# ADELSYSTEM



#### "All In One" CBI series: Uninterruptible Power Supply with DC output

Thank you for having chosen one of our products for your work.

# We are certain that it will give the utmost satisfaction and be a notable help on the job.

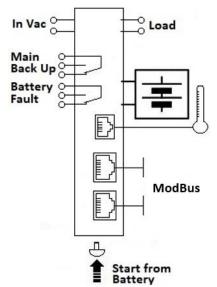
## **General Description**

Thanks to "All In One" CBI series of DC-UPS, it will be possible to optimize the power management of your system with one single, extremely compact and cost-effective device, connected directly to the mains. The available power is automatically distributed between load and battery giving priority to the load. Battery can supply the load even with mains so the output power to the load can be twice the nominal power if it is required (Power Boost). When mains failure



occurs, the load continues to be supplied by the battery in backup mode. It is also possible to switch on the device with no mains directly from battery. The "Battery Care" algorithm performs rapid and automatic charging, battery charge optimization during time, flat batteries recovery and real time diagnosis during installation and operation. Temperature compensation is possible to connect the temperature sensor probe. The real time auto-diagnostic system monitors battery faults such as sulfated battery, shorted cells, accidental reverse polarity connection or disconnection of the battery. Every fault is signaled by a blink code of Diagnosis Led or via Modbus (only in some models) in order to be easily detected and removed during the installation and after sales. The continuous monitoring of battery efficiency reduces risk of battery damage and allows a safe operation in permanent connection. Predefined curves can be selected by jumpers or DIP switch to optimize the charge of different battery types: Open Lead Acid, AGM and Gel Lead Acid; Ni-Cd are rechargeable in the same device. Charging curves can be customized via Modbus (only in some models). Output dry contacts are used to signal both backup and fault conditions. A rugged casing with bracket for DIN rail mounting provides IP20 protection degree.

# **Main Characteristics**



- Universal input voltage: single-phase 115-230-277 Vac
- Load output:24 Vdc 3,5,10,20A; 12 Vdc 3,6,10,15,35A 48 Vdc 5,10A
- Battery output:24 Vdc 3,5,10,20A; 12 Vdc 3,6,10,15,35A; 48 Vdc 5,10A
- "All In One" solution: power supply + battery charger + backup module in one single device connected directly to the mains
- Suited for different battery types: Open Lead Acid, Sealed Lead Acid, AGM and Gel Lead Acid; Ni-Cd and Li-ion are available as options. Four stage charging curve for Lead Acid batteries: 5-stage IUoU (Recovery, Bulk, Absorption, Float, Refresh Battery) plus Recovery stage for deeply discharged batteries
- Automatic diagnosis of battery status and battery Life Test function (Battery Care)
- · Switching technology with high efficiency
- Protected against short circuit, overload and inverted polarity
- Output dry contact for signaling Low Battery or Battery Replacement and Fault system
- Output dry contact for signaling Mains or Backup
- IP20 protection degree
- Space saving on DIN rail

#### Safety and warning notes

**WARNING** – Explosion Hazard. Do not disconnect Equipment unless power has been switched off or the area is known to be non-hazardous.

WARNING - Explosion Hazard. Substitution of components may impair suitability for class I, Division 2.

**WARNING** – Switch off the system before connecting the module. Never work on the machine when it is live. The device must be installed in according with UL508 or UL60950. The device must have a suitable isolating facility outside the power supply unit, via which can be switched to idle. Danger of fatal Injury! **WARNING** - Residual voltage. Wait for 10 seconds before to operate on the device CBI2420A and CBI485A.

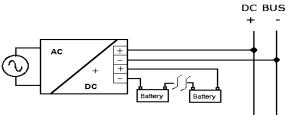
# Connection (terminal and wiring):

Cable Connection: The following cable cross-sections may be used:

				ing cable		1100 0.00	<b>.</b>			
F		Solid	Stranded	AWG	Torque (Nm)	Stripping	All In One	1 Phase L N PE	1 Phase L N PE	
		(mm²)	(mm²)	AWG	roique (Mill)	Length	(Size)	Input AC	Input AC	
F	In:	0.2 – 2.5	0.2 – 2.5	24 – 14	0.5 – 0.6 Nm	7 mm	Size 1 and 2			
		4.0	6.0	30 – 10	0.8 – 1.0 Nm	7 mm	Size 3 and 4			
ſ	Out:	0.2 – 2.5	0.2 – 2.5	24 – 14	0.5 – 0.6 Nm	7 mm	Size 1 and 2			
	Out.	4.0	6.0	30 – 10	0.8 – 1.0 Nm	7 mm	Size 3 and 4			
	Signal:	0.2 – 2.5	0.2 – 2.5	24 – 14	0.5 – 0.6 Nm	7 mm	All types	DC	DC — —	

The connection is made by the screw type 2.5 mm2 or 4.0 mm2 terminal blocks. Wiring terminal shall be marked to indicate the proper connection for the power supply. Use copper cables only, for supply connections, use wires suitable for at least 75°C.

## **Output Power connections**

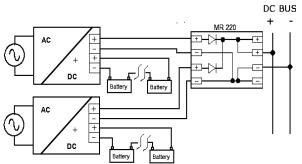


#### Normal connection

Typical application for All In One device, one output for Load "DC Bus", one Input / Output for connection to the battery. N°1 battery (12 Vdc) for CBI 12xx;

N°2 battery (12 Vdc) connected in Series for CBI 24xx;

N°4 battery (12 Vdc) connected in Series for CBI 48xx;

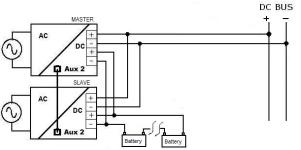


### <sup>US</sup> Parallel connection "Redundancy"

Parallel connection "Redundancy"

Power supplies can be paralleled in case of redundancy concept, to obtain a higher system reliability. Redundant systems may support N+1 redundancy to safeguard against single-point failures, or to enable hot-swapping of a failed supply without system impact. The simplest way is to put two CBI in parallel. In case one power supply unit fails, the other one is automatically able to support the load current without any interruption. To isolate completely the ipotetic device fail, it is necessary add the decoupling diodes which are included in the

Redundancy Module MR220. Recommendations for building redundant power systems: a) Use separate input fuses for each CBI. b) Monitor the individual CBI units by three LED. Each unit has two relays: Mains or backup and Low Battery or Battery Replacement (faulty situation). This feature reports a faulty unit; see Relay Contact Rating for any technical detail. c) When possible, connect each power supply to different phases or circuits.



#### Parallel connection "Double Power"

Power supply can be paralleled to increase the output power, devices can be paralleled for 1+1=2 to obtain the double power of a single unit. The possibility to put in parallel connection it is only in SIZE 3 devices in the specific "P" version (i.e.CBI1235AP, CBI2420AP, CBI4810AP), to be reach the sum of the current at the same output voltage. It is necessary to use a standard UTP or order Cable code: ERJ.CBI.004 for RJ45, and connect by Aux2 of each device. The communication protocol is based on CAN2.0A standard.

In this way the system has only One output for the Load and One output for the battery.

a) Use separate input fuses for each CBI.

b) Make sure that the two CBI have the same settings: Battery type, Charging level current, Time buffering, Life test...

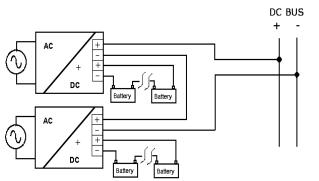
c) Automatic configuration, Master-Slave. The devices decide themselves Master and Slave assignment random. The assignment become able every power on, or after the connection of the cable RJ45. Master device give you all the visual signals, the Slave device maintain diagnosis LED always ON.

d) Use the alarm contacts of both the two devices and deliver them at will.

e) For Start Battery there are two way, without mains voltage:

- push start button on both units

- connect Cable "RTCONN" on position 5, to connect pushbutton on a front panel.



# Series connection:

It is possible to connect as many units in series as needed, providing the sum of the output voltage does not exceed 150Vdc. b) Voltages with a potential above 60Vdc are not SELV anymore and can be dangerous. Such voltages must be installed with a protection against touching. c) For serial operation use power supplies of the same type. d) Earthing of the output is required when the sum of the output voltage is above 60Vdc. e) Keep an installation clearance of 10 mm (left/right) between two power supplies and avoid installing the power supplies on top of each other. Note: Avoid return voltage (e.g. from a decelerating motor or battery) which is applied to the output terminals.

# **Output Load (Mains input ON)**

The output Load in normal mode, Mains Input Vac Voltage present, follow the charging battery dc output voltage. The minimum and maximum range stabilized are the following:

CBI 12xx:11 – 14,4 Vdc; 15,5 Vdc for NiCd (Without battery connected out. Voltage fixed at 12Vdc)

CBI 24xx:22 – 28.8 Vdc; 30 Vdc for NiCd (Without battery connected out. Voltage fixed at 24Vdc)

CBI 48xx:44 – 57.6 Vdc; 62 Vdc for NiCd (Without battery connected out. Voltage fixed at 48Vdc)

Thanks to the All In One units, it will be possible to manage the power. The available power, is automatically allocated between load and battery: supplying power to the load is the first priority of the unit; thus it is not necessary to double the power and also the power available for the battery will go to the load if the load requires it.

In "Power Boost Mode" the maximum current on the load output is the 2 times the rated current 2 x In (Iload = In+ Ibatt) in continuous operation and 3 times the rated current 3 x In (Iload = 2In+ Ibatt) for 4 seconds; after this parameter the devices is electrically protected against overload and short circuit.

- In "Power Boost Mode", if the current of the battery generate current to the load for a time more than 4 minutes, the device give message (8 Blink), consequently means that the battery is discharging. If the Mains Input Voltage fall below a Threshold level (50% of the Typ. Vac input) the battery is immediately connected to the Output Load, without any interruption.
- Voltage dips: In this situation the voltage in the output load it is the same of the battery.

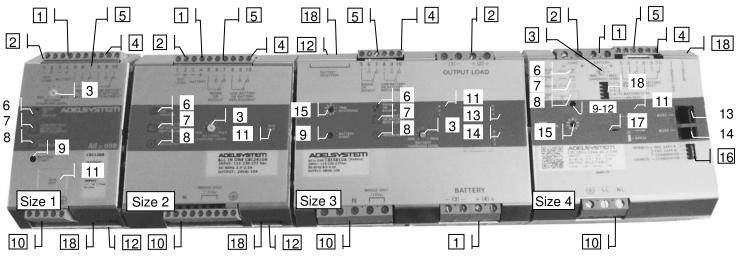
**To Avoid deep battery discharge**, the battery will supply the load until battery voltage reaches 1.5 V/cell. Below this level the device automatically switches off to prevent Deep discharge and battery damage.

# **Output Load In Buffer Mode (Mains Input OFF)**

Some example of buffering time depending on LOAD Output in function to the Ah of the battery.

Buffering Time	BATT1.2 Ah	BATT 3 Ah	BATT7.2 Ah	BATT12 Ah	BATT100 Ah
Load 1.5 A	20 min	60 min	200 min	400 min	/
Load 3 A	8 min	30 min	120 min	240 min	/
Load 5 A	3 min	15 min	55 min	100 min	/
Load 7.5 A	2 min	10 min	30 min	60 min	/
Load 10 A	No	7 min	20 min	45 min	20 h
Load 12 A	No	3 min	12 min	30 min	600 min
Load 15 A	No	No	9 min	20 min	400 min
Load 20 A	No	No	7 min	13 min	240 min

# **Operating and Display Element:**



# No. 1: Battery Connection Port:

Connect the battery between pin. 3 (-) and 4 (+)

One battery (12 Vdc) for CBI12xx;

Two battery (12 Vdc) connected in Series for CBI24xx;

Four battery (12 Vdc) connected in Series for CBI48xx;

#### No. 2: Output Load:

Connect this Output to the load 1 (-). 2 (+).

# No. 3: Charging Level Current:



In order to protect the battery from excessive charging currents, the device allows you to limit the maximum charge current by adjusting the trimmer. It allows you to limit from max In up to 20% of current In. To determine the maximum battery charge current, see the battery manufacturer's Data Sheet, If it is not possible, consider that on average the maximum charge current is 10% of Ah's rated battery current; The data is suitable for both Lead Acid and NiCd batteries.

# No. 4, 5 Signal Ports (Output Isolated):

Connections for,

No. 5: MAINS OR BACKUP: Input Mains On/Off. Contact: 5, 6, 7

No. 4: LOW BATTERY, BATTERY REPLACEMENT, FAULT BATTERY or FAULT SYSTEM Contact: 8,9,10

#### **Relay Contact Rating:**

Max.DC1: 30 Vdc 1 A; AC1: 60 Vac 1A: Resistive load (EN 60947-4-1) Min.1mA at 5 Vdc: Min. permissive load

Signal Output port true table:		· · · Wains/back-up			- Led N°7 Battery
		5-6 Closed	5-7 Closed	8-9 Closed (OK)	8-10 Closed
Maina Input Vaa	ON	Ied off		Ied off	
Mains Input Vac	OFF		Ied On (1)	Ied off	
The battery in BackUP it is less than	YES		∎ - led On		■ - led On (2)
30% cap?	NO		Ied On	Ied off	
Battery or system	YES	Ied off			Ied On
Fault?	NO	Ied off		Ied off	

Note:

(1) Contact relay Mains/Back switch at least 5 seconds after disconnection of Power.

(2) See Diagnosis Led

# No. 6, 7 and 8 Display Signals

No.6: Led MAINS OR BACKUP: Input Mains On/Off

No.7: Led LOW BATTERY (capacity less than 30%), BATTERY REPLACEMENT, FAULT BATTERY or FAULT SYSTEM.

No.8: Led DIAGNOSIS: Battery charge mode,

Led Diagnosis. Diagnosis of the system through "blinking code" signal Light

#### State of Charge

Monitoring Control Chart:	State	Led DIAGNOSIS (No.8)	LED BATTERY FAULT (No.7)
Charaina	Float	1 Blink/2 sec	OFF
Charging	Absorption	1 Blink/sec	OFF
Туре	Boost	2 Blink/sec	OFF
	Recovery	5 Blink/sec	OFF

#### Fault Battery / Fault System

aut System		
Reverse polarity or high battery Voltage (over 32.5Vdc for CBI 24xxA)	1 Blink/pause J	ON
Battery No connected	2 Blink/pause 💵	ON
Element in Short Circuit	3 Blink/pause 🎩	ON
Over Load or short circuit on the load	4 Blink/pause 💵	ON
Bad battery; Internal impedance Bad or Bad battery wire connection	5 Blink/pause JMM_	ON
Life test not possible	6 Blink/pause 🌆	ON
Boost condition; battery discharge after 4 min. of overload.	8 Blink/pause JMM_	ON
Internal fault	9 Blink/pause JMM	ON
Low battery (under 18.5Vdc for CBI 24xxA) Only if started		
from battery, no Mains input, from Jumper N°5 or Push Bottom	10 Blink/pause JMM	ON
MODBUS error	11 Blink/pause JMM_	ON
Life test not possible; Parallel mode on Slave Device	12 Blink/pause JMM_	ON
Bad battery wire connection; Parallel mode on Slave Device	13 Blink/pause MM_	ON
Boost condition; battery discharge after 4 min. of overload; Parallel mode on Slave Device	15 Blink/pause JMM	ON
	Reverse polarity or high battery Voltage (over 32.5Vdc for CBI 24xxA) Battery No connected Element in Short Circuit Over Load or short circuit on the load Bad battery; Internal impedance Bad or Bad battery wire connection Life test not possible Boost condition; battery discharge after 4 min. of overload. Internal fault Low battery (under 18.5Vdc for CBI 24xxA) Only if started from battery, no Mains input, from Jumper N°5 or Push Bottom MODBUS error Life test not possible; Parallel mode on Slave Device Bad battery wire connection; Parallel mode on Slave Device Boost condition; battery discharge after 4 min. of overload;	Reverse polarity or high battery Voltage (over 32.5Vdc for CBI 24xxA)       1 Blink/pause JL         Battery No connected       2 Blink/pause JL         Element in Short Circuit       3 Blink/pause JL         Over Load or short circuit on the load       4 Blink/pause JL         Bad battery; Internal impedance Bad or Bad battery wire connection       5 Blink/pause JLL         Life test not possible       6 Blink/pause JLL         Boost condition; battery discharge after 4 min. of overload.       8 Blink/pause JLL         Internal fault       9 Blink/pause JLL         Low battery (under 18.5Vdc for CBI 24xxA) Only if started from battery, no Mains input, from Jumper N°5 or Push Bottom       10 Blink/pause JLL

# No. 9, 12: Start from Battery Only; No Mains Vac



No. 9: Push-bottom, for 3 sec., in the front panel for switch ON the system without the "Mains input Vac" but only the battery connected. (Not present in CBI 2410XX and CBI 485XX)

No.12: (Jumper n.5) It is also available the same function for remote start from the battery, via RTCONN cable connected in the Push-bottom mounted on front Panel of the external system. Standard function for all products, Size 2 only with code CBI2410A/S and CBI485A/S. Do not leave jumper in this position, otherwise the system will discharge completely the battery. Only push bottom.

# No. 10: Input AC Port pin. L – N:



1 Phase Switching Power Supplies L, N, PE <sup>①</sup>.

Size 2 and Size 3 BRIDGE ONLY for input 115 Vac, and connect L, N, PE  $^{\oplus}$ .

# No. 11: Auxiliary Output "AUX 1"

Remove the window label to find the connector.

It is possible to connect the Temperature sensor probe and apply it on the battery. The function of the probe is for temperature battery compensation. With this it is possible to active the specifications of the EN54-4 fire norm.

Size 1,2,3

# Size 4

#### Battery Temperature Compensation Charge (not for NiCd)

Connecting to Auxiliary Output AUX1 the cable RJTEMP (supplied separately), the CBI will vary the voltage of battery charging depending on the temperature:

Fast Charge	Float charge
+/-5mV/°C x n. of Cells from -8°C to +60°C	+/-3mV/°C x n. of Cells from -20°C to +60°C
+140mV/Cell ÷ -200mV/Cell compared to the value	+120mV/Cell ÷ -120mV/Cell compared to the
at 20°C	value at 20°C

The device stops to charge the battery If the temperature is less than -20°C or greater than +60°C. The alarm fault battery could be signalled by 7 blink code.

The sensor placed on cable RJTEMP must be applied on the battery.

#### No. 13: Auxiliary Output "AUX 2"

Present only in Sizes 3 and Sizes 4, connection MODBUS via RJ45 connector. See instruction MODBUS communications protocol. (CANBUS to be implemented).

#### No. 14: Auxiliary Output "AUX 3"

Present only in Sizes 4. The function is the same of Auxiliary Output "AUX 2"

#### No. 15: Buffering Time Setting (Size 3-4)

On models Size 3 and Size 4 is possible to set a buffering time. It can be selected by setting the desired value on the rotary switch 15. Buffering time is initiated when the mains is switched OFF. The LOAD output will be ON for the selected time.

Switch position	0	1	2	3	4	5	6	7	8	9
Buffering Time (min.)	8	0.5	2	5	10	15	20	30	45	60

If the switch is in position 0, the LOAD output will be in ON state until the battery is completed discharged. Any way to prevent damage risks, the unit disconnects the batteries when a minimum voltage level is reached.

The LOAD output will be in ON state until the battery it is completed discharged. It is however possible to request factory customized versions with specific buffering time setting, for units Size 1 or 2, you have two choose the extension CBIxxxxSDxx.

# No. 16: Bus Termination (Size 4)

Read the MODBUS/CANBUS instruction manual to learn about the operational functions available. Dip Switch Setting always active during all states of the system.

#### No. 17: Select Output Voltage (Size4)

Caution: Switch off the system before Setting the Jumper



# No. 18: Battery Management Configurations (Sizes 1,2,3,4)

Preliminary Operations: One device for all battery types.

Completely automatic, all devices are suitable to charge most batteries types thank to User Selectable charging curves. They can charge open lead acid, sealed lead acid, Gel, Ni-Cd and Li-Ion. It is possible to change or add other charging curves connecting the device to a portable PC.

Caution: Switch off the system before Setting the jumper. Only jumper in position 6 is Refreshed also with power ON.



Don't use Ni-Cd charging configuration in battery less than 7 Ah.

OFF ON

Battery Type Sele	ction (Only for	CBI485A and	d CBI485A/S)			
	Jumper Position (Size 1)	Jumper Position (Size 2)	Jumper Position (Size 3)	Dip Switch Position (Size 4)	Float charge (Volt/Cell)	Fast charge (Volt/Cell)
Open Lead					2.23	2.40
AGM Low					2.25	2.40
AGM High					2.27	2.40
Gel Battery					2.30	2.40

Battery Type cher	mistry Selection	ı				
	Jumper Position (Size 1)	Jumper Position (Size 2)	Jumper Position (Size 3)	Dip Switch Position (Size 4)	Float charge (Volt/Cell)	Fast charge (Volt/Cell)
Open Lead				1 2 3 4 5 6 0N	2.23	2.40
(AGM) Low				1 2 3 4 5 6 0N	2.25	2.40
Gel Battery				1 2 3 4 5 6 ON	2.30	2.40
NiCd				1 2 3 4 5 6 ON	1.4V/cell (12V:10 cells) (24V:20 cells) (48V:40 cells)	1.5V/cell (12V:10 cells) (24V:20 cells) (48V:40 cells)
Li-lon (4)				1 2 3 4 5 6 0N	<b>3.45</b> (12V:4 cells) (24V:8 cells)	3.65 (12V:4 cells) (24V:8 cells)
Custom Charging Config (6)				1 2 3 4 5 6 0N	Config by D ADELViews	

Functional Settin	ng			Function
Battery Life test ON			1 2 3 4 5 6 ON	Jumper present or dip switch ON: Life test enabled (not for NiCd)
Fast Charge Enable (3)				Jumper present: Fast Charge enabled. It is possible remote Fast Charge enabling by RTCONN cable
"Start from Battery" (without Input Mains) (1)			BATTERY START	Switch ON the system without the "Mains In Vac", only the battery is connected. For connection to external Push button use RTCONN cable
UPS Disabling (2)				If jumper removed: UPS function disabled Use RTCONN cable for connection to external Contact.

#### Notice:

- 1 Do not leave the jumper in position 5 (Size 1, 3) or position 6 (Size 2) or Battery Start (Size 4); otherwise, in Backup mode, the battery discharges completely close to Zero. For Size 2: must be require CBI2410A/S or CBI485A/S (/S means start with battery functions, otherwise only start with Input Mains)
- 2 CBI2420A, CBI1235A, CBI4810A, CBI24xxASDxx Replaces the fast charge in UPS disabling:
  - <u>Closed contact</u>: back-up (UPS) enabled.
  - System shut down after xx min (it dependes on time minutes required in SD version).
  - Contact open: Inhibit backup function. No UPS enabled.

CBI2801224A

- <u>Closed contact</u>: back-up (UPS) enabled
- Open contact: Inhibit backup function. No UPS enabled.
- 3 Jumper present in Fast Charge means also that every 288h, the device goes in "Cycling Refresh Charging". This mode continues for 85 minutes at the same voltage condition: 2.4V/Cell; for Lead Acid Batteries.
- 4 Please note that it is possible to use lithium-charging curve just with a single BMS Battery. From the release: Size1:12Vdc Output: S13 R6; 24Vdc Output: S13 R7 Size2: 24Vdc Output: S92 R3 Size3:12Vdc, 24Vdc, 48Vdc Output: S40 R13 Size4: S130 R5
- 5 By DPY351 or ADELViewsystem it is possible configure a Customized Charging Curve. After programming it is possible disconnect the programmer and use the device as standalone device.
  - Whit this selection it is possible to change the parameters of the chemistry selected.
    - a. First, you have to select the battery chemistry
    - b. Select "Custom Charging Config".
    - c. Change the parameters with DPY351

Note: If you remove the "Custom Charging Selection" all parameter came back to default chemistry selection

# **Battery Care**

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The Battery Care philosophy is based on algorithms that implement rapid and automatic charging, battery charge optimization during time, flat batteries recovery and real time diagnostic during installation and operation. Elements in short circuit, accidental reverse polarity connection, disconnection of the battery, can easily be detected and removed by help of Blink Code of Diagnosis Led; during the installation and after sell. Each device is suited for all battery types, it is possible setting predefined curves for Open Lead Acid, Sealed Lead Acid, Gel, Ni-Cd (option). They guarantee battery reliability in time by continuously testing the internal impedance status, avoids any possible risk of damages and grants a permanent, reliable and safe connection of the battery to the power supply. The system, through a battery stimulation circuit with algorithms of evaluation of the detected parameter, is able to recognize sulphated batteries or batteries with a short-circuited element. Battery Test: Automatic. Every 60 sec. check battery connection. Every 220 minute in Float charge, make the test of the battery efficiency. The Battery Fault will be monitored by relay and led blinking.

# Diagnostic Type Checks:

# Check for accidental disconnection of the battery cables:

All In One detects accidental disconnection and immediately switched off the output power.

# Battery not connected:

If the battery is not connected no output power.

#### Test of quality wire connections:

During Float charge the quality (resistance) on the battery connection is checked every 60 sec. This to detect if the cable connection has been properly made.

#### Battery in Open Circuit or Sulphated:

In Float charging mode, the All In One performs internal impedance test every 220 minutes.

#### **Reverse Polarity check:**

If the battery it is connected with inverted polarity, All In One is automatically protected.

#### Test of battery voltage connections:

Appropriate voltage check, to prevent connection of wrong battery types, more or less than the nominal voltage. **End of Charge check** 

# When the battery is completely fully charged, the device automatically switch in Float charging mode.

# Check for Battery Cells in short circuit

Thanks to specific algorithms of evaluation, the CBs recognize batteries with cells in internal short circuit.

In Float charge every 220 minutes test of element in short circuit.

# Diagnosis of battery and device

All CBI devices support the user during installation and operation. A Blink code of Diagnosis Led allows to discriminate among various possible faults.

Error conditions, "LED Battery Fault" ON and "LED Diagnosis" blinking with sequence; see Display Signal section.

#### **Protection Features**

On the primary side: the device is equipped whit an internally fuse. If the internal fuse is activated, it is most probable that there is a fault in the device. If happen, the device must be checked in the factory.

On the secondary side Battery and load: The device is electrically protected against short circuits and overload.

**Inversion polarity:** the module it is automatically protected against inversion of battery polarity and connection of load inverted.

Over current and output short circuit: the unit limits the output current (see the technical data).

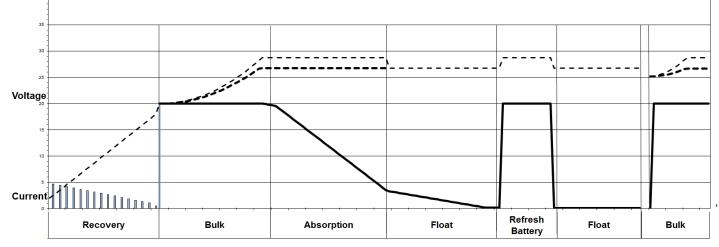
Deep discharge: not possible. The unit disconnects the battery when a minimum voltage level is reached.

### Thermal behaviour

Surrounding air temperature 50°C. For ambient temperature of over 50°C, the output current must be reduced by 2.5% per °C. Max 70°C At the temperature of 70°C the output current will be 50% of In. The equipment does not switch off in case of ambient temperature above 70°C or thermal overload. The devices are protected for Over temperature conditions "worst case"; in this situation the device Shut-down the output and automatic restart when temperature inside fall.

# **Charging Curve**

Automatic multi-stage operation and real time diagnostic allows fast recharge and recovery of deep discharged batteries, adding value and reliability to the system hosting the CBI device. The type of charging is Voltages stabilized and Current stabilized IUoU. Five charging phases are identified by a flashing code on a Diagnosis LED. To maintain the Output Load in lower Voltage state, don't put jumper in position 6, in this case no boost charge but only Float charge. Fast/Bulk Charge means also that every 288h, the device goes in "Cycling Refresh Charging" for 85 minutes at 2.4V/Cell.



# **Standard and Certifications**

#### Electrical Safety for Mounting:

Device assembling: UL508, IEC/EN 60950 (VDE 0805) and EN 50178 (VDE 0160). Installation according: IEC/EN 60950. Input / Output separation: SELV EN 60950-1 and PELV EN 60204-1. Double or reinforced insulation. Safety of Electrical Equipment Machines: EN 60204-1.

€ In According to EMC 2014/30/UE and Low voltage directive 2014/35/UE

Safety Standards: EN IEC 62368-1: 2014/AC:2015

#### EMC Standards Immunity:

EN 61000-4-2, EN 61000-4-3, EN 61000-6-2, EN 61000-4-4, EN 61000-4-5.

#### **EMC Standards Emission:**

EN 61000-6-4, EN 61000-6-3, EN 61000-3-2 (see data sheet for each device)

#### Conformity to:

EN60950/UL60950-1 and CSA C22.2 No. 60950-1-07 (Information Technology Equipment) – Safety – Part1: General Requirement. Requirement.

Device is intended to be installed in a cabinet protected from external shocks or damages.

Electrical safety EN54-4 Fire Detection and fire alarm systems

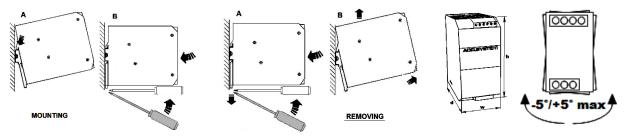
DIN41772: Charging curve; DIN41773: Characteristic Curve for charging Lead Acid and Nickel-Cadmium batteries. **Approved:** 

Devices, CBI243A, CBI245A, CBI123A, CBI126A, CBI1210A,CBI2410A and\S, CBI485A and \S, CBI1235A, CBI2420A, CBI4810A

EN60950 / UL60950-1 and CSA C22.2 No. 60950-1-07 (Information Technology Equipment) - Safety - Part1: General Requirement. 3

# **Rail Mounting:**

All modules must have a minimum vertical and horizontal distance of 10 cm to this power supply in order to guarantee sufficient auto convection. Depending on the ambient temperature and load of the device, the temperature of the housing can become very high.



#### ADELSYSTEM

											www.adelsystem.com
DC Ups - All in ONE	12/24Vdc			12	/dc		24	Vdc		4	l8Vdc
Input (Volt)	115 – 230 – 277Vac	115 – 230 – 277Vac	115 – 230 – 277Vac	115 – 230 – 277Vac	115 - 230 - 277Vac	115 – 230 – 277Vac	115 – 230 – 277Vac	115 – 230 – 277Vac	115 – 230 – 277Vac	115 – 230 – 277Vac	115 - 230 - 277Vac
Output (Vdc - A - W) Reference	12-24V /15-10A /280W CBI2801224A	12Vdc - 3A - 36W CBI123A	12Vdc - 6A - 72W CBI126A	12Vdc - 10A - 120W CBI1210A	12Vdc - 35A - 420W CBI1235A	24Vdc - 3A - 72W CBI243A	24Vdc - 5A - 120W CBI245A	24Vdc - 10A - 240W CBI2410A	24Vdc - 20A - 500W CBI2420A	48Vdc - 5A - 240W CBI485A	48Vdc - 10A - 500W CBI4810A
INPUT DATA	CB12001224A	CBI123A	CBI126A	CBI1210A	CBI1235A	CBI243A	CBI245A	CBI2410A	CBI2420A	CBI465A	CBI46TUA
Nominal Input Voltage	115 - 230 - 277Vac 90 - 135Vac	115 - 230 - 277Vac	115 - 230 - 277Vac	115 - 230 - 277Vac	115 - 230 - 277Vac 90 - 135Vac	115 - 230 - 277Vac	115 - 230 - 277Vac	115 - 230 - 277Vac 90 - 135Vac	115 - 230 - 277Vac 90 - 135Vac	115 - 230 - 277Vac 90 - 135Vac	115 - 230 - 277Vac 90 - 135Vac
Voltage Range	180 - 305Vac	90 – 305Vac	90 – 305Vac	90 – 305Vac	180 - 305Vac	90 – 305Vac	90 – 305Vac	180 - 305Vac	180 - 305Vac	180 - 305Vac	180 - 305Vac
Inrush Current (Vn and In Load) I <sup>2</sup> t	< 16 A < 5msec 47 - 63 Hz	< 11 A < 5msec 47 - 63 Hz	≤ 11 A ≤ 5msec 47 - 63 Hz	11 A < 5msec     47 - 63 Hz     4	< 35 A < 5msec 47 - 63 Hz	< 11 A < 5msec 47 - 63 Hz	≤ 11 A ≤ 5msec 47 - 63 Hz	< 16 A < 5msec 47 - 63 Hz	≤ 35 A ≤ 5msec 47 - 63 Hz	≤ 16 A ≤ 5msec 47 - 63 Hz	< 35 A ≤ 5msec 47 - 63 Hz
Frequency Input Current (115 – 230Vac)	47 - 63 HZ 5.5 - 3.0 - 2.0A	47 - 63 HZ 1.91 - 0.96A	47 - 63 HZ 1.91 - 0.96A	47 – 63 HZ 2.8 – 1.38A	47 – 63 Hz 9.0 – 4.5A	47 – 63 HZ 2.8 – 1.3A	47 – 63 HZ 2.8 – 1.3A	47 – 63 HZ 5 – 2.5A	47 - 63 HZ 9.0 - 4.5A	47 – 63 HZ 5 – 2.5A	47 - 63 Hz 9.0 - 4.5A
Internal Fuse	6.3A	4A	4A	4A	10A	4A	4A	6.3A	10A	6.3A	10A
External Fuse (recommended) OUTPUT DATA	16A	10A	10A	10A	16A	10A	10A	16A	16A	16A	16A
Output Vdc /in	12Vdc 15A / 24Vdc 10A	12Vdc - 3A	12Vdc - 6A	12Vdc - 10A	12Vdc - 35A	24Vdc - 3A	24Vdc - 5A	24Vdc - 10A	24Vdc - 20A	48Vdc - 5A	48Vdc - 10A
Output Current (In)	15A / 10A	3A	6A	10A	35A	3A	5A	10A	20A	5A	10A
Dissipation Power load max (W) Efficiency (50% of In)	28	17 ≥ 90%	17 ≥ 90%	17 ≥ 90%	48 > 91%	13 ≥ 90%	17 ≥ 90%	28 ≥ 83%	48 > 91%	28 ≥ 83%	54 > 91%
Residual Ripple	≤ 80 mVpp	≤ 60 mVpp	≤ 60 mVpp	≥ 90% ≤ 60 mVpp	≤ 80 mVpp	≤ 60 mVpp	≥ 90% ≤ 60 mVpp	≥ 60 mVpp	≤ 80 mVpp	≤ 80 mVpp	≤ 60 mVpp
Short-circuit protection	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Over Load protection Over Voltage Output protection	Yes Yes (Typ. 35Vdc)	Yes Yes (Typ. 35Vdc)	Yes Yes (Typ. 35Vdc)	Yes Yes (Typ. 35Vdc)	Yes Yes (Typ. 35Vdc)	Yes Yes (Typ. 35Vdc)	Yes Yes (Typ. 35Vdc)	Yes Yes (Typ. 35Vdc)	Yes Yes (Typ. 35Vdc)	Yes Yes (Typ. 90Vdc)	Yes Yes (Typ. 90Vdc)
Overheating Thermal Protection	Yes (Typ. 35Vdc) Yes	Yes (Typ. 35Vdc) Yes	Yes (Typ. 35Vdc) Yes	Yes (Typ. 35Vdc) Yes	Yes (Typ. 35Vdc) Yes	Yes (Typ. 35Vdc) Yes	Yes (Typ. 35Vdc) Yes	Yes (Typ. 35 Vdc) Yes	Yes (Typ. 35 Vdc) Yes	Yes (Typ. 90Vdc) Yes	Yes (Typ. 90Vdc) Yes
LOAD OUTPUT		T				1		T	1	1	
Output voltage (at IN) Vdc	10 - 14.4Vdc 22 - 28.8Vdc		10 – 14.4Vdc (17Vdc for Ni-Cd) Yes, Unlimited	10 - 14.4Vdc (17Vdc for Ni-Cd)		22 - 28.8Vdc (31Vdc for Ni-Cd)	22 – 28.8Vdc (31Vdc for Ni-Cd) Yes, Unlimited	22 - 28.8Vdc (31Vdc for Ni-Cd)	22 - 28.8Vdc (31Vdc for Ni-Cd)	44 - 57.6Vdc	44 - 57.6Vdc (62Vdc for Ni-Cd)
Start up with strong load (capacitive load) Output Current In ⊨ lload	Yes, Unlimited 1.1 x In A ± 5%	Yes, Unlimited 1.1 x In A ± 5%	Yes, Unlimited 1.1 x In A ± 5%	Yes, Unlimited 1.1 x In A ± 5%	Yes, Unlimited 1.1 x In A ± 5%	Yes, Unlimited 1.1 x In A ± 5%	Yes, Unlimited 1.1 x In A ± 5%	Yes, Unlimited 1.1 x In A ± 5%	Yes, Unlimited 1.1 x In A ± 5%	Yes, Unlimited 1.1 x In A ± 5%	Yes, Unlimited 1.1 x In A ± 5%
Continuous current (without battery) Iload = In	15A 12Vdc / 10A 24Vdc	3A	6A	10A	35A	3A	5A	10A	20A	5A	10A
Max continuous current (with battery) Iload = In + Ibatt	30A 12Vdc / 20A 24Vdc	6A	12A	20A	70A	6A	10A	20A	40A	10A	20A
Max current Output Load: (Main Input) Iload (4sec.) Max current Output Load: (Back Up) Iload (4sec.)	max. 45A 12Vdc / 30A 24Vdc max. 30A 12Vdc / 20A 24Vdc	9A max 6A max	18A max 12A max	30A max 20A max	105A max 70A max	9A max 6A max	15A max 10A max	30A max 20A max	60A max 40A max	10A max	30A max 20A max
Start From Battery Without Main (Remote Input Control)	RTCONN (cable): Push Button	RTCONN (cable): Push Button	RTCONN (cable): Push Button	RTCONN (cable): Push Button	RTCONN (cable): Push Button	RTCONN (cable): Push Button	RTCONN (cable): Push Button	CBI2410A/S : RTCONN (cable)	RTCONN (cable): Push Button	CBI485A/S : RTCONN (cable)	RTCONN (cable): Push Button
Time Buffering; (switch off output without main input)	0.5;1;3;5;10;15; 20; 30; 45;60;∞	(2)	(2)	(2)	0.5;1;3;5;10;15; 20; 30; 45;60;=	(2)	(2)	(2)	0.5:1:3:5:10:15: 20: 30: 45:60:**	(2)	0.5;1;3;5;10;15; 20; 30; 45;60;∞
Turn-On delay after applying mains voltage	1sec. Max	1sec. Max	1sec. Max	1sec. Max	1sec. Max	1sec. Max	1sec. Max	1.5sec. Max	1sec. Max	1.5sec. Max	1sec. Max
BATTERY CHARGER OUTPUT											
Boost charge (Typ. at I <sub>N</sub> )	14.4Vdc / 28.8Vdc	14.4Vdc	14.4Vdc	14.4Vdc	14.4Vdc	28.8Vdc	28.8Vdc	28.8Vdc	28.8Vdc	57.6Vdc	57.6Vdc
Short circuit Element Detection Max.Time Boost–Bulk charge (Typ. at I <sub>N</sub> )	Yes 15h	Yes 15h	Yes 15h	Yes 15h	Yes 15h	Yes 15h	Yes 15h	Yes 15h	Yes 15h	Yes 15h	Yes 15h
Min.Time Boost–Bulk charge (Typ. at I <sub>N</sub> )	1min.	1min.	1min.	1min.	1min.	1min.	1min.	1min.	1min.	1min.	1min.
Float charge (25 °C) (at In)	13,48Vdc/26,76Vdc	13,48Vdc	13,48Vdc	13,48Vdc	13,48Vdc	26,76Vdc	26,76Vdc	26,76Vdc	26,76Vdc	53,52Vdc	53,52Vdc
Recovery Charge End of charging current (Bulk charge)	2 – 10Vdc / 2 – 20Vdc 6% of charging current limiting	2 - 9Vdc	2 – 9Vdc 0.3A	2 - 9Vdc	2 - 9Vdc	2 - 16Vdc	2 - 16Vdc	2 – 16Vdc 0.3A	2 - 16Vdc	2 - 24Vdc	2 – 16Vdc
Charging max l <sub>batt</sub>	15A ± 5% 12Vdc / 10A ± 5% 24Vdc	3A ± 5%	6A ± 5%	10A ± 5%	35A ± 5%	3A ± 5%	5A ± 5%	10A ± 5%	20A ± 5%	5A ± 5%	10A ± 5%
Charging current Limiting I <sub>N</sub> (I <sub>adj</sub> )			20 ± 100 % / Iwa	20 ÷ 100 % / lue	10 + 100 % / Ibatt	20 ÷ 100 % / Isat	20 + 100 % / I <sub>batt</sub>	20 + 100 % / I <sub>batt</sub>	10 ± 100 % / but	20 ± 100 % / has	10 + 100 % / Ibatt
	10 + 100 % / I <sub>butt</sub>	20 + 100 % / I <sub>batt</sub>	and it food for figures	at the fer the						2011 100 101 108s	
Reverse battery protection	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Reverse battery protection Sulfated battery check	10 ⇒ 100 % / I <sub>bast</sub> Yes Yes by Deep Switch	at the territor	and it food for figures	Yes Yes by Jumper	Yes Yes by Jumper 23 V/cell Open Lead, 2.25 V/cell Seale	Yes Yes by Jumper ed Lead, 2.27 V/cell Sealed Lead, 2	Yes Yes by Jumper 3 V/cell gel; NICd 1.4V/cell ; Li-Ion 3.45	Yes by Jumper	Yes Yes by Jumper	2011 100 101 108s	Yes Yes by Jumper
Reverse battery protection Sulfated battery check Jumper/Switch Config. Battery Type (Li-ion optional) Oulescent Current	Yes Yes by Deep Switch	Yes Yes by Jumper ≤100mA	Yes Yes by Jumper ≤100mA	Yes Yes by Jumper 2 \$100mA	23 V/cell Open Lead, 2.25 V/cell Seale ≤100mA	d Lead, 2.27 V/cell Sealed Lead, 2 ≤100mA	3 V/cell gel; NiCd 1.4V/cell ; Li-Ion 3.45 \$100mA	Yes by Jumper 5/cell ≤100mA	≤100mA	Yes Yes by Jumper ≲100mA	Yes by Jumper ≤100mA
Reverse battery protection Sultistic battery otek Jumper/Switch Config. Battery Type (Li-lon optional) Oulescent Current Remote Input Control (RTCONN cable)	Yes Yes by Deep Switch ≤100mA Boost / Float	Yes Yes by Jumper ≤100mA Boost / Float	Yes Yes by Jumper ≤100mA Boost / Float	Yes Yes by Jumper ≤100mA Boost / Float	23 V/cell Open Lead, 2.25 V/cell Seale ≤100mA Boost / Float	d Lead, 2.27 V/cell Sealed Lead, 2 ≤100mA Boost / Float	3 V/cell gel; NiCd 1.4V/cell ; Li-Ion 3.45 ≤100mA Boost / Float	Yes by Jumper jccell ≤100mA Boost / Float	≤100mA Boost / Float	Yes Yes by Jumper \$100mA Boost / Float	Yes by Jumper ≤100mA Boost / Float
Reverse battery protection Sulfated battery check Jumper/Switch Config. Battery Type (Li-lon optional) Oulescent Current Remote Input Control (RTCONN cable) Threshold Jarm Battery almost flat	Yes Yes by Deep Switch 5100mA Boost / Float 10 – 11 Vidc batt / 20 – 21 Vidc batt	Yes Yes by Jumper ≤100mA Boost / Float 10 - 11 Vdc batt	Yes Yes by Jumper ≤100mA Boost / Float 10 - 11 Vdc batt	Yes Yes by Jumper 2 ≤100mA Boost / Float 10 - 11 Vdc batt	23 V/cell Open Lead, 2.25 V/cell Seale ≤100mA Boost / Float 10 – 11 Vdc batt	d Lead, 2.27 V/cell Sealed Lead, 2 ≤100mA Boost / Float 20 – 21 Vdc batt	3 V/cell gel; NICd 1.4V/cell ; Li-Ion 3.45 ≤100mA Boost / Float 20 - 21 Vdc batt	Yes by Jumper Sicell ≤100mA Boost / Float 20 – 21 Vdc batt	≤100mA Boost / Float 20 – 21 Vdc batt	Yes Vas Yes by Jumper \$100mA Boost / Float 40 - 42 Vdc batt	Yes by Jumper ≤100mA Boost / Float 40 – 42 Vdc batt
Reverse battery protection Sulfated battery check JumperSwitch Config. Battery Type (LI-on optional) Oulescent Current Remote Input Control (RTCONN cable) Threshold alarm Battery almost flat Threshold alarm Battery almost flat LVD. Lew Voltage Disconnection (Protections against total Battery discharge)	Yes Yes by Deep Switch ≤100mA Boost / Float	Yes Yes by Jumper ≤100mA Boost / Float	Yes Yes by Jumper ≤100mA Boost / Float	Yes Yes by Jumper ≤100mA Boost / Float	23 V/cell Open Lead, 2.25 V/cell Seale ≤100mA Boost / Float	d Lead, 2.27 V/cell Sealed Lead, 2 ≤100mA Boost / Float 20 - 21 Vdc batt 19 - 20 Vdc batt	3 V/cell gel; NiCd 1.4V/cell ; Li-Ion 3.45 ≤100mA Boost / Float	Yes by Jumper jccell ≤100mA Boost / Float	≤100mA Boost / Float	Yes Yes by Jumper \$100mA Boost / Float	Yes by Jumper ≤100mA Boost / Float
Reverse battery protection Sultitate battery beak Jumper/Switch Conflig. Battery Type (Li-lon optional) Oulescent Current Remote Input Control (RTCONN cable) Threshold alarm Battery almost flat LVD. Low Voltage Disconnection (Protections against total Battery discharge) Changing Curve: IUdU	Yes Yes by Deep Switch 5100mA Boost / Float 10 – 11 Vidc batt / 20 – 21 Vidc batt	Yes Yes by Jumper ≤100mA Boost / Float 10 - 11 Vdc batt	Yes Yes by Jumper ≤100mA Boost / Float 10 - 11 Vdc batt	Yes Yes by Jumper 2 ≤100mA Boost / Float 10 - 11 Vdc batt	23 V/cell Open Lead, 2.25 V/cell Seale ≤100mA Boost / Float 10 – 11 Vdc batt	d Lead, 2.27 V/cell Sealed Lead, 2 ≤100mA Boost / Float 20 – 21 Vdc batt	3 V/cell gel; NICd 1.4V/cell ; Li-Ion 3.45 ≤100mA Boost / Float 20 - 21 Vdc batt	Yes by Jumper Sicell ≤100mA Boost / Float 20 – 21 Vdc batt	≤100mA Boost / Float 20 – 21 Vdc batt	Yes Vas Yes by Jumper \$100mA Boost / Float 40 - 42 Vdc batt	Yes by Jumper ≤100mA Boost / Float 40 – 42 Vdc batt
Reverse battery protection Sulfated battery check JumperSwitch Config. Battery Type (Li-lon optional) Ouiseacert Current Remote Input Control (RTCONN cable) Threshold alarm Battery almost flat LVD. Low Voltage Disconnection (Protections against total Battery discharge) Charging Curve: IUoU SIGNAL OUTPUT (free switch contacts)	Yes Yes by Deep Switch 5100mA Boost / Float 10 – 11 Vidc batt / 20 – 21 Vidc batt	Yes Yes by Jumper ≤100mA Boost / Float 10 - 11 Vdc batt	Yes Yes by Jumper ≤100mA Boost / Float 10 - 11 Vdc batt	Yes Yes by Jumper 2 ≤100mA Boost / Float 10 - 11 Vdc batt	23 V/cell Open Lead, 2.25 V/cell Seale ≤100mA Boost / Float 10 – 11 Vdc batt	d Lead, 2.27 V/cell Sealed Lead, 2 ≤100mA Boost / Float 20 - 21 Vdc batt 19 - 20 Vdc batt	3 V/cell gel; NICd 1.4V/cell ; Li-Ion 3.45 ≤100mA Boost / Float 20 - 21 Vdc batt	Yes by Jumper Sicell ≤100mA Boost / Float 20 – 21 Vdc batt	≤100mA Boost / Float 20 – 21 Vdc batt	Yes Vas Yes by Jumper \$100mA Boost / Float 40 - 42 Vdc batt	Yes by Jumper ≤100mA Boost / Float 40 – 42 Vdc batt
Reverse battery protection Suitlande battery check Jumper/Switch Conflig. Battery Type (Li-lon optional) Quiescent Current Remote Input Control (RTCONN cable) Threshold alarm Battery almost flat LVD. Low Voltage Disconnection (Protections against total Battery discharge) Charging Curre: UkuU SIGNAL OUTPUT (free switch contacts) Main or Sackup Power Low Battery	Yes         Yes by Deep Switch           ¥100mA         80001 /Fold           10 - 11 Vdc batt / 20 - 21 Vdc batt         9 - 10 Vdc batt / 9 - 20 Vdc batt           9 - 10 Vdc batt / 19 - 20 Vdc batt         9 - 10 Vdc batt           Yes         Yes	Yes         Yes by Jumper           \$100mA         Boost / Float           10 - 11 Vdc batt         9 - 10 Vdc batt           9 - 10 Vdc batt         Yes	Ves by Jumper \$100mA Boost / Float 10 – 11 Vdc batt 9 – 10 Vdc batt Yes Yes	Yes         2           \$100mA         Boost / Poat           10 - 11 Vác batt         9 - 10 Vác batt           9 - 10 Vác batt         Ves	23 Vicell Öpen Lead, 2.25 Vicell Seale \$100mA Boost / Float 10 - 11 Vice batt 9 - 10 Vice batt Yes Yes	d Lead, 2.27 V/cell Sealed Lead, 2 \$100mA Boost / Float 20 - 21 Vidc batt 19 - 20 Vidc batt IUoLio, Automatic, 4 stage Yes Yes	3 Vicel get: NGd 1.4Vicel ; Li-lon 3.42 \$100mA Boost / Float 20 - 21 Vice batt 19 - 20 Vice batt Yes Yes	Yes by Jumper Scall 510mA Boost / Float 20 – 21 Vide batt 19 – 20 Vide batt Yes Yes	\$100mA Boost / Float 20 - 21 Vidc batt 19 - 20 Vidc batt Yes Yes	Yes         Yes by Jumper           \$100mA         Boost / Float           40 - 42 Vdc batt         38 - 42 Vdc batt           38 - 42 Vdc batt         Yes           Yes         Yes	Yes by Jumper \$100mA Boott / Float 40 – 42 Vdc batt 38 – 40 Vdc batt Yes Yes
Reverse battery protection Strillate battery check Jungers/Smith: Config. Battery Type (Li-lon optional) Outscent Current Remote Input Control (RTCONN cable) Threshold alarm Battery almost flat UPL. Low Vollage Disconnection (Protections against total Battery discharge) Charging Curres: USU SIGNAL OUTPUT (free switch contacts) Main or Backup Power Low Battery Fault Battery or System	Ves U beg Switch Ves by Deeg Switch s100mA Boost / Foat 10 – 11 Vdc batt / 20 – 21 Vdc batt 9 – 10 Vdc batt / 19 – 20 Vdc batt	Ves Ves by Jumper s100mA Boost / Float 10 - 11 Vdc batt 9 - 10 Vdc batt Yes	Ves by Jumper \$100mA Boott / foat 10 - 11 Vdc batt 9 - 10 Vdc batt Yes	Yes         Yes           Yes by Jumper         2           \$100mA         8           Boost / Float         10           10         11 Vdc batt           9 – 10 Vdc batt         9	23 Vicell Open Lead, 2.25 Vicell Seale ≤100mA Boost / Float 10 - 11 Vdc batt 9 - 10 Vdc batt Yes	d Lead, 2.27 Vicell Sealed Lead, 2 \$100mA Boost / Float 20 – 21 Vdc batt 19 – 20 Vdc batt IUoUo, Automatic, 4 stage Yes	3 Viceli gel; NiCd 1.4Viceli ; Li-lon 3.48 ≤100mA Boost / Float 20 - 21 Vidc balt 19 - 20 Vidc balt Ves	Yes by Jumper Scell \$100mA Boost / Float 20 – 21 Vdc batt 19 – 20 Vdc batt Yes	\$100mA Boost / Float 20 - 21 Vdc batt 19 - 20 Vdc batt	Ves Ves by Jumper \$100mA Boot / Float 40 – 42 Vdc batt 38 – 42 Vdc batt	Yes by Jumper ≤100mA Boost / Float 40 - 42 Ydo batt 38 - 40 Vdc batt Yes
Reverse battery protection Suitate battery obeck Jumper:Switch Config. Battery Type (L-Ion optional) Guidescent Current Remote Input Control (RTCONN cable) Threshold alarm Battery almost flat LVD. Low Voltage Disconnection (Protections against total Battery discharge) Charging Curve: LIOU SIGNAL OUTPUT (free switch contacts) Main or Backup Power Low Battery Fault Battery or System AUXILARY OUTPUT	Yes         Yes by Deep Switch           ¥100mA         80001 /Fold           10 - 11 Vdc batt / 20 - 21 Vdc batt         9 - 10 Vdc batt / 9 - 20 Vdc batt           9 - 10 Vdc batt / 19 - 20 Vdc batt         9 - 10 Vdc batt           Yes         Yes	Yes         Yes by Jumper           \$100mA         Boost / Float           10 - 11 Vdc batt         9 - 10 Vdc batt           9 - 10 Vdc batt         Yes	Ves by Jumper \$100mA Boost / Float 10 – 11 Vdc batt 9 – 10 Vdc batt Yes Yes	Yes         2           \$100mA         Boost / Poat           10 - 11 Vác batt         9 - 10 Vác batt           9 - 10 Vác batt         Ves	23 Vicell Öpen Lead, 2.25 Vicell Seale \$100mA Boost / Float 10 - 11 Vice batt 9 - 10 Vice batt Yes Yes	d Lead, 2.27 V/cell Sealed Lead, 2 \$100mA Boost / Float 20 - 21 Vidc batt 19 - 20 Vidc batt IUoLio, Automatic, 4 stage Yes Yes	3 Vicel get: NGd 1.4Vicel ; Li-lon 3.42 \$100mA Boost / Float 20 - 21 Vice batt 19 - 20 Vice batt Yes Yes	Yes by Jumper Scall 510mA Boost / Float 20 – 21 Vide batt 19 – 20 Vide batt Yes Yes	\$100mA Boost / Float 20 - 21 Vidc batt 19 - 20 Vidc batt Yes Yes	Yes         Yes by Jumper           \$100mA         Boost / Float           40 - 42 Vdc batt         38 - 42 Vdc batt           38 - 42 Vdc batt         Yes           Yes         Yes	Yes by Jumper \$100mA Boott / Float 40 – 42 Vdc batt 38 – 40 Vdc batt Yes Yes
Reverse battery protection Solliade battery check JumperSwitch Config. Battery Type (L-Ion optional) Dulescent Courted (RTCONN cable) Threshold alarm Battery almost flat LVD. Low Vollage Disconnection (Protections against total Battery discharge) Charging Curve: NoU SIGNAL OUTPUT (free switch contacts) Main or Backyn Power Low Battery Fault Battery or System AUXILIARY OUTPUT UPS Otsabing Temp. Comp. Battery (with external probe)	Yes         Yes by Deep Switch           ¥100mA         Boot/Fold           10 - 11 Vdc ball / 20 - 21 Vdc ball         9 - 10 Vdc ball / 19 - 20 Vdc ball           9 - 10 Vdc ball / 19 - 20 Vdc ball         9           Yes         Yes           Yes         Yes	Yes         Yes           Yes by Junper         \$100mA           Boott / Foal         10 - 11 Vdc batt           10 - 11 Vdc batt         9 - 10 Vdc batt           Yes         Yes	Ves Ves by Jumper st00mA Boost / Foat 10 – 11 Vide batt 9 – 10 Vide batt Ves Ves Ves	Yes         yes           Yes         yunper           2         \$100mA           Boott/Foat         10 - 11 Vdc batt           10 - 11 Vdc batt         9 - 10 Vdc batt           Yes         Yes           Yes         Yes           Yes         Yes	23 Vicell Öpen Lead, 2.25 Vicell Seale \$100mA Boost / Float 10 - 11 Vice batt 9 - 10 Vice batt Yes Yes	bt d.sd, 2.27 Vicell Sealed Lead, 2           \$100mA           Boost / Float           20 - 21 Vide batt           19 - 20 Vide batt           IUdo, Automatic, 4 stage           Yes           Yes	3 Vicel get: NGd 1.4Vicel ; Li-lon 3.42 \$100mA Boost / Float 20 - 21 Vice batt 19 - 20 Vice batt Yes Yes	Yes by Jumper Scell 510mA 800st / Float 20 - 21 Vdc batt 19 - 20 Vdc batt 19 - 20 Vdc batt Yes Yes Yes	5100mA Boost / Float 20 - 21 Vidc batt 19 - 20 Vidc batt Yes Yes Yes	Yes         Yes by Jumper           \$100mA         Boost / Float           40 - 42 Vdc batt         38 - 42 Vdc batt           38 - 42 Vdc batt         Yes           Yes         Yes	Yes by Jumper           ≤ 100mA           Boost / Float           40 - 42 Vdo batt           38 - 40 Vdc batt           Yes           Yes           Yes           No           RU Temp (cable)
Reverse battery protection Suitlande battery check Jumper/Switch Conflig. Battery Type (Li-lon optional) Quiescent Current Remote input Control (RTCONN cable) Threshold alarm Battery almost flat LVD. Low Voltage Disconnection (Protections against total Battery discharge) Charging Curve: UkuU SIGNAL OUTPUT (Ince switch contacts) Main or Backup Power Lev Battery or System Fault Battery or System AUXILIARY OUTPUT UPS Disabiling Temps. Comp. Battery (with external probe) Paralle connection	Ves         Ves           Ves by Deep Switch           st00mA           Boost / Foat           10 - 11 Vidc batt / 20 - 21 Vidc batt           9 - 10 Vidc batt / 19 - 20 Vidc batt           Yes           Yes           Yes           Yes           Yes           Yes           Yes           Yes           Yes           No	Yes         yumper           \$100mA         Boodt /Float           10 - 11 Vdc batt         - 10 Vdc batt           Yes         Yes           Yes         Yes           Yes         Yes           Yes         Yes           Yes         Yes           No         No	Ves         yes           yes         by Jumper           \$100mA         Boost, Float           50 - 11 Vdc batt         0 - 10 Vdc batt           0 - 10 Vdc batt         Ves           Yes         Yes           Yes         Yes           No         No	Ves         yes           2         \$100mA           Boodt / Float         \$10 - 11 Vide batt           10 - 11 Vide batt         \$10 - 11 Vide batt           Yes         Yes           Yes         Yes           Yes         Yes           Yes         Yes           No         No	23 Vicel Open Lead, 2.25 Vicel Sealt <pre>s100mA</pre> 10 - 11 Vice bat 10 - 11 Vice bat 10 - 11 Vice bat 9 - 10 Vice bat Ves Ves Ves No RJ Temp (cable) Ves	of Lead, 227 Vicel Seated Lead, 2 5100mA Boost / Float 20 – 21 Vice batt 19 – 20 Vice batt Ilbolio, Automatic, 4 stage Ves Ves Ves No RJ Temp (cable) No	3 Vioral gel; NG 1 4/Viori ; Li-lon 3.4 5100nA Boott / Float 20 - 21 Vide batt 19 - 20 Vide batt Yes Yes No	Yes by Jumper           Scoll         \$100mA           Boost / Float         20 - 21 Vide batt           19 - 20 Vide batt         19 - 20 Vide batt           Yes         Yes           Yes         Yes           No         No	f00mA     Bost / Plast     20 – 21 V6c bat     19 – 20 V6c bat     Ves     Yes     Yes     No     RJ Temp (cable)     Yes	Yes         Yes by Jumper           \$100mA         Boost / Float           40 - 42 Vidc batt         38 - 42 Vidc batt           Yes         Yes           Yes         Yes	Yes by Jumper           \$100mA           Boot / Float           40 - 42 V& batt           38 - 40 Vdc batt           Yes           Yes           No           FJ Temp (cable)           Yes
Reverse battery protection Solliade battery check JumperSwitch Config. Battery Type (L-Ion optional) Dulescent Courted (RTCONN cable) Threshold alarm Battery almost flat LVD. Low Vollage Disconnection (Protections against total Battery discharge) Charging Curve: NoU SIGNAL OUTPUT (free switch contacts) Main or Backyn Power Low Battery Fault Battery or System AUXILIARY OUTPUT UPS Otsabing Temp. Comp. Battery (with external probe)	Yes         Yes by Deep Switch           \$100mA         \$5001 / Foat           10 - 11 Vidc batt / 20 - 21 Vidc batt         9 - 10 Vidc batt / 19 - 20 Vidc batt           9 - 10 Vidc batt / 19 - 20 Vidc batt         9           Yes         Yes           Yes         Yes           Yes         Yes           Yes         Yes           Yes         Yes	Yes         Ves           100mA         Boost / Float           10-11 Vdc batt         Io-11 Vdc batt           9 - 10 Vdc batt         Ves           Yes         Ves           No         RJ Temp (cable)	Yes         yes           yes         yes           \$100 A         Boost / Float           10 - 11 Vdc batt         9 - 10 Vdc batt           9 - 10 Vdc batt         Yes           Yes         Yes           Yes         Yes           No         No	Yes         yupper           2         \$100mA           Boost / Float         10 - 11 Vdc batt           0 - 10 Vdc batt         \$2           Yes         Yes           Yes         Yes           Yes         Yes           No         No	23 Vicel Open Land, 2.25 Vicel Seals \$100mA Boost / Float 10 - 11 Vic batt 10 - 11 Vic batt 9 - 10 Vic batt Yes Yes No RU Temp (cable)	Lead, 227 Vicell Sealed Lead, 2           \$100mA           Boost / Flast           20 - 21 Vicel Sealed Lead, 2           20 - 21 Vice batt           10 - 20 Vice batt           ILOLD, Automatic, 4 stage           Yes           Yes           No	3 Vioral gel; NG 1 4/Viori ; Li-lon 3.4 5100nA Boott / Float 20 - 21 Vide batt 19 - 20 Vide batt Yes Yes No	Yes by Jumper         100mA           6100mA         6100mA           80ost / Foat         20 - 21 Vide batt           19 - 20 Vide batt         19 - 20 Vide batt           Yes         Yes           Yes         Yes           No         No	100mA     Boost / Float     20 – 21 Vide batt     19 – 20 Vide batt     Yes     Yes     Yes     No     Ru Temp (cable)	Yes         Yes by Jumper           \$100mA         Boost / Float           40 - 42 Vidc batt         38 - 42 Vidc batt           Yes         Yes           Yes         Yes	Yes by Junger           ≤ 100nA           Boot / Float           40 - 42 Vdo batt           38 - 40 Vdo batt           Yes           Yes           Yes           No           RU Temp (cable)
Reverse battery protection Sulliade battery check JumperSwitch Config. Battery Type (L-Ion optional) Quiescent Courrent Remote Input Control (RTCONN cable) Threshold alarm Battery almost flat UPU. Low Vollage Disconnection (Protections against total Battery discharge) Charging Curve: IUoU SIGNAL OUTPUT (res ewitch contacts) Main or Backup Power Low Battery Fauil Battery or System AUXILIARY OUTPUT UPS Disabling Temp. Comp. Battery (with external probe) Paralle connection Remote Enditor (ada. Protocol:	Yes         Yes by Deep Switch           4100mA         Boot / Foot           10 - 11 Vidc batt / 20 - 21 Vidc batt         9 - 10 Vidc batt / 19 - 20 Vidc batt           9 - 10 Vidc batt / 19 - 20 Vidc batt         9           Yes         Yes           Yes         Yes           Yes (HTCCNN cable)         RJ Temp (cable)           N         ModBus hTU           -25 + x0°C         25	Yes         ************************************	Yes         Yes by Jumper           \$100mA         Boost / Foat           10 - 11 Vide batt         10 - 11 Vide batt           9 - 10 Vide batt         Yes           Yes         Yes           Yes         Yes           Yes         Yes           Yes         Yes           No         RU Temp (cable)           No         No           25 + x70°C         25 + x70°C	Yes         2           st0bmA         Boott /Final           10-11 VMc batt         3           30-11 VMc batt         3           Yes         Yes           Yes         Yes           No         R1 Temp (cable)           No         R0           No         R0           25 + 70°C         25 + 70°C	23 Vicel Open Land, 2.25 Vicel Sealt \$100m\ 10 - 11 Vic bat 10 - 11 Vic bat 9 - 10 Vic bat Yes Yes Yes No RJ Temp (cable) Yes Automatical Yes 25 + +70°C	et ead; 227 Vicel Seated Lead; 2           100m/k           Sootr / Roat           20 – 21 Web batt           10 – 20 Web batt           10 – 20 Web batt           No           25 + «70°C	3 Vioral gel; NGC1 4-ViCall; Li-lon 3.4 6100mA 800s1 / Ploat 800s1 / Ploat 800s1 / Ploat 19 – 20 Vide batt 19 – 20 Vide batt 9es Yes Yes No RJ Temp (cable) No 29 + +70°C	Yea by Jumper           Iscall           100mA           80ost /Foat           20 - 21 Vide batt           19 - 20 Vide batt           19 - 20 Vide batt           Yea           Yea           No           RJ Temp (cable)           No           No           25 + +70°C	100mA     Boost / Float     20 - 21 Vide batt     20 - 21 Vide batt     19 - 30 Vide batt     19 - 30 Vide batt     Yes     Yes     Yes     No     RJ Temp (cable)     Yes     Ves     Xedbus     Z5 + 70°C	Yes         Yes by Jumper           #100mA         Boost / Float           40 - 42 Vidc batt         38 - 42 Vidc batt           38 - 42 Vidc batt         Yes           Yes         Yes           No         RJ Temp (cable)           No         No           -25 + +70°C         25 + +70°C	Yes by Junger           \$100nA           Boot / Float           40 - 42 Vdc batt           38 - 40 Vdc batt           38 - 40 Vdc batt           Yes           Yes           Yes           Ves           No           PJ Trmp (cable)           Yes           ModBus           -25 + 70°C
Reverse battery protection Solliade battery eheck Jumper/Switch Config. Battery Type (L-Ion optional) Dulescent Current Remote Input Control (RTCONN cable) Threshold alarm Battery almost flat LVD. Low Voltage Disconnection (Protections against total Battery discharge) Charging Curve: IUoU SIGNAL OUTPUT (free switch contacts) Main or Backup Power Low Battery Main or Dackup Power Low Battery or System AUXILIARY OUTPUT UPS Disabiling Temp. Comp. Battery (with external probe) Paralle connection Remote monitoring data. Protocol: CLIMATIC DATA Ambient Temperature operation De rating Ti- (In)	Yes           Yes by Deep Switch           \$100mA           Boot/Fold           10 - 11 Vac bait / 10 - 21 Vac bait           9 - 10 Vac bait / 10 - 20 Vac bait           Yes           Yes           Yes           Yes           Yes           Yes           Yes           ModBus RTU           -25 + 70°C           > 50° - 25%(n) / *C	Yes         Yes by Junper           \$100mA         Boost / Foal           10 - 11 Vdc batt         9 - 10 Vdc batt           Yes         Yes           Yes         Jarrep (cable)           No         Al Temp (cable)           No         No           25 + r70°C         - 50° - 2.5%(In) / °C	Ves         Ves by Jumper           \$100mA         Boost, Float           10 – 11 Vide batt         9 – 10 Vide batt           9 – 10 Vide batt         Ves           Ves         Ves           Ves         Ves           No         Al Temp (cable)           No         Al Temp (cable)           No         Soft - 25% (n) / *C	Yes         yes           Yes by Jumper         2           \$100mA         Boodt /Foot           10 - 11 Vbc batt         10 - 11 Vbc batt           Yes         Yes           Yes         Xes           No         Al Temp (cable)           No         No           25 + +70°C         - 50° - 2.5%(lng / °C	23 Vicel Open Land, 2.25 Vicel Seals s100mA Boost / Float 10 – 11 Vice batt 9 – 10 Vice batt Yes Yes Yes No RJ Temp (cable) Yes ModBus -25 ++70°C -25 ++70°C	text, 227 Vicel Seated Lext, 2           \$100mA           Boort / Float           20 - 21 We batt           18 - 20 We batt           19 - 20 We batt           Wes           Yes           Yes           No           Ru Temp (cable)           No           Ru Temp (cable)           No           So 59' - 25%(in) / *C	3 Vioral gel; NG 1.4Vioral; Li-lon 3.4 \$100mA Boost / Float 20 – 21 Vdc batt 19 – 20 Vdc batt Yes Yes No RJ Temp (cable) No RS \$60° - 25%(n) / °C	Yes by Jumper           st00mA           Boott / Foat           20 - 21 Vdc batt           19 - 20 Vdc batt           19 - 20 Vdc batt           Ves           Ves           Ves           Ves           Ves           Ves           So           25 + <70°C		Yes         Yes bumper           \$10mA         Boost / Foat           40 - 42 Vdc batt         38 - 42 Vdc batt           38 - 42 Vdc batt         Yes           Yes         Yes           Yes         Yes           No         Plut Temp (cable)           No         No           No         S0           S0         -50" - 2.5%(ht) / "C	Yes by Jumper           \$100mA           Bootr / Float           40 - 42 Vdc batt           38 - 40 Vdc batt           38 - 40 Vdc batt           Yes           Yes           Yes           Yes           Yes           Yes           Yes           Yes           Mo           AU Tronp (coble)           Yes           ModBlus           -25 + 70*C           50* - 25%((n) /*C
Reverse battery protection Stritted battery otheck JumperSwitch Config. Battery Type (Li-Ion optional) Outscent Current Remote Input Confirs (RTCONN cable) Threshold alarm Battery almost that Churging Curres: UI-UU SIGNAL OUTPUT (UPU free switch contacts) Main or Backup Power Low Battery Fault Battery or System AUXILIARY OUTPUT UPS Disabiling Temp. Comp. Battery (with esternal probe) Parallel contering data. Protocol: CLIMATIC DATA Ambient Temperature operation De rating T > (m)	Yes         Yes by Deep Switch           4100mA         Boot / Foot           10 - 11 Vidc batt / 19 - 20 Vidc batt         9 - 10 Vidc batt / 19 - 20 Vidc batt           9 - 10 Vidc batt / 19 - 20 Vidc batt         9           Yes         Yes           Yes	Yes         ************************************	Yes         Yes by Jumper           \$100mA         Boott / Float           10 - 11 V dc batt         Boott / Float           10 - 11 V dc batt         Yes           Yes         Yes           Yes         Yes           Yes         Yes           Yes         Yes           No         RJ Temp (cable)           No         No           25 + + 70°C         - 50° - 2.5%(n) / °C           40 + e8°C         C	Yes         2           1400mA         Boost / Float           10 - 11 Vdc bat         3           10 - 11 Vdc bat         3           Ves         Ves	23 Vcel Open Land, 2.25 Vcel Seak \$100mA 10 - 11 Vdc batt 10 - 11 Vdc batt 10 - 11 Vdc batt 9 - 10 Vdc batt Ves Ves Ves No RJ Trenp (cable) Yes AddBus ModBus 125 + +70°C > 50° - 2.5%(m) / °C	Lead, 22 7 Vicel Seated Lead, 2           21007A           Boost / Float           20 - 21 Vicel Seated Lead, 2           20 - 10 Vice batt           Libito, Automatic, 4 stage           Ves           Ves           No           RJ Temp (cable)           No           So           So           24 + x70°C           25 + x70°C           26 - x85°C	3 Vioral gel; NGC1 4-ViCall; Li-lon 3.4 6100mA 800s1 / Ploat 800s1 / Ploat 800s1 / Ploat 19 – 20 Vide batt 19 – 20 Vide batt 9es Yes Yes No RJ Temp (cable) No 29 + +70°C	Yes by Jumper         100mA           6100mA         6100mA           80ost / Foat         20 - 21 Vdc batt           19 - 20 Vdc batt         19 - 20 Vdc batt           Yes         Yes           Yes         Yes           No         RJ Temp (cable)           No         8           25 + +70°C         -25%(in) / *C           40 + x85°C         25	5100nA Boot / Float 20 – 21 Vide batt 19 – 20 Vide batt 19 – 20 Vide batt Yes Yes No BJ Temp (cable) Yes WesDBus -25 + x70°C -50° - 25%C) / °C	Yes         Yes by Jumper           \$100mA         Boost / Foat           40 - 42 Vic batt         38 - 42 Vic batt           38 - 42 Vic batt         Yes           Yes         Yes           Yes         Yes           No         RJ Temp (cable)           No         No           25 + +70°C         > 50° - C           -40 + #55°C         Here Societ	Yes by Jumper           s100nA           Boot / Float           40 - 42 Vdc batt           38 - 40 Vdc batt           38 - 40 Vdc batt           Yes           Yes           Ves           No           RJ Temp (cable)           Yes           Ves           S5 + r3P*C           > 50* - 2.5%(n) /*C           -40 + 48*C
Reverse battery protection Stritted battery check Jumger/Switch Config. Battery Type (Li-lon optional) Outscort Current Remote Input Control (RTCONN cable) Threshold alarm Battery almost flat Churging Curres: UIOU SIGNAL OUTPUT (Unce switch contacts) Main or Backup Dever Lev Battery Fault Battery or System AUXILARY OUTPUT UPS Disabiling UPS Disabiling Temp. Comp. Battery (with external probe) Parallel connection Remote monitoring data. Protocol: CLIMATIC DATA Battery Operation CLIMATIC DATA Battery Operation De rating T > (h) Aution 2 Scotting Humidity at 25 °C.	Yes           Yes by Deep Switch           \$100mA           Boot/Fold           10 - 11 Vac bait / 10 - 21 Vac bait           9 - 10 Vac bait / 10 - 20 Vac bait           Yes           Yes           Yes           Yes           Yes           Yes           Yes           ModBus RTU           -25 + 70°C           > 50° - 25%(n) / *C	Yes         Yes by Junper           \$100mA         Boost / Foal           10 - 11 Vdc batt         9 - 10 Vdc batt           Yes         Yes           Yes         Jarrep (cable)           No         Al Temp (cable)           No         No           25 + r70°C         - 50° - 2.5%(In) / °C	Ves         Ves by Jumper           \$100mA         Boost, Float           10 – 11 Vide batt         9 – 10 Vide batt           9 – 10 Vide batt         Ves           Ves         Ves           Ves         Ves           No         Al Temp (cable)           No         Al Temp (cable)           No         Soft - 25% (n) / *C	Yes         yes           Yes by Jumper         2           \$100mA         Boodt /Foot           10 - 11 Vbc batt         10 - 11 Vbc batt           Yes         Yes           Yes         Xes           No         Al Temp (cable)           No         No           25 + +70°C         - 50° - 2.5%(lng / °C	23 Vicel Open Land, 2.25 Vicel Seals s100mA Boost / Float 10 – 11 Vice batt 9 – 10 Vice batt Yes Yes Yes No RJ Temp (cable) Yes ModBus -25 ++70°C -25 ++70°C	text, 227 Vicel Seated Lext, 2           \$100mA           Boort / Float           20 - 21 We batt           18 - 20 We batt           19 - 20 We batt           Wes           Yes           Yes           No           Ru Temp (cable)           No           Ru Temp (cable)           No           So 59' - 25%(in) / *C	3 Vioral gel; NG 1 4/Vioral ; Li-lon 3.4 6100nA 6100nA 20 – 21 Vioc Batt 19 – 20 Vioc Batt 19 – 20 Vioc Batt Ves Ves No No No 25 + +70°C 26 + +70°C 26 + = 25%(n) / *C	Yes by Jumper           Soft           Soft           Boost / Float           Boost / Float           20 - 21 Vdc batt           19 - 20 Vdc batt           Yes           Yes           Yes           Yes           Yes           Yes           Yes           No           RJ Temp (cable)           No           Soft - 2, 5%(h) / *C           40 + 45°C           95%           No restrictions	5 100mA Boost / Float 20 – 21 Vide batt 19 – 20 Vide batt 19 – 20 Vide batt Ves Ves No RJ Temp (sable) Yes Modbus 25 + 270°C 25 9° – 255(n) / *C 4 – 455°C 86%	Yes         Yes bumper           \$10mA         Boost / Foat           40 - 42 Vdc batt         38 - 42 Vdc batt           38 - 42 Vdc batt         Yes           Yes         Yes           Yes         Yes           No         Plut Temp (cable)           No         No           No         S0           S0         -50" - 2.5%(ht) / "C	Yes by Jumper           \$100mA           Bootr / Float           40 - 42 Vdc batt           38 - 40 Vdc batt           38 - 40 Vdc batt           Yes           Yes           Yes           Yes           Yes           Yes           Yes           Yes           Mo           AU Tronp (coble)           Yes           ModBlus           -25 + 70*C           50* - 25%((n) /*C
Reverse battery protection Sulliade battery check JumperSwitch Config. Battery Type (L-Ion optional) Quiescent Courrent Remote Input Control (RTCONN cable) Threshold alarm Battery almost flat UPD. Low Vollage Disconnection (Protections against total Battery discharge) Charging Curve: IUoU SIGNAL OUTPUT (res ewitch contacts) Main or Backup Power Low Battery Fauil Battery or System AUXILIARY OUTPUT UPS Obsaining Temp. Comp. Battery (with external probe) Paralle connection Remote molitor gdat. Protocol: CLIMATIC DATA Remote Institute gdat. Protocol: CLIMATIC DATA De rating 17-3 (h) Ambient Temperature operation De rating 17-3 (h) Ambient Temperature Storage Humidity 432 C- Altitude: 200 Colon - 6.5601 ca.000ft	Yes         Yes by Daep Switch           410mA         Bost / Past           10 - 11 Vic balt / 20 - 21 Vic balt         9           9 - 10 Vic balt / 19 - 20 Vic balt         9           Yes         Yes	Yes         yunper           120mA         Boott / Float           10-11 Vdc batt         Boott / Float	Yes         yes           \$100mA         Boost / Float           10 - 11 Vide batt         10 - 11 Vide batt           9 - 10 Vide batt         10 - 11 Vide batt           Yes         Yes           Yes         Yes           Yes         Yes           Yes         Yes           Yes         Yes           No         FG1 Femp (cable)           No         25 + 170°C           > 50° - 2.5%(in) / °C         40 ≠ 45°C           95%         No           No Ferriticions         00+erating 5°C1000m	Yes         yes           Yes         yes           2         st00mA           Boost/FPat         10-11 V4c bat           10-11 V4c bat         10-11 V4c bat           Yes         Yes           Yes         Ves           Ves         Ves           No         R11 Teng (cable)           No         R12 Teng (cable)           No         set           25 + 170°C         set           95%         No           No         set           95%         No           No         Set           95%         No           No         Periative SC1000m	23 Vicel Open Land, 2.25 Vicel Sealt \$100mA Boost / Float 10 - 11 Vic batt 10 - 11 Vic batt 9 - 10 Vic batt Yes Yes No RJ Temp (cable) Yes No RJ Temp (cable) Yes Soft - 2.5%(In) / °C \$67 + 2.5%(In) / °C	et exit, 227 Vicril Seated Lead, 2           \$100mA           Boord / Roat           Boord / Roat           20 - 21 Vicril Seated Lead, 2           20 - 21 Vicril Vice Seatt           Ilkolo, Automatic, 4 stage           Yes           Yes           No           RJ Temp (cable)           No           40 + x85°C           65%           Derating 5°C1000m	3 'Voral gel: NGC 1 4/VGal'; Li-lon 3.4' 4100mA 80xx1 / Float 80xx1 / Float 20 – 21 Vdc batt 19 – 20 Vdc batt 19 – 20 Vdc batt Yes No No RJ Temp (cable) No 26 + +70°C 26 + +70°C 40 + 48°C 46°C 46°C 46°C 46°C	Yes by Jumper           still           still           800st / Float           20 - 21 Vide batt           19 - 20 Vide batt           19 - 20 Vide batt           Ves           Ves           Ves           No           RL Temp (cable)           No           25 + #70*C           > 50" - 2.5%(in) / *C           40 + 48*C           95%           No           Poe-rating \$7C1000m	100mA     Bootr / Foat     20 - 21 Vide batt     20 - 21 Vide batt     19 - 20 Vide batt     19 - 20 Vide batt     Yes     Yes     Yes     No     RU Temp (cable)     Yes     Modbus     507 - 259(k) / *C     40 + 857*C     65%     No reditions     Derating \$5^*C1000m     Derating \$5^*C1000m	Yes         Yes by Jumper           \$100 mA         Boost / Float           40 - 42 Vidc batt         38 - 42 Vidc batt           38 - 42 Vidc batt         38 - 42 Vidc batt           Yes         Yes           Yes         No           RJ Temp (cable)         No           No         No           25 5 + 70°C         > 50° - 2.5%(m) / °C           > 40 - 48°C         96%           No be-rating 5°C/1000m         PC/1000m	Yes by Jumper           \$100mA           Booir // Noat           40 – 42 Vide batt           38 – 40 Vide batt           38 – 40 Vide batt           Yes           Vas           Yes           No           HJ Temp (cable)           Yes           S60*-25%(IN) / *C           -40 + 48°C           96%           No restrictions           De-raing \$7C1000m
Reverse battery protection Suitated battery check JumperSwitch Config. Battery Type (Li-Ion optional) Outscent Current Remote input Control (RTCONN cable) Threshold alarm Battery almost flat (LV). Low Vollage Disconnection (Protections against total Battery discharge) Charging Curres: IUGU SIGNAL, OUTPUT (Ince switch contacts) Main or Backup Power Low Sattery Fauit Battery or System AUXILLARY OUTPUT UPS Disabiling Temp. Comp. Battery (with external probe) Parallel concellon Remote monitoring data. Protocol: CLIMATIC DATA Ambient Temperature operation De rating T > (n) Ambient Temperature Storage Humidity at 25 °C Humidity at 25 °C Humidity at 25 °C Humidity at 25 °C Storage Concellon Humidity at 25 °C Storage Concellon Humidity at 25 °C Storage Concellon Humidity at 25 °C Conting	Yes         Yes by Deep Switch           4100mA         Boot / Float           10 - 11 Valc batt / 20 - 21 Valc batt         9 - 10 Valc batt / 20 - 21 Valc batt           9 - 10 Valc batt / 10 - 20 Valc batt         9 - 10 Valc batt / 10 - 20 Valc batt           Yes         Yes           Yes         Yes	Yes         ************************************	Yes Yes by Jumper \$100mA Boost / Float 10 - 11 V dc batt 0 - 10 V dc batt 9 - 10 V dc batt Yes Yes No RJ Tmp (cable) No RJ Tmp (cable) No 25 + +70°C > 50° - 25%(n) / °C 40 + 85°C 95%.	Yes         2           1100mA         Bood/ FRod           Bood/ FRod         Bood/ FRod           10 - 11 Vide batt         3           9 - 10 Vide batt         Vide batt           Vide         Vide batt           Vide batt         Vide batt <t< td=""><td>23 Vcel Open Land. 2.25 Vcel Seak \$100mA \$100mA 10 - 11 Vdc batt 10 - 11 Vdc batt 10 - 11 Vdc batt Ves Ves No PJ Temp (cable) Yes ModBus 25 + 770°C 25 + 770°C - 40 + 485°C 90%</td><td>Lead, 22 7 Vicel Beated Lead, 2           61007A           Boost / Float           20 – 21 Vice batt           LioUo, Automatic, 4 stage           Ves           Ves           No           No           No           So = (abb)           No           So = 4.970°C           &gt; 50° - 250°(n) / °C           &gt; 40° - 255°(n) / °C           90%           No           No</td><td>3 Vioral (e): NG-1 4-Vicel : Li-lon 3.4 6100nA Boott / Float 20 - 21 Vide bat 19 - 20 Vide bat Yes Yes No RJ Temp (cable) No RJ Temp (cable) No RD - 25 Vide bat -25 + -70°C -50° - 25°C 90%</td><td>Yes by Jumper           Soft           Soft           Boost / Float           Boost / Float           20 - 21 Vdc batt           19 - 20 Vdc batt           Yes           Yes           Yes           Yes           Yes           Yes           Yes           No           RJ Temp (cable)           No           Soft - 2, 5%(h) / *C           40 + 45°C           95%           No restrictions</td><td>5 100mA Boost / Float 20 – 21 Vide batt 19 – 20 Vide batt 19 – 20 Vide batt Ves Ves No RJ Temp (sable) Yes Modbus 25 + 270°C 25 9° – 255(n) / *C 4 – 455°C 86%</td><td>Yes         Yes by Jumper           4100mA         Boost / Float           40 - 42 Vick batt         38 - 42 Vick batt           38 - 42 Vick batt         38 - 42 Vick batt           Yes         Yes           Yes         No           PUT from(cibile)         No           No         -42.5%((m) /*C)           -40 + 485*C         65%           No restrictions         No</td><td>Yes by Jumper           \$100nA           Boot / Float           40 - 42 V&amp; batt           38 - 40 Vdc batt           Yes           Yes           Yes           Yes           No           RJ Temp (cable)           Yes           ModBlus           -25 + r0PC           &gt; 50° - 2.5%(m) / °C           -40 + 48°C           96%           No restrictions</td></t<>	23 Vcel Open Land. 2.25 Vcel Seak \$100mA \$100mA 10 - 11 Vdc batt 10 - 11 Vdc batt 10 - 11 Vdc batt Ves Ves No PJ Temp (cable) Yes ModBus 25 + 770°C 25 + 770°C - 40 + 485°C 90%	Lead, 22 7 Vicel Beated Lead, 2           61007A           Boost / Float           20 – 21 Vice batt           LioUo, Automatic, 4 stage           Ves           Ves           No           No           No           So = (abb)           No           So = 4.970°C           > 50° - 250°(n) / °C           > 40° - 255°(n) / °C           90%           No	3 Vioral (e): NG-1 4-Vicel : Li-lon 3.4 6100nA Boott / Float 20 - 21 Vide bat 19 - 20 Vide bat Yes Yes No RJ Temp (cable) No RJ Temp (cable) No RD - 25 Vide bat -25 + -70°C -50° - 25°C 90%	Yes by Jumper           Soft           Soft           Boost / Float           Boost / Float           20 - 21 Vdc batt           19 - 20 Vdc batt           Yes           Yes           Yes           Yes           Yes           Yes           Yes           No           RJ Temp (cable)           No           Soft - 2, 5%(h) / *C           40 + 45°C           95%           No restrictions	5 100mA Boost / Float 20 – 21 Vide batt 19 – 20 Vide batt 19 – 20 Vide batt Ves Ves No RJ Temp (sable) Yes Modbus 25 + 270°C 25 9° – 255(n) / *C 4 – 455°C 86%	Yes         Yes by Jumper           4100mA         Boost / Float           40 - 42 Vick batt         38 - 42 Vick batt           38 - 42 Vick batt         38 - 42 Vick batt           Yes         Yes           Yes         No           PUT from(cibile)         No           No         -42.5%((m) /*C)           -40 + 485*C         65%           No restrictions         No	Yes by Jumper           \$100nA           Boot / Float           40 - 42 V& batt           38 - 40 Vdc batt           Yes           Yes           Yes           Yes           No           RJ Temp (cable)           Yes           ModBlus           -25 + r0PC           > 50° - 2.5%(m) / °C           -40 + 48°C           96%           No restrictions
Reverse battery protection Suitland battery eheck JumperSwitch Config. Battery Type (L-Ion optional) Quieacent Current Renote Input Control (RTCONN cable) Threshold alarm Battery almost flat LVD. Low Volkes Disconnection (Protections against total Battery discharge) Charging Curve: IVoU SIGNAL OUTPUT (rec switch contacts) Main or Backup Power Low Battery Fault Battery of System AUXILLARY OUTPUT UPS Disabiling Tem- Comp. Battery (with external probe) Paralle connection Remote monitoring data. Protocol: CLIMATIC DATA Ambient Temperature operation De rating T>.6(n) Ambient Temperature operation De rating T>.6(n) Ambient Temperature Songe Numidity at 25 °C Athude: 0 to 2.000m - 0 to 6.5401 Athude: 2.000 - 0 to 6.5401 Athude: 2.000 - 100 A.5401 Conling GENERAL DATA	Yes         Yes by Daep Switch           410mA         Bost / Past           10 - 11 Vic balt / 20 - 21 Vic balt         9           9 - 10 Vic balt / 19 - 20 Vic balt         9           Yes         Yes	Yes         yunper           120mA         Boott / Float           10-11 Vdc batt         Boott / Float	Yes         yes           \$100mA         Boost / Float           10 - 11 Vide batt         10 - 11 Vide batt           9 - 10 Vide batt         10 - 11 Vide batt           Yes         Yes           Yes         Yes           Yes         Yes           Yes         Yes           Yes         Yes           No         FG1 Femp (cable)           No         25 + 170°C           > 50° - 2.5%(in) / °C         40 ≠ 45°C           95%         No           No Ferriticions         00+erating 5°C1000m	Yes         yes           Yes         yes           2         st00mA           Boost/FPat         10-11 V4c bat           10-11 V4c bat         10-11 V4c bat           Yes         Yes           Yes         Ves           Ves         Ves           No         R11 Teng (cable)           No         R12 Teng (cable)           No         set           25 + 170°C         set           95%         No           No         set           95%         No           No         Set           95%         No           No         Periative SC1000m	23 Vicel Open Land, 2.25 Vicel Sealt \$100mA Boost / Float 10 - 11 Vic batt 10 - 11 Vic batt 9 - 10 Vic batt Yes Yes No RJ Temp (cable) Yes No RJ Temp (cable) Yes Soft - 2.5%(In) / °C \$67 + 2.5%(In) / °C	et exit, 227 Vicril Seated Lead, 2           \$100mA           Boord / Roat           Boord / Roat           20 - 21 Vicril Seated Lead, 2           20 - 21 Vicril Vice Seatt           Ilkolo, Automatic, 4 stage           Yes           Yes           No           RJ Temp (cable)           No           40 + x85°C           65%           Derating 5°C1000m	3 'Voral gel: NGC 1 4/VGal'; Li-lon 3.4' 4100mA 80xx1 / Float 80xx1 / Float 20 – 21 Vdc batt 19 – 20 Vdc batt 19 – 20 Vdc batt Yes No No RJ Temp (cable) No 26 + +70°C 26 + +70°C 40 + 48°C 46°C 46°C 46°C 46°C	Yes by Jumper           still           still           800st / Float           20 - 21 Vide batt           19 - 20 Vide batt           19 - 20 Vide batt           Ves           Ves           Ves           No           RL Temp (cable)           No           25 + #70*C           > 50" - 2.5%(in) / *C           40 + 48*C           95%           No           Poe-rating \$7C1000m	100mA     Bootr / Foat     20 - 21 Vide batt     20 - 21 Vide batt     19 - 20 Vide batt     19 - 20 Vide batt     Yes     Yes     Yes     No     RU Temp (cable)     Yes     Modbus     507 - 259(k) / *C     40 + 857*C     65%     No reditions     Derating \$5^*C1000m     Derating \$5^*C1000m	Yes         Yes by Jumper           \$100 mA         Boost / Float           40 - 42 Vidc batt         38 - 42 Vidc batt           38 - 42 Vidc batt         38 - 42 Vidc batt           Yes         Yes           Yes         No           RJ Temp (cable)         No           No         No           25 5 + 70°C         > 50° - 2.5%(m) / °C           > 40 - 48°C         96%           No be-rating 5°C/1000m         S°C/1000m	Yes by Jumper           \$100mA           Booir / Float           40 - 42 Vac batt           38 - 40 Vac batt           38 - 40 Vac batt           Yes           Yes           No           HJ Temp (cable)           Yes           S60 - 25%(IN) / *C           -40 + 48°C           6%           No restitions           De-raing \$701000m
Reverse battery protection Suifield battery check Jumper Switch Config. Battery Type (L-Ion optional) Quiescent Current Renote input Control (RTCONN cable) Threshold alarm Battery almost flat LVD. Low Vollage Disconnection (Protections against total Battery discharge) Charging Curve: IVoU SIGNAL OUTPUT (rec switch contacts) Main or Backey Power Low Battery Fauit Battery or System AUXILIARY OUTPUT UPS Disabling Temp: Comp. Battery (with external probe) Paralle connection Tamp: Comp. Battery (with external probe) Paralle Connection Remote monitoring data. Protocol: CLIMATIC DATA Ambient Temperature operation De rating 17 > (n) Ambient Temperature Storage Humidity at 25 °C Altitude : 2000 re 3006 m - 6.5601 Altitude : 2000 re 3006 m - 6.5001 Cooling GENERAL DATA	Yes           Yes by Deep Switch           4100mA           Boot/Float           10 - 11 Vick batt / 20 - 21 Vick batt           9 - 10 Vick batt / 19 - 20 Vick batt           Yes           Yes           Yes           Yes           Yes (HTCONN cable)           RJ Temp (cable)           No           ModBus RTU           -25 + x70°C           >50° - 2.5%(n) * C           -9 - 80°C           95%           No restrictions           De-rating 5°C/1000m           Auto Convection           300Viac           1805Viac	Yes	Yes         Yes by Jumper           s100mA         Boost / Float           10 - 11 Vido batt         10 - 11 Vido batt           9 - 10 Vido batt         Yes           Yes         Yes           No         Reproduct (Reproduct (Re	Yes         2           st0bmA         Boot/ Float           10-11 V4b bat         3           30-11 V4b bat         3           9-10 V4b bat         3           Yes         Xes           Yes         Xes           Yes         Xes           Yes         Xes           Yes         Xes           Yes         Xes           No         Rel Temp (cable)           No         A           25 + 70°C         395%           95%         25%C           95%         95%           De rating 5*C100m         Aub cenvection           30007vic         1607vic	23 Vicel Open Land, 2.25 Vicel Seak \$100m\ 10 - 11 Vice batt 10 - 11 Vice batt 10 - 11 Vice batt 9 - 10 Vice batt Ves Ves Ves Ves Ves Ves Ves Ves	Lead, 22 Vicel Seated Lead, 2           100xxh           Boost / Float           20 – 21 Web Batt           20 – 21 Web Batt           20 – 21 Web Batt           LibUo, Automatic, 4 stage           Ves           Yes           Yes           No           RJ Temp (cable)           No           25 + x70°C           > 50° - 255/(n) / °C           40 - x85°C           95%           No methodoms           De rating 5°C/1000m           Automatic           3000Vacc           1665/vac	3 'Voral gel; NGC1 4.4Vical'; Li-lon 3.4 6100nA 600st / Float 800st / Float 20 – 21 Vdc batt 19 – 20 Vdc batt 19 – 20 Vdc batt 19 – 20 Vdc batt Ves No No 25 + +70°C 25 + +70°C 26 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20	Yes by Jumper           Scall           StornA           Boott / Float           20 - 21 Vide batt           19 - 20 Vide batt           19 - 20 Vide batt           Yes           Yes           Yes           No           RJ Temp (cable)           No           25 + +70°C           - 50° - 2.5%(in) / *C           40 + e8°C           95%           No restrictions           De-rating 5°C/1000m           Auto Convection           3000Vac	100mA     Boost / Float     20 - 21 Vide Saft     20 - 21 Vide Saft     21 - 21 Vide Saft     19 - 20 Vide Saft     19 - 20 Vide Saft     19 - 20 Vide Saft     Ves     V	Yes         Yes by Jumper           #100mA         Boost / Float           40 - 42 Vick batt         38 - 42 Vick batt           38 - 42 Vick batt         Yes           Yes         Yes           Yes         Yes           RUT emp (cable)         No           No         No           -25 + 70°C         -25%(h) / *C           -90* - 45%*C         95%           No restrictions         De-rating 5*C/1000m           Auto Convection         3000Vac	Yes by Jumper           s100mA           Boot / Float           40 - 42 VGe batt           38 - 40 Vde batt           38 - 40 Vde batt           Yes           Yes           No           RJ Temp (cable)           Yes           ModBus           25 + r30*C           95%           No restrictions           De-rating 5*C/1000m           Auto Convection           3000Vac
Reverse battery protection Schlade battery check Jungeri Switch Config. Battery Type (Li-lon optional) Outscent: Current Remote Input Control (IRTCOMN cable) Threshold alarm Battery atmost flat UD, Low Voltage Disconnection (Protections against total Battery discharge) Charging Curres: IU-0U StoRAL OUTPUT (Ifee switch contacts) Main or Backup Power Low Battery Fault Battery or System AUXILARY OUTPUT UP's Disabiling Temp. Comp. Battery (with external probe) Parallel competition Remote monitoring data. Protocol: CLIMATIC DATA Ambient Temperature operation De rating 7: 5 (D) Ambient Temperature Sorgen Humidity at 3: °C Autifued: 0 to 2.000m - 6 to 6.560t Autifued: 0 to 2.000m - 6 to 6.560t Autifued: 0 to 2.000m - 6 to 6.560t Autifued: 0 to 2.000m - 6 to 6.560t (Control Control Cont	Yes           Yes by Deep Switch           \$100mA           Boot/Float           10 - 11 Vac bat/ 20 - 21 Vac bat           9 - 10 Vac bat/ 10 - 20 Vac bat           9 - 10 Vac bat/ 10 - 20 Vac bat           Yes           Wes           Yes           Yes           Yes           Yes           Yes           Bot/Sus PTU           40 + 48°C           95%           No restrictions           Deratifications           Deratifications           Deratifications           S000Viac           1605Viac           S00Viac	Yes         Yes by Jumper           \$100mA         Boost / Foat           10 - 11 Vdc batt         Boost / Foat           10 - 11 Vdc batt         P - 10 Vdc batt           Yes         Yes           Yes         Yes           No         Rest           A1 Temp (cable)         No           No         S5" 4.5%(m) / **C           > 50" 4.5%(m) / **C         40 + 38*C           No         Destrictions           No resting SPC1000m         Auto Convection           3000Vac         1605Vac	Yes         Yes by Jumper           \$100mA         Boost, Float           10 - 11 Vide batt         Io - 11 Vide batt           9 - 10 Vide batt         Yes           Yes         Yes           Yes         Yes           No         RL Temp (cable)           No         RL Temp (cable)           No         Person (Ca	Yes         2           \$100mA         Boot/Feat           10 - 11 Vice batt         10 - 11 Vice batt           9 - 10 Vice batt         9           Yes         Yes           Yes         10 - 11 Vice batt           10 All Social Feat         10 - 11 Vice batt           Yes         Yes           No         All Temp (cable)           No         Social Feat           No	23 Vicel Open Land, 2.25 Vicel Sealt \$100mA Boort / Float 10 - 11 Vice batt 9 - 10 Vice batt Yes Yes No RU Temp (cable) Yes No RU Temp (cable) Yes No 84.7 Cmp (cable) 25.5 + 70°C > 50° - 2.5%(m) / °C -40 + 48°C 95% No testing 5/C1000m Auto Convection 3000Vice 1005Vice 500Vice	et exit, 227 Vicel Seated Lead, 2           \$100mA           Boort / Float           20 - 21 Vicel Seated Lead, 2           20 - 21 Vice Seated Lead, 2           Ves           Yes           No           RL Temp (cable)           No           25 + r70°C           25 + r20°C           95%           No rearing 9°C1000m           Auto Convection           3000Vac           500Vac	3 'Voral gel; NGC1 4-ViCel1; Li-lon 3.4' 4100mA Boost / Float 20 – 21 Vdc batt 19 – 20 Vdc batt 19 – 20 Vdc batt Yes No No 25 s + 70°C 25 s + 70°C 25 s + 70°C 25 s + 70°C 25 s + 70°C 40 s + 48°C 06% No Ro Bor-ault S70100m Auto Convection	Yes by Jumper           Scoll           Scoll           Boott / Float           20 – 21 Vide batt           19 – 20 Vide batt           19 – 20 Vide batt           Ves           Ves           Ves           Ves           Ves           Ves           Soft           Ves           Soft           Ves           Ves           Soft           Ves           Soft           Ves           No           No           No           No           Auto Concection           Soft/Location           Auto Concection           SoftWac	5 1000A Boost // Fost 20 - 21 Vide belt 10 - 20 Vide belt 10 - 20 Vide belt Yes Yes No RJ Tenp (cable) RJ Tenp (cable) RJ Tenp (cable) 25 + 77°C 55 % No 85 % No 85 % No 10 - 20 Vide belt 25 % No 25 % 10 - 25 % 10 / 25 % 10 - 25 % 10 / 25 % 10 - 25 % 10 / 25 %	Yes         Yes           Yes by Jumper         Stom A           Boost / Float         40 – 42 Vidc batt           40 – 42 Vidc batt         38 – 42 Vidc batt           38 – 42 Vidc batt         38 – 42 Vidc batt           Yes         No           Pas         Yes           No         R0           25 + +70°C         >56° -2.5%(In) / °C           > 56° -2.5%(In) / °C         >95%           No bereating/Critical base         No           Dereating/Critical base         Software           3000Vac         1605Vac           Software         Software	Yes by Jumper           \$100mA           Bootr / Float           40 - 42 Vide batt           38 - 40 Vide batt           39 - 40 Vide batt           Ves           No           PU Temp (cable)           Ves           ModBlus           -25 + 70°C           > 50° - 255(m) / °C           -40 + 48°C           95%           No restrictions           De-atigs S°C 1000m           Auto Convection           3000Vac
Reverse battery protection Suitade battery check Jumper Switch Config. Battery Type (Li-lon optional) Outscent Current Remote Input Control (RTCONN cable) Threshold alarm Battery almost flat UV. Low Voltage Disconnection (Protections against total Battery discharge) Charging Curres: II.0U SKOMAL OUTFUT (free switch contacts) Main or Backup Power Low Battery Fault Battery or System AUXILIARY OUTFUT UPS Disability Temp. Comp. Battery (with esternal probe) Parallel consection Remote monitoring data. Protocol: CLIMATIC DATA Ambient Temperature operation De rating T> (m) Antibidet: 0: 2000m - 0: 10 6.5501 Attitude: 0: 2000m - 0: 55010 Attitude: 0: 2000m - 0: 55010 Attitude: 2000 - 0: 0: 0: 0: 0: 0: 0: 0: 0: 0: 0: 0: 0:	Yes           Yes by Deep Switch           4100mA           Boot/Float           10 - 11 Vick batt / 20 - 21 Vick batt           9 - 10 Vick batt / 19 - 20 Vick batt           Yes           Yes           Yes           Yes           Yes (HTCONN cable)           RJ Temp (cable)           No           ModBus RTU           -25 + x70°C           >50° - 2.5%(n) * C           -9 - 80°C           95%           No restrictions           De-rating 5°C/1000m           Auto Convection           300Viac           1805Viac	Yes	Yes         Yes by Jumper           s100mA         Boost / Float           10 - 11 Vido batt         10 - 11 Vido batt           9 - 10 Vido batt         Yes           Yes         Yes           No         Reproduct (Reproduct (Re	Yes         2           st0bmA         Boot/ Float           10-11 V4b bat         3           30-11 V4b bat         3           9-10 V4b bat         3           Yes         Xes           Yes         Xes           Yes         Xes           Yes         Xes           Yes         Xes           Yes         Xes           No         Rel Temp (cable)           No         A           25 + 70°C         395%           95%         25%C           95%         95%           De rating 5*C100m         Aub cenvection           30007vic         1607vic	23 Vicel Open Land, 2.25 Vicel Seak \$100m\ 10 - 11 Vice batt 10 - 11 Vice batt 10 - 11 Vice batt 9 - 10 Vice batt Ves Ves Ves Ves Ves Ves Ves Ves	Lead, 22 Vicel Seated Lead, 2           100xxh           Boost / Float           20 – 21 Web Batt           20 – 21 Web Batt           20 – 21 Web Batt           LibUo, Automatic, 4 stage           Ves           Yes           Yes           No           RJ Temp (cable)           No           25 + x70°C           > 50° - 255/(n) / °C           40 - x85°C           95%           No methodoms           De rating 5°C/1000m           Automatic           3000Vacc           1665/vac	3 'Voral gel; NGC1 4.4Vical'; Li-lon 3.4 6100nA 600st / Float 800st / Float 20 – 21 Vdc batt 19 – 20 Vdc batt 19 – 20 Vdc batt 19 – 20 Vdc batt Ves No No 25 + +70°C 25 + +70°C 26 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20 + +20	Yes by Jumper         1           Isoall         4100mA           Boott / Float         2           20 - 21 Vdc batt         19 - 20 Vdc batt           19 - 20 Vdc batt         19 - 20 Vdc batt           Yes         Yes           Yes         Yes           No         RU Temp (cable)           No         -           No         -           Yes         -           Ves         -           No         -           Allo =         -           De-rating 5*C*/1000m         -           Auto Convection         -           3000Vac         1000Vac	100mA     Boost / Float     20 - 21 Vide Saft     20 - 21 Vide Saft     21 - 21 Vide Saft     19 - 20 Vide Saft     19 - 20 Vide Saft     19 - 20 Vide Saft     Ves     V	Yes         Yes by Jumper           #100mA         Boost / Float           40 - 42 Vick batt         38 - 42 Vick batt           38 - 42 Vick batt         Yes           Yes         Yes           Yes         Yes           RUT emp (cable)         No           No         No           -25 + 70°C         -25%(h) / *C           -90* - 45%*C         95%           No restrictions         De-rating 5*C/1000m           Auto Convection         3000Vac	Yes by Jumper           s100nA           Boot / Float           40 - 42 Vdc batt           38 - 40 Vdc batt           38 - 40 Vdc batt           Yes           Yes           No           RJ Temp (cable)           Yes           Ves           Added Statt           25 + r30*C           26 + r30*C           95%           No restrictions           De-rating 5*C/1000m           Auto Convection           3000Vac
Reverse battery protection Suifield battery check Jumper Switch Config. Battery Type (L-Ion optional) Quiescent Current Renote input Control (RTCONN cable) Threshold alarm Battery almost flat LVD. Low Vollage Disconnection (Protections against total Battery discharge) Charging Curve: IVoU SIGNAL OUTPUT (rec switch contacts) Main or Backey Power Low Battery Fauit Battery or System AUXILIARY OUTPUT UPS Disabling Temp: Comp. Battery (with external probe) Paralle connection Tamp: Comp. Battery (with external probe) Paralle Connection Remote monitoring data. Protocol: CLIMATIC DATA Ambient Temperature operation De rating 17 > (n) Ambient Temperature Storage Humidity at 25 °C Altitude : 2000 re 3006 m - 6.5601 Altitude : 2000 re 3006 m - 6.5001 Cooling GENERAL DATA	Yes         Yes by Deep Switch           4100mA         Boot / Foat           10 - 11 Vac batt / 20 - 21 Vac batt         9 - 10 Vac batt / 19 - 20 Vac batt           9 - 10 Vac batt / 19 - 20 Vac batt         9           Yes         Yes           Paramoticable)         RU           Hoddbus RTU         Yes           Yes         Yes           Bost > 250° - 25%(N) / °C           Bost > 80°C         Bost           Borating 9°C/1000m           Auto Convection           2000Vac         Heo           Sootvac         P 20           > 300 000 h         2	Yes         Yes           Yes by Jumper         #100mA           #100mA         Boost / Float           10 - 11 Vdc batt         Boost / Float           10 - 11 Vdc batt         Provide batt           Yes         Yes           Yes         Yes           Yes         Yes           No         RJ Temp (cable)           No         RJ Temp (cable)           No         #0           25 + 70°C         -50° - 25%(n) / °C           40 + 48°C         95%           95%         50° C000m           Auto Convection         3000Vac           1605Vac         500°/20	Yes         Yes           Yes by Jumper         st00mA           Boott / Float         10 - 11 V dc batt           10 - 11 V dc batt         -           9 - 10 Vdc batt         -           Yes         -           Yes         -           Yes         -           Yes         -           Yes         -           Yes         -           No         -           25 + 70°C         -           - 50° - 2.5%(in) / °C         -           40 + e8°C         -           95%         -           No restrictoris         -           De-rating 5°C/1000m         -           Auto Convection         -           3000Vac         -           1605Vac         -           5002 Vac         -	Yes         2           stobnA         Boott / Float           10-11 V4b batt         3           3 - 10 V4b batt         3           Yes         Yes           Yes         Yes           Yes         Yes           Yes         Yes           Yes         Yes           No         RJ Temp (cable)           No         No           25 + 70°C         -50° - 25%(n) / °C           40 - s85°C         95%           95%         25%(n) / °C           40 - s85°C         95%           90 restrictions         De-rating 5°C/100m           Auto Convection         30007viac           1605Viac         500°/ac           500°/ac         3007viac	23 Vicel Open Land. 2.25 Vicel Seak \$100m\ 10 - 11 Vice batt 10 - 11 Vice batt 10 - 11 Vice batt Ves Ves Ves Ves No RJ Temp (cable) Yes No RJ Temp (cable) Yes Sea \$25 + 70°C \$50°- 2.5%(m) /~C 40 + 85°C 95% No restrictions De-rating 5°C/1000m Auto Convection 3000Vac 1005Vac 50°Vac	Lead, 22 7 Vicel Seated Lead, 2           21007A           Boost / Float           20 – 21 Web batt           20 – 12 Web batt           20 – 21 Web batt           Liblo, Automatic, 4 stage           Ves           Ves           Ves           No           RJ Tramp (cable)           No           So           Ves           Ves           Ves           Ves           Ves           No           No reative           Solower           De rating SPC/1000m           Auto Convection           So0Wac	3 'Voral gel; NG 1 44'Gal'; Li-lon 3.4' 6100nA 600st / Float 800st / Float 20 – 21 Vdc batt 19 – 20 Vdc batt 19 – 20 Vdc batt Yes No No 25 + *70°C 25 + *70°C 25 + *70°C 25 + *70°C 25 + *70°C 40 + 85°C 95% No restrictions De-rating 5°C / 1000m Auto Convection 2600Vdc 10 20 20	Yes by Jumper           15:00           16:00 x A           8:00 x A           8:00 x A           20 - 21 Vdc batt           19 - 20 Vdc batt           19 - 20 Vdc batt           Yes           No           Soft/Soc           So00Vac           IP 20	100mA     Boost / Float     20 – 21 Vide bat     20 – 21 Vide bat     21 – 21 Vide bat     19 – 20 Vide bat     19 – 20 Vide bat     Ves     Ves     Ves     Ves     Ves     No     Ru Temp (cable)     Yes     ModBus     -25 + r20*C     95%     No reatrictions     De-rating 5*C*1000m     Auto Convection     3000Viac     1055Viac     500Viac     1055Viac     500Viac     1050Viac	Yes         Yes           Yes by Jumper         #100mA           #100mA         Boost / Float           40 - 42 Vick batt         38 - 42 Vick batt           38 - 42 Vick batt         Yes           Yes         Yes           No         All Temp (cable)           No         No           25 # +70°C         96%           No restrictions         De-rating 5°C1000m           Auto Convection         3000Vac           1605Vac         500Vac           509Vac         19700	Yes by Jumper           s100nA           Boot / Float           40 - 42 V6 batt           38 - 40 V6c batt           38 - 40 V6c batt           Yes           Yes           Yes           No           RJ Temp (rable)           Yes           ModBlus           -25 + 70°C           > 50° - 22 550(n) / °C           -40 + 48°C           96%           No restrictions           Dorwection           3000Vac           1605%ac           500Vac           97 20
Reverse battery protection Sublistic battery check JumperSwitch Config. Battery Type (L-Ion optional) Quiescent Courrent Remote Input Control (RTCONN cable) Treschold alarm Battery almost flat UPD. Low Vollage Disconnection (Protections against total Battery discharge) Charging Curve: IU6U SIGNAL OUTPUT (res ewitch contacts) Main or Backup Power Low Battery Forem Low Battery Forem AUXILIARY OUTPUT UPS Obtaining Temp. Comp. Battery (with external probe) Paralle connection Remote molitoring data. Protocol: CLIMATTO DATA Protection Remote molitoring data. Protocol: CLIMATTO DATA De rating 17 - (In) Ambient Temperature operation De rating 17 - (In) Ambient Temperature Storage Hundidy 412 - Colon - 6.5601 Altitude: 2000 - 0 to 6.5601 Stolation Voltage (IN / VPI) Isolation Voltage (IN / PE) Isolation Class (ENHEC 6629) Reliability ATTE (EE 61709)	Yes         Yes by Daep Switch           ¥es by Daep Switch           \$100mA         Boot/Fold           10 - 11 Vac bat/ 20 - 21 Vac bat           9 - 10 Vac bat/ 10 - 20 Vac bat           9 - 10 Vac bat/ 10 - 20 Vac bat           Yes           Wes           Yes           Wes           Yes           No           Addres RTU           25 + 70°C           > 50° - 2.5%(h) / *C           40 + 45° C           95%           No restrictions           Beraficiang 5°C1000m           Adsto Convection           300000h           20000b           20           > 30000h           2           Yes	Yes         Yes           Yes by Jumper         #100mA           #100mA         Boost / Float           10 - 11 Vdc batt         Boost / Float           10 - 11 Vdc batt         Provide batt           Yes         Yes           Yes         Yes           Yes         Yes           No         RJ Temp (cable)           No         RJ Temp (cable)           No         #0           25 + 70°C         -50° - 25%(n) / °C           40 + 48°C         95%           95%         50° C000m           Auto Convection         3000Vac           1605Vac         500°/20	Yes         Yes           Yes by Jumper         st00mA           Boott / Float         10 - 11 V dc batt           10 - 11 V dc batt         -           9 - 10 Vdc batt         -           Yes         -           Yes         -           Yes         -           Yes         -           Yes         -           Yes         -           No         -           25 + 70°C         -           - 50° - 2.5%(in) / °C         -           40 + e8°C         -           95%         -           No restrictoris         -           De-rating 5°C/1000m         -           Auto Convection         -           3000Vac         -           1605Vac         -           5002 Vac         -	Yes         2           stobnA         Boott / Float           10-11 V4b batt         3           3 - 10 V4b batt         3           Yes         Yes           Yes         Yes           Yes         Yes           Yes         Yes           Yes         Yes           No         RJ Temp (cable)           No         No           25 + 70°C         -50° - 25%(n) / °C           40 - s85°C         95%           95%         25%(n) / °C           40 - s85°C         95%           90 restrictions         De-rating 5°C/100m           Auto Convection         30007viac           1605Viac         500°/ac           500°/ac         3007viac	23 Vicel Open Land. 2.25 Vicel Seak \$100m\ 10 - 11 Vice batt 10 - 11 Vice batt 10 - 11 Vice batt Ves Ves Ves Ves No RJ Temp (cable) Yes No RJ Temp (cable) Yes Sea \$25 + 70°C \$50°- 2.5%(m) /~C 40 + 85°C 95% No restrictions De-rating 5°C/1000m Auto Convection 3000Vac 1005Vac 50°Vac	Lead, 22 7 Vicel Seated Lead, 2           21007A           Boost / Float           20 – 21 Web batt           20 – 12 Web batt           20 – 21 Web batt           Liblo, Automatic, 4 stage           Ves           Ves           Ves           No           RJ Tramp (cable)           No           So           Ves           Ves           Ves           Ves           Ves           No           No reative           Solower           De rating SPC/1000m           Auto Convection           So0Wac	3 'Voral gel; NG 1 44'Gal'; Li-lon 3.4' 6100nA 600st / Float 800st / Float 20 – 21 Vdc batt 19 – 20 Vdc batt 19 – 20 Vdc batt Yes No No 25 + *70°C 25 + *70°C 25 + *70°C 25 + *70°C 25 + *70°C 40 + 85°C 95% No restrictions De-rating 5°C / 1000m Auto Convection 2600Vdc 10 20 20	Yes by Jumper           15:00           16:00 x A           8:00 x A           8:00 x A           20 - 21 Vdc batt           19 - 20 Vdc batt           19 - 20 Vdc batt           Yes           No           Soft/Soc           So00Vac           IP 20	100mA     Boost / Float     20 – 21 Vide bat     20 – 21 Vide bat     21 – 21 Vide bat     19 – 20 Vide bat     19 – 20 Vide bat     Ves     Ves     Ves     Ves     Ves     No     Ru Temp (cable)     Yes     ModBus     -25 + r20*C     95%     No reatrictions     De-rating 5*C*1000m     Auto Convection     3000Viac     1055Viac     500Viac     1055Viac     500Viac     1050Viac	Yes         Yes           Yes by Jumper         #100mA           #100mA         Boost / Float           40 - 42 Vick batt         38 - 42 Vick batt           38 - 42 Vick batt         Yes           Yes         Yes           No         All Temp (cable)           No         No           25 # +70°C         96%           No restrictions         De-rating 5°C1000m           Auto Convection         3000Vac           1605Vac         500Vac           509Vac         19700	Yes by Jumper           s100nA           Boot / Float           40 - 42 V& batt           38 - 40 Vdc batt           38 - 40 Vdc batt           Yes           Yes           Yes           No           RJ Temp (rable)           Yes           ModBlus           -25 + 70°C           > 50° - 22 5N(n) / °C           -40 + 48°C           96%           No restrictions           Dorwection           3000Vac           1605%ac           500Vac           197.20
Reverse battery protection Suitated battery check JumperSwitch Config. Battery Type (Li-lon optional) Outscent: Current Remote Input Control (RTCOMW cable) Threshold alarm Battery afmost flat UD, Low Voltage Disconnection (Protections against total Battery discharge) Charging Curres: IU/OU SIGNAL OUTPUT (Ives switch contacts) Main or Backup Power Low Battery Fault Battery or System AUXILLARY OUTPUT UPS Disabiling Temp. Comp. Battery (with esternal probe) Parallel competition Remote monitoring data. Protocol: CLIMATIC DATA Ambient Temperature storage Humidity at 25 °C. Anthude: 0 a 2000m - 6 to 6.54001 Anthude: 0 a 2000m - 6 to 6.54001 Anthude: 2000 to 6.0500m - 6.5400 to 2000tt Cooling GENERAL DATA Isolation Voltage (NI / OUT) Isolation Costage (NI / PE) Portection Class (With PE connected)	Yes         Yes by Daep Switch           ¥es by Daep Switch           \$100mA         Boot/Float           10 - 11 Vac bat/ 12 - 21 Vac bat           9 - 10 Vac bat/ 12 - 20 Vac bat           Yes           Wes           Yes           Wes           Yes           No           Modilus RTU           40 + 45°C           95%           No restrictions           Beraficiang 5°C1000m           Ads: Convection           5000Vac           1605Vac           5000Vac           Pag           >300000 h           2           Yes	Yes         Yes by Jumper           \$100m A         Boost / Foat           10 - 11 Vdc batt         Boost / Foat           10 - 11 Vdc batt         P - 10 Vdc batt           Yes         Yes           Yes         Yes           Yes         Yes           Yes         Yes           Yes         Yes           Yes         Yes           Yes         Social (Social Social Soci	Yes         Yes           \$100mA         Boost, Float           10 - 11 Vide batt         Image: Comparison of the state           9 - 10 Vide batt         Image: Comparison of the state           Yes         Yes           No         Soft - 25%(In) / *C           > Soft - 25%(In) / *C         Soft - 25%(In) / *C           Yes         Yes         Yes           No         Persitions         De-eraing S*C1000m           Auto Convection         Softwace         Softwace           Softwace         Softwace         Softwace           Yes         Softwace         Softwace	Yes         2           Yes by Jumper         2           \$100mA         300047 Foot           500mA         300047 Foot           10 - 11 Vide batt         9 - 10 Vide batt           Yes         Yes           Yes         Soft Josephile           No         Soft Josephile           No         Soft JSS(N) / *C           40 setS*C         Soft Josephile           95%         Soft/Soft Josephile           3000Nuc         1605Vuc           1605Vuc         Soft/Soft Josephile           2.5mm (24-14 AWG)         L, with FE	23 Vcel Open Lead. 2.25 Vcel Seak \$100mA Boost / Foat 10 - 11 Vdc batt 9 - 10 Vdc batt 9 - 10 Vdc batt Ves Ves No RJ Temp (cable) Yes No RJ Temp (cable) Yes Sef? - 254(m) / *C - 40 + 485*C Sef% - 254(m) / *C - 40 + 485*C - 50000 h - 2 - 40 + 400+C - 50000 h - 2 - 50000 h - 2 - 50000 h - 500000 h - 50000	Lead, 227 Vicel Beated Lead, 2           21000A           Boost // Float           20 - 21 (dx batt           20 - 21 (dx batt           10 - 20 (dx batt           UoUo, Automatic, 4 stage           Yes           Yes           No           No           No           S5 - x70*C           55* - 25*(0) /*C           40 - x85*C           Bord           No           No           No           No           S6* - 25*(0) /*C           40 - x85*C           Bord           S000Vac           500Vac           92 0           300000 h           2           2:5mm (26-14 AWG)           1. wh PE	3 Vioral egi: NG 1 4/Vioral ; Li-lon 3.45 5100nA Boost / Float 20 – 21 Vide batt 9 – 20 Vide batt	Yes by Jumper           st00mA           6100mA           Boott / Foat           20 - 21 Vide batt           19 - 20 Vide batt           19 - 20 Vide batt           Ves           Ves           Ves           Ves           Ves           Ves           Start           No           No           No           Soft           Soft           25 + 70°C           - 50° - 25%(n) / °C           - 40 + x8°C           95%           No restrictions           Derating 5°C/100m           Auto Convection           30000Vac           1665Vac           500Vac           2.5mm (24.14 AWG)           Ves           2.5mm (24.14 AWG)	51000A Boost // Foat 20 - 21 Vdc bat 10 - 20 Vdc bat Ves Ves No RU Temp (cable) RU Temp (cable) RU Temp (cable) RU Temp (cable) 25 - x70°C 55 /* 2.5%(1) //C 40 - x80°C 50 ** 2.5%(1) //C 50 **	Yes         Yes           \$100 A         Boost / Foat           40 - 42 Vidc batt         38 - 42 Vidc batt           38 - 42 Vidc batt         38 - 42 Vidc batt           Yes         Yes           Yes         Yes           No         Pio           Particle         Pio           >50" - 2.5%(III) / *C           -40 + 48°C         95%           No ber-ating 57C100m           Derating 57C100m           Auto Convection           3000Vac           1605Vac           - 3000 00 h           2           2.5 m (24-14 AWG))           1, with PE	Yes by Jumper           \$100mA           Boot / Float           40 - 42 V&batt           38 - 40 Vdc batt           39 - 40 Vdc batt           40 Vdc batt           40 - 42 Vdc batt           90 Vdc batt           25 + 70*C           > 50* - 25% C           95%           No realite/CV00m           Auto Convection           3000Vdc           1005Vac           > 300 00 h           2           4mm (30-10 AWCG)           1, wh PE
Reverse battery protection Suitland battery enckek Jumper Switch Config. Battery Type (L-Ion optional) Quiescent Current Renote input Control (RTCONN cable) Threshold alarm Battery almost flat LUL. LUL Vollage Disconnection (Protections against total Battery discharge) Charging Curve: IUOU SIGNAL OUTPUT (ree switch contacts) Main or Backup Power Low Battery Fauil Battery or System AUXILLARY OUTPUT UPS Disabiling Temp. Comp. Battery (with external probe) Paralle connection Renote monitoring data. Protocol: CLIMATIC DATA Ambient Temperature operation De rating 1° 5 (n) Altitude: U to 2000m - 6 to 5 5001 Altitude: U to 2000m - 6 500 to 20.0001 Cooling GENERAL DATA Biolation Voltage (NI/ OUT) Isolation Voltage (NI/ OUT) Isolation Voltage (NI/ PE) Portection Class (INEE 66320) Reliaged (NI/ ED) Follution Degree Ervitronnent Connection Terminal Blocks Sterew Type	Yes           Yes by Deep Switch           4100mA           Boot/Float           10 - 11 Vicc batt / 19 - 20 Vicc batt           9 - 10 Vicc batt / 19 - 20 Vicc batt           Yes           Yes           Yes           Yes (HTCONN cable)           RJ Temp (cable)           No           Hordbus RTU           -25 + x70°C           >567 - 2.5%(n) r C           -96 - 85°C           95%           No restrictores           De-rating 5°C/1000m           Auto Convection           500Vac           IP 20           > 300 000 h           2           400 - 2410 AVG(I)	Yes         Yes y, Junper           #100mA         Boost / Float           10 - 11 V4c batt         Boost / Float           10 - 11 V4c batt         Yes           Yes         Yes           Yes         Yes           Yes         Yes           All Temp (cable)         No           No         Rel Temp (cable)           No         Rel           Se + 70°C         Se + 25%(n) / °C           40 + s85°C         Se + 50°C           Se + 10°C         Se + 20°C           Se + 20°C	Yes         Yes by Jumper           st00mA         Boost / Float           10 - 11 Vide batt         Boost / Float           10 - 11 Vide batt         Yes           Yes         Yes           No         Ref Temp (cable)           No         Adv = Strict           95%         Soft (N / YC           40 + eBtrC         95%           De-rating 5Cr1000m         De-rating 5Cr1000m           Auto Econvection         1000Vvac           1000Vvac         1000Vac           1000Vvac         5000Vac           20000 h         2           2         2           2         2           2         2	Yes         2           Yes by Amper         2           st00mA         30047 FPad           Boott / FPad         30047 FPad           Boott / FPad         30047 FPad           Yes         -           Yes         -           Yes         -           Yes         -           No         -           Ro         -           25 + 70°C         -           95%         -           95%         -           40 + x85°C         -           95%         -           900 Vic         -           1000Vic         -           2000Vic         -           2000Vic         -           21         -           22         -           2         -           2         -           2         -           2         - <tr tr="">          2         -</tr>	23 Vicel Open Land, 2.25 World Seak \$100mA 10 - 11 Vice batt 10 - 11 Vice batt 9 - 10 Vice batt 9 - 10 Vice batt Ves Ves Ves No RU Temp (cable) Ves RU Temp (cable) Ves Sea - 25 + +70°C > 50° - 2.5%(fn) / °C - 40° + e8°C 9 9% No restrictions De-rating 5°C1/000m Auto Convection 20 000 h 2 2	Lead, 22 7 Vical Seated Lead, 2           100xxh           Boost / Float           20 - 21 Vical Seated Lead, 2           Ves           Software           Software           Software           Software           Software           Software           So	3 'Voral gel; NG 1 4Vical'; Li-lon 3.4' 4100nA 4100nA 20 – 21 Vdc batt 19 – 20 Vdc batt 19 – 20 Vdc batt 19 – 20 Vdc batt Ves No No 25 + +70°C 25 + +70°C 26 + +70°C 26 + +70°C 27 + +70	Yes by Jumper           Stell           at100mA           Boast           20 - 21 Vdc batt           19 - 20 Vdc batt           19 - 20 Vdc batt           Ves           Ves           Ves           Ves           Ves           No           RJ Temp (cable)           No           25 + -70°C           > 50° - 25%(n) / °C           40 + 48°C           95%           No           De-rating 5°C/1000m           Auto Convection           5000Vac           1505Vac           50000 h           2           2.5mm (24-14 AWG)	S100mA     Boost / Float     20 – 21 Vide Saft     21 – 21 Vide Saft     21 – 21 Vide Saft     119 – 20 Vide Saft     119 – 20 Vide Saft     119 – 20 Vide Saft     Ves     Ves     Ves     Ves     RJ Temp (cable)     Ves     V	Yes         Yes           410mA         Boost / Float           40 - 42 Vick batt         38 - 42 Vick batt           38 - 42 Vick batt         38 - 42 Vick batt           Yes         Yes           Yes         Yes           Rul Temp (cable)         No           No         No           25 + 70°C         95%           No restrictions         Deraing 57/1000m           Auto restrictions         1000Vac           1605Vac         500Vac           500Vac         2           2         2.5mm (24-14 AWG)	Yes by Jumper 5100xh Boost / Ploat 40 – 42 Vac batt 38 – 40 Vac batt Yes Yes Yes No RJ Tenp (cable) Yes No RJ Tenp (cable) Yes Sofr - 25%(n) / *C - 40 + 40*C 05% No reading *C1000m Auto Convection 3000Vac 105% S070vac 11250 - 22 S070vac 11250 - 22 S070vac 112500 - 22 S070vac 112500 - 22 S070vac 112500 - 22 S070vac 112500 - 22 S070vac 112500 - 22 S070vac 112500 - 22 S07

Options to be defined by Order/S (ex: CBIXXXA/S), Push Button not available
 Yes if required by order /TB1/TB5..

(2) Tes intequiled by order (15 intes.)