

DynaGen™

TOUGH SERIES™ TE410



AUTOSTART OR MANUAL CONTROLLER FOR INDUSTRIAL ENGINES

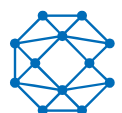
- HIGHLIGHTS**
- Designed for complete control, protection and engine instrumentation on mechanical or electronic engines
 - Easily configured using the front panel buttons or RapidCore™ configurator software
 - Supports all major diesel and spark engines including mechanical Tier III, Tier IV Interim and Tier IV Final
 - Tier 4F and Euro Stage V compliant. Call factory for specific engine types
 - Offers solutions for variable speed applications and closed loop control
 - 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
 - Supports mechanical or CANbus J1939 engines
 - Configurable Diagnostic Trouble Code (DTC) readout
 - Conformally coated for protection against moisture and contaminants
 - Front panel gasket for panel water ingress protection
 - Front panel RPM adjustment buttons
 - Full electronic variable speed control over J1939
 - Configurable remote bump speed control
 - Configurable ramping control with 3 set points: idle, intermediate and goal RPM
 - Adjustable min and max RPM limits
 - Closed loop control using feedback from sensors such as level and pressure (maintain-in and maintain-out)
 - Modbus RS485 communication
 - IDMT overcurrent protection
 - Configurable warm-up idle (timer, oil and engine temperature and ECM control)
 - DPF and DEF status icons (fluid level and temp)
 - Two customer defined parameters (temperature, pressure, voltage, levels)
 - Three-phase AC Volts and Hz (for generators)
 - J1939 percent load and percent torque
 - Custom screens for pumping/compressor applications
 - Display PF, KW, and KVA
 - Stall detection
 - Retry 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 setpoint RPM output feature
 - AC current sensing for electronic driven equipment
 - Load imbalance detection

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



Snap-on RelayPak





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 Sensing (electric-driven systems)	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 Measurement	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)
Warranty	Five-year warranty or 17,500 hours

Inputs & Outputs

	Model TE410
J1939 CANbus	✓
Magnetic Pick-Up Input	✓
Modbus Port	✓
AC Volts Measurement	3-Phase
AC Amps Measurement	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

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