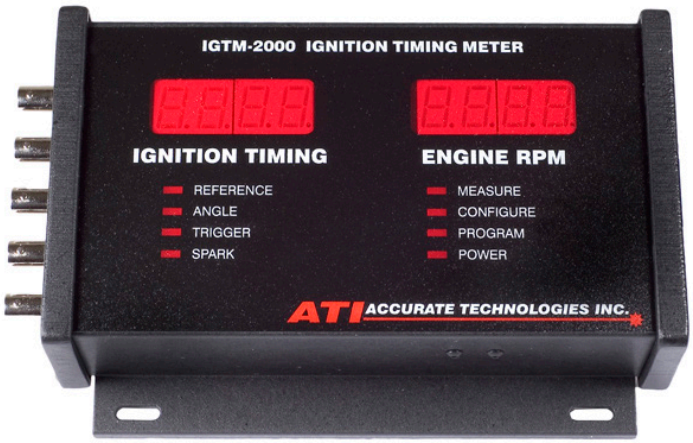
ATI ACCURATE TECHNOLOGIES

IGTM-2000 Reference Connection Configurations

The IGTM-2000 is a very flexible ignition timing measurement system. To provide compatibility with practically all spark ignition engines, a wide variety of programmable parameters are incorporated into the unit. The configuration parameters effectively “customize” the unit to each specific application. Reference is typically taken from the crankshaft position sensor however when a crankshaft position sensor is not available alternative methods for reference may be used.

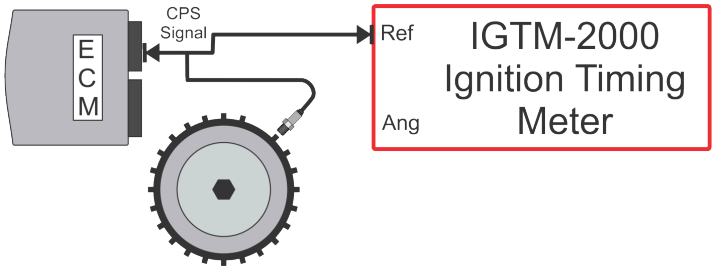


DATA ACQUISITION | ECU CALIBRATION | ECU RAPID PROTOTYPING | ECU INTERFACES | CAN BUS INTERFACES | NETWORK SOLUTIONS | TEST CELL MEASUREMENT

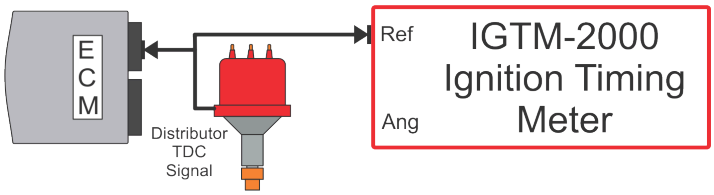
Shown here is a typical connection options for a reference signal.

The following are several options for connecting for reference signal:

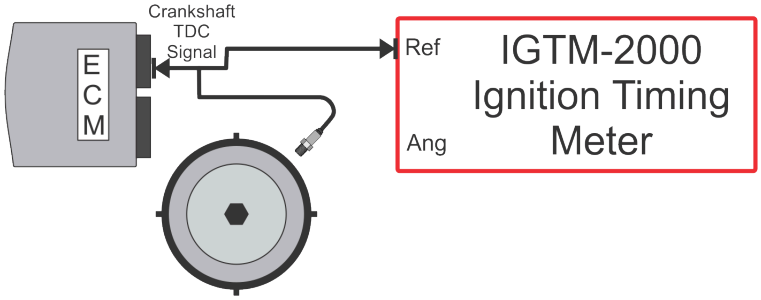
1. Connection to a multi-tooth patterned wheel sensor (used by the production ECM)
   - Common on many newer engines
   - Easy and quick installation (no additional sensors to install)
   - Good transient timing accuracy (dependent on number of teeth)



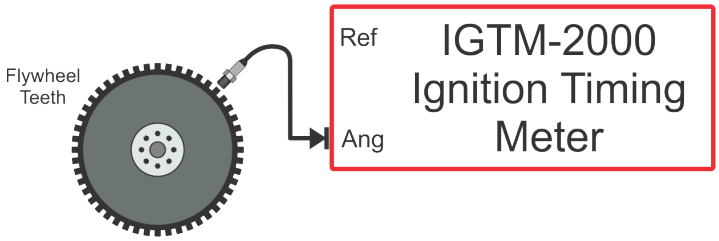
2. Connection to the engine TDC signal (used by the production ECM)
   - Compatible with aftermarket “Crank Trigger” sensors used for racing engines
   - Easy and quick installation (no additional sensors to install)
   - Average transient timing accuracy (approximately +/- 1 degree



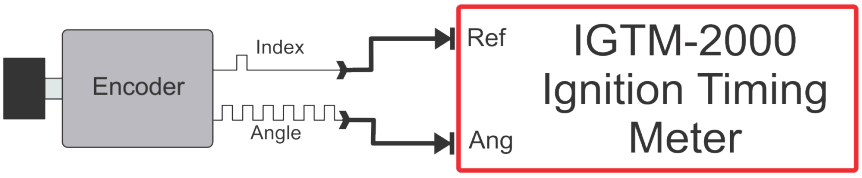
3. User-installed crankshaft position sensor
   - Easy and universal installation (one sensor to install)
   - Compatible with all engines
   - Poor transient timing accuracy (approximately +/- 2 degrees)



4. Method #3 above with additional starter ring gear tooth sensor
   - More involved installation (two sensors)
   - Compatible with all engines
   - Excellent transient timing accuracy (+/- 0.05 degrees possible)



5. Optical Shaft Encoder connected to engine crankshaft
   - Complicated installation (mounting bracket for encoder)
   - Compatible with all engines
   - Best transient timing accuracy (+/- 0.05 degrees)



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