



Caerbond Automotive
Instruments

"The original makers of SMITHS instruments"

Instructions for 80mm & 100mm 12volt Smiths Tachometers for Negative or Positive Earth

Caution

**Disconnect the negative battery cable
prior to any installation**

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Products designed and manufactured under ISO
9001:2008 quality standard.

INSTALLATION

To fit the tacho, either an 80mm or 100mm clearance hole is required—appropriate to the model. The harness provided should be connected as follows.

Negative Earth Applications

Wire	Connect To
Brown/Slate	Push button to adjust Calibration
Green	Switched 12v supply Ignition
Black	Ground
Red/blue	Switched side of ignition coil of contact breaker ignition system
White/black	ECU or electronic ignition tacho signal
Red/black	Ground (for illumination)
Red/white	Illumination +ve supply, connect to sidelight feed

Positive Earth Applications

Wire	Connect To
Brown/Slate	Push button to adjust Calibration
Green	Vehicle Ground, Battery Positive
Black	Switched Negative, Supply Ignition
Red/blue	Switched side of ignition coil of contact breaker ignition system
White/black	ECU or electronic ignition tachometer signal
Red/black	Illumination, switched 0 volt supply
Red/white	Vehicle Ground, 12V Battery Positive

OPERATION

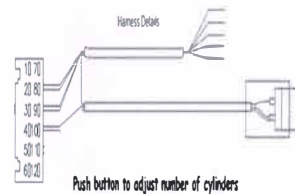
Set the number of engine cylinders, Factory default is 4.

For conventional ignition systems, 1 coil and 1 distributor:

With the ignition switched off, press and hold the push button and switch on the ignition. Keep holding the button until the pointer moves to the factory setting of 4 cylinders then release the button. Each subsequent press of the push button will increment the pointer by 1000rpm (or 1 cylinder), up to a maximum RPM figure on the dial. When the number of cylinders exceeds the full scale then the pointer will move backwards, initially 500 RPM, then 1000 RPM representing a 1 cylinder increment. If the maximum 12 cylinders is exceeded, then the sequence will restart at 1 cylinder (1000rpm).

For lost spark ignition systems:

These systems have two double ended coils and no distributor. Connect the red/blue lead to one coil only. The procedure is as above but the values must be halved, so for 4 cylinders the setting will be 2000rpm (not 4000). When the pointer is at the correct cylinder number, press and hold the button until the pointer resets, then cycle the ignition to store the set up and return to normal operation.



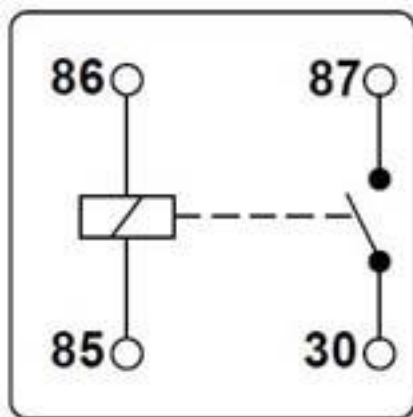
For other ignition systems please contact our technical support team at technical@caigauge.com

Positive Earth Lighting

The circuit board inside the gauge was designed for Negative earth vehicles, the issue is with the LED lighting inside the gauge; it only uses the Red/White input wire from side light switch to operate the illumination, so is expecting switched 12 volts input not 0 volts, so you will have to fit a 4 pin automotive relay, driven from the side light switch output, to transpose the illumination input voltage.

Connect one side of the relay coil (85) to the illumination switch output and other side of the relay coil (86) to the vehicle chassis (12V).

Connect one side of the normally open relay contact (87) to the chassis (12V), and the other side of the normally open relay contact (30) to the Red/White wire on the gauge input cable.



85 To vehicle light switch

86 To 12v ground

87 To 12v ground

30 To Red/White on gauge