

IPack65

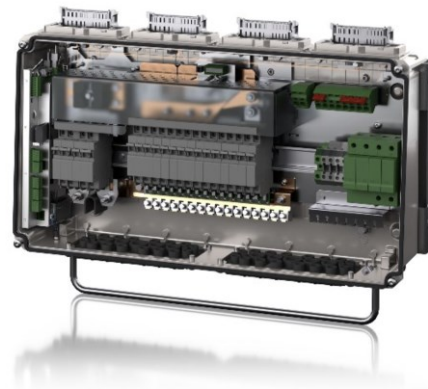
48V 8kW Power System



Rectifier (Field Expansion)



Design Cover



System Compartment Interior

Super High Efficiency Power System for Telecom

The roll-out of 5G networks will significantly increase the number of small cells and 5G radio equipment at the edge of the telecom network. The IPack65 power system provides uninterrupted 48Vdc, either backed up by nearby IP65 free-standing Li-ion batteries or by normal indoor batteries in an outdoor cabinet. Alternatively, the system can be powered by a backed-up 400V AC or DC feed.

The IPack65 rectifier itself, and the system compartment, are IP65 compliant, without fans or filters, and will withstand any outdoor environment and require no regular maintenance. With its super high efficiency, small size and weight, and flexible installation options, the IPack65 is a true 5G enabler.

It boosts application flexibility with a power range of 2-8kW and can be expanded in the field as load demands increase.

Key features

- Super high efficiency – 97.7% rectifiers
- IP65 - convection cooling
- Full distribution
 - 15 Load branches (LVLD)
- Smartpack S Controller - remote monitoring and control
- Hot pluggable rectifiers

Applications

- Telecom – Wireless
 - Radio base station / RAN sites
 - 5G / 4G
 - Microwave
- Railway and Metro
 - Communication systems

IPack65

48V 8kW Power System

Model	IPACK65 48V 8KW 400V SPD BD LD	IPACK65 48V 8KW 400VDC SPD
Ordering Part Number	MFGFC-0415.0001-S (.0003-S .0004-S) ¹⁾	MFGFC-0415.0002-S

Input data		
Voltage nominal / operating range	185 - 275 V _{AC} / 85 - 275 V _{AC} (Shutdown above 305V _{AC})	300 - 400 V _{DC} / 85 - 400 V _{DC} (Shutdown above 420 V _{DC})
Frequency	45 - 66 Hz	0 Hz
Mains configuration / surge protection	3ph 400V+N TN (3ph 230V 4 x 230V) ¹⁾ Class2 20kA	Individual input breaker (8A) 450VDC Class2 20kA
Mains connection	1.5 - 16mm ² terminal block [AWG 14-6]	1.5 - 25mm ² terminal block [AWG 14-4]

Output data	
Voltage nominal / adjustable range	-48 V _{DC} / 42 - 59 V _{DC}
Power maximum / installed	8kW / 4kW ²⁾
Protection	ORing FET, short circuit proof, shutdown for cont. deep short circuit, SPD Cl.2 10kA

Load Distribution		
Primary load breakers (field replaceable)	9 pos: 2 x 40A, 3 x 16A, 4 x 10A	15 pos: 3 x 40A, 9 x 25A, 3 x 16A
Secondary (LVLD 100A) load breakers (field replaceable)	6 pos: 3 x 40A, 3 x 16A	-
Connection	1.5 - 35mm ² [AWG 14-2] , negative directly in breaker, positive screw clamps	
Maximum rated load	6kW	8kW

Control & Monitoring		Battery Distribution		
Smartpack S ND (no display)	Ethernet (RJ45): SNMP, MODBUS slave, Webpages, E-mail. Serial RS-232/485 (RJ-11): MODBUS master for Smart-battery/- meter monitoring 6 x Inputs (conf. digital/temp./batt. sym.), 6 x Relay outputs (max 75V / 2A / 60W)	LVBD	Default	-
		Breaker positions (field replaceable)	2 x 150A	-
		Connection	M8 stud in negative 1.5 - 35mm ² [AWG 14-2] screw clamp in positive	-

1) See ordering information next page

2) Maximum power @120Vac 5kW / 2.5kW, @85Vac 3.4kW / 1.7kW

Specifications are subject to change without notice

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Other Specifications	
Efficiency (rectifier)	97.7 %
Temperature	Operating: -40 to +55°C (-40 to +131°F) Shutdown above 75°C (167°F)
Environmental protection class	IP65 – Rectifiers and system box
Seismic / Vibration	Zone 4 (Telecordia GR 63 core) / ETSI EN 300 019:-2-4 (Cl.1), EN 50125-3:2003
Cable entry	2xMC25 Multigate gland plates in bottom (IP65) 5-7mm Ø: 2x4pcs, 8-12mm Ø: 2x4pcs, 10-14mm Ø: 2x12pcs, 14-20mm Ø: 2x4pcs, 20-26mm Ø: 2x1pcs
Accessories	Wall mount bracket and design cover included
Dimensions (WxHxD)	598 x 729 x 148 mm ²⁾ [23.54 x 28.7 x 5.83"] ²⁾
Weight (w/o packing), system module / wall bracket / design cover	20.4 kg [45 lbs] 3.3 kg [7.3 lbs] / 1.9 kg [4.2 lbs] / 2.8 kg [6.2 lbs]

Design Standards	
Electrical safety	EN IEC 62368-1:2020/A11:2020, IEC 62368-1:2018, UL 62368-1:2021 ¹⁾ C22.2 No. 62368-1:2021 ¹⁾ , IEC 60950-1:2013
EMC	EN IEC 61000-6-1:2019, -6-2:2019, -6-3:2021, -6-4:2019 ETSI EN 300 386 V.2.2.1, FCC CFR47 part 15B:2020 (parts of), EN 50121-4:2016+A1:2019, -5:2017+A1:2019, EN 61000-6-5:2015/AC:2018
Environment	ETSI EN 300 019: -2-1 (class 1.2), -2-2 (class 2.2), -2-4 (Class 4.1E & 4.2H) EN 50614:2020 (WEEE) EN IEC 63000:2018 (ROHS), EN IEC 62474:2019 + A1:2021 (REACH)

Model	IPACK65 48V 8KW 3D230V BD LD SPD	IPACK65 48V 8KW 4X230V BD LD SPD
Ordering Part Number	MFGFC-0415.0003-S	MFGFC-0415.0004-S
Mains / SPD configuration	3phase Δ 230V	4 x single phase 230V (individual feed)

Additional Items	
Rectifier module	ELK1126.106-S - IPACK65 48/2000 SHE
Load breakers (sold in boxes of 12pcs)	0831911619 - BREAKER QY 60A 80VDC U3 1P 0831911119 - BREAKER QY 16A 80VDC U3 1P

1) No UL/CSA on MFGFC-0415.0002 & MFGFC-0415.0003, pending SPD certification for MFGFC-0415.0004

2) Dimension with design cover WxHxD 610 x 793 x 189 mm [24.01 x 31.22 x 7.44"]

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DELTA ELECTRONICS (NORWAY) AS
PO Box 2340 Stromso, 3003 Drammen, +47 3220 3200
www.delta-emea.com
www.eltek.com
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