



**PERFORMANCE ELECTRONICS**

**AEM 20 & 30 Amp Relay Kits**

**30 Amp Kit 30-2061**

**20 Amp Kit 30-2062**

AEM Performance Electronics  
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## Introduction

The AEM 30 amp relay kit (30-2061) and 20 amp relay (30-2062) kits allow high current circuits to be safely used for any device that needs to be activated by a switched low current input. The switching activity can be from a manual switch or a low or high side switch from an engine management system. The relay included in the AEM Relay kit has a resistor between the switching terminals (85 & 86) to reduce voltage fly-back and unlike relays that use a diode, the terminals are interchangeable. If the relay needs to be replaced the replacement relay MUST either have no resistor or have a resistor but NOT a diode.

The relay socket has a dovetail feature on each side to allow stacking multiple relays together so all of the relays are easily serviced.

The relay kit wires are TXL High grade automotive wires. The high current wires are 10ga. (30 amp kit) or 12 ga. (20 amp kit) and the switched wires are 18 ga. both are 80 inches long for remote mounting. These wires are NOT rated for submersion in gasoline. We recommend that a separate harness constructed of wire that is rated for submersion in gasoline (meets SAE J1127, SGT wire). For circuit protection, there is a 30 or 20 amp circuit breaker that auto resets when overheated.

Common uses of the relay kit are for:

- Coolant Fan activation
- Fuel Pump activation
- NOS system activation
- Engine start to the starter solenoid

## Kit Contents

AEM 20 Amp Relay Kit PN: 30-2062

Qty	Part Number	Description
1	35-2069	20 amp Circuit breaker, auto reset, splash and dust proof
1	35-2070	30 amp relay
1	3-2062	Relay socket with 12 ga power wires
2	4-2050	10 - 12 ga. Ring terminals
2	4-2051	Red Butt Connectors
1	10-2061	Instructions

AEM 30 Amp Relay Kit PN: 30-2061

Qty	Part Number	Description
1	35-2071	30 amp Circuit breaker, auto reset, splash and dust proof
1	35-2070	30 amp relay
1	3-2061	Relay socket with 10 ga. power wires
2	4-2050	10 - 12 ga. Ring terminals
2	4-2051	Red Butt Connectors
1	10-2061	Instructions

## Relay Terminal Legend and operation

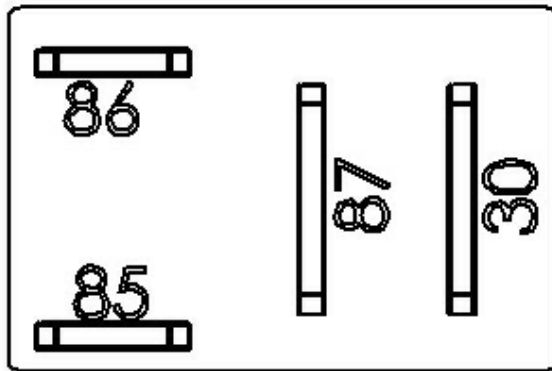
Terminals 85 & 86 are the activation terminals for the relay. The 18 ga. wires are used for this circuit. Terminals 30 & 87 are the high current circuit for 20 or 30 amps depending on the circuit breaker supplied with the kit. The 30 amp kit uses 10 ga. wire for the high current circuit and the 20 amp kit uses 12 ga. wire for the high current circuit.

Typically terminal 30 is from the high current source (battery +) and terminal 87 is for the device such as

a coolant fan or fuel pump

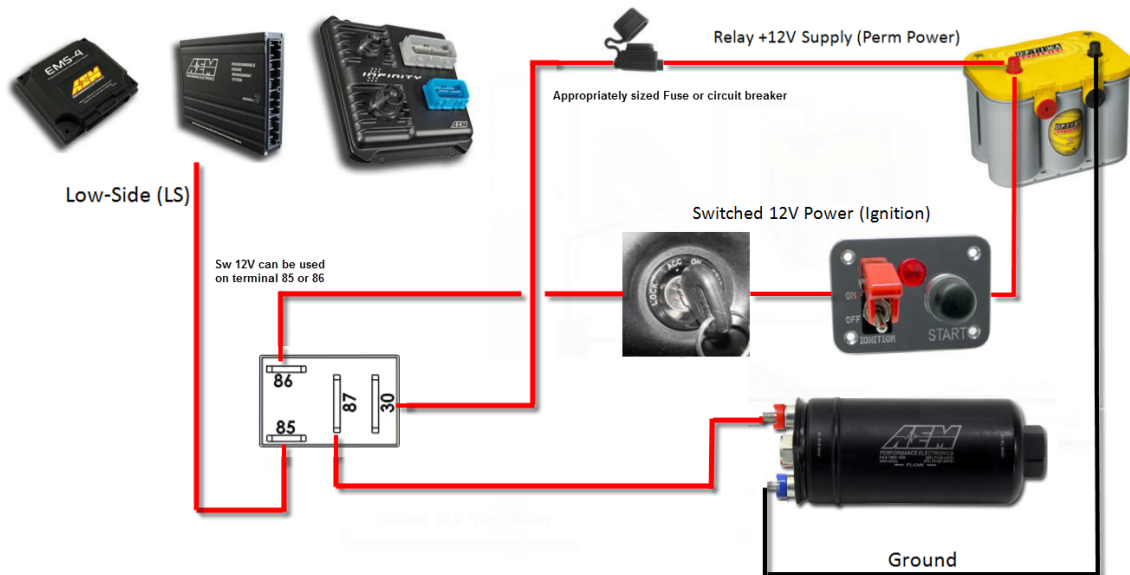
The triggering terminals 85 & 86 can be operated in 2 ways,

1. apply 12V to the circuit via a switching device (a manual switch, a micro switch, or a high side driver from the ECU) to terminal 85 and complete the circuit to ground via terminal 86. Terminals 85 & 86 are interchangeable.
2. supply 12 V to terminal 85 and use a low side driver from the ECU to pull to ground on terminal 86 to complete the circuit



Terminal 30 - 12V Power IN  
Terminal 87 - 12V Power Out  
Terminal 85 - Sw 12V in  
Terminal 86 - Ground

### Low side driver in an ECU



### Circuit Breaker

The circuit breakers supplied in the AEM Relay kits are auto resetting devices. If the circuit breaker trips, the cause of the circuit overload has to be remedied before the circuit breaker will reset. The circuit

breakers **are polar** and the current source (from the battery) must be connected to the copper post on the circuit breaker and the silver side is connected to the device. The closer the circuit breaker is to the power source, the more the circuit is protected. The circuit breaker should be on the wire between the power source and terminal 30 on the relay.

## Warranty Statement

### Warranty

Advanced Engine Management Inc. 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 of the AEM part. In no event shall this warranty exceed the original purchase price of the AEM part nor shall AEM be responsible for special, incidental or consequential damages or cost incurred due to the failure of this product. Warranty claims to AEM must be transportation prepaid and accompanied with 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 disclaims any liability for consequential damages due to breach of any written or implied warranty on all products manufactured by AEM. Warranty returns will only be accepted by AEM when accompanied by a valid Return Merchandise Authorization (RMA) number. Product must be received by AEM within 30 days of the date the RMA is issued.

Please note that before AEM 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 a RMA requested before the above process transpires.

AEM will not be responsible for electronic products that are installed incorrectly, installed in a non-approved application, misused, or tampered with. In the case of the AEM Fuel Pump, 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 can be returned for repair if it is out of the warranty period. There is a minimum charge of \$50.00 for inspection and diagnosis of AEM electronic parts. Parts used in the repair of AEM electronic components will be extra. AEM will provide an estimate of repairs and 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 [tech@aempower.com](mailto:tech@aempower.com), or visit the AEM Performance Electronics forum at <http://forum.aempower.com/forum/> Enter topic text here.