

**-DIN rail Mounting RoHS compliant-**

# FAL-10G

**«single phase/  
Three phase Dual use»**

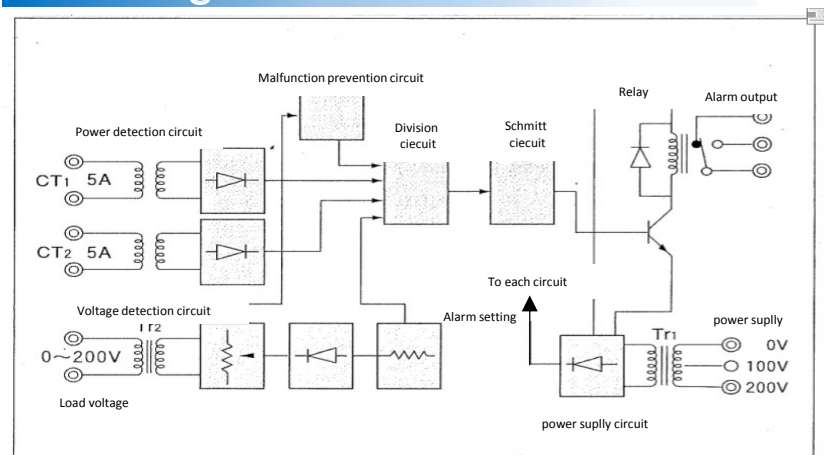
**NEW**



## Characteristic

- Phase control • ON-OFF control • Zero cross control can be used regardless of waveform
- One heater burnout detection in parallel heater
- Detection points can be set arbitrarily by dial scale
- When the detection point is reached, ALARM LP lights up and issues at output signal
- Three-phase circuit OK with one unit OK
- DIN rail mounting type

## Block Diagram



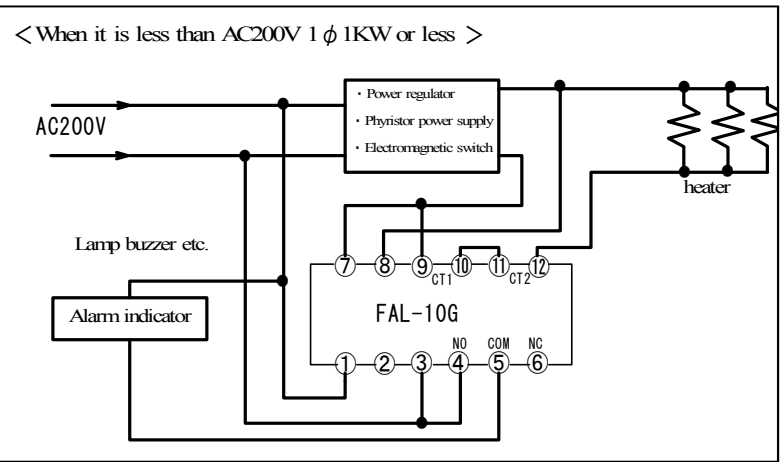
## Operating principle

1. The line current of the load is detected by the electric power detector (C.T), converted into voltage, and entered into the division circuit
2. The line current of the load is detected by the electric power detector (Tr2) and enters the division circuit through the current detector and the alarm setter
3. Divide circuit compares and divides both inputs, relays are driven through Schmitt circuit and alarm output is issued
4. Since voltage and current are detected, even if the power supply changes, both will increase and decrease at the same rate  
No alarm will be issued even if the current decrease due to this change  
Therefore, we can use the power supply unit by thyristor phase control etc.
5. When the road voltage is 15% or less, the malfunction prevention circuit operates and no alarm output is output  
(15V when rated 100V • 30V when rated 200V)

Specification

- Model Name : FAL-10G
- Meter power supply : AC100V / 200V ± 50 / 60Hz
- Load current : 0.3~5A (C.T external when 5A is exceeded)
- Load voltage : 0~100V / 0~200V
- Heater capacity : 0.5KW in the case of 100V AC 1φ  
: 1KW in the case of 200V AC 1φ  
: 1.7KW in the case of 200V AC 3φ } less than line current 5A or less  
USE C.T for the above case
- Applicable load : Linearity load such as Nichrome wire
- Alarm setting range : 3~100%
- Set accuracy : ±1.5% (full-scale)
- Detection sensitivity : 0.5% (full-scale)
- Input : Phase control • ON-OFF control • Zero cross control
- Detection method : Load current and load voltage
- Alarm output : Relay contact 1C (Rated 200V 0.1A Resisted load)
- Shape : Inboard mounting (DIN rail designated)
- Insulation resistance : 50MΩ or more between each input terminal (DC500V mega meter)
- Withstand voltage : Between each input /output terminal AC1500V/1minute
- Terms of use : -10°C~50°C (However, without condensation)
- Case material : Polycarbonate PCN-6-3114 (gray Flame retardance)
- Weight : 490g
- List price : ¥27,000-
- Two connectors are not attached
- OMRON made "XW4B-06C1-H1" sold separately

Terminal Connection diagram



Use Applications

- semiconductor mold
- Molding mold for plastic molding
- Thermal management of physics and chemistry machinery
- Metallic heat treatment
- Other industrial heater management

Setting Method

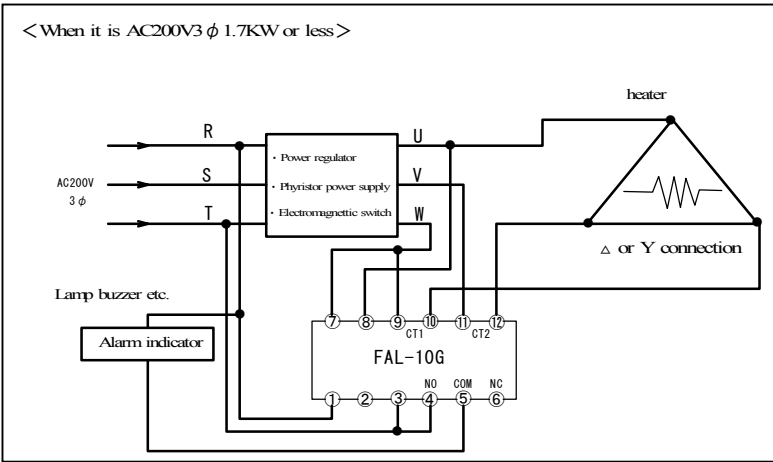
- Alarm set value is graduated in %
- The setting 0 to 100% corresponds to the line current 0 to 5A

case1. Heater capacity 1φ 200V 0.5KW case

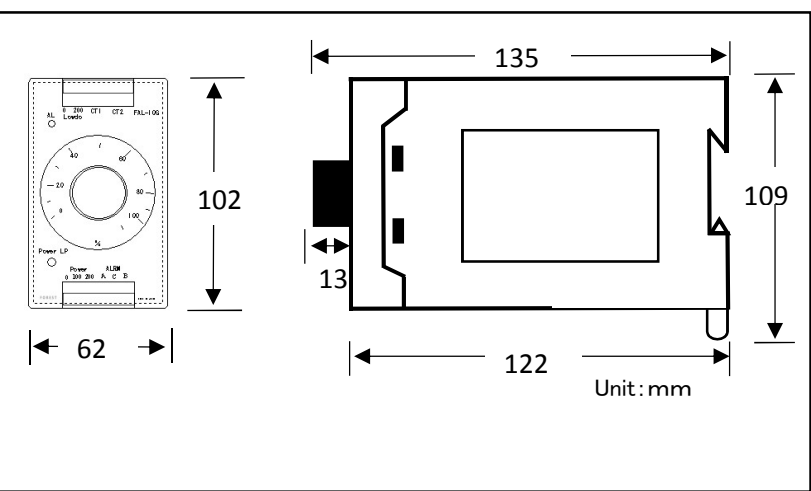
Line current 2.5A  
Setting range 0~50%  
1/20 Disconnection of all heaters...47.5%

case2. Heater capacity 3φ 200V 10KW case

Line current 87A C.T 100/5  
Setting range 0~87%  
1/9 Disconnection of all heaters...73%



Externals dimensional drawing



Attention Usage precautions described in the catalog or instruction manual Please read careful and use correctly

- Business item
- Heater broken alarm
  - DC accumulated ammeter
  - Thyristor power regulator
  - Various temperature detector
  - etc



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