

Digital Timer *Eliro*[®]

- Compact 17.5 mm Wide
- Multi-Function: (8 or 17) Non Signal & Signal based functions
- Multi-Voltage: 24 - 240 VAC/DC
- Wide Timing Range: 0.1s to 999 Hr
- 3 Digit LCD for Preset time and Run time
- Option to select Up/Down counting
- Tamper proof with key lock feature

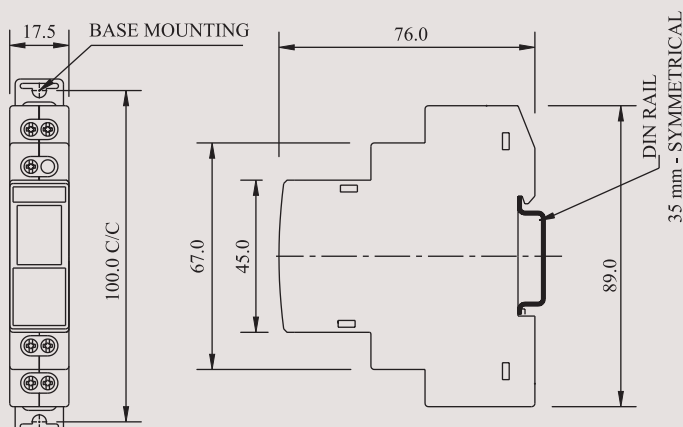


Cat. No.	V0DDTS	V0DDTD	V0DDTS1	V0DDTD1	
Parameters					
Mode	Multi-Function (8 Modes)		Multi-Function (17 Modes)		
Supply Voltage (φ)	24 - 240 VAC/DC				
Supply Variation	-15% to +10% (of φ)				
Frequency	50/60 Hz				
Power Consumption (Max.)	10 VA				
Timing Range	0.1s to 999h				
Repeat Accuracy	± 0.5%				
Output	Relay Output	1 C/O	2 NO	1 C/O	2 NO
	Contact Rating	8A @ 240 VAC / 24 VDC (Resistive)			
	Electrical Life	1x10 ⁵			
	Mechanical Life	2x10 ⁷			
Utilization Category	AC - 15	Rated Voltage (Ue): 125/240 V, Rated Current (Ie): 3/1.5 A			
	DC - 13	Rated Voltage (Ue): 125/250 V, Rated Current (Ie): 2/0.22/0.1 A			
Operating Temperature	-10° C to +55° C				
Storage Temperature	-20° C to +65° C				
Humidity (Non Condensing)	95% (Rh)				
LED Indication	Red LED → Relay ON				
Enclosure	Flame Retardant UL94V0				
Dimension (W x H x D) (in mm)	17.5 X 89 X 76				
Weight (unpacked)	85 g				
Mounting	Base / DIN rail				
Certification					
Degree of Protection	IP 20 for Terminals, IP 30 for Enclosure				
EMI/ EMC					
Harmonic Current Emissions	IEC 61000-3-2	Ed. 3.0 (2005-11) Class A			
ESD	IEC 61000-4-2	Ed. 1.2 (2001-04) Level II			
Radiated Susceptibility	IEC 61000-4-3	Ed. 3.0 (2006-02) Level III			
Electrical Fast Transients	IEC 61000-4-4	Ed. 2.0 (2004-07) Level IV			
Surges	IEC 61000-4-5	Ed. 2.0 (2005-11) Level IV			
Conducted Susceptibility	IEC 61000-4-6	Ed. 2.2 (2006-05) Level III			
Voltage Dips & Interruptions (AC)	IEC 61000-4-11	Ed. 2.0 (2004-03) Level All 7 Levels			
Voltage Dips & Interruptions (DC)	IEC 61000-4-29	Ed. 1.0 (2000-08) Level All 5 Levels			
Conducted Emission	CISPR 14-1	Ed. 5.0 (2005-11) Class A			
Radiated Emission	CISPR 14-1	Ed. 5.0 (2005-11) Class A			
Environmental					
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, 6ms			
Non-Repetitive Shock	IEC 60068-2-27	Ed. 4.0 (2008-02) 30g, 15ms			

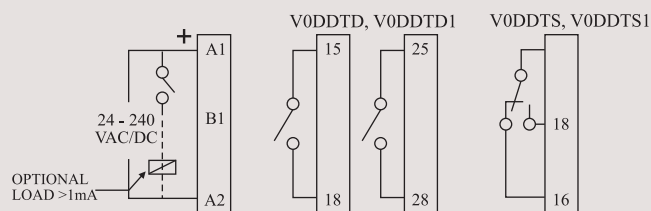
ORDERING INFORMATION

Cat. No.	Description
V0DDTS	24 - 240 VAC/DC, Digital Timer - Eliro (8 Functions), 1C/O
V0DDTD	24 - 240 VAC/DC, Digital Timer - Eliro (8 Functions), 2 NO
V0DDTS1	24 - 240 VAC/DC, Digital Timer - Eliro (17 Functions), 1C/O
V0DDTD1	24 - 240 VAC/DC, Digital Timer - Eliro (17 Functions), 2 NO

MOUNTING DIMENSION (mm)



CONNECTION DIAGRAM



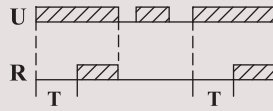
TERMINAL TORQUE & CAPACITY

 Ø 3.5 mm	Torque - 0.40 N.m (3.5 Lb.in) Terminal screw - M2.5
 AWG	Solid Wire - 1 X 0.3...2.5 mm ² 1 X 22 to 14



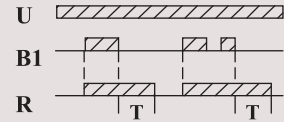
FUNCTIONAL DIAGRAMS FOR V0DDTS1 & V0DDTD1

ON DELAY [0]



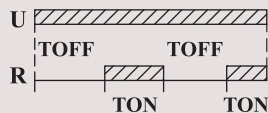
Timing commences when supply is present. R energizes at the end of the timing period.

SIGNAL OFF DELAY [9]



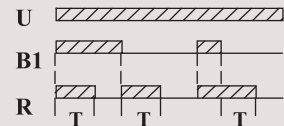
R energizes when switch B1 is closed. Timing commences after S is opened and then the relay de-energizes.

CYCLIC OFF/ON {OFF Start, (Sym, Asym)} [1]



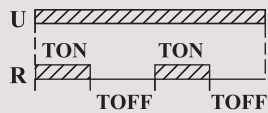
T-ON and T-OFF can be same or different. The relay (R) keeps on changing its status till power is removed.

IMPULSE ON/OFF [A]



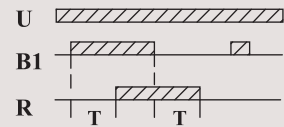
R energizes for the timing period when B1 is opened or closed. When timing commences, changing state of B1 does not affect R but resets timer.

CYCLIC ON/OFF {ON start, (Sym, Asym)} [2]



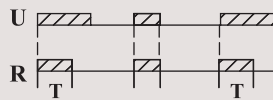
This function is quite similar to the function '1' but initially the relay (R) is ON for period T-ON after the power is applied.

SIGNAL OFF/ON [b]



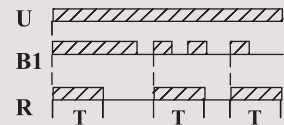
When switch B1 is closed or opened for preset time T, the relay changes its state after time duration T.

IMPULSE ON ENERGIZING [3]



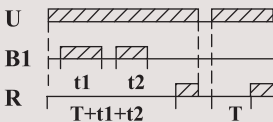
After power ON, R energizes and timing starts. R de-energizes after timing is over.

LEADING EDGE IMPULSE1 [C]



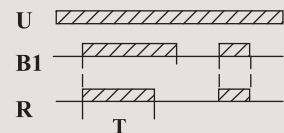
When B1 is closed, output relay energizes until timing irrespective of any further action of B1.

ACCUMULATIVE DELAY ON SIGNAL [4]



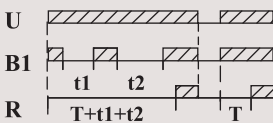
Time commences as supply is present and switch B1 is open. Closing switch B1 pauses timing. Timing resumes when switch B1 is opened again. R energizes at the end of timing.

LEADING EDGE IMPULSE2 [d]



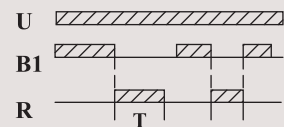
when switch B1 is closed, and remains closed output relay energizes until timing is over. If B1 is opened during timing, R resets.

ACCUMULATIVE DELAY ON INVERTED SIGNAL [5]



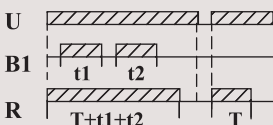
Time commences as supply is present and switch B1 is closed. Opening switch B1 pauses timing. Timing resumes when switch B1 is closed again. R energizes at end of timing.

TRAILING EDGE IMPULSE1 [E]



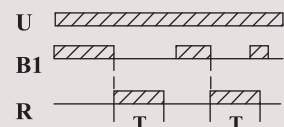
when B1 is opened, R energizes and de-energizes when timing is over. If B1 is closed during timing R resets.

ACCUMULATIVE IMPULSE ON SIGNAL [6]



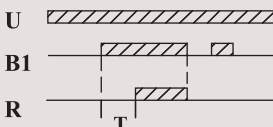
When supply is ON, R energizes. When switch B1 is closed timing is suspended and remains suspended till switch B1 is opened again. Interrupting supply resets timer.

TRAILING EDGE IMPULSE2 [F]



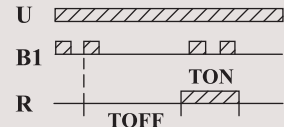
When switch B1 is opened, R energizes and will de-energize when timing is over. If B1 is pulsed during timing period it will have no effect on R.

SIGNAL ON DELAY [7]



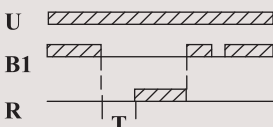
Timing starts when switch B1 is closed. R energizes at end of timing period and de-energizes when B1 is opened.

DELAYED IMPULSE [G]



when switch B1 is closed, TOFF starts. Relay energizes at the end of TOFF period. Then, TON starts irrespective of signal level and relay de-energizes at the end of TON period.







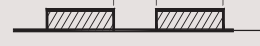









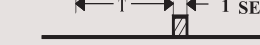
INVERTED SIGNAL ON DELAY [8]



Timing will commence when supply is present and switch B1 is open. R energizes after timing .If B1 is closed during timing period, timing resets to the beginning of cycle.



FUNCTIONAL DIAGRAMS FOR V0DDTS & V0DDTD

<p>ON DELAY (A)</p>	<p>P : A1-A2 </p> <p>P: Power-On operation</p> <p>S : B1 </p> <p>R : </p>
<p>CYCLIC OFF/ON {OFF Start, (Sym, Asym)} (b)</p>	<p>S : B1 </p> <p>T OFF T ON T OFF T ON</p> <p>R : </p>
<p>CYCLIC ON/OFF {ON Start, (Sym, Asym)} (C)</p>	<p>S : B1 </p> <p>T ON T OFF T ON T OFF</p> <p>R : </p>
<p>SIGNAL ON/OFF (d)</p>	<p>S : B1 </p> <p>R : </p>
<p>SIGNAL OFF DELAY (E)</p>	<p>S : B1 </p> <p>R : </p>
<p>INTERVAL (F)</p>	<p>S : B1 </p> <p>R : </p>
<p>SIGNAL OFF / ON (G)</p>	<p>S : B1 </p> <p>R : </p>
<p>ONE SHOT OUTPUT (H)</p>	<p>S : B1 </p> <p>R : </p>

Note:

1. For Power-On operation (P) connect the terminal B1 to A1 permanently.
2. If the Signal (S) changes during the Timer Duration (T), it does not change the output relay but re-triggering takes places and the Timer Duration is extended.