

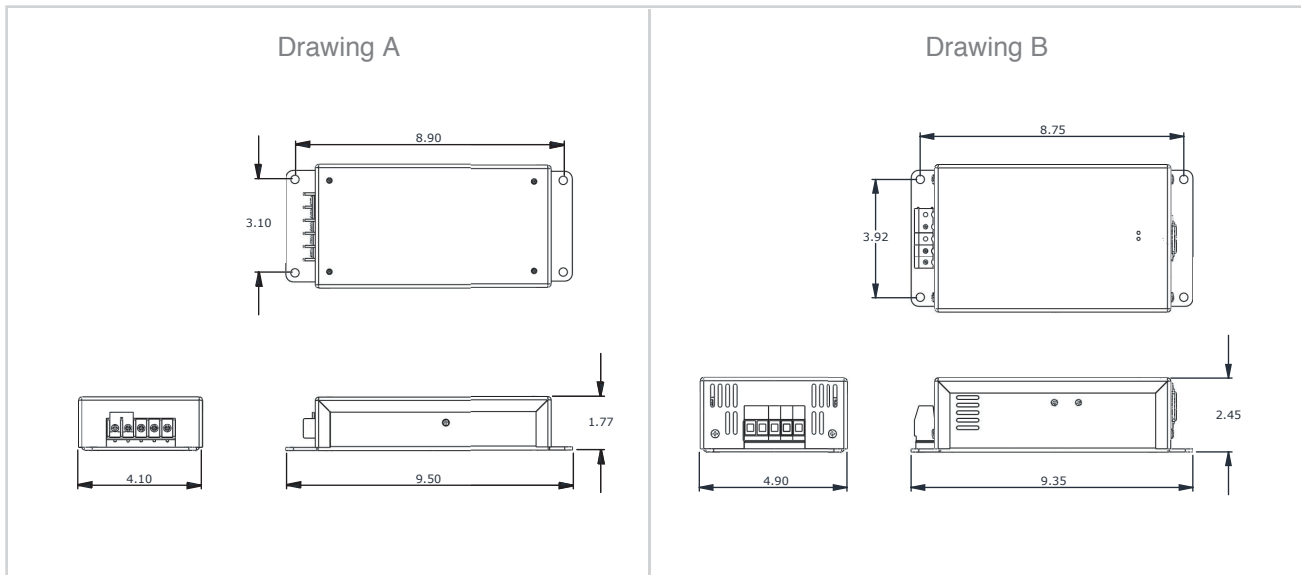
## SPECIFICATIONS

| Model Number    | Input Voltage Range | Output Voltage         | Output Current (Cont.) | Output Current (Peak) | Current Limiting    | Line Regulation | Load Regulation | Output Ripple (Max) | Efficiency (Typical) | Input Fuse | Operating Temperature Range | Dimensions | Remote Terminal Operation |
|-----------------|---------------------|------------------------|------------------------|-----------------------|---------------------|-----------------|-----------------|---------------------|----------------------|------------|-----------------------------|------------|---------------------------|
| ICT1212-12AI2   | 11-18 VDC           | 13.8 VDC<br>+/- 150 mV | 10.0 Amps              | 12.0 Amps             | 12.5 Amps<br>+/- 5% | 0.5%            | 0.5%            | 20mV RMS            | 88%                  | 20 Amp     | -20°C to +40°C              | Drawing A  | Note 1)                   |
| ICT1212-35AI2   | 11-18 VDC           | 13.8 VDC<br>+/- 150 mV | 32.0 Amps              | 35.0 Amps             | 35.5 Amps<br>+/- 5% | 0.5%            | 0.5%            | 20mV RMS            | 90%                  | 60 Amp     | -20°C to +40°C              | Drawing B  | Note 1)                   |
| ICT1224-10AI2   | 11-18 VDC           | 27.6 VDC<br>+/- 300 mV | 8.0 Amps               | 10.0 Amps             | 10.5 Amps<br>+/- 5% | 0.5%            | 0.5%            | 30mV RMS            | 90%                  | 35 Amp     | -20°C to +40°C              | Drawing A  | Note 1)                   |
| ICT1224-20AI2   | 11-18 VDC           | 27.6 VDC<br>+/- 300 mV | 17.0 Amps              | 20.0 Amps             | 20.5 Amps<br>+/- 5% | 0.5%            | 0.5%            | 30mV RMS            | 90%                  | 60 Amp     | -20°C to +40°C              | Drawing B  | Note 1)                   |
| ICT103048-5AI2  | 11-30 VDC           | 48.0 VDC<br>+/- 300 mV | 4.0 Amps               | 5.0 Amps              | 5.5 Amps<br>+/- 5%  | 0.5%            | 0.5%            | 30mV RMS            | 90%                  | 35 Amp     | -20°C to +40°C              | Drawing A  | Note 1)                   |
| ICT206012-12AI2 | 20-60 VDC           | 13.8 VDC<br>+/- 150 mV | 10.0 Amps              | 12.0 Amps             | 12.5 Amps<br>+/- 5% | 0.5%            | 0.5%            | 20mV RMS            | 88%                  | 15 Amp     | -20°C to +40°C              | Drawing A  | Note 1)                   |
| ICT206012-20AI2 | 20-60 VDC           | 13.8 VDC<br>+/- 150 mV | 17.0 Amps              | 20.0 Amps             | 20.5 Amps<br>+/- 5% | 0.5%            | 0.5%            | 20mV RMS            | 90%                  | 20 Amp     | -20°C to +40°C              | Drawing A  | Note 1)                   |
| ICT206024-10AI2 | 20-60 VDC           | 27.6 VDC<br>+/- 300 mV | 8.0 Amps               | 10.0 Amps             | 10.5 Amps<br>+/- 5% | 0.5%            | 0.5%            | 30mV RMS            | 90%                  | 20 Amp     | -20°C to +40°C              | Drawing A  | Note 1)                   |
| ICT206012-35AI2 | 20-60 VDC           | 13.8 VDC<br>+/- 150 mV | 32.0 Amps              | 35.0 Amps             | 35.5 Amps<br>+/- 5% | 0.5%            | 0.5%            | 20mV RMS            | 90%                  | 40 Amp     | -20°C to +40°C              | Drawing B  | Note 1)                   |
| ICT206024-20AI2 | 20-60 VDC           | 27.6 VDC<br>+/- 300 mV | 18.0 Amps              | 20.0 Amps             | 21 Amps<br>+/- 5%   | 0.5%            | 0.5%            | 30mV RMS            | 90%                  | 40 Amp     | -20°C to +40°C              | Drawing B  | Note 1)                   |

- The REMOTE control input requires a voltage between 10VDC and 60VDC referenced to the input ground to enable the output of the converter. Converters ship with a jumper connecting the REMOTE input and the input positive terminal, which must be removed before the control feature will function.
- The REMOTE control will disable the converter when the remote terminals connected to the INPUT NEG terminal of the converter. The converter is enabled when the REMOTE terminal is left floating.

## OUTLINE DRAWING

DIMENSIONS IN INCHES



## ICT ISOLATED SERIES 2 CONVERTERS INSTRUCTION MANUAL



INNOVATIVE CIRCUIT TECHNOLOGY LTD.

855-315-004

## ICT ISOLATED SERIES 2 CONVERTERS

ICT ISOLATED SERIES 2 DC-DC converters feature an all-new design that builds on the ICT legacy of reliability and performance. This line delivers higher efficiency and an on/off control contact to help save energy and battery life.

ISOLATED SERIES 2 converters can operate from a negative or positive ground electrical system, and are ideal for applications where complete isolation is necessary between primary and secondary circuits, as well as from the chassis.

These instructions should be read before using the product and saved for future reference.

### SETUP

- ▶ Mount converter securely.
- ▶ Do not apply power until the unit is completely wired.

#### Default Configuration From Factory

All models are output-enabled by factory default:

> For models ICT206012-35AI2, ICT206024-20AI2, ICT1212-35AI2 and ICT1224-20AI2, a jumper is installed between the two REMOTE terminals.

> For all other models, a jumper is installed between the REMOTE terminal and the INPUT POS terminal.

#### Remote On/Off Feature

To use the remote on/off feature, remove the jumper.

> For models ICT206012-35AI2, ICT206024-20AI2, ICT1212-35AI2 and ICT1224-20AI2, short/open the REMOTE CONTROL terminals to turn the unit on/off.

> For all other models apply the input voltage to the REMOTE terminal to enable the output.

- ▶ Connect load to the output.
- ▶ Connect power source to the input using appropriate fusing for the application
- ▶ For the best results, wire converter directly to the battery using heavy gauge wire.

### WARNING

- ▶ Incorrect wiring may damage both the converter and any equipment connected.
- ▶ Do not place the unit on or near any sources of heat and moisture.
- ▶ Servicing of unit should be done only at ICT factory.

### TROUBLESHOOTING

- ▶ Remove the cover to check fuse inside the unit. If blown, replace it only with a fuse of the same rating.
- ▶ Check for proper voltage at the input while converter is under load.
- ▶ Check for any erratic voltage conditions at the input that might trigger the overvoltage protection.

### NOTES

- ▶ These converters incorporate a special noise filter design. For proper filtering, the converter chassis must be grounded.
- ▶ The continuous current ratings are for 40°C ambient temperatures. Please de-rate the output current rating 2%/°C for operating from 40°C to 60°C ambient temperatures.

## LIMITED WARRANTY

ICT Limited Warranty is only intended for the benefit of the original Purchaser of this product. This Warranty is not transferable or assignable without the prior written permission of ICT. ICT's sole obligation and liability under this warranty is limited to either repairing or replacing defective products at the sole discretion of ICT. When repairing or replacing the products, ICT may use products or parts that are new, equivalent to new or re-conditioned. Parts repaired or replaced during the warranty period will be under warranty for the remainder of the warranty period.

The warranty period on ICT products purchased new from ICT is two years. The warranty period for a repaired product or part thereof is ninety (90) days or the remainder of the unexpired term of the new product warranty period, whichever is greater. Repair or replacement of a defective product or part does not extend the original warranty coverage period.

No claim will be accepted unless written notice of the claim is received by ICT in accordance with ICT's Return Material Authorization (RMA) procedure, as soon as reasonably possible after the defect is discovered. A valid product serial number must be provided with the RMA claim to prove eligibility. The RMA form is available on the ICT website at [www.ict-power.com/support/warranty-repair/](http://www.ict-power.com/support/warranty-repair/).

The Purchaser shall at their own risk and cost return the defective product to ICT's factory or designated repair center once an RMA is issued by ICT. Return of the products to the customer after repair is completed shall be prepaid by ICT unless otherwise mutually agreed between the parties. Products shipped to ICT which have incurred freight damage will not be covered by this Warranty and any repairs or replacement parts, components or products needed will be invoiced in the full current price amount and returned freight collect to Purchaser. It is the Purchaser's responsibility to check the product upon receipt for any damage during shipping and to contact the carrier or shipper regarding such damage. Product that is returned as defective, which is determined to operate within published specifications will be returned to the Purchaser freight collect.

This Warranty will be void if the product has been subjected to misuse, neglect, accident, exposure to environmental conditions not conforming to the products' limits of operation, improper installation or maintenance, improper use of an electrical source, defects caused by sharp items or by impact pressure, a force majeure event, has been modified or repaired by anyone other than ICT or its authorized representative, has been subjected to unreasonable physical, thermal or electrical stress, improper maintenance, or causes external to the unit including but not limited to general environmental conditions such as rust, corrosive atmospheres, sustained temperatures outside the specified operating range of the equipment, exposure to power surges and/or electrical surges, improper grounding, mould or dust, animal or insect damage, water damage or immersion in liquid of any kind.

ICT does not control the installation and use of any ICT product. Accordingly, it is understood this does not constitute a warranty of performance or a warranty of fitness for a particular purpose.



**INNOVATIVE CIRCUIT TECHNOLOGY LTD.**

26921 GLOUCESTER WAY LANGLEY, BRITISH COLUMBIA, CANADA V4W 3Y3

T 604.856.6303 F 604.856.6365 [www.ict-power.com](http://www.ict-power.com)