

**ECEI**

**DC Controls and Drives  
For the industry**

## *Electronic Controls*

**Thank you for purchasing our DC Controls & Drives we guaranty you will have years of dependable operation with our equipments.**

**Our drives have a 1-year guaranty under normal operations conditions.**

**Our goal is to keep your machines and production moving.**

## *Electronic Controls*

**Our DC controls & drives had being designed with the customer in mind, to meet their expectations for industry, to give them the best quality and service for their investment.**

**We have years working with our customers and we know their needs.**

**That is why we offer the best solution to meet their needs in speed, power and torque control for their DC motors.**

**We offer controls and drives for DC motors from: 1/25 HP to 5 HP, for single phase power: 115 VAC / 230 VAC input. And outputs: 90 VDC / 180 VDC**

**We offer CUSTOM Controllers to meet the application's needs.**

**DC controllers/drives are used in many machines because they are best choice for full torque and/or speed control applications.**

# **PEDAL**

## **Operation manual**

*Content:*

Installation .....	5
Presets (Adjust) .....	7
Fuse Charts .....	8
Specification .....	9
Troubleshooting .....	10

### **IMPORTANT NOTE:**

**A QUALIFIED TECHNICIAN MUST INSTALL THIS EQUIPMENT; THERE IS A RISK OF ELECTRIC SHOCK, WHICH CAN BE FATAL IF THE PERSON INSTALLING THE DRIVE IS NOT FAMILIAR WITH DC DRIVES.**

## *Electronic Controls*

### **Installing the ASC-PEDAL Control: Install it in a clean, dry and ventilated place!**

Always make sure the Pedal is away from water or wet locations, the pedal has some holes for ventilation and the electronic board is inside of it!

**The ASC-PEDAL is for SUBFRACTIONAL MOTORS WITH PERMANENT MAGNET ONLY! It is NOT for shunt-wound motors (DC Motors with “Field”)**

1. Find a wall outlet (115 VAC) where you will plug the Pedal. You can use an extension cord if necessary, a Heavy Duty one, rated for 10 Amps minimum in good condition to connect the Pedal and keep it away from “Pinch points”. Safety First! **And DO NOT Connect it yet!**
2. **You will need an extra plug** to connect the DC Motor’s wires to the Pedal’s connector. The A+ & A- Motor’s wires will be connected to the extra plug; the position of the wires will determine the Motors rotation direction. You will need to check what direction you motor to run, if when you connect your motor and try it, it runs in the opposite direction, just switch the wires you connected to the plug and it will change direction.
3. **Don’t leave loose wires, Safety FIRST!** Also Make sure all wires are properly fastened and inside a conduit for protection.

## *Electronic Controls*

4. **Always ground all your equipment and wires properly** to prevent electric shocks.
5. **Once you connected the DC Motor cable into the plug's receptacle with the new plug, now you are ready to test.**
6. Now Connect the PEDAL's plug to the AC Power and softly push the pedal until the motor starts to run, and check rotation, if you are satisfied with it, then you are done! If the DC Motor turns in the opposite direction, just switch the wires in the plug you just connected and try again, it will fix the problem.
7. The ASC-PEDAL has an internal shut down control "**OLIP**" (Over Load Instantaneous Protection) that will operate, if the motor's current exceeds the maximum set in the "**CL**" preset and will cause the motor to stop. **It is meant to protect the Motor and the Drive.** To reset it, you need to reset power to the drive. Disconnect AC Power to the drive momentary and reconnect. **This will happen if you push the Throttle Pedal too fast,** you need to push the Pedal **SOFTLY** always, not too fast.

## *Electronic Controls*

### **ADJUSTING THE TRIM POTS**

The ASC-PEDAL has four “Trim pots” to set the way the drive will behave and respond.

**ACC:** (Acceleration): To set the time, from 0.1 to 7 seconds to reach motor’s full speed, adjust it according to your needs.

**IR:** To compensate torque, (Pre-Adjusted) if the motor’s speed drops down more than acceptable while operating. This one will add extra “Amps” to the motor but will be limited by the “**CL**” as well.

**CL:** Limits the maximum current the motor will draw from the drive, this was preset already according to the motor’s power you requested. Turning it all the way to the left will decrease the current that will be delivered to the motor; turning it all the way to the right will increase the current. **BE CAREFUL WITH THIS ONE**, for if set it too high you can damage your motor.

**MAX:** (Maximum Speed): Sets the maximum voltage to be delivered to the motor (or the maximum speed). The output voltage to the motor has to be set according to the motor’s name plate. You can adjust the speed from 70% ~ 150 %.

## FUSES CHART

<b>DC MOTOR HP</b>	<b>Voltage DC Armature</b>	<b>Full Loaded DC Motor Amperage</b>	<b>FUSE RATING AC Amps.</b>
1/25 HP	90	0.5	1
1/15 HP	90	0.8	1.5
1/8 HP	90	1.3	2
1/4 HP	90	2.5	4

<b>DC MOTOR HP</b>	<b>Voltage DC Armature</b>	<b>Full Loaded DC Motor Amperage</b>	<b>FUSE RATING AC Amps.</b>
1/15 HP	180	0.4	0.75
1/8 HP	180	0.7	1.5
1/4 HP	180	1.3	2



## *Electronic Controls*

### **General Specifications:**

<b>AC Line Voltage Single Phase</b>	<b>110-130VAC, 50/60 Hz. or 208-240 VAC, 50/60 Hz.</b>
<b>Armature Voltage Output</b>	<b>For 115 VAC: 0 ~ 90/130 VDC. For 230 VAC: 0 ~ 180/220 VDC.</b>
<b>Maximum operating temperature</b>	<b>50°C / 122°F</b>
<b>Field</b>	<b>ASC-PEDAL HAS NO FIELD POWER OUTPUT</b>



**ASC-PEDAL**

# *Electronic Controls*

## TROUBLESHOOTING

<b>Symptom</b>	<b>Possible Cause</b>	<b>Solution</b>
Breaker trips or blows fuses	Bad Drive or Bad Motor	*Check/Change Drive or Motor
Motor doesn't run	*Check fuse and Input Voltage *Check Motor wires and brushes	*Reset Breaker *Change fuses *Change brushes
Motor stops with load	* <b>CL</b> trim pot set too low. *Drive too small for motor's HP.	*Check Motor and drive nameplate HP * <b>CL</b> pot (Pg 7)
Motor runs backwards	*Armature wires backwards	*Switch Armature wires
Motor hums but doesn't run	*Load too big for the motor * <b>CL</b> trim pot not set properly	*Reduce load *Adjust <b>CL</b> trim pot
Motor runs slow or does not reach maximum speed	* Load too big for the motor * <b>MAX</b> trim pot set too low	*Reduce load *Adjust <b>MAX</b> trim pot (See Pg. 7)
Motor doesn't have enough torque or stops as speeds up.	* <b>CL</b> trim pot set too low * Instantaneous OC protection. (IOCP)	* Check Motor's Amperage, adjust <b>CL</b> not exceed max motor's Amp.
Motor oscillates	* <b>IR</b> trim pot set too high	*Turn <b>IR</b> to the left (see pg. 7)