

FK-85P 85A Fan Control Kit

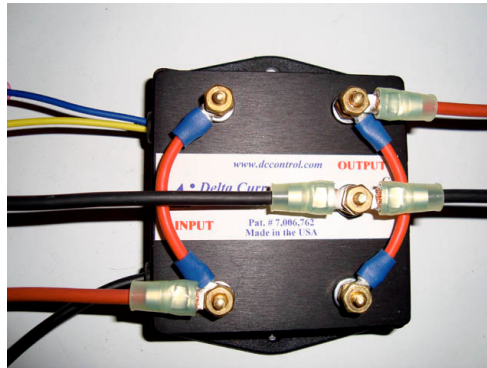
Delta Current Control module

Blue - AC input

Yellow - multifunction I/O

Black - Battery negative

Red - Battery positive



Red – Fan positive

Black – Fan negative

Setting the Temperature

The controller is set from the factory for use with a 180 degree thermostat, the set temperature, however, can be adjusted byway of the multiturn potentiometer, located on the input side of the controller. Each turn clockwise will raise the temperature approximately 3 1/2 degrees, each turn ccw will lower the temperature by the same amount. A total adjustment of +/- 35 degrees is possible.

Mounting the control unit

Find a flat surface in the engine compartment, the preferred area being the radiator support sheet metal near the battery. Allow for adequate airflow. Drill two 1/8" holes by using the control unit as a template. Drill two more 1/8" holes at about 8" centers to install the wire hold-downs. Mount the control unit using two self tapping screws and flat washers.

Delta fast response temperature sensor

Mounting the temperature sensor

Figure 1a shows the Delta temperature probe. Its low mass, high friction housing and high flex multi strand wiring loom provide a fast response time and convenient mounting, requiring no retaining mechanism. Simply insert the probe between the radiator fins so that the sensor flange is flush with the radiator fins and the mounting is complete. Unlike other control systems, the FK85 fan control operates most accurately when the temperature is indicated downstream from the cooling fan.

Down flow radiator positioning

Figure 1b shows the correct mounting position on a conventional radiator. Mounting is below the fan, and near the outlet hose.

Cross flow radiator positioning

Figure 1c shows the correct mounting position on a cross flow radiator. Mounting is to the side of the fan, and near the radiator outlet hose

Figure 1a
Delta Temp Probe



Figure 1b
Down Flow Radiator

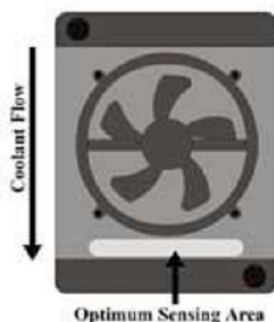
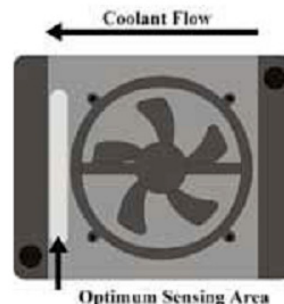


Figure 1c
Cross Flow Radiator



Control unit wiring

High current wiring

1. Using the supplied wiring loom, secure one connected end of the red wire on the **OUTPUT terminal** of the controller using one star washer and brass 6-32 hex nut. A snug fit is all that is needed (5-in-lb), Be careful not to overtighten. Route the wire to the **positive fan terminal**, cut and trim the wire and install the butt connector to connect the fan wiring.
2. Place one connected end of the black wire on the **GND terminal** of the controller. Route the wire to the **negative fan terminal**, cut and trim the wire and install the butt connector to connect the fan wiring.
3. Place the connected end of the remaining black wire on the **GND terminal** of the controller and secure both wires with one star washer and 6-32 brass hex nut. Route the wire to the **negative battery terminal**. Attach the 5/16 ring terminal and connect to the negative battery terminal.
4. Place the connected end of the remaining red wire on the **INPUT terminal** of the controller and secure the wire with one star washer and brass 6-32 hex nut. Route the wire to the **positive battery terminal**. Attach the **fusible link** and connect to the positive battery terminal. Do not connect to the starter end of the battery cable or to the alternator. Use the supplied wire hold downs, along with two self tapping screws and flat washers to secure the wires.

Auxiliary wiring

AC input

If the vehicle has air conditioning and a factory installed electric fan, connect the blue AC input wire of the harness to the unit and to the positive terminal of the OEM fan wiring harness. If the vehicle has air conditioning and originally came with a mechanical fan, connect the blue AC input wire of the harness to the air conditioning compressor input.

Multifunction I/O

The multifunction port can be used for numerous functions, a 12V input will over ride the controller on, a grounded input will raise the set temperature by approximately forty degrees, effectively over riding the controller off. The port can also be used as an AC input if 100% power is desired for the AC. To accomplish this, a diode, striped-end to the I/O is connected between the AC compressor input and the I/O as shown below:

Diode
AC compressor----->|----- I/O port

The controller can also effectively be shut off with the ignition by raising the set temperature. This is done by connecting a diode between the ignition switch and the IO, striped-end towards the ignition switch as shown below:

Diode
I/O port----->|-----Ignition switch

The port can also be used to calibrate the controller temperature by reading the voltage while adjusting the potentiometer, a chart is shown below:

Thermostat temperature	I/O voltage	Thermostat temperature	I/O voltage
160	3.16	190	2.38
170	2.89	200	2.14
180	2.63	210	1.91

Finally, the TADJ22 remote input can be used to adjust the temperature of the controller from inside the car.

Testing the unit

Start the car. If equipped with air conditioning, turn on the AC, the fan should run at 50 % power Check the direction of airflow and reverse the fan input wires if necessary. Turn off the AC and let the engine warm up. The fan should run at the necessary speed to stabilize engine temperature.

Parts list

1 control unit with radiator temperature probe	2 controller to fan connectors	3 6-32 brass nuts
1 high current wiring harness	1 5/16 ring terminal	4 # 6 self tapping screws
1 low current wiring harness	2 wire hold downs	4 flat washers
1 fusible link	3 internal star washers	

LIMITED WARRANTY

Delta Current Control, hereon referred to as DCC, warrants to the first consumer purchaser that this DCC brand product, hereon referred to as the product, when shipped in its original container, will be free from defective workmanship and materials and agrees to, at its option, either repair the defect or replace the defective Product or part thereof at no charge to the purchaser for parts or labor for the time period(s) set forth below.

This warranty does not apply to any appearance items of the Product nor to any product the exterior of which has been damaged or defaced, which has been subjected to misuse, abnormal service or handling or which has been altered or modified in design or construction.

In order to enforce the rights under this limited warranty, the purchaser should follow the steps set forth below and provided proof of purchase to the servicer.

The limited warranty described herein is in addition to whatever implied warranties may be granted to purchasers by law. **ALL IMPLIED WARRANTIES INCLUDING THE WARRANTIES OF MERCHANT ABILITY AND FITNESS FOR USE ARE LIMITED TO THE PERIOD(S) FROM THE DATE OF PURCHASE SET FORTH BELOW.** Some states do not allow limitations on how long an implied warranty lasts, so the limitation may not apply to you.

Neither the sales personnel of the seller nor any other person is authorized to make any warranties other than those described herein or to extend the duration of any warranties beyond the time period described on behalf of DCC.

The warranties described herein shall be the sole and exclusive warranties granted by DCC and shall be the sole and exclusive remedy available to the purchaser. Correction of defects, in the manner and for the period of time described herein, shall constitute complete fulfillment of all liabilities and responsibilities of DCC to the purchaser with respect to the Product and shall constitute full satisfaction of all claims, whether based on contract, negligence, strict liability or otherwise. In no event shall DCC be liable, or in any way responsible, for any damages or defects in the Product which were caused by repairs performed by anyone other than an authorized servicer. Nor shall DCC be liable, or in any way responsible, for any incidental or consequential economic or property damage. Some states do not allow the exclusion of incidental or consequential damages, so the above exclusion may not apply to you.

THE WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS. YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE.

Warranty Period for this Product: Ninety (90) days parts and labor from date of purchase.

Where to obtain service: To locate an authorized DCC service center, contact Delta Current Control at (408) 379 – 8951