

Multi-range Timer With Circular Scale LCD Display 72 □

Features

- Easy to read circular scale LCD display
- Convenient single-knob set-up of timing range and pre-set delay
- Six selectable timing ranges from 6 seconds to 60 hours
- Time Delay and Instantaneous Relays, each with N / O + N / C contacts
- Protected against accidental set-up changes
- Version V133T protected against power supply interruption

The Multi-Mode Timer **V133** features an easy-to-read circular scale LCD display, and simple set-up through a single multi-function knob.

The **V133** is quickly installed in a standard 72 □ instrument cut-out, using spring clips. Connections are made through rear screw terminals. The unit can alternatively be DIN rail mounted using an optional adaptor base. Timing can be initiated either by switching on the power supply, or by external contact across terminals B1-B2. These modes are selectable by shorting / opening terminals X1-X2. Models **V133L** and **V133TL** have a back-lit LCD display.

Functions

Models **V133** and **V133T** have 2 operating modes, selected by opening / shorting terminals X1-X2. With X1-X2 open, **V133** and **V133T** function identically. Instantaneous Relay (Ri) is energised and timing starts as soon as power is switched on. The Time Delay Relay (Rd) remains de-energised until the pre-set time ends, at which instant it is energised. Rd is deenergised again when power is switched off. In the **V133**, the timing cycle is aborted if power fails before the pre-set time ends. In the T-Version timing can be re-set by closing B1-B2. In the **V133**, with X1-X2 closed, Ri is energised, and timing starts as soon as B1-B2 contacts are closed. Rd acts as before. In the **V133T**, with X1-X2 closed,

Ri is energised when B1-B2 contacts are closed, and de-energised when these contacts are opened. Timing starts when B1-B2 contacts are toggled from closed to open. Rd acts as before. In Model **V133** with X1-X2 closed, and Model **V133T** with X1-X2 open or closed, timing is not aborted when power fails. The elapsed time at instant of power failure is memorised. When power resumes, the timing starts from the interrupted point. The display of the **V133T** remains on when power fails, for up to 5 days. Its battery recharges in approximately 24 hours.

Operation

Changes in settings are possible only when power supply is on. Pressing the knob briefly causes the inner circle of numbers to blink. The pre-set time is displayed on the circular scale, and can be changed by rotating the knob. Pressing the knob again causes the pre-set time to blink. The desired time range can be selected by repeatedly rotating and pressing the knob. The time range and pre-set time delay settings are protected against power failure. New settings are memorised,

and the Timer is re-set when power is switched off. The Timer is now ready for use.

The **V133** can set up for either single-range of multi-range operation. For this, the knob should be pressed for about 8 seconds when switching on the instrument, until the time units blink in the centre of the display. In this mode, a single time range can be selected. Delay settings then can be made only within the selected range: i.e., the timer will not jump to the next higher range if a delay setting exceeds the selected range. If all ranges are simultaneously selected, delay settings can freely be made for any time value, spanning all time ranges.

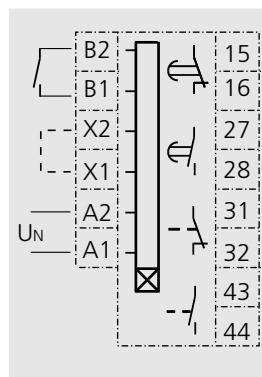
A time delay setting can be changed even while timing is in progress. The elapsed time is indicated by a blinking segment on the circular scale. The switching state of the the Time Delay Relay (Rd) is indicated by a relay symbol on the LCD display. If the knob is pressed for a longer duration and then released, the settings are protected against any changes. This secured mode is indicated by a small lock symbol on the LCD display. Unlocking can be done the same way.



Specifications

Voltage range	0.85 to 1.1 of nominal voltage
Frequency range	50 / 60 Hz
Rated consumption	Approx. 2 VA
Relay life	10 ⁷ switching cycles
Relay duty factor	3000 operations / hour
Timing accuracy	< ±0.5%; (at constant temperature)
Temperature influence	< 0.01% / °K; from 0 to +55 °C
Response time	Instant. Relay ≤ 40 ms
Re-set time	During timing ≤ 75 ms After timing ≤ 50 ms
Recovery time	During timing ≤ 120 ms After timing ≤ 60 ms
Operating temperature	-5 °C to +55 °C ambient
Isolation voltage	250 V
Creep & air path	Category III per VDE 0110
Test voltage	2000 V per VDE 0435
Mode of Protection	Terminals IP20, Enclosure IP50 to DIN VDE / 0470-1 (11/92)
Connecting terminals	Terminal Box with wire protection
Conductor size	2.5 mm ² fine wire, to be stripped up to max. 7 mm
Switching capacity	AC 15 250 V 6 A, DC 13 24 V 4 A
B1-B2 contacts	Potential free
Weight	Approx. 220g

Connection Diagram



Relay contacts:

1 Instantaneous N/C
1 Instantaneous N/O
1 Time delay N/C
1 Time delay N/O

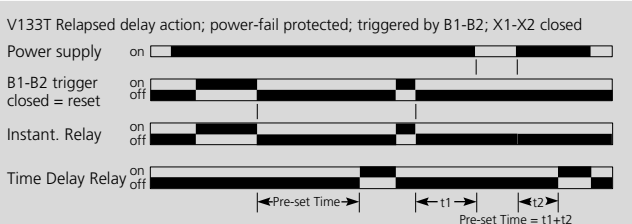
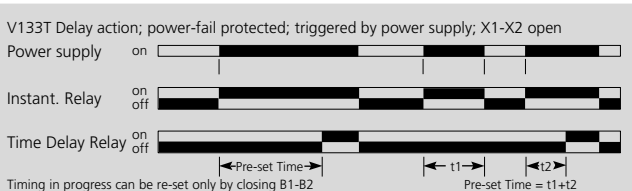
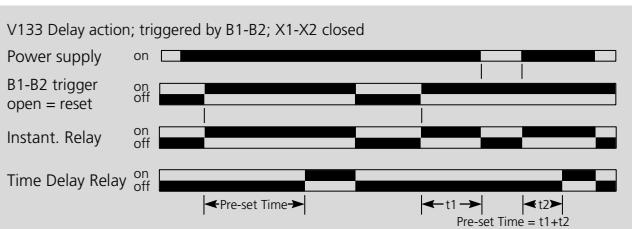
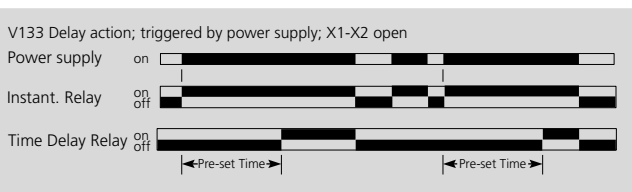
Time Ranges:

6 s	60 s
6 min	60 min
6 h (std)	60 h (std)

Accessories

Full-view front cover:	Type No.	Order No.
With lock ; IP 65	D63 x 6	10 300 054
With knob ; IP 65	D63 x 7	10 300 055
With lock ; IP 42	D63 x 4	10 300 044
With knob ; IP 42	D63 x 5	10 300 045
Rail mounting adaptor	D88 - 09	91 900 612
Adaptor plate 96 □	D64 x 1	10 300 107

Function Diagram



Models and Ordering Data

Type	V133	V133T	V133L	V133TL
Voltage	Order No.			
230 VAC	05002336	05002341	05002356	05002361
115 VAC	05002337	05002342	05002357	05002362
42 VAC	05002338	05002343	05002358	05002363
24 VAC	05002339	05002344	05002359	05002364
24 VDC	05002340	05002345	05002360	05002365

Dimensions V133 / T

