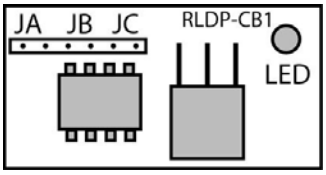
Cat: RLDP-CB1

Double Pole Relay Control Board – TIMER1



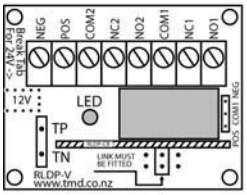
Features:

- Microprocessor control board plugs into RLDP-V double pole relay board to become multifunction timer.
- Compact size, modular design.
- Eight (8) versatile modes of operation →
- Timeout: 1-900 secs, 1-180 mins, 1-18 hours.
- Rising and falling edge triggers.
- Simple programming method.
- Selectable 12V/24V DC operation.
- High quality screw connectors.
- LED indicator to show timing status.

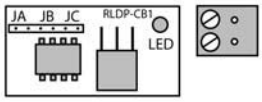
1. Buffered Input.
2. Flip Flop.
3. One Shot.
4. One Shot (retriggerable).
5. Pulse Extender.
6. Delay Start.
7. Delay Start (retriggerable).
8. Stand-Off (door open too long).

1. Hardware Setup

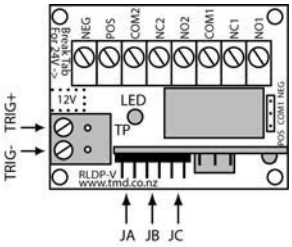
a) Plug the RLDP-CB1 control board into a Livewire RLDP-V double pole relay board as shown (remove the link on the RLDP-V first).
b) Fit the (supplied) 2-way screw connector over trigger inputs TRIG+ / TRIG-.
c) Set the voltage on the RLDP-V (default is 12V or break off the voltage tab to convert to 24V operation).
d) Set the COM1 link on the RLDP-V if required.



Remove Link from RLDP-V



RLDP-CB1 with 2-Pin Screw Connector for TRIG+ /TRIG-



RLDP-CB1 and Connector Installed on RLDP-V

2. Set the Timeout

Programming the RLDP-CB1 is simple. To set the TIMEOUT (T):

a) Remove all Jumpers and any connections to TP (TRIG+) and TN (TRIG-).
b) Apply power.
c) Wait until the LED turns ON, then briefly connect TRIG+ to TRIG- until the LED starts flashing (you have 3 secs to do this). **Hint:** Remove the 2-way screw connector and short the two pins quickly with a screwdriver. You are now ready to set the TIMEOUT.
d) Put on Jumper JA, JB or JC according to the TIMEOUT required – see tables (you have 10 secs to do this).
e) Wait for Timeout Programming Period **(TPP)**. **Hint:** Each flash of the LED is 1 sec so you can easily count LED flashes.
f) Remove Jumper JA, JB or JC -> TIMEOUT has been set.

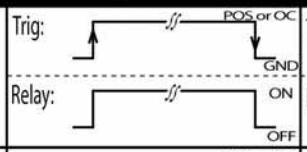
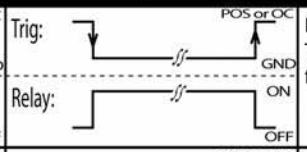
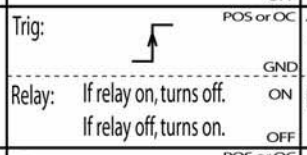
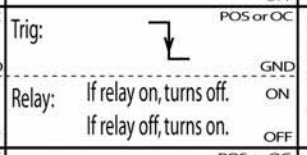
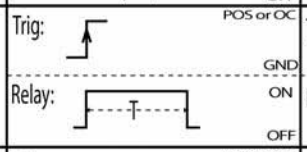
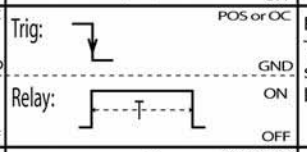
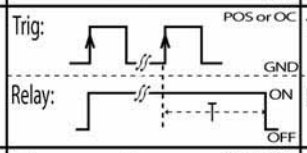
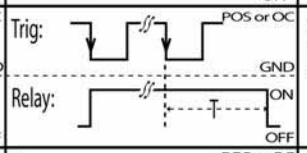
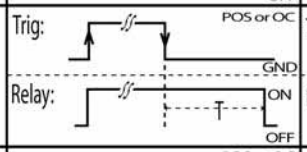
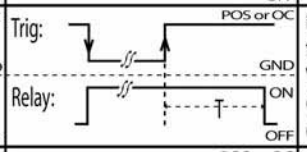
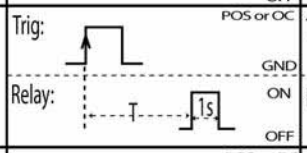
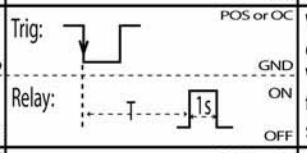
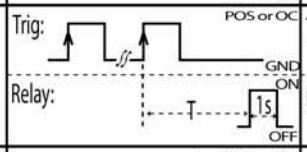
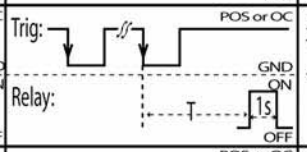
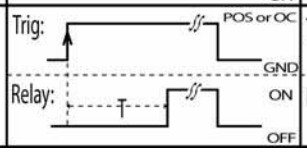
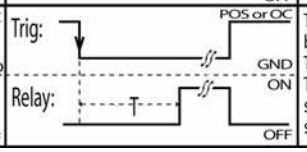
Jumper	Max TIMEOUT	Units	Jumper ON for:	=>	TIMEOUT:
JA	900	Secs	1 Sec	=>	1 Sec
JB	180	Mins	5 Sec	=>	1 Min
JC	18	Hours	5 Sec	=>	30 Min

Examples:

30 secs => JA for 30 secs
5 mins => JB for 25 secs
15 mins => JB for 75 secs
1 hour => JC for 10 secs
3 hours => JC for 30 secs

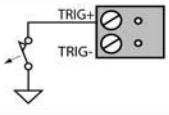
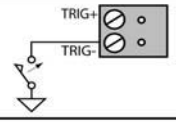
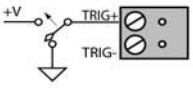
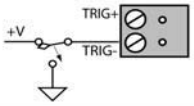
TPP (Secs)	JA	JB	JC
5	5s	1m	30m
10	10s	2m	1h
15	15s	3m	1h30m
20	20s	4m	2h
25	25s	5m	2h30m
30	30s	6m	3h
35	35s	7m	3h30m
40	40s	8m	4h
45	45s	9m	4h30m
50	50s	10m	5h
55	55s	11m	5h30m
60	1m	12m	6h
65	1m5s	13m	6h30m
70	1m10s	14m	7h
75	1m15s	15m	7h30m
80	1m20s	16m	8h
85	1m25s	17m	8h30m
90	1m30s	18m	9h

Common Timeouts, Jumper settings & Timer Programming Periods.

	MODE	JA	JB	JC	TP (TRIG+)	TN (TRIG-)	DESCRIPTION
1	Buffered Input	OFF	OFF	OFF			Relay ON when Trig ON, OFF when Trig OFF. When Relay OFF, LED short flash. When Relay ON, LED ON.
2	Flip Flop (Clutch)	ON	OFF	OFF			Relay changes state when Triggered. When OFF, LED short flash. When ON, LED ON. Can Trigger on both edges by connecting TRIG+ and TRIG-.
3	One Shot	OFF	ON	OFF			Relay ON for TIMEOUT when Triggered. When OFF, LED short flash. When ON, LED long flash.
4	One Shot (Retriggerable)	ON	ON	OFF			As for One Shot except TIMEOUT restarts if Triggered again.
5	Pulse Extender	OFF	OFF	ON			Relay ON when Triggered, stays ON for TIMEOUT after Trigger removed. When OFF, LED short flash. When ON (but not timing), LED ON. When ON (timing) LED long flash.
6	Delay Start	ON	OFF	ON			When Triggered, after TIMEOUT expires get 1 second ON pulse. When OFF, (not timing) LED short flash. When OFF (timing), LED double short flash. When ON, LED ON.
7	Delay Start (Retriggerable)	OFF	ON	ON			As for Delay Start except TIMEOUT restarts if Triggered again.
8	Stand-Off (Door open too long)	ON	ON	ON			Timer starts when Triggered. If Trig gone before TIMEOUT, Relay won't activate. If Trig remains after TIMEOUT, Relay ON until Trig removed. When OFF (not timing), LED short flash. When OFF (timing) LED double short flash. When Relay ON, LED ON.

Trigger Inputs

Trigger Inputs are active low (see table). Note that dual edge triggering can be achieved by connecting the TRIG- and TRIG+ inputs together.

	Trigger using TRIG+	Trigger using TRIG-
Trigger from dry contact or manual switch input.		
Trigger from +V (5V -> VPOS) switched to GND.		

Specifications

	Parameter	Min	Typ	Max	Units
1	Input Voltage	10.0	12.0	28.0	VDC
2	Current (12V nominal, Relay OFF)	4.0 @ 10V	5.0 @ 12V	9.0 @ 17V	mA
3	Current (12V nominal, Relay ON)	12.0 @ 10V	15.0 @ 12V	23.0 @ 17V	mA
4	Current (24V nominal, Relay OFF)	9.0 @ 17V	13.0 @ 24V	16.0 @ 28V	mA
5	Current (24V nominal, Relay ON)	16.0 @ 17V	25.0 @ 24V	29.0 @ 28V	mA
6	Timing Accuracy		+/-2%		
7	Debounce time on Trigger inputs	40	50	60	ms
8	Operating Temperature	-20	25	65	deg C
9	Dimensions			35x19x12h	mm

Security Wholesale 2001 Ltd
CNR Sims & Great South Road Penrose, Auckland
Postal: P.O Box 12-395 Penrose, Auckland.
Ph: (09) 580 1147, Fax: (09) 580 1159.
Web: www.swl.co.nz
Email: trade@swl.co.nz

Ref: Product RLDP-CB:0807, PCB: 0722 Rev A; S/W: v1.0