



OPUS C DC POWER SYSTEMS IN 2066 CABINETS

OPUS C 24-6.6, OPUS C 48-9.6 , OPUS C 60-9.6, OPUS C 110-9.6, OPUS C 220-9.6
 OPUS C 24-13.2, OPUS C 48-19.2, OPUS C 60-19.2, OPUS C 110-19.2, OPUS C 220-19.2



PRODUCT DESCRIPTION

OPUS C DC power systems are robust, free convection cooled, N+1 redundant backup power solutions for critical infrastructure applications such as transmission and distribution substations, process industries and special communications.

OPUS C DC power systems consist of MRC-rectifiers, VIDI+ controllers, Connections for mains and battery and wide variety of load distribution.

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- ### FEATURES
- Convection cooling
 - Models for 24, 48, 60, 110, 125, 220 VDC
 - Max 19.2 kW output power
 - N+1 redundancy
 - Plus or Minus Grounded or Floating
 - Battery connection: 1 string with full current: MCB or MCCB
 - Load Distribution Modules as options: 2-pole or 1-pole MCB, NH000/NH00, NH01, Diazed
 - Options: Battery LVD, Load LVD, extra battery connections, Temperature sensors, IP21, bottom entry cabling

TECHNICAL SPECIFICATIONS, CABINETS

GENERAL CONSTRUCTION	
Cooling	Natural convection
Protection	IP 20 Option IP21
Controller user interface	Display and local control in front door
Cabling	From top, Option bottom entry
Colour	Cabinet RAL 7037 Door RAL 7035
Dimensions	Height 2000 mm Width 600 mm Depth 600 mm



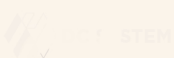
TECHNICAL SPECIFICATIONS, CABINETS

ENVIRONMENT AND STANDARDS					
Operating temperature	-5°C ... +45°C				
Humidity max	95% relative humidity, non-condensing				
Altitude max	2000 m above sea level				
Safety	IEC/EN 60950-1				
EMC	Emissions: IEC/EN 61000-6-4 Immunity: IEC/EN 61000-6-2 Harmonic currents IEC/EN 61000-3-2 Voltage fluctuation&flicker: IEC/EN 61000-3-3				
INPUT	OPUS C 24-	OPUS C 48-	OPUS C 60-	OPUS C 110-	OPUS C 220-
AC-connection	3W + N + PE				
Nominal voltage	230 / 400 VAC				
Range, full	180 - 275 VAC				
Range, reduced	140 - 180 VAC				
Frequency	45 to 65 Hz				
Internal protection	16 A MCB / rectifier module				
Mains terminal	Terminal blocks 10 mm ²				
	OPUS C 24-6.6	OPUS C 48-9.6	OPUS C 60-9.6	OPUS C 110-9.6	OPUS C 220-9.6
Nominal current	10.2 A	15.4 A			
Maximum current	13.8 A	19.4 A			
Inrush current per rectifier	14.7 A	18 A			
Main switch	40 A				
Recommended mains fuse	3 x 25 A				
	OPUS C 24-13.2	OPUS C 48-19.2	OPUS C 60-19.2	OPUS C 110-19.2	OPUS C 220-19.2
Nominal current	2 x 10.2 A	2 x 15.4 A			
Maximum current	2 x 13.8 A	2 x 19.4 A			
Inrush current per rectifier	14.7 A	18 A			
Main switch	2 x 40 A				
Recommended mains fuse	2 x (3 x 25 A)				

OPUS C SYSTEM CABINETS

TECHNICAL SPECIFICATIONS, CABINETS

OUTPUT	OPUS C 24-6.6	OPUS C 48-9.6	OPUS C 60-9.6	OPUS C 110-9.6	OPUS C 220-9.6
Grounding	+ , - or floating	+ or floating	+ or floating	floating	floating
Nominal voltage	24 VDC	48 VDC	60 VDC	110 VDC	220 VDC
Voltage range	21 -31 VDC	42 - 58 VDC	51 - 72 VDC	97 - 132 VDC	189 - 265 VDC
Ripple noise	< 100 mVp-p	< 100 mVp-p	< 100 mVp-p	< 100 mVp-p	< 100 mVp-p
Rectifiers	Max 6	Max 6	Max 6	Max 6	Max 6
Maximum current	275A @ 24V	197A @ 48V	161A @ 60V	87A @ 110V	43A @ 220V
Output current	240A @ 27.5V	177A @ 54.5V	141A @ 68.1V	78A @ 123.6V	39A @ 220V
Power max.	6.6 kW	9.6 kW	9.6 kW	9.6 kW	9.6 kW
Redundant power	5.5 kW	8.0 kW	8.0 kW	8.0 kW	8.0 kW
Output terminals	Terminal blocks 25 mm2				
OUTPUT	OPUS C 24-13.2	OPUS C 48-19.2	OPUS C 60-19.2	OPUS C 110-19.2	OPUS C 220-19.2
Grounding	+ , - or floating	+ , floating	+ , floating	floating	floating
Nominal voltage	24 VDC	48 VDC	60 VDC	110 VDC	220 VDC
Voltage range	21 -31 VDC	42 - 58 VDC	51 - 72 VDC	97 - 132 VDC	189 - 265 VDC
Ripple noise	< 100 mVp-p	< 100 mVp-p	< 100 mVp-p	< 100 mVp-p	< 100 mVp-p
Rectifiers	Max 12	Max 12	Max 12	Max 12	Max 12
Maximum current	550A @ 24V	394A @ 48V	322A @ 60V	174A @ 110V	86.4 A @ 220V
Output current	480A @ 27.5V	354A @ 54.5V	281A @ 68.1V	156A @ 123.6V	78A @ 245.3V
Power max.	13.2 kW	19.2 kW	19.2 kW	19.2 kW	19.2 kW
Redundant power	12.1 kW	17.6 kW	17.6 kW	17.6 kW	17.6 kW
Output terminals	Terminal blocks 25 mm2				
BATTERY CONNECTION	OPUS C 24-6.6	OPUS C 48-9.6	OPUS C 60-9.6	OPUS C 110-9.6	OPUS C 220-9.6
Battery breaker in system	1 pc MCCB	1 pc MCB	1 pc MCB	1 pc MCB	1 pc MCB
Optional breakers	Max 2 MCCB	Max 2 MCCB	Max 2 MCCB	Max 2 MCCB	Max 2 MCCB
Battery shelves	2	2	2	3	3
BATTERY CONNECTION	OPUS C 24-13.2	OPUS C 48-19.2	OPUS C 60-19.2	OPUS C 110-19.2	OPUS C 220-19.2
Battery breaker in system	1 pc MCCB	1 pc MCB	1 pc MCB	1 pc MCB	1 pc MCB
Optional breakers	Max 2 MCCB	Max 2 MCCB	Max 2 MCCB	Max 1 MCB	Max 1 MCB
Battery shelves	2	2	2	3	3
LOAD DISTRIBUTION OPTIONS	OPUS C 24-6.6	OPUS C 48-9.6	OPUS C 60-9.6	OPUS C 110-9.6	OPUS C 220-9.6
1-pole MCB, 2...63A	Max 2 x 24 loads	Max 2 x 24 loads	Max 2 x 24 loads	N/A	N/A
2-pole MCB, 2...63A	Max 2 x 12 loads	Max 2 x 12 loads	Max 2 x 12 loads	Max 1 x 12 loads	Max 1 x 12 loads
2-pole MCB, 2...63A + AUX or alarm	Max 2 x 10 loads	Max 2 x 10 loads	Max 2 x 10 loads	Max 1 x 12 loads	Max 1 x 12 loads



OPUS C SYSTEM CABINETS

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1-pole NH000/00 Fuses	Max 2 x 12 loads	Max 2 x 12 loads	Max 2 x 12 loads	N/A	N/A
1-pole NH000/00 Fuses	Max 2 x 6 loads	Max 2 x 6 loads	Max 2 x 6 loads	Max 1 x 6 loads	Max 1 x 6 loads
1-pole NH01 Fuses	Max 1 x 6 loads	Max 1 x 6 loads	Max 1 x 6 loads	N/A	N/A
2-pole NH01 Fuses	Max 1 x 3 loads	Max 1 x 3 loads	Max 1 x 3 loads	Max 1 x 3 loads	Max 1 x 3 loads
2-pole Diazed Fuses	Max 2 x 8 loads	Max 2 x 8 loads	Max 2 x 8 loads	Max 1 x 8 loads	Max 1 x 8 loads
	OPUS C 24-13.2	OPUS C 48-19.2	OPUS C 60-19.2	OPUS C 110-19.2	OPUS C 220-19.2
1-pole MCB, 2...63A	Max 2 x 24 loads	Max 2 x 24 loads	Max 2 x 24 loads	N/A	N/A
2-pole MCB, 2...63A	Max 2 x 12 loads	N/A	N/A	Max 1 x 12 loads	Max 1 x 12 loads
2-pole MCB, 2...63A + AUX or alarm	Max 2 x 10 loads	Max 2 x 10 loads	Max 2 x 10 loads	Max 1 x 10 loads	Max 1 x 10 loads
1-pole NH000/00 Fuses	Max 2 x 12 loads	Max 2 x 12 loads	Max 2 x 12 loads	N/A	N/A
2-pole NH000/00 Fuses	Max 2 x 6 loads	N/A	N/A	Max 1 x 6 loads	Max 1 x 6 loads
1-pole NH01 Fuses	Max 1 x 6 loads	Max 1 x 6 loads	Max 1 x 6 loads	N/A	N/A
2-pole NH01 Fuses	Max 1 x 3 loads	N/A	N/A	Max 1 x 3 loads	Max 1 x 3 loads
2-pole Diazed Fuses	Max 2 x 8 loads	N/A	N/A	Max 1 x 8 loads	Max 1 x 8 loads
OTHER OPTIONS					
IP21 drip water cover					
Cable duct for bottom entry cables, assembled side of cabinet					
NTC Temperature sensor					
Load LVD contactors, Battery LVD contactors					
Controllers: VIDI+ or VIDI+ I/O.					
Auxiliary controllers: VIDI-BM battery monitoring, VIDI-LVD Low Voltage Disconnect driver					

ORDER INFORMATION *

NAME	ORDER NUMBER	DESCRIPTION
OPUS C 24-6.6 CS2066 F	9220X0000195	24VDC, 6.6 kW, Floating
OPUS C 24-13.2 CS2066 F	9220X00002629	24 VDC, 13.2 kW, Floating
OPUS C 24-13.2 CS2066 P	9220X00002631	24 VDC, 13.2 kW, Positive Grounded
OPUS C 48-9.6 CS2066 F	9220X00002131	48V DC, 9.6 kW, Floating
OPUS C 48-9.6 CS2066 P	9220X00000121	48 VDC, 9.6 kW, Positive Grounded
OPUS C 48-19.2 CS2066 P	9220X00000424	48 VDC, 19.2 kW, Positive Grounded
OPUS C 60-9.6 CS2066 P	9220X00000122	60 VDC, 9.6 kW, Positive Grounded
OPUS C 60-19.2 CS2066 P	9220X00000426	60 VDC, 19.2 kW, Positive Grounded
OPUS C 110-9.6 CS2066 F	9220X00000123	110V DC, 9.6 kW, Floating
OPUS C 110-19.2 CS2066 F	9220X00001565	110 VDC, 19.2 kW, Floating
OPUS C 220-9.6 CS2066 F	9220X00000124	220V DC, 9.6 kW, Floating
OPUS C 220-19.2 CS2066 F	9220X00000887	220 VDC, 19.2 kW, Floating

* other configurations on request