FC 135
Built-in control

FC 135

- **CURRENT RELAY FOR CONTROLLING A.C.**
- **A.C. or D.C. supply.**
- **Maximum or minimum current.**
- **8 ranges from: 0.2 mA. to 5 A.**
- **Optional delay of 3 s.**
- **Led indicating power on.**
- **Led indicating relay on.**

CHARACTERISTICS

Technical data in common
See page 10 and 11

Form of adjustment
By means of button built in the box, on relative 0-10 scale.

Ranges

Range	Internal shunt	Maximum current
0.2 - 1 mA A.C.	100 Ω	10 mA
0.5 - 5 mA A.C.	20 Ω	50 mA
4 - 20 mA A.C.	5.1 Ω	100 mA
20 - 100 mA A.C.	1 Ω	500 mA
100 - 500 mA A.C.	0.2 Ω	2 A
0.2 - 1 A A.C.	0.1 Ω	4 A
0.4 - 2 A A.C.	0.05 Ω	6 A
0.5 - 5 A A.C.	0.02 Ω	10 A

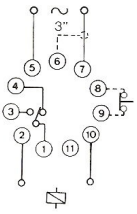
Currents greater than 5 Amp.
When greater than 5 Amp. currents are to be controlled, a current transformer, ratio X/5, class 1 is to be used, where X is the closest value to the current to be controlled. For example, if a 45 Amp current is to be controlled, a 50/5 transformer will have to be used.

Hysteresis
Approximately 10%. It can be increased up to approximately 75% by placing a resistor between terminals 8 and 9. The limit values for it are 1 MΩ to 15 KΩ and 0.25 W. The hysteresis increases as the resistance value decreases.
By putting a jumper on terminals 6 and 7, approximately 3-second detecting timing is made.

Manual reset
Connect a N.C. push-button between terminals 8 and 9.
Whether it is controlling a maximum or minimum current, when the relay has detected and the conditions are re-established in the control current, the state of the relay will change when the push button is pressed.

Automatic reset
If the push-button is not connected, when the conditions are re-established in the control current, the resetting will take place automatically.

Example 1



FC 135

Maximum or minimum selector
By means of a selector located in the front of the equipment, the programming is made for working on maximum or minimum current.

Accessories
Sockets.
IDM system coding ring.
Attachment spring.
Front mounting frame.
Protecting covers.

OPERATING PRINCIPLE

Maximum current
Place the selector on «MAX».
When the supply power is applied, if the control current is lower than that pre-set, the relay operates instantaneously. When the control current exceeds the pre-set value, the relay releases and remains on this position until the control current goes approximately 10% below the pre-set value. If when the supply power is applied the control current is greater than that pre-set, the relay remains released.

Minimum current
Place the selector on «MIN».
When the supply power is applied, if the control current is greater than that pre-set, the relay operates instantaneously. When the control current goes below the pre-set value, the relay releases and remains on this position until the control current exceeds the pre-set value by approximately 10%. If when the supply power is applied, the control current is lower than the pre-set current, the relay remains released.

FUNCTION DIAGRAM