

# Compact HE 1U Power Shelves

The Flatpack S 1U Power Shelves are designed for integration into a power system. It can be used with all Flatpack S rectifiers and meets the markets demand for flexible and expandable power solutions. The combination of power density, efficiency, and reliability makes the Flatpack S family a perfect choice for Marine & Offshore applications.



## FLATPACK S 19" 1U POWERSHELVES

1U x 19" 48V / 24V – C+3R/C+5R/6R, MARINE & OFFSHORE

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### APPLICATIONS

#### MARINE & OFFSHORE

- Control and protection
- SAS system
- Communication
- GMDSS
- Emergency lights

Applications in these markets demand state of the art, reliable and safe DC power systems. Flatpack S delivers an industry leading power density in its segment, many safety functions, wide operating temperature range and superb reliability in its small housing.

### PRODUCT DESCRIPTION

Flatpack S 24/48V combines High Efficiency and an extremely compact and short casing. With only 210 mm long modules it fits into most applications in the shallow cabinets.

Complete solutions are available in compact packages and there is flexibility to meet higher power demands in tight spaces.

The Flatpack S follows the strictest Marine & Offshore specifications, 95,5% efficiency and reverse current protection.

### KEY FEATURES

- COMPACT AND SHALLOW
- HIGH POWER DENSITY
- HIGH EFFICIENCY
- SMARTPACK S CONTROLLERS
- SIL3 RATED OUTPUT VERSIONS AVAILABLE
- FLEXIBILITY
- ADVANCED CONTROL AND MONITORING

# FLATPACK S 19" 1U POWERSHELVES

Model	Flatpack S 1U/C+3R 24V	Flatpack S 1U/C+5R 24V	Flatpack S 1U/6R 24V
Part number	CMES0301.1000	CMES0501.1001	CMES0601.1000
<b>INPUT DATA</b>			
Voltage (nominal)	185 V <sub>AC/DC</sub> - 305 V <sub>AC</sub> / 300V <sub>DC</sub>		
Maximum current (per feed)	12Arms	21Arms	
Mains configuration	230V <sub>AC</sub> , 3 x 1 phase or 3 phase(Δ) 230/400V <sub>AC</sub> , 3 phase (Y)		
Mains connection	7x4mm <sup>2</sup> Terminal blocks, rear connection	Flying leads 2,5mm <sup>2</sup> halogen free, 1.5 meter	
Frequency	45 – 66Hz		
<b>OUTPUT DATA</b>			
Maximum voltage	28V <sub>DC</sub>		
Maximum current (@24V <sub>DC</sub> )	125.1A <sub>DC</sub>	187.5A <sub>DC</sub>	225A <sub>DC</sub>
Load Connection (rear)	M6 cable lug	M6 cable lug	M6 cable lug
Battery connection (rear)	M6 cable lug Shunt in positive leg	-	-
LVBD (LV battery disconnecter)	In positive leg (150A latched)	-	-
<b>CONTROLLER</b>			
	Smartpack S <sup>1)</sup>		External <sup>2)</sup>
<b>MECHANICAL DATA</b>			
Dimensions (W/H/D)	19" / 1U / 270mm (recommended minimum cabinet depth, 300mm)		
Weight (without rectifiers/controller)	4.7 Kg [10.36 lbs]	2.8 Kg [6.17 lbs]	
<b>OTHER SPECIFICATIONS</b>			
Operating temperature <sup>3)</sup>	-40 to +85°C (-40 to +185°F)		
Coding	Coding to prevent insertion of incorrect power modules		
Mounting	Flush mount or mid mount		
<b>DESIGN STANDARDS</b>			
Electrical safety	UL 60950-1 2ed, EN 60950-1 2ed		
EMC	ETSI EN 300 386 V.1.6.1 EN 61000-6-1, -2, -3, -4		
Environment	ETSI EN 300 019-2-1 Class 1.2, 2.3, 3.2		
Marine	ABS (Pending) DNV GL-OS-D202, Ch.2 Sec. 4 (DNV 2.4) (Pending)		

- 1) See applicable datasheet for Smartpack S
- 2) Can be used with Compact, Smartpack 2 and Smartpack S controllers
- 3) See rectifier and controller datasheet for details

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Specifications are subject to change without notice

# FLATPACK S 19" 1U POWERSHELVES

Model	Flatpack S 1U/C+3R 48V	Flatpack S 1U/C+5R 48V	Flatpack S 1U/6R 48V
Part number	CMES0301.1001	CMES0501.1000	CMES0601.1001

## INPUT DATA

Voltage (nominal)	85 - 305 V <sub>AC/DC</sub>		
Maximum current (per feed)	12A <sub>rms</sub>	21A <sub>rms</sub>	
Mains configuration	230VAC, 3 x 1 phase or 3 phase(Δ) 230/400VAC, 3 phase (Y)		
Mains connection	7x4mm <sup>2</sup> Terminal blocks, rear connection	Flying leads 2,5mm <sup>2</sup> halogen free, 1.5 meter	
Frequency	45 – 66Hz		

## OUTPUT DATA

Maximum voltage	60V <sub>DC</sub>		
Maximum current	125.1A <sub>DC</sub>	187,5A <sub>DC</sub>	225A <sub>DC</sub>
Load Connection (rear)	M6 cable lug	M6 insert nuts	M6 insert nuts
Battery connection (rear)	M6 cable lug Shunt in negative leg	-	-
LVBD (LV battery disconnecter)	In negative leg (150A latched)	-	-

## CONTROLLER

	Smartpack S <sup>1)</sup>	External <sup>2)</sup>
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## MECHANICAL DATA

Dimensions (W/H/D)	19" / 1U / 270mm (recommended minimum cabinet depth, 300mm)		
Weight (without rectifiers / controller)	4.7 Kg [10.36 lbs]	2.8 Kg [6.17 lbs]	

## OTHER SPECIFICATIONS

Operating temperature <sup>3)</sup>	-40 to +85°C (-40 to +185°F)		
Coding	Coding to prevent insertion of incorrect power modules		
Mounting	Flush mount or mid mount		

## DESIGN STANDARDS

Electrical safety	UL 60950-1 2ed, EN 60950-1 2ed		
EMC	ETSI EN 300 386 V.1.6.1 EN 61000-6-1, -2, -3, -4		
Environment	ETSI EN 300 019-2-1 Class 1.2, 2.3, 3.2		
Marine	ABS (Pending) DNV GL-OS-D202, Ch.2 Sec. 4 (DNV 2.4) (Pending)		

- 1) See applicable datasheet for Smartpack S
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## AVAILABLE 24/48V RECTIFIERS

Part Number	Description	Voltage Range	Efficiency	Maximum Current				Output protection
				1 Module	3 Module	5 Module	6 Module	
241122.205M	FlatpackS 24V/1000W HE	21.5 – 28 V	> 92,5%	41.7 A	125.1 A	208.5	250.2 A	Blocking diode
241122.290	FlatpackS 24V/1000W HE SIL3	21.5 – 28 V	> 92,5%	41.7 A	125.1 A	208.6	250.2 A	SIL 3 / Diode
241122.215M	FlatpackS 24V/500W HE	21.75 – 28 V	> 92,5%	19 A	57 A	95 A	114 A	Blocking diode
241122.105M	FlatpackS 48V/1000W HE	43,5 – 57,6 V	> 95,5%	20.9 A	62.7 A	104.5 A	125.4 A	FET

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## OPTIONAL CONTROLLERS FPS 1U/6R



COMPACT  
242100.400



SMARTPACK S PANEL MOUNT  
242100.415M



SMARTPACK2  
242100.500M+242100501M