Model- T5F

Din rail mountable Asymmetrical timer relay, Five different functions with memory and non-memory mode. Programmable time range from one second to ten days. Designed for time based switching application. Capable of drive a 10 Amps / 230v AC load.

> Microcontroller based programmable switching device

> Seven segment display for time setting, countdown read

> Integrated safety supervisory circuit and temperature sensor.

Application
ON delay switch
OFF delay switch
ON-OFF delay switch
Flasher beginning with ON delay switch
Flasher beginning with OFF delay switch
Watch dog timer with external reset input.

Accessories(optional)   DS50, LD45

Technical Data	
Input supply voltage	24v - 230v AC/DC
Functions	Five timer functions
Operating mode	Memory, Non-memory
Countdown display	Seven segment LED
LED Indications	Relay status, Function settings
Time setting range	1 sec [min] - 10 days [max]
Relay continuous current	Elec-Mech, SPDT, 10A@230vAC
Relay contacts	1000000 Operations
Ext. control input	Reset
Safety features	Supervisory Circuits, Thermal off
Terminals	4mm Sq solid
Enclosure protection	IP20 / DIN EN60529
Size	45x75x105mm
Installation style	Din rail mountable
Colour	Light grey
Weight	Approx 225gm
Warranty	One year
Model: T5F	

Input(v) Input supply voltage range from 24v to 230v AC/DC.

CTL Input The CTL input voltage range from 24volt to 230volt AC or DC. Supply voltage to CTL input will reset the countdown to set value. Disconnecting supply voltage to CTL input will start countdown. Seven segment led display blink every few seconds once indicate CTL input is ON.

Function switch Function knob is used to select the function. Functions name with bar above is memory mode functions. Other are non memory mode functions.

Time range switch Time range switch is use to select ON or OFF delay time range from 1 seconds to 10 days.

T-ON switch T-ON switch is use to select ON delay time. Example: Ton_{delay} = Time range x T-ON = 1h x 0.5 = 30min
{ See front panel }

T-OFF switch T-OFF switch is use to select OFF delay time. Example: $Toff_{delay}$ = Time range x T-OFF = 1h x 1.0 = 60min
{ See front panel }

Output Electromechanical relay SPDT. Output capable to drive 10amps load current (10A/230vAC).

Display Four digit seven segment LED display. It display the count down in seconds (or) minutes (or) hours. Change in switch setting reflect on the display.

LED indicator

F1 - blink & F2- OFF	**ND** function selected
F1 - OFF & F2 - blink	**FD** function selected
F1 - ON & F2 - ON	**NFD** function selected
F1, F2 blinks simultaniously	**FBN** function selected
F1, F2 blinks sequentially	**FBF** function selected
Relay - ON	Relay active, Output ON

Front Panel

Front panel labels: CTL input, U1 U2 Input(V), MEM F2 F1 RELAY, LED Indicator, Function switch, Time range switch, Display, Count Indicator, T-ON switch, T-OFF switch, KUDIL T5F, NO C NC, Output, FUNCTIONS, TIME RANGE, T-ON, T-OFF
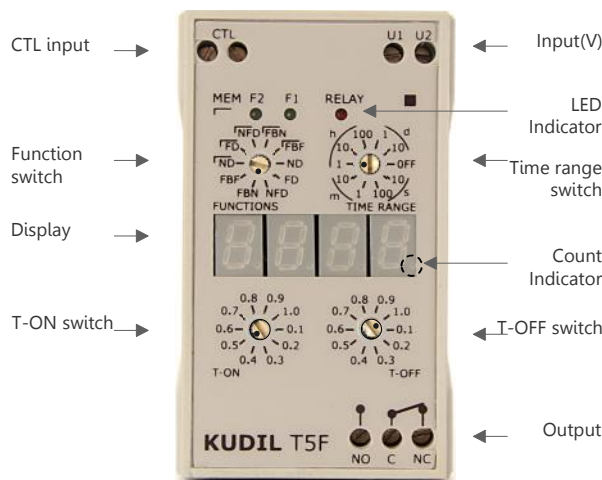
Count indicator

|	
Count led blink every 5 seconds	Count down in hours
Count led blink every second	Count down in minutes
Display '0' and count led blink	ND,FD,NFD countdown end
Seven segment display blink	CTL input ON
Display 'set' every 15 seconds	Set value changed
Display 'Er 1'	Device temperature high

Functions

ND(on-delay)   The relay output will be initially in switch-off position and then switch-on after an adjustable time **Toff delay**.

Ex-1

Ex-2
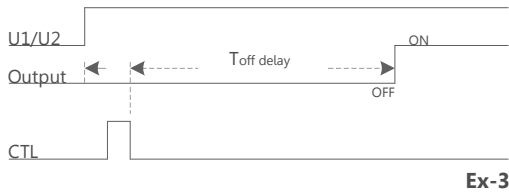
Ex-3

$\overline{ND}$ (on-delay)   In memory mode **Toff delay** count continue when the power fail and resume. It will not get reset.
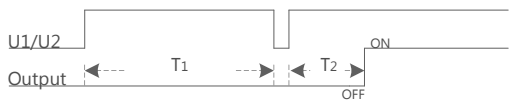
$T_{off\ delay} = T_1 + T_2$

Ex-4

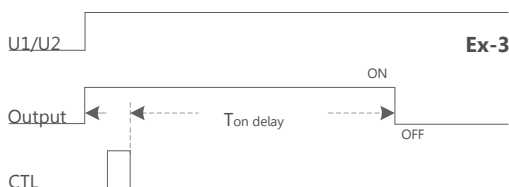**FD(off-delay)**   The relay output will be initially in switch-on position and then switch-off after an adjustable time **Ton delay**.
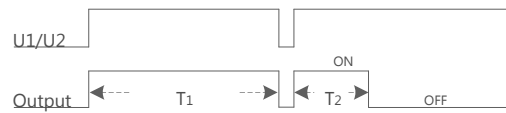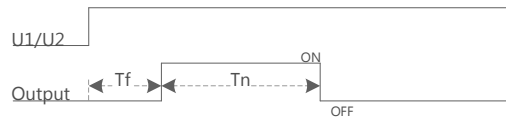

Ex-1
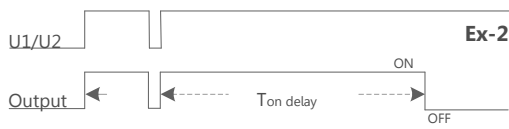
Ex-2

Ex-3

$\overline{FD}$ (off-delay)   In memory mode **Ton delay** count continue when the power fail and resume. It will not get reset.

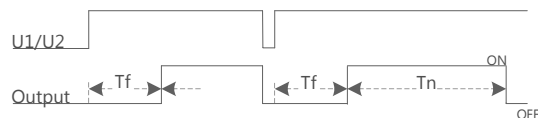$T_{on\ delay} = T_1 + T_2$

Ex-4

NFD(on-off-delay)   The relay output will be initially in switch-off position and then switch-on after an adjustable time **Toff delay**. And stay switch-on for an adjustable time **Ton delay**, and then switch-off.

Tf=Toff delay   Tn=Ton delay   Ex-1

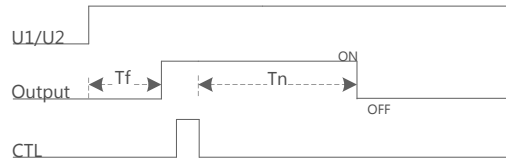Tf=Toff delay   Tn=Ton delay   Ex-2

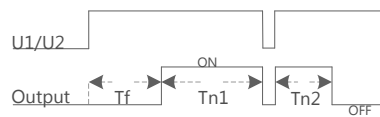

Tf=Toff delay   Tn=Ton delay   Ex-3

$\overline{NFD}$ (on-off-delay)   In memory mode **Ton delay / Toff delay** count continue when the power fail and resume. It will not get reset.

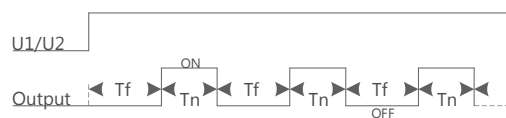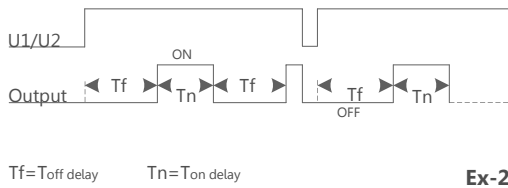Tf=Toff delay   Tn=Toff delay=Tn1 + Tn2   Ex-4

FBN (flasher beginning with on-delay)   The relay output will be initially in switched-off position and then switch-on after an adjustable time **Toff delay** and stays switch-on for an adjustable time **Ton delay** and then switch-off. This loop repeats until the device is powered off.

Tf=Toff delay   Tn=Ton delay   Ex-1

U1/U2 — ON

Output: Tf | Tn | Tf | Tf | Tn | OFF

Tf=Toff delay   Tn=Ton delay   **Ex-2**

U1/U2 — ON

Output: Tf | Tn | Tf | OFF | Tn | Tf

CTL

Tf=Toff delay   Tn=Ton delay   **Ex-3**

F̄B̄N (flasher beginning with on-delay)   In memory mode **Ton delay / Toff delay** count continue when the power fail and resume. It will not get reset.

U1/U2 — ON

Output: Tf | Tn | Tf | OFF | T1 | T2 | Tf

Tf=Toff delay   Tn=Ton delay=T1+T2   **Ex-4**

FBF (flasher beginning with off-delay)   The relay output will be initially in switched-off position and then switch-on after an adjustable time **Toff delay** and stays switch-on for an adjustable time **Ton delay** and then switch-off. This loop repeats until the device is powered off.
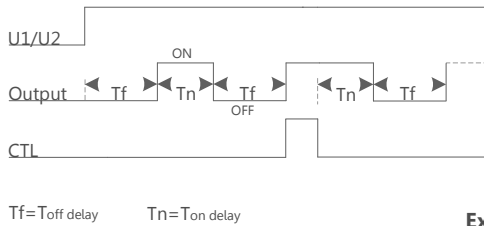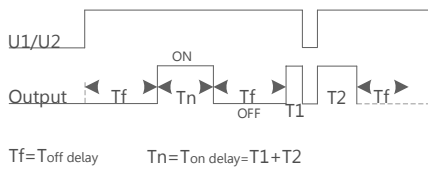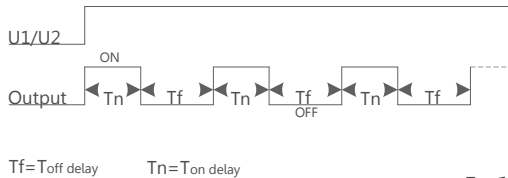

U1/U2 — ON

Output: Tn | Tf | Tn | Tf | OFF | Tn | Tf

Tf=Toff delay   Tn=Ton delay   **Ex-1**

U1/U2 — ON

Output: Tn | Tf | OFF | Tn | Tn | Tf

Tf=Toff delay   Tn=Ton delay   **Ex-2**

U1/U2 — ON

Output: Tn | Tf | OFF | Tn | Tf | Tn | Tf

CTL

Tf=Toff delay   Tn=Ton delay   **Ex-3**

F̄B̄N (flasher beginning with on-delay)   In memory mode **Ton delay / Toff delay** count continue when the power fail and resume. It will not get reset.
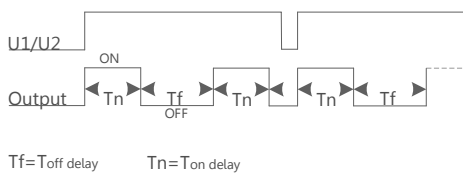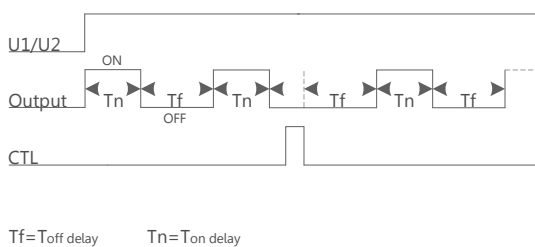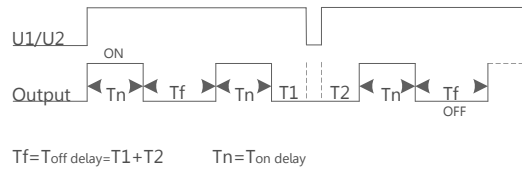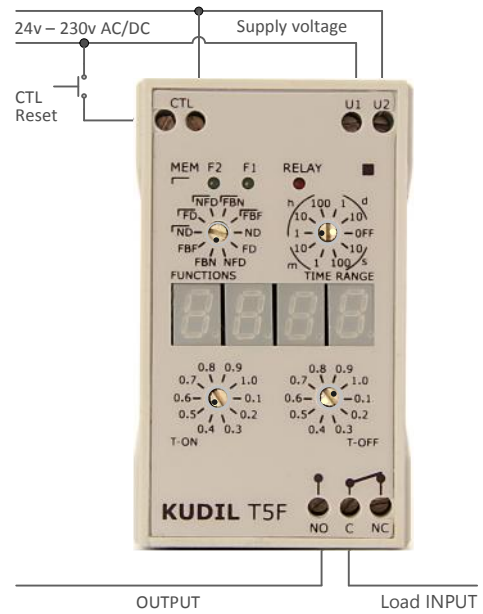

U1/U2 — ON

Output: Tn | Tf | Tn | T1 | T2 | Tn | Tf | OFF

Tf=Toff delay=T1+T2   Tn=Ton delay   **Ex-4**

Wiring diagram

24v – 230v AC/DC   Supply voltage

CTL Reset

OUTPUT   Load INPUT

Safety Precautions

Avoid using this device in high temperature environment etc. Do not place objects on top of the device. Unplug the device from the main before cleaning. Do not use liquid cleaner. This device is recommended for indoor use only or with weather proof enclosure.

Service Information

Please mail us to info@kudiltech.com , Clearly mention the problem and purchased date. KudilTech will contact you.

Fuse Replacement

If the fuse blows, there will be no output. The following instructions are for use by qualified personnel only. The fuse is located on the top panel. Replace only with a fuse of correct current rating.

One-Year Warranty

KudilTech warranty to the original purchaser that its product and parts, will be free from defects in workmanship and materials for a period of one year from date of purchase. This warranty does not apply of misuse or abuse of the product, unauthorized repairs. This product must be registered by completing registration at within 15 days of purchase.