PRODUCT ADVICE SHEET

Model VZ-ISNSE

POWER SENSE MODULE
For Remote activation of Fans, Fan Timers and BMS modules / circuits

FANTECH

FEATURES

- **Operation**
  - ⇒ When load is >~ 1.65 amps, potential free relay contact closes.
  - ⇒ When current <~ 1.0 amps, relay contact opens.
- **Triggers run-on timers** "Looks like" a light circuit
- **High load currents** up to 15 amps and fits in series with neutral or active line of load
- **Does not require power supply.** No active or neutral required for operation – uses load current to generate internal power supply for operation.
- **Energy friendly.** Zero current draw in standby.
- **Quick and Easy connections.** Internal terminals behind snap on lid enable easy wiring.
- **Small footprint Enclosure.** Enables mounting in a cavity wall behind power socket.
- **High Power Control Capability.** Can switch independent control functions up to 1200VA 5A resistive or inductive.
- **Double isolation** between load and control ensures safety, isolation and minimisation of electrical noise.
- **C Bus / BMS** system compatible
- **Reliable KISS Philosophy.** Practical Australian design and manufacturing know-how using tried and tested technology. NO complicated setting procedures, programming, memory loss, microcontrollers, geek tech or miniature sensitive components.

SPECIFICATIONS	VZ-ISNSE Load Sense Module
OPERATION and TYPICAL APPLICATION	Acts as a fully isolated trigger or control of a secondary circuit based on the load current / power level. "Looks like" a light circuit to a standard run-on timer and activates based on a minimum current being exceeded. Used typically as an add-on module in bathroom and laundry applications to enable remote fan activation and run-on during high humidity activities such as operation of a clothes drier or washing machine. Can be used to trigger a C-*Bus* module or HPM *Icontrol* I/O module for load monitoring in BMS systems.
RATINGS	Control Input: load sensing in series with one line of AC load (neutral or active). Load sense range 1.5 – 15 amps AC. ON ~1.65A , OFF ~0.8A ($^{+}/_{-}$ 20%) Output: fully isolated potential free N.O. relay contact SPST max 240 VAC 1200VA 5A inductive or resistive. Supply Variation: 190 – 275 VAC. Max ambient temperature: 50°C. Max power consumption: < 1VA when relay ON.
STANDBY and SAFETY	Control output is fully isolated from input load circuit. Fail safe circuit draws no power on standby. Fully insulated enclosure does not require earth.
ACCURACY	Tolerance and accuracy $^{+}/_{-}$ 20% . Switches OFF approx 40% lower than switch ON current.
CONNECTIONS	Internal terminal blocks to UL94-Vo on printed circuit board with screw wire protector Load Input: 2.5/4 mm^2 terminals rated 300 VAC 30A. Trigger Output: 1.5/2.5 mm^2 terminals rated 300 VAC 10A.
ENCLOSURE	Fully insulated IP40 black bulkhead enclosure made of ABS. Mounting via two screws. Access via rear snap-in cover. Dimensions (mm) 87L x 67W x 33D (with mounting feet 107L x 67W x 33D). Mounting screw centres 94mm.
RELIABILITY	This product is proudly designed and fully manufactured in Australia for Fantech. It is designed and built for a long service life in commercial applications with appropriate quality control throughout manufacture and a commitment to continuous improvement of the product line.
ORDERING	**VZ-ISNSE** load sense set to operate at 1.5A . Max load 15A.
OPTIONS Min order quantities apply	**Specific Control Current:** Can specify switching point current 0.8–10 amps. Model **VZ-ISNSE-*X*** where *X = "current in amps"* **Low hysterisis Control Current:** OFF point at approx 50% of ON current. Special manufacture. eg ON 0.7A OFF 0.35A **Enclosure:** Larger enclosures can be specified including IP55

GUIDELINES FOR INSTALLING FANTECH VZ-ISNSE LOAD MONITOR

OBJECTIVE / APPLICATION The Fantech VZ-ISNSE module enables the monitoring of a minimum load current or power of a LOAD and switching a separate independent CONTROL circuit or device if the load current / power increases above ~1.65 amps (1.5 –2.0) or the specific set-point value. A typical application is where a bathroom fan assisted air extraction system is activated / deactivated whenever a laundry dryer is in operation. The module may be used on its own to switch a fan or trigger a run-on timer or trigger a BMS system or module.

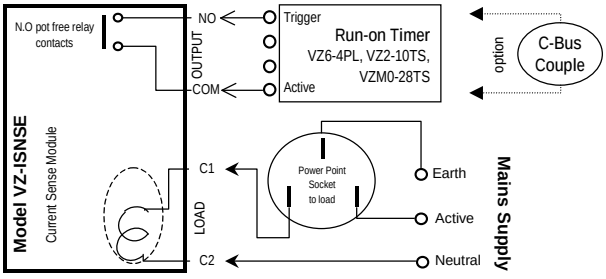
LOAD RATINGS and POWER SUPPLY REQUIREMENTS The VZ-ISNSE module can monitor one or more inductive or resistive loads provided the maximum current and power ratings are not exceeded. The unit is simply inserted in series with either the active or neutral line to the load (usually a 10 or 15A power socket). The unit does not need a separate active or neutral connection to operate as it derives its own power supply via the current flowing through it. The fully isolated potential free relay contacts for the output are rated up to 1200 VA 250 VAC 5 amps inductive or resistive.

PLACEMENT and ACCESS The module may be mounted in a wall cavity behind or next to a wall power socket, in a ceiling or a switch board. The module has a removable base (simple screwdriver lever slot) and internal PCB connection terminals. The unit must be mounted in a dry reasonably clean environment via the two side mounting brackets. DO NOT mount the module without the removable base plate being securely fitted.

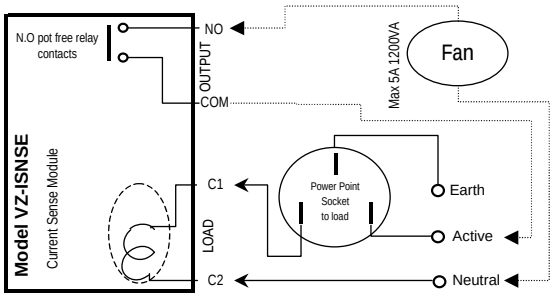
CONNECTIONS [Please note: S1, S2 & S3 refer to older version terminal markings which are backwards compatible]

Load: 2.5 or 4 mm² cable should be used in accordance with AS/NZS3000 to place the unit in series with either the active or neutral line of the load and connected to the C1 and C2 terminals.

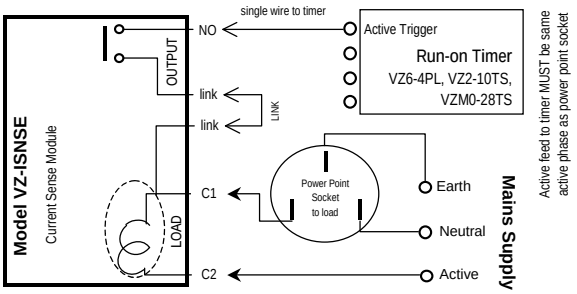
Control Output: The potential free relay contacts are via the **COM** (S2) and **NO** (S1) terminals. Single wire control output can be invoked by fitting a link between **link** (S2) & **link** (S3) and using **NO** (S1) as a single wire output (effectively connects the output relay to load line C1 (whether active or neutral) and thus provides single wire active or neutral control output. A normally closed contact (NC) is also provided.



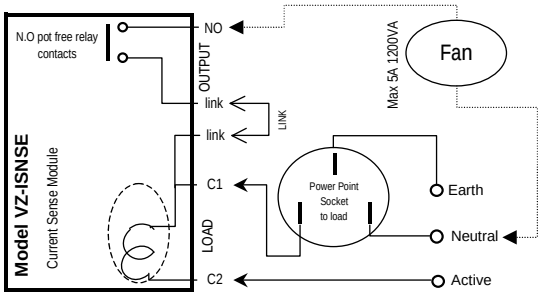
GENERAL WIRING DIAGRAM for 2 wire trigger



WIRING DIAGRAM for direct fan connection



OPTION WIRING DIAGRAM - single-wire trigger & common supply phase



ALTERNATIVE DIAGRAM for direct fan connection

CAUTION: The inside of the module must be considered ***live*** and ***dangerous*** at all times. Before the lid is removed the power both to the LOAD and CONTROL circuit 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.

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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 9888
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

Asia
For agents in the Asian region
call (603) 7846 0340
or visit www.eltafantechasia.com

www.fantech.com.au