

TECHNICAL MANUAL

THROTTLE CABLE SENSOR

PART #: 82-00054

Offering performance for a wide range of electric vehicles, this throttle seamlessly transmits the driver's accelerator position sensor input to the VCU

SAFETY. ALWAYS THE MAIN PRIORITY.

Our products must be used with utmost care. Improper use or installation can result in severe damage to your vehicle, personal property, and pose a risk of serious injury or even death. If you do not possess adequate knowledge in electrical engineering or lack familiarity with the safety requirements of high voltage electric vehicles, and/or if you are not proficient in configuring the necessary control calibrations, DO NOT attempt to install or utilize this product under any circumstances. We strongly advise you to seek the assistance of a reputable installation facility or contact Hypercraft for a referral in your area for proper installation and calibration. The installer holds the ultimate responsibility to ensure the safety of the installation and calibrations for the intended use.

Hypercraft products have been designed for installation by qualified professionals in suitable vehicles. Hypercraft disclaims any responsibility for damage or mechanical degradation to the vehicle, drivetrain components, or vehicle high voltage systems resulting from improper installation or use of this product.



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If you have any questions or concerns regarding the installation of this product, please do not hesitate to contact our technical support team at techsupport@hypercraftusa.com

1.0 SAFETY INFORMATION

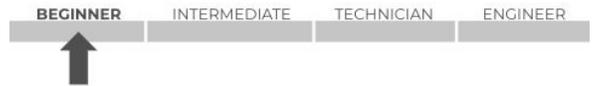
PERSONAL PROTECTIVE EQUIPMENT

Safety Glasses

SUGGESTED

Pro Tip: Educate yourself on how to be safe, and know your own personal skill level in comparison with what you are attempting. There is always time to learn safe practices and/or ask a professional for help!

SKILL LEVEL CHART



2.0 PARTS + TOOLS LIST

2.1 The contents of **your connector kit includes the following:**

(Note: If you are missing items from your kit, please contact Hypercraft customer service for resolution at techsupport@hypercraftusa.com)

ITEM	QTY	MFG	MFG P/N
Mating Connector	1	Sumitomo	6189-1012
Terminals	7	Sumitomo	8100-3067
Mating Connector Seal	7	Sumitomo	7165-0621
Mating Connector Wedge Lock	1	Sumitomo	6918-2056

2.2 The following will be utilized for installation (not included in kit):

TOOLS NEEDED

Screwdriver/hand drill

Wire strippers

Crimper (18-20 AWG)

Adj. Wrench

3.0 INSTALLATION PROCEDURE

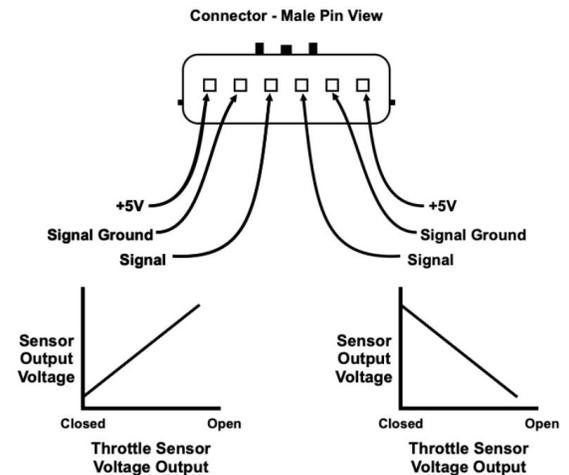
 Estimated time to complete: 1-2 hrs.

3.1 Turn off vehicle, install the Lock-Out-Tag-Out signage, and inform anyone in the area that you will be performing installation.

3.2 Install under hood, on driver side fender. Ensure that the tab on the sensor fits into the slot on the rotating throttle assembly when installing. Secure the sensor using torx screws. Tighten just enough so you can still rotate sensor in its slotted mounting holes, but tight enough so it stays where you set it.

3.3 The pinout for the Throttle Pedal Connector is:

Pin	Name	Description
1	VCC 1	5v Power
2	GND 1	Sensor Ground
3	APP 1	Sensor Signal
4	APP 2	Sensor Signal
5	GND 2	Sensor Ground
6	VCC 2	5v Power



3.4 If installing with an AEM VCU300, the following connection locations will apply, otherwise refer to your controllers instructions to locate the proper connection points:

Pin	Throttle	Description	VCU300 Pin	Desc
1	VCC 1	5v Power 1	K81	Sens Gnd
2	APP 1	Sensor Signal 1	K65	APP2
3	GND 1	Sensor Ground 1	K83	Vref +5v
4	VCC 2	5v Power 2	K83	Vref +5v
5	APP 2	Sensor Signal 2	K82	APP1
6	GND 2	Sensor Ground 2	K81	Sens Gnd

 Estimated time to complete: 1-2 hrs.

3.5 Sensor alignment:

Plug the electrical connector into the sensor. Note, if you turn the key on with sensor unplugged, it will throw codes. If you accidentally turn on ignition with sensor unplugged, just clear the codes and continue.

With the sensor loosely tightened and plugged in, rotate sensor as far clockwise as it will go. Throttle assembly should not be bolted in place yet. Only the sensor should be loosely bolted into place and plugged in.

Turn on ignition, but do not start the engine. Press pedal all the way to the floor. Make sure no code is thrown.

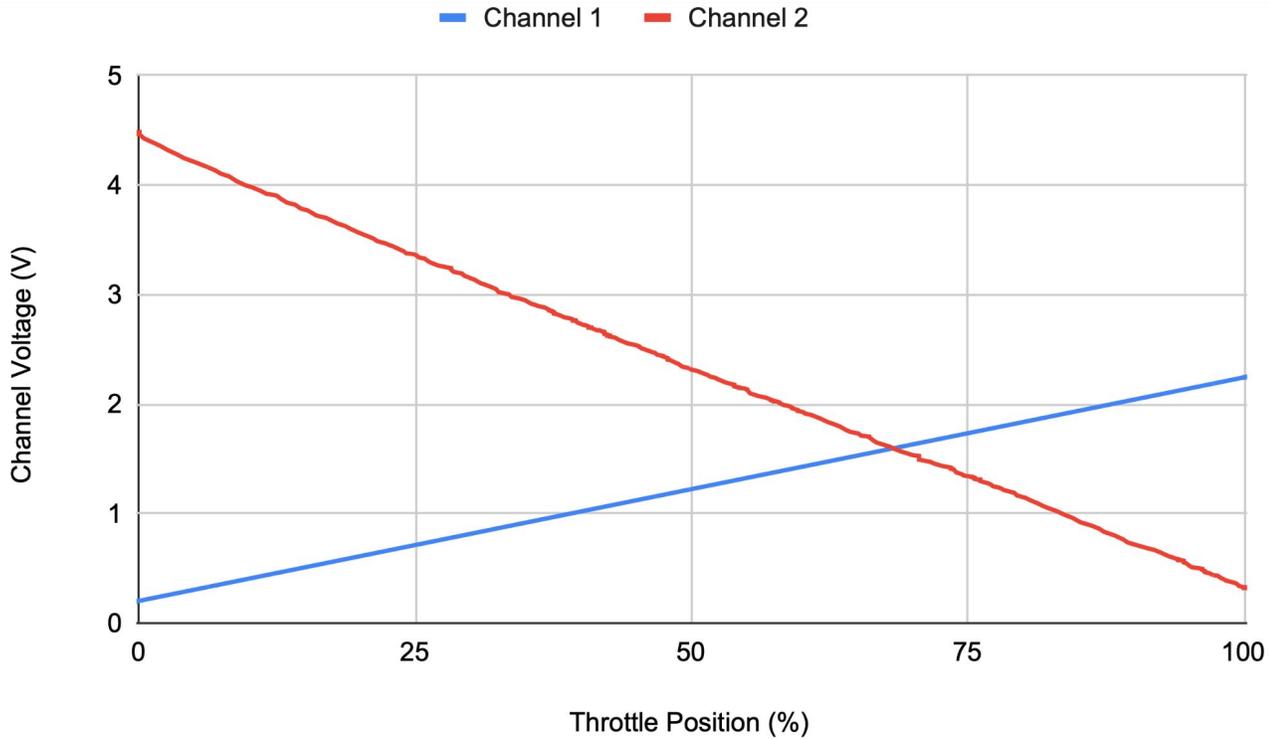
Now you're going to find the spot where sensor alignment throws a code, then back off a hair.

Rotate sensor counter clockwise by as small an increment as you can. Press throttle to the floor again. Make sure no code is thrown. Repeat this process until it throws a code.

Now back the sensor down clockwise by as small an increment as you can. Tighten into place, being careful the unit doesn't rotate at all.

Clear code. Then try throttle to floor again, make sure it does not throw a code.

3.6 The signal output of the sensors is shown below



3.7 The approximate signal output of the two sensors is shown below. Note that Sensor 1 **increases** in voltage as throttle is applied and Sensor 2 **decreases** in voltage as more throttle is applied. Check your sensor output and use the values you measure for a more accurate reading as this is only a guideline.

	No Throttle	Full Throttle
Sensor 1	0.2v	2.2v
Sensor 2	4.5v	0.35v
Crossover	Approx 1.6v	

4.0 MAINTENANCE + TROUBLESHOOTING

As equipment is used, various items may become worn out and/or need replacing. The following is a guide on preventative maintenance and other actions to ensure usability and performance.

NOTE: Please reference all safety information on the cover page and requirements in section 1.0 for any procedures done on equipment including maintenance or or troubleshooting.

4.1 If a connector or terminal breaks, they should be replaced as new. Connector kit offered on our website as individual part for sale.

4.2 Troubleshooting

If there are any issues that you face with this component, please contact customer support: techsupport@hypercraftusa.com

5.0 PRODUCT SPECIFICATIONS

Offering performance for a wide range of electric vehicles, this throttle seamlessly transmits the driver's accelerator position sensor input to the VCU (Vehicle Control Unit).

This throttle pedal is to be mounted on the floor of your vehicle acting as the best throttle option for vehicles with cramped or contoured foot space and firewalls.

TECHNICAL SPECIFICATIONS

Type: Accelerator Pedal Sensor

Control Method: Alternating Voltage (5V)

Connection Type: Bolt-on

Weight: 1. lb

Depth: 5.3 in

Width: 4.3 in

Height: 4.3 in

SENSOR INFORMATION

Kit Assembly: Hypercraft USA

Communication/Interface: Electronic

Certifications: Manufactured to OE Specs

Applications: Racing, Defense, Commercial, Fleet

Components Included: Sensor Assy, Connector

6.0 WARRANTY + SUPPORT

6.1 WARRANTY

Hypercraft assures the consumer that all Hypercraft products will be devoid of defects in material and workmanship for a duration of twelve months from the original purchase date. Should any product fail within this twelve-month warranty period due to material or workmanship defects as determined by us, we will either repair or replace the product. This warranty is limited to the repair or replacement of the Hypercraft part and is exclusively applicable to the original purchaser, non-transferable. All implied warranties are limited to the aforementioned twelve-month period. The warranty is void if the product is improperly used or installed, subjected to accidents, abuse, unauthorized repairs, or alterations performed by the user.

Under no circumstances shall this warranty exceed the original purchase price of the Hypercraft part, nor shall Hypercraft be liable for any special, incidental, or consequential damages or costs incurred due to product failure. Hypercraft denies any responsibility for consequential damages resulting from a breach of any written or implied warranty on its products.

To initiate a warranty return, a valid Return Merchandise Authorization (RMA) number and a dated proof of purchase must accompany the returned product. The product must reach Hypercraft within 30 days from the date the RMA is issued. Warranty claims must be shipped to us with prepaid shipping. Upon receipt of your package by our warranty and repairs department, you will be promptly notified and provided with updates.

PROCEDURES FOR OBTAINING A RETURN MERCHANDISE AUTHORIZATION (RMA) NUMBER

Please note that before Hypercraft can issue an RMA for any product, the installer or end user must first contact our technical support team to discuss the issue. Most problems can be resolved over the phone. It is essential to contact our support team before returning a system or requesting an RMA. This ensures that if an RMA is necessary, our team can efficiently track your product through the warranty process.

For technical support on all Hypercraft products, please reach out to our Tech Support Team by emailing us at techsupport@hypercraftusa.com.

Hypercraft will not assume responsibility for products that are incorrectly installed, used in non-approved applications, misused, or tampered with.

PRODUCTS OUTSIDE OF WARRANTY PERIOD (Hypercraft built parts only)

If a Hypercraft product, excluding discontinued products, is beyond the warranty period, it can still be returned for repair. A charge between \$50- \$1,000 is applicable for inspection and diagnosis of Hypercraft parts. That charge will be determined based on the product, category and cost of re-validation, and will be communicated at that point if necessary. Additional charges for parts used in the repair of Hypercraft components will apply. Hypercraft will provide a repair estimate and requires written or electronic authorization from you before proceeding with the repairs.

6.2 SUPPORT If you have any questions or concerns regarding the installation of this product, please do not hesitate to contact us before proceeding with installation. We are happy to assist you to ensure the correct application, resolve any component issues, and support the installment of our kits on equipment. Thank you for your purchase, we look forward to being of service.

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