



PERFORMANCE ELECTRONICS

AEM 20 & 30 Amp Relay Kits

30 Amp Kit 30-2061

20 Amp Kit 30-2062

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

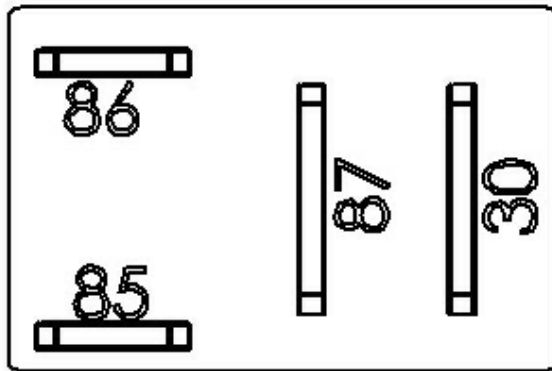
Terminals 85 & 86 are the activation terminals for the relay. The 18 ga. wires are used for this circuit. Terminals 30 & 87 are the high current circuit for 20 or 30 amps depending on the circuit breaker supplied with the kit. The 30 amp kit uses 10 ga. wire for the high current circuit and the 20 amp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

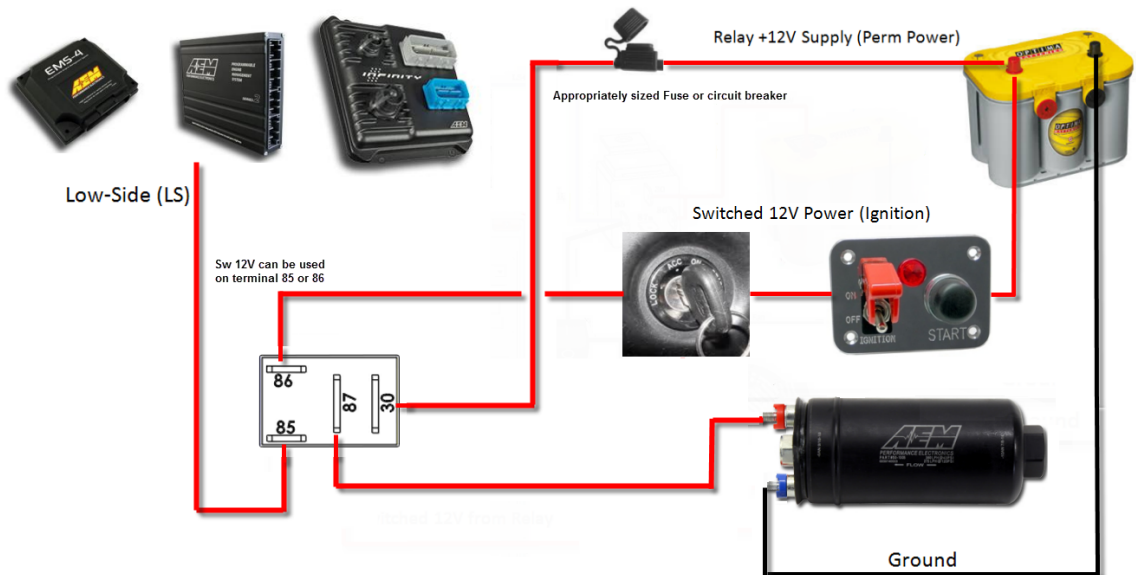
The triggering terminals 85 & 86 can be operated in 2 ways,

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.