



Induction Performance
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- Spark plugs

ANY RESISTOR TYPE SPARK PLUGS. R DOES NOT DESIGNATE RESISTOR IN THE PART NUMBER. LOOK THE SPARK PLUG UP ONLINE AND MAKE SURE IT'S A RESISTOR TYPE SPARK PLUG. COMMON RESISTOR TYPE SPARK PLUGS ARE BELOW.

- NGK BKR7E
- NGK BKR7EIX
- NGK BKR8EIX
- NGK BKR9EIX

If you need a resistor type 10 heat range spark plug please contact Induction Performance for their Race spark plug.

Suggested wiring instructions for [Induction Performance IGN-1a](#) coil packs.

- Material

[10awg solid color wires](#)

[16awg solid color wires](#)

[18awg solid color wires](#)

[20awg solid color wires](#)

[80a Zettler relay kit](#)

[Heatshrink & boots](#)

[Hella relay 12v 70 amp spst](#)

[High current relay connector pigtail](#) (suggested, don't face pigtail upwards)

[Sealed fuse holder/10 ga 3-40 amp](#)

[Packard weatherproof relay pigtail](#) (if weatherproof is needed)

[IGN-1a coil connector](#)

Due to the energy of this coil, when making a harness or sub harness for the IGN1A, please make sure the connections are 100%. Pin C must absolutely be grounded to the cylinder head. If pin C isn't grounded to the cylinder head the coil will not full power. It's best to break

the coil circuits up into two separate circuits. This means for 4 coils use 2 coils per circuit, or for 6 coils, use 3 coils per circuit, etc. If the battery is more than 6 feet away consider using a distribution block with 0, 2, 4, 6 or 8 gauge cable.

- Instructions

A – Ignition 0-5v signal / Coil Trigger from ECU (20 gauge, 18 prefer)

AEM Series 2 30-6100:

57B (COIL 1)

56B (COIL 2)

55B (COIL 3)

54B (COIL 4)

53B (COIL 5)

52B (COIL 6)

ProEFI Pro 128:

J2 A12 (COIL 1)

J2 A13 (COIL 2)

J2 A14 (COIL 3)

J2 A20 (COIL 4)

J2 A10 (COIL 5)

J2 A11 (COIL 6)

MoTeC M1:

C_3 IGN_LS1 (COIL 1)

C_4 IGN_LS2 (COIL 2)

C_5 IGN_LS3 (COIL 3)

C_6 IGN_LS4 (COIL 4)

C_7 IGN_LS5 (COIL 5)

C_8 IGN_LS6 (COIL 6)

B – Logic ref ground / ECU 0V, connect to ECU ground (20 gauge, 18 prefer)

AEM Series 2 30-6100:

28B AND/OR 65B

ProEFI Pro 128:

J2 A22

MoTeC M1:

D15 AND/OR D16

C – Spark wire ground, connect to cylinder head (18 gauge, 16 prefer)

D – Power ground, connect to battery negative (18 gauge, 16 prefer)

E – 12 volt switched power / battery positive via relay (18 gauge, 16 prefer)

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

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.

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.

Below is our recommended coil dwell. If your tuner wants to run less/more, that's for them to decide. But always make sure you start around 1.8ms at 1000rpm or so and slowly work your way up to 4+ms at or around peak torque depending on your needs.

		Coil Dwell Control (Milliseconds) (Offline Only)								
		Voltage								
		8.00	9.00	10.00	11.00	12.00	13.50	14.00	15.00	16.00
Engine RPM	1300	5.80	5.00	4.20	3.40	2.60	1.80	1.80	1.80	1.80
	2062	5.90	5.10	4.30	3.50	2.70	1.90	1.90	1.90	1.90
	2825	6.00	5.20	4.40	3.60	2.80	2.00	2.00	2.00	2.00
	3587	6.40	5.60	4.80	4.00	3.20	2.40	2.40	2.40	2.40
	4350	7.40	6.60	5.80	5.00	4.20	3.40	3.40	3.40	3.40
	5112	8.00	7.40	6.90	6.40	5.90	5.40	5.40	5.40	5.40
	5875	8.00	7.60	7.20	6.80	6.40	6.00	5.80	5.60	5.40
	6637	8.00	7.60	7.20	6.80	6.40	6.00	5.80	5.60	5.40
	7400	8.00	7.60	7.20	6.80	6.40	6.00	5.80	5.60	5.40

Harness Installation Notes

If you purchased the kit with the wiring harness, then most of the work is already done for you. Simply connect the terminated coil leads into the appropriate spots at the ECU -- the signal locations are notated above for most ECUs -- connect your two grounds with eyelets (cylinder head and battery/chassis), and then there will be two remaining leads next to the signal wires at the ECU. The red/black wire should be connected to switched 12v and the black/green wire should be connected to sensor ground at ECU.

Quick Release Bracket Notes

The mounting height of the bracket is dependent upon the depth of the ball stud in the standoff. For some aftermarket valve covers such as Hypertune, Plazmaman, etc., it may be necessary to trim the ball stud length to reduce the overall mounting height of the bracket in relation to the valve cover.

