

# NGI-1000

## GENERATION FOUR Advanced Digital Ignition System for Small and Medium-Sized Industrial Engines

- Universal, moderately-priced ignition system designed for 1-16 cylinder engines
- Ideal for both natural gas (CH<sub>4</sub> - Methane) and biogas-fueled applications
- Incorporates state-of-the-art spark energy control for lean-burn and other difficult to ignite air/fuel mixtures
  - Current vs. time energy control
  - Spark current selectable from 50-200mA and durations up to 1000µS
  - Standard, CD-style spark profiles also available
- Comprehensive system diagnostics for simple troubleshooting
- Easily configured for the application utilizing a Windows®-based Terminal Program
- Supports Modbus RTU serial communications
- Rugged aluminum enclosure for high reliability
- Accepts magnetic, Hall-Effect, and powered-inductive-style pickups for ease of retrofit with existing Altronic or third-party ignition systems

The Altronic NGI-1000 system is the first in a series of new ignition products and platforms from Altronic. This innovative, reliable, and capable system is designed for use on small and medium-sized industrial engines fueled by either natural gas (CH<sub>4</sub> – Methane) or biogas. Eliminating maintenance-intensive engine accessory drives and conventional ignition systems, these solid-state digital systems deliver high-end control capabilities and features and operational flexibility across the range of suitable applications.

All NGI-1000 systems process angular pickup input signals from a single pickup (magnetic, Hall-Effect, or powered inductive) which senses drilled reference holes, magnets and/or protrusions on a steel disc. This flexible approach allows for a simple installation—including retrofit for existing Altronic or third-party applications—and for accurate/consistent timing inputs referenced directly to the engine’s crankshaft or camshaft.

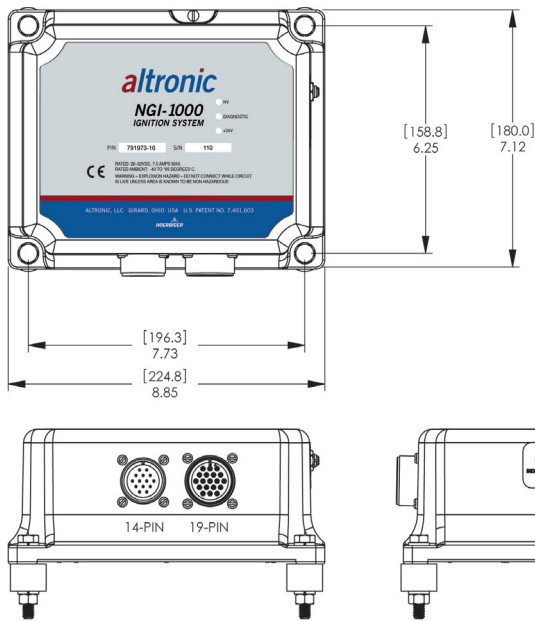
Unique to the NGI-1000 is an advanced spark energy control system designed to provide maximized combustion assurance on both lean-burn and biogas engine applications where the air/fuel mixture is often difficult to ignite and maintain. Both spark current and duration can be automatically adjusted externally via Modbus RTU to insure complete dynamic control of the delivered spark energy for all engine operating conditions.

These same values, as well as the engine setup, overspeed setpoint, all analog/RPM timing adjustment curves, and system/spark diagnostics can be monitored/adjusted conveniently using the NGI-1000 Terminal Program. Like its predecessors, the system also incorporates a popular and unique LED “Blink System” to provide at-a-glance system diagnostics on the unit.

The NGI-1000 is housed in a rugged, die-cast aluminum enclosure, and all system circuit boards are custom manufactured and conformally coated for a maximum level of environmental protection and long-term reliability.



## DIMENSIONS



## SPECIFICATIONS

No. of cylinders .....	1-16
Power required .....	24VDC, 7.5 Amp
System Pickup .....	Magnetic, Hall-Effect, or powered inductive
Enclosure.....	Die-cast, gasketed, MS-connectors
Max. voltage output .....	40kV
Spark duration .....	Adjustable, 150-1000 microsec*
Max. delivered current.....	Adjustable, 50-200 milliamps*
Timing adjustment:	
Manual (8 pos. switch).....	User-selectable increments
RPM range.....	25 to 2,500 RPM
Analog input range .....	4-20mA or 0-5Vdc
Overall max timing range..	25° of retard
Overspeed setpoint range .....	25 to 2,500 RPM
Output switch rating .....	0.5 Amp, 32Vdc max.
Communications.....	Modbus RTU (RS-485)

\* See NGI-1000 IOM for details of spark characteristic operating range

## TO ORDER

NGI-1000 (8 cylinder) .....	791973-8
NGI-1000 (16 cylinder) .....	791973-16
Input Harness, 72" unshielded.....	793106-4 (MPU) 793105-4 (HE)
Input Harness, 120" unshielded.....	793106-5 (MPU) 793105-5 (HE)
Input Harness, 180" unshielded.....	793106-7 (MPU) 793105-7 (HE)
Input Harness, shielded .....	793104-1 (MPU) 793103-1 (HE)
Output Harness, 180" unshielded (180°) .....	793012-8 793012-12 793012-16
Output Harness, 180" shielded (180°).....	793015-8 793015-12 793015-16
Output Harness, 180" shielded (90°) .....	793023-8 793023-12 793023-16
Hall-effect Pickup.....	791050-1 (5/8"-18 x 1.75") 791050-2 (5/8"-18 x 2.50") 791050-4 (5/8"-18 x 4.50")
<i>Hall-effect Pickup Cables included in Input Harness</i>	
Magnetic Pickup.....	691118-1 (5/8"-18 x 1.75") 691118-2 (5/8"-18 x 2.50") 691118-3 (5/8"-18 x 3.00") 691118-4 (5/8"-18 x 4.50")
<i>Magnetic Pickup Cables, unshielded included in Input Harness</i>	
Magnetic Pickup Cables, shielded (180°).....	593048 Series
Magnetic Pickup Cables, shielded (90°).....	593054 Series
Ignition Coils, unshielded .....	501061, 591010
Ignition Coils, flange .....	591012, 591018

# altronic

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