

Order Number

Serial Number

## PRODUCT/TEST MANUAL

**1F21K2**

**FAN FAIL RELAY**

<b>Issue Level</b>	<b>Date</b>	<b>Summary of changes</b>
A	25/10/99	Initial issue.
B	3/03/03	TfA Issue C
C	20/10/04	TfA Issue D
D	3/03/05	TfA Issue E

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<b>Author</b>	<b>Checked &amp; Registered</b>	<b>.pdf file created</b>	<b>Released</b>
ERL	DG	DG	

**1. BROAD DESCRIPTION**

The 1F21K2 is an electromechanical relay that monitors the airflow of cooling fans using a vane and switch system. A neon indicator is used as a visual indication of a healthy air flow. If the fan fails the timer starts and after a set time the relay will de-energise.

**2. SPECIFICATIONS**

Auxiliary Supply Voltage            240 VAC DC

Auxiliary Supply Burden (at 240V)      Approx 1W with the output relay output relay operated

Ambient Temperature Range            -5°C to 55°C

Output Relay Contact Ratings

**Make and Carry Continuously**

1700 VA AC resistive with maximums of 380 Volt and 8 Amp  
 1700 VA DC resistive with maximums of 250 Volt and 8 Amp

**AC Break Capacity**

1700 VA AC resistive with maximums of 380 Volt and 8 Amp

**Maximum Contact Capacity (Amps)**

Voltage	DC			AC		
	30	125	250	110	220	250
Resistive	10	2.4	1.2	10	7	6.6
Inductive L/R 7 ms	7.5	1.8	.9	7.5	5	4.4

**3. TEST EQUIPMENT REQUIRED**

AC Auxiliary Supply  
 High Voltage Test Equipment.  
 Megger 1000 Volt

**4. ASSOCIATED DRAWINGS**

153-021-102    Wiring Diagram  
 Energy Aust Test For Approval 60962 Issue E

**5. HIGH VOLTAGE TESTING**

- a)    Apply 2KV RMS between the terminal groups as listed in A & B below for 1 minute.
- b)    Apply a 1KV DC megger test between the terminals as listed in A & B below. Megger reading must be greater than 50 M ohms

**GROUP A**  
 1 ,3 & 5  
 17 & 19  
 All terminals

**GROUP B**  
 17, 19 & Frame  
 1,3,5 & Frame  
 Frame

**6. CALIBRATION**

- a) Connect and indicating device across terminals 17 & 19. Apply 240VAC between terminals 1 (Active) and 5 (Neutral) with terminal 3 floating. Check that the output relay operates and the neon lamp is lit.

Check

- b) With the connections as in a) apply 240 VAC to terminal 3, the neon lamp will extinguish and the relay will drop out after the set time on the timer expires.

Check

- c) Perform the above test with the timer set for 30 seconds and check that the actual time is 30 seconds +/- 10%

Check

**7. GENERAL & FUNCTIONAL**

- a) Ensure contacts operate correctly  
b) Check that the Neon is RED in colour and that it operates correctly.  
c) Check that the relay is electrically sound and mechanically robust as per Standard Inspection & Test Schedule 903-000-026

PASS

TESTED BY : \_\_\_\_\_ DATE : \_\_\_\_\_

8. CONNECTION DIAGRAM

