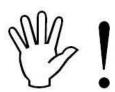
Instruction Manual



Infinity Hardware Specification 30-7106/7108/7112



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.

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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 caused by

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Instruction Part Number: 10-7106/7108-Hardware
Document Build 1/20/2021

Hardware Specification 30-7106/7108/7112

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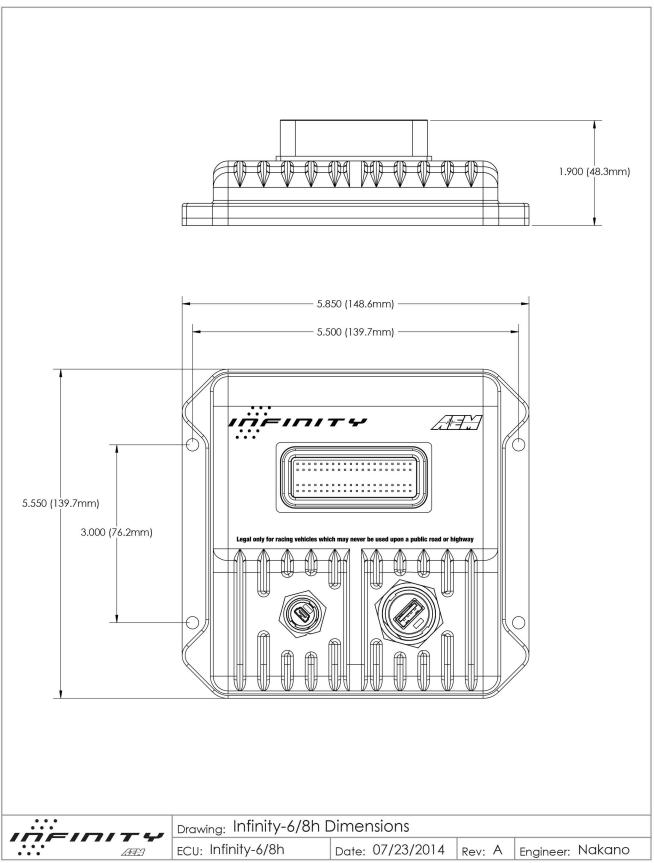
Hardware
Infinity Hardware Specifications

| Specifications | Infinity-308 PN: 30-7113 | Infinity-358 PN: 30-7114 | Infinity-506 PN: 30-7106 | Infinity-508 PN: 30- 7108/7112 | Infinity-708 PN: 30-7101 | Infinity-710 PN: 30-7100 | Infinity-712 PN: 30-7111 |
|---|-----------------------------|-----------------------------|-----------------------------|--------------------------------------|-----------------------------|-----------------------------|-----------------------------|
| Cylinders | Up to 8 | Up to 8 | Up to 6 | Up to 8 | Up to 8 | Up to 10 | Up to 12 |
| Injectors, Low Impedance (Sequential) | 2 | N/A | 6 | N/A | 8 | 10 | 12 |
| Injectors High Impedance (Sequential) | 8 | 8 | Up to 6 | 8 | 8 | 10 | 12 |
| Ignition (or Coil) Triggers - 0-5v Falling Edge | 8 | N/A | 6 | 8 | 8 | 10 | 10 |
| Direct Coil Driver - Distributed | 1 | 1 | N/A | N/A | N/A | N/A | N/A |
| Direct Coil Drivers - COP | N/A | 8 | N/A | N/A | N/A | N/A | N/A |
| Connector Pins | 73 | 73 | 80 | 80 | 129 | 129 | 129 |
| Drive-by-Wire | N/A | N/A | Single | Single | Dual | Dual | Dual |
| H-Bridge Channels | N/A | N/A | 1 | 1 | 2 | 2 | 2 |
| RS232 Channels* | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| CAN Channels | 1 | 1 | 2 | 2 | 2 | 2 | 2 |
| Knock Control | 2-Channel | 2-Channel | 2-Channel | 2-Channel | 2-Channel | 2-Channel | 2-Channel |
| Analog Voltage Inputs | Up to 9 | Up to 9 | Up to 9 | Up to 9 | Up to 17 | Up to 17 | Up to 17 |
| Analog Temp Inputs | Up to 3 | Up to 3 | Up to 3 | Up to 3 | Up to 6 | Up to 6 | Up to 6 |
| VR/Mag Inputs | Up to 2 | Up to 2 | Up to 4 | Up to 4 | Up to 6 | Up to 6 | Up to 6 |
| Digital Inputs | Up to 8 | Up to 8 | Up to 8 | Up to 6 | Up to 8 | Up to 8 | Up to 8 |
| Internal Wideband UEGO Controller | N/A | N/A | 1 | 1 | 2 | 2 | 2 |
| High Side Outputs | N/A | N/A | 1 | 1 | Up to 2 | Up to 2 | Up to 2 |
| Low Side Outputs | 10 | 10 | 8 | 6 | 10 | 10 | 10 |

| Specifications | Infinity-308 PN: 30-7113 | Infinity-358 PN: 30-7114 | Infinity-506 PN: 30-7106 | Infinity-508 PN: 30- 7108/7112 | Infinity-708 PN: 30-7101 | Infinity-710 PN: 30-7100 | Infinity-712 PN: 30-7111 |
|---|---|---|---|---|---|---|---|
| 4-Wire Stepper Motor Control | Yes |
| Boost Control (RPM, Time, Gear, VSS, Switch Input, Flex Fuel Content | Application Dependent | Application Dependent | Yes | Yes | Yes | Yes | Yes |
| Engine Protection | Yes |
| Variable Cam Control | Up to 2 Application Dependent | Up to 2 Application Dependent | Up to 2 | Up to 2 | Up to 4 | Up to 4 | Up to 4 |
| Launch Control | Application Dependent | Application Dependent | Yes | Yes | Yes | Yes | Yes |
| Nitrous Control | Application Dependent | Application Dependent | Single Stage |
| Data Logging | PC & Internal Engine History | PC & Internal Engine History | Up to 64 GB |
| Traction Control | Up to 2-Wheel Speed Application Dependent | Up to 2-Wheel Speed Application Dependent | Up to 2-Wheel Speed | Up to 2-Wheel Speed | Up to 4-Wheel Speed | Up to 4-Wheel Speed | Up to 4-Wheel Speed |
| Weather Resistance | Yes, Sealed Enclosure with IP67 Connectors | Yes, Sealed Enclosure with IP67 Connectors | Yes, Sealed Enclosure with IP67 Connectors |
| Enclosure Dims | 7.35"x6.55"x1. 8" | .855"x5.55"x1. 8" | 5.855"x5.55"x1 .8" | 5.855"x5.55"x1 .8" | 6.75"x6.00"x1. 8" | 6.75"x6.00"x1. 8" | 6.75"x6.00"x1. 8" |
| Weight | 29.9 oz/848g | 29.9 oz/848g | 18.8 oz/476.27g | 18.8 oz/476.27g | 24oz/680g | 24oz/680g | 24oz/680g |

^{**}Dual use pins. Tx and Rx shared with 2 digital inputs.

ECU Installation Dimensions Infinity-Series5



Wiring Harness

Wiring

Universal Pinout, Infinity-Series5

| Infinity Pin | Hardware Ref. | Hardware Specification | Notes |
|-----------------|-------------------------------------|---|--|
| C1-1 | Lowside 4 | Lowside switch, 1.7A max, NO internal flyback diode. | See Setup Wizard Page "Output Function Assignment" for setup options. |
| | | 12V pullup | |
| C1-2 | Lowside 5 | Lowside switch, 6A max with internal flyback diode. Inductive load should NOT have full time power. | See Setup Wizard Page "Output Function Assignment" for setup options. |
| | | 12V pullup | |
| C1-3* | Lowside 6 (*Infinity- 506 Only) | Lowside switch, 6A max with internal flyback diode. Inductive load should NOT have full time power. | See Setup Wizard Page "Output Function Assignment" for setup options. |
| | | No pullup | |
| C1-3** | Injector 7 (**Infinity-508 Only) | For use with high impedance (10-15 ohms) injectors only, 1.7A max. | Available on P/N 30-7108 only |
| C1-4* | Lowside 7 (*Infinity-506 Only) | Lowside switch, 6A max, NO internal flyback diode. | See Setup Wizard Page "Output Function Assignment" for setup options. |
| | | No pullup | |
| C1-4** | Injector 8 (**Infinity-508 Only) | For use with high impedance (10-15 ohms) injectors only, 1.7A max. | Available on P/N 30-7108 only |
| C1-5 | UEGO 1 Heat | Bosch UEGO controller | Lowside switch for UEGO heater control. Connect to pin 4 of Bosch UEGO sensor. NOTE that pin 3 of the Sensor is heater (+) and must be power by a fused/switched 12V supply. |
| C1-6 | UEGO 1 IA | | Trim Current signal. Connect to pin 2 of Bosch UEGO sensor |
| C1-7 | UEGO 1 IP | | Pumping Current signal. Connect to pin 6 of Bosch UEGO sensor |
| C1-8 | UEGO 1 UN | | Nernst Voltage signal. Connect to pin 1 of Bosch UEGO sensor |
| C1-9 | UEGO 1 VM | | Virtual Ground signal. Connect to pin 5 of Bosch UEGO sensor. |
| C1-10 | Battery Perm Power | Dedicated power management CPU | Full time battery power. MUST be powered before the ignition switch |

| Infinity Pin | Hardware Ref. | Hardware Specification | Notes |
|-----------------|-----------------------------------|---|--|
| | | | input is triggered (See C1-48). |
| C1-11 | Coil 4 | 25 mA max source current | 0-5V Falling edge fire. DO NOT connect directly to coil primary. Must use an ignitor OR CDI that accepts a FALLING edge fire signal. |
| C1-12 | Coil 3 | 25 mA max source current | 0-5V Falling edge fire. DO NOT connect directly to coil primary. Must use an ignitor OR CDI that accepts a FALLING edge fire signal. |
| C1-13 | Coil 2 | 25 mA max source current | 0-5V Falling edge fire. DO NOT connect directly to coil primary. Must use an ignitor OR CDI that accepts a FALLING edge fire signal. |
| C1-14 | Coil 1 | 25 mA max source current | 0-5V Falling edge fire. DO NOT connect directly to coil primary. Must use an ignitor OR CDI that accepts a FALLING edge fire signal. |
| C1-15 | Coil 6 | 25 mA max source current | 0-5V Falling edge fire. DO NOT connect directly to coil primary. Must use an ignitor OR CDI that accepts a FALLING edge fire signal. |
| C1-16 | Coil 5 | 25 mA max source current | 0-5V Falling edge fire. DO NOT connect directly to coil primary. Must use an ignitor OR CDI that accepts a FALLING edge fire signal. |
| C1-17 | Crankshaft Position Sensor VR+ | Differential Variable Reluctance Zero Cross Detection | See Setup Wizard page Cam/Crank for options. |
| C1-18 | Crankshaft Position Sensor VR- | | See Setup Wizard page Cam/Crank for options. |
| C1-19 | Camshaft Position Sensor 1 VR- | Differential Variable Reluctance Zero Cross Detection | See Setup Wizard page Cam/Crank for options. |
| C1-20 | Camshaft Position Sensor 1 VR+ | | See Setup Wizard page Cam/Crank for options. |
| C1-21 | Lowside 2 | Lowside switch, 1.7A max, NO internal flyback diode. No pullup | See Setup Wizard Page "Output Function Assignment" for setup options. |
| C1-22 | Lowside 3 | Lowside switch, 6A max with internal flyback diode. Inductive load should NOT have full time power. | See Setup Wizard Page "Output Function Assignment" for setup options. |
| | | No pullup | |

| Infinity Pin | Hardware Ref. | Hardware Specification | Notes |
|-----------------|---|--|---|
| C1-23 | Analog Sensor Ground | Dedicated analog ground | Analog 0-5V sensor ground |
| C1-24 | Analog Sensor Ground | Dedicated analog ground | Analog 0-5V sensor ground |
| C1-25 | Crankshaft Position Sensor Hall | 10K pullup to 12V. Will work with ground or floating switches. | See Setup Wizard page Cam/Crank for options. |
| C1-26 | Camshaft Position Sensor 1 Hall | 10K pullup to 12V. Will work with ground or floating switches. | See Setup Wizard page Cam/Crank for options. |
| C1-27 | Digital 2 | 10K pullup to 12V. Will work with ground or floating switches. | See Setup Wizard page Cam/Crank for options. |
| C1-28 | Dig3 [Hz] / Dig3 Duty | 10K pullup to 12V. Will work with ground or floating switches. | See Setup Wizard page "Input Function Assignments" for setup options. |
| C1-29 | Dig4 [Hz] / Dig4 Duty | 10K pullup to 12V. Will work with ground or floating switches. | See Setup Wizard page "Input Function Assignments" for setup options. |
| C1-29 | RS232 Rx | RS232 Line Driver/Receiver | Future expansion |
| C1-30 | Digital 5 | 10K pullup to 12V. Will work with ground or floating switches. | See Setup Wizard page "Input Function Assignments" for setup options. |
| C1-30 | RS232 Tx | RS232 Line Driver/Receiver | Future expansion |
| C1-31* | Dig6 [Hz] / Dig6_Duty (*Infinity-506 Only) | 10K pullup to 12V. Will work with ground or floating switches. | See Setup Wizard page "Input Function Assignments" for setup options. |
| C1-31** | Coil 7 (**Infinity-508 Only) | 25 mA max source current | Available on P/N 30-7108 only. 0-5V Falling edge fire. DO NOT connect directly to coil primary. Must use an ignitor OR CDI that accepts a FALLING edge fire signal. |
| C1-32* | Digital 7 (*Infinity-506 Only) | 10K pullup to 12V. Will work with ground or floating switches. | See Setup Wizard page "Input Function Assignments" for setup options. |
| C1-32** | Coil 8 (**Infinity-508 Only) | 25 mA max source current | Available on P/N 30-7108 only. 0-5V Falling edge fire. DO NOT connect directly to coil primary. Must use an ignitor OR CDI that accepts a FALLING edge fire signal. |
| C1-33 | Battery Ground | Battery Ground | Connect directly to battery ground |

| Infinity Pin | Hardware Ref. | Hardware Specification | Notes |
|-----------------|---|--|--|
| C1-34 | CANL A | Dedicated High Speed CAN Transceiver | Recommend twisted pair (one twist per 2") with terminating resistor. Contact AEM for additional information. |
| C1-35 | CANH A | Dedicated High Speed CAN Transceiver | Recommend twisted pair (one twist per 2") with terminating resistor. Contact AEM for additional information. |
| C1-36 | CanL B | Dedicated High Speed CAN Transceiver | Not used, reserved for future expansion. |
| C1-37 | CanH B | Dedicated High Speed CAN Transceiver | Not used, reserved for future expansion. |
| C1-38 | Analog Temp 1 | 12 bit A/D, 2.49K pullup to 5V | Default Coolant Temperature Input |
| C1-39 | Analog Temp 2 | 12 bit A/D, 2.49K pullup to 5V | Default Air Temperature Input |
| C1-40 | Analog Temp 3 | 12 bit A/D, 2.49K pullup to 5V | Default Oil Temperature Input. See Setup Wizard page "Input Function Assignments" for setup options. |
| C1-41 | Lowside 0 | Lowside switch, 1.7A max, NO internal flyback diode. No pullup | See Setup Wizard Page "Output Function Assignment" for setup options. |
| C1-42 | Lowside 1 | Lowside switch, 6A max with internal flyback diode. Inductive load should NOT have full time power. No pullup | See Setup Wizard Page "Output Function Assignment" for setup options. |
| C1-43 | Battery Ground | Battery Ground | Connect directly to battery ground |
| C1-44 | Knock Sensor 1 | Dedicated knock signal processor | See Setup Wizard page Knock Setup for options. |
| C1-45 | Knock Sensor 2 | Dedicated knock signal processor | See Setup Wizard page Knock Setup for options. |
| C1-46 | Battery Ground | Battery Ground | Connect directly to battery ground |
| C1-47 | EFI Main Relay Switched Ground Output | 0.7A max ground sink for external relay control | Will activate at key on and at key off according to the configuration settings. |
| C1-48 | Ignition Switch | 10K pulldown | Full time battery power must be available at C1-10 before this input is triggered. |
| C1-49 | +5V Sensor Power | Regulated, fused +5V supply for sensor power | Analog sensor power |

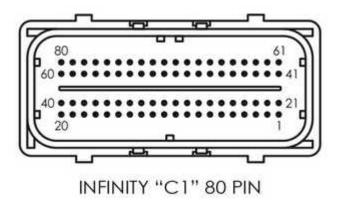
| Infinity Pin | Hardware Ref. | Hardware Specification | Notes |
|-----------------|------------------|--|---|
| C1-50 | +5V Sensor Power | Regulated, fused +5V supply for sensor power | Analog sensor power |
| C1-51 | Analog 7 | 12 bit A/D, 100K pullup to 5V | Default primary Throttle Position sensor inpur. |
| | | | 0-5V analog signal. Use +5V Out pins as power supply and Sensor Ground pins as the low reference. Do not connect signals referenced to +12V as this can permanently damage the ECU. See Setup Wizard Set Throttle Range page for automatic min/max calibration. Monitor the Throttle [%] channel. Also DB1_TPSA [%] for DBW applications. |
| C1-52 | Analog 8 | 12 bit A/D, 100K pullup to 5V | Default Manifold Pressure Sensor input. |
| | | | 0-5V analog signal. Use +5V Out pins as power supply and Sensor Ground pins as the low reference. Do not connect signals referenced to +12V as this can permanently damage the ECU. |
| C1-53 | Analog 9 | 12 bit A/D, 100K pullup to 5V | Default Fuel Pressure Sensor Input. |
| | | | 0-5V analog signal. Use +5V Out pins as power supply and Sensor Ground pins as the low reference. Do not connect signals referenced to +12V as this can permanently damage the ECU. |
| C1-54 | VR+ 2 | Differential Variable Reluctance Zero Cross Detection | See Setup Wizard page "Input Function Assignments" for setup options. |
| C1-55 | VR- 2 | | |
| C1-56 | VR- 3 | Differential Variable Reluctance Zero Cross Detection | See Setup Wizard page "Input Function Assignments" for setup options. |
| C1-57 | VR+ 3 | | |
| C1-58 | Highside 0 | 2.6A max, High Side Solid State Relay | See Setup Wizard Page "Output Function Assignment" for setup options. |
| C1-59 | Stepper 1B | Automotive, Programmable Stepper Driver, up to 28V and ±1.4A | Be sure that each internal coil of the stepper motor are properly paired with the 1A/1B and 2A/2B ECU outputs. |

| Infinity Pin | Hardware Ref. | Hardware Specification | Notes |
|-----------------|---------------------------|---|---|
| | | | Supports Bi-Polar stepper motors only. |
| C1-60 | Stepper 2B | Automotive, Programmable Stepper Driver, up to 28V and ±1.4A | Be sure that each internal coil of the stepper motor are properly paired with the 1A/1B and 2A/2B ECU outputs. Supports Bi-Polar stepper motors only. |
| C1-61 | DBW1 Motor - | 5.0A max Throttle Control Hbridge Drive | +12V to close |
| C1-62 | DBW1 Motor + | 5.0A max Throttle Control Hbridge Drive | +12V to open |
| C1-63 | Main Relay Power Input | 12 volt power from relay | 12 volt power from relay. Relay must be controlled by +12V Relay Control signal, pin C1-47 above. |
| C1-64 | Injector 6 | Saturated (P/N 30-7108) or peak and hold, 3A max continuous (P/N 30-7106) | Injector 6 |
| C1-65 | Injector 5 | Saturated (P/N 30-7108) or peak and hold, 3A max continuous (P/N 30-7106) | Injector 5 |
| C1-66 | Injector 4 | Saturated (P/N 30-7108) or peak and hold, 3A max continuous (P/N 30-7106) | Injector 4 |
| C1-67 | Battery Ground | Battery Ground | Connect directly to battery ground |
| C1-68 | Main Relay Power Input | 12 volt power from relay | 12 volt power from relay. Relay must be controlled by +12V Relay Control signal, pin C1-47 above. |
| C1-69 | Analog 19 | 12 bit A/D, 100K pullup to 5V | 0-5V analog signal. Use +5V Out pins as power supply and Sensor Ground pins as the low reference. Do not connect signals referenced to +12V as this can permanently damage the ECU. See Setup Wizard page "Input Function Assignments" for setup options. |
| C1-70 | Analog 18 | 12 bit A/D, 100K pullup to 5V | 0-5V analog signal. Use +5V Out pins as power supply and Sensor Ground pins as the low reference. Do not connect signals referenced to +12V as this can permanently damage the ECU. See Setup Wizard page "Input Function Assignments" for setup options. |

| Infinity Pin | Hardware Ref. | Hardware Specification | Notes |
|-----------------|---------------|---|---|
| C1-71 | Analog 16 | 12 bit A/D, 100K pullup to 5V | 0-5V analog signal. Use +5V Out pins as power supply and Sensor Ground pins as the low reference. Do not connect signals referenced to +12V as this can permanently damage the ECU. See Setup Wizard page "Input Function Assignments" for setup options. |
| C1-72 | Flash Enable | 10K pulldown | Not usually needed for automatic firmware updates through Infinity Tuner. If connection errors occur during update, connect 12 volts to this pin before proceeding with upgrade. Disconnect the 12 volts signal after the update. |
| C1-73 | Analog 13 | 12 bit A/D, 100K pullup to 5V | Default Oil Pressure Sensor input. |
| | | | 0-5V analog signal. Use +5V Out pins as power supply and Sensor Ground pins as the low reference. Do not connect signals referenced to +12V as this can permanently damage the ECU. |
| C1-74 | Analog 11 | 12 bit A/D, 100K pullup to 5V | 0-5V analog signal. Use +5V Out pins as power supply and Sensor Ground pins as the low reference. Do not connect signals referenced to +12V as this can permanently damage the ECU. See Setup Wizard page "Input Function Assignments" for setup options. |
| C1-75 | Analog 10 | 12 bit A/D, 100K pullup to 5V | 0-5V analog signal. Use +5V Out pins as power supply and Sensor Ground pins as the low reference. Do not connect signals referenced to +12V as this can permanently damage the ECU. See Setup Wizard page "Input Function Assignments" for setup options. |
| C1-76 | Injector 3 | Saturated (P/N 30-7108) or peak and hold, 3A max continuous (P/N 30-7106) | Injector 3 |
| C1-77 | Injector 2 | Saturated (P/N 30-7108) or peak and hold, 3A max continuous (P/N 30-7106) | Injector 2 |
| C1-78 | Injector 1 | Saturated (P/N 30-7108) or peak and hold, 3A max continuous (P/N 30-7106) | Injector 1 |
| C1-79 | Stepper 2A | Automotive, Programmable | Be sure that each internal coil of the |

| Infinity Pin | Hardware Ref. | Hardware Specification | Notes |
|-----------------|---------------|--|---|
| | | Stepper Driver, up to 28V and ±1.4A | stepper motor are properly paired with the 1A/1B and 2A/2B ECU outputs. Supports Bi-Polar stepper motors only. |
| C1-80 | Stepper 1A | Automotive, Programmable Stepper Driver, up to 28V and ±1.4A | Be sure that each internal coil of the stepper motor are properly paired with the 1A/1B and 2A/2B ECU outputs. Supports Bi-Polar stepper motors only. |

Connector Views Infinity-Series5



Example System Schematics

Custom wiring harness projects should only be undertaken by experienced harness builders. If in doubt, please contact AEM for recommendations.

For users wishing to build their own wiring harnesses from scratch, the following kits are available to help.

30-3701 Infinity Series 7 Plug & Pin Kit

Bare necessities to begin a custom wire harness design. Includes 73- and 56-pin Molex MX123 harness connectors, terminals and sealing plugs, main relay and relay socket.

30-3702 Infinity Series 7 Mini-harness

This harness is intended to be used as a starting point by experienced harness builders. It saves time by including basic power distribution features that can be expanded to suit many application requirements. It allows the harness builder to populate the ECU connector with only the features needed by the application. Includes 100 96" preterminated leads.

30-3703 Infinity Series 7 Mini-harness

This harness is intended to be used as a starting point by experienced harness builders. It saves time by including basic power distribution features that can be expanded to suit many application requirements. It allows the harness builder to populate the ECU connector with only the features needed by the application.

30-3704 Infinity Series 5 Plug & Pin Kit

Bare necessities to begin a custom wire harness design. Includes 80-pin Molex MX123 harness connector, terminals and sealing plugs, main relay and relay socket.

30-3805 Universal modular V8 harness system for Infinity Series 7 systems

The Infinity Universal Modular V8 Harness system consists of a universal core harness and optional application specific extensions. It was designed with flexibility in mind. The harness system includes many features and it can be used in many different applications.

30-3809 Universal modular V8 harness system for Infinity Series 5 systems

The Infinity Universal Modular V8 Harness system consists of a universal core harness and optional application specific extensions. It was designed with flexibility in mind. The harness system includes many features and it can be used in many different applications.

30-3705 Universal Mini Harness for Infinity Series 5 systems

This harness is intended to be used as a starting point by experienced harness builders. It saves time by including basic power distribution features that can be expanded to suit many application requirements. It allows the harness builder to populate the ECU connector with only the features needed by the application.

30-3706 Universal Mini Flying Lead for Infinity Series 5 systems

This harness is intended to be used as a starting point by experienced harness builders. It saves time by including basic power distribution features that can be expanded to suit many application requirements.

<u>30-3707 Universal Mini Flying Lead for Infinity Series 3 systems</u>
This harness is intended to be used as a starting point by experienced harness builders. It saves time by including basic power distribution features that can be expanded to suit many application requirements.

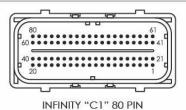
30-3708 Infinity Series 3 Plug & Pin Kit

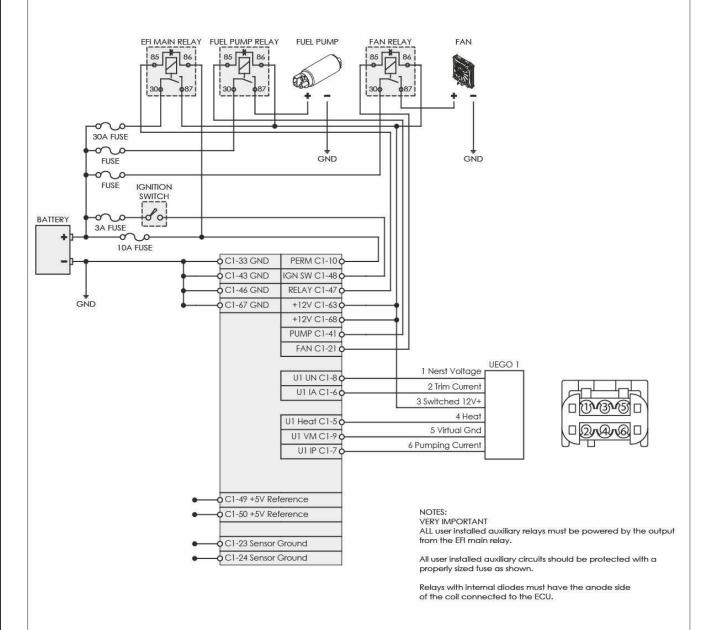
Bare necessities to begin a custom wire harness design. Includes 73-pin Molex MX123 harness connector, terminals and sealing plugs, main relay and relay socket.

The following schematics show examples for wiring a basic Infinity system. Examples are included for Infinity Series 3, Infinity Series 5 and Infinity Series 7 hardware platforms. The power, ground and accessory relay sections of the following schematics must be strictly followed to avoid inconsistent power sequencing and possible ECU damage.

Power Distribution, Infinity-Series5

| NAME | FUNCTION | | |
|---|----------------|--|--|
| GND | Battery ground | | |
| PERM Fused connection to battery positive terminal (+12V, always hot) | | | |
| IGN SW Fused connection to vehicle ignition switch (+12V in RUN/CRANK o | | | |
| RELAY Switched ground from ECU connected to relay coil primary negat | | | |
| +12V Relay driven +12V power source for ECU power and auxiliary ou | | | |
| +5V Reference +5V supplied by ECU | | | |
| Sensor Ground Analog ground used as ground point for sensors | | | |







Drawing: Power Distribution

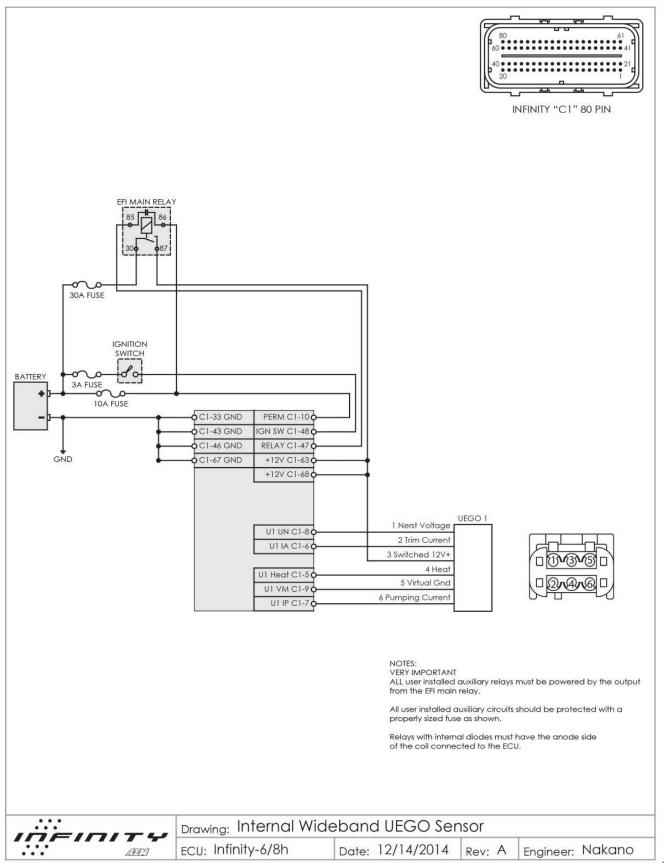
ECU: Infinity Series 5

Date: 3/24/16

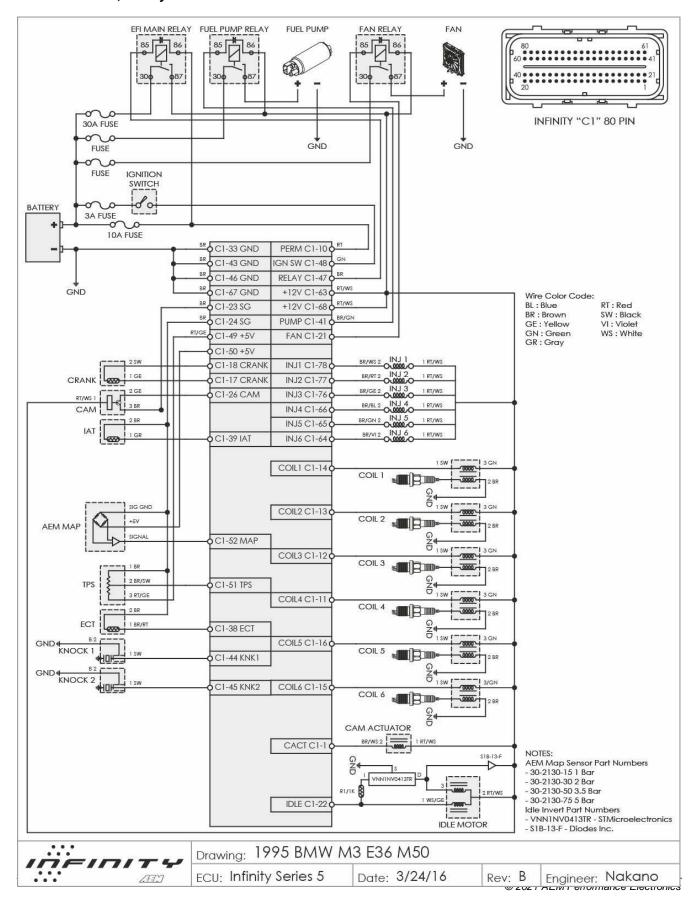
Rev: C En

Engineer: Nakano

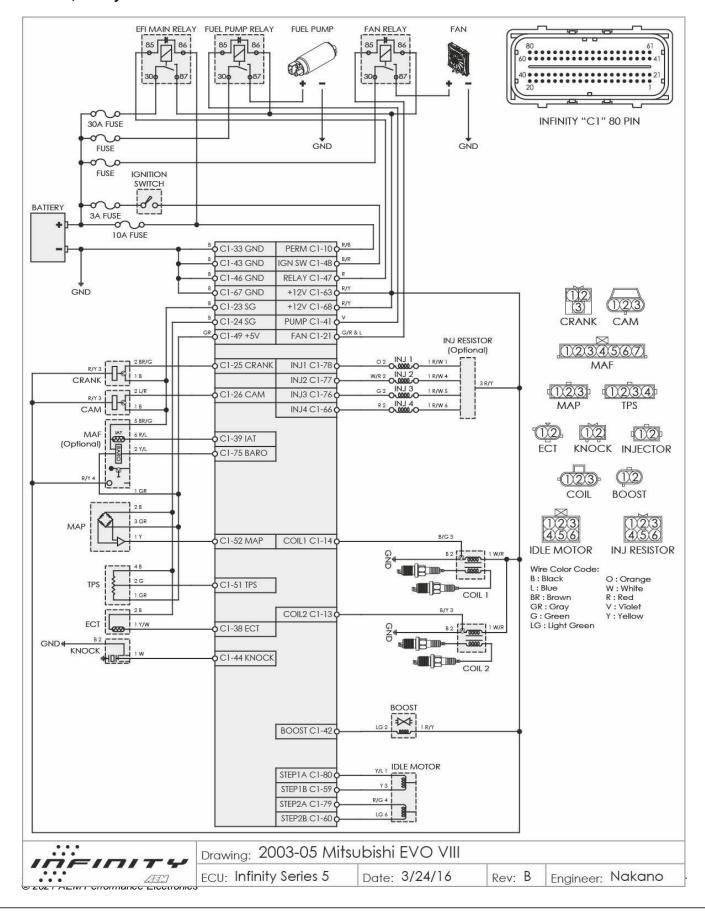
Internal UEGO, Infinity-Series5



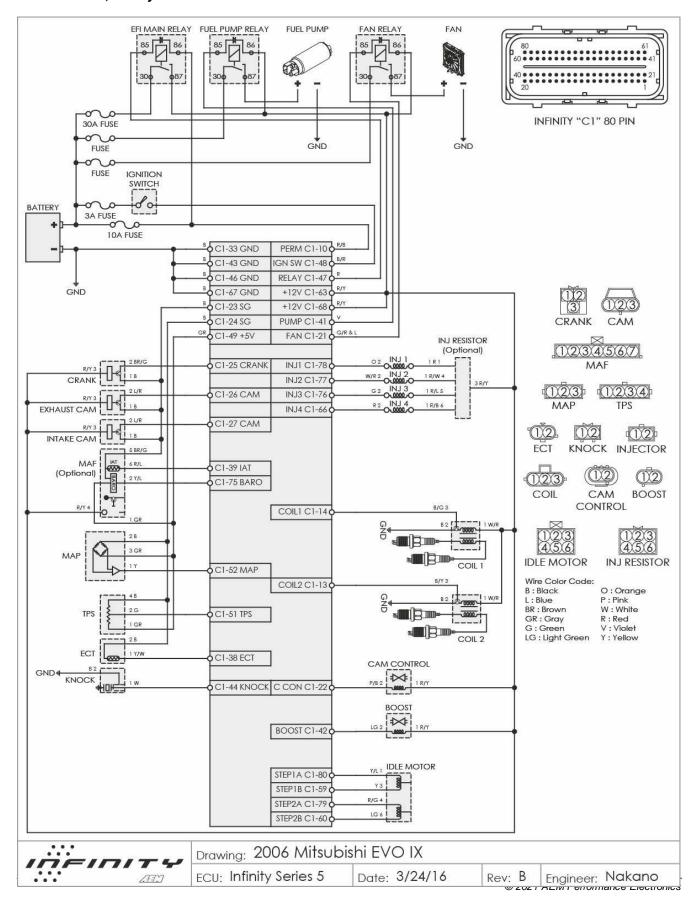
95 BMW E36 M3, Infinity-Series5



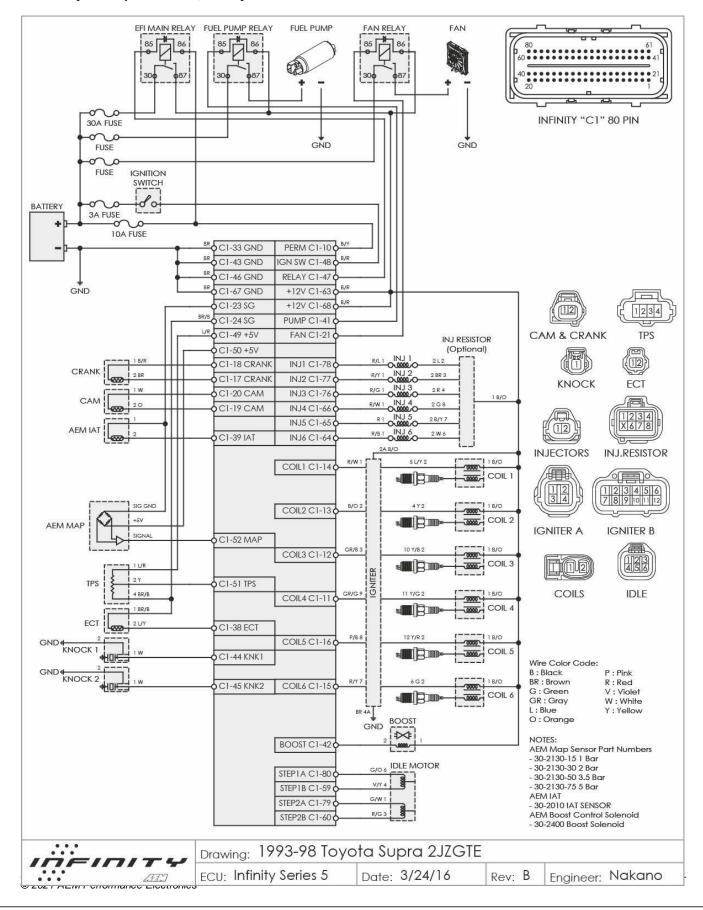
EVO VIII, Infinity-Series5



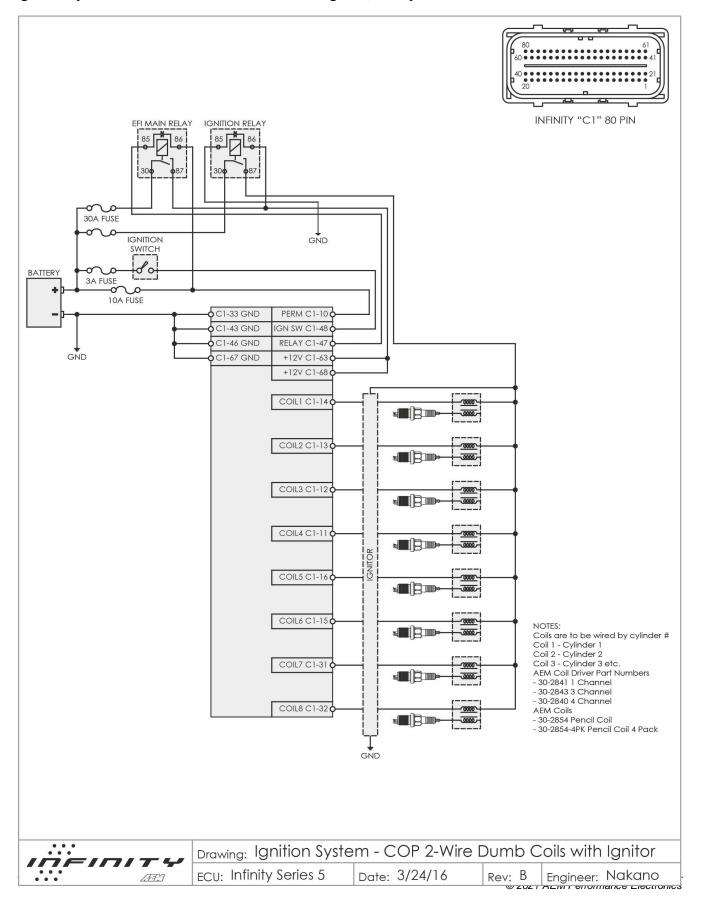
EVO IX Pinout, Infinity-Series5



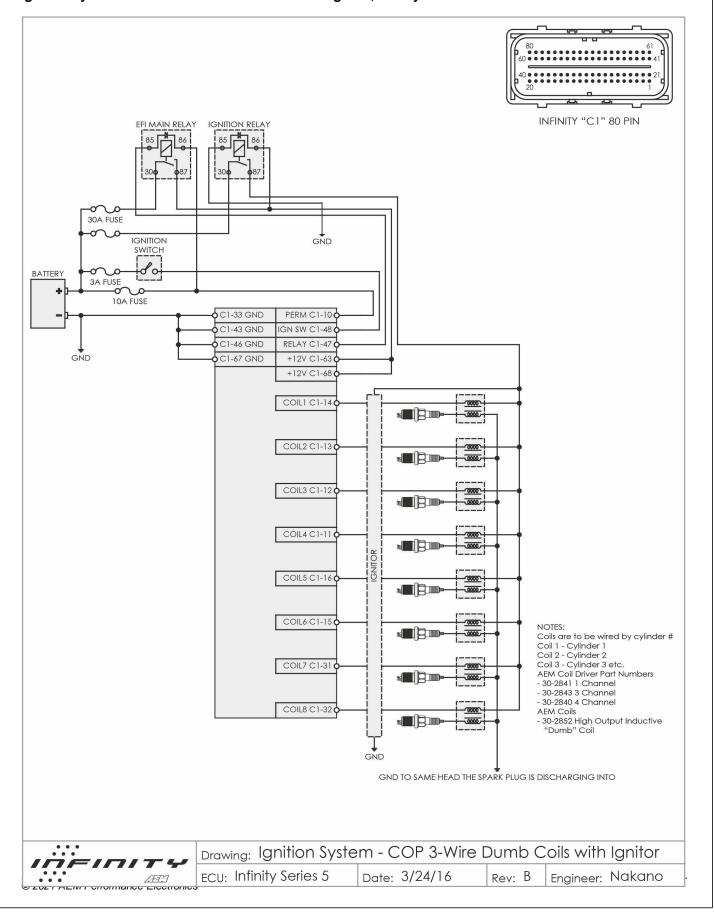
93-98 Toyota Supra 2JZGTE, Infinity-Series5



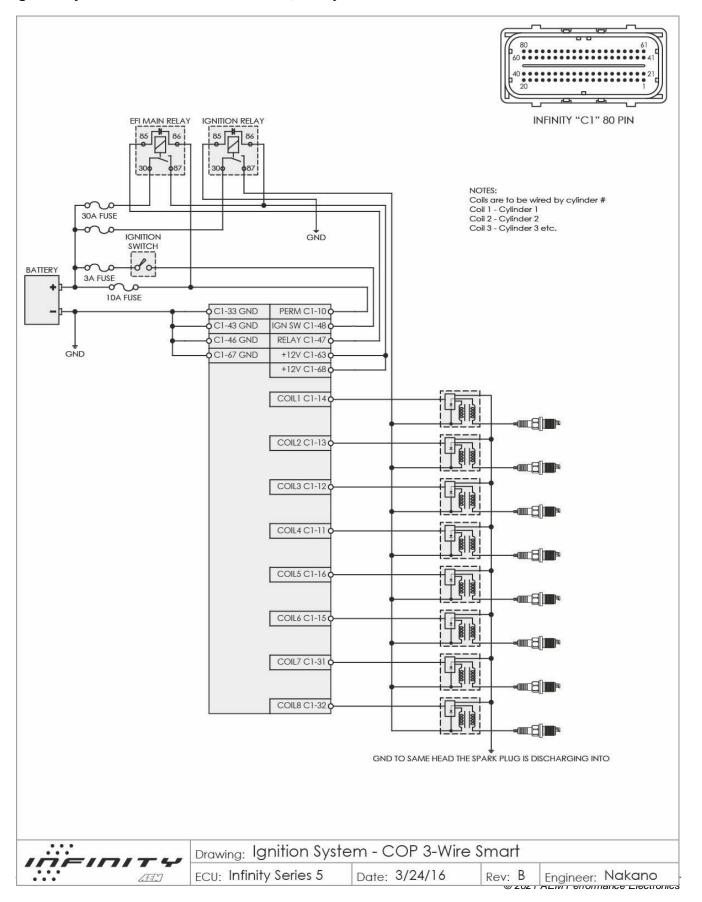
Ignition System - COP 2 Wire "Dumb" Coils with Ignitor, Infinity-Series5



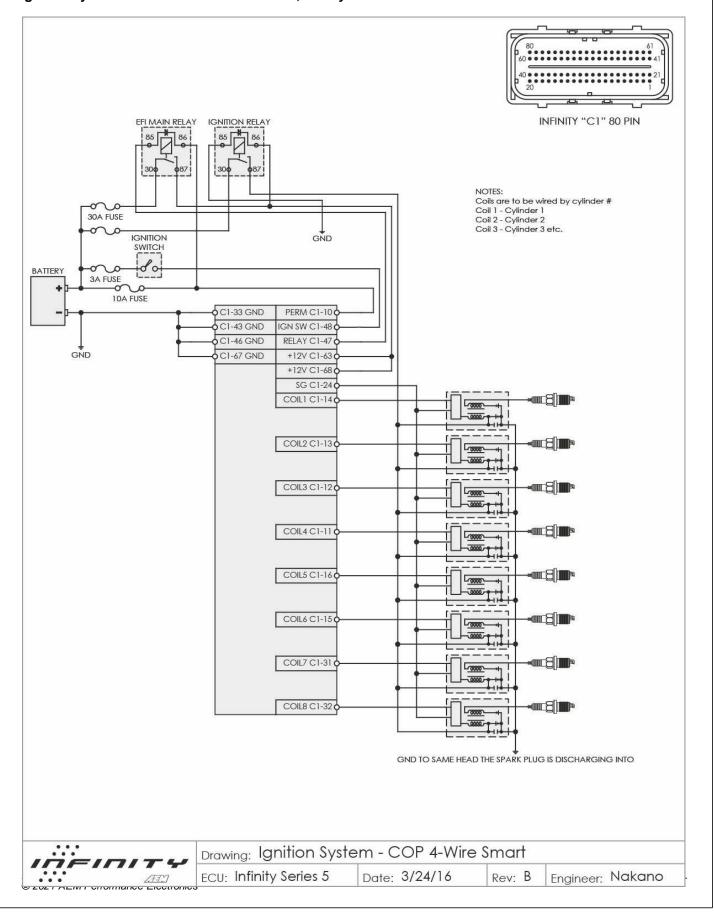
Ignition System - COP 3 Wire "Dumb" Coils with Ignitor, Infinity-Series5



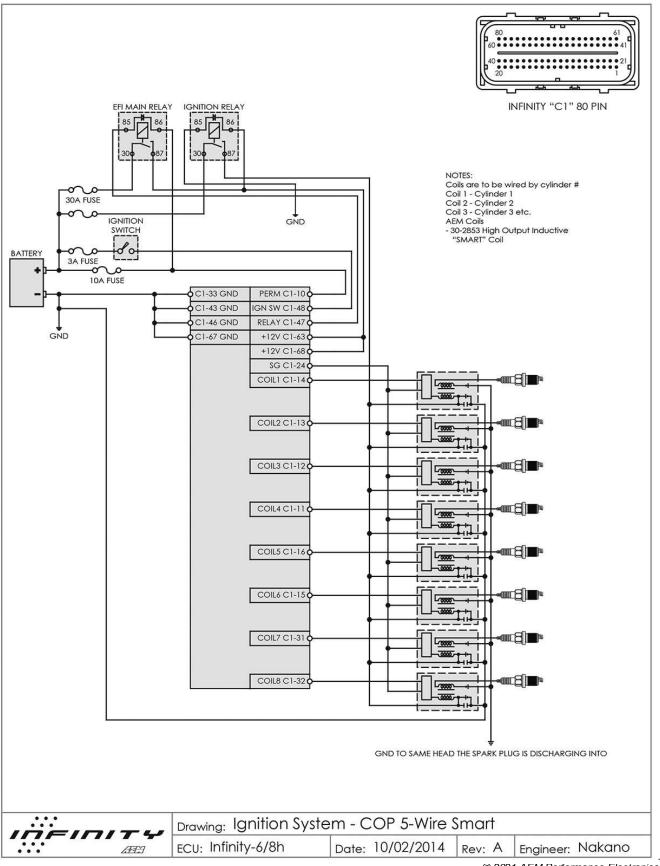
Ignition System - COP 3 Wire "Smart" Coils, Infinity-Series5



Ignition System - COP 4 Wire "Smart" Coils, Infinity-Series5



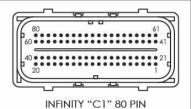
Ignition System - COP 5 Wire "Smart" Coils, Infinity-Series5



GM LS3 DBW Wiring, Infinity-Series5

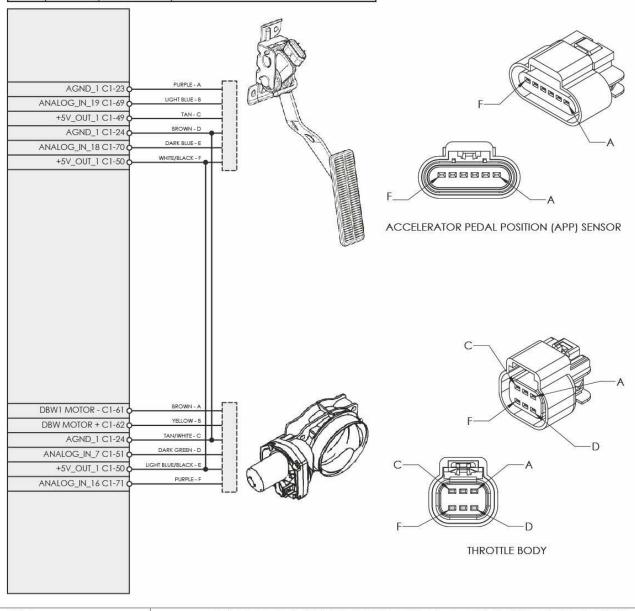
ACCELERATOR PEDAL POSITION (APP) SENSOR

| GM PIN | INFINITY PIN | WIRE COLOR | FUNCTION |
|--------|--------------|-------------|--|
| Α | C1-23 | Purple | Sensor Ground |
| В | C1-69 | Light Blue | Accelerator Pedal Position (APP) Sensor 2 Signal |
| С | C1-49 | Tan | +5 Volt Reference |
| D | C1-24 | Brown | Sensor Ground |
| Е | C1-70 | Dark Blue | Accelerator Pedal Position (APP) Sensor 1 Signal |
| E | C1-50 | White/Black | +5 Volt Reference |



THROTTLE BODY

| GM PIN | INFINITY PIN | WIRE COLOR | FUNCTION |
|--------|--------------|------------------|--|
| Α | C1-61 | Brown | Throttle Acuator Control (TAC) Motor Control - 2 |
| В | C1-62 | Yellow | Throttle Acuator Control (TAC) Motor Control - 1 |
| С | C1-24 | Tan/White | Sensor Ground |
| D | C1-51 | Dark Green | Throttle Position Sensor 1 Signal |
| E | C1-50 | Light Blue/Black | +5 Volt Reference |
| E | C1-71 | Purple | Throttle Position Sensor 2 Signal |





Drawing: GM LS3 ACCELERATOR PEDAL & DBW THROTTLE BODY

ECU: Infinity Series 5 Date: 3/24/16 Rev: B Engineer: Nakano

Mazda RX7 FD Wiring, Infinity-Series5

