

# Instruction Manual



## 30-3805-17 Core Harness System Ford Coil Adapter Harness AEM IGBT Smart Coils



### STOP!

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

THIS PRODUCT MAY BE USED SOLELY ON VEHICLES USED IN SANCTIONED COMPETITION WHICH MAY NEVER BE USED UPON A PUBLIC ROAD OR HIGHWAY, UNLESS PERMITTED BY SPECIFIC REGULATORY EXEMPTION. (VISIT THE "EMISSIONS" PAGE AT [HTTP://WWW.SEMASAN.COM/EMISSIONS](http://www.semasan.com/EMISSIONS) FOR STATE BY STATE DETAILS.)

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:** This installation is not for the tuning novice! Use this system with **EXTREME** caution! The AEM Infinity Programmable EMS allows for total flexibility in engine tuning. Misuse or improper tuning of this product can destroy your engine! If you are not well versed in engine dynamics and the tuning of engine management systems **DO NOT** attempt the installation. Refer the installation to an AEM-trained tuning shop or call 800-423-0046 for technical assistance.

**NOTE:** All supplied AEM calibrations, Wizards and other tuning information are offered as potential starting points only. **IT IS THE RESPONSIBILITY OF THE ENGINE TUNER TO ULTIMATELY CONFIRM IF THE CALIBRATION IS SAFE FOR ITS INTENDED USE.** AEM holds no responsibility for any engine damage that results from the misuse or mistuning of this product!

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## Optional Extension Harnesses for Modular Harness System

Extension harnesses compatible with the 3805 and 3809 V8 harness system are available.

### **30-3805-00 GM Injector Adapter Harness**

Adapter harness that mates EV1 style injectors in standard GM cylinder order (odd cylinders on one bank, even cylinders on other) to Core Harnesses.

### **30-3805-01 Ford Injector Adapter Harness**

Adapter harness that mates EV1 style injectors in standard Ford cylinder order (cylinders 1-4 on one bank, cylinders 5-8 on other) to Core Harnesses.

### **30-3805-02 Single Channel Ignition Adapter Harness**

Adapter harness that mates AEM Single Channel Coil Driver (30-2841) to 30-3805 Core Harness. Coil driver takes 5v falling edge ignition trigger signal from Infinity and outputs a 12v rising edge signal. 12v rising edge signal can either be used to trigger an inductive coil directly or trigger a single channel CDI box (MSD 6A, etc).

### **30-3805-03 VR Crank & VR Cam Adapter Harness**

Adapter harness that mates variable reluctance (VR) crank and cam sensors to Core Harnesses. Legs to each sensor are 48" long.

### **30-3805-04 VR Crank & Hall Cam Adapter Harness**

Adapter harness that mates variable reluctance (VR) crank sensor and Hall Effect cam sensor to Core Harnesses. Legs to each sensor are 48" long.

### **30-3805-05 Hall Crank & VR Cam Adapter Harness**

Adapter harness that mates Hall Effect crank sensor and variable reluctance (VR) cam sensor to Core Harnesses. Legs to each sensor are 48" long.

### **30-3805-06 Hall Crank & Hall Cam Adapter Harness**

Adapter harness that mates Hall Effect crank and cam sensors to Core Harnesses. Legs to each sensor are 48" long.

### **30-3805-07 GM Stepper Idle Control Adapter Harness**

Adapter harness that mates GM stepper idle control valve to Core Harnesses. IAC connector is flat and meant for use with later model style control valves.

### **30-3805-08 Universal PWM Idle Control Adapter Harness (For use with 30-3805 only. Not compatible with 30-3809 Core Harness)**

Flying lead to mate universal PWM idle control valve to 3805 core harnesses. Connector to connect to control valve must be provided by end user.

### **30-3805-09 GM Coil Adapter Harness - AEM High Output IGBT Smart Coils**

Adapter harness that mates AEM High Output IGBT Smart Coils (AEM p/n 30-2853) in standard GM cylinder order (odd cylinders on one bank, even cylinders on other) to Core Harnesses.

### **30-3805-10 GM Injector Adapter - EV6**

Adapter harness that mates EV6 style injectors in standard GM cylinder order (odd cylinders on one bank, even cylinders on other) to Core Harnesses.

### **30-3805-11 Ford Injector Adapter - EV6**

Adapter harness that mates EV6 style injectors in standard Ford cylinder order (cylinders 1-4 on one bank, cylinders 5-8 on other) to Core Harnesses.

**30-3805-12 GM Coil Adapter Harness - GM "LS" Style Coils**

Adapter harness that mates GM "LS" Style Coils in standard GM cylinder order (odd cylinders on one bank, even cylinders on other) to Core Harnesses.

**30-3805-14 Crank/Cam Signal Adapter Harness - AEM Engine Position Module (EPM), 15"**

Adapter harness that mates AEM EPM to Core Harnesses for crank/cam timing sensor inputs. 15" long for rear mounted distributor.

**30-3805-15 Crank/Cam Signal Adapter Harness - FAST Dual Sync Distributor, 15"**

Adapter harness that mates FAST Dual Sync Distributor to Core Harnesses for crank/cam timing sensor inputs. 15" long for rear mounted distributor.

**30-3805-16 Crank/Cam Signal Adapter Harness - MSD Dual Sync Distributor, 15"**

Adapter harness that mates MSD Dual Sync Distributor to Core Harnesses for crank/cam timing sensor inputs. 15" long for rear mounted distributor.

**30-3805-17 Ford Coil Adapter Harness - AEM High Output IGBT Smart Coils**

Adapter harness that mates AEM High Output IGBT Smart Coils (AEM p/n 30-2853) in standard Ford cylinder order (cylinders 1-4 on one bank, cylinders 5-8 on other) to Core Harnesses.

**30-3805-18 Ford Coil Adapter Harness - GM "LS" Style Coils**

Adapter harness that mates GM "LS" Style Coils in standard Ford cylinder order (cylinders 1-4 on one bank, cylinders 5-8 on other) to Core Harnesses.

**30-3805-19 Crank/Cam Signal Adapter Harness - AEM Engine Position Module (EPM), 35"**

Adapter harness that mates AEM EPM to Core Harnesses for crank/cam timing sensor inputs. 35" long for front mounted distributor.

**30-3805-20 Crank/Cam Signal Adapter Harness - FAST Dual Sync Distributor, 35"**

Adapter harness that mates FAST Dual Sync Distributor to Core Harnesses for crank/cam timing sensor inputs. 35" long for front mounted distributor.

**30-3805-21 Crank/Cam Signal Adapter Harness - MSD Dual Sync Distributor, 35"**

Adapter harness that mates MSD Dual Sync Distributor to Core Harnesses for crank/cam timing sensor inputs. 35" long for front mounted distributor.

**30-3809-01 GM Throttle Body Adapter (For use with 30-3809 only. Not compatible with 30-3805 Core Harness)**

For DBW use only. Adapter harness that mates GM DBW throttle body PNs 12570790, 12580760 (or equivalent) to 3809 core harness.

**30-3809-00 GM Pedal Adapter (For use with 30-3809 only. Not compatible with 30-3805 Core Harness)**

For DBW use only. Adapter harness that mates GM DBW Pedal PN 10379038 (or equivalent) to 3809 core harness.

**30-3600 O2 Sensor Extension Harness**

Extension harness to connect AEM UEGO Wideband O2 sensor to 6 pin Deutsch DTM in Infinity Mini Harnesses (30-3702/3703) and V8 core harnesses 30-3805 and 30-3809.

**30-3601 IP67 Comms Cable**

USB Mini-B comms cable; 39" long with right angled connector and bayonet style lock.

**30-3602 IP67 Logging Cable**

USB A-to-A extension cable: 39" long with right angled connector and bayonet style lock.

## 3805-17 Kit Contents

AEM P/N	Description	Qty
36-3805-17	Coil Extension, AEM IGBT Smart Coils (Ford Cylinder Order)	1
10-3805-17	Instruction Sheet	1



## 3805-17 Ford Coil Adapter (AEM IGBT Coils) Pinout

C1				DT Receptacle, 12-Way
Pin	Wire Color	Gauge	Destination	
			1	
C1-1	BLK	20	C5-A	Coil1
C1-2	BLK	20	C4-A	Coil2
C1-3	BLK	20	C3-A	Coil3
C1-4	BLK	20	C2-A	Coil4
C1-5	BLK	20	SP1	Sensor Ground
C1-6	BLK	14	SP4	+12V Power
C1-7	BLK	14	SP5	+12V Power
C1-8	BLK	14	SP6	Battery Ground
C1-9	BLK	20	C9-A	Coil5
C1-10	BLK	20	C8-A	Coil6
C1-11	BLK	20	C7-A	Coil7
C1-12	BLK	20	C6-A	Coil8

C2				Metri-Pack 150.2 5-Way
Pin	Wire Color	Gauge	Destination	Coil4
			1	
A	BLK	20	C1-4	Coil4
B	BLK	20	SP2	Sensor Ground
C	BLK	20	R1	Cylinder Head Ground
D	BLK	20	SP7	Battery Ground
E	BLK	20	SP5	+12V Power

C3				Metri-Pack 150.2 5-Way
Pin	Wire Color	Gauge	Destination	Coil3
			1	
A	BLK	20	C1-3	Coil3
B	BLK	20	SP2	Sensor Ground
C	BLK	20	R1	Cylinder Head Ground
D	BLK	20	SP7	Battery Ground

E	BLK	20	SP5	+12V Power
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C4				Metri-Pack 150.2 5-Way
Pin	Wire Color	Gauge	Destination	Coil2
			1	
A	BLK	20	C1-2	Coil2
B	BLK	20	SP2	Sensor Ground
C	BLK	20	R1	Cylinder Head Ground
D	BLK	20	SP7	Battery Ground
E	BLK	20	SP5	+12V Power

C5				Metri-Pack 150.2 5-Way
Pin	Wire Color	Gauge	Destination	Coil1
			1	
A	BLK	20	C1-1	Coil1
B	BLK	20	SP2	Sensor Ground
C	BLK	20	R1	Cylinder Head Ground
D	BLK	20	SP7	Battery Ground
E	BLK	20	SP5	+12V Power

C6				Metri-Pack 150.2 5-Way
Pin	Wire Color	Gauge	Destination	Coil8
			1	
A	BLK	20	C1-12	Coil8
B	BLK	20	SP3	Sensor Ground
C	BLK	20	R2	Cylinder Head Ground
D	BLK	20	SP8	Battery Ground
E	BLK	20	SP4	+12V Power

C7				Metri-Pack 150.2 5-Way
Pin	Wire Color	Gauge	Destination	Coil7
			1	
A	BLK	20	C1-11	Coil7
B	BLK	20	SP3	Sensor Ground
C	BLK	20	R2	Cylinder Head Ground
D	BLK	20	SP8	Battery Ground

E	BLK	20	SP4	+12V Power
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C8				Metri-Pack 150.2 5-Way
Pin	Wire Color	Gauge	Destination	Coil6
			1	
A	BLK	20	C1-10	Coil6
B	BLK	20	SP3	Sensor Ground
C	BLK	20	R2	Cylinder Head Ground
D	BLK	20	SP8	Battery Ground
E	BLK	20	SP4	+12V Power

C9				Metri-Pack 150.2 5-Way
Pin	Wire Color	Gauge	Destination	Coil5
			1	
A	BLK	20	C1-9	Coil5
B	BLK	20	SP3	Sensor Ground
C	BLK	20	R2	Cylinder Head Ground
D	BLK	20	SP8	Battery Ground
E	BLK	20	SP4	+12V Power

R1				Ring Terminal
Pin	Wire Color	Gauge	Destination	GND
			1	
1	BLK	20	C2-C	Cylinder Head Ground
2	BLK	20	C3-C	Cylinder Head Ground
3	BLK	20	C4-C	Cylinder Head Ground
4	BLK	20	C5-C	Cylinder Head Ground

R2				Ring Terminal
Pin	Wire Color	Gauge	Destination	GND
			1	
1	BLK	20	C6-C	Cylinder Head Ground
2	BLK	20	C7-C	Cylinder Head Ground
3	BLK	20	C8-C	Cylinder Head Ground
4	BLK	20	C9-C	Cylinder Head Ground

S1				Splice
Pin	Wire Color	Gauge	Destination	
			1	
L	BLK	20	SP2	Sensor Ground
L	BLK	20	SP3	Sensor Ground
R	BLK	20	C1-5	Sensor Ground

S2				Splice
Pin	Wire Color	Gauge	Destination	
			1	
L	BLK	20	C2-B	Sensor Ground
L	BLK	20	C3-B	Sensor Ground
L	BLK	20	C4-B	Sensor Ground
L	BLK	20	C5-B	Sensor Ground
R	BLK	20	SP1	Sensor Ground

S3				Splice
Pin	Wire Color	Gauge	Destination	
			1	
L	BLK	20	C6-B	Sensor Ground
L	BLK	20	C7-B	Sensor Ground
L	BLK	20	C8-B	Sensor Ground
L	BLK	20	C9-B	Sensor Ground
R	BLK	20	SP1	Sensor Ground

S4				Splice
Pin	Wire Color	Gauge	Destination	
			1	
L	BLK	20	C6-E	+12V Power
L	BLK	20	C7-E	+12V Power
L	BLK	20	C8-E	+12V Power
L	BLK	20	C9-E	+12V Power
R	BLK	14	C1-6	+12V Power

S5				Splice
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Pin	Wire Color	Gauge	Destination	
			1	
L	BLK	20	C2-E	+12V Power
L	BLK	20	C3-E	+12V Power
L	BLK	20	C4-E	+12V Power
L	BLK	20	C5-E	+12V Power
R	BLK	14	C1-7	+12V Power

S6				Splice
Pin	Wire Color	Gauge	Destination	
			1	
L	BLK	20	SP7	Battery Ground
L	BLK	20	SP8	Battery Ground
R	BLK	14	C1-8	Battery Ground

S7				Splice
Pin	Wire Color	Gauge	Destination	
			1	
L	BLK	20	C2-D	Battery Ground
L	BLK	20	C3-D	Battery Ground
L	BLK	20	C4-D	Battery Ground
R	BLK	20	C5-D	Battery Ground
R	BLK	20	SP6	Battery Ground

S8				Splice
Pin	Wire Color	Gauge	Destination	
			1	
L	BLK	20	C6-D	Battery Ground
L	BLK	20	C7-D	Battery Ground
L	BLK	20	C8-D	Battery Ground
R	BLK	20	C9-D	Battery Ground
R	BLK	20	SP6	Battery Ground