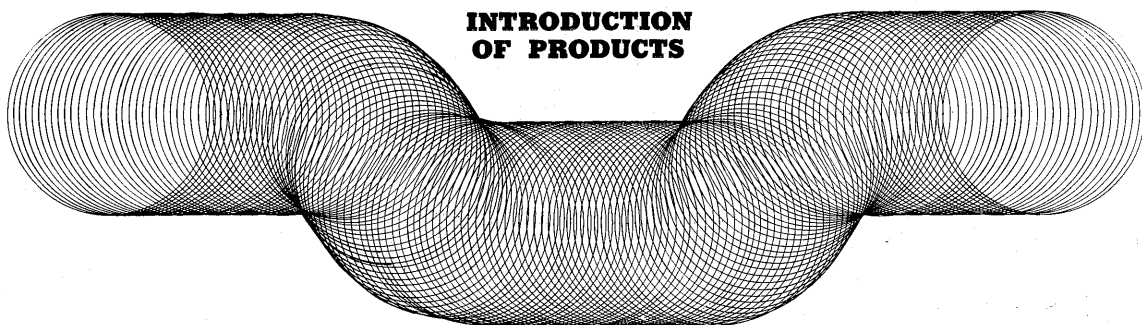


## INTRODUCTION OF PRODUCTS



### TRANSISTOR TYPE CURRENT LIMITING RELAY, MODEL AS3

Model AS3 Fuji Transistor Type Current Limiting Relay is mainly used as a current limiting relay for self-starting an ac winding type motor. This relay is an instantaneous operating current relay used to control surge current developed during starting when starting resistance is repeatedly short-circuited.

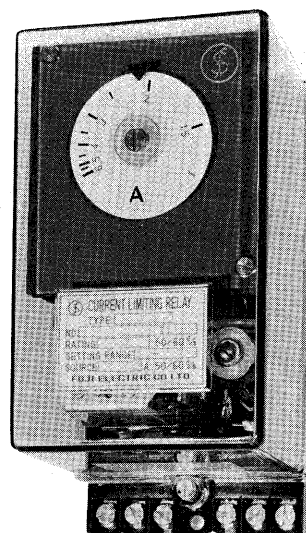
Fuji Electric has been manufacturing both Model K3702 electromagnetic and Model AIK-1 magnetic amplifier relays, ac current limiting relays, for many years. These relays have gained wide popularity in various motor control applications. In addition to the conventional types, Model AS3 has been developed. These relays employ transistor type static circuits throughout so as to provide improved performance characteristics. Transistor type static circuits have proven their effectiveness as current detection circuit electric power relays.

#### Construction and Operation

These relays consist primarily of input, output, and power supply circuits. Ac current input is converted to voltage by a built-in transformer, the converted voltage is rectified and applied to the transistor circuit, and the output relay is operated through a switching motion, operating the output contacts.

The static current detection circuit is connected to external equipment through individual transformers in the input and power supply circuits. These transformers serve as isolating transformers providing adequate external electrical isolation. Moreover, through the use of protective circuits employing valve resistors, capacitors, etc., sufficient protection is provided against overcurrents and external surge voltage. With this reliable, efficient circuit construction, resulting performance is equivalent to or exceeds that of conventional power relays.

A Model HH 22-1 control relay is used as an output relay. It is constructed to provide a high contact capacity and can be effectively used for direct machine operational control. It has high reliability and stability and bears up well under high frequencies of operation.



Current is set to a continuous value. Current can be easily adjusted from the outside with the adjusting screw on the front panel, greatly facilitating maintenance and adjustment.

#### Features

##### 1) Precise operation

The relay is of simple, trim construction and has highly stable and accurate operational characteristics due to the employment of the static current detection circuit.

##### 2) Stability

The circuits have been designed for power supply relay application with due consideration to operational stability and accurate, constant control. The relays are, therefore, highly stable against external surge voltage and overcurrents as well as variations in temperature and humidity, and control voltage fluctuations.

##### 3) Low power consumption

Power consumption is extremely low, permitting the use of a small capacity current transformer. Power consumption is approximately 1/30 that of conventional electromagnetic relays.

##### 4) High insulation strength

Model AS3 relays have an electrical insulation strength to successfully withstand ac 2000 v applied for 1 minute, and are, therefore, of sufficient electrical insulation strength for power supply applications.

## Ratings

| Rated Control Power Supply |                    |                           | Rated Input        |                        |   |                                |   | Rated Output       |   |
|----------------------------|--------------------|---------------------------|--------------------|------------------------|---|--------------------------------|---|--------------------|---|
| Rated voltage<br>(v)       | Frequency<br>(cps) | Power consumption<br>(va) | Frequency<br>(cps) | Rated current<br>(amp) | Adjustment<br>range   | Operational<br>accuracy<br>(%) | Power consumption at<br>rated value<br>(va) | No. of<br>contacts | Contact<br>capacity   |
| 200/220<br>(100/110)       | 50/60              | Approx. 4                 | 50/60              | 5                      | 1.2~5 amp.<br>(Continuously<br>variable.<br>Scale is marked<br>in the reset<br>current values.<br>Operating<br>value is 120%<br>of reset current<br>value.) | ±5                             | Approx. 10                                  | 1b                 | Ac induction<br>load (power<br>factor: 0.4);<br>Closing capacity:<br>220 v<br>2 amp.; Circuit<br>breaking capacity:<br>200 v<br>0.2 amp |

### 5) High frequency of operation

The control relay consists of a static circuit and a Model HH 22-1 control relay and will, thus, AS3 will effectively withstand extremely frequent operation (1800 times per hour).

### 6) Long service life

Efficient performance with an extended service life is guaranteed. The service life is far longer than that of conventional electromagnetic relays due to the employment of a static circuit.

### 7) Compact and light

This relay is only  $\frac{1}{4}$  the size and  $\frac{1}{3}$  the weight of comparative conventional relays.

### 8) Can be used with both 50 and 60 cps.

Since this relay can be used with both 50 and 60 cps, there are no regional restrictions with respect to its applications.

### 9) Easy to set (Adjust)

Current operational value is easily set at constant value by a control knob provided on the case for simple external adjustment which greatly facilitates equipment maintenance and adjustment.

## FUJI AIR PURIFIER

The dreams of our progenitors are realities today due to the tremendous industrial development.

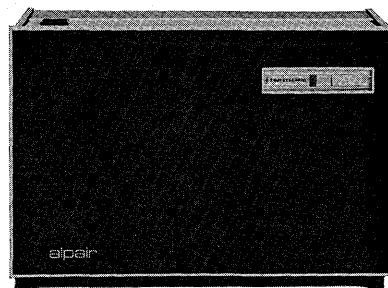
However, accompanying the phenomenal growth of industry in almost equal stride has been a sharp increase in waste materials released into the atmosphere in large cities and industrial areas, an alarming rise in air contamination made by motor vehicle exhaust fumes, and the increased presence of noxious particles and gases in the air we breathe.

The Fuji Air Purifier removes these elements, which pose a serious threat to good health and happy living, and adds negative ions ("Air Vitamins") in their place. Air in the home or office is electrically purified by this unit, resulting in clean, healthy living or working quarters.

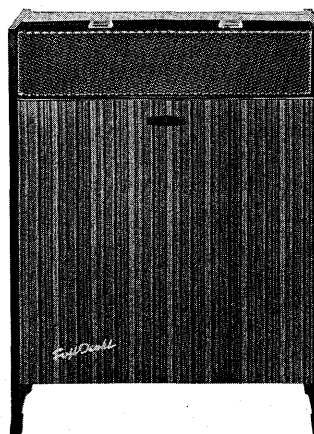
### Features

1) Powerful suction captures microscopic dust particles as minute as  $1/10,000$  mm ( $0.1 \mu$ )

Dust particles larger than  $10\mu$  are visible to the naked eye, but particles smaller than  $5\mu$  are not. It is these particles that are even present in the air, and the ones that pose a constant health threat.



Model LFH-302, floor and wall mounted type



Model LFH-406, floor type