



Technical Data Sheet

B-00392-1	14V MULTI ENGINE ALTERNATOR CONTROL
Duty Voltage Factory Set To Load Current Load Balance Balance Information Authority of Balance Circuit Over-Voltage Trip Point Over-Voltage Trip Time Alternator Inop. Indicator Alternator Inop. Sensing Point Weight Dimensions	Continuous PWM 14.0V 5A Max. Within 10% of Alternator Rating From 50mV (Full Load) Shunt, Each Alternator Output 1V Maximum Rise Of Regulator Voltage Setting 16.0V 0.5V above Calibration 3.0V above Calibration 0.15A Max. 5.25V 0.5lb. Max. 23/4"L x 55/8"W x 2"H
PINOUT	FUNCTION
Red Blue Brown Gray Green Yellow Orange Black Violet	+14V Field Alternator Inop. Sense (AUX Terminal) Alternator Inop. Indicator Equalizer - Shunt + Shunt Ground Voltage Regulator Sense
OPERATION NOTES	DESCRIPTION
Note 1: Note 2: Note 3: Note 4: Note 5: Note 6: Note 7: Note 8: Note 9: Note 10: Note 11:	<p>This unit design for fuselage mounting. To be protected from water, except condensation. Mount on a metallic airframe member for secondary ground.</p> <p>Alternator Inop. Will not warn if Alternator C/B is open and alternator is still operating.</p> <p>A short from ALT+ to FIELD+ of either machine will result in uncontrolled overvoltage on the main bus which can be removed only by opening Alternator C/B of the faulted machine. Internal fuse in B-00392-1 will open.</p> <p>In a split bus system, opening of bus tie must also result in opening of the equalizer in order to maintain normal individual operation of controls.</p> <p>Overvoltage protection is incorporated which latches off regulator output following an overvoltage event</p> <p>This unit is protected against damage due to output (Field) short to ground. A short will latch off the output until reset.</p> <p>Reset of latch off caused by either overvoltage or shorted output is accomplished by momentary turn off of 14V supply.</p> <p>In an operating system (2 units with equalizer connection), an excess current in one shunt due to an overvoltage condition in that side will cause the opposite side overvoltage sensing to be desensitized so that the side causing the overvoltage will be selectively tripped. Excess shunt current then falling to zero will permit the normal side overvoltage sensitivity to restore to its calibrated value.</p> <p>Left and right alternator systems are independent of each other except for the equalizer connection. The equalizer connection will not cause a failure in one system to disable the other normal system.</p> <p>The equalizer circuit may be faulted to either ground or the bus with no damage resulting in either system; however, balancing action and selectivity of overvoltage protection will be lost. In event of the equalizer faulted to the bus, system voltage will increase to the limit of balancing circuit control authority (less than 1.0V), and overvoltage operating point in both systems will be elevated to the value provided for selective trip action (approximately 2V above the overvoltage trip calibration point).</p> <p>When used with an operating alternator, never bypass the regulator (Bus to Field) as a means of checking alternator integrity or the overvoltage protection circuit action.</p>

Note 12:

Caution: for each control the voltage source for regulator input and sense terminal must be the load terminal of the related shunt, with no means provided which can result in any other source of voltage being applied to these terminals. A dangerous condition with extensive damage to the control may result from not observing this requirement.

PART NUMBER

AIRCRAFT ELIGIBILITY

B-00392-1
585-400

Piper PA-44-180, PA-44-180T

NOTE: Installer must cross-check eligibility with applicable technical data.

Data Sheet B-00392-1.A