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SOLID-STATE STARTER FEATURES



Startco Solid-State Starters are designed for starting squirrel-cage induction motors in single or parallel operation.

1. Each power module is fused on the line side. The I²t rating of each fuse protects the power semiconductors under external fault conditions. Blown-fuse switches cause the SCR gate signals to be removed if any fuse blows.
2. The thermal capacity of the SE-901 power module assembly and cooling system is sufficient to keep the SCR junction temperature below 125°C for steady-state operation at 1380 A with internal air at 40°C. Heat rise in the SCR enclosure is typically 15°C for operation at 100% rated current. SCR's are protected with heat-sink mounted thermostats.
3. The SCR gates are hard fired.
4. All power semiconductors have a repetitive blocking voltage of 2 kV.
5. Snubber networks are provided to prevent dv/dt triggering.
6. Surge suppression is provided to protect the SCR's in the event of loss of control power.
7. Controlled starting is switchable between current and tachometer feedback. Tachometer feedback can provide constant acceleration starts.



8. In the tachometer-feedback mode, the acceleration ramp is adjustable from 10 to 40 seconds. In the current-feedback mode, the time to advance the output from initial voltage to full voltage is adjustable from 2 to 24 seconds.
9. In the current-feedback mode, the current limit is adjustable from 200% to 500% of rated current. If the current limit setting is too low, the unit will trip and provide indication that the setting is too low. Current-limit-hold trip indication is provided.
10. Instantaneous overcurrent trip is selectable at 550% or 600% of rated current.
11. Multi-function protection for each motor is provided by an MPU-16A Motor Protection Unit or MPS Motor Protection System.
12. In parallel-motor configurations, overcurrent and current-limit controls respond to the motor with the highest current.
13. An emergency-trip circuit is provided to check operation of electronic circuit boards and SCR modules. If motor current is present 3.5 seconds after a stop signal is received from an input, the starter will trip the motor circuit breaker.
14. Phase-loss and phase-reverse protection are provided and indicated.