

3 Phase Current Balance Protection

A three phase current balance protection relay continuously monitors a three phase AC current through current transformers, tripping upon an unbalanced load condition. The output relay trips when the monitored current is outside of the user adjustable limit and the LED ceases to illuminate indicating a fault condition.

The trip point is adjustable from 3% to 20% of the nominal current through the front control knob. The relay also has a built-in time delay, adjustable from 0.1 to 10 seconds, used to avoid nuisance tripping.

The output relay is set to de-energise in the unbalanced condition ensuring the protection relay is failsafe. The relay is auxiliary powered and is available with an output to either open on fault or close on fault.



Models Available

CST-100 Three Phase Current Balance

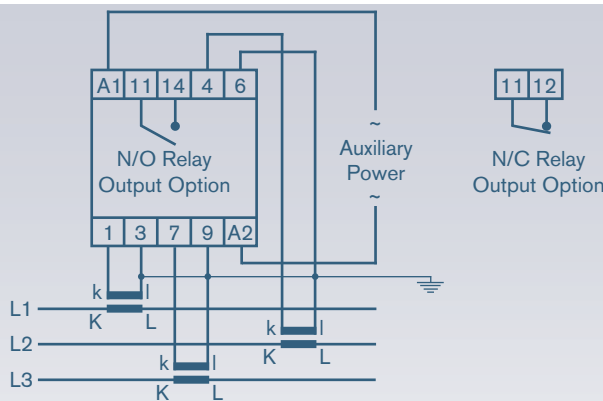
Product Features

- Protects against:-
Unbalance in three phase loads
- LED indication
- Adjustable 0.1-10 second delay

For dimensions see page 3

For 3 phase current monitoring and protection against unbalanced loads

Connections



Specification

- Input Current, I_n :**
 - 1A or 5A from CT
- Calibrated Scale:**
 - 3 to 20% (adjustable)
- Time Delay:**
 - 0.1 to 10 seconds (adjustable)
- Frequency:**
 - 50/60Hz (400Hz upon request)
- Overload:**
 - 2 x I_n continuous
 - 10 x I_n for 3 seconds
- Auxiliary Supply:**
 - 110, 230, 380, 400 or 415Vac ($\pm 15\%$)
 - 24, 48Vac ($\pm 15\%$)
- Burden:**
 - Current circuit < 0.5VA
 - Auxiliary supply < 2VA
- Low Current Lockout:**
 - Non-operational below 0.2A
- Weight:**
 - 300g

Ordering information

Code	Relay Type	Nominal Current / Aux.	Output
CST-100	Three Phase Current Balance	-	-
Specify	-	1A or 5A from a CT	-
Specify	-	110, 230, 380, 400 or 415Vac	-
Specify	-	24, 48Vac	-
N/O	-	Output Opens on Fault	
N/C	-	Output Closes on Fault	
Example	CST-100	5A, 230Vac	N/O

General Specification

Reference Standards

Performance: IEC 144 / BS 5420 / VDE/VDI 0435 / IEC 947 / EN60947

Environmental

Calibration Temperature: 23°C
 Operating Temperature: 0°C to 60°C
 Storage Temperature: -10°C to 70°C
 Temperature Coefficient: $\pm 0.03\%/^{\circ}\text{C}$
 Relative Humidity: 0 - 95% non-condensing

Relay Output

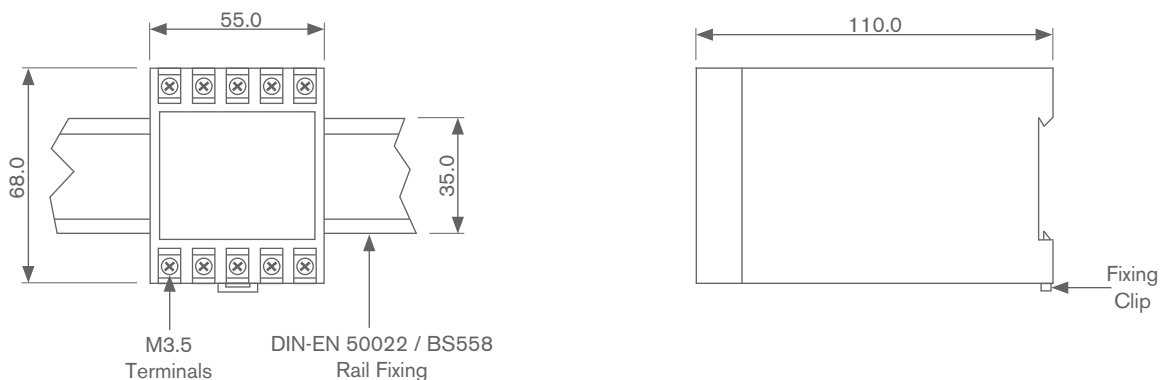
Relay Type: Single pole change-over
 (Except CST-100 has single pole normally open or normally closed)
 (Double pole change-over available on some models as an option)
 Contact Rating: 5A @ 250Vac (non-resistive), 1A @ 125Vdc (resistive)
 Contact Life: 1,000,000 at 5A, 10,000,000 at 1A
 Mechanical Life: 2,000,000 operations
 Dielectric Strength: 4kV coil/contact, 1kV contact/contact
 Optional Time Delay: 0.3-10 sec, 1-30 sec, 2-60 sec, 3-100 sec or 10-300 sec (delay on fault or reset)
 (Note if the voltage supply to the protection relay falls below 75% of the nominal the timer will fail to operate and the relay will trip instantaneously upon fault)

Enclosure

Enclosure: Flame retardant black ABS plastic with screw type terminals
 Enclosure Code: Case IP50, terminals IP10 to IEC529 and BS5490
 Insulation Test: 2kV rms 50Hz 1min (to IEC 414) between Input / Case / AC Auxiliary
 Mounting: 35mm DIN rail (DIN-EN 50022)
 Markings: CE marked

Specification subject to change without notice.

Dimensions



All dimensions in mm