



# OPUS C DC Power Systems

## VIDI Controller product family

VIDI+ System Controller  
VIDI+ I/O System Controller  
UIF, User interface display

VIDI-LVD Low Voltage Disconnect  
VIDI-BM Battery Monitoring  
VIDI-SAM Serial Adapter Module



POWER  
GENERATION &  
DISTRIBUTION



PROCESS  
INDUSTRY



DEFENCE &  
SECURITY



TELECOM

## Product Description

VIDI Controller Platform is for OPUS DC Power Systems. It provides intelligent and easy user interface and comprehensive set of features for DC Power System management.

VIDI architecture is based on PowerCAN bus communication and a modular design, which enables excellent system expandability, selectable additional features and flexibility in the design.

## Features

- Universal controller for all 24 VDC to 220 VDC OPUS DC Power Systems
- Modular structure for optimal performance and design flexibility
- Sophisticated User Interface. User friendly local and remote operation
- Comprehensive features and alarms
- Numerous user configurable alarms and settings
- Full remote monitoring and control with WEB interface via RS232, modem or TCP/IP
- SNMP v3 TRAP, GET, SET
- Large event log file with real time clock time stamps



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# Technical Specifications, Advanced Controller Modules

Electrical		VIDI+ , VIDI+ I/O	
Power Input voltage range		18 – 280 VDC	
Communication Ports		VIDI+ , VIDI+ I/O	
LAN		10/100 Ethernet, RJ-45 connector	
Serial communication		RS-232, 9600-115200 kbps	
Monitoring and Control		User Interface Module	
Local Monitoring and Control			
Local Display		128 x 64 Graphical LCD with Backlight	
Local Operation		Dial button, Info button and cancel button	
Local LED indication		3 color system Status LED	
Info		Dedicated button to open info text	
Default view		Charge mode, system voltage, number of active alarms	
Languages		English, Russian, Finnish, Custom	
Monitoring and Control		VIDI+ , VIDI+ I/O	
Remote Monitoring and Control			
Remote PC connection		Connect via LAN	
Local PC connection		Connect directly with serial port RS-232 or LAN port	
Alarms		E-mail or SNMP traps	
Remote user interface		Web interface, 4 access levels	
Remote terminal		Text mode interface over Telnet/SSH	
Supported Protocols		HTTP, HTTPS, Telnet, SSH, SMTP, SNMPv2, SNMPv3 NTP, DHCP, Modbus TCP/IP	
Languages		English, Russian, Finnish	
System Features		VIDI+ , VIDI+ I/O	
Measurements		System Output Voltage Measurement AC input voltage, individual rectifiers DC output voltage, individual rectifiers DC output current, individual rectifiers Temperature, individual rectifiers DC output current, total rectifiers Battery current Load current	
		PowerCAN-Bus interface to MRC rectifiers and Smart Peripheral Modules	
Functions		Energy Save Mode, with MRC rectifiers	
		Rectifier runtime counter	
		Alarm configuration	
		System parameters upload and download in XML format	
		Real Time Clock with Battery Backup	
		Plug-and-Play Support, Automatic Module Configuration	
		Inventory Management for Installed Modules	
		Site Information text input	
Connections		VIDI+ , VIDI+ I/O	
Battery or load LVD		1 pcs Contactor Coil Driver, Aux contact	
Connections		VIDI+	VIDI+ I/O
Alarm/Temperature Inputs		4	12
Alarm Relay Outputs		4	12
Earth fault detection		0	1
Modules		VIDI+ , VIDI+ I/O	
Supported max number of all modules		48	



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<b>Limitations per module types</b>		<b>VIDI+ , VIDI+ I/O</b>
Local User Interface panel		1
Rectifiers, supported max amount		47
VIDI-LVD Low voltage disconnection modules. Supported max amount.		8
VIDI-BM Battery management modules. Supported max amount.		16
VIDI-SAM modules. Supported max amount.		1

<b>Battery Management features</b>		<b>VIDI+ , VIDI+ I/O</b>
<b>Measurements</b>		
Battery tests		Manual battery test Periodic battery test Natural battery tests, starts on mains fault
Charge modes		Float charge Manual boost charge Periodic boost charge Automatic boost charge Temperature compensation in all charge modes
Functions		Charge current limiting Discharged Ah-counter Time window for battery tests

<b>Alarms</b>		<b>VIDI+ , VIDI+ I/O</b>
Configurable		Mains Fault Phase Fault Rectifier Low/Over voltage System Low/Over voltage Rectifier overcurrent Rectifier Over Temperature System Over Temperature High Battery Temperature Low Battery Temperature Rectifier Fault Module Communication Error/Module Fault Load fuse fault Battery LVD or Load LVD Contactor failure Battery Temperature Sensor Fault Rectifiers No Redundancy Alarms/Rectifiers Over Load, Configurable limits Load Disconnect Warning, Configurable limits Load Disconnect Battery Fuse Fault Battery Discharge Test Fault Boost Charge Fault Battery Disconnect Warning, Configurable limit

<b>Alarms</b>		<b>VIDI+ I/O</b>
Configurable		Earth fault detection

<b>Log data</b>		<b>VIDI+ , VIDI+ I/O</b>
		Alarm log: 512 last alarms, Event log: 100 last events, Battery Temperature Log Graph, System Power log, 12 Months



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Connectors	VIDI+ , VIDI+ I/O
Alarm/Temperature input	Screw terminals
Internal PowerCAN-Bus connector	User interface Module RJ11 Other PowerCAN connectors RJ45
PowerCAN Termination Plug	RJ45 Plug

## Technical Specifications VIDI-LVD Low Voltage Disconnect Module

Electrical	VIDI-LVD
Power Input voltage range	18 – 280 VDC
Communication	PowerCAN connection to VIDI+ Controller
Coil Contact Driver	Maximum allowed continuous coil current: 2A
Coil Driver output voltage	System voltage
Aux contact for contactor	Indication of the actual core position of the latched contactor
System voltage measurement range	0 – 280 VDC
Current Sense	1 pc shunt voltage measurement, 60 mV
Alarm inputs	2 pcs configurable alarm/temperature inputs
Status indication	LED Green/Red
Mechanical data	Dimensions (H xW x D) : 75 x 160 x 27 mm Weight : 320 g Protection class IP20

## Technical Specifications VIDI-BM Battery Monitoring Module

Electrical	VIDI-BM
Power Input voltage range	18 – 280 VDC
Communication	PowerCAN connection to VIDI+ Controller
Block Voltage Measurement	Inputs: 4 pcs 12V nominal, Accuracy < 20mV, polarity protection
System voltage measurement range	0 – 280 VDC
Current Sense	1 pc shunt voltage measurement, 60 mV
Alarm inputs	2 pcs configurable alarm/temperature inputs
Status indication	LED Green/Red
Mechanical data	Dimensions (H xW x D) : 75 x 160 x 27 mm Weight : 320 g Protection class IP20

## Technical Specifications VIDI-SAM Serial Adapter Module

Electrical	VIDI-SAM
Power Input voltage range	18 – 280 VDC
Communication	PowerCAN connection to VIDI+ Controller
Auxiliary communications	RS-232, RS-485, CAN
System voltage measurement range	0 – 280 VDC
Current Sense	1 pc shunt voltage measurement
Alarm inputs	2 pcs configurable alarm/temperature inputs
Mechanical data	Dimensions (H xW x D) : 75 x 160 x 27 mm Weight : 320 g Protection class IP20



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## Technical Specifications, common

Environmental		VIDI+, VIDI+ I/O, VIDI-LVD, VIDI-BM, VIDI-SAM
Cooling	Natural convection	
Acoustic noise	< 40 dB	
Operating temperature	-20 / +50 °C	
Storage temperature	-40 / +70 °C	
Humidity	95 % (relative humidity, non-condensing)	
Altitude (max)	2000 m above sea level	

Applicable Standards	
EMC	Emissions: EN/IEC 61000-6-4 Immunity: EN/IEC61000-6-2 Harmonic currents: EN / IEC 61000-3-2 Voltage fluctuations & flicker: EN / IEC 61000-3-3 * Measured as a part of Opus C-series rack system
Safety	IEC / EN 60950-1 * Tested as a part of Opus C-series rack system

## Order Information

System controller kits	
Description	Order number
VIDI+ controller kit. Includes system controller module and cable set	8320X0004311
VIDI+ I/O controller kit. Includes system controller module and cable set	8320X0004312
Auxiliary controller kits	
Description	Order number
VIDI BM kit. Includes Battery monitoring module and cable set	9040X0002338
VIDI LVD kit. Includes Low Voltage Disconnect controller module and cable set.	8320X0003275
VIDI SAM kit. Includes serial adapter module and cable set. Used with OPUS EIM and DUAL inverters.	8320X0004402



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