



# VIDI+ SYSTEM CONTROLLER AND VIDI-LVD, VIDI-BM, VIDI-SAM AUXILIARY CONTROLLERS

for OPUS DC Power Systems

## 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.

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- 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
  - Large event log file with real time clock time stamps

**TECHNICAL SPECIFICATIONS, ADVANCED CONTROLLER MODULES**

<b>ELECTRICAL</b>	VIDI+ , VIDI+ I/O
Power Input voltage range	18 - 280 VDC
<b>COMMUNICATION PORTS</b>	VIDI+ , VIDI+ I/O
<b>LAN</b>	10/100 Ethernet, RJ-45 connector
Serial communication	RS-232, 9600-115200 kbps
<b>MONITORING AND CONTROL LOCAL MONITORING AND CONTROL</b>	<b>USER INTERFACE MODULE</b>
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



TECHNICAL SPECIFICATIONS, ADVANCED CONTROLLER MODULES

Info	Dedicated button to open info text	
Default view	Charge mode, system voltage, number of active alarms	
Languages	English, Russian, Finnish	
MONITORING AND CONTROL REMOTE MONITORING AND CONTROL	VIDI+ , VIDI+ I/O	
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	
Functions	PowerCAN-Bus interface to MRC rectifiers and Smart Peripheral Modules	
	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
Battery or load LVD	4	12
Battery or load LVD	0	1
MODULES	VIDI+ , VIDI+ I/O	
Supported max number of all modules	48	



TECHNICAL SPECIFICATIONS, ADVANCED CONTROLLER MODULES

LIMITATIONS PER MODULE TYPES	VIDI+ , VIDI+ I/O
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
BATTERY MANAGEMENT FEATURES MEASUREMENTS	VIDI+ , VIDI+ I/O
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
ALARMS	VIDI+ , VIDI+ I/O
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
ALARMS	VIDI+ I/O
Configurable	Earth fault detection
LOG DATA	VIDI+ , VIDI+ I/O
Configurable	Alarm log: 512 last alarms, Event log: 100 last events, Battery Temperature Log Graph, System Power log, 12 Months



TECHNICAL SPECIFICATIONS, ADVANCED CONTROLLER MODULES	MECHANICAL	VIDI+ , VIDI+ I/O	USER INTERFACE MODULE
	Dimensions (HxWxD)	105 x 40 x 205 mm	80 x 80 x 20 mm
	Enclosure	IP20 / IEC 529	IP43 / IEC 529
	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

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