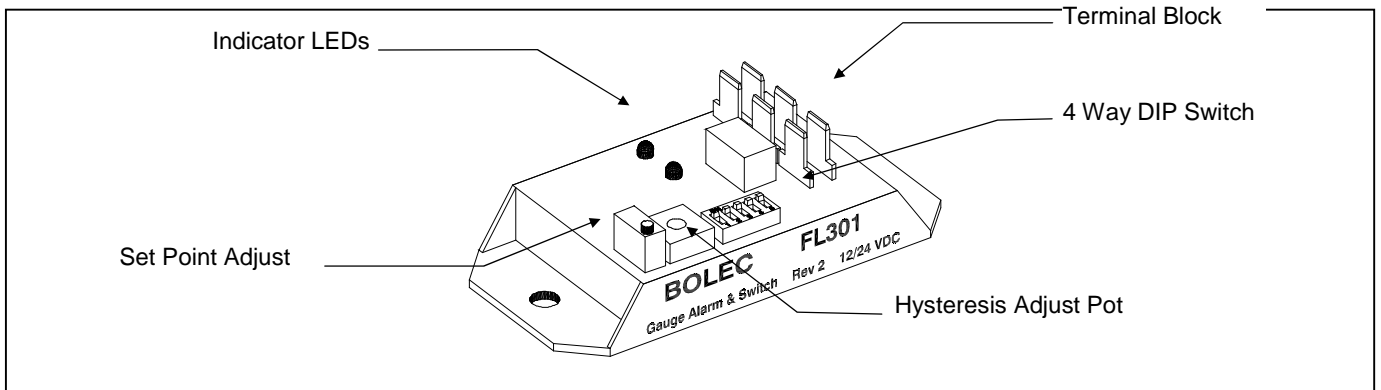


MULTIFUNCTION ALARM – 12/24 VDC

P/No. FL301 Connection Instructions for 12/24V Module

GENERAL



The FL301 - Multifunction Alarm is designed to give an alarm output when the reading on a particular gauge passes a predetermined level. The unit may be set to switch on either a falling or rising level for any type of gauge as long as the sensing unit is a variable resistance and the sender output is a variable voltage.

A twenty five turn pot is fitted, allowing fine adjustment across the full scale for most known gauges.

Alarm output is via volt free relay contacts. Contact rating is 30VDC, 1.0 Amp resistive.

Typical applications are ...

- Thematic fan switch control for electric fan cooled engines
- Low fuel level alarm for 4WD vehicles
- High temperature alarm for commercial, industrial & marine engines
- Low engine oil pressure alarm for commercial, industrial & marine engines
- Low gearbox oil pressure alarm for marine engines
- Low air bag pressure alarm for double bogey suspension systems

This unit may also be used without a gauge if necessary ie: with sender only. Refer wiring diagram.

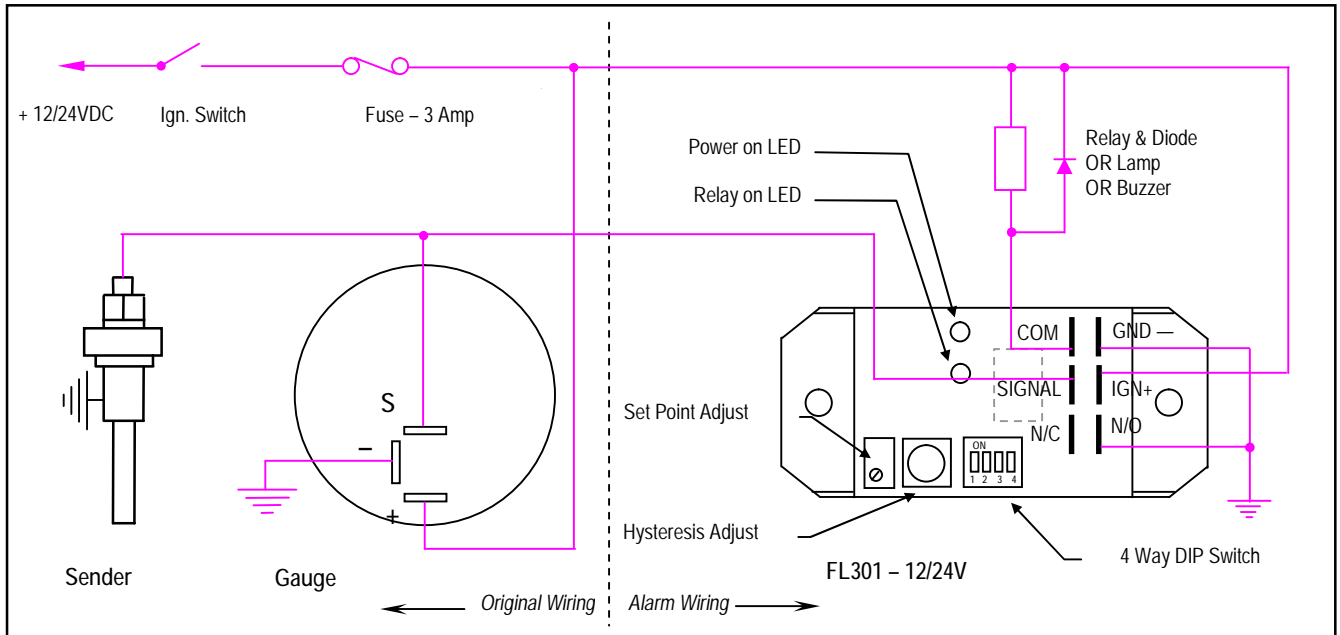
NOTE: This module is designed as a universal unit to suit as many automotive type applications as possible. However there may be some systems where the input or output signals are not compatible with this unit. Bolec Products is not responsible for incorrect fitting or damage caused by or during the fitting of this module.

FITTING INSTRUCTIONS

1. Locate a convenient mounting place in the instrument panel or under the dash near the fuse panel and mount the FL301 multifunction alarm module. Screws (3/16" or 5mm), double sided tape, or Silicone are all acceptable. Orientation is not critical.
2. Connect "IGN+" to a switched ignition supply line preferably via a 2 Amp fuse.
3. Connect "GND" to a good ground or earth connection.
4. Connect "SENDER" to the sender terminal on your gauge. Note: Do not change your gauge wiring, merely piggyback this unit to it.
5. Connect output relay contacts in the negative side of a lamp, buzzer or relay coil (30VDC 1.0A resistive max). Make sure an appropriate fuse also protects the lamp, buzzer or relay.
6. When switching relay and solenoid coils with other electronic items connected it is recommended to fit reverse EMF diodes across all coils.
7. If your gauge or sender fails this module will not work. It is good wiring practice to make all circuits failsafe where possible and practical.
8. Temporarily replacing your alarm circuit with a test light may simplify the setting procedure.

DIP SWITCH NO à	1	2	3	4
Switch Posn. – ON	Falling Volts	Slosh Delay	Self test on power up	Pull up resistor connected
Switch Posn. - OFF	Rising Volts	Instant Acting	Self test off	Standard with gauge

WIRING DIAGRAM



SETTINGS

1. Check all wiring for correct connections and possible short circuits.
2. Set DIP Switch 1 to OFF for switching on Rising Volts or ON for switching on Falling Volts.
Note 1: Standard VDO gauges have falling voltage on dropping oil pressure and rising temperature.
3. Set DIP Switch 2 to OFF. Set this to ON after settings have been finalized for an active Slosh Delay of approximately 5 Seconds. In practice this will vary from 3 – 10 seconds
4. Set DIP Switch 3 to OFF. Set this to ON after settings have been finalized for a Self Test Alarm output of 1 second on power up.
5. Set DIP Switch 4 to OFF if wired to a normal resistance gauge circuit or ON if using a sender without gauge.
6. Set the hysteresis pot to minimum (fully anti c/w).
7. Temporarily replace the gauge sender with an appropriate variable resistance such as the VDO Gauge Check ... P/No. 105.001 if available.
8. Turn the key on and adjust your variable resistance so the gauge pointer reads at the required "alarm" point. Turn the set point pot clockwise for Switch On Falling until the RED LED indicator is off. Then turn the pot slowly anticlockwise until the relay contact just closes and the RED LED indicator comes on.
Note 2: This is a 25 turn pot, it will not be harmed by going past each end
Note 3: A ½ turn anti- C/W lowers the setting point approx 10degrees C on standard VDO gauges
9. Adjust the resistance setting up and down a few times again to fine tune the switch point.
10. Move the hysteresis from minimum to approx ¼ scale and check if range is as desired.
Note 4: Leave this at minimum while setting the ON switch point
11. Now set DIP Switch 2 to ON if you want a short "slosh" delay before the alarm switches, and Switch 3 to ON if you want a test alarm on power up.

TIPS

1. Temporarily replacing your alarm circuit with a test light can simplify the setting procedure.
2. When switching relay and solenoid coils with other electronic items around, it is recommended to fit reverse EMF diodes across all coils.
3. This unit will not work if supply to it fails or the gauge or sender fails. It is good practice to make all circuits fail safe where possible and practical.

SPECIFICATIONS

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|-----------------------|---|
| 1. Dimensions: | Approximately 88 x 42 x 29mm overall. |
| 2. Voltage, Current : | 12 - 28 VDC Neg Ground, 3mA Alarm off, 90mA Alarm on. |
| 3. Adjustment Range: | 2k Ω. |
| 4. Contact Rating: | 30Vdc 1.0amp, Resistive. |