



Micropack Power System

GREAT SMALL POWER

The Micropack power system is designed for smaller loads, yet with a heavy functionality. With few standard building blocks easily mounted on a DIN rail, the system is fully on-site configurable.

Product Description

The Micropack Power System extends your network one step further. With load ranges typically between 120W and 1000W, the system is perfect for broadband extension and other high speed data and telecom applications. It is suitable for both indoor and outdoor applications.

With a few DIN rail mountable building blocks, the Micropack power system is design for on-site configuration and assembly. This allows fast and efficient logistics and enhanced flexibility.

Broad functionality including ethernet based remote monitoring is provided by the Compack controller.

The Micropack Power System comes in 12, 24 and 48V options making it suitable for industrial applications as control cabinets, safety systems and building automation application

System Building Blocks

Power Cores

The power core options are 2 or 4 plug-in positions for Micropack rectifiers and one position for Compack controller, or a simple bulk AC in - DC out stand alone unit with one rectifier plug-in position. The multi rectifier cores also include common AC mains connection, internal signaling and redundant DC current output.

Battery Distribution

The battery distribution is configurable with plug in style breakers. Battery connection terminals and low voltage battery disconnect (LVBD) are rated for optimal battery backup. The battery distribution is available for negative distribution systems.

Bulk feed option

As an option to the battery distribution, the bulk feed option is available for a non-load distribution power solution or with self made wired standard DIN rail breaker distribution. This option is available for systems with floating, positive or negative ground.

Load Distribution

Distribution is on-site configurable with plug in style breakers and can be used in series with more distribution blocks if needed. This unit is designed for positive grounded systems and has single pole breakers placed in the negative output.

Marine Filter Unit

The MicroPack System complies to DnV Rules for Classification of Ships, High Speed & Light Craft and DnV Offshore Standards when the AC mains input is connected through the Marine Filter Unit. The filter can be used for power cores with up to 4 rectifiers installed.

Micropack Rectifiers

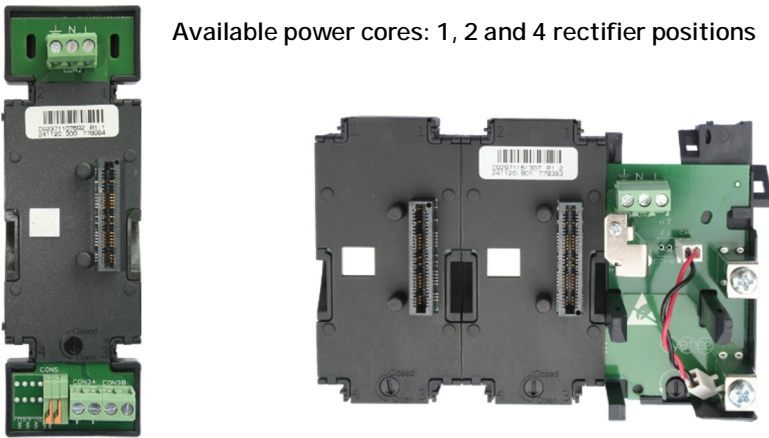
The rectifiers are convection cooled for system installation in harsh and noise sensitive environments. Wide ranges of both input voltage and operating temperature give the system superior system availability. High current ability for selective fuse tripping and support for DC input extends the application range. Refer to rectifier modules datasheets for further information.



See last page for specifications

Micropack Power System - Installation

Available power cores: 1, 2 and 4 rectifier positions

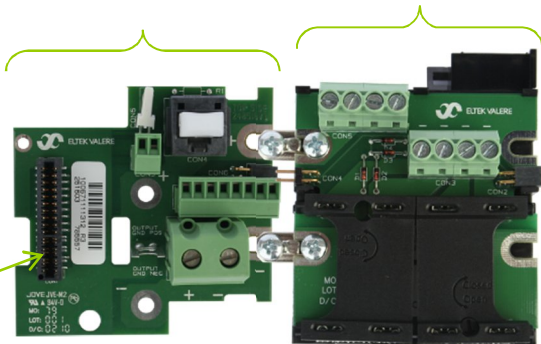


A few quick steps.....

- ü Start with a DIN rail
- ü Clip on and lock the desired power core; 2 or 4 rectifier positions or stand alone
- ü Clip on and fasten either the bulk feed unit or battery distribution (for 2 or 4 pos power cores)
- ü Clip on and fasten the load distribution (if applicable)
- ü Do the wiring
- ü In marine applications, clip on the Marine Filter Unit and connect the AC feed through it.
- ü Plug in the battery and load breakers
- ü Plug in the rectifier modules and controller
- ü Install covers for the distributions, bulk feed and blind panel for any unused rectifier positions if applicable

Bulk feed output

Optional load distribution



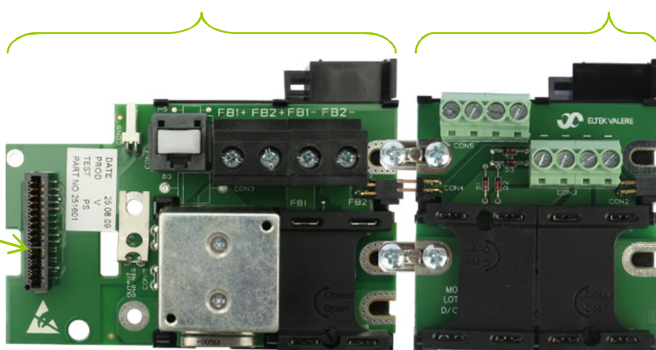
Load and battery breaker



Compack controller slot

Battery distribution with LVBD

Load distribution



Marine Filter Unit

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

Micropack Power System – Configurable order options

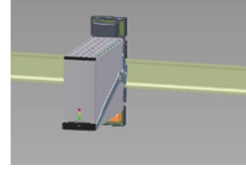
Stand alone power core

- ü Controller-less dc systems
- ü Output voltage set by pot meter in front
- ü Optional filter for Marine applications

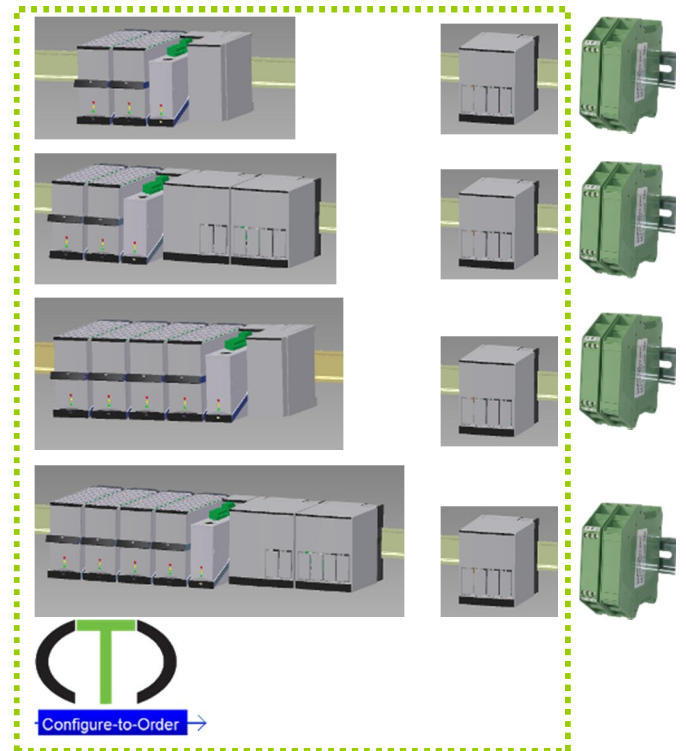
2 and 4 rectifier positions power core

- ü Compack controller
- ü Bulk feed or
- ü Battery and load distribution
- ü Optional extra load distribution and filter for Marine applications
- ü Optional breakers and rectifier slot blind panels
- ü Configured and ordered by CTO

Basic systems



Optional blocks



Micropack system building blocks - compability matrix

Part number	Description	Output Voltage			Grounding		
		12V	24V	48V	Positive	Negative	Floating
241120.900	PowerCore - 1	ü	ü	ü	ü	ü	ü
241120.901	PowerCore - 2	ü	ü	ü	ü	ü	ü
241120.902	PowerCore - 4	ü	ü	ü	ü	ü	ü
241120.910	Batt. dist.	ü	ü	ü	ü	ü	ü
241120.911	Bulk feed	ü	ü	ü	ü	ü	ü
241120.920	Load dist.	ü	ü	ü	ü	ü	ü
241120.930	Marine Filter	ü	ü	ü	ü	ü	ü

Compack controller – remote monitoring and control

The Compack controller provides several functions for controlling the power system, and it provides an interface to the outside world through its LAN connection:

- ü Local and remote configuration through WebPower, SNMP and Powersuite
- ü Easy integration with NMS software using the SNMP protocol with TRAP, SET and GET on Ethernet. Email of TRAP alarms
- ü Automatic battery test, lifetime indication and capacity
- ü Energy, Event, Data, Battery temperature and temp logs
- ü User defined alarm groups using Boolean logic on events
- ü 3 programmable relay outputs for alarm and control
- ü 3 programmable multipurpose inputs (temp/dig/analog)

Specifications

Input Voltage	Tolerances: 9-75 VDC (17-75VDC*)
Temperature Range	Nominal: -20 to +60°C (-4 to 140°F) Reduced accuracy: -40 to +70°C
Power Consumption	3W
MTBF	> 550,000 hours Telcordia SR-332 Issue I, method III (a) (T _{ambient} : 25°C)
Dimensions (HxWxD)	75 x 30 x 115mm / 2.95 x 1.2 x 4.52"
Weight	240g / 0.53 lbs
Ethernet port	10/100 BASE-T HP Auto MDI/MDI-X
Relay Outputs (1.5 mm ²)	Form-C (dry contact NO-C-NC) 60V / 1A breaking capacity
Contactor Outputs	2 x LVD control outputs
Configurable Inputs (1.5 mm ²)	"Digital": open/closed Analog: 0-75V Temperature: External NTC

* HW version 1.0 - 1.2

Micropack Power System

Additional Technical Specifications

Bulk Feed (40A)	
Max. Current	40A
Output Connector	Screw terminals, max 10.0 mm ² [6 AWG]
Signals for external distribution	<ul style="list-style-type: none"> o Load fuse sense o Battery fuse sense o Battery shunt (60mV) o 2x LVD
DC Output Earth	Configurable, default: floating
Dimension (W)	26 mm [1.0"] extending width
Weight	110 g [0.24 lbs]
Battery Distribution (2 x MCB + LVBD)	
Breakers	<ul style="list-style-type: none"> o Plug-in style (IPA series from Airpax™) o Up to 30A
Max no of breakers	2 per block
Battery Connector	Screw terminals, max 10.0 mm ² [6 AWG]
LVBD	50A (latching type)
Dimension (W)	66 mm [2.6"] extending width
Weight	270 g [0.6 lbs] (excl. MCBs)
Load Distribution (4 x MCB)	
Breakers	<ul style="list-style-type: none"> o Plug-in style (IPA series from Airpax™) o 2A to 15A
Max no of breakers	4 per block
Load Connector	Screw terminals, max 4.0 mm ² [10 AWG]
LVLVD	No
Dimension (W)	73 mm [2.9"] extending width
Weight	165 g [0.4 lbs] (excl. MCBs)
Marine Filter Unit	
AC connector	Screw terminals, 2.5 mm ² [12 AWG]
Rating	85 – 300 V _{AC} /V _{DC} / 0 – 6.4 A
Dimensions (WxHxD)	35 x 99 x 114.5 mm [1.4 x 4.1 x 4.7"]
Weight	328 g [0.72 lbs]
Common Specifications	
Dimensions (H x D)	89 mm (2U) x max. 150mm (incl. DIN rail) mm [3.5 x 5.9"]
Mounting	35mm DIN rail
Remote Monitoring	Ethernet 10/100 BASE-T (refer to Compack datasheet for details)
Local Monitoring	3 x LEDs (major alarm, minor alarm, power on) 3 x Form C dry contacts
Cover material	Plastic V0 rated and aluminum
Operating temp	-40 to +65°C (-40 to +149°F)
Storage temp	-40 to +85°C (-40 to +185°F)

Rectifier/Controller Part Numbers

Part no.	Description
241120.100	Micropack 48/250 CC
241120.200	Micropack 24/240 WOR
241120.300	Micropack 12/120 WOR
242100.400	Compack

Power Core (Stand alone / 2-pos / 4-pos)			
AC Input	<ul style="list-style-type: none"> o 1x Single Phase o 85VAC – 300VAC (185 – 275VDC, no power derating) 		
AC Connector	<ul style="list-style-type: none"> o Screw terminals, 2.5 mm² [12 AWG] o Top entry 		
Max Output Power Standalone	48VDC 250W	24VDC 240W	12VDC 120W
2-pos	500W	480W	240W
4-pos	1000W	960W	480W
Dimension (W)	Std.aln. 44mm [1.7"]	2 pos. 142 mm [5.6"]	4 pos 231 mm [9.1"]
Weight	70 g [0.2 lbs]	160g [0.4 lbs]	250 g [0.6 lbs]
Coding	YES, to prevent use of incompatible rectifier models		

Applicable Standards

Electrical safety	IEC 60950-1/UL 60950-1/CSA 22.2
EMC	ETSI EN 300 386 V.1.3.2 EN 61000-6-1 (immunity, light industry) EN 61000-6-2 (immunity, industry) EN 61000-6-3 (emission, light industry) EN 61000-6-4 (emission, industry) EN 61000-6-5 (immunity, power station and substation)
Mains Harmonics	EN 61000-3-2
Environment	ETSI EN 300 019-2-1 Class 1.2 ETSI EN 300 019-2-2 Class 2.3 ETSI EN 300 019-2-3 Class 3.2 ETSI EN 300 132-2 2002/95/EC (RoHS) 2002/96/EC (WEEE)
Marine compliant (w/ additional filter module)	DnV Rules for Classification of Ships, High Speed & Light Craft and DnV Offshore Standards

Part Numbers

Part no.	Description
CTOU0402.xxxx	CTO configuration for 4 rectifier Power Core
CTOU0202.xxxx	CTO configuration for 2 rectifier Power Core
241120.900	Micropack Power Core standalone
241120.901	Micropack Power Core 2 position
241120.902	Micropack Power Core 4 position
241120.910	Battery Distribution (2 x MCB + LVBD)
241120.911	Bulk Feed (40A)
241120.920	Load Distribution (4 x MCB)
241120.930	Marine Filter Unit

Specifications are subject to change without notice

241120.90X.DS3 - v1