

Power

CES48

Remote Feeding Central Up Converter



CES48/12L320R Central energy system

- > RFT-C operation mode
- > Up to 52 output lines
- > Full front access
- > Redundant DC input
- > 900W output power capability
- > Start-up protection system
- > Modular, hot pluggable module

The Central Energy System is a solution to feed remote locations from a power source located in a central location (hub) over existing or new copper networks installed with the regulatory constraints applicable to telecom networks. The design based on the IEC (EN/UL) 60950/21 features the installation of 52 insulated and independent DC/DC converters. The system can be connected to 48V or 60V redundant sources to provide superior availability of the services at remote locations.

The standard supports two modes for power transmission: RFT-C and RFT-V. The CES48/xxL320 is designed around the RFT-C mode to offer full safety in any conditions of operation and distance from the central office equipment. Furthermore, the RFT-C mode is easy to dimension and implement. The current limitation avoids potential overheating of cables.

The remote feeding solution from Alpha Technologies results from years of experience and work with leading network operators. Beyond the requirements of the standard, each line is protected to bring the maximum current capability well below the safety limits in case of short circuits line to line or line to ground. Feeding power at 320V in normal operation, the voltage of each line will go independently below 50V if the line is opened.

Remote feeding solution offers numerous advantages versus traditional AC/DC conversion for remote locations. If the most obvious advantage is to support high availability of signals while avoiding the multiplication of batteries in the field, it also eases and supports faster network deployment. In many applications it finally brings significant measurable cost savings compared to traditional solutions.

The system is designed primarily to be installed in central office equipment, but can also be installed as one component of a delocalized power hub serving multiple small remote nodes. Designed and manufactured with state-of-the-art technologies and processes, electronic cards are hot pluggable and very easy to install and replace without any specific tools or special care.

CES48/12L320R Remote Feeding Central Up Converter

Part Number: CER48/xxL320RFW-xx: remote feeding central energy system

Electrical

Input Voltage:-39,6 to -72Vdc

Input Current
(per module):2,2A @ 39,6Vdc
1,62 @ 54Vdc
(Full 14 cards system):31A @ 39,6Vdc
19A @ 54Vdc

Number of input:.....2 (protected by breakers)

Efficiency*:85% typical @ 54Vdc
* including start-up protection system

Power output:
(per line): 18,6W
(Full 14 cards system):890W

Current output
(per line):58mA @ 320Vdc
(Full 14 cards system):2,78A @ 320Vdc

Mechanical

Dimensions:
mm:..... 183H x 448W x 250D
inches:.....7,2H x 17,6W x 9,4D

Mounting:..... 19" or ETSI*
* Additional brackets - see Accessories

Weight:
Empty shelf:.....4,1kg (9,04lb)
Up converter module:.....0,23kg (0,51lb)

Connections

DC output:
4 Positions:Female 8 poles connector

DC Input:Female 2 poles connector (Molex Mini-Fit)

Alarms:Female 3 poles connector (Mate-N-Lok)

Environmental

Temperature:
Standard:.....-5 to 45°C (23 to 113°F)
Storage:.....-40 to 85°C (-40 to 185°F)

Humidity:
Operating.....5 to 95% RH non-condensing
Storage:5 to 100% RH non-condensing

Elevation:.....Up to 2500m (8200ft)

Cooling:Fan cooled (with fan tray)

Related Components

Modules:
CEC4L320-3A:DC/DC up converter card for 4 twisted pairs
with connector
CEC4L320:DC/DC up converter card for 4 twisted pairs

Supervisory:
9413 060 00041:Monitoring and control unit with Comp@s
9413 044 89421:Central monitoring card for up to 4 sites

Fan trays:
CO4489/50.....Rear fan tray
CO4489/51Fan control card
CO4489/52.....Rear fan kit (fan tray + fan control card)
CO4489/53.....Front fan tray
CO4489/54.....Front fan kit (fan tray + fan control card)

Accessories:
4004 117 81291:Blind panel for central unit
5304 500 00711:Blind panel for up converter card
5304 500 00721:50 mating connectors kit for up converter card
5304 500 00731:System connector kit (input and alarms
cables with mating connector)
5304 500 00961:50 mating connectors kit for monitoring unit
5304 500 00691:Mounting brackets for ETSI frame
5304 500 35001:Assembled cable kit (28 pairs cable with
mating connectors for 7 cards)
5304 500 36001:Alarm cable
5304 500 37001:Input cable

Standards

Safety:CE marked
EN60950

Environment:RoHS compliant
IEC 60068-2-27

EMC:ETSI EN 300 386