

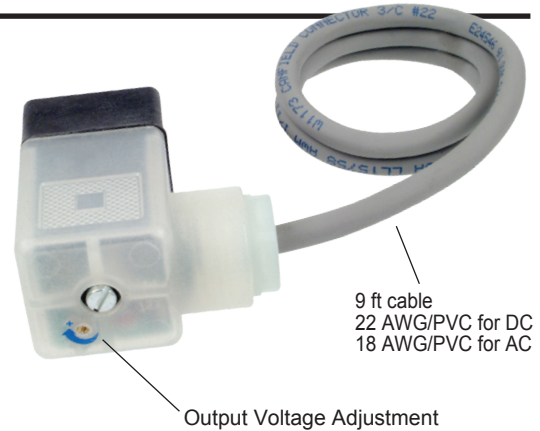
**canfield connector**  
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**SERIES D5400 (MSD)  
 MICRO SOLENOID DRIVER, POWER CONVERTER**



**General Description**

The Canfield Connector Series D5400 Micro Solenoid Driver is a NEMA 4 DIN 43650 Form "A" / ISO 4400, EN175301-803:2000 and MINI type connector with a built in electronic circuit used to induce solenoid pull-in and reduce holding current. The time proven MSD has been designed into many applications where heat buildup occurs which reduces operating efficiency and life span of solenoid valves. The MSD has two main functions: one is to induce faster or stronger than usual response times at solenoid pull-in, the second is to reduce the net wattage of the solenoid during hold-in. The MSD drives the coil with a high input voltage for a fixed time period until the coil has shifted at which time the MSD reduces the holding voltage, which saves power, and the solenoid runs cool. The MSD is often used to replace low voltage power supplies where a 24 VDC solenoid valve can then be operated by 120 VAC. The Alternating current is rectified and the duty cycle reduced so as to operate the valve at proper voltage and wattage ranges. An additional advantage can be found when the MSD drops the holding voltage, which then reduces heat and current requirements.



**Dimensional Data**

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED

*Reduce Heat • Increase Speed*

| ISO Connector | MINI & ISO Profile View | MINI Connector |
|---------------|-------------------------|----------------|
|               |                         |                |

**Features**

- Speed operator cycle rates with greater consistency
- Enable coils to be energized for extended periods without burnout
- Save energy by reducing overall coil consumption
- Reduce hold-in voltage to reduce coil heat related losses
- Enclosure NEMA 4 accepted
- MINI or DIN 43650 Form "A" / ISO 4400, EN175301-803:2000 electrical connector enclosure saves hook up space and is a generally accepted quick connect interface
- Increases coil life expectancy
- All versions have LED indicator lights
- 9 ft cable is standard on all versions

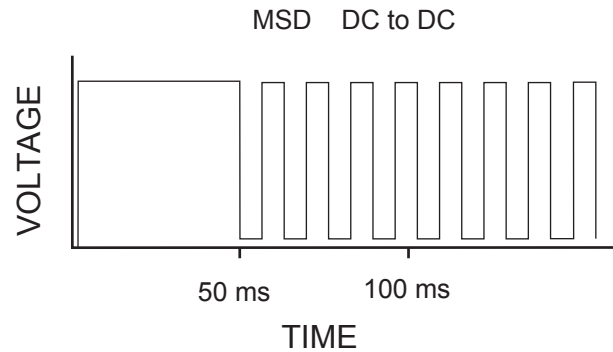
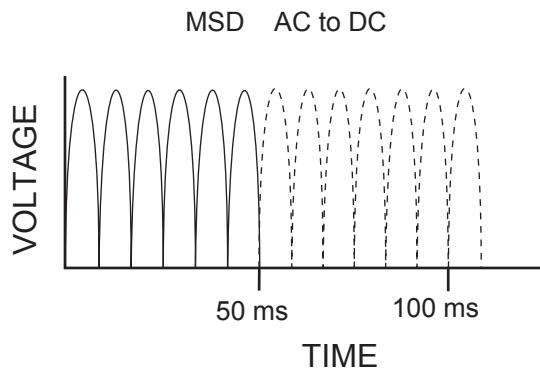
## Technical Data

- Ambient temperature range: -20° to +50° C
- Maximum input voltage tolerance: 10%
- Input voltage: AC or DC (in different versions)
- Output voltage: DC
- Peak output voltage: Supply -0.5v
- Maximum output current: 8 Amps inrush for 50 ms / 1 Amp holding
- Maximum allowable input DC ripple: 20% peak to peak
- 2 ms max. response time

## How it Works

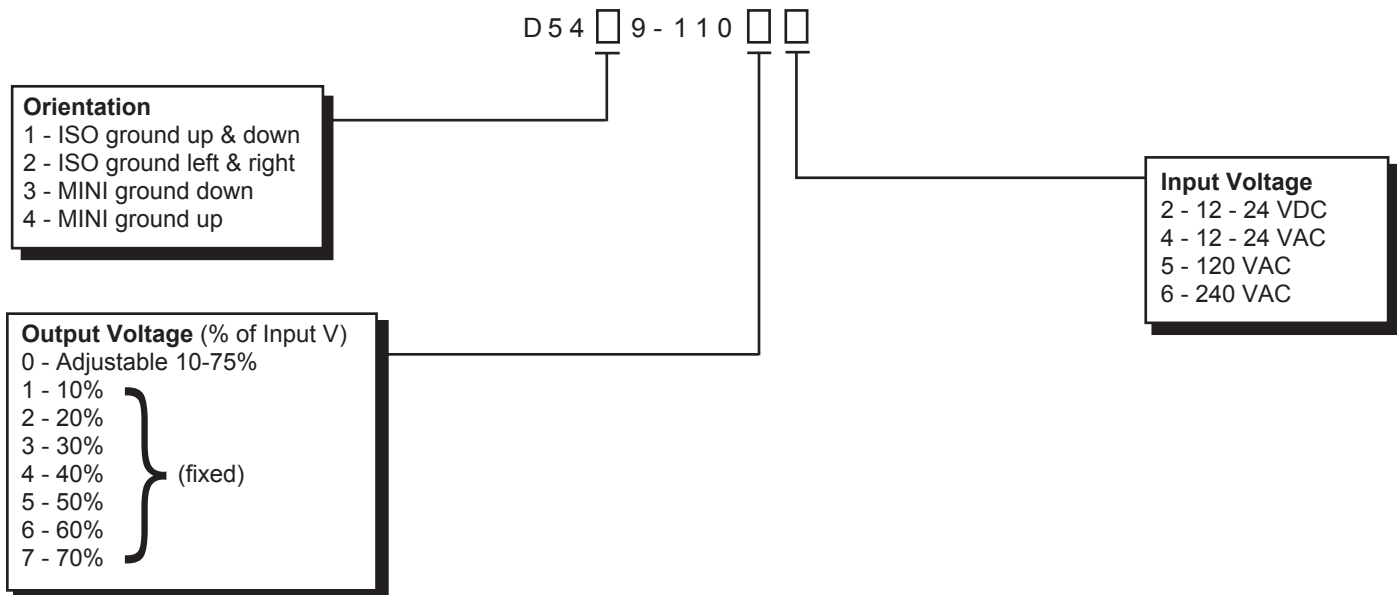
The MSD allows the input line voltage directly to the coil for a fixed single shot of 50 milliseconds. After that period, the MSD automatically pulses the input voltage to the coil. In either fixed or adjustable versions, the MSD turns the power on and off so fast that the armature does not respond. By adjusting the off period so that it is longer than the on period, the net RMS voltage decreases and wattage is decreased. Many coils can be adjusted much lower than expected due to the fact that much less energy is required for hold-in as opposed to pull-in.

## Output Waveforms



Output Frequency = 1.6 KHz

## Ordering Information



### Ordering Example:

D5439 - 11005

MINI ground down, adjustable output, 120 VAC

Each connector kit contains screw, washer and gasket assembly.