

Electronic Motor Protection Relays (EMPR)

- ✓ Prevent Motor Failure
- ✓ Increase Motor Life
- ✓ Reduced Down Time - Improve Productivity
- ✓ Reduce Inventory - Common Model
- ✓ Improve Productivity-Overload Alarm Before Trip
- ✓ Long Life - Maintains Accuracy of Settings
- ✓ Earth Fault Protection - Trip Only The Faulted Motor and not the Incoming Supply



Intelligent Motor Controller (with communication)

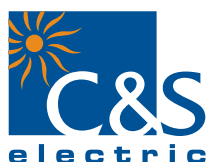
Features

- Over load, Under load, Reverse phase, Phase loss, Locked rotor, Unbalance, E/F protection function
- Current range 0.125A~60A within one device
- Different functions selectable within one device, e.g Direct starter, Reversing starter, Y-D starter, Reactor / Inverter starter
- MCC, Local, Auto, Water level, Remote control
- Instantaneous under voltage compensation, Auto re-starter function
- Fault analysis, Fault value storing(Fault recording)
- Total operating time recording, Setting function
- Modbus, RS-485 / RS - 422 port

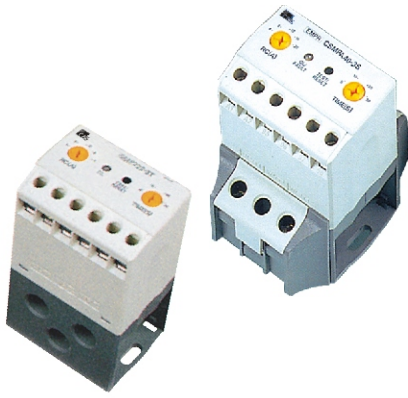
CSMPM - Digital Relays

Features

- Digital Relay with built-in MCU (Micro Processor Control Unit).
- Multiple protection: Over load / Phase failure / Stall / Asymmetry / Phase reverse / Earth Fault.
- Current setting 0.5-6A & 5-60A.
Current setting 0.5-6A can be used upto 600A with external Ct's
- Fault diagnostic seven segment display of fault & values.
- Digital Ammeter function.
- Time setting : Inverse time (0-60 sec), Definite time (0-60 sec) starting & Delay time (0-30 sec) operating time.
- Accuracy : Current / Time $\pm 5\%$ of setting.
- Fail safe operation
- Alert function (60-110% of set current).
- Inverse / Definite time characteristics, site selectable.
- C.T. ratio setting in CSMPM-06 frame only.



C&S Electric Ltd.
(Protection & Control Division)



CSMPA - Analog Relays

Type - CSMPA22/40/80

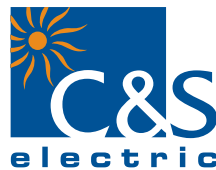
Features Inverse Time Characteristics

- Multiple protection: Over load / Phase failure / Stall /Asymmetry / Phase reverse.
- Current setting upto 80A in 3 frame sizes.
- Fault diagnose by LEDs indication.
- Time setting 0 - 30 sec.
- Accuracy : Current / Time $\pm 5\%$.
- Relays with built-in MCU (Micro Processor Control Unit)
- Environment operational temperature (-25°C to +70°C).
- Compact design & Elegant outlook.
- Common use of the Screw type & Tunnel type.
- Applicable to the inverter circuit (20 - 200 Hz).
- Mounting options : 35mm Din-rail or Screw.
- Fail safe operation.

Type - CSMPA 60T

Features Definite Time Characteristics

- Protection : Over load & phase failure
- Time setting : Starting time (0.2-30 sec)
: Operating time(0.2- 15 sec)
- Accuracy : Current/Time $\pm 5\%$ / (± 0.5 sec)
- Compact Size, Economical
- Relays with built-in MCU (Micro Processor Control Unit)
- Current setting: 0.5-6A or 5-60A options
Current setting 0.5-6A can be used upto 600A with external CT's
- Looping option is available for FHP Motors
- Fault diagnostic by LED indication
- Mounting option: 35mm Din-rail or Screw



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