

Locomotive AC Propulsion Modules

A300693 Dual DC/AC Inverter

This module is a liquid-cooled power semiconductor converter module suitable for use as a component of a traction electric propulsion system. It may be used for:

- Induction motor drive for main traction
- On-board 3-phase AC power for auxiliary power units
- Rectification of 3-phase AC power from AC generator to supply the common DC Bus

A300640 Traction Inverter and A300635 Brake Chopper Module

These modules are power converters designed to operate over a DC bus voltage range of 500V to 800V. They are used as components of a power conversion system consisting of several modules sharing a common DC bus filter capacitor.

- The **A300640 Traction Inverter Module** can be used to control an AC traction motor, and it can also operate very effectively as a dynamic brake down to very low speeds.
- The **A300635 Dynamic Brake Chopper** is used to control the delivery of power to the dynamic brake resistors. The resistor currents are controlled so as to limit the voltage rise of the DC bus when power is being absorbed from the traction motors.



Dual DC/AC Inverter Module

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

Modules are liquid-cooled using cooling hoses and manifolds.



Specifications for Inverters and Brake Choppers

Part Number	Dual Inverter		Traction Inverter		Brake Chopper	
	A300693		A300640		A300635	
	Input	Output	Input	Output	Input	Output
Rated Power @Rated Volts	302kW @ 650V	2x149kW (2 x 200HP)	480kW	480kW	1500kW	1495kW
Frequency range	DC	0 - 120Hz	DC	0 - 170Hz	DC	DC
Voltage Range**	360 - 750VDC	0 - 0.7 x DC INPUT	500 - 800V	0 - 480V	600 - 750V	0 - Input
Amps @ Rated Power	465A DC	2 x 300A	600A	600A	2000A	2 x 1000A
Ambient Operating Temperature Range	-25°C to 50°C		-20°C to 60°C		-20°C to 60°C	
Coolant Temperature Range	Dew point to 65°C		-40°C to 70°C		-40°C to 70°C	
Control Supply Voltage	22 to 28V DC		22 to 28V DC		22 to 28V DC	
Control Supply Current	1.5A DC		1.5A DC		1.5A DC	
Minimum Coolant Flow	3 gal/min (11.25 l/min)		4 gal/min (11.25 l/min)		3 gal/min (11.25 l/min)	
Maximum Coolant Pressure	50 psig (3.5 bar)		50 psig (3.5 bar)		50 psig (3.5 bar)	

**Other voltages are available. Contact ATS representative for more information.



ATS Control Card Assembly

