SmartTach
Module

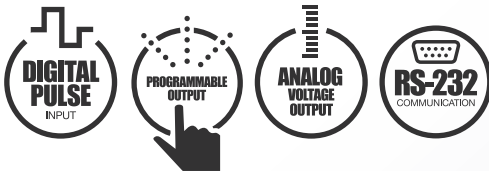DIGITAL PULSE INPUT

PROGRAMMABLE OUTPUT

ANALOG VOLTAGE OUTPUT

RS-232 COMMUNICATION

ATI's SmartTach Module is a universal speed measurement tool for measurement applications such as engine RPM, vehicle speed, chassis dyno roll speed, frequency, period, pulse width and duty cycle.

The built-in User Interface allows the SmartTach to be easily configured without a PC connection. This provides access to the advanced features and functions of the SmartTach.

Features

- Analog Voltage Output proportional to measurement
- Conditioned Digital Pulse Output
- RS-232 Serial Interface
- Programmable Range Outputs
- In-vehicle, stand-alone or rackmount

Specialty product that satisfy specific test cell or dynamometer challenges.

DATA ACQUISITION

ECU CALIBRATION

TEST CELL MEASUREMENT

Easy Installation

All that is needed for RPM / speed measurement is a repetitive pulse signal and DC power. The SmartTach is compatible with a wide variety of input signal sources such as: Inductive pickups, magnetic sensors, encoders, ECU outputs and direct connection to an ignition coil. The SmartTach uses microprocessor controlled intelligent signal conditioning. This allows the SmartTach to dynamically configure the signal conditioning when using the magnetic sensors or digital pulses.

Timing Patterns

Compatible with "patterned" (i.e. missing or extra tooth) crankshaft position signals. Popular automotive patterns are pre-programmed and additional custom patterns can be easily programmed by the operator. Maximum achievable transient timing measurement accuracy is always obtained for any given reference pattern.

SmartTach Specifications

Signal Inputs	
Pulse Inputs	Selectable between Spark (Coil Primary, Inductive Pickup) and Trigger (Digital, VRS) modes Measurement range from 0.5Hz to 500KHz Trigger voltage range +/-75 V Intelligent signal conditioning in Trigger Mode
Analog Voltage Input	Auxiliary analog voltage input used together with range outputs Input voltage levels may be programmed along with range outputs 0 to 5 V input range
Signal Outputs	
Analog Voltage Output	Optically isolated analog voltage output proportional to measurement Programmable scaling, offset and range in engineering units Maximum output range 0 to 10 V 12-bit D/A (+/- 0.003 V resolution)
Digital Pulse Output	Optically isolated digital 5V conditioned pulse output corresponding to input signal May be used to connect to other instrumentation requiring conditioned signals
Range Outputs	Three user programmable range outputs Speed ranges for output activation may be independently programmed Optically isolated solid state relay (contact-closure) outputs
Other Inputs/Outputs	
Communication Port	RS-232 Serial Port, 75 - 9600 baud The Serial Port may be used for obtaining data from the unit and for remote configuration
Power Supply	Requires 10-30 VDC at 10W maximum Internal regulated power supply
General	
Enclosure	Aluminum and steel, black color, water and oil resistant Dimensions: (WDH) 141 x 138 x 39 mm/ 5.57 x 5.45 x 1.52 in Weight: 0.58 kg / 1.3 lbs

ATI **ACCURATE TECHNOLOGIES**

SmartTach Order Information

Product	
Part Number	**Description**
100-0005	SmartTach

Accessories		
Part Number	**Description**	
Accessory		
100-0007 100-0009	10m/32.8ft 3.66m/12ft	TachSensor with 15-pin D-sub connector; measures engine speed when clamped around an Ignition Primary wire
100-0011	10m/32.8ft	Optical Diesel RPM Pickup w/sensor; measures speed of any rotating object
100-0014	4.8m/15.8ft	Inductive Spark Plug Wire Sensor: measures spark event (or engine speed) when clamped around a Secondary Ignition cable
Power		
102-0006		DC Power Plug, 2-pin open connector
102-0002		Dual DC-Power Plug with Wire, Y-cable Adapter
100-0006		AC/DC Power Supply with AC Cord
Package		
100-0016		SmartTach with 19 in Rackmount System, includes (1) SmartTach, (1) power supply, (1) bracket, and (1) blank rack cover
Hardware		
102-0001		19 in 1HU rack mount designed for mounting one or two units in a cabinet
102-0003		Blank Rack Cover Plate (covers holes on bracket)

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