

### Locomotive AC Propulsion

#### Propulsion Module

ATS Part # Various

(See your Sales Rep for specific ordering information)

The propulsion inverter converts power provided by the DC bus to AC power of suitable voltage and frequency to achieve the required axle speed provided the total capacity of all power sources is not exceeded. If the maximum power limit of all the sources is reached, the commands from the control head are modified proportionally so as to remain within the limit but preserve the ratio of the axle speed.

Suitable for induction or permanent magnet motors.

Dimensions	
Height	864mm (34")
Width	127mm (5")
Depth	447mm (17.6")
Weight	46.7kg (103 lbs)

Electrical Specifications	Dual DC/AC Inverter Module (ATS Part # A300723)	
	Input	Output
Rated Power @ Rated Volts	500kW @ 730V DC	510kW @ 460V AC @ 0.85 p.f.
Frequency Range	DC	0 - 60Hz
Voltage Range	0 - 750V DC	0 - 500V AC / 3 phase
Amps @ Rated Power	685A @ 730V DC	750A rms @ 460V AC
Duty Cycle	Continuous	Continuous
Control I/O	Eight digital Inputs: 24V programmable functions Analog reference input: -10 to +10V	
Communication	CANbus: System communication, handheld programmer	
Protective Functions	Thermal Protection: Heat sink over-temperature alarm at 80°C, Shutdown at 85°C Motor Overload: Electronic Time trip Overcurrent Protection: 1200A AC rms	



Single Inverter Module

#### Generator Module

A diesel engine is coupled to an induction or permanent magnet motor of matching power capability. The motor is used to crank the engine to a speed slightly above idle in order to achieve a smoke-free start. The motor is also used as a generator by operating at negative slip in order to absorb power from the diesel engine. Operation in the generator mode is possible over a speed range of 600 rpm to 1800rpm.

The generator inverter provides magnetizing current for the motor and delivers its electrical output to the 750V DC bus.

Electrical Specifications	Generator Module (ATS Part # A300722)	
	Input	Output 1
Rated Power @ Rated Volts	500kW @ 460V AC @ 0.85 p.f.	500kW
Frequency Range	20 - 60Hz	DC
Voltage Range	0 - 510V / 3 phase	0 - 750V DC
Amps @ Rated Power	750A rms @ 460V AC	700A @ 730V DC
Duty Cycle	Continuous	Continuous
Control I/O	Eight digital Inputs: 24V programmable functions Analog reference input: -10 to +10V	
Communication	CANbus: System communication, handheld programmer	
Protective Functions	Thermal Protection: Heat sink over-temperature alarm at 75°C, Shutdown at 85°C Motor Overload: Electronic Time trip Overcurrent Protection: Overvoltage trip 900V DC	



Single DC/AC Inverter Module

