



## CS-11, 12, 13, 14 DC to DC Switched Mode Converters

The CS 11-14 series of DC-DC converters are ideal for DC conversion in small to mid-sized communications applications.

**Low cost expansion solution** CS converters expand your load capabilities without the accompanying costs of adding a new DC power system. These converters provide an excellent source of power for loads requiring an alternative voltage input, polarity reversal or ground isolation.

**Field-proven operation** CS converters utilize the same durable monolithic design and advanced switched mode technology as the Argus RST rectifier series. Years of field experience have enabled Argus engineers to create a reliable, highly efficient, low noise converter.

**Comprehensive features** CS converters offer a wide range of standard and optional features, including alternate polarities for input or output grounding, 19/ 23" rack mounting and combination voltmeter/ammeter. The converters are designed to operate in parallel to provide load sharing and redundancy for critical applications.

**High quality products backed by a solid warranty** In addition to being ISO 9002 registered, Argus' manufacturing center employs a rigorous quality control program to ensure all CS units meet the highest quality standards. Each product is designed with premium electronic components and is backed by a comprehensive factory parts and service warranty.

Available in 24 and 48 VDC inputs and 12, 24 and 48 VDC outputs

Maximum output of 520W

Isolated input and output

Equipped with output paralleling diode

Features efficient, natural convection cooled design

**Complete protection** Each converter is supplied with comprehensive features that protect the load and the unit from deficiencies in the input supply and environment. The input voltage shutdown protects the unit from voltages outside the operating range, while the output current is limited to 105% of the rated current. Should the load attempt to draw additional current, the converter automatically decreases the output voltage to keep the current at 105%. In the unlikely event that the unit is not able to properly power the load, the front panel converter fail lamp will illuminate and the remote alarm relay will be extended. These units have temperature protection in case of high ambient temperature or interruption of the convection cooling air path. This protection feature automatically decreases the output current to keep the unit from exceeding its operating temperature limit.



## CS Series DC-DC Converters

Model #	Input volts (DC)	Output volts (DC)	Max. output current (A)	Part #
CS11	20-30	44-52	10	012-011-20
CS12	40-60	22-26	20	012-012-20
CS13	21-30	11-14	20	012-013-20
CS14	42-60	11-14	20	012-014-20

### Indicators/

Alarms: Power on LED  
Over voltage protection LED  
  
Converter fail LED  
Voltage test points  
Analog output ammeter/voltmeter (optional)  
Current test points (optional)  
Converter fail alarm†

Adjustments: Output voltage  
Output slope (load sharing)

Cooling: Natural convection (front to top)

† Form C contacts

## Specifications

### Electrical

Efficiency: >88% for 48 and 24 volt output units  
>80% for 12 volt output units

Output regulation: ±0.1% line and load (static)  
<1% deviation for 50 to 100% load step (dynamic)

Response time: 2ms to 0.1% of output

Temperature coefficient: <100ppm /°C

Noise  
Voiceband: <22 dBnC  
Wideband: <10mV RMS (10kHz to 10MHz)  
<150mV pk to pk (10kHz to 100MHz)

Acoustic noise: 45dBA at 1m (3 ft)

Soft start: 3 to 5 seconds

### Mechanical

Mounting : All units are equipped with reversible rack brackets for 19" or 23" center or flush rack mounting. Consult factory for wall mount brackets.

Dimensions: 89 H x 432 W x 305 D mm (inches) (3.5" H x 17" W x 12" D)

Weight: 6.1 kg (13.5 lb.)

Connections  
Input: 1/4" studs  
Output: Terminal block 1.5mm<sup>2</sup> to 6mm<sup>2</sup> (#16 to #10 AWG)

Alarms: Terminal block 0.5mm<sup>2</sup> to 1.5mm<sup>2</sup> (#20 to #16 AWG)

### Environmental

Temperature: 0° to 50°C (32° to 122°F)

Humidity: 0 to 95% R.H. non-condensing

Elevation: -500 to 2800m (-1640 to 9186 ft)

### Features

Protection: Input breaker  
Input low voltage shutdown  
Output over voltage protection  
Output current limit  
Output series diode  
Over temperature protection

## Ordering Information

To order, please specify the part number and list options required.

List Option	Description
0*	Basic unit
19/23*	19" or 23" rack mounting (1 3/4" spacing)
20/24	19" or 23" rack mounting (1" spacing)
81	Positive ground input
82	Negative ground input
85**	Positive ground output
86**	Negative ground output
87*	Voltmeter/ammeter
88	Current test points
97***	Low Input Noise Operation

\* Default option on all models.

\*\* Available for CS12 and CS14 only

\*\*\* Available for CS13 and CS14 only.

Due to continuing product improvements, Argus reserves the right to change specifications without notice.

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