



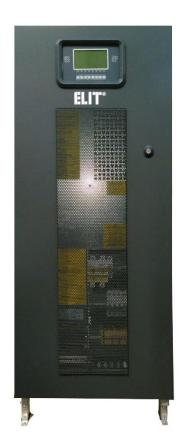
#### 3PH UPS 10 ÷ 200kVA INVERTER WITH TRANSFORMER

Rev. 3

**TPH IND Series** 



#### **UNINTERRUPTIBLE POWER SUPPLY**



TPH IND series represents the last transformer double conversion (VFI) power protection technology designed to protect a wide area of critical applications including server rooms, networks, telecommunication system, industrial processes and medical equipment. Unmatched reliability, excellent electrical performance, exceptionally compact size and outstanding cost-efficiency housed in an attractive enclosure are only some features of this new UPS solution. Monitoring and control data are shown on an easy to understand front panel display featuring pushbutton controls, LCD read out for event logs and diagnostics and a mimic diagram for system status. The power protection system can be remotely monitored via RS232, RS485, dry contact or SNMP interface. The TPHIND series is available from 10kVA to 200kVA models.

#### PRINCIPLES OF WORKING

The backup series is composed by: Rectifier, Inverter with transformer, Static Switch, manual by-pass and Battery.

The Rectifier-Inverter line normally feeds the users, and the Battery is kept charged by the Rectifier.

If a black out occurs, the Battery supplies power energy to users always through the Inverter. When the blackout is over, the Rectifier provides for Battery charge.

If a short circuit or an overload occurs to the users, the Static By-pass switches the load over the emergency line. When the fault is over, the Inverter feeds users.

#### **FEATURES**

- Backfeed protection to prevent voltage backfeed on the input line due to internal fault
- LCD remote panel as option
- Input power factor with full load 0.9.
- Output power factor 0.9.
- Zero transfer time.
- Parallelable features till 8 units as option.
- Filtered, stabilized and regulated sinewave supply.
- Wide input voltage and frequency range, minimizing the battery usage.
- Superior overload capability.
- Battery monitoring and temperature. dependent charging function as option.
- LCD display for measurements, alarms and power history.
- Device to avoid a complete battery discharge.
- ON LINE OFF LINE working settable.
- IGBT inverter with transformer.
- Accessory slot, 2<sup>nd</sup> RS 232, dry contact, RS485 and SNMP.
- Dual input feed as option.
- Personalizing 60Hz output converter.
- Personalizing stabilizer features.





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#### **CONTROL PANEL**

The control panel consists of a graphic display, 6 LEDs of visual signal and 4 function keys. 5.1" LCD Display with 16 lines and up to 40 characters each. The resolution is 240x128 pixels in black and white.



Messages are available in the following languages: Italian, English, French, German, Spanish, Polish, Chinese, and Russian. A large graphic display is located at the center of the control panel, enabling you to always have a detailed overview of UPS status in the foreground and in real time. Directly from the control panel, the user can turn on / off the UPS, check the electrical measurements of the network, output, battery, etc., and perform the main machine settings.

#### **INTERFACES**

The front panel (behind the door) allows access to the following communication ports:

- Serial port, available with RS232 connector and USB connector.
- EPO
- No. 2 Expansion Slots for additional interface cards.

#### **Dry contact card**

There are two accessory types of dry contact cards, with 4 and 8-way programmable.

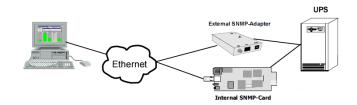
#### **Emergency Power Off - EPO**

The isolated contact is used to turn off the UPS in an emergency. The Emergency Power Off facility must use a Normally Closed contact, which opens to operate the emergency stop

sequence. The EPO circuit is self-powered with SELV circuits. No external power supply is required.

#### **SNMP**

The SNMP network adapter manages UPS through the LAN by using one of the main TCP/IP, HTTP, HTTPS, and SNMP v1 and SNMP v3 network communication protocols. The software allows UPS to be integrated into medium and large networks and to provide reliable communication between the UPS and the management system used.



#### **RS485**

Modbus / Jbus protocol converter via RS485 output for UPS monitoring in BMS (Build Management System).

#### **Profibus DP**

External accessory that allows the UPS to be integrated into a Profibus DP network. With this device UPS management and monitoring can be integrated into a control system based on one of the most widely used bus buses in the industrial field for communication between control / automation systems and distributed I/O.

#### **Remote Panel**

Remote Panel that allows remote UPS monitoring and real-time detailed overview of operating conditions; it can display on the display the values of the UPS specifying input and output, and battery measurements. The graphic display has a high definition and manages 7 languages: English, Italian, German, French, Spanish, Russian and Chinese.

#### **External battery temperature sensor**

The UPS has a dedicated input to detect the temperature inside a Remote Battery Box and display the temperature on the UPS display.





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#### **External maintenance bypass**

You can install a remote maintenance bypass on a peripheral electrical board, for example to allow UPS to be replaced without interrupting power supply.



#### **INPUT AND OUTPUT**

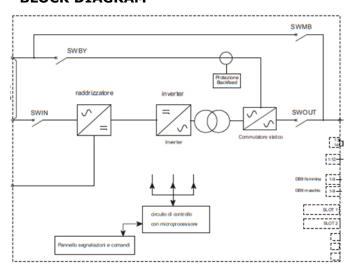
In/outlet terminals are placed in the front bottom under the switch isolators of the apparatus. On request is possible to provide the apparatus with input/output and battery terminals from the top.



## N+X POWER SCALABLE PARALLEL REDUNDANCY

The TPH IND UPS may be paralleled for power capacity or for redundancy up to 8 units to increase the power capacity or configuring a parallel redundant UPS system. The standard version is not provided with this feature which is optional and field upgradable.

#### **BLOCK DIAGRAM**







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## 3PH UPS 10 ÷ 200kVA INVERTER WITH TRANSFORMER

Rev. 3

TPH IND Series

Model	TPH IND 10	TPH IND 15	TPH IND 20	TPH IND 30	
Rated power kVA/kW	10/9	15/13.5	20/18	30/27	
INPUT					
Nominal voltage	380-400-415Vac Three phase with neutral				
Voltage tolerance	300÷480Vac @ 100% load				
Power factor	≥0.9 at full load				
Frequency tolerance	45 ÷ 65Hz				
Current distortion THDI	≤25% (5% as option)				
Inrush current	Absent				
OUTPUT					
Voltage	38	30-400-415Vac Thr	ee phase with neuti	ral	
Voltage tolerance	±1% static stability; ±5% dynamic stability				
Voltage distortion	<1% with linear load, <3% with non-linear load				
Frequency	50Hz or 60Hz				
Frequency stability during battery operation	0.05%				
Waveform	Sinusoidal				
Transfer time	0 ms.				
Crest factor	3:1				
	1100/6 60				
Overload	110% for 60 m	in. – 125% for 10 i	min. – 150% 1 min.	. – 300% 1 sec.	
<b>BATTERY</b> Type			nin. – 150% 1 min. nance free – NiCd –		
BATTERY Type Max recharge current @	Sealed	l Lead Acid mainte	nance free – NiCd –	Li-ion	
BATTERY Type Max recharge current @ 80% load		d Lead Acid mainte 7A	nance free – NiCd – 14A		
BATTERY Type Max recharge current @ 80% load	Sealed	d Lead Acid mainte 7A	nance free – NiCd –	Li-ion	
BATTERY Type Max recharge current @ 80% load Nominal voltage	Sealed	l Lead Acid mainte 7A 384	nance free – NiCd – 14A Vdc	Li-ion	
BATTERY Type Max recharge current @ 80% load Nominal voltage	Sealed	l Lead Acid mainte 7A 384	nance free – NiCd – 14A	Li-ion	
BATTERY Type Max recharge current @ 80% load Nominal voltage  EFFICIENCY OFF LINE mode	Sealed	l Lead Acid mainte 7A 384	nance free – NiCd – 14A Vdc	Li-ion	
BATTERY Type Max recharge current @ 80% load Nominal voltage  EFFICIENCY OFF LINE mode  MISCELLANEOUS Relative humidity	Sealed	d Lead Acid maintei 7A 384 Up to 90% withou	nance free – NiCd – 14A Vdc 98% t condensing	Li-ion	
BATTERY Type Max recharge current @ 80% load Nominal voltage  EFFICIENCY OFF LINE mode  MISCELLANEOUS Relative humidity Operating temperature	Sealed	d Lead Acid maintei 7A 384 Up to 90% withou	nance free – NiCd – 14A Wdc 98%	Li-ion	
BATTERY Type Max recharge current @ 80% load Nominal voltage  EFFICIENCY OFF LINE mode  MISCELLANEOUS Relative humidity Operating temperature Noise level 1mt	Sealed	J Lead Acid mainter  7A  384  Up to  90% withou  from 0°C	nance free – NiCd – 14A Vdc 98% t condensing	Li-ion	
BATTERY Type Max recharge current @ 80% load Nominal voltage  EFFICIENCY OFF LINE mode  MISCELLANEOUS Relative humidity Operating temperature Noise level 1mt (0-100% Load) Interfaces	Sealed 7A	Up to 90% withou from 0°C 60-6	nance free - NiCd -  14A  Vdc  98%  t condensing to + 40°C  2dBA  ontact, SNMP, RS48	Li-ion 21A	
BATTERY Type Max recharge current @ 80% load Nominal voltage  EFFICIENCY OFF LINE mode  MISCELLANEOUS Relative humidity Operating temperature Noise level 1mt (0-100% Load) Interfaces Colour	Sealed 7A	90% withou from 0°C O standard, dry co	t condensing to + 40°C 2dBA ontact, SNMP, RS48	Li-ion 21A	
BATTERY Type Max recharge current @ 80% load Nominal voltage  EFFICIENCY OFF LINE mode  MISCELLANEOUS Relative humidity Operating temperature Noise level 1mt (0-100% Load) Interfaces Colour Dimensions w/o battery	Sealed 7A RS232 & El	90% withou from 0°C 60-6 Dark grey 555x740	t condensing to + 40°C 2dBA ontact, SNMP, RS48 or RAL7016 x1400mm	Li-ion 21A 5 as option	
BATTERY Type Max recharge current @ 80% load Nominal voltage  EFFICIENCY OFF LINE mode  MISCELLANEOUS Relative humidity Operating temperature Noise level 1mt (0-100% Load) Interfaces Colour Dimensions w/o battery Net weight w/o battery	Sealed 7A	90% withou from 0°C  O standard, dry co Dark grey 555x740: 240kgs	t condensing to + 40°C 2dBA ontact, SNMP, RS48 or RAL7016 x1400mm 260kgs	Li-ion 21A	
BATTERY Type Max recharge current @ 80% load Nominal voltage  EFFICIENCY OFF LINE mode  MISCELLANEOUS Relative humidity Operating temperature Noise level 1mt (0-100% Load) Interfaces Colour Dimensions w/o battery Net weight w/o battery	Sealed 7A RS232 & El	90% withou from 0°C  O standard, dry co Dark grey 555x740: 240kgs	t condensing to + 40°C 2dBA ontact, SNMP, RS48 or RAL7016 x1400mm	Li-ion 21A 5 as option	
BATTERY Type Max recharge current @ 80% load Nominal voltage  EFFICIENCY OFF LINE mode  MISCELLANEOUS Relative humidity Operating temperature Noise level 1mt (0-100% Load) Interfaces Colour Dimensions w/o battery Net weight w/o battery Protection degree	Sealed 7A RS232 & El	90% withou from 0°C  O standard, dry co Dark grey 555x740: 240kgs	t condensing to + 40°C 2dBA ontact, SNMP, RS48 or RAL7016 x1400mm 260kgs	Li-ion 21A 5 as option	
BATTERY Type Max recharge current @ 80% load Nominal voltage  EFFICIENCY OFF LINE mode  MISCELLANEOUS Relative humidity Operating temperature Noise level 1mt (0-100% Load) Interfaces Colour Dimensions w/o battery Net weight w/o battery Protection degree  STANDARDS Safety	Sealed 7A RS232 & El	90% withou from 0°C 60-6 PO standard, dry co Dark grey 555x740: 240kgs IP	t condensing to + 40°C 2dBA 2ntact, SNMP, RS48 2 RAL7016 x1400mm 260kgs	Li-ion 21A 5 as option	
Overload  BATTERY Type Max recharge current @ 80% load Nominal voltage  EFFICIENCY OFF LINE mode  MISCELLANEOUS Relative humidity Operating temperature Noise level 1mt (0-100% Load) Interfaces Colour Dimensions w/o battery Net weight w/o battery Protection degree  STANDARDS Safety EMC Performance	Sealed 7A RS232 & El	90% withou from 0°C 60-6 O standard, dry co Dark grey 555x740: 240kgs  EN 62 EN 62	t condensing to + 40°C 2dBA 2ntact, SNMP, RS48 2 RAL7016 2400mm 260kgs	Li-ion 21A 5 as option	



#### CATALOGO PRODODOTTI

## 3PH UPS 10 ÷ 200kVA INVERTER WITH TRANSFORMER

Rev. 3

TPH IND Series

Model	TPH IND 40	TPH IND 60	TPH IND 80	TPH IND 100	
Rated power kVA/kW	40/36	60/54	80/72	100/90	
INPUT					
Nominal voltage	380-400-415Vac Three phase with neutral				
Voltage tolerance	300÷480Vac @ 100% load				
Power factor	≥0.9 at full load				
Frequency tolerance	45 ÷ 65Hz				
Current distortion THDI	≤27% (5% as option)				
Inrush current		Ab	sent		
OUTPUT					
Voltage			ree phase with neut		
Voltage tolerance	±1% static stability; ±5% dynamic stability				
Voltage distortion	<1% with linear load, <3% with non-linear load				
Frequency		50Hz	or 60Hz		
Frequency stability during battery operation	0.05%				
Waveform	Sinusoidal				
Transfer time			ms.		
Crest factor	1100/ 5 50		3:1	2000/ 4	
Overload	110% for 60 m	in 125% for 10	min. – 150% 1 min	ı. – 300% 1 sec.	
BATTERY					
T	Caalaa	ا ا م م ما ۸ م؛ ما سم م : سام	names fues NiCd	1::	
	Sealed	l Lead Acid mainte	nance free - NiCd -	- Li-ion	
Max recharge current @	Sealed 27A	l Lead Acid mainte 41A	nance free – NiCd - 56A	- Li-ion 69A	
Max recharge current @ 80% load					
Type Max recharge current @ 80% load Nominal voltage		41A		69A	
Max recharge current @ 80% load Nominal voltage		41A 384Vdc	56A	69A	
Max recharge current @ 80% load Nominal voltage		41A 384Vdc		69A	
Max recharge current @ 80% load Nominal voltage  EFFICIENCY OFF LINE mode  MISCELLANEOUS		41A 384Vdc Up to	56A o 98%	69A	
Max recharge current @ 80% load Nominal voltage  EFFICIENCY OFF LINE mode  MISCELLANEOUS Relative humidity		41A 384Vdc Up to 90% withou	56A o 98% ut condensing	69A	
Max recharge current @ 80% load Nominal voltage  EFFICIENCY OFF LINE mode  MISCELLANEOUS Relative humidity Operating temperature		41A 384Vdc Up to 90% withou	56A o 98%	69A	
Max recharge current @ 80% load Nominal voltage  EFFICIENCY OFF LINE mode  MISCELLANEOUS Relative humidity Operating temperature Noise level 1mt (0-100% Load)	27A	41A 384Vdc Up to 90% withou from 0°C	56A  o 98%  ut condensing C to + 40°C	69A 396Vdc	
Max recharge current @ 80% load Nominal voltage  EFFICIENCY OFF LINE mode  MISCELLANEOUS Relative humidity Operating temperature Noise level 1mt (0-100% Load) Interfaces	27A	41A 384Vdc Up to 90% withou from 0°C 60-6	56A  o 98%  it condensing to + 40°C  52dBA  ontact, SNMP, RS48	69A 396Vdc	
Max recharge current @ 80% load Nominal voltage  EFFICIENCY OFF LINE mode  MISCELLANEOUS Relative humidity Operating temperature Noise level 1mt (0-100% Load) Interfaces Colour	27A	41A 384Vdc Up to 90% withou from 0°C 60-6 PO standard, dry co Dark gre	56A  o 98%  t condensing t to + 40°C  o2dBA  ontact, SNMP, RS48 y RAL7016	69A 396Vdc 85 as option	
Max recharge current @ 80% load Nominal voltage  EFFICIENCY OFF LINE mode  MISCELLANEOUS Relative humidity Operating temperature Noise level 1mt (0-100% Load) Interfaces Colour Dimensions w/o battery	27A RS232 & El	41A 384Vdc  Up to  90% withou from 0°C 60-6 PO standard, dry co Dark gree 555x740x1400mm	56A  o 98%  t condensing t to + 40°C  62dBA  ontact, SNMP, RS48 y RAL7016	69A 396Vdc 85 as option 800x800x1900mr	
Max recharge current @ 80% load Nominal voltage  EFFICIENCY OFF LINE mode  MISCELLANEOUS Relative humidity Operating temperature Noise level 1mt (0-100% Load) Interfaces Colour Dimensions w/o battery Net weight w/o battery	27A	41A 384Vdc  Up to  90% withou from 0°C 60-6 PO standard, dry c Dark green 555x740x1400mm 460kgs	56A  o 98%  t condensing t to + 40°C  52dBA  ontact, SNMP, RS48 y RAL7016 n 540kgs	69A 396Vdc 85 as option	
Max recharge current @ 80% load Nominal voltage  EFFICIENCY OFF LINE mode  MISCELLANEOUS Relative humidity Operating temperature Noise level 1mt (0-100% Load) Interfaces Colour Dimensions w/o battery Net weight w/o battery	27A RS232 & El	41A 384Vdc  Up to  90% withou from 0°C 60-6 PO standard, dry c Dark green 555x740x1400mm 460kgs	56A  o 98%  t condensing t to + 40°C  62dBA  ontact, SNMP, RS48 y RAL7016	69A 396Vdc 85 as option 800x800x1900mr	
Max recharge current @ 80% load Nominal voltage  EFFICIENCY OFF LINE mode  MISCELLANEOUS Relative humidity Operating temperature Noise level 1mt (0-100% Load) Interfaces Colour Dimensions w/o battery Net weight w/o battery Protection degree	27A RS232 & El	41A 384Vdc  Up to  90% withou from 0°C 60-6 PO standard, dry c Dark green 555x740x1400mm 460kgs	56A  o 98%  t condensing t to + 40°C  52dBA  ontact, SNMP, RS48 y RAL7016 n 540kgs	69A 396Vdc 85 as option 800x800x1900mr	
Max recharge current @ 80% load Nominal voltage  EFFICIENCY OFF LINE mode  MISCELLANEOUS Relative humidity Operating temperature Noise level 1mt (0-100% Load) Interfaces Colour Dimensions w/o battery Net weight w/o battery Protection degree  STANDARDS Safety	27A RS232 & El	41A 384Vdc  Up to  90% withou from 0°C 60-6 PO standard, dry c Dark gree 555x740x1400mm 460kgs  IF	56A  o 98%  o 98%  t condensing  t to + 40°C  ootact, SNMP, RS48 y RAL7016 n 540kgs  22040-1	69A 396Vdc 85 as option 800x800x1900mr	
Max recharge current @ 80% load Nominal voltage  EFFICIENCY OFF LINE mode  MISCELLANEOUS Relative humidity Operating temperature Noise level 1mt (0-100% Load) Interfaces Colour Dimensions w/o battery Net weight w/o battery Protection degree  STANDARDS	27A RS232 & El	41A 384Vdc  Up to  90% withou from 0°C 60-6 PO standard, dry co Dark gree 555x740x1400mm 460kgs  EN 62 EN 62	56A  o 98%  t condensing t to + 40°C  62dBA  ontact, SNMP, RS48 y RAL7016 n 540kgs	69A 396Vdc 85 as option 800x800x1900mr	



#### CATALOGO PRODODOTTI

# 3PH UPS 10 ÷ 200kVA INVERTER WITH TRANSFORMER

Rev. 3

**TPH IND Series** 

Model	TPH IND 120	TPH IND 160	TPH IND 200		
Rated power kVA/kW	120/108	160/144	200/180		
INPUT					
Nominal voltage	380-400	-415Vac Three phase with	neutral		
Voltage tolerance	300÷480Vac @ 100% load				
Power factor	≥0.9 at full load				
Frequency tolerance	45 ÷ 65Hz				
Current distortion THDI	≤27% (5% as option)				
Inrush current		Absent			
OUTPUT					
Voltage	380-400	-415Vac Three phase with	neutral		
Voltage tolerance		cic stability; ±5% dynamic			
Voltage distortion		inear load, <3% with non			
Frequency		50Hz or 60Hz			
Frequency stability during battery operation		0.05%			
Waveform		Sinusoidal			
Transfer time		0 ms.			
Crest factor		3:1			
Overload	110% for 60 min. – 1	25% for 10 min. – 150%	1 min. – 300% 1 sec		
_					
_	Sealed Lead	Acid maintenance free - I	NiCd – Li-ion		
Туре		Acid maintenance free – I			
Type Max recharge current @	Sealed Lead 75A	Acid maintenance free – I 100A	NiCd – Li-ion 125A		
Type Max recharge current @ 80% load					
Type Max recharge current @ 80% load Nominal voltage		100A			
Type Max recharge current @ 80% load Nominal voltage  EFFICIENCY		100A 396Vdc			
Type Max recharge current @ 80% load Nominal voltage  EFFICIENCY		100A			
Type Max recharge current @ 80% load Nominal voltage  EFFICIENCY OFF LINE mode		100A 396Vdc			
Type Max recharge current @ 80% load Nominal voltage  EFFICIENCY OFF LINE mode  MISCELLANEOUS Relative humidity		100A 396Vdc Up to 98%  90% without condensing			
Type Max recharge current @ 80% load Nominal voltage  EFFICIENCY OFF LINE mode  MISCELLANEOUS Relative humidity Operating temperature		100A 396Vdc Up to 98%			
Type Max recharge current @ 80% load Nominal voltage  EFFICIENCY OFF LINE mode  MISCELLANEOUS Relative humidity Operating temperature Noise level 1mt		100A 396Vdc  Up to 98%  90% without condensing from 0°C to + 40°C			
Type Max recharge current @ 80% load Nominal voltage  EFFICIENCY OFF LINE mode  MISCELLANEOUS Relative humidity Operating temperature Noise level 1mt (0-100% Load)	75A	100A 396Vdc  Up to 98%  90% without condensing from 0°C to + 40°C 68dBA	125A		
Type Max recharge current @ 80% load Nominal voltage  EFFICIENCY OFF LINE mode  MISCELLANEOUS Relative humidity Operating temperature Noise level 1mt (0-100% Load) Interfaces	75A	100A 396Vdc  Up to 98%  90% without condensing from 0°C to + 40°C 68dBA  ndard, dry contact, SNMP,	125A		
Type Max recharge current @ 80% load Nominal voltage  EFFICIENCY OFF LINE mode  MISCELLANEOUS Relative humidity Operating temperature Noise level 1mt (0-100% Load) Interfaces Colour	75A	100A 396Vdc  Up to 98%  90% without condensing from 0°C to + 40°C 68dBA  ndard, dry contact, SNMP, Dark grey RAL7016	125A		
Type Max recharge current @ 80% load Nominal voltage  EFFICIENCY OFF LINE mode  MISCELLANEOUS Relative humidity Operating temperature Noise level 1mt (0-100% Load) Interfaces Colour Dimensions w/o battery	RS232 & EPO star	100A 396Vdc  Up to 98%  90% without condensing from 0°C to + 40°C 68dBA  ndard, dry contact, SNMP, Dark grey RAL7016 800x800x1900mm	125A  RS485 as option		
Type Max recharge current @ 80% load Nominal voltage  EFFICIENCY OFF LINE mode  MISCELLANEOUS Relative humidity Operating temperature Noise level 1mt (0-100% Load) Interfaces Colour Dimensions w/o battery Net weight w/o battery	75A	100A 396Vdc  Up to 98%  90% without condensing from 0°C to + 40°C 68dBA  ndard, dry contact, SNMP, Dark grey RAL7016 800x800x1900mm 690kgs	125A		
Type  Max recharge current @ 80% load  Nominal voltage  EFFICIENCY OFF LINE mode  MISCELLANEOUS Relative humidity Operating temperature Noise level 1mt (0-100% Load) Interfaces Colour Dimensions w/o battery Net weight w/o battery	RS232 & EPO star	100A 396Vdc  Up to 98%  90% without condensing from 0°C to + 40°C 68dBA  ndard, dry contact, SNMP, Dark grey RAL7016 800x800x1900mm	125A  RS485 as option		
Type Max recharge current @ 80% load Nominal voltage  EFFICIENCY OFF LINE mode  MISCELLANEOUS Relative humidity Operating temperature Noise level 1mt (0-100% Load) Interfaces Colour Dimensions w/o battery Net weight w/o battery Protection degree	RS232 & EPO star	100A 396Vdc  Up to 98%  90% without condensing from 0°C to + 40°C 68dBA  ndard, dry contact, SNMP, Dark grey RAL7016 800x800x1900mm 690kgs	125A  RS485 as option		
Type Max recharge current @ 80% load Nominal voltage  EFFICIENCY OFF LINE mode  MISCELLANEOUS Relative humidity Operating temperature Noise level 1mt (0-100% Load) Interfaces Colour Dimensions w/o battery Net weight w/o battery Protection degree  STANDARDS	RS232 & EPO star	100A 396Vdc  Up to 98%  90% without condensing from 0°C to + 40°C 68dBA  ndard, dry contact, SNMP, Dark grey RAL7016 800x800x1900mm 690kgs	125A  RS485 as option		
BATTERY Type Max recharge current @ 80% load Nominal voltage  EFFICIENCY OFF LINE mode  MISCELLANEOUS Relative humidity Operating temperature Noise level 1mt (0-100% Load) Interfaces Colour Dimensions w/o battery Net weight w/o battery Protection degree  STANDARDS Safety EMC	RS232 & EPO star	100A 396Vdc  Up to 98%  90% without condensing from 0°C to + 40°C 68dBA  ndard, dry contact, SNMP, Dark grey RAL7016 800x800x1900mm 690kgs IP20	125A  RS485 as option		

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