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This service parts topic provides general information and documents the conversion of AMBAC International SWA675A1 to SWA675D1. Both parts were released in the Cummins system under part number 3050323.

General Information

The SWA675D1 speed switch has been designed to monitor the speed of an engine or piece of rotating machinery by detecting the pulses from a magnetic pick-up device.

The module can be set to operate the independent relays at different speed settings. Either relay can be adjusted to operate from between 10% to 140% of the engine rate running speed.

This flexibility allows the module to be used for many different applications including underspeed or overspeed protection or crank disconnect facilities.

Adjustment

Adjustment of the trip points is via two pre-set potentiometers. Turning clockwise increases the appropriate trip point and turning counter-clockwise decreases the appropriate trip point. The appropriate LED will be illuminated to indicate that the trip has been activated.

On application of a continuous DC supply voltage, the module will start counting pulses from the magnetic pick-up. Should these pulses exceed the pre-set RPM levels, then the trips will be activated and the relay contacts will change state.

A latch is provided to prevent the release of the relays. This speed switch can be made to be automatically latched and disabled by applying a continuous negative signal to terminal 5.

The SWA675D1 will allow a remote key or toggle switch reset function by simply connecting terminal 2 and terminal 5 and placing the switch in the desired location.

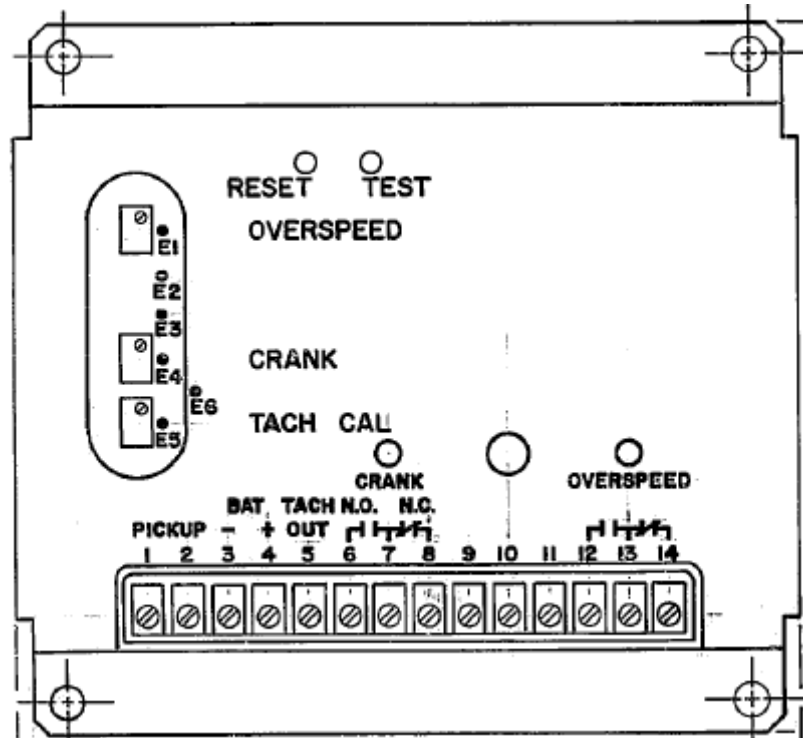
Meter calibration is via a pre-set potentiometer, which enables the meter output to be scaled to match the optional RPM meter. Rotating the pre-set potentiometer clockwise increases the meter reading.



Conversion from Model SWA675A1 to SWA675D1

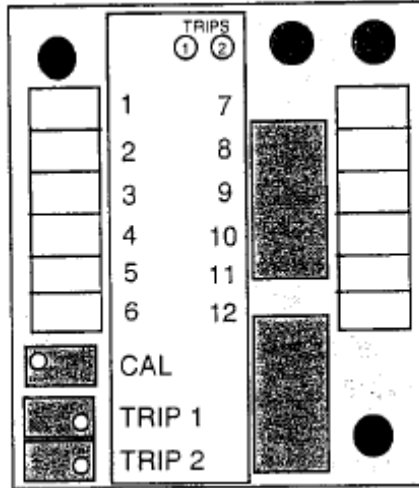
	SWA675A1	SWA675D1
Function	Pins	Pins
Magnetic Pick-Up (+)	1	3
Magnetic Pick-Up (-)	2	4
Battery (+)	4	1
Battery (-)	3	2
Tach Out (+)	5	6
Tach Out (-)	3	2
Crank	6	7
Crank	7	8
Crank	8	9
Jump	N/A	2 + 5
Not Used	9	N/A
Not Used	10	N/A
Not Used	11	N/A
Overspeed	12	10
Overspeed	13	11
Overspeed	14	12

CAUTION: When replacing the old unit with the new unit it is very important that if the speed switch is used in conjunction with a control panel and if that control panel has a manual reset button, you should disable this button. The new SWA675D1 has an automatic latching reset feature, to engage the feature you must connect terminal 5 to terminal 2, and this will allow the latch to reset while stopping or when the power drops.

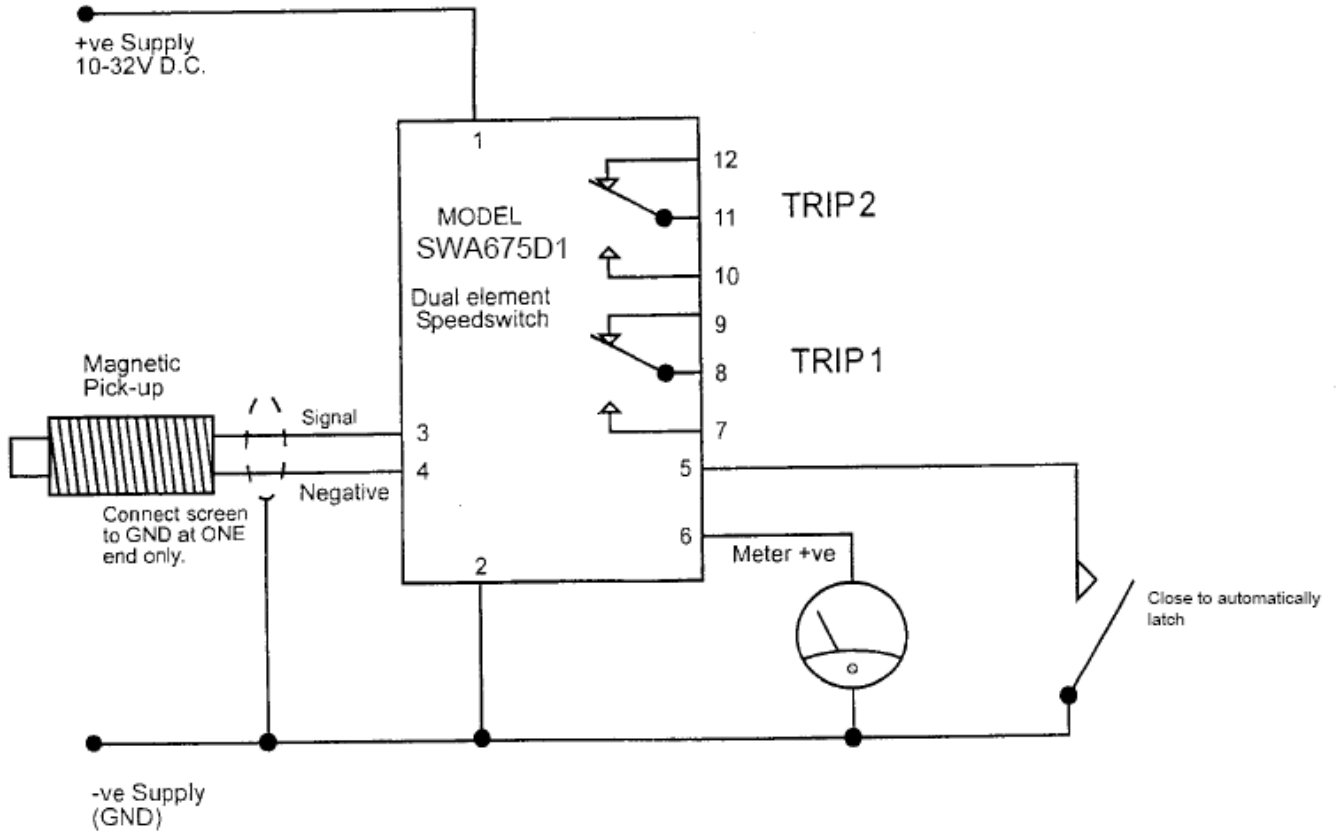


Model SWA675A1

**** DRAFT ****



Model SWA675D1



Model SWA675D1 – Wiring Diagram