

Protective Functions in Saminco A700 and A800 Series DC/AC Converters

1. Overcurrent:

Saminco DC traction drives incorporate 5 methods of overcurrent protection:

- inverse time, electronic thermal overload protection (STN 156)
- instantaneous (1 ms) short circuit protection if current in the motor armature exceeds 900A.
- ability to trip a DC-rated input circuit breaker via a shunt trip or UV coil if abnormal conditions such as an overcurrent or overvoltage event occurs.
- continuous, active current control of both field and armature circuits
- back-up fuses for short circuit protection only in the following branches:
 - DC input positive leg
 - one for each armature lead
 - one fuse in positive supply to field converter

2. Overtemperature:

- at 85 degree Celsius baseplate temperature, maximum current is reduced to 50% (400 A in the case of an 800 A controller.)
- at 105 degrees Celsius IGBT temperature, the unit is shut off, and the circuit breaker is tripped.