3 year GUARANTEE

Respecting the customer is our duty

3 year no question asked guarantee under these conditions;

1-at most it should be within 3 years from the date printed on the label of the product

2-the label on the product should be safe and sound

Shiva Amvaj products in accordance with international standards and with a 3 year no question asked guarantee are presented

ISO 9001-2015 CE

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3 PHASE CONTROL AMPERE RELAY

Device Introduction

3 Phase Control Ampere Relay is a convenient device to protect three-phase motors against increase, decrease and asymmetry of currents and current display.

VER:9801

SCAN QR TO VIEW THE PRODUCT

MODEL : CAD - 1000 A
CODE :13D1
WEIGHT : 495 gr
(96x96x115) mm
IP 30

Features

- Capable of displaying and measuring current and protection to minimum, maximum and asymmetry of currents
- Equipped with
  - 3 adjustment bound for minimum, alarm and maximum current
  - Delay time at the first start of heavy motors
  - Inner alarm for warning when confronting error
  - 2 separate relays for ALARM and TRIP
- 10 indicators to announce
  - **AC:** grid's electricity
  - **Alarm Relay:** status of Alarm relay
  - **Trip Relay:** status of Trip relay
  - **Delay Start:** delay of first start(3-300sec)*
  - **CT:** display and adjustment of CT(5-1000A)
  - **Delay Off:** delay of disconnection(2-60sec)
  - **Unbalance:** currents asymmetry(10-100% CT)
  - **Max:** maximum current(0.01A-120% CT)
  - **Alarm:** Alarm current(0-120% CT)
  - **Min:** minimum current(0-120% CT)

  (Indicators are blinking when parameters are being adjusted)
- Wire installation Instruction is available on device terminals

*The first start time is the time when current increase will not be considered after starting.

Technical Specifications

- Supply voltage/output RESET:180-250VAC/PH-N/50-60Hz
- Current measurement accuracy:0.5% ± 1digit
- CT adjustment time and other parameters: for 5 minutes from the time when connecting power
- Efficiency at
  - Temperature : -20°C .. +65°C
  - Humidity: 70%
- Output: two 16A relays

Device operation

By connecting input power to device, Alarm relay is positioned in disconnection mode and Trip relay in disconnection or connection mode according to adjustment status (table ④) and normal operation starts based on table ①.

Device adjustments are based on tables②,③,④and error messages on table⑤.

Warning: by adjusting CT each time, currents value of Min, Max and Alarm must be adjusted again.

Table ①

Normal Operation

description	display	Indicator ON
No Current	Rotational movement	AC
current crossing of CTs at start time	Inverse counting of Delay Start accompanied with a bleep	AC Delay Start
current crossing of CTs	current	AC

Warning: device adjustments (CT, status of Trip relay, device parameters) are possible just at the first 5 minutes of connecting power. After finishing this time you are provided to adjust device again by disconnecting and connecting input power of device.

Table ②

Display and Adjustment of CT

key	Blinking indicator	indicator	Variation Range using ▼ and ▲ keys
↵ + ▲	CT	CT value	5 - tHU (1000)
↵	Saving adjusted CT accompanied with a bleep		

Table ③

Display and Adjustment of device parameters

Adjustment key	Blinking indicator	Description/ display	Variation range using ▼ and ▲ keys accompanied with a bleep
↵ + ▼	Unbalance	Current Asymmetry	10 - 100%
↵	Max	Maximum Current	* 0.01A - 120% CT
↵	Alarm	Alarm Current	0 - 120% CT
↵	Min	Minimum Current	0 - 120% CT
↵	Delay Start	First Start Time	3 - 300 Sec
↵	Delay Off,Alarm	Delay-Off for Alarm Relay	2 - 60 Sec
↵	Delay Off,Unbalance Max , Min	Delay-Off for Trip Relay	2 - 60 Sec
↵	Saving all information with displaying SAU and a bleep		

Note1 : it is necessary to adjust CT first because after adjusting CT each time, maximum, alarm and minimum current values will be reset.

Note2 : note that maximum current value must be more than alarm current and alarm current value must be more than minimum current when adjusting currents. Otherwise in this step, adjustments will not be saved and Err will be displayed and previous adjustments will be saved.

Note3 : if any values of alarm or minimum currents set to zero they will be disabled.

Note4 : if adjustment steps are done slowly with an interruption more than 10 seconds, device will exit adjustment mode.

Table ④

Display and Adjustment of Trip relay status

Adjustment key	Display:(changeable by ▼ and ▲ keys)	description
↵ + ↺	r-C	Trip relay is disconnected Normally and will be connected when error occurs
	r-o	Trip relay is connected Normally and will be disconnected when error occurs
↵	Saving status of selected relay	

Device Function when Error Occurs

Performance details are based on table ⑤ .In this situation when Alarm relay indicator is turned on and off it expresses that Alarm relay gets connected and disconnected respectively and when Trip relay indicator gets turned on and off it shows that situation of Trip relay alters from connected to disconnected or from disconnected to connected

Table ⑤

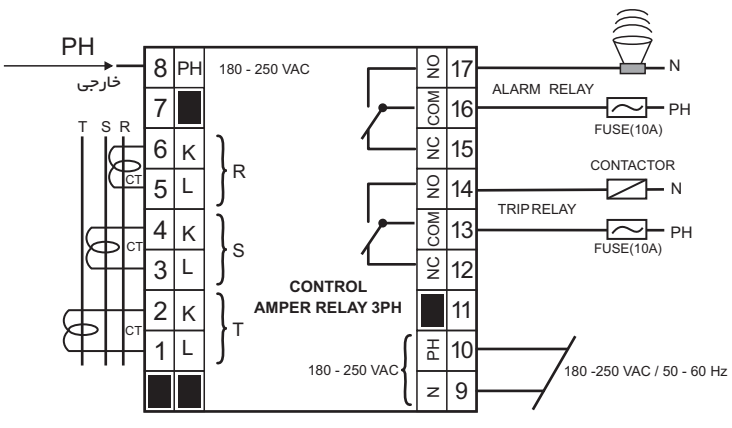
Error Messages

Indicator ON	Error description	Before relay situation change: Displaying accompanied with a bleep	After relay situation change: Alarm Relay indicator	After relay situation change: Trip Relay indicator	After relay situation change: Display accompanied with an uninterrupted sound
Unbalance	Current asymmetry of phases	b - - Countdown Delay Off	——	ON	difference of phase currents at disconnection time-blinking
Min	Current is lower than Min value	t - - Countdown Delay Off	——	ON	Current at disconnection time-blinking
Alarm	Current is higher than Alarm	A - - Countdown Delay Off	ON (if Alarm is activated)	—	Current of CTs
Max	Current is higher than Max value	t - - Countdown Delay Off	ON (if Alarm is activated)	ON	Current at disconnection time-blinking
Max	Current is higher than 120% CT	t - - Countdown Delay Off	ON (if Alarm is activated)	ON	oUr

Note5 : if current keeps its previous condition 5 minutes after Alarm relay connection, Alarm relay gets disconnected and Alarm Relay indicator will be turned off but Alarm indicator remains turned ON.

Note6 : after error correction by pressing RESET key on device(inner RESET) or connecting phase voltage (PH) to RESET terminal (outer RESET) for minimum 1 second, device returns to its normal function and device indicator displays crossing current of CTs.

Installation Instruction For Three-Phase Motors



Installation Instruction For Single-Phase Motors