



FREQUENCY MONITOR
Type FAA/FQA AC Powered
50/60/400 Hz



GENERAL

Frequency Monitors are used in those applications where electrical systems must be de-energized, or alarm devices activated when the power line frequency departs from normal range of operation. Type FAA/FQA Frequency Monitors may be utilized for power line frequencies that vary above and below pre-specified limits.

OPERATION

Signal voltage from the power line is applied to the designated terminals. If the line frequency is between the upper and lower specified limits the output relay energizes. Should the frequency deviate beyond the specified limits, and remain outside the normal band for longer than the specified drop-out time-delay, the relay de-energizes. After de-energizing, the frequency must return to within the normal band for longer than the pick-up time-delay in order to energize the output relay.

STANDARD SPECIFICATIONS

ELECTRICAL

<i>Input (operating)</i>	
Voltage (nominal)	115, 220 vrms ±20%
Frequency (nominal)	50/60/400 Hz ±20%
Voltage Transients	MIL-STD-704, Limits 1 & 3
<i>Input (sense)</i>	
Frequency Band	As required*
Accuracy W	±1.0%
Time Delay (pick-up)	250 ms to 10 sec.*
Time Delay (drop-out)	250 ms to 10 sec.*

OUTPUT CONTACTS

Contact Form	DPDT or 3PDT
Contact Rating	2 A res 10A res 75 A ind. 6 A ind.
Contact Life	50,000 operations minimum
Contact Resistance	.075 ohms maximum
Dielectric Strength	1000 vrms @ 60 Hz, all terminals to case
Insulation Resistance	100 megohms @ 500 vdc. all terminals to case
Marking	Model number, date code, operating

ENVIRONMENTAL

Temperature	Per MIL-STD-810C, Methods 501.1, 502.2
Operating	FAA -55° C to +125° C FQA -40° C to +85° C
Storage	-65° C to +150° C
Vibration	Per MIL-STD-810C, Method 514.2 Procedure I, 10-2000 Hz 20g's
Acceleration	Per MIL-STD-810C, Method 513.2 Procedure I, and II, ± 10g's
Shock	Per MIL-STD-810C, Method 516.2 Procedure I, 50g's 11 ± 1ms any axis
Humidity	Per MIL-STD-810C, Method 507.1 Procedure II
Altitude	Per MIL-STD-810C, Method 504.1 Category 6 Equipment, Sea level to 70,000 ft.

PHYSICAL

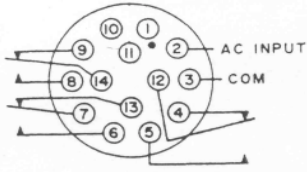
Finish	In accordance with MIL-F-14072 Gloss Blue#15177 FED-STD-595 meet or exceed MIL-E-5556 or 5557
Connector	Glass-to-metal seal solder hooks or MS 3113H-20-16-PN type connector (optional) voltage and wiring diagram
Enclosure	Hermetically sealed and encapsulated
Weight	16 oz. maximum

*Specify in Part Number

(1) Defined as maximum difference between factory set point and specified set point over the operating temperature range, including temperature drift and repetitive operations.

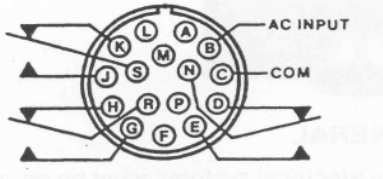
WIRING DIAGRAM

SOLDER HOOKS



FOR DPDT OPERATION
DELETE PINS D, E, & N.

MS CONNECTOR



FOR DPDT OPERATION
DELETE PINS D, E, & N.

	115 VAC				
Symbol	2A,60HZ	10A,60HZ	2A,400HZ	10A,400HZ	220 VAC
A	2.14	2.56	2.00	2.14	2.56
B	2.27	2.94	2.00	2.27	2.94
C	2.75	2.75	2.50	2.75	3.19
D	1.625	1.875	1.437	1.625	1.875
E	1.750	2.250	1.437	1.750	2.250
F	.375	.656	.718	.375	.656
G	.875	1.125	.718	.875	1.125
H	.41	.41	.31	.41	.41
J	1.938	1.938	1.875	1.938	1.938
K	.32	.39	.38	.32	.39
L	1.625	2.156	1.250	1.625	2.156
M	.63	1.00	1.00	.63	.868
N	1.13	1.47	1.00	1.13	1.336
P	2.765	3.437	2.500	2.765	3.437
R	3.27	3.94	3.00	3.27	3.94
S	1.750	1.750	1.500	1.750	2.17

TOLERANCES: .XX DEC. ± .03 .XXX ± .010

Tolerance .XX DEC. ± .03 .XXX ± .010

CASE DIMENSIONS

ORDERING INFORMATION

To order, specify all parameters using the part numbering system shown below.

