

TWO YEAR WARRANTY

REDARC Electronics warrants to the original purchaser that the product(s) on the reverse side of this sheet ("Product") will be free, under normal use and maintenance, from defects in material and workmanship for a period of TWO YEARS from the date of purchase, subject to the conditions shown below.

1. Warranty

Unless otherwise stated in this warranty, Redarc Electronics will at its sole discretion either replace or repair any of the Product that is defective in material or workmanship within the abovementioned period without charge to the original purchaser.

2. Other Warranty

Subject to any terms implied by law, this warranty contains the whole of the Redarc Electronics' obligations and any distributor and the agents, officers and employees of such distributor and of Redarc Electronics are not authorised to vary or extend the terms of the warranty. The benefits conferred by this warranty are in addition to the conditions and warranties implied by applicable legislation conferring rights upon consumers, which apply only to the extent to which they may not by law be excluded.

3. Exclusions

This warranty shall not apply to, or include, any of the following:

- 3.1 Any defect or failure due to accident, misuse, abuse, movement of the Product to a new site, negligence, non-observance of any of the instructions supplied with the Product including the instructions on the reverse side of this sheet ("Operating Instructions") or local regulations on the part of any user, choice of location, improper installation, configuration or connection, or faulty power supply.
- 3.2 If the Product is installed, repaired or serviced by a person who is not a qualified auto electrician or electronics technician, or if non-approved parts have been fitted.
- 3.3 Failure to obtain proper maintenance for the Product or any associated equipment or machinery.
- 3.4 Failure to pay for the products in full or comply with Redarc Electronics' Trading Terms.
- 3.5 If the Product is used other than for any reasonable purpose for which it was manufactured, or is used in a way not specified by Redarc Electronics.
- 3.6 If the original purchaser sells, leases or otherwise parts with possession of the Product.
- 3.7 Deterioration due to normal use and exposure, including abnormal environmental conditions such as lightning strike, flood and extreme heat.
- 3.8 Any freight, packing and insurance expenses relating to transportation of the Product.
- 3.9 Any expenses relating to installation and/or removal of the Product.
- 3.10 Any damage, indirect or incidental, of whatever nature.

4. Limitations

4.1 Redarc Electronics is not liable for any consequential, indirect or accidental loss or damage or for any service not expressly provided herein (including without limitation liability for any loss or damage caused by a fault in the Product or its external wiring connections) and the liability of Redarc Electronics under this warranty is limited to the repair or replacement of defective material or workmanship by a qualified auto electrician or electronics technician, provided such person and work is approved by Redarc prior to commencement. Subject to **clause 2**, Redarc Electronics is hereby excluded to the maximum extent permitted by law from all other liability in respect of the Product.

4.2 While Redarc Electronics warrants, where applicable, that the Product is free from defects in materials and workmanship under normal use at the time of delivery, Redarc Electronics does not warrant that the Product will meet any user specific requirements or that the operation of the Product will be uninterrupted or error-free.

5. Owner's Responsibilities

- 5.1 Maintenance of the Product and associated equipment and/or machinery is the responsibility of the owner. The owner must retain evidence that proper maintenance has been performed on the Product by Redarc Electronics or a qualified auto electrician or electronics technician. Claims made during the warranty term will not be accepted if resulting from lack of maintenance rather than faulty material or workmanship.
- 5.2 The owner must operate the Product in accordance with all of the Operating Instructions.
- 5.3 Upon discovery of a fault the owner must return the Product to the distributor with full details of the nature of the fault. Removal of the Product must be done by a qualified auto electrician or electronics technician to ensure that the warranty remains valid. A written report describing the circumstances of failure must accompany the returned Product with proof of purchase which clearly shows the date of such purchase by the original purchaser.
- 5.4 If the Product is found to be working satisfactorily on return to Redarc Electronics a reasonable charge will be made for the cost of testing, packing and freight. The Product will be returned on receipt of the amount charged.

FREE TECHNICAL ASSISTANCE

REDARC

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Certified
Environmental
Management



Quality
Endorsed
Company

CEM 20649
ISO 14001:2004
SAI Global
QEC 5375
ISO 9001:2000
SAI Global

Multi Function Timers TIM05 & TIM06

FUNCTION

TIM05

- Delayed turn OFF or
- Temporary Output at turn ON

TIM06

- Delayed turn ON or
- Temporary Output at turn OFF

The TIM05 & TIM06 timers can be used in a 12V or 24V negative ground automotive system, is designed to plug into a standard automotive relay base and has the same pin numbers as a standard automotive relay (underside shown on diagram). Contacts operate in a similar way to a changeover relay.

The timer switches the internal relay to provide output on PIN 87. (Positive output only)

The timer is started by switching pin PIN 86 ON or OFF (depending on **Switch 1**).

Use **Switch 2** to select time range between **SECONDS** and **MINUTES**.

Use the potentiometer to adjust time (increasing in clockwise direction).

The TIM05 & TIM06 can supply a maximum current of **10 AMPS**. (For higher current ratings, use the timer to operate an external relay).

NOTE: 10 Amps is maximum current rating, any current higher than 10 Amps (including lamp or motor start up) may cause damage to the internal relay.

CONNECTIONS

The TIM05 & TIM06 have five connecting terminals, to be wired according to the terminal allocation shown.

The numbers shown on the diagram are as viewed from the terminal end of the timer.

- PIN 30 Battery Positive (+12V or +24V) (Cannot be used to switch ground)
- PIN 87 Timed Positive Output (From PIN 30)
- PIN 87A Alternate Output (From PIN 30)*
- PIN 85 Negative Ground (Must be permanent ground, do not switch ground to control timer)
- PIN 86 Positive input to start timer (+12V or +24V)

*The internal relay is a change-over type- when PIN87 is on, PIN87a is off & vice versa.

NOTE: The TIM05 & TIM06 timers require supply voltage at PIN 30 to run their internal electronics, for this reason the timers cannot be used to switch ground.

SWITCH FUNCTION

TIM05

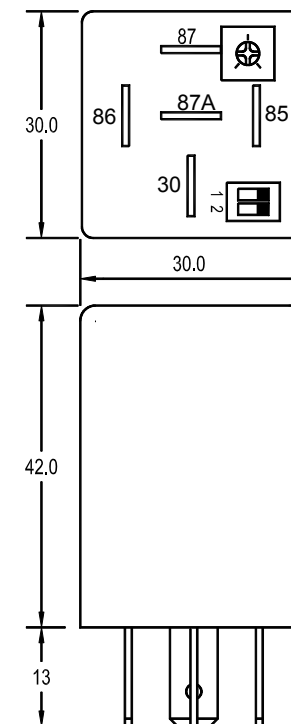
- Switch 1** ON Input **ON** starts timer (Temporary Output at Turn ON)
- Switch 1** OFF Input **OFF** starts timer (Delayed Turn OFF)

- Switch 2** OFF 1 to 60 **Seconds**
- Switch 2** ON 1 to 60 **Minutes**

TIM06

- Switch 1** ON Input **ON** starts timer (Delayed Turn ON)
- Switch 1** OFF Input **OFF** starts timer (Temporary Output at Turn OFF)

- Switch 2** OFF 1 to 60 **Seconds**
- Switch 2** ON 1 to 60 **Minutes**



FREE TECHNICAL ASSISTANCE, contact Redarc Electronics
Ph (08) 8322 4848, Fax (08) 8387 2889
or Email power@redarc.com.au
Specifications are subject to change without notification.

POTENTIOMETER FUNCTION

Depending on Switch 2 selection, this varies the time setting, time increasing in the clockwise direction.
Note: All adjustments must be made with the timer **disconnected**.

The REDARC TIM family of timers are programmable, and can be tailored to a specific application beyond the options listed here. The timers can be made non variable, but set to a specific time. The timing periods could be set from milliseconds up to months and can be set for cyclic applications. Timers can also be made to trigger by voltage. For specific voltage triggered relays, REDARC can offer the VS family voltage sensors in the same package. For more information regarding custom applications, please call.

TIM05 APPLICATION EXAMPLES

Delayed turn OFF

Output is ON (PIN87) when Ignition is ON. Output remains ON, for (X seconds/minutes) after Ignition is turned OFF.

Example : Pump stays on for 2 minutes after ignition is turned OFF.

Connect pump positive wire to pin 87. Set **Switch 1** to **OFF** position (IGN OFF trigger), Set **Switch 2** to **ON** position to select minutes timing range. Adjust the potentiometer to fully counter clockwise, then turn it a fraction of one division clockwise. Each minor division line on the potentiometer represents about 6 minutes of time step. *Please see TIP below.

Temporary Output at turn ON

Output turns ON (PIN87) when Ignition is first switched ON. Output stays ON for a period of (X seconds/minutes) only and then turns OFF even though ignition may still be ON.

Example: Pre-heater turns on with ignition for 10 seconds only.

Connect heater positive wire to pin 87. Set **Switch 1** to **ON** position (IGN ON trigger), Set **Switch 2** to **OFF** position to select seconds timing range. Adjust the potentiometer to fully counter clockwise, then turn it one and a half divisions clockwise. Each minor division line on the potentiometer represents about 6 seconds of time step.

TIM06 APPLICATION EXAMPLES

Delayed turn ON (IGN ON trigger)

Output turns ON (PIN87), X seconds/minutes after Ignition is turned ON. Output turns OFF when Ignition turns OFF.

Example : Air conditioning turns on 2 minutes after ignition is turned ON.

Connect aircon relay positive wire to pin 87. Set **Switch 1** to **ON** position (IGN ON trigger), Set **Switch 2** to **ON** position to select minutes timing range. Adjust the potentiometer to fully counter clockwise, then turn it a fraction of one division clockwise. Each minor division line on the potentiometer represents about 6 minutes of time step. *Please see TIP below.

Temporary Output after turn OFF (IGN OFF trigger)

Output stays OFF (PIN87) when Ignition is ON. When Ignition is turned OFF, the Output turns ON & stays ON for a period of X seconds/minutes, and then turns OFF.

Example: Cabin Light turns ON for 30 seconds when vehicle is switched OFF.

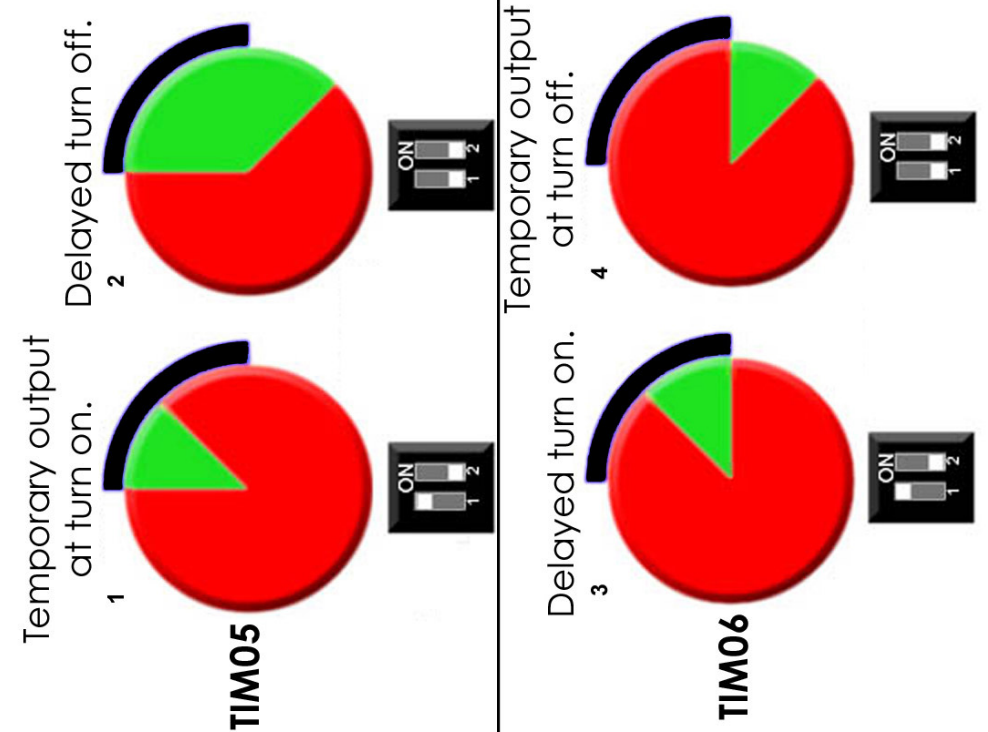
Connect positive light wire to pin 87. Set **Switch 1** to **OFF** position (IGN OFF trigger), Set **Switch 2** to **OFF** position to select seconds timing range. Adjust the potentiometer to half way position. Each minor division line on the potentiometer represents about 6 seconds of time step.

Note: Output pin 87A is always OFF when pin 87 is ON, and ON when pin 87 is OFF. This can be used for applications where devices are turned OFF during active ignition and require a prolonged OFF time, when ignition becomes inactive. (Switch 1 is OFF) Similarly as in the second example, pin 87A can be used to turn a device OFF for a set amount of time. (Switch 1 is ON)

***Tip:** When setting a time in Minutes, first set the equivalent number of seconds (Switch 2 OFF) and test the timer, then switch it into Minutes (Switch 2 ON).

CUSTOM TIMERS

Redarc can design timer relays to suit a variety of situations or applications. Custom relays can also be used to switch by sensing current, voltage, frequency or RPM, or used to count events in an electrical system. Please contact Redarc to ask how we can design a custom relay to your specific application.

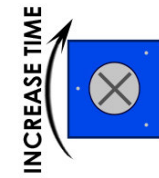
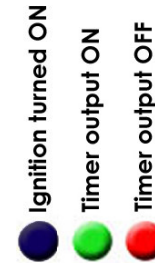


TIM05 & TIM06 Timing diagrams.

Examples

The TIM05 can be used as a Glow Plug Timer (1) or a Turbo Timer (2).

The TIM06 can be used as a Thermo Fan Delay (3) or a Headlight Delay (4).



NOTE: DIP Switch 2 shown in seconds mode (OFF), switch (ON) for minutes.