TOSHIBA

SOLID STATE MOTOR PROTECTION RELAY FAMILY

MOTOR PROTECTION

Model RC820
Overload, Single Phase, Ground Fault, Phase Reversal Relay

Model RC803A
Overcurrent/Undercurrent Relay

- **Complete Package of Motor Protection**
- **Wide Variety of Selection**
- **Allows Motor Operation at 100% Capability**

MOTOR PROTECTION & MONITORING

Model RTM20
RTD Temperature Monitor/Relay

Model S2E21
Multi-function Protection Relay

RC820 *Solid State Motor Protection Relay*

The 2E relay is a three-phase overload relay with single-phase protection. Phase reversal and ground fault protection are available as options. Models are available in 7Amp, 55Amp and 110Amp, each with an adjustable range of 75-150%. Above 165Amp or with medium/high voltage applications, the 7Amp model is used with current transformers. The 2E relay is adjustable from Class 3 through Class 40, to provide optimum overload protection for any application.

Additional Features

- Phase Loss/Single Phase protection
- LED trip indicator
- Manual test feature
- Two models: manual/remote reset and auto reset
- RC820 and modules are UL listed and CSA certified

Optional

- **Phase Reversal:** Instantaneous trip on phase sequence reversal, with LED trip indication
- **Ground Fault:** With Zero Sequence CT, detects ground fault, with LED trip indication

S2E21 *Multi-function Motor Protection Relay*

The S2E21 motor protection relay uses state of the art microprocessor technology to provide a total motor protection and monitoring package for all motor applications.

Features

- Information displayed with Menu format on large, easy to read, 16x16 character LCD screen
- Drawout Construction for easy interchangeability, CT connections shorted automatically
- Thermal-model calculations customize temperature protection with auto-learning
- Data for operation monitoring, including before-trip running data stored and displayed
- Memory card stores setting data
- External communications with RS485 port standard Data linkable to PC or PLC for monitoring & maintenance program - Optional Datalink DL2000 Communication Controller for DH+, RIO or Modbus
- Protection features include:
  - Overload (49)
  - Short Circuit/Instantaneous Overcurrent (50)
  - Overcurrent (51)
  - Current Phase Unbalance (46)
  - Stator and Bearing Overcurrent (38/49)
  - Undercurrent (37)
  - Zero Sequence Ground Fault (50G/51G)
  - Locked Rotor and Starting Time Failure (48)
  - Repeated Starting (66)
- Additional standard capabilities and functions
  - Auto-learning (Start time, Start current, Motor heating & cooling time characteristics)
  - Motor running time (Elapsed Time Meter)
  - Number of starts (Counter)
  - Motor starting time (Last start & Avg.)
  - Eight RTD inputs/readouts, inputs individually selectable from: Pt 100, Pt 100 (JIS), Ni 100, Ni 120 ohm, (Optional Cu 10)
  - Analog output signal (4-20mA, selectable from 15 different functions)

RC803A *Overcurrent/Undercurrent Relay*

The RC803A Current Relay is designed to control processes and equipment by monitoring the current of an induction motor and change in load conditions.

- **Conveyers:** Protect against jams and excessive loads. Indicates broken or loose belts.
- **Pumps:** Protect against dry running clogging and worn bearings.
- **Fans:** Monitor fans for worn or broken belts. Indicates closed dampers or blocked filters.

Features

- Overcurrent and undercurrent adjustable trip points (0.5 ~ 5A).
- Adjustable start-up delay (0 ~ 30 seconds).
- Fail safe construction - relay operates as soon as the input current exceeds the preset level or power supply is de-energized.
- Individual SPDT (1NO/NC) output contact for overcurrent and undercurrent trip.
- Separate LED indication for overcurrent and undercurrent trip.

RTM20 *RTD Temperature Monitor/ Relay*

Applications

Toshiba's RTM20 relay is designed to monitor temperature of:

- Bearings
- Motor stator windings
- Generator stator windings
- Furnace and heating controls
- Industrial processes

Features

- Eight RTD (resistance temperature detector) inputs
- Adjustable trip-point setting (40°C to 195°C)
- Alarm trips at 0.9 X set point temperature
- 12 mm display of temperatures and alarm
- Alarm if sensor input is either shorted or open
- RTD Inputs (field selectable):
  - Pt 100 ohm Ni 100 ohm
  - Ni 120 ohm Cu 10 ohm

TOSHIBA

TOSHIBA INTERNATIONAL CORPORATION

INDUSTRIAL DIVISION