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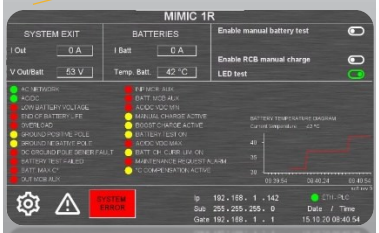
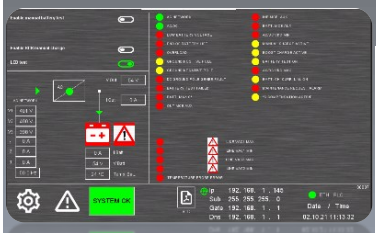
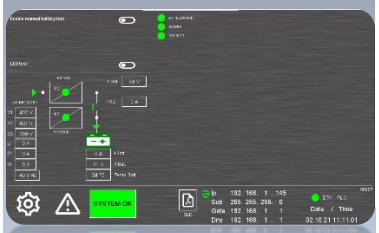
DC UPS – PLATINUM PL4.0







These devices are the result of careful research and development carried out by our company to achieve maximum reliability and performance in the field of DC emergency power systems. The improvements we have made now allow us to offer a single system that can be offered in different electrical configurations all with IGBT (CHOPPER) or THYRISTOR conversion technology depending on the currents required:

Single branch - abbreviation **1R**
Double branch - abbreviation **2R**
Double parallel branch - abbreviation **2RP**

The **SYSTEM CONTROL** is now based on an expandable Industrial **PLC**, characterized therefore by a very high reliability as well as by a considerable flexibility, it allows to satisfy a greater numbe of technical needs and consequent applications. This section, which constitutes the "intelligent" heart of our system, is now made in a special drawer located on the inside of the main door of the cabinet and **FULLY REMOVABLE** thanks to the presence of a polarized connector. This solution introduces a very important advantage, in fact it is possible to replace this assembly while hot, witl the machine running, without turning off the system. This is possible as the AC / DC conversion units recognize the loss of communication with the drawer and set themselves up in "**AUTOMATIC SAVE MODE**", actually working independently and guaranteeing continuity of operation. Once the drawer has been replaced and the connection re-established, the AC / DC units will return to operate under the automatic control of the PLC, resuming normal and complete operation.

Innovative **B.E.A Battery Efficiency Analysis** function that analyses the battery efficiency curve i the event of a blackout and/or BATTERY TEST, giving an immediate overview of the functionality status.

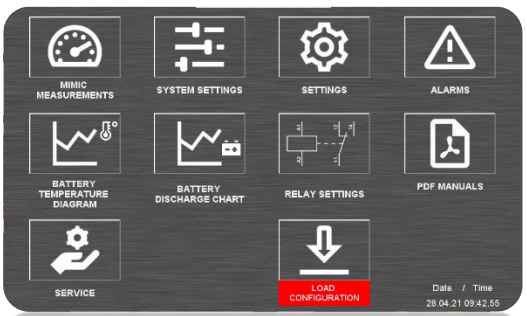
The HMI (Human Machine Interface) system has also been renewed, which now includes a touch panel, capacitive, 7 "with excellent visibility characteristics, mechanical resistance to wear and connectivity with the outside world. Finally, a great deal of space was reserved for **REMOTE CONNECTION**, in fact now it is possible to control, parameterize and manage these systems in absolute safety through the INTERNET network thanks to the standard presence of the WEB SERVER function. This has an undoubted advantage that significantly improves the maintenance and technical assistance aspects in critical installations

Applications

- Oil & Gas (petrochemical plants, offshore, pipeline)
- Electricity generation (power stations, hydroelectric, transmission, distribution, utilities)
- Transport (Airports, naval, rail)
- Process control (Mining industry, steel mills, paper production, etc.)
- Plants for desalination and water treatment

Main Features

- Power element: IGBT or THYRISTOR depending on power.
- Isolation transformer on AC input line complete with electrostatic shield between primary and secondary
- System control with Industrial PLC
- 7 " touchscreen panel
- Charging curve for AGM - Pb - Ni-Cd battery
- 3 charging levels including manual charging complete with safety timer
- High MTBF and low MTTR
- Easy maintenance with access from the front
- Low residual ripple in output and on batteries (Ripple)
- 5 fully user programmable alarm relays
- Temperature compensation with PT100 sensor and correction coefficient (Vel / ° c) settable by the user
- **Battery Effeciency Analysis**: Battery efficiency analyzer
- Automatic battery test with programmable frequency and duration
- Integrated web mail



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GENERAL TECHINICAL SPECIFICATIONS

ELECTRICAL DATA									
		IGBT			**THY**				
DC output voltage		24	24	24	24	48	110	220	
AC Incoming voltage	**1 Ph**	230 Vac ± 10%			NOT AVAILABLE				
	3 Ph	400 Vac ± 10%							
Incoming frequency		50 ÷ 60 Hz ± 5%							
Incoming s/c current		≤ 10KA RMS (with nominal VAC - ref.CEI EN 60947-2)							
Incoming current distortion	**THD**	≤ 27 (with nominal load)							
Incoming power factor		≥ 0.80 (with nominal voltage , 100% load)							
I/O insulation		4kV WITH INPUT TRANSFORMER							
OUTPUT DATA									
Ouput current (IGBT)		**Incoming feeding 1 Ph**			**Incoming feeding 3 Ph**				
	Config.1R	10÷60 Amp			10÷100 Amp				
	Config.2R	10÷60 Amp			10÷100 Amp				
	Config.2RP	10÷60 Amp			10÷100 Amp				
Output current (THY)					**Incoming feeding 3 Ph**				
	DC output voltage				24	48	110	220	
	Config.1R				10 – 500 Amp			10 – 250 Amp	
	Config.2R				10 – 500 Amp			10 – 250 Amp	
	Config.2RP				10 – 500 Amp			10 – 250 Amp	
Battery voltage	**Floating** (HMI adj)	2,27 V/cell for VRLA battery type 2,2 ÷ 2,3 V/cell for VLA battery type 1,4 ÷ 1,5 V/cell for Ni-Cd battery type							
	Boost (optional) (HMI adj)	2,4 ÷ 2,45V/cell for VLA battery type 1,5 ÷ 1,65 V/cell for Ni-Cd battery type							
	Manual (optional) (HMI adj)	2,35 V/cell for VRLA battery type 2,7 V/cell for VLA battery type 1,7 V/cell for Ni-Cd battery type							
Battery current recharge	(HMI adj)	1 ÷ In Amp (Note 2)							
Current curve		COSTANT							
Output voltage stability		1%							
Output volt.stab.ref.to Main input variation		1%							
Output volt.stab.ref.to Load variation		1%							
Output ripple	**RMS**	1%							
OUTPUT OVERLOAD	(without)	100% In (Note 1) or 2 In x 5 mS			100% In (Note 1) <120% per 20 min (Note1 1a) >150% per 5sec (Note1 1a)				
AMBIENT DATA									
Noise level	**Ref. EN50091**	< 60 dBA (typical value with forced ventilation in operation)							
EMI		EN 61000-6-2 - EN 61000-6-4							
Operating temperature standard	**°C**	-10..... +40							
Storage temperature	**°C**	-20.....+70							
Relative humidity	**Without condense**	< 95%							
Ventilation (on the power module AC/DC)		Electronic speed control according to the current delivered			NATURAL / FORCED as a function of power output				
Altitude	**Mt.s.l.**	< 1000 (de - rating ref. EN62040-3)							
MECHANICAL DATA									
External degree of protection	**Ref. IEC 60529**	IP 31 standard							
Internal degree of protection	**Ref. IEC 60529**	IP 20 with main door open and additional guards engaged							
Color		RAL 7035 structure RAL 7012 roof and base							
Dimensions (w*d*h) mm		In function of the Iout / Autonomy							
IN/OUT cables connection		From the front with cable entry from below							
Transport		Base for handling with pallet trucks							
Installation		Floor standing							
Accessibility		Front							
PROTECTIONS									
Incoming		See TAB.1							
Output		See TAB.1							
Battery		See TAB.1							
Generals		Vout > / Vout< / Maximum temperature / Icc / Incorrect input cyclic direction							

More details can be found in the technical document STC20-00.

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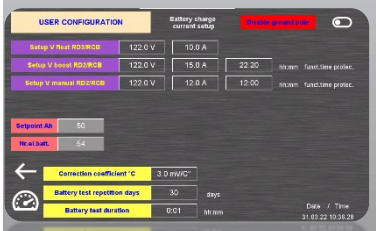

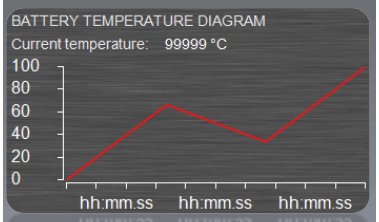

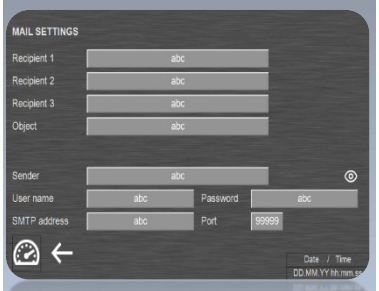

Tab.1	1R	2R	2RP
Standard equipment			
AC input circuit breaker complete with aux. status counter on HMI	x	x	x
DC output manual isolator complete with aux. status counter on HMI	x	x	x
Battery fuses	x	x	x
Floating charge	x	x	x
DC to earth probe	x	x	x
Temperature compensation	x	x	x
Automatic/Manual battery test	x	x	x
Relay alarms	x	x	x
7" colour touch HMI	x	x	x
MODBUS TCPIP	x	x	x
Alarm history	x	x	x
Password-protected system configuration menu	x	x	x
System software updates / remote assistance	x	x	x
Multilingual HMI	x	x	x
AUT battery test frequency and duration configuration from HMI	x	x	x
Configuration of K/°C/el correction factor for battery temperature compensation from HMI	x	x	x
WEB SERVER - Remote system control without installation of specific programs but from internet browser	x	x	x
WEB MAIL - Possibility of sending system status messages by e-mail	x	x	x
Battery Efficiency Analysis- Battery efficiency analyser	x	x	x
Dual system display on HMI - Numerical / Mimic	x	x	x
Battery temperature graph	x	x	x
Graph of battery discharge curve with time back-up indication	x	x	x
Measurements on HMI			
DC output voltage - Plant	x	x	x
DC Output Current - Plant	x	x	x
DC Voltage - Batteries	x	x	x
DC Current - Batteries	x	x	x
Temperature - Battery	x	x	x
Ac input mains parameter measurement (V/A/Hz)	x	x	x
Signalling on HMI			
AC input main ON/OFF	x	x	x
AC/DC - RS/RD1- ON/OFF		x	x
AC/DC - RCB/RD2- ON/OFF	x	x	x
RS/RD1- High output voltage	-	x	x
RS/RD1- Output voltage Low	-	x	x
RCB/RD2- High output voltage	x	x	x
RCB/RD2- Low output voltage	x	x	x
RCB/RD2- Floating Charge	x	x	x
RCB/RD2- Boost Charge	x	x	x
RCB/RD2- Manual Charge	x	x	x
Charging current limitation in progress	x	x	x
Temperature compensation in progress	x	x	x
Max. battery temperature	x	x	x
DC positive pole to earth	x	x	x
DC negative pole to earth	x	x	x
Output overload	x	x	x
Battery test in progress	x	x	x
Battery test failed	x	x	x
Battery mode	x	x	x
Low battery voltage	x	x	x
End of battery discharge	x	x	x
Regular system	x	x	x
General system failure	x	x	x
DC output switch status	x	x	x
Relay alarms			
AC main input ON/OFF	x	x	x
General failure (cumulative of states)	x	x	x
Low battery voltage	x	x	x
No.5 relays programmable from HMI	x	x	x

More details can be found in the technical document STC20-00.

X = optional
X = standard
- = not present

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