

# MOBILE COMMUNICATIONS DC-TO-DC CONVERTERS

Designed to power 12-volt or 24-volt equipment from a variety of vehicular battery systems, these dc-to-dc converters feature high conversion efficiency, low standby power consumption, good noise suppression, and electrical and mechanical ruggedness.

## +24 Vdc to +12 Vdc



Model 1650-24-12-15

### CHARACTERISTICS

#### Input/Output

Input voltage: 24 Vdc nominal, negative ground (20 to 30 Vdc)  
 Output voltage: 12 Vdc nominal, negative ground  
 Maximum output current: 15 amperes, continuous

#### Output-Voltage Variation

Line: Output voltage is directly proportional to input voltage  
 Load: Approximately  $\pm 0.3$  volts for the load range 0.5 to 15 amperes

#### Output-Voltage Ripple

Typically less than 10 millivolts rms, 50 millivolts peak-to-peak

#### Protection

Protected by an input power fuse against short circuits and accidental reversal of input polarity

#### Ambient Operating Temperature Range

-30°C to +60°C

#### Mechanical

Size: 1.9" h x 4.5" w x 5.5" d excluding mounting flanges and fuse holder. Add 0.7" to height for fuse holder and terminal block.  
 Weight: 1.0 lbs.  
 Mounting: Mounting flanges on base will accept #10 screws. Hole pattern is 4.0" x 5.0" on center.

## -12 Vdc to +12 Vdc

(Polarity reversing)



Model 1649-12-12-15

### CHARACTERISTICS

#### Input/Output

Input voltage: -12 Vdc nominal, positive ground (-10 to -15 Vdc)  
 Output voltage: 12 Vdc nominal, negative ground  
 Maximum output current: 15 amperes intermittent, 10 amperes continuous

#### Output-Voltage Variation

Line: Output voltage is directly proportional to input voltage  
 Load: Approximately  $\pm 0.5$  volts for the load range 0.5 to 12 amperes

#### Output-Voltage Ripple

Typically less than 10 millivolts rms, 50 millivolts peak-to-peak

#### Protection

Protected by an input power fuse against short circuits and accidental reversal of input polarity

#### Ambient Operating Temperature Range

-30°C to +60°C

#### Mechanical

Size: 1.9" h x 4.5" w x 6.9" d excluding mounting flanges and fuse holder. Add 0.7" to height for fuse holder and terminal block.  
 Weight: 1.5 lbs.  
 Mounting: Mounting flanges on base will accept #10 screws. Hole pattern is 5.0" x 5.0" on center.

## +12 Vdc to +24 Vdc



Model 1649-12-24-15

### CHARACTERISTICS

#### Input/Output

Input voltage: 12 Vdc nominal, negative ground (10 to 15 Vdc)  
 Output voltage: 24 Vdc nominal, negative ground  
 Maximum output current: 15 amperes intermittent, 10 amperes continuous

#### Output-Voltage Variation

Line: Output voltage is directly proportional to input voltage  
 Load: Approximately  $\pm 0.5$  volts for the load range 0.5 to 12 amperes

#### Output-Voltage Ripple

Typically less than 10 millivolts rms, 50 millivolts peak-to-peak

#### Protection

Protected by an input power fuse against short circuits and accidental reversal of input polarity

#### Ambient Operating Temperature Range

-30°C to +60°C

#### Mechanical

Size: 1.9" h x 4.5" w x 6.9" d excluding mounting flanges and fuse holder. Add 0.7" to height for fuse holder and terminal block.  
 Weight: 1.5 lbs.  
 Mounting: Mounting flanges on base will accept #10 screws. Hole pattern is 5.0" x 5.0" on center.

\*20% duty cycle per EIA specifications RS-152-B

Specifications subject to change without notice

For additional information about these and other Wilmore Electronics Company dc-to-dc converters, dc-to-ac inverters and uninterruptible power systems, please contact our Sales Department at (919) 732-9351 or FAX (919) 732-9359 or visit our Web site: [www.wilmoreelectronics.com](http://www.wilmoreelectronics.com).