PRODUCT ADVICE SHEET

Model VZM0-28TS

Dual Period Delay Run-On Timer with multiple trigger inputs



FANTECH

FEATURES

- **Operation**
  - ◊ when any one or more of the 'switched actives' comes ON the delay time period is initiated.
  - ◊ If any 'switched active' is still ON after the delay time period, the load switches ON & remains ON as long as any 'switched active' remains ON.
  - ◊ when all switched actives go OFF, the run-on time is initiated, the load remains ON for the run-on period and then switches OFF automatically.
- **Multiple trigger inputs** up to 3 separate circuits.
- **NO double-pole switches** or complicated wiring.
- **Range of Run-on Times** (2 – 30 mins) **& Delay Periods** (0–300 secs) in selectable ranges. Variable adjustment via front slot potentiometers.
- **Non-active isolated OFF state** in standby mode ensures reliability, long life & energy efficiency.
- **Quick and Easy connections.** External 3-pin mains socket for load. Internal PCB mounted terminal blocks for supply / trigger.
- **Easy To Use Robust UL94v0 Enclosure.** Electronic PCB in removable lid. Base free for mounting, cable entry and large enough for looping.
- **High Power Capability.** Can switch loads up to 1200VA 5A resistive or inductive.
- **Reliable KISS Philosophy.** Practical design, solid engineering using tried and tested technology not the latest bells, whistles or geek tech. NO complicated microcontrollers, sensitive components, miniaturisation to the nth degree, complicated setting procedures or programming/memory loss.

SPECIFICATIONS	VZM0-28TS Delay Run-on Timer with Multiple Trigger Inputs
OPERATION & TYPICAL APPLICATION	Multiple trigger input dual period automatic switch-off 'run-on' timer for fans or other inductive or resistive loads that are required to run for a fixed or user adjustable time after activation / deactivation of one or more independent switched active "trigger" circuits that have been active for an initial minimum period. A typical application is a multiple bathroom and laundry fan assisted air extraction system where switching on one or more bathroom lights or a clothes washer / dryer for longer than the 'delay' period activates a fan automatically and when the light / dryer is switched off, a fan 'run-on' period is initiated. After the 'run-on time' is complete, the fan or load is switched OFF automatically. Reactivation of any switched active trigger during the run-on time will reset the 'run-on' timing period. The trigger inputs are isolated from each other and expensive double pole switches are not required for wiring.
RATINGS	240 volt 50/60 Hz. 0VA in standby ~1VA when in ON state. Supply Variation 195 – 265 VAC Max Load 250 VAC 5 A 1200 VA inductive or resistive load cos Ø 0.4 – 1.0. Max ambient Temp 50 ºC
STANDBY & SAFETY	Controller circuitry is automatically disconnected from the main electrical supply and draws zero current under standby conditions. Device is activated only when the switched active trigger is ON or timer is in the temporary run-on time delay period after which safe standby is resumed. MOV surge protection is provided for both the continuous active and switched active inputs. An internal fail-safe protection fuse is also provided.
ACCURACY	Timing accuracy $^{+15}/_{-10}$% . Timing Rreproducibility $^{+}/_{.}5$%
CONNECTIONS	Mains Input - Internal Terminal blocks to UL94-V0 on printed circuit board with screw wire protector 1.5/2.5 mm² terminals rated 250 VAC 10A.. Dual mains input terminals provided for Active, Neutral and Earth which are intended for convenient looping. Input Terminals inside enclosure: A = ~ constant active A1, A2, A3 – switched active triggers N = ~ neutral E = earth Output - 3 pin Aus/NZ 240 VAC 10A mains socket integral with lid of enclosure.
ENCLOSURE	Fully insulated IP50 grey bulkhead enclosure made of thermoplastic recyclable PVC self extinguishing material to UL94-V0. Temperature limits –25 to 55ºC. Case dimensions (mm) 153L x 110W x 66H .
RELIABILITY	Fantech controllers are built for long service life and are proudly designed & manufactured in Australia for Fantech. Appropriate quality control is ensured throughout their manufacture and all units are hand soldered and assembled using high grade commercial duty rated components. Fantech have a commitment to on-going research and development of their products.

GUIDELINES FOR INSTALLING VZM0-28TS RUN-ON TIMER

OBJECTIVE / APPLICATION The VZM0-28TS timer enables automatic fan run time based on the activation of multiple control circuits such as two separate lights and a washer/dryer which act as triggers. A typical application is a bathroom fan assisted air extraction system where activation / deactivation of the bathroom light for longer than the delay period, initiates the fan. When the light is switched OFF, the fan runs-on for the specified 'run-on' time.

LOAD RATINGS and POWER SUPPLY REQUIREMENTS The VZM0-28TS controller can control one or more inductive or resistive loads provided the maximum current and power ratings are not exceeded. The controller requires a constant active mains supply which must be capable of providing the required load power. This could be for example part of a lighting or power socket circuit before any switches. The controller ALSO requires 1, 2 or 3 SWITCHED ACTIVE trigger connections to the controlling circuit – eg light circuit after any activation switches. The constant active and all switched actives MUST be from the same phase. They also should preferably be protected by a common suitably rated overload protection and isolation device (MCB) and be able to easily be switched OFF together with the constant active to safely isolate the VZM0-28TS and all 4 of its active inputs for service work.

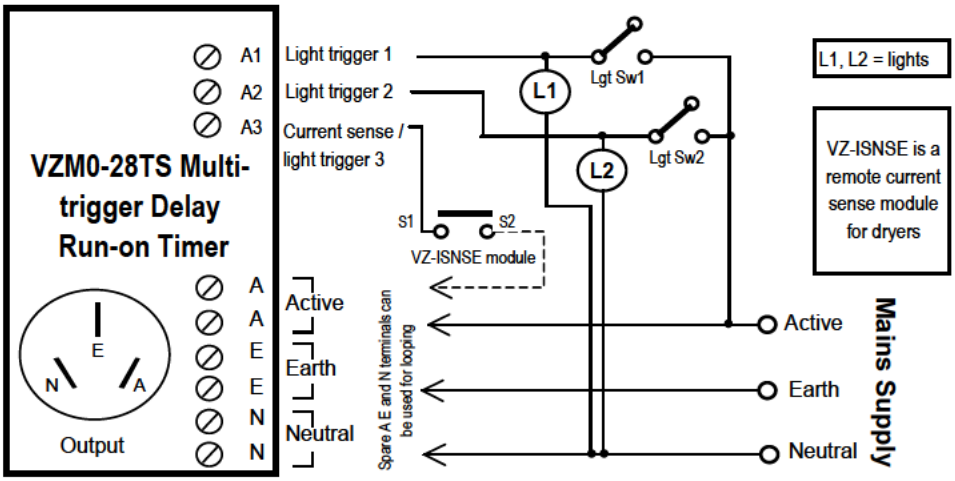
PLACEMENT Mount the VZM0-28TS controller base near the fan on a wall, rafter or stud. The lid of the timer contains the circuit board and terminal connectors and can be completely separated from the enclosure base. The enclosure base is secured with screws from the inside. The lid is secured to the base with 4 screws. The controller must be mounted in a dry reasonably clean environment. A roof, ceiling or duct space is ideal. The enclosure base may be drilled to an appropriate size in order to allow entry of the input cables, a cable gland if required and mounting screws.

CONNECTIONS

Mains Supply: A separate constant ACTIVE power supply (earth, neutral, active) and separate switched ACTIVE triggers (single wires) are wired to the enclosure. Spare E, N and A terminals are provided for looping. The optional current sense module can use the spare A terminal. All actives MUST be from the same phase and be protected at some stage of the wiring by a common overload / isolation protection device.

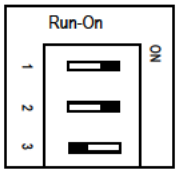
Trigger Input/s: From one to three switched active trigger inputs can be wired to terminals A1, A2 and A3. For a multiple input application this would typically be 2 lights and a current sense module from a dryer / washer. Inputs are not specific and can be used from light circuits or current sense modules (model VZ-ISNSE) interchangeably. You don't require all 3 inputs for the timer to work, just one or two are also applicable.

Load Output Socket: AUS/NZ 3-pin mains socket provided on the timer cover into which the load (max 5A inductive or resistive) is plugged.

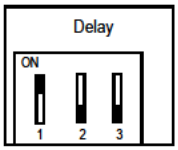


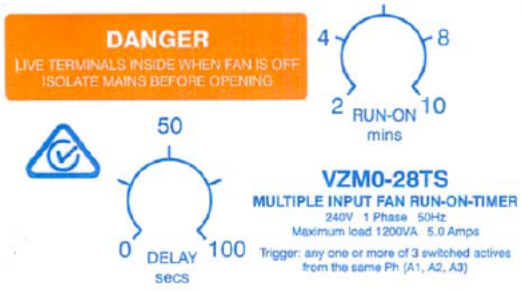
TIME RANGES & SETTINGS: The standard version has a wide range of adjustments possible. Adjustable preset potentiometers beneath the grommets on the front panel allow for variable adjustment of each range. In addition, internally on the electronic circuit board, one of three ranges can be selected for both Delay and Run-on via miniature slide switches.

RUN-ON SWITCH RANGE SETTINGS			
	1	2	3
2 - 10 mins	**ON**	off	off
12 - 20 mins	off	**ON**	off
22 - 30 mins	off	off	**ON**



DELAY SWITCH RANGE SETTINGS			
	1	2	3
0-100 secs	**ON**	off	off
100-200 secs	off	**ON**	off
200-300 secs	off	off	**ON**





OPERATION and ADJUSTMENT Adjustments for the variable time period version are accessible from the front panel by removing the small black protection grommets and referring to the scale on the front of the enclosure lid. Use a small flat ended screwdriver and be gentle – do not force the slotted adjuster beyond its obvious end stops at "7 o'clock and 5 o'clock". Replace the rubber grommets when complete! The controller is in a standby fully OFF state whenever the switched active triggers are off and at least one run-on time period has completed. When the trigger circuit (any switched active) is switched ON, the delay time period is invoked. If any switched active is still ON after the delay period is complete, the load is switched ON and remains ON as long as the trigger circuit is active. Once the last trigger is deactivated, the run-on timer starts and maintains the load ON for the prescribed run-on time period. The timer will be reset to the full run-on time delay if any trigger circuit is reactivated during the run-on period.

CAUTION: The inside of the controller as well as load must be considered LIVE and **DANGEROUS** at all times and before the lid is removed the power to both the constant active and ALL switched active control circuits MUST be isolated OFF. If you are unsure of any aspect of the contents of this product advice sheet, connection, wiring, application or operation, please contact Fantech.

EARTHING The controller and load must be installed in accordance with AS3000. This requires that any metallic or conductive part of the controlled device or controller that can be touched, is earthed and that full earth continuity is maintained through all inter-connected units.

TESTING CAUTION: This device is fitted with MOV surge arrestors between both the switched and constant actives/neutral. DO NOT MEGGER any device with the timer module connected. It is recommended that once the unit is working, a separate earth continuity test using an ohmmeter is carried out between the mains earth and the load earth and/or any metallic casing.

FANTECH

GOODS AND WARRANTY

1. When supplying goods to a consumer, the following mandated statement applies:
   "Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure."

2. The benefits of this warranty are in addition to any rights and remedies imposed by Australian State and Federal legislation that cannot be excluded. Nothing in this warranty is to be interpreted as excluding, restricting or modifying any State or Federal legislation applicable to the supply of goods and services which cannot be excluded, restricted or modified.

3. Subject to the conditions and limitation below, the Company warrants products of its manufacture to be free of defects in workmanship and/or materials at the time of delivery to the Buyer.

4. Any part, assembly or portion thereof found to be defective within one year from the date of commissioning or eighteen (18) months from date of shipment from our factory, whichever is the sooner, unless expressly stated otherwise in the Company's Publications or Literature, will be repaired or exchanged F.O.B factory.

5. The Company reserves the right to replace defective parts of the goods with parts and components of similar quality, grade and composition where an identical component is not available.

6. Goods presented for repair may be replaced by refurbished goods of the same type rather than being repaired. Refurbished parts may be used to repair the goods.

7. Goods or parts that have been returned for repair (except where the repair is as a result of the Company's failure to comply with the statutory guarantees in the ACL) or warranty assessment are deemed to have been abandoned by the Buyer if not collected within 30 days after the Company has notified the Buyer in writing of the warranty assessment outcome or the completed repair.

8. The Company reserves the right to dispose or otherwise deal with an abandoned product or part at its discretion.

9. This warranty does not apply if:
   (i) the goods have not been paid for by the Buyer as per the credit terms provided; or
   (ii) the goods have not been installed in accordance with AS NZS 3000/2000 Australian/New Zealand Wiring rules; or
   (iii) the goods have been misused or neglected.

10. The Company assumes no responsibility under this warranty for the labour costs involved in the removal of defective parts, installation of new parts or service charges related thereto.

11. If a fault covered by this warranty occurs, the Buyer must first contact the Company at the contact address listed below.

12. Any warranty claim must be accompanied by:
    (i) proof of purchase;
    (ii) written details of the alleged defect; and
    (iii) appropriate documentation (such as installation and maintenance records etc).

13. The Company shall have the option of requiring the return of the defective part (transportation prepaid by the Buyer) to establish the claim.

14. The Company makes no warranties or representations other than set out in this clause 7.

15. The repair or exchange of the goods or part of the goods, is the absolute limit of the Company's liability under this express warranty.

FANTECH
Intelligent Ventilation

Fantech Contacts

Head Office
Victoria - Melbourne
A.B.N. 11 005 434 024
Ph: +61 (3) 9554 7845
Fax: +61 (3) 9554 7833
Email: info@fantech.com.au

Australia

Adelaide	(08) 8294 0530
Brisbane	(07) 3299 9688
Darwin	(08) 8947 0447
Melbourne H.O.	**(03) 9554 7845**
Perth	(08) 9209 4999
Sydney	(02) 8811 0400

New Zealand

Auckland H.O.	(09) 444 6266
Christchurch	(03) 379 8622
Wellington	(04) 566 0532

www.fantech.com.au