

Programmable ammeter-controller

Technical data:

Code : MC800
Model : AP-820
Supply : 220 v , 50 Hz , +/- 10%
Range : 0 ...1000 A
Output : Relay (5 A / 250 Vac) or
 Triac (1 A / 250 V ac AP_213 only)
Amb. Temp.: -10...+50 C
Dimensions : 72x72 mm front panel mounting

Features:

- Auto reset using watch dog.
- Automatic unit change (deci amps for ranges below 100 A)
- On line parameter editing.
- Offset for zero calibration.
- Relay output for alarm.

Details:

A : Front panel

- 1- Set key : This key is used to:
 - Display and edit preset value.
 - Enter programming mode .
 - Display and edit parameter values.
- 2- UP key : This key is used to :
 - Increase parameter value .
 - Choose the next parameter.
 - Reset the unit, while DN key is pressed.
- 3- DN. key : This key is used to :
 - Decrease parameter value .
 - Choose the previous parameter.
 - Reset the unit, while UP_key is pressed.
- 4- LED-OUT1 : Relay 1/Triac status (ON=Relay/Triac is active)
- 5- LED-OUT2 : Relay 2 status (ON=Relay is active)
- 6-

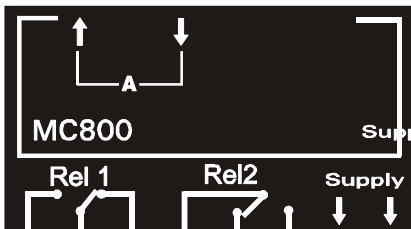
B : Rear side (Input /Output)

INPUTS:

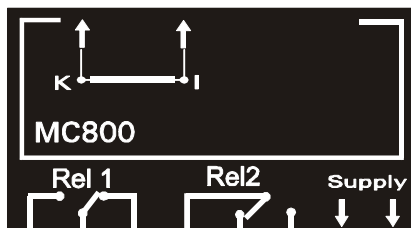
- 1- Supply : Supply terminals (220 v , 50 Hz , +/- 10%)
- 2- Terminal for c.t. connection

OUTPUTS:

2



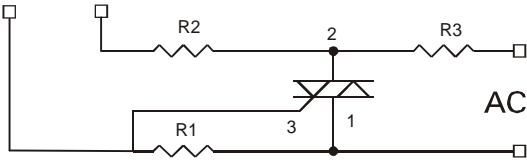
Direct connection
(c.t. Not required)
(type 802 only)



2000/5...50/5
(c.t. required)
(type 802 only)



| Output 1(control) | Output 2(alarm) | Description |
|-------------------|-----------------|---------------|
| | | Relay control |
| | | Triac control |



Operating Instructions

- This unit operates in two different modes Normal mode (Displaying Ampere.) Programming mode (Displaying parameters). Connect supply and current sensing wires, apply power and the unit will blink the characters A.P. for 4 seconds and then starts operating in normal mode. (if sensor is misconnected or faulty "Error" will be displayed until error rectified)
- To view and edit the set value (S_V) press the "Set" key S_V will be displayed in blinking mode, use UP or DN key to edit the value.
- To view and edit the operator parameters ("Set.L.", "d.t.", "S.t.") Press and hold the "Set" key until one of the above parameters is displayed, release the set key, now you can view the para. value by pressing the "Set" key again and edit the value by UP/DN keys.
 - To view and edit all the parameters, power off the unit and while pressing the set key Power on the unit again, the unit will start in programming mode by displaying the first para. ("rAng") release the set key, now you can view the para. value by pressing the "Set" key again and edit the value by UP/DN keys. Or use UP/DN keys to choose another parameter and view or edit its value. To return to normal mode, power the unit off and on again. If untouched the unit will return to normal mode after timeout.

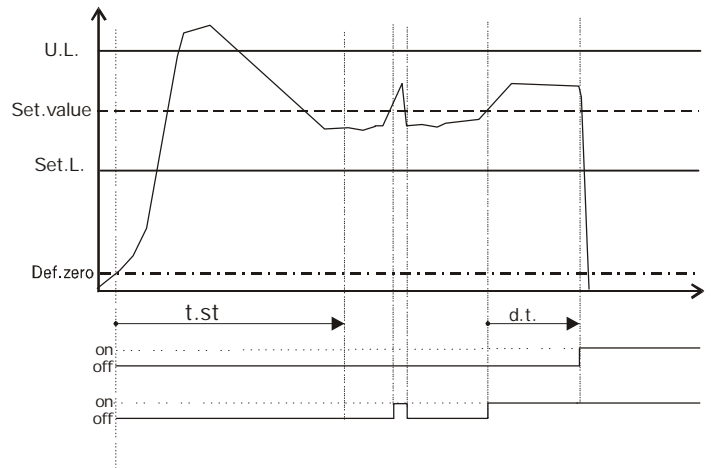
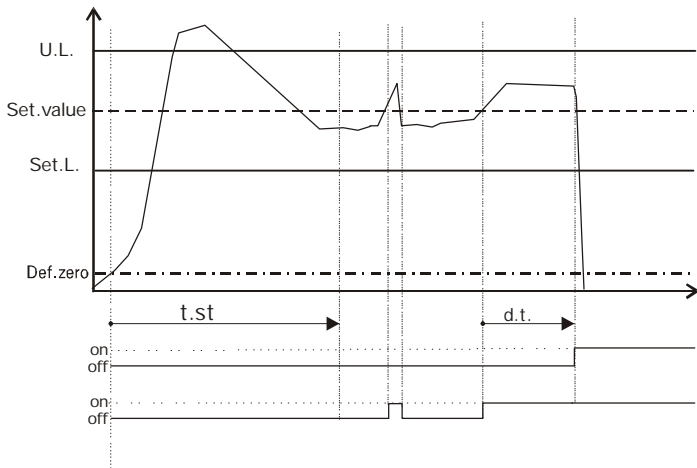


Table 1 shows available parameters and corresponding possible values.

| Para. | Possible value | unit |
|--------|-----------------------|------------------------------------|
| Set.L. | 0..UL | A / deciA |
| d.t. | 0...9.9 0...99.9 | Sec. (Type 802) Sec. (Type 820) |
| S.t. | 0...99.9 0...999.9 | Sec. (Type 802) Sec. (Type 820) |
| rAng | 0...2000 | A / deciA |
| UL | 0...rAng | A / deciA |
| Func. | Oto / HAnd | Menu choice |
| r.t. | 0...999.9 | Sec. |
| r.n. | 0...99 | - |

Parameter description.

- Set.L.: (Set low limit) The lower limit of the current.(no load detection)
- d.t. (Delay time) Delay time for relay 1 activation.
- S.t. (Start time) Start up delay to mask initial current over shoot .
- rAng (Range) Max expected range
- UL (Upper limit).Maximum limit for S_V.
- Func. (Function).choose automatic or manual operation.
- r.t. : (rest time) The unit can only be restarted after the expiry of this time .
- r.n. (reset number) The number of resets allowed.(only for automatic operation.)

Manual mode of operation:

- The unit starts to control only , when load has been supplied with current and “S.t.” the start time, has expired.
- If the current stays within “S_V” and ”Set.L” boundaries ,relays stay OFF.
- If the current becomes more than “S_V” or less than ”Set.L”
 - 1-Relay 2 will switch on immediately , but will switch off if current returns to the boundary
 - 2-After a delay time specified by “d.t.” parameter and if the current is still out of range , Relay 1 will switch on and stay on until the unit is reset manually .
- To reset the unit ,after “r.t.” has expired ,press UP and DN keys simultaneously for 2 seconds.

Automatic mode of operation:

- Same as manual mode ,but reset is performed automatically , when the number of resets is equal to the number specified in the “r.n.” parameter ,the unit will not reset automatically anymore and manual reset will be necessary to initialize the unit.

OPTIONAL parameters

The following optional parameters are implemented on request.
(Do not hesitate to contact us for additional requests.)