

# Instruction Manual



## 30-3805-20 Core Harness System Crank/Cam Adapter Harness FAST Dual Sync Distributor 35"



### 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!

AEM Performance Electronics  
AEM Performance Electronics, 2205 126th Street Unit A, Hawthorne, CA 90250  
Phone: (310) 484-2322 Fax: (310) 484-0152  
<http://www.aemelectronics.com>  
Instruction Part Number: 10-3805-20  
Document Build 11/17/2015

## 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.

## 3805-20 Kit Contents

| AEM P/N    | Description                             | Qty |
|------------|---|-----|
| 36-3805-20 | Crank/Cam Extension, FAST Dual Sync 35" | 1   |
| 10-3805-20 | Instruction Sheet                       | 1   |



## 3805-20 FAST Dual Sync Harness, 35" Pinout

| C1  |            |       |             | DTM Plug, 12 Way                         |
|-----|------------|-------|-------------|--|
| Pin | Wire Color | Gauge | Destination | Crank/Cam                                |
|     |            |       | 1           |  |
| 1   | White      | 22    | C2-F        | Crank Position Sensor (Hall Effect)      |
| 2   | Black      | 22    | C2-D        | AGND_1 (Analog Sensor Ground)            |
| 3   | Green      | 22    | C2-C        | Camshaft Position Sensor 1 (Hall Effect) |
| 4   | Red        | 22    | F1          | Fused +12V Relay Power                   |
| 5   |            |       |             |  |
| 6   |            |       |             |  |
| 7   |            |       |             |  |
| 8   |            |       |             |  |
| 9   |            |       |             |  |
| 10  |            |       |             |  |
| 11  | BLK        | 22    | Shield      | Shield Ground                            |
| 12  |            |       |             |  |

| C2  |            |       |             | Metri-Pack 150, 8 Way                    |
|-----|------------|-------|-------------|--|
| Pin | Wire Color | Gauge | Destination | FAST Dual Sync Distributor               |
|     |            |       | 1           |  |
| A   |            |       |             |  |
| B   |            |       |             |  |
| C   | Green      | 22    | C1-3        | Camshaft Position Sensor 1 (Hall Effect) |
| D   | Black      | 22    | C1-2        | AGND_1 (Analog Sensor Ground)            |
| E   |            |       |             |  |
| F   | White      | 22    | C1-1        | Crank Position Sensor (Hall Effect)      |
| G   |            |       |             |  |
| H   |            |       |             |  |

| F1  |            |       |             | Flying Lead            |
|-----|------------|-------|-------------|------------------------|
| Pin | Wire Color | Gauge | Destination | +12V                   |
|     |            |       | 1           |                        |
| 1   | Red        | 22    | C1-4        | Fused +12V Relay Power |

**NOTE: The cable shield grounds are terminated at the ECU. Do not connect the shield grounds to anything on the vehicle. Doing so may introduce unwanted noise.**