



## **DCX300 & DCX400**

### **SEPARATELY EXCITED DC MOTOR CONTROLLER**

This motor controller is designed to work with various golf cars depending on configuration and adapter harness used. See chart below to assure correct configuration of the Alltrax controller for your vehicle.

| Vehicle Mfg | Model | Alltrax Controller | Motor Field Map | Alltrax Wire Harness |
|-------------|-------|--------------------|-----------------|----------------------|
| E-Z-GO      | DCS   | DCX                | DCS 2 – 19 amp  | None                 |
| E-Z-GO      | PDS   | DCX                | PDS 3 – 25 amp  | PDS Adapter          |

DCX300 is a 300 amp controller, DCX400 is a 400amp controller. The DCX300 is intended to be a bolt in replacement to the standard controller found in E-Z-GO DCS cars. The DCX400 bolts in too, and offers increased torque and acceleration. Both may be used in E-Z-GO PDS cars with an adapter harness that allows the existing wiring to simply plug in. Note that Tach speed limiting is disabled on PDS cars.

#### **Installation:**

Disconnect all wires from battery + terminal. Place jack stands under rear axle. Remove black cover from existing controller. Observe wiring orientation prior to disassembly. Remove relay bracket, mount relay on top of Alltrax controller, using the stock bolts to secure the relay to the plastic inserts. Align notches in controller mounting flange with relay bracket holes in heatsink and secure with 2 bolts.

#### **Fusing:**

A fuse is required in the battery circuit. Place a Buss ANN-250 250A fuse in series with one of the battery interconnects, or in line between the controllers B- bus bar and the B- terminal of the battery. Fuse is Alltrax P/N FUS110-011.

| <b><u>FROM:</u></b>                       | <b><u>TO:</u></b> | <b><u>Function</u></b>                      |
|---|-------------------|---|
| Curtis DCS/PDS                            | Alltrax DCX       |   |
| A1  | M-                | Controller output to motor Armature 1       |
| B-  | B-                | Battery negative terminal                   |
| A2/B+                                     | B+                | Battery positive from solenoid & Armature 2 |
| F1  | F1                | Start of field winding                      |
| F2  | F2                | End of field winding                        |
| 9 pin                                     | 9 pin             | Control wiring. See schematic for details.  |
| PDS Adapter harness required for PDS cars |                   |   |

Observe orientation of 9 pin connector, 1 pin is removed to indicate polarity.  
Some cars may require replacement of the wire going from B+ on controller to output of solenoid as it is too short. Use 4-6AWG wire to replace if needed. Tuck wires sharply down the back of the controller to allow stock E-Z-GO cover to be reinstalled.

### **Troubleshooting:**

At power up, the front panel LED on the controller will blink green a number of times. The number of green blinks identifies the throttle configuration of the controller. If there is an error, the LED will then blink a RED pattern.

Green Blinks = Throttle Type

- 1 green = 0-5K 2 wire throttle
- 2 green = 5K-0 2 wire throttle
- 4 green = E-Z-GO ITS compatible throttle

Red Blinks = Error Code

- 1 red = Throttle position sensor over range. Check for open throttle wires.
- 2 red = Under temperature. Controller shuts down at temps below -25C.
- 3 red = HPD. Throttle has not returned to zero during this power up sequence.
- 4 red = Over temperature. Controller shuts down at temps greater than 95C.
- 5 red = Open Field. Check for open field wires.
- 6 red = Battery undervoltage shutdown. Battery V < undervoltage slider.
- 7 red = Battery overvoltage shutdown. Battery V > overvoltage slider.

Solid Green = OK and ready

Solid yellow = throttle wide open and controller not in current limit

Solid RED = controller in bootload mode

Programming:

This controller may be programmed to change operating characteristics such as throttle response rate, throttle type, top speed and braking force. Go to [www.alltraxinc.com](http://www.alltraxinc.com) and download the free software tool ControllerPRO. With a DB-9 serial cable and a notebook PC running Windows XP, you can customize the driving style of the car on the fly.

### **Limited Warranty**

Alltrax, Inc. warrants this motor controller to be free from defects in materials and workmanship for a period of 2 years from the date of manufacture. This warranty does not apply to defects due directly or indirectly to misuse, abuse, negligence, accidents, repairs or alterations. We shall in no event be liable for death, injuries to persons or property or for incidental, contingent or consequential damages arising through the use of our products. Alltrax, Inc. specifically disclaims the implied warranties of merchantability and fitness for a particular purpose, however some areas do not allow limitations on how long an implied warranty lasts, so the preceding exclusion may not apply to you. This is Alltrax, Inc. sole written warranty, no other warranty is expressed or implied. In the event you need warranty repair, please call Alltrax to obtain a return authorization number. Alltrax reserves the right to repair or replace merchandise at its option, and to make changes to any of its products or specifications without notice.