

DARE's External Aircraft Power Monitors are designed to meet the requirements of MIL-PRF-24021 for aircraft electrical power. DARE's External Aircraft Power Monitors sense the output characteristics of 115V, 400 Hz ground power and protect the aircraft's AC power distribution system from over or under-voltage, over or under-frequency, or improper phase sequence. The output of the power monitor controls the coil circuit of the aircraft's AC contactor.



DESIGN FEATURES

- 400 Hz operation
- Over/Under Voltage Sensing
- Over/Under Frequency Sensing
- Phase loss sensing
- Time delays for pull-in and/or drop-out
- Relay contacts or internal power supply output
- Hermetic sealing and encapsulating for immunity to shock, vibration, and environmental extremes
- Wide variety of finishes, enclosures, connectors, and mounting arrangements

OPERATION

DARE External Aircraft Power Monitors incorporate solid-state sensing circuits to sense the condition of 115V, 400 Hz power source based on MIL-E-24021F. They determine the acceptability of the power source in terms of MIL-STD-704. If the 115V, 400 Hz input power varies from the specified limits, the Power Monitor's output circuit will open and remain open until reset. If the input power is not phase ABC or BCA, the output will not be activated. The output circuit can be used to drive an AC contactor or any other controlled device.

Function	Steady State Operation			Transient Operation		
	Operating Range	Response Time (seconds)		Operating Range	Response Time (seconds)	
		Drop-Out	Pull-In		Drop-Out	Pull-In
Over-Frequency*	425 – 430Hz	1.0 ± .25	0.5 ± 0.5	Above 430Hz	1.0 ± .25	0.5 ± 0.5
Under-Frequency*	370 – 375Hz	1.0 ± .25	0.5 ± 0.5	Below 370Hz	1.0 ± .25	0.5 ± 0.5
Over-Voltage*	125 – 130V	1.0 – 3.0	0.5 ± 0.5	130V – 174V	Limit 1-Fig.4**	0.5 ± 0.5
Under-Voltage*	100 – 105V	.85 – 2.55	0.5 ± 0.5	Above 174V	< 0.03	0.5 ± 0.5
				Below 100 V	Limit 2-Fig.4**	0.5 ± 0.5

CONSTRUCTION	
Enclosure	Hermetically sealed and encapsulated
Connector	MS3116 type connector
Finish:	Various finishes available
OUTPUT CONTACTS	
Configuration:	SPST
Contact Rating @ 28 VDC	1 A Resistive
Contact Life:	20,000 operations, minimum

ENVIRONMENTAL CHARACTERISTICS	
Temperature:	-54°C to +71°C
Vibration:	10 G's 5-2000 Hz.,
Acceleration:	13.5 G's
Shock:	15 G's - 11 ms
Humidity:	95%
Altitude:	10,000 Ft. Operating 70,000 Ft. Non-Operating

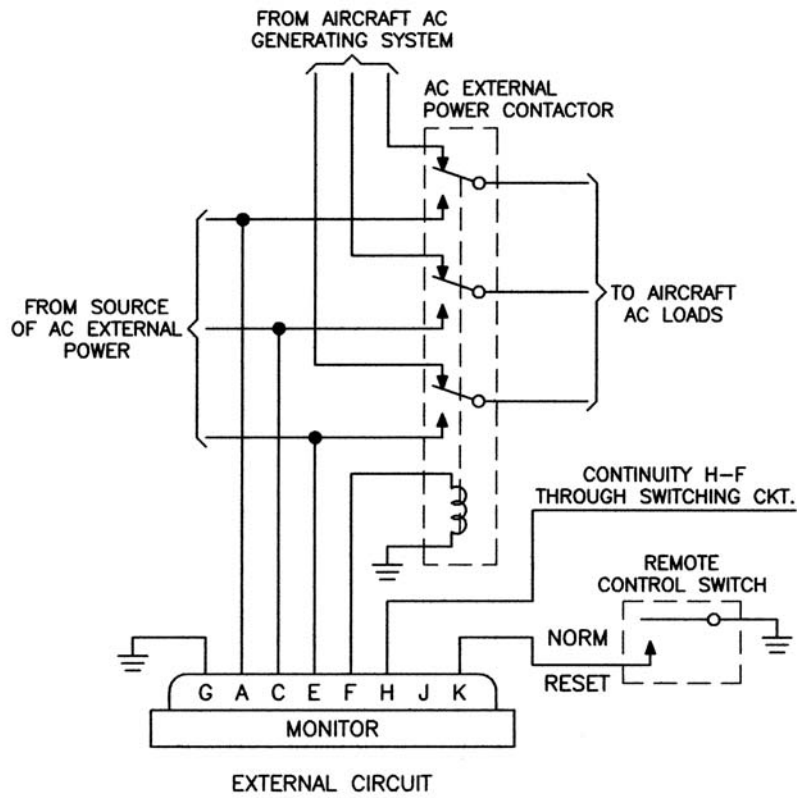
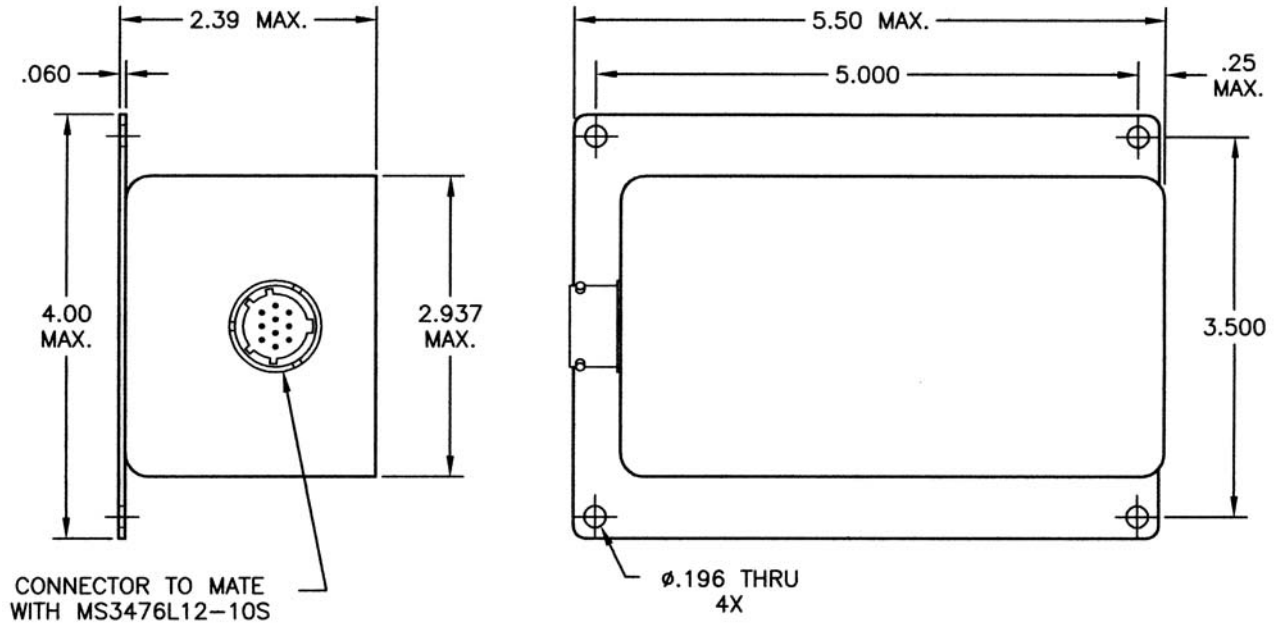
* These parameters can be custom specified to meet your particular requirements
 ** Per MIL-E-0024021F



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EXTERNAL AIRCRAFT POWER MONITORS



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