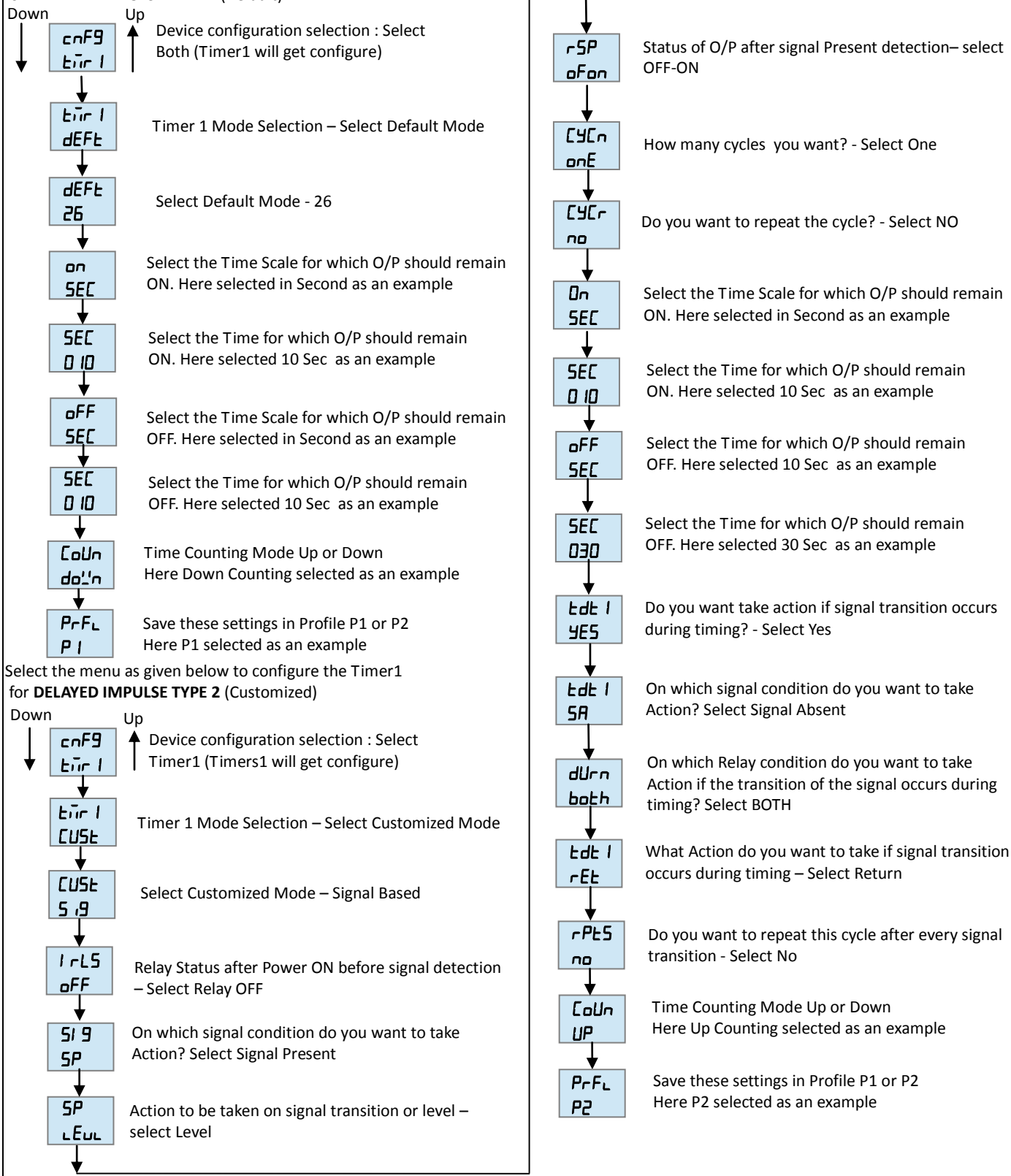
Select the menu as given below to configure the Timer1 for **DELAYED IMPULSE** (Customized)

Down Up

MODE-26: DELAYED IMPULSE TYPE 2

A permanent supply is required. When signal is applied the output will remain OFF while the first preset time period (TOFF) elapses. Once this time period has elapsed the output is switched ON for the second preset time period (TON). Once this second time period (TON) had elapsed then output is switched OFF and cycle stops. Output stays OFF until supply voltage has been interrupted. During **timing period (TON or TOFF) if signal is removed then output is switched OFF and the cycle stops, cycle will start with output OFF state when the input signal applied again.**

Select the menu as given below to configure the Timer1 for **DELAYED IMPULSE TYPE 2** (Default)

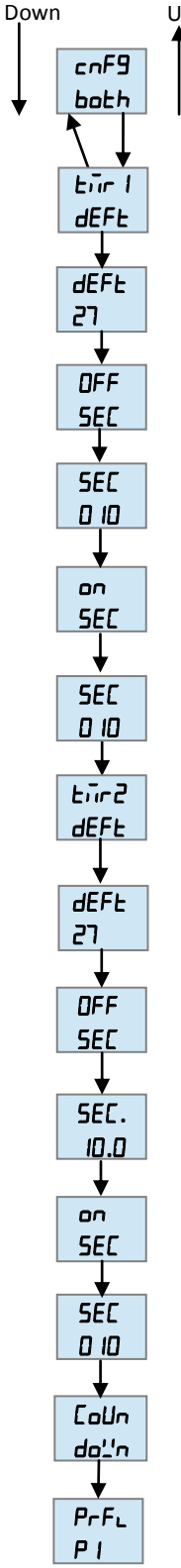


Select the menu as given below to configure the Timer1 for **DELAYED IMPULSE TYPE 2** (Customized)

MODE-27: DELAYED PULSE (CONSTANT SUPPLY) POWER BASED

The timing period (TOFF) starts when the supply is applied to the timer. After the preset has elapsed output is switched ON for the preset pulse (TON) duration. To reset the timer the supply has to be interrupted. If this interruption occurs during the pulsed output (TON) then the output is switched OFF and the timer will reset.

Select the menu as given below to configure the Timer1 for **DELAYED PULSE (CONSTANT SUPPLY) POWER BASED** (Default)



Device configuration selection : Select Both (Both Timers will get configure)

Timer 1 Mode Selection – Select Default Mode

Select Default Mode - 27

Select the Time Scale for which O/P should remain OFF. Here selected in Sec as an example

Select the Time for which O/P should remain OFF. Here selected 10 Sec as an example

Select the Time Scale for which O/P should remain ON. Here selected in Sec as an example

Select the Time for which O/P should remain ON. Here selected 10 Sec as an example

Timer 2 Mode Selection – Select Default Mode

Select Default Mode - 27

Select the Time Scale for which O/P should remain OFF. Here selected in Sec . as an example

Select the Time for which O/P should remain OFF. Here selected 10.0 Sec as an example

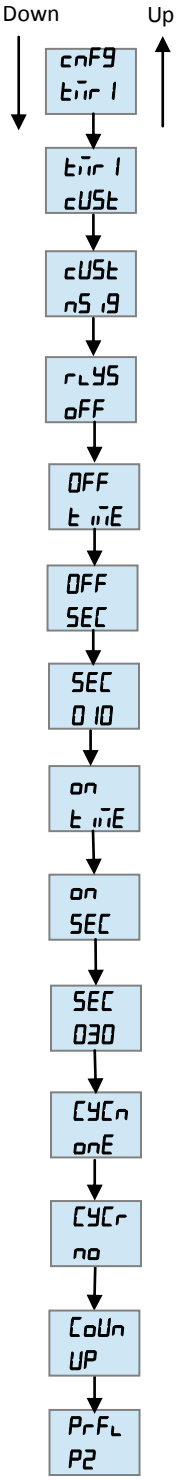
Select the Time Scale for which O/P should remain ON. Here selected in Sec as an example

Select the Time for which O/P should remain ON. Here selected 10 Sec as an example

Time Counting Mode Up or Down
Here Down Counting selected as an example

Save these settings in Profile P1 or P2
Here P1 selected as an example

Select the menu as given below to configure the Timer1 **DELAYED PULSE (CONSTANT SUPPLY) POWER BASED** (Customized)



Device configuration selection : Select Timer1 (Timer1 will get configure)

Timer 1 Mode Selection – Select Customized Mode

Select Customized Mode – Non Signal Based

Relay Status after Power ON – Select Relay OFF

Do you want O/P OFF for Specific time duration or continuously – Select for specific time

Select the Time Scale for which O/P should remain OFF. Here selected in Second as an example

Select the Time for which O/P should remain OFF. Here selected 010 Second as an example

Do you want O/P ON for Specific time duration or continuously – Select for Specific Time

Select the Time Scale for which O/P should remain ON. Here selected in Second as an example

Select the Time for which O/P should remain ON. Here selected 030 Second as an example

How many cycles you want? - Select One

Do you want to repeat the cycle? - Select NO

Time Counting Mode Up or Down
Here Up Counting selected as an example

Save these settings in Profile P1 or P2
Here P2 selected as an example

MODE-28: DELAYED PULSE (REMOTE TRIGGER)

The timing period (TOFF) will start when input signal is applied with the supply connected. After preset time (TOFF) has elapsed the output is switched ON for the per-selected pulse (TON) duration. To reset the timer either input signal needs to be removed or supply has to interrupt. If this action occurs during the pulsed output cycle (TON) then output is switched OFF and the timer will reset.

Select the menu as given below to configure the Timer1 for **DELAYED PULSE-REMOTE TRIGGER** (Default)

Down / Up

- cnFG tiMr 1 — Device configuration selection : Select Timer1 (Timers1 will get configure)
- tiMr 1 dEFt — Timer 1 Mode Selection – Select Default Mode
- dEFt 28 — Select Default Mode - 28
- on SEC — Select the Time Scale for which O/P should remain ON. Here selected in Second as an example
- SEC 0 10 — Select the Time for which O/P should remain ON. Here selected 10 Sec as an example
- oFF SEC — Select the Time Scale for which O/P should remain OFF. Here selected in Second as an example
- SEC 0 10 — Select the Time for which O/P should remain OFF. Here selected 10 Sec as an example
- CoUn do'n — Time Counting Mode Up or Down Here Down Counting selected as an example
- PrFL P 1 — Save these settings in Profile P1 or P2 Here P1 selected as an example

Select the menu as given below to configure the Timer1 for **DELAYED PULSE -REMOTE TRIGGER** (Customized)

Down / Up

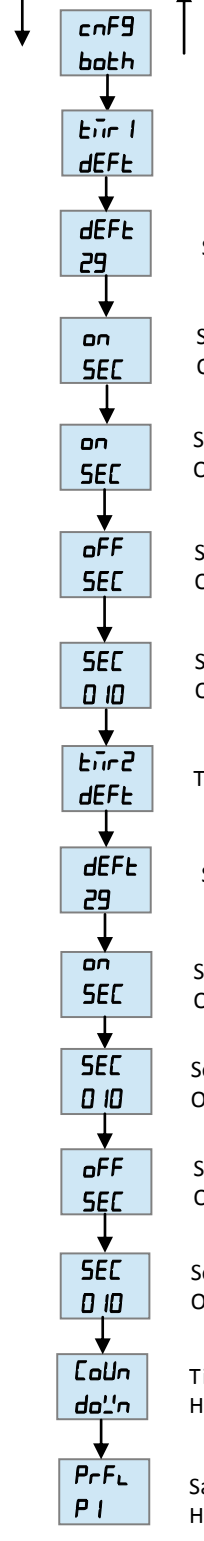
- cnFG tiMr 1 — Device configuration selection : Select Timer1 (Timer1 will get configure)
- tiMr 1 cUSt — Timer 1 Mode Selection – Select Customized Mode
- cUSt S .9 — Select Customized Mode – Signal Based
- I rLS oFF — Initial Relay Status before signal status detection – Select OFF
- SI 9 SP — On which signal condition do you want to take Action? Select Signal Present
- SP LEUL — Action to be taken on signal transition or level – select Level
- rSP oFon — Status of O/P after signal Present detection– select OFF-ON
- CYCn onE — How many cycles you want? - Select One
- CYCr no — Do you want to repeat the cycle? - Select NO
- on SEC — Select the Time Scale for which O/P should remain ON. Here selected in Second as an example
- SEC 0 10 — Select the Time for which O/P should remain ON. Here selected 10 Sec as an example
- oFF SEC — Select the Time Scale for which O/P should remain OFF. Here selected in Second as an example
- SEC 030 — Select the Time for which O/P should remain OFF. Here selected 30 Sec as an example
- tdt 1 YES — Do you want take action if signal transition occurs during timing? - Select Yes
- tdt 1 SA — On which signal condition do you want to take Action? Select Signal Absent
- dUrn on — On which Relay condition do you want to take Action if the transition of the signal occurs during timing? Select ON
- tdt 1 rLoF — What Action do you want to take if signal transition occurs during timing – Select Relay OFF
- rPtS YES — Do you want to repeat this cycle after every signal transition - Select Yes
- CoUn UP — Time Counting Mode Up or Down Here Up Counting selected as an example
- PrFL P2 — Save these settings in Profile P1 or P2 Here P2 selected as an example

MODE-29: DELAYED PULSE (CONST. SUPPLY TYPE 1)

Supply to the unit must be continuous. On application of input signal the time period 'TOFF' starts to run. On completion of 'TOFF', the relay output is switched ON immediately and the time period 'TON' starts to run. On completion of 'TON' the output is switched OFF. The input signal has no effect until ' TOFF' + ' TON' have completely expired.

Select the menu as given below to configure the Timer1 for **ODELAYED PULSE -CONST. SUPPLY TYPE 1** (Default)

Down Up



Device configuration selection : Select Both (Both Timers will get configure)

Timer 1 Mode Selection – Select Default Mode

Select Default Mode - 29

Select the Time Scale for which O/P should remain ON. Here selected in Second as an example

Select the Time for which O/P should remain ON. Here selected 10 Sec as an example

Select the Time Scale for which O/P should remain OFF. Here selected in Second as an example

Select the Time for which O/P should remain OFF. Here selected 10 Sec as an example

Timer 2 Mode Selection – Select Default Mode

Select Default Mode - 29

Select the Time Scale for which O/P should remain ON. Here selected in Hour : Minute as an example

Select the Time for which O/P should remain ON. Here selected 10 Sec as an example

Select the Time Scale for which O/P should remain OFF. Here selected in Hour : Minute as an example

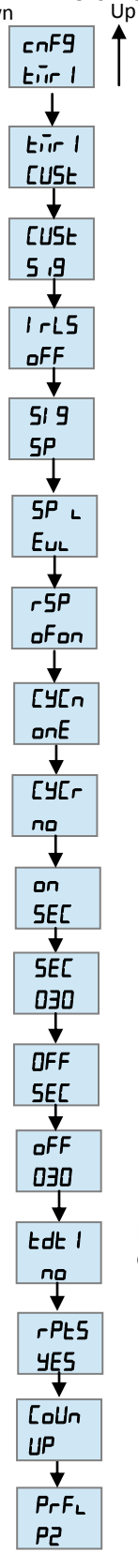
Select the Time for which O/P should remain OFF. Here selected 10 Sec as an example

Time Counting Mode Up or Down
Here Down Counting selected as an example

Save these settings in Profile P1 or P2
Here P1 selected as an example

Select the menu as given below to configure the Timer1 for **DELAYED PULSE -CONST. SUPPLY TYPE 1** (Customized)

Down Up



Device configuration selection : Select Timer1 (Timer1 will get configure)

Timer 1 Mode Selection – Select Customized Mode

Select Customized Mode – Signal Based

Initial Relay Status before signal status detection – Select OFF

On which signal condition do you want to take Action? Select Signal Present

Action to be taken on signal transition or level – select Level

Status of O/P after signal Present detection– select OFF-ON

How many cycles you want? - Select One

Do you want to repeat the cycle? - Select NO

Select the Time Scale for which O/P should remain ON. Here selected in Second as an example

Select the Time for which O/P should remain ON. Here selected 30 sec as an example

Select the Time Scale for which O/P should remain OFF. Here selected in Second as an example

Select the Time for which O/P should remain OFF. Here selected 30 sec as an example

Do you want take action if signal transition occurs during timing? - Select No

Do you want to repeat this cycle after every signal transition - Select Yes

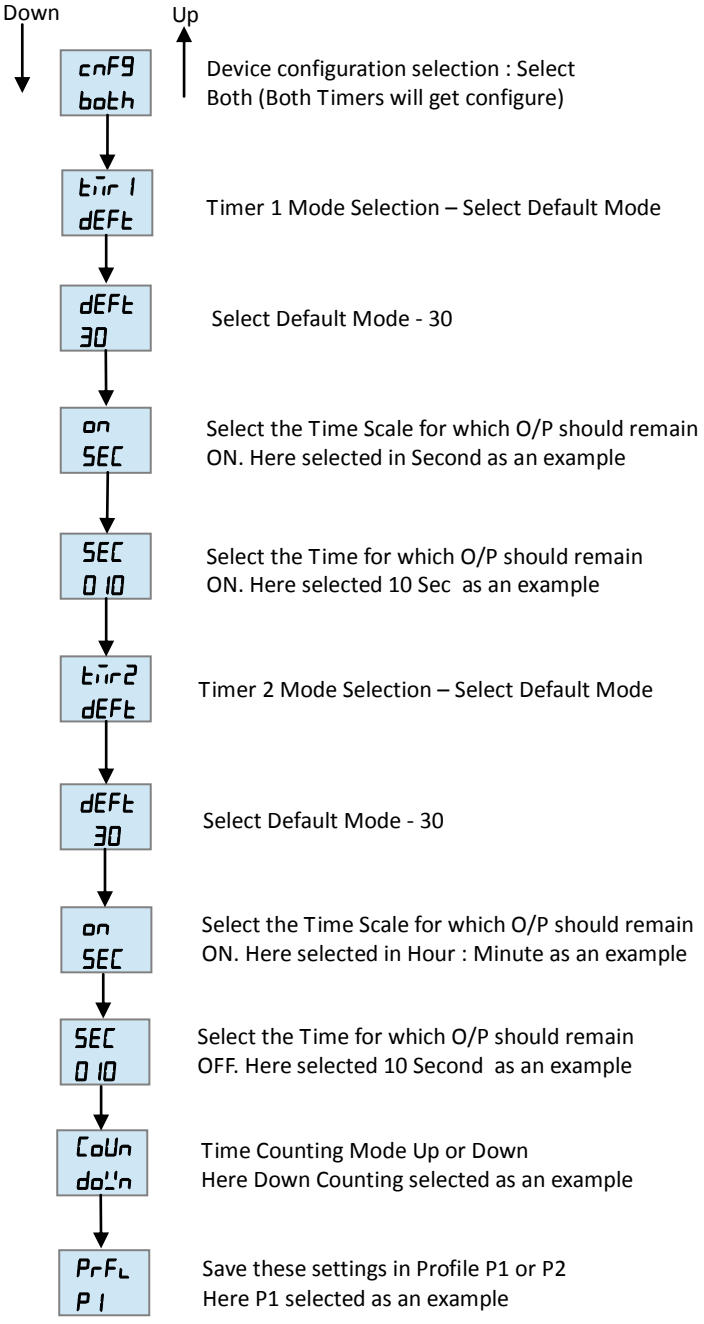
Time Counting Mode Up or Down
Here Up Counting selected as an example

Save these settings in Profile P1 or P2
Here P2 selected as an example

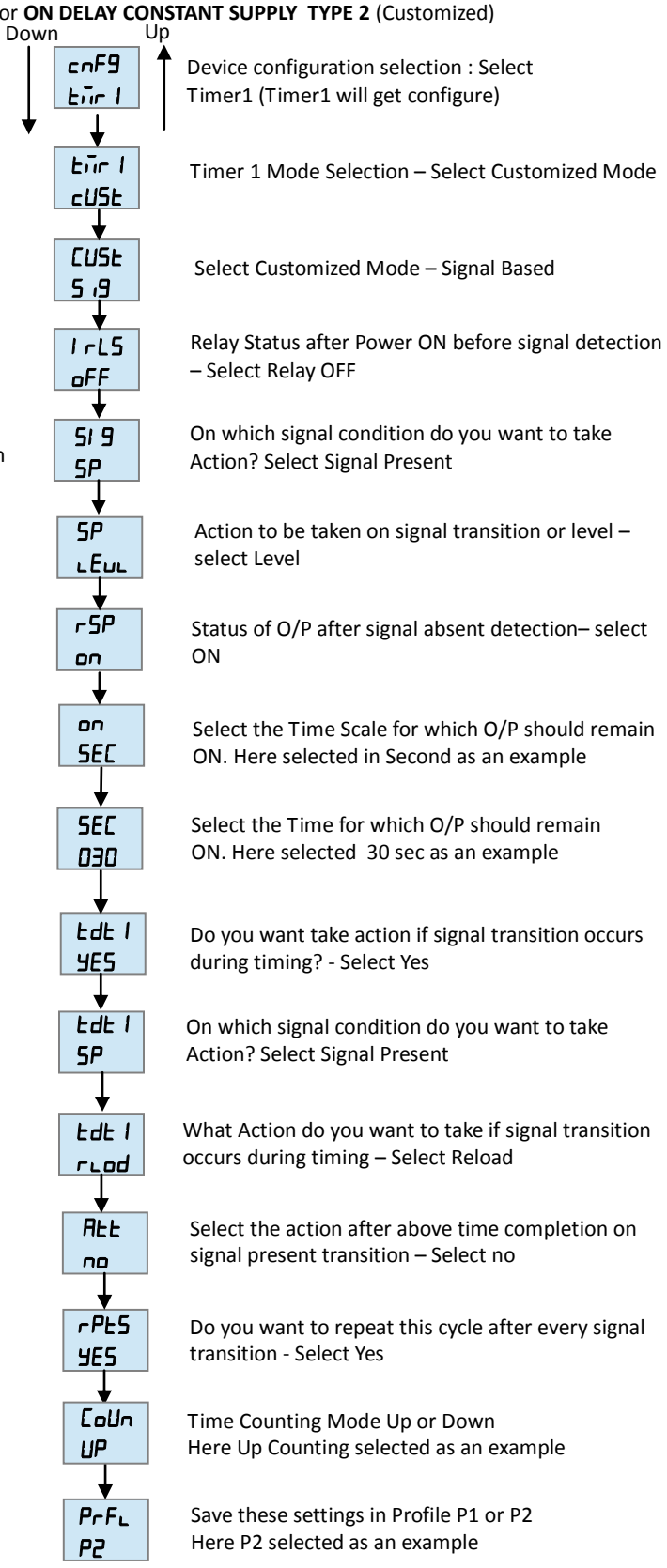
MODE-30: ON PULSE (CONTROL SWITCH RESETTABLE)/ WATCH DOG TYPE

When the supply is connected and signal is applied, output is switched ON and the timing function starts. If signal is removed and applied during the preset timing then timing is restarted and output stays ON. After preset time(TON) has elapsed the output is switched OFF.

Select the menu as given below to configure the Timer1 for **ON DELAY CONSTANT SUPPLY TYPE 2** (Default)



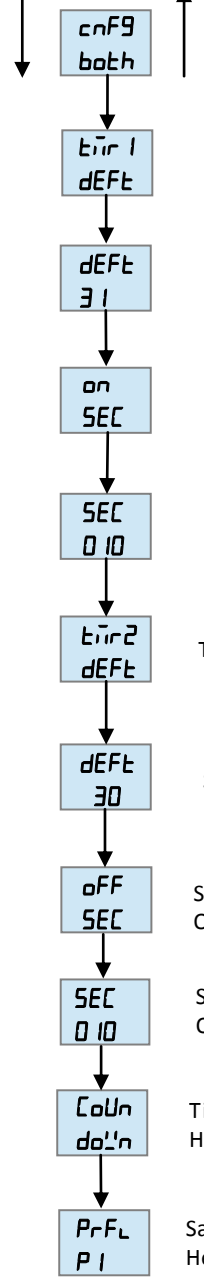
Select the menu as given below to configure the Timer1 for **ON DELAY CONSTANT SUPPLY TYPE 2** (Customized)



MODE – 31: ON PULSE (SUPPLY RESET)
On application of supply voltage the output is switched ON. The first pulse of input signal starts the preset time period. Receiving pulses during the time period extends it and output stays ON. Receiving no signal pulses during the time period completes it and output is switched OFF. Output stays OFF until supply voltage has been interrupted.

Select the menu as given below to configure the Timer1 for **ON PULSE (SUPPLY RESET)** (Default)

Down Up



Device configuration selection : Select Both (Both Timers will get configure)

Timer 1 Mode Selection – Select Default Mode

Select Default Mode - 31

Select the Time Scale for which O/P should remain ON. Here selected in Second as an example

Select the Time for which O/P should remain ON. Here selected 10 Sec as an example

Timer 2 Mode Selection – Select Default Mode

Select Default Mode - 30

Select the Time Scale for which O/P should remain ON. Here selected in Hour : Minute as an example

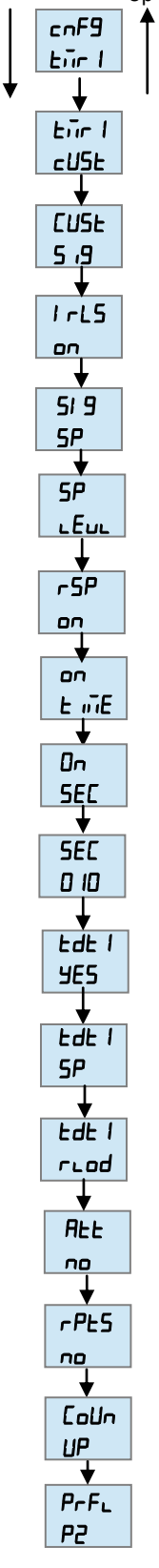
Select the Time for which O/P should remain ON. Here selected 10 Second as an example

Time Counting Mode Up or Down
Here Down Counting selected as an example

Save these settings in Profile P1 or P2
Here P1 selected as an example

Select the menu as given below to configure the Timer1 for **ON PULSE (SUPPLY RESET)** (Customized)

Down Up



Device configuration selection : Select Timer1 (Timer1 will get configure)

Timer 1 Mode Selection – Select Customized Mode

Select Customized Mode – Signal Based

Relay Status after Power ON before signal detection – Select Relay ON

On which signal condition do you want to take Action? Select Signal Present

Action to be taken on signal transition or level – select Level

Status of O/P after signal absent detection– select ON

Do you want output to be ON for specific time duration or continuously – select for Specific time duration

Select the Time Scale for which O/P should remain ON. Here selected in Second as an example

Select the Time for which O/P should remain ON. Here selected 10 sec as an example

Do you want take action if signal transition occurs during timing? - Select Yes

On which signal condition do you want to take Action? Select Signal Present

What Action do you want to take if signal transition occurs during timing – Select Reload

Select the action after above time completion on signal present transition – Select no

Do you want to repeat this cycle after every signal transition - Select No

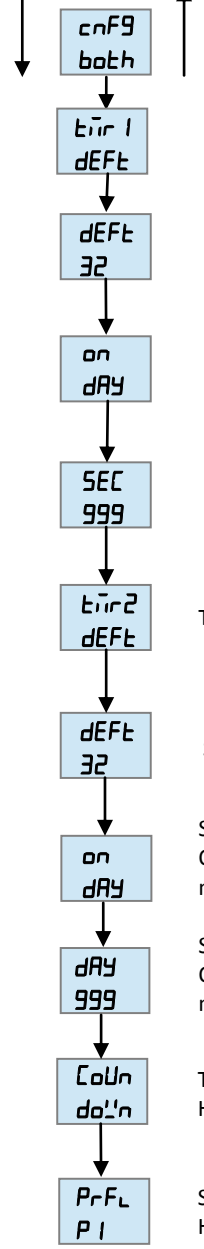
Time Counting Mode Up or Down
Here Up Counting selected as an example

Save these settings in Profile P1 or P2
Here P2 selected as an example

MODE – 32: Leading Edge Bi-stable or Step Mode:
After every signal, the output contact changes their states, alternately switching from open to close & vice versa.
Important Note:
As per the timing diagram this mode is not time base mode, hence ideally there is no need to enter the time. But if we havce select action on Signal present as relay ON contineuosly, then as per flow chart of the TDT2 (Action on Transition during Run Time) will not shown. So select relay on time maximum i.e 999 Days.

Select the menu as given below to configure the Timer1 for **Leading Edge Bi-stable or Step Mode** (Default)

Down / Up



Device configuration selection : Select Both (Both Timers will get configure)

Timer 1 Mode Selection – Select Default Mode

Select Default Mode - 32

Select the Time Scale for which O/P should remain ON. Here selected in Day as we want to select maximum time.

Select the Time for which O/P should remain ON. Here selected 999 Days as we want to

Timer 2 Mode Selection – Select Default Mode

Select Default Mode - 32

Select the Time Scale for which O/P should remain ON. Here selected in Day as we want to select maximum time.

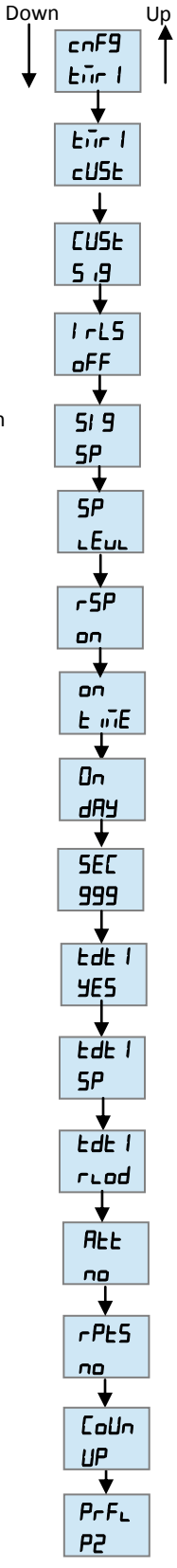
Select the Time Scale for which O/P should remain ON. Here selected in 999 Day as we want to select maximum time.

Time Counting Mode Up or Down
Here Down Counting selected as an exampl

Save these settings in Profile P1 or P2
Here P1 selected as an example

Select the menu as given below to configure the Timer1 for **Leading Edge Bi-stable or Step Mode** (Customized)

Down / Up



Device configuration selection : Select Timer1 (Timer1 will get configure)

Timer 1 Mode Selection – Select Customized Mode

Select Customized Mode – Signal Based

Relay Status after Power ON before signal detection – Select Relay ON

On which signal condition do you want to take Action? Select Signal Present

Action to be taken on signal transition or level – select Level

Status of O/P after signal absent detection– select ON

Do you want output to be ON for specific time duration or continuously – select for Specific time duration

Select the Time Scale for which O/P should remain ON. Here selected in Day as we want to select maximum time.

Select the Time Scale for which O/P should remain ON. Here selected in 999 Day as we want to select maximum time.

Do you want take action if signal transition occurs during timing? - Select Yes

On which signal condition do you want to take Action? Select Signal Present

What Action do you want to take if signal transition occurs during timing – Select Reload

Select the action after above time completion on signal present transition – Select no

Do you want to repeat this cycle after every signal transition - Select No

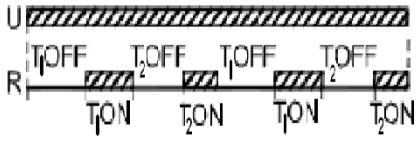
Time Counting Mode Up or Down
Here Up Counting selected as an example

Save these settings in Profile P1 or P2
Here P2 selected as an example

Examples of Customized modes which are not included in Default Modes:

1) **Cyclic OFF/ON (two OFF/ ON cycles) mode (Customized) :**

Timing Chart :

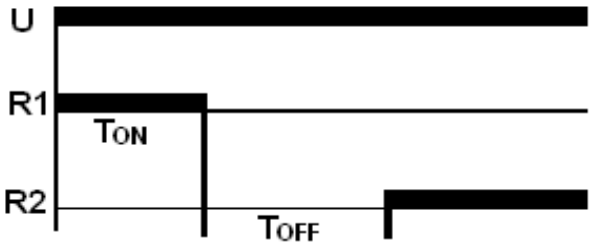


Select the menu as given below to configure the Timer1 for Cyclic OFF/ON (two OFF/ ON cycles) mode (Customized) :

Down / Up

- `cnF9 tmr 1` — Device configuration selection : Select Timer1 (Timer1 will get configure)
- `tMr 1 CUSt` — Timer 1 Mode Selection – Select
- `CUSt nS 19` — Timer 1 Mode Selection – Select Customized Mode
- `rLYS oFF` — Relay Status after Power ON – Select Relay OFF
- `OFF t ME` — Do you want output to be OFF for specific time duration or continuously – select for Specific
- `oFF SEC` — Select the Time Scale for which O/P should remain OFF. Here selected in Second as an
- `SEC 0 10` — Select the Time for which O/P should remain OFF. Here selected 10 Sec as an example
- `on t ME` — Do you want output to be ON for specific time duration or continuously – select for
- `on SEC` — Select the Time Scale for which O/P should remain ON. Here selected in Second as an
- `SEC 0 15` — Select the Time for which O/P should remain ON. Here selected 15 Sec as an example
- `CYCn t'o` — How many cycles you want? - Select One
- `CYCr YES` — Do you want to repeat the Cycle? Select
- `OFF t ME` — Do you want output to be OFF for specific time duration or continuously – select for Specific time duration
- `oFF SEC` — Select the Time Scale for which O/P should remain OFF. Here selected in Second as an example
- `SEC 020` — Select the Time for which O/P should remain OFF. Here selected 20 Sec as an example
- `on t ME` — Do you want output to be ON for specific time duration or continuously – select for Specific time duration
- `on SEC` — Select the Time Scale for which O/P should remain ON. Here selected in Second as an example
- `SEC 025` — Select the Time for which O/P should remain ON. Here selected 25 Sec as an example
- `CoUn U` — Time Counting Mode Up or Down Here Up Counting selected as an example
- `PrFL P2` — Save these settings in Profile P1 or P2 Here P2 selected as an example

2) Star delta Mode:



Mode Description:
When the supply is applied, Output Relay 1 turns ON. After completion of set ON time, Relay 1 turns OFF and Relay 2 turns ON after the OFF time (Pause Time in case of Star Delta) Time remains ON till the Supply is present.

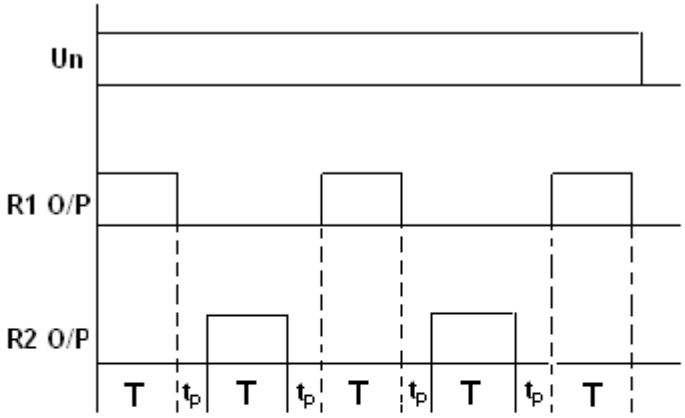
Note: Select the OFF time of timer2 = Timer1 ON time + Pause Time

Select the menu as given below to configure the Timer1 for Star -Delta Mode(Customized) :

Down Up

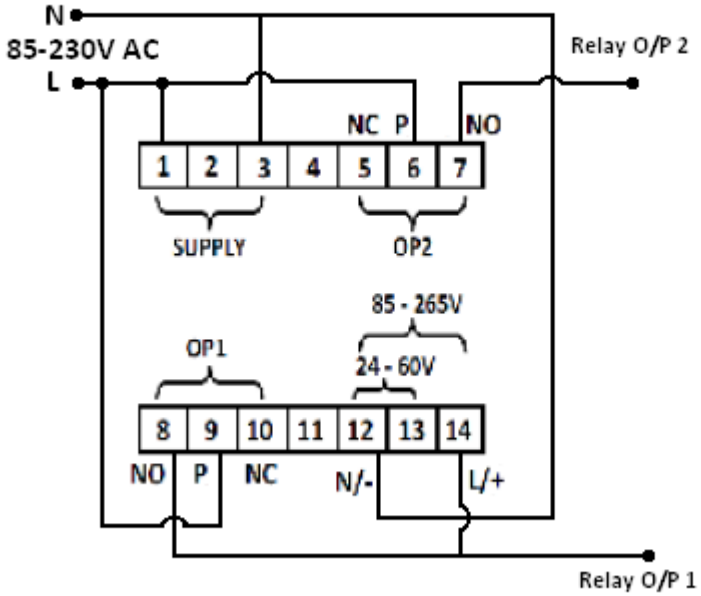
- cnF9 tmr 1 — Device configuration selection : Select Timer1 (Timer1 will get configure)
- tMr 1 CUSt — Timer 1 Mode Selection – Select
- CUSt nS 19 — Timer 1 Mode Selection – Select Customized Non-Signal Based
- rLY5 on — Relay Status after Power ON – Select Relay ON
- on t iME — Do you want output to be ON for specific time duration or continuously – select for
- on SEC — Select the Time Scale for which O/P should remain ON. Here selected in Second as an
- SEC 030 — Select the Time for which O/P should remain OFF. Here selected 30 Sec as an example
- OFF cont — Do you want output to be ON for specific time duration or continuously – select
- tMr2 CUSt — Timer 2 Mode Selection – Select
- CUSt nS 1 — Timer 1 Mode Selection – Select Customized Non-Signal Based
- rLY5 oFF — Relay Status after Power ON – Select Relay OFF
- OFF t iME — Do you want output to be OFF for specific time duration or continuously – select for Specific time duration
- oFF SEC. — Select the Time Scale for which O/P should remain OFF. Here selected in Second as an example
- SEC 30.1 — Select the Time for which O/P should remain OFF. Here selected 30.1 Sec as an example (Considering 100ms Pause Time)
- on c ont — Do you want output to be ON for specific time duration or continuously – select Continuously
- CoUn U — Time Counting Mode Up or Down Here Up Counting selected as an example
- PrFL P2 — Save these settings in Profile P1 or P2 Here P2 selected as an example

3. **Forward-Reverse Mode:**



Important Note: To built & implement this mode we have to connect the Relay 1 O/P as a signal for Relay 2. Timer 1 needs to be configured as a Non-Signal based Mode & Timer 2 needs to be configured as a Signal Based Mode. (As shown in Below Diagram)
T – Relay 1 & Relay 2 O/P On Time.
tp – Pause time
For Relay 1 O/P select OFF = T (On Time) + 2 X tp (Pause Time)

Connection Diagram:



Select the menu as given below to configure the Timer for Forward-Reverse Mode (Customized) :