

# Unity DC Power System with V-HE

Versatile and powerful solution for any application. The combination of high efficiency, power density and reliability makes the Unity Power System a product family that truly stands out and provides unparalleled network availability. The versatility of the Unity Power System in combination with advanced control and monitoring means that it can be used in a wide variety of DC Telecom applications.



## Unity Power System DC Power Supply System

Doc 370153.DS3 – rev1.1

### APPLICATIONS

#### WIRELESS, FIBER AND FIXED LINE COMMUNICATION

Today's communications demand state of the art, efficient and compact DC power systems. Unity Power Systems deliver an industry leading power density, efficiency and superb reliability at lowest lifetime cost.

#### BROADBAND AND NETWORK ACCESS

Increasing network speed demands flexible and expandable DC power solutions. The V-HE rectifiers combined with Smartpack S controller are your key building blocks for future needs.

#### SMALL AND LARGE

Due to the high power density, cost competitive design and a highly flexible system communication interface, V Series HE rectifiers are used in system solutions up to 25 kW.

### PRODUCT DESCRIPTION

#### MORE ROOM FOR REVENUE EQUIPMENT

The 4U distribution is designed to meet the demand for compact and flexible DC power solutions. It is based on building blocks and has a variety of configurations depending on battery and load needs. Pluggable breakers ensure easy configurability as well as "in field" placement.

The power system contains a Smartpack S, which has all the functionality required in present and future applications.

Powered by V Series HE rectifier modules, efficiency exceeds 96%.

### KEY FEATURES

- **COMPACT DESIGN**  
Small overall dimensions are ideal for both rack and cabinet solutions.
- **DIGITAL CONTROLLERS**  
The Smartpack S digital controller system provides comprehensive monitoring and regulation by utilizing a variety of specialized data collection devices.
- **HEAT MANAGEMENT**  
V Series HE modules feature front-to-back airflow and chassis-integrated heat-sinks, supplementing high-efficiency energy conversion with excellent heat management.
- **COST EFFICIENCY**  
A true plug-and-play system, the Unity power system reduces both time-to-install and overall costs.

## INPUT SPECIFICATIONS

Rated Input Voltage Range	100 – 240 VAC <sup>1</sup> <small><sup>1</sup> See module datasheet for further details.</small>
Input Connections (Rear Access)	Terminal Block <sup>2</sup> MATE-N-LOK™ <sup>3</sup> <small><sup>2</sup> Default configuration is one rectifier per input; jumper straps sold separately for two inputs per shelf, or for one input for shelf. <sup>3</sup> Input cables sold separately; options include one rectifier per input or one cable with two MATE-N-LOK connectors to power two rectifiers per line cord or one cable with three MATE-N-LOK connectors to power three rectifiers per line cord (cannot be used with 2500W modules).</small>

## OUTPUT SPECIFICATIONS

Rated Voltage	0 – 56 V
Rated Current	480A

## PHYSICAL ATTRIBUTES

Nominal rack sizes	19" / 23"
Depth	14.0"
Height	6 RU to 12 RU, depending on number of distributions and rectifier shelves.

## DC DISTRIBUTION OPTIONS (VARY BY SYSTEM)

Distribution configurations* <small>*For additional details see the Unity Product Guide.</small>	Load breaker, bulk load, battery breaker, and bulk battery options available
Available breaker positions	19" systems – 21 single-pole breaker positions per panel,* ¼-20 studs, ⅝" center-to-center 23" systems – 26 single-pole breaker positions per panel,* ¼-20 studs, ⅝" center-to-center <small>*Up to two panels</small>
Bulk battery connections	19" – Five (5) ¼-20 nuts, ⅝" center-to-center and five (5) ⅜-16 studs, 1" center-to-center 23" – Eight (8) ¼-20 nuts, ⅝" center-to-center and seven (7) ⅜-16 studs, 1" center-to-center
Low voltage disconnect options	None or battery (LVBD)
Breaker sizes	Single pole, 0 – 100A Double pole, 125 –200A Triple pole, 250A

## CONTROLLER

Monitoring Unit	Smartpack S
Inputs/Outputs	6 configurable inputs* : temperature (battery or ambient), voltage, normally open, normally closed 6 outputs: dry contact (Normally Open/Normally Closed) <small>* See Smartpack S Panel Mount datasheet for more details (Doc. No. 242100.415.DS3).</small>

## MODULES (SOLD SEPARATELY)

V0500A1-HE	V Series 48V, 560W HE Rectifier
V0750A1-HE	V Series 48V, 840W HE Rectifier
V1000A1-HE	V Series 48V, 1120W HE Rectifier
V1250A1-HE	V Series 48V, 1400W HE Rectifier
V1500A1-HE	V Series 48V, 1680W HE Rectifier
V2000A1-HE	V Series 48V, 2240W HE Rectifier
V2500A1-HE	V Series 48V, 2800W HE Rectifier

## OTHER SPECIFICATIONS

Operating temperature	-40 to +65°C (-40 to +149°F)
Storage temperature	-40 to +70°C (-40 to +158°F)

## APPLICABLE STANDARDS

Electrical Safety	UL/CSA 60950-1, 2 <sup>nd</sup> edition IEC 60950-1, 2 <sup>nd</sup> edition
EMI/EMC	GR-1089-CORE
Environment	GR-63-CORE, NEBS LEVEL 3