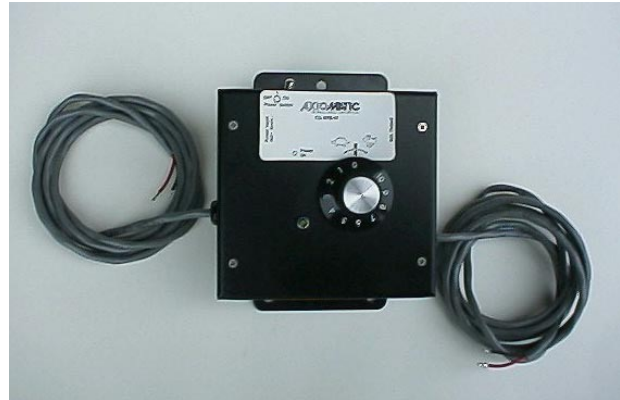


# Speed Controller

(Metal Box with 2 m Cables)

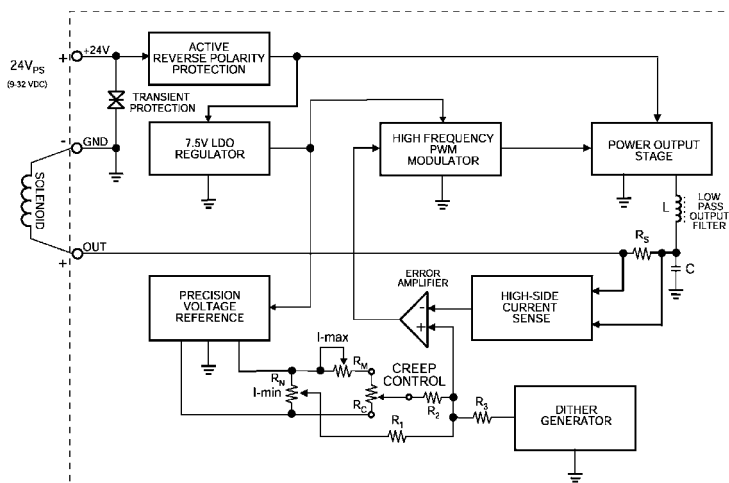
P/N: CC-SMB-1.2A

**A low-cost manual velocity controller in a rugged metal box designed to interface between 12 or 24V battery power and a remote grounded proportional solenoid valve**



- Accepts a wide range of input operating voltages (12 or 24 VDC nominal)
- Power on/off switch provided with LED indication
- Manual control with a built-in single turn potentiometer
- Regulated output of 2 Amps (adjustable) comes factory set at 1.2 Amps
- Designed for use with proportional valves
- Efficient control
- Minimum output current adjustment to compensate for valve deadband
- Fixed superimposed dither to reduce valve hysteresis
- Reverse polarity protection inherent in design
- Short circuit protection
- Filter eliminates electrical noise
- Robust, rugged and highly reliable
- Compact size
- Cable connections to power and solenoid
- IP67 rated metal box for remote mounting
- Interfaces to a grounded proportional solenoid (not supplied)
- Operational from -40 to 85°C

## BLOCK DIAGRAM



## Application:

- material handling, aerial lift and mobile agricultural equipment
- proportional hydraulic circuits in a variety of mobile and industrial applications

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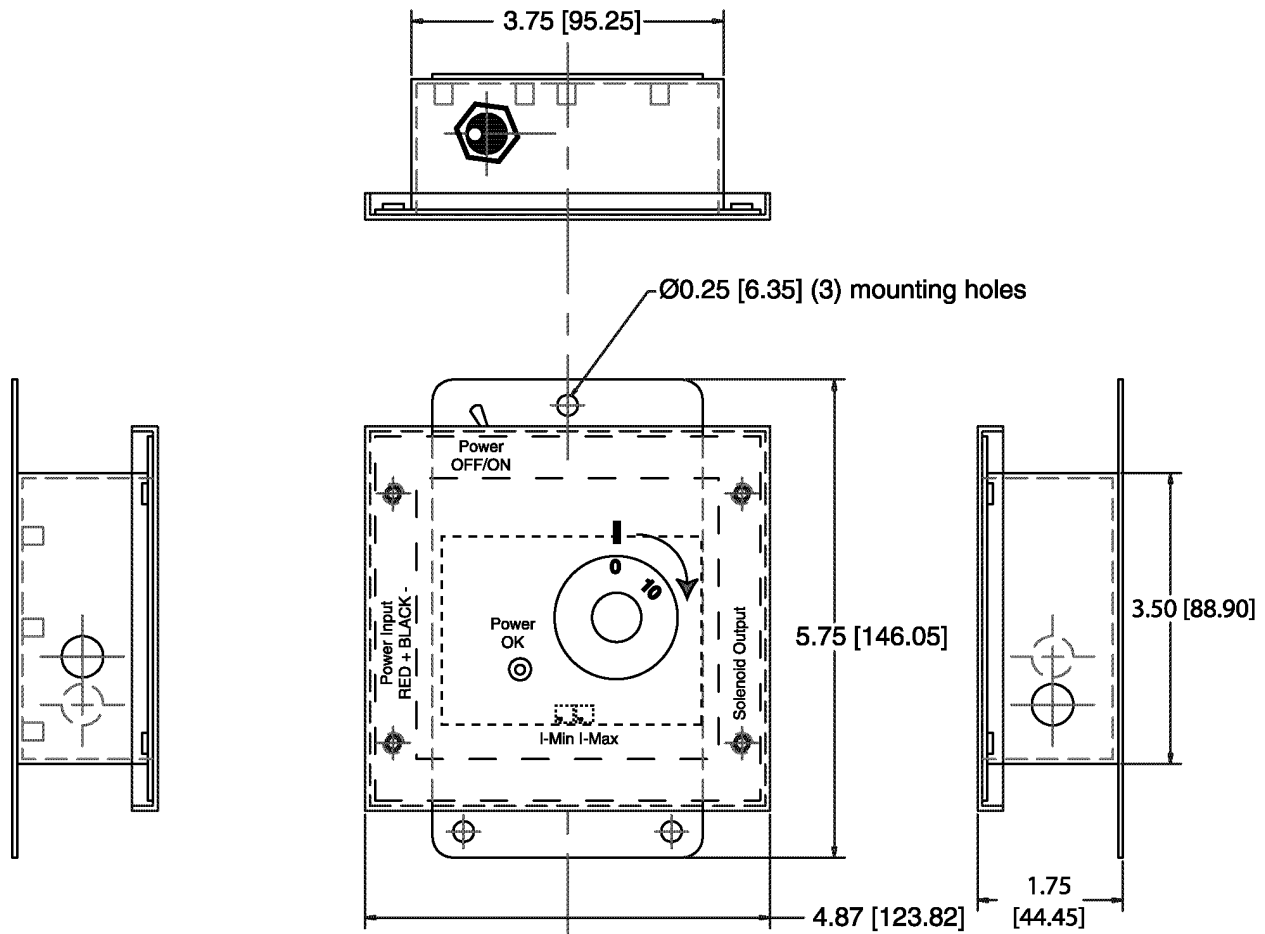
## Technical Specifications:

All specifications are typical at nominal input voltage and 25 degrees C unless otherwise specified.

<b>General Specifications</b>	
Operating Temperature	-40 to 85°C (-40 to 185°F)
Protection Rating	IP67 with box gasket
Solenoid Selection (nominal)	Solenoid selection should comply with: (V <sub>power supply</sub> – 1.5V)/I <sub>max</sub> = R coil
LED Indication	Power OK
Electrical Connections	2 meters of 18 AWG conductor cable <u>INPUT:</u> RED - Power + BLACK - Power GND <u>OUTPUT:</u> RED - Output + BLACK - Output GND
Dimensions	Powder Coated Metal Box (grommet, cabling excluded) 4.87 x 5.75 x 1.75 inches 123.82 x 146.05 x 44.45 mm (W x L x H)
Weight	2.0 lbs. (0.9 kg)
<b>Input Specifications</b>	
Power Source	12 or 24 VDC nominal (9...32 VDC) ON/OFF power switch provided
Control Input	Integral single turn potentiometer (setting 0...10 represents 0...full output – turn clockwise to increase output linearly with control input)
Reverse Voltage Protection	Inherent in design
Short Circuit Protection	Provided
<b>Output Specifications</b>	
Regulated Current Output	Proportional valves only 2 Amps (adjustable)
Dither (fixed)	180 Hz frequency 10% amplitude
Minimum Current Adjustment (10 turn trim pot)	0 to 500 mA (Factory set at 0 mA) (increases as trim pot is turned clockwise)
Maximum Current Adjustment (10 turn trim pot)	600 to 2000 mA (Factory set at 1.2A) (increases as trim pot is turned clockwise)
<b>Ordering Part Number:</b>	<b>CC-SMB-1.2A</b>

## Mounting, Connections, Power Up and Adjustments

- Mount the housing using four #10-32 bolts or screws (not supplied).
- Connect the power supply and solenoid (load). Refer to *General Specifications* for pin out.
- Press the power switch ON (green LED ON).
- Remove the housing lid to access the trim pots. Adjust the trim pots with a jeweler's screwdriver as described below. Refer to *Output Specifications* for adjustment ranges.
- Use the I-Min. trim pot to set up minimum speed with minimum control input.
- Use the I-Max. trim pot to set maximum speed with 100% of control input.
- Replace and fasten the housing lid.
- To increase manual control input, turn potentiometer knob clockwise. Fully clockwise represents a 2A output or the maximum position. This results in the quickest movement of the valve (velocity).



Dimensions: inches [mm]  
Watertight strain relief and cable assemblies are not shown.

Specifications are subject to update without notice.

Form: TD2205TD-06/04/03  
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