

Flatpack2

Hybrid power core

Eltek's Hybrid power core is based on the Flatpack2 product family, fully integrated into complete and flexible solutions with one single Smartpack2 controller monitoring all energy sources, flow and storage.

The Hybrid power core has integrated battery distribution, DC load distribution, rectifiers and solar chargers with PV connection panel. The power core is flexible and can easily be upgraded to meet changing demands.

A typical hybrid site is powered from PV panels in addition to Gen-set and/or mains connection.



Flatpack2 - Hybrid power core

DC Power supply system, 300A-500A 4U Distribution

Doc M30408S.400.DS3 – rev1

APPLICATIONS

TELECOM – MOBILE / WIRELESS

- Radio Base stations/ Cell Sites
- LTE / 4G / WiMAX
- Distributed Antenna Systems
- Microwave
- Broadband

TELECOM – FIXED

- Telephony servers / switches
- Fiber Optics / FTTx
- Microwave
- Cable
- Broadband

Smartpack2 Touch controller



Flatpack2 48/3200 HE solar



Flatpack2 48/3000 SHE rectifier



KEY FEATURES

- COMPLETE SYSTEM
- SMARTPACK2 TOUCH CONTROLLER
- ADVANCED CONTROL AND MONITORING THROUGH ETHERNET PORT
- SHE FP2 RECTIFIERS
- HE FP2 SOLAR WITH MPPT
- MAX PV CAPACITY 24KW
- PV CONNECTION PANEL WITH DC SPD (OPTION)
- HOT PLUGGABLE MODULES
- 19" / 4U DISTRIBUTION CHASSIS
- UP TO 8X BATTERY BREAKER POSITIONS
- LVBD
- UP TO 18X LOAD BREAKERS POSITIONS
- LVLD1
- LVLD2 (OPTIONAL)
- GLOBAL APPROVALS

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MODEL	300A DISTRIBUTION	500A DISTRIBUTION
Part number (configured power systems)	CTO30408S.4xxx	CTO308xxS.4xxx
POWER MODULES		
Flatpack2 Rectifier ¹⁾	Flatpack2 48/3000 HE or SHE	
Flatpack2 Solar Charger ²⁾	Flatpack2 48/3200 HE Solar	
INPUT DATA (RECTIFIER)		
Voltage (range)	85-300 V _{AC} (HE module) 85-264 V _{AC} (SHE module)	
Frequency	45-66 Hz	
Mains configuration	3x 1p230 V _{AC} TN / 1x 3p400 V _{AC} TN / 1x 3p230 V _{AC} IT (Single mains)	2x 3p400 V _{AC} TN / 2x 3p230 V _{AC} IT (Dual mains)
Connection	Terminal blocks, 10 mm ² max	
INPUT DATA (SOLAR CHARGER)		
Voltage (range)	85-420 V _{DC} (operating range) / 100-380 V _{DC} (MPPT range)	
Voltage (start-up)	150 V _{DC}	
Maximum current	20 A _{DC}	
PV CONNECTION PANEL		
Service switches for PV arrays	4 pcs 2-pole	4 or 8 pcs 2-pole
DC SPD Type 2 (option)	Up to 4 pcs	Up to 8 pcs
OUTPUT DATA		
Voltage	-48 V _{DC}	-48 V _{DC}
Current (maximum)	300 A	500 A
BATTERY DISTRIBUTION		
Number of breaker positions	6x (single pole)	8x (single pole)
LVBD	300 A	500 A
Battery breaker type	Plug-in type (D-frame)	
LOAD DISTRIBUTION		
Number of load positions	Up to 18x 18 mm	Up to 16x 18 mm
LVL1 1	300 A (max 12x 18 mm or 4x 27 mm + 6x 18mm)	300 A (max 10x 18 mm or 4x 27 mm + 4x 18mm)
LVL1 2 (option)	150 A (max 6x 18 mm or 4x 27 mm)	150 A (max 6x 18 mm or 4x 27 mm)
Load breaker type	DIN rail mounted, 18 mm and 27 mm wide	
CONTROL AND MONITORING		
Control and Monitoring unit ³⁾	Smartpack2 Touch + Smartpack2 Basic + I/O Monitor Type2	
Mounting location	Door panel mounted	
Local operation	Menu guided operation via touch-pad and graphical colour display	
Remote operation	Ethernet for remote/local monitoring and control via WEB Browser	
OTHER SPECIFICATIONS		
Operating temperature	-40 to +70 °C [-40 to +158 °F] ⁴⁾	
Storage temperature	-40 to +85 °C [-40 to +185 °F]	
Dimensions (W x D x H) ⁵⁾	482 x 384 x H mm [19 x 15.1 x H inch] Height (H): 8U: 356 mm [17 inch]	482 x 384 x H mm [19 x 15.1 x H inch] Height (H): 9U: 400 mm [15.8 inch] 12U: 534 mm [21 inch]
Weight (excluding modules)	8U: 13 kg [29 lbs] (approx.)	9U: 14 kg [31 lbs]; 12U: 21 kg [46 lbs] (approx.)
DESIGN STANDARDS		
Electrical safety	EN 60950-1:2006/A2:2013, EN 62368-1:2020/A11:2020	
EMC	ETSI EN 300 386 v1.3.2, EN 61000-6-1:2019, EN 61000-6-2:2019, EN 61000-6-3:2007/A1:2011/AC:2012, EN 61000-6-4:2019	
Environment	ETSI EN 300 019-2-1 v2.3.1:2017, ETSI EN 300 019-2-2 v2.4.1:2017, ETSI EN 300 019-2-3 v2.4.1:2015, ETSI EN 300 132-2 v2.6.1:2019 Normal operating conditions as per IEC 62040-5-3:2016 clause 4.2. Other operating conditions as per IEC 62040-5-3:2016 clause 4.3, must be advised	

1) See Flatpack2 Rectifier datasheet for details

2) See Flatpack2 Solar charger datasheet for details

3) See Smartpack2 Touch controller datasheet for details

4) +45 to +70 °C [+113 to +158 °F] with de-rated performance

5) Recommended minimum cabinet depth is 400 mm [15.7 inch]