

# TAC2

10-000880 TAC2 600A BASE MODEL

NAVITAS  
VEHICLE SYSTEMS



## DESCRIPTION

The TAC 2 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, RS232 and Bluetooth allowing control of virtually all settings including current limits, maximum speeds in both forward and reverse, and battery over-discharge protection



Navitas "OTF" On The Fly  
Programmer

## KEY FEATURES

- 600A state of the art MOSFET technology
- Compact size and low weight
- Regenerative braking
- Molex waterproof connector
- Thermal protection
- Sensor less motor thermal protection
- Under voltage protection
- Fully sealed IP5X
- A/B speed sensor inputs
- OEM multi-platform mounting options
- Plug & Play installation for major OEM golf cars
- Rollback protection
- Speed-limiting (w/ optional speed sensor)
- 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

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## BATTERY VOLTAGE

- 48 to 72 Volt

## OUTPUT CAPACITY

- Up to 600A motor current

## APPLICATIONS

- Golf cars, LSV's
- UTV, Hunting buggies

## 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 advanced algorithms with Space Vector Modulation 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 RS232 or 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