DynaGen™

TOUGH SERIES™ TG410

AUTOSTART CONTROLLER FOR ENGINES OR GENERATORS

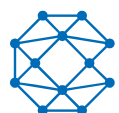**HIGHLIGHTS**

- Designed for complete control, protection and engine instrumentation on mechanically or electronically governed engines
- Three phase voltage metering for generator applications
- Easily configured using the front panel buttons or RapidCore™ configurator software
- Tier 4F and Euro Stage V compliant. Call factory for specific engine types
- Modbus port with galvanic isolation to connect remote annunciators and internet monitoring devices
- Ideal for applications where reliability is critical, such as mobile and stationary engine equipment or generators
- OEM private label branding available

FEATURES

- Displays:
    - Oil pressure
    - Engine temperature
    - Fuel level
    - Oil level
    - Hour meter
    - RPM
    - Battery voltage
    - Real time clock with time/date
    - J1939 DTC codes with custom text
    - DPF and DEF status icons (fluid level and temp)
    - Two customer defined parameters (temperature, pressure, voltage, levels)
    - Three-phase AC Volts, Amps and Hz (for generators)
    - Power factor, apparent power, real power and reactive power metering for generator applications
    - J1939 percent load and percent torque
    - Custom screens for pumping/compressor applications
    - Display PF, KW, and KVA

- Supports mechanical or CANbus J1939 engines
- RPM via J1939, magnetic pick-up or generator
- Configurable Diagnostic Trouble Code (DTC) readout
- Conformally coated for protection against moisture and contaminants
- Front panel gasket for panel water ingress protection
- Full electronic variable speed control over J1939
- Autostart on low battery
- Trim features for sensors and AC voltage inputs
- Exercise clock
- 150 event logs (events, warnings, failures)
- Fast and rugged installation clips
- Automatic shutdown and warnings
- Manual and remote start
- Momentary start/stop inputs
- Accepts common senders (VDO, Datcon, Murphy and more)
- Configurable warm-up idle (timer, oil and engine temperature and ECM control)

- Stall detection
- Restart on false start
- Custom warnings and failures
- Single or dual float switch input control
- Built-in weekly scheduler
- Maintenance counter
- Preheat and many configurable timers
- Autostart trigger on sensor value (pressure, temperature, level, voltage)
- Easy-to-use field configuration from front panel menu (passcode protected)
- Configurable set point RPM output feature
- Long-term run
- Closed loop control on custom sender
- Load imbalance
- IDMT overcurent shutdown
- Modbus RS485 communication

OPTIONS

- Snap on RelayPak eliminates the need to mount and wire external slave relays for fuel crank and up to two other loads
- RemoteIQ™ remote monitoring and control available with cellular modem
- Heated LCD version available for operation and display down to -40°

Snap on RelyPak

TECHNICAL DATA AND SPECIFICATIONS

Operating Voltage	5.5 to 38 VDC continuous. Cranking dropouts to 0 VDC for 50mS, also meets SAE J1113-11 Standby current draw: 60mA @ 12 VDC, 38mA @ 24 VDC Reverse battery protected Surge and load dump: SAE J1113-11
Vibration and Shock	Meets or exceeds SAE J1455 plus DynaGen's five year accelerated life test
Operating Temperature	Controller function: -40°C to 70°C Display screen viewing: -20°C to 70°C
Electromagnetic Compatibility	Meets or exceeds MIL-STD-461E conducted emissions
Dimensions	4.17" H x 6.5" W x 1.38" D
Weight	0.83 lb
Speed Sensing	Via J1939 bus, magnetic pick-up, tachometer or AC voltage
Inputs:	
AC Voltage Sensing	Single-phase 2 and 3-wire Delta 3 and 4-wire Wye 2, 3 and 4-wire Max 600 VAC (direct connection) true RMS, +/- 1% of full scale
AC Current Sensing	Accepts 5A secondary CTs +/-2% of full scale
Fixed Sensor Inputs	0-7500Ω engine temperature sender 0-750Ω senders or switches*
Universal Sensor Inputs	0-7500Ω senders, 4-20mA, 0-5V or switch* 0-750Ω senders
Configurable Switched Inputs	With programmable text, auto detect close to +Bat or Gnd
Outputs:	Includes standard fuel and crank outputs, as well as configurable pre-heat
Switched Outputs	1A max UL pilot duty. Switched to +battery. Short circuit and overload protected
Memory	150 event history. 16 channel weekly scheduler
SAE J1939 Communications	Tier II, III, IV and IVF engines. Address settings for both controller and the engine ECM
USB Communications	RapidCore™ configuration software. High retention socket accepts standard USB cable
Modbus Communications	RTU slave mode, RS 485 port (9600, 19200, 38400, 57600 baud), galvanic isolation
Warranty	Five-year warranty or 17,500 hours

Inputs & Outputs

	Model TG410
J1939 CANbus	√
Magnetic Pick-Up Input	√
Modbus Port	√
Generator Volts	3-Phase
Generator Amps	3-Phase
Configurable Switched Inputs	5
Resistive Sensor Inputs	2
Universal Sensor Inputs (Resistive, voltage, 4-20mA)	2
Configurable Switched Outputs (in addition to fuel & crank)	4

* Failure inputs must close to ground. All failure inputs are ignored for an adjustable bypass period.

North America: +1.234.806.0018 | Sales.US@Cattron.com

Europe: +49.2151.4795.0 | Sales.EU@Cattron.com

UK: +44.1932.238121 | Sales.UK@Cattron.com

South America: +55.19.3518.7030 | Sales.BR@Cattron.com

Asia: Sales.CN@Cattron.com

Oceania: Sales.AU@Cattron.com

cattron.com