

How to Increase Your Current Capacity of 6-pin CotoMOS[®] Solid State MOSFET Relays by up to 100%

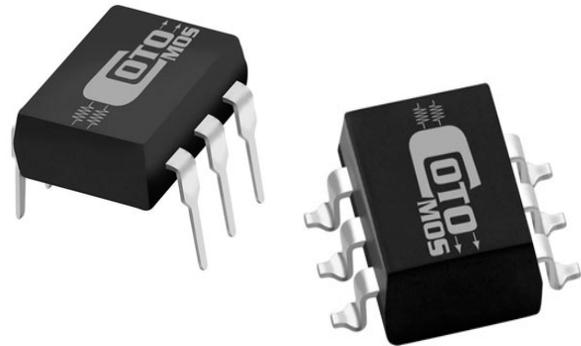
Background

All CotoMOS[®] Series 6-pin Single Channel devices have the capability of being wired for AC operation (AC Mode) or one of three different DC operating configurations (DC Mode). By configuring the relay in the DC mode, designers can improve performance by increasing switching current capability by 11% to as much as 100%.

CotoMOS[®] MOSFET

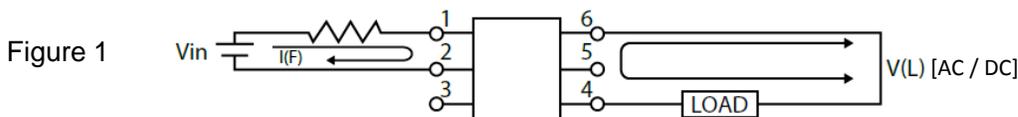
High-current 6 Pin DIP/SMD Relays include:

- CotoMOS[®] CT124/CS124 – allow from 29% to 71% increase
- CotoMOS[®] CT128/CS128 – allow from 11% to 56% increase
- CotoMOS[®] CT136/CS136 – allow from 40% to 100% increase



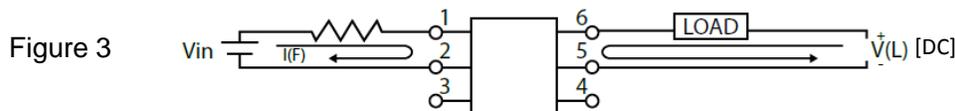
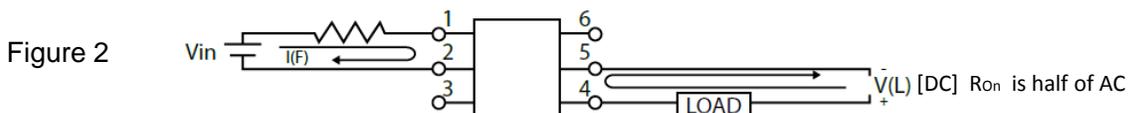
Tech Tip

AC/DC Mode [rated current]



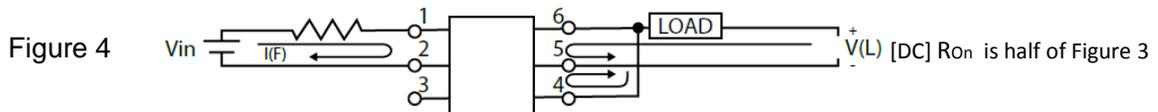
Connecting the load to be switched between pins 4 and 6 of the SSR will allow for switching of an AC or DC signal in either polarity. The operating parameters for this configuration are noted in the data pages of the specific model numbers under the “AC peak or DC” headings.

DC Mode Modified – up to 40% increase



The inherent features of the relay allow the designer to configure the relay as noted in figures 2 and 3. In each case, the (-) side of the load is connected to pin #5 and the (+) side of the load is connected to either pin #4 or pin #6. In either of these cases, the on resistance is 50% of the AC Mode and the allowable switching current increases by about 40%. The relay can also be configured as a two pole device by combining figures #2 and #3. This assumes that the low side of both loads are common to each other.

DC Mode - High Current Version – up to 100% increase



If the load to be switched is DC and the (+) polarity is always applied to the same pin, the relay can be wired in the DC Mode to enhance current carrying capability. In this configuration, the (-) side of the load is connected to pin #5 and the (+) side of the load is connected to pins 4 and 6. The operating parameters for this configuration are noted in the data pages of the specific model numbers under the “DC Mode” headings. Using this configuration, the designer can take advantage of the improved performance: the DC Mode on-resistance is 25% of the AC Mode and the switching current capability is increased as much as 100%.

Questions? E-mail us at CotoMOS@CotoRelay.com

Features of the *High Current CotoMOS® 124 / 128 / 136 Series*

Configuration: Thru-hole and Surface Mount

Contact Form: 1A

Load Voltage (Normal State): 40V / 40V / 60V Max.

Operation LED Current: 3.0mA Max.

Load Current: 3.5A / 4.5A / 2.5A Max.

On-Resistance: 0.07 Ω / 0.05 Ω / 0.14 Ω Max.

Low Off-state Leakage Current: 10 μ A / 10 μ A / 1.0 μ A Max.

I/O Breakdown Voltage: 1500Vrms Min.

Suffix – H for I/O Breakdown Voltage: 5000Vrms Min.

[Visit www.CotoRelay.com](http://www.CotoRelay.com) to download the full-line
[CotoMOS® MOSFET Relays Selection Guide](#)

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World Leader in Small Signal Switching Solutions**

Coto Technology, Inc., designs and manufactures Reed Relays, Reed Switches / Sensors and Solid State MOSFET relays for the Automatic Test Equipment, Electronics, Telecommunication, Medical, Automotive, and Security markets.



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