DESCRIPTION

The TAC3 line of fully-programmable controllers for AC induction motors are designed for on-road and off-road vehicles

With current and thermal limiting of the internal power bridge and external motor temperatures, current limited contactor I/O, automotive quality connectors, and rugged highly ingress resistant ABS case the TAC is fully protected

All TAC controllers support CAN and Bluetooth allowing control of virtually all settings including current limits, maximum speeds in both forward and reverse, and battery over-discharge protection

KEY FEATURES

- $850A_{RMS}$ state of the art MOSFET technology
- Regenerative braking
- AmpSeal waterproof connector
- Thermal protection
- Under voltage protection
- Fully sealed IP65
- A/B and SIN/COS speed sensor inputs
- OEM multi-platform mounting options
- Plug & Play installation for major OEM golf cars
- Rollback protection
- Speed-limiting
- Compatible with Navitas On-The-Fly (OTF) programmer (optional) (see OTF Data Sheet)
  - Variable maximum speed control
  - Variable regen control
  - Variable Acceleration rate
  - Simplified wiring diagnostics

Navitas "OTF" On The Fly Programmer

BATTERY VOLTAGE

- 48 to 72 Volt

OUTPUT CAPACITY

- Up to 1200A Peak, 850A$_{RMS}$ motor current

APPLICATIONS

- LSV, NEV, ATV
- UTV, Hunting buggies
- Motorcycle/Scooter
- Material Handling
- Mining/Industrial Applications

FLEXIBILITY

- Fully programmable using access limited engineering apps and publicly available end user apps for smart phones, tablets and PC's
- Programmable to match the unique characteristics of each motor model
- Programmable low-voltage battery discharge interrupt (BDI) cutbacks will limit motor current to extend the battery charge

CONTROL

- Motor speed and torque control using optimal field oriented control to deliver high efficiency with smooth motion
- Regenerative braking harnesses excess energy to extend the battery charge
- Battery over-charge protection using active regen clamp output

COMMUNICATIONS

- Integrated LEDs flash information and error codes for basic controller diagnostics
- Protected I/O connections
- CAN network support for Multi-Controller vehicles will operate in parallel with Bluetooth for additional diagnostics and configuration
- iOS and Android app for smart phones and tablets are available at the App Store and Google Play

SAFETY

- Regenerative braking provides vehicle speed control at any throttle position when going down ramps and channels the extra energy back into the batteries for longer battery life
- Adjustable regen settings allow for braking strength to be tailored to the specific vehicle for safety during stopping and forward/reverse transitions
- Safe-Sequencing including high pedal disable (HPD) and static-return-to-off (SRO) interlock ensure safe startup and vehicle operation
- Controlled motor and power stage temperature cutbacks ensures there is no sudden loss of power under any thermal conditions