

## Compact, full-featured DIN-rail power system

The Micropack System is convection cooled, designed for less power hungry applications, but still with system functionality options to match any requirements. Use as stand alone or in a flexible off the shelf configurable system.

The Micropack Power System extends your network one step further. With load ranges typically between 120W and 1000W, and in 12, 24 and 48V options, the system is perfect for a great variety of applications.



# Micropack System

For 12 VDC, 24 VDC, 30 VDC & 48 VDC Output

Doc 241120.90x.DS3 - v9

### APPLICATIONS

#### TELECOM - MOBILE/WIRELESS

- Radio Base stations/ Cell Sites
- LTE / 4G / WiMAX
- Microwave

#### TELECOM - FIXED

- Fiber Optics
- Microwave
- Cable
- Broadband

#### RAILWAY & METRO

- Control and protection
- Signaling systems
- Safety systems

#### POWER UTILITIES

- Control and protection
- PLC and alarm systems
- Signaling



Micropack Rectifiers



Compact controller

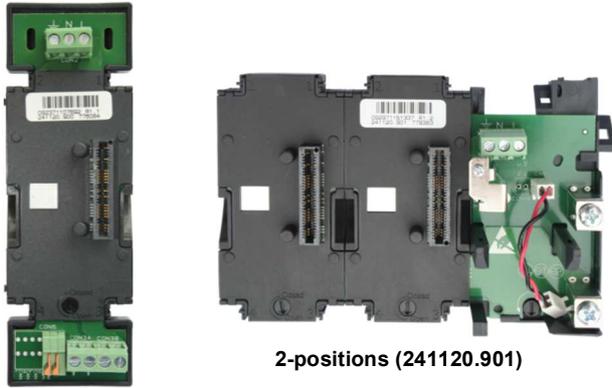
### KEY FEATURES

- COMPACT AND SHALLOW (149 MM DEEP)
- DIN RAIL MOUNTABLE
- ON-SITE CONFIGURABLE
- OFF THE SHELF DELIVERY
- STAND-ALONE OPTION (W/ALARM RELAY)
- PLUG-IN BREAKERS OR BULK OUTPUT
- ACCEPTS 85 – 300 VAC/DC INPUT
- 12, 24-30, 48 VDC OUTPUT VERSIONS
- ETHERNET FOR REMOTE AND LOCAL MONITORING AND CONTROL VIA WEB BROWSER
- SNMP PROTOCOL WITH TRAP, SET AND GET ON ETHERNET. EMAIL OF TRAP ALARMS
- 3 DIGITAL PROGRAMMABLE RELAY OUTPUTS
- 3 PROGRAMMABLE MULTIPURPOSE INPUTS

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## RECTIFIER POWER CORES



2-positions (241120.901)

Standalone (241120.900)



4-positions (241120.902)

## SYSTEM BASES – NEGATIVE DISTRIBUTION

Battery distribution with shunt, LVBD and sockets for 2 breakers

(241120.915 for 24 - 48 V<sub>DC</sub>)

Load distribution with sockets for 4 breakers (241120.920)



Plug-in battery and load breaker



## DCDC POWER CORE



Standalone (241120.905)

## SYSTEM BASES – FLOATING / POSITIVE DIST.

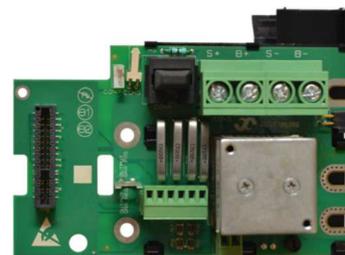
Bulk feed output (241120.911)



Battery bulk feed with shunt and contactor in positive leg.

(241120.912 – 12 V<sub>DC</sub> only)

(241120.914 – 24 - 48 V<sub>DC</sub>)



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## MARINE FILTER



**DIN Rail Marine filter (241120.930)**

## MICROPACK BUILDING BLOCKS - COMPABILITY MATRIX

Part number	Description	Output Voltage			Output grounding			Supports	
		12V	24V	48V	DC+	DC-	Float	Rectifier	DC/DC
241120.900	Powercore -1	✓	✓	✓	✓	✓	✓	✓	✗
241120.901	Powercore -2	✓	✓	✓	✓	✓	✓	✓	✗
241120.902	Powercore -4	✓	✓	✓	✓	✓	✓	✓	✗
241120.905	Powercore -1	✓	✓	✓	✓	✓	✓	✗	✓
241120.911	Bulk feed	✓	✓	✓	✓	✓	✓	✓	✗
241120.912	Bulk feed LVD 12	✓	✗	✗	✗	✓	✓	✓	✗
241120.914	Bulk feed LVD 24/48	✗	✓	✓	✗	✓	✓	✓	✗
241120.915	Batt dist. 24/48	✗	✓	✓	✓	✗	✓ <sup>1)</sup>	✓	✗
241120.920	Load dist.	✓	✓	✓	✓	✗	✓ <sup>1)</sup>	✓	✗
251875	Dummy Module	✓	✓	✓	✓	✓	✓	✓	✓
241120.930	Marine filter <sup>2)</sup>	✓	✓	✓	✓	✓	✓	✓	✗

1) Grounding of positive recommended

2) For AC input, supports also a few Flatpack2 and Flatpack S modules see module DS

## EASY INSTALLATION – ON-SITE CONFIGURATION

### A few quick steps.....

- ✓ Start with a DIN rail
- ✓ Clip on and lock the desired power core; 2 or 4 rectifier positions or stand alone
- ✓ Clip on and fasten either the bulk feed unit or battery distribution (for 2 or 4 pos power cores)
- ✓ Clip on and fasten the load distribution (if applicable)
- ✓ Do the wiring

- ✓ In marine applications, clip on the Marine Filter Unit and connect the AC feed through it.
- ✓ Plug in the battery and load breakers
- ✓ Plug in the rectifier modules and controller
- ✓ Install covers for the distributions, bulk feed and blind panel for any unused rectifier positions if applicable

**...and you'll have a complete DC system.**

Model	Battery dist.	Bulk feed	Bulk feed LVD	Load dist.
Part number	241120.915	241120.911	241120.912 / .914	241120.920
<b>OUTPUT DATA</b>				
System voltage support	-24 – -48 V <sub>DC</sub>	±12 – ±48 V <sub>DC</sub>	+12 / +24 – +48 V <sub>DC</sub>	-12 – -48 V <sub>DC</sub>
Unprotected bulk output connections	-	1 (Max 10 mm <sup>2</sup> )	1 (Max 10 mm <sup>2</sup> )	-
Protected load output connections (plug-able single pole MCB in negative)	-	-	-	4 x 2 - 15 A (Max 4 mm <sup>2</sup> )
Connection to Load dist (241120.920)	•	•	•	•
Unprotected battery output connections (shunt and LVBD in positive)	-	-	1 (Max 10 mm <sup>2</sup> )	-
Protected battery output connections (single pole MCB, shunt and LVBD in negative)	2 x max 30 A (Max 10 mm <sup>2</sup> )	-	-	-
Output Protection in rectifiers/converters	Blocking OR-ing FET or fuse, Short circuit proof and High temperature protection			
<b>OTHER SPECIFICATIONS</b>				
Control system connection terminals	CAN (1 x RJ45)	CAN (1 x RJ45) 2 x LVD 2 x fuse fail 1 x current shunt	CAN (1 x RJ45) 1 x LVD 2x fuse fail 1 x earth fault	-
Extending width	66 mm [2.6"]	26 mm [1.0"]	66 mm [2.6"]	73 mm [2.9"]
Weight	270 g [0.6 lbs]	110g [0.24 lbs]	250 g [0.6 lbs]	165 g [0.3 lbs]

Specifications are subject to change without notice

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Model	Stand alone	2-pos	4-pos	DC/DC 1-pos
Part number	241120.900	241120.901	241120.902	241120.905
<b>INPUT DATA</b>				
Maximum voltage		300 V <sub>AC/DC</sub>		72 V <sub>DC</sub>
Maximum current	2 A	7 A	7 A	15 A
Connection, screw terminals max 2.5mm <sup>2</sup>		1 x L/N/PE		1 x DC+/DC-/PE
Protection	Individual fuse in Micropack power modules			
Coding (prevents mixing of output voltages)	Yes, and only rectifiers fit			Y, only DC/DC fit
<b>OUTPUT DATA</b>				
Voltage	12V <sub>DC</sub> , 24 V <sub>DC</sub> , 30 V <sub>DC</sub> & 48 V <sub>DC</sub>			
Maximum current	10 A	20 A	40 A	12 A
Connection, screw terminals max 2.5mm <sup>2</sup>	2 x V <sub>OUT+</sub> / V <sub>OUT-</sub>	-	-	2 x V <sub>OUT+</sub> / V <sub>OUT-</sub>
Connection to 241120.91x bases	-	•	•	-
Output Protection in rectifiers	Blocking OR-ing FET or fuse, Short circuit proof and High temperature protection			
<b>OTHER SPECIFICATIONS</b>				
Module alarm relay output, max 1mm <sup>2</sup>	•	-	-	•
CAN connections	- / •(3 pin) <sup>1)</sup>	• (2 wire)	• (2 wire)	- / •(3 pin) <sup>1)</sup>
Width	44 mm [1.7"]	142 mm [5.6"]	231 mm [6.1"]	44 mm [1.7"]
Weight	70 g [0.2 lbs]	160g [0.4 lbs]	250 g [0.6 lbs]	78 g [0.2 lbs]

Model	DIN Rail Marine Filter
Part number	241120.930
<b>OTHER SPECIFICATIONS</b>	
Mains rating / connection	85 - 300 V <sub>AC/DC</sub> , 0 - 12.5 A / L- N (DC+/-) + PE : 2.5mm <sup>2</sup> screw terminals
Dimensions / weight	35 x 99 x 114.5 mm [1.4 x 4.1 x 4.7"] / 328 g [0.72 lbs]

All models	
<b>OTHER SPECIFICATIONS</b>	
Cover material	Plastic V0 rated and aluminium
Temperature	Operating: -40 to +65°C (-40 to +149°F), storage: -40 to +85°C (-40 to +185°F)
Mounting	35mm DIN rail
Dimensions (H x D)	89 mm (2U) <sup>2)</sup> x max. 150mm (incl. DIN rail) mm [3.5 x 5.9 "]
<b>DESIGN STANDARDS</b>	
Electrical safety	EN 60950-1:2006+A11:2009+A1:2010+A12:2011+A2:2013, IEC 60950-1:2013 UL 60950-1:2014
EMC	EN 61000-6-1:2019 / -2:2019 / -3:2007/A1:2011/AC:2012 / -4:2019 FCC CFR47 part 15B section 109: 2010, ETSI EN 300 386 v2.1.1: 2016
Mains Harmonics	EN 61000-3-2:2019
Environment	ETSI EN 300 019: 2-1 (Class 1.2) & 2-2 (Class 2.3) EU 2015/863 (RoHS) & 2012/19/EU (WEEE) 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
Marine compliance (EMC class B)	DNVGL-CG-0339:2015

1) CAN connector available on HW rev ≥ 2

2) Allow for minimum 1U below and above to ensure airflow

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