

Instruction Manual



High Output Inductive Smart Coil 30-2853



STOP!

THIS PRODUCT HAS LEGAL RESTRICTIONS.
READ THIS BEFORE INSTALLING/USING!

WARNING! THIS IS A RACE ONLY PRODUCT MANUFACTURED AND SOLD FOR INSTALLATION ON VEHICLES DESIGNED TO BE USED SOLELY FOR COMPETITION PURPOSES. ONCE THIS PART IS INSTALLED, THE VEHICLE MAY NEVER BE USED, OR REGISTERED OR LICENSED FOR USE, ON A PUBLIC ROAD OR HIGHWAY. IF YOU INSTALL THIS PART ON YOUR VEHICLE AND USE THE VEHICLE ON A PUBLIC ROAD OR HIGHWAY, YOU WILL VIOLATE THE CLEAN AIR ACT AND MAY BE SUBJECT TO PERSONAL CIVIL OR CRIMINAL LIABILITY, INCLUDING FINES OF UP TO \$4,819 PER DAY.

IT IS THE RESPONSIBILITY OF THE INSTALLER AND/OR USER OF THIS PRODUCT TO ENSURE THAT IT IS USED IN COMPLIANCE WITH ALL APPLICABLE LAWS AND REGULATIONS. IF THIS PRODUCT WAS PURCHASED IN ERROR, DO NOT INSTALL AND/OR USE IT. THE PURCHASER MUST ARRANGE TO RETURN THE PRODUCT FOR A FULL REFUND.

THIS POLICY ONLY APPLIES TO INSTALLERS AND/OR USERS WHO ARE LOCATED IN THE UNITED STATES; HOWEVER CUSTOMERS WHO RESIDE IN OTHER COUNTRIES SHOULD ACT IN ACCORDANCE WITH THEIR LOCAL LAWS AND REGULATIONS.

WARNING!

Improper installation and/or adjustment of this product can result in major engine/vehicle damage. For technical assistance visit our dealer locator to find a professional installer/tuner near you.

Note: AEM holds no responsibility for any engine damage or personal injury that results from the misuse of this product, including but not limited to injury or death.

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Introduction:

The model **30-2853 HO IGBT Coil** is specially designed for racing applications and does not require a CDI or external Igniter to function. This is a very high energy coil so you must take special attention to the quality of the connections. Make sure to apply a liberal amount of dielectric grease to the connector terminals and the tip and body of the spark plugs. Failure to do this may cause arcs to the cylinder head and cause a misfire.

Kit Contents:

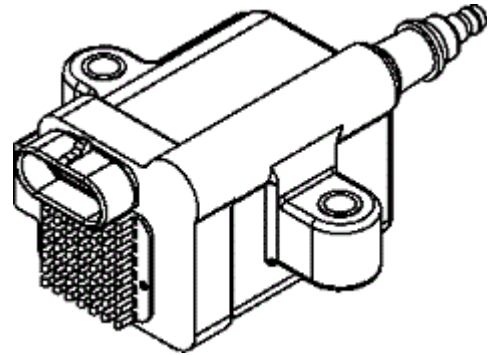
The 30-2853 Kit Contains:

- 1 High Output IGBT Coil
- 1 Mating Connector & 6 Contacts

Specifications:

SPECIFICATIONS:

Output (no load):	40kV minimum
Output (50pF load):	40kV +/- 10%
Output Energy:	103 mJ +/- 7%
Peak Secondary Current:	102 mA +/- 10%
Arc Duration:	2.9mS +/- 10%
Turns Ratio	71:1
Maximum Current:	19 Amps
Maximum Battery Voltage:	17 Volts
Base Dwell:	3.0 mS
Max Continuous Dwell:	9 mS but don't exceed 40% duty cycle
Max Intermittent Dwell:	80% duty cycle, 5 seconds maximum
Mating Connector:	Packard/Delphi 12162825 "Pull to Seat"
Mating Contacts:	Packard/Delphi 12124075 "Pull to Seat"
High Tension Wire Terminal:	HEI "spark plug top" Style



Pinout:

- A: Coil Trigger (0-5V signal)
- B: Coil Trigger (Ref Ground)
- C: Ground to Cylinder Head
- D: Battery Ground
- E: Battery Positive (Relay or switched ignition)

Important!

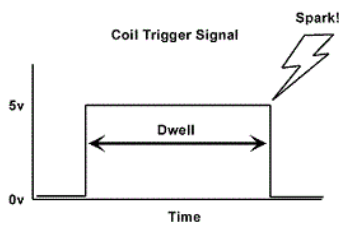
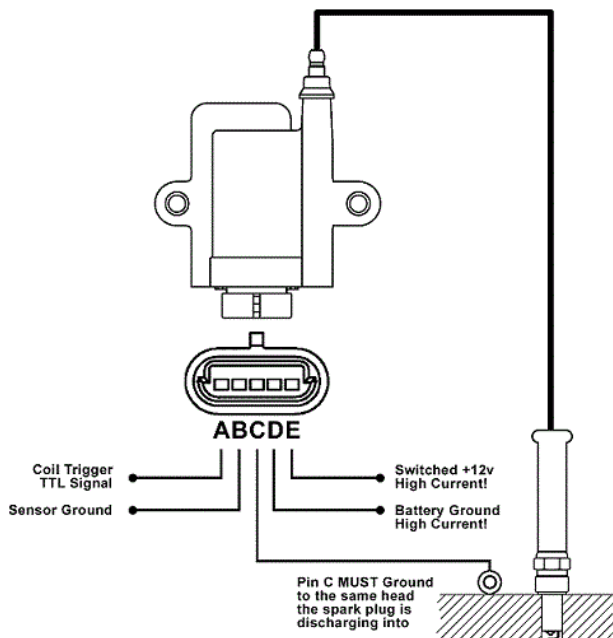
The contacts are "Pull to Seat" meaning you must feed the wire through the connector housing BEFORE you crimp on the contacts. The wire is then pulled back into the housing and the contact locks in place. The contact cannot be inserted or removed from the rear (wire side entry) of the housing

Dwell:

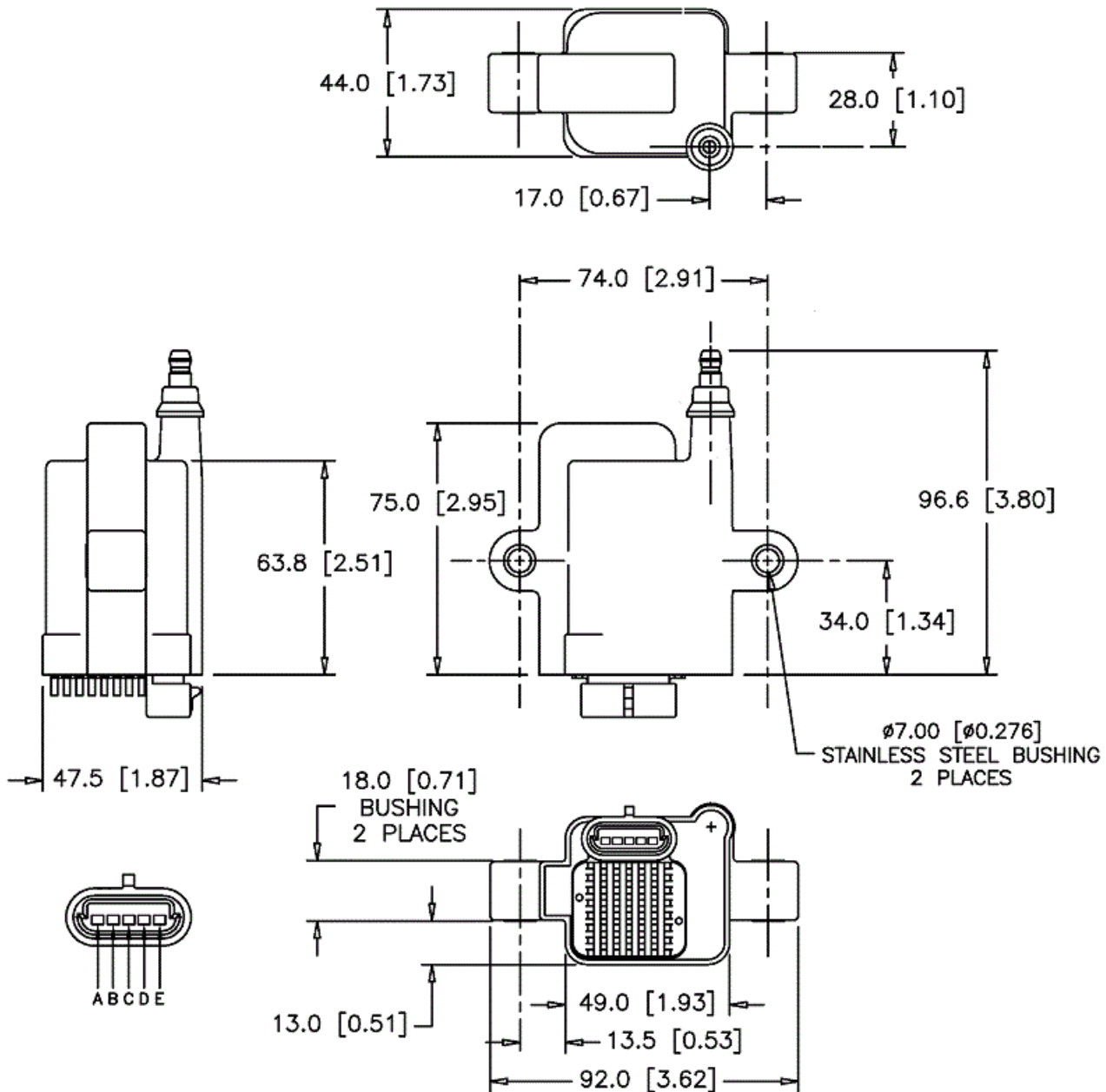
When setting the dwell the following guidelines should be used:

- Target a base dwell time of 3mS and *only* increase it when needed due to high cylinder pressures.
- The maximum individual coil dwell "ON" time must not exceed 9mS at any time, regardless of engine RPM. Exceeding this time will cause the coil to overheat and fail.
- For continuous duty the maximum "ON" time must remain below 40% duty (on 40% of the time, off 60% of the time). Exceeding this will cause the coil to overheat and fail.
- For short bursts, the coil dwell can go as high as 80% "ON" duty but these forays need to be short (under 5 seconds or so) and cannot be frequent.

Wiring:



Dimensions:



Warranty

AEM Performance Electronics warrants to the consumer that all AEM ELECTRONICS products will be free from defects in material and workmanship for a period of twelve months from date of the original purchase. Products that fail within this 12-month warranty period will be repaired or replaced when determined by AEM that the product failed due to defects in material or workmanship. This warranty is limited to the repair or replacement, at AEM's discretion, of the AEM Electronics part. In no event shall this warranty exceed the original purchase price of the AEM ELECTRONICS part nor shall AEM ELECTRONICS be responsible for special, incidental or consequential damages or cost incurred due to the failure of this product.

Warranty claims to AEM ELECTRONICS must be transportation prepaid and accompanied by dated proof of purchase. This warranty applies only to the original purchaser of product and is non-transferable. All implied warranties shall be limited in duration to the said 12-month warranty period. Improper use or installation, accident, abuse, unauthorized repairs or alterations voids this warranty.

AEM ELECTRONICS disclaims any liability for consequential damages due to breach of any written or implied warranty on all products manufactured by AEM ELECTRONICS.

Warranty returns will only be accepted by AEM ELECTRONICS when accompanied by a valid Return Merchandise Authorization (RMA) number. Product must be received by AEM ELECTRONICS within 30 days of the date the RMA is issued. UEGO oxygen sensors are considered wear items and are not covered under warranty.

Please note that before AEM ELECTRONICS can issue an RMA for any electronic product, it is first necessary for the installer or end user to contact the tech line at 1-800-423-0046 to discuss the problem. Most issues can be resolved over the phone. Under no circumstances should a system be returned, or an RMA requested before the above process transpires. AEM ELECTRONICS will not be responsible for products that are installed incorrectly, installed in a non-approved application, misused, or tampered with.

Fuel Pumps installed with incorrect polarity (+&- wires crossed) will not be warranted. Proper fuel filtration before and after the fuel pump are essential to fuel pump life. Any pump returned with contamination will not be warranted.

Any AEM ELECTRONICS product, excluding discontinued products, can be returned for repair if it is out of the warranty period. There is a minimum charge for inspection and diagnosis of AEM ELECTRONICS parts which are out of warranty. Parts used in the repair of AEM ELECTRONICS electronic components will be extra. AEM ELECTRONICS will provide an estimate of repairs and must receive written or electronic authorization before repairs are made to the product.

Need additional help? Contact the AEM Performance Electronics tech department at 1-800-423-0046 or email us at tech@aemelectronics.com.