ACE306

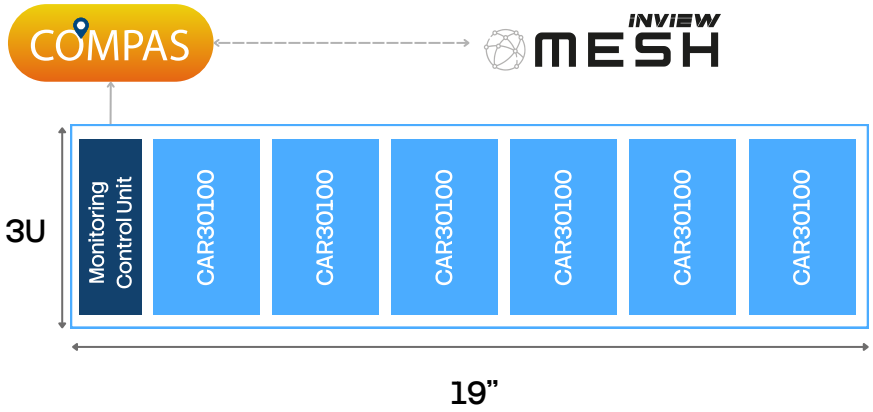
ALPHA INNOVATIONS
Member of CE+T Group

Modular 19" power rack 110Vdc
up to 18kW

DISCOVER

Product Highlights

- Battery Management
- Modular, from 1 to 6 power converters
- Rackable
- Advanced Monitoring



Applications Areas

- **Customer** : Portalp
- **Application** : Power supply for platform screen doors in the metro network
- **Country** : France
- **Expertise** : Secure system

ACE306

3U - 19” power racks with advanced monitoring

Compact Power, Reliable Performance

Compact, efficient, and reliable, the **ACE306** is designed to **power traffic and industrial systems** where performance is non-negotiable.

Compatible with the **CAR30100** rectifier providing different output options [110 - 84 - 96Vdc], it delivers high power density in a compact footprint.

Featuring an integrated a **monitoring** unit, the ACE306 provides remote supervision and control, helping reduce operational costs through real-time data analysis, energy optimization, and automated testing. For advanced **customization**, create your own alarms or select pre-assembled, pre-programmed, and tested configurations ready for immediate deployment. Implement custom logic locally with Python on the monitoring unit, without relying on the Cloud. Furthermore, **Inview MESH** consolidates data from all deployed monitoring units into a single interface, providing unified monitoring and reporting. Its API enables seamless integration with existing systems and applications.

Built for indoor and outdoor environments, the ACE306 combines smart protection and adaptability — including intelligent power de-rating, thermal and voltage safeguards, and module monitoring.

Designed for **parallel operation**, it features active PFC, IEC/CE compliance, and single-wire load sharing for perfect current balance. An integrated redundancy diode enables hot-swap, fault-tolerant operation, ensuring continuous uptime.

Specifications

Electrical

Input	
Input Standard Voltage AC	100 to 240 Vac
Input Frequency	50 / 60 Hz
Input Standard Voltage DC	100 to 330 Vdc
Input Voltage Maximum	300 Vac / 410 Vdc
Input Current	• 14 A @ 230Vac • 18.5 A @ 110Vac • 22 A max (AC or DC input mode)
Output DC	
Output Voltage	68 to 114 Vdc [Product option for 84 V and 96 V]
Output Power (per module)	• 3000W from 180Vac to 265Vac input • 1800W from 100Vac to 132Vac input • 1575W to 3000W from 85Vdc to 180Vdc input (15W /DC slope) • 3000W from 180Vdc to 402Vdc input
Max Output Power	18 kW (6 x 3 kW per module)
Output Current (per module)	• 27.5A @ 109 Vdc High mains • 16.5A @ 109Vdc Low mains • Load regulation :±0.5% • Line regulation :±0.2% • Wide band noise : 20mVrms
Efficiency	93 %
Battery	
Max Battery Output (LVD)	250 A / 60 mV (external relay)

Standards

Safety	• CE marked • EN 62368-1 • IEC 62368-1 (formerly IEC 60950-1) DesignToMeet
Environment	• RoHS compliant
EMC	• EN 61000-6-1 • EN 61000-6-4 • EN 50121-4

Features

Protection	• Automatic input status (Power limits, AC or DC mode) • Mains out of range (input fuse) • Output overvoltage and overload Short circuit current • Smart power derating : ◦ 2% above 55°C • Thermal shutdown Hot swap
Indicators	• Refer to mechanical view
Customization	• Specific configuration (alarm, function, ...) • Alarming on specific signals, events, alarms... • Real-time data visualization • Customization through Python scripting • Remote control and access • ....

COMPAS Safely manage your system from anywhere

Environmental

Operating Temperature	-20 to +55 °C
Extended (derated output power)	-25 to +70 °C
Storage Temperature	-40 to +85 °C
Humidity Operating	20 to 80% RH non-condensing
Humidity Storage	10 to 95% RH non-condensing
Elevation	Up to 2000 m
Cooling	Forced air cooling (Front to rear)

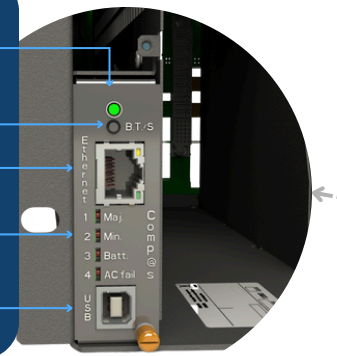
Part Number

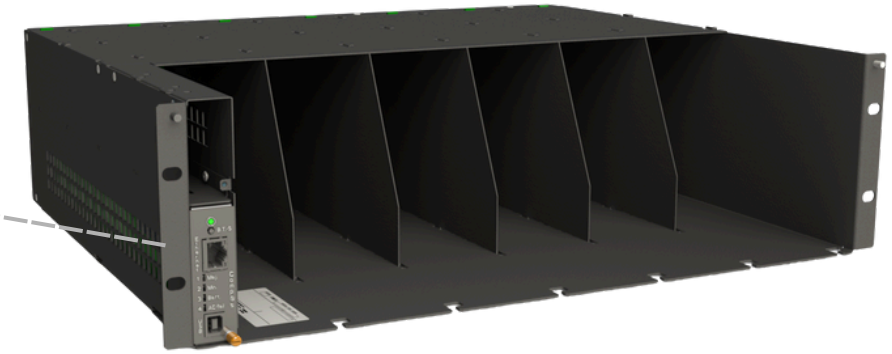
Family	9400 005 00000
Specific Configuration	9400 005 001xx

Mechanical dimensions

Dimensions (mm)	133H (3U) x 448W x 410D
Dimensions (inches)	5.2H x 17.6W x 15D
Weight (kg) Shelf	5.95
Weight (kg) Rectifier	3.5

- LED :
  Green = Normal function
  Blinking green = Battery test
- Pushbutton for battery test
- Ethernet connector
- Alarms are related to internal relays configurable through COMPAS
- USB A connector





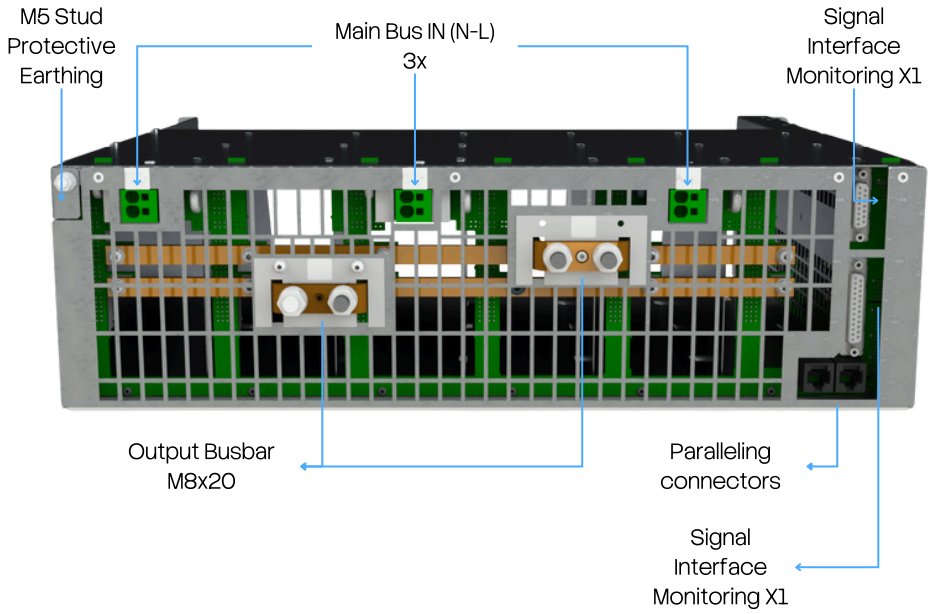
X1 Pinout

1	Dig 1 closed	Relay 1 NC
2	Dig 1 open	Relay 1 NO
3	Dig 2 Com	Relay 2 common
4	Dig 3 closed	Relay 3 NC
5	Dig 3 open	Relay 3 NO
6	Dig 4 Com	Relay 4 common
7	CAN H (SELV)	Isolated CAN high
8	CAN L (SELV)	Isolated CAN low
9	Dig 1 Com	Relay 1 common
10	Dig 2 closed	Relay 2 NC
11	Dig 2 open	Relay 2 NO
12	Dig 3 Com	Relay 3 common
13	Dig 4 closed	Relay 4 NC
14	Dig 4 open	Relay 4 NO
15	0V (SELV)	GND isolated

X2 Pinout

1	Out+ Sense	Positive sense input
2	ShuntBatBus	Positive shunt input
3	Bat_MP1	Battery middle point 1
4	Bat_MP3	Battery middle point 3
5		
6	Out- Sense	Negative sense input
7	5Vstby	Aux 5V supply, ref 0V
8	5Vstby rtn	Aux 5V supply return
9	Amb_temp	Second temp signal input (NTC 10k)
10	Diginp1	Digital input 1
11	Diginp3	Digital input 3
12	Diginp5	Digital input 5
13	Diginp7	Digital input 7

14	ShuntBat	Negative shunt input
15	LVD+	LVD signal (positive)
16	Bat_MP2	Battery middle point 2
17	LVD-	LVD signal (negative)
18		
19	BB_aux	Aux Battery breaker (NC)
20	Bat_temp	First temp signal input (NTC 10 k)
21	0V	GND
22	Diginp2	Digital input 2
23	Diginp4	Digital input 4
24	Diginp6	Digital input 6
25	Diginp8	Digital input 8



More info ?

Address
Avenue Alexander
Fleming, 1
1348 Louvain-la-Neuve
Belgium

Email
rfq@alphainnovations.eu

Phone
+32 10 438 211

Website
www.alphainnovations.eu

ALPHA INNOVATIONS
Member of CE+T Group