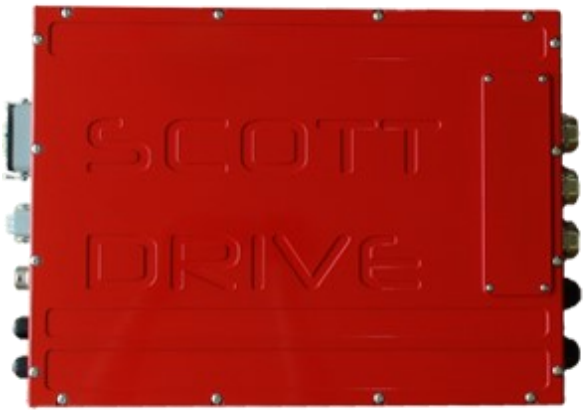
SCOTT DRIVE SD300

Key Features:

- Peak Output Power >300kW
- Integrated Pre-charge Circuit
- Integrated KILOVAC Contactor
- Motor Temperature Monitoring
- Four 12V (10A) Low Side Driver Outputs for Water Pumps, Vacuum Pumps, Brake Lights, Reversing Lights etc.
- Nine Digital Switch Inputs
- Regenerative Braking
- Highly Efficient Liquid Cooling
- Integrated TCPIP Ethernet, RS485 and CAN communications ports
- Software support for Marine Mode Throttle
- Software support for Hybrid Vehicles (with Ultracapacitors)
- Drive setup configured via Ethernet
- Firmware upgradeable via Ethernet



The Scott Drive family of AC Motor controllers is designed for easy integration into existing vehicles or for new OEM applications. With support for both Permanent Magnet (PM) and AC Induction (ACIM) motors the SD300 can provide up to 600 Arms of motor current from bus voltages up to 800V DC bus. Using the latest technology and high quality Automotive grade components the SD300 represents exceptional value and reliability for three Phase Motor control applications up to ~400kVA.

GENERAL SPECIFICATIONS

DESCRIPTION	VALUE	UNITS
Nominal DC Bus Voltage	200-800	Volts
Maximum DC Bus Voltage	900	Volts
Rated Current	450	Amps
Maximum Current	600	Amps
Switching Frequency	10-20	kHz
DC Bus Capacitance	800	uF
Recommended Coolant Flow Rate	9-15	L/Min
Drive Supply Voltage	11-15	Volts
Minimum Drive Supply Current	2	Amps
Maximum Drive Supply Current	40	Amps
Weight (without cables)	16.5	kG
Dimensions	460X350X110	mm

Email: info@scottdrive.co.nz **Website:** www.scottdrive.co.nz

Powerful multi-core processor:

Four Processor cores capable of executing Floating Point Instructions

Motor control software based on Field Orientated Control (FOC)

Trigonometric Math unit for fast Sin and Cos execution used for FOC

AEC-Q100 Qualified for operation from -40°C to 125°C.

Four ADC units for simultaneous sampling of Phase currents or resolver signals

Processors able to monitor each other for additional Functional Safety

Components:

Automotive rated components as follows:
AEC-Q100 (IC's)
AEC-Q101(Diodes)
AEC-Q200 (R's & C's)

Very high Isolation rating between Low Voltage and High Voltage Power System

Digital Isolators:
5.0kVrms Qualification Tested for 60s
6.0kVrms Production Tested for 1 s

Isolation Amplifier Isolation:
4.25kV Qualification Tested 60s
5.1kV Production tested for 1s

Communication Interfaces

Ethernet TCPIP

A standard RJ45 Ethernet connection is provided for easy connection to any PC. The Ethernet port is AUTO-MDIX enabled meaning it can be connected directly to either a PC or network switch without using a cross-over cable. PC based application software is provided which can be used for initial setup, in-field firmware upgrade or to simply view to operating parameters of the Drive.

CAN Bus

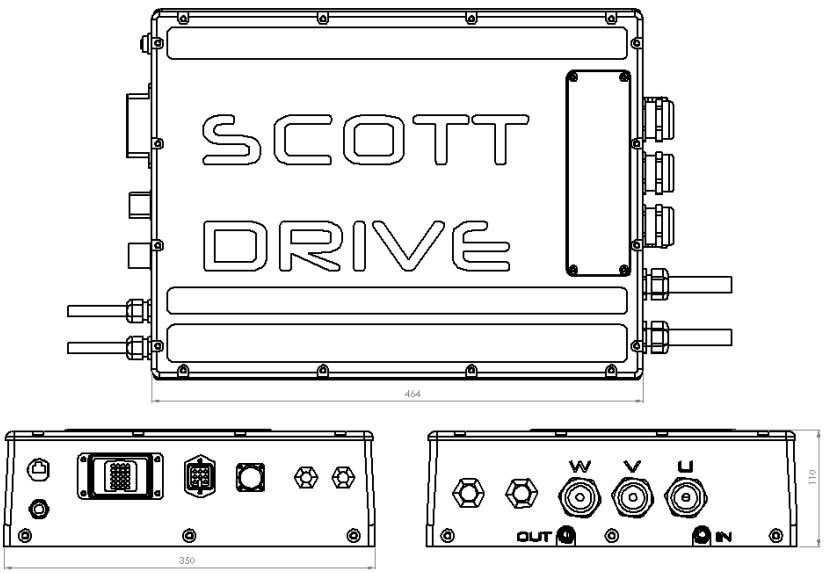
The CAN 2.0 A/B bus port is provided primarily so the Drive controller can communicate with other Scott EV products or External Vehicle Control Systems. A second CAN port is available if required.

RS485

The RS45 port is included for future expandability and custom interfaces if requested. Please contact your local distributor if you wish to customize setup, control or diagnostic functions via RS485.

Motor Support

- Supports 3-Phase Permanent Magnet Motors (BLDC, PMSM and IPM)
- Supports 3-Phase AC Induction Motors (ACIM)
- Configurable Motor Current De-rating Settings
- Multiple Temperature Sensor support: KTY81, KTY84, PT1000, Omega 44008 + Others
- 2 Channel Encoder support for ACIM Motors
- 3 Channel Encoder support for PM Motors
- 3 Channel Hall Sensor support
- 5V and 12V supplies available for encoders and hall sensors
- Resolver Sensor support for single and multi-pole pair resolvers
- Resolver Excitation Voltage software adjustable up to 7Vrms @10kHz
- Analog Sin Cos Encoder support



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