

TITANIUM ECO 1R-CH

DC POWER SUPPLY SYSTEMS

Single branch IGBT-based

TITANIUM ECO 1R-CH is a Single Branch rectifier, provided with a single IGBT-based AC/DC conversion unit which supplies the loads and simultaneously charges the battery. The rectifier is assembled in an industrial cabinet 1600mm height and can be supplied with sealed Lead Acid and NiCd batteries.

Further, the rectifier is provided with an input insulation transformer and the AC/DC converter is based on a removable rack 19" unit, in order to improve the efficiency, contain the output voltage ripple, and obtain an high MTBF with an extremely low MTTR.



MAIN FEATURES

- Input insulation transformer at power frequency, complete of electrostatic shield
- Rectifier bridge chopper **IGBT-based on REMOVABLE UNITS** RACK 19" with polarized connector
- Control type: high frequency PWM
- Digital control with microprocessor
- Extended frequency range accepted as input
- Charge curve for every type of sealed lead acid and NiCd battery
- Provided with digital control panel with backlit alphanumeric display
- High efficiency and reliability
- Easy maintenance thanks to the access from the front and the removable power units
- Low residual voltage ripple on output and on batteries
- Automatic and manual battery test to perform a true discharge battery test (Optional)
- Earth fault sensor with POLE+ and POLE-

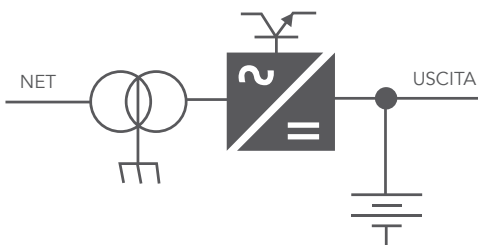
REMOVABLE AC/DC CONVERTERS

AC/DC converter based on removable rack 19" unit, provided with polarized connectors in order to simplify the replacement in case of failure (very short MTTR).

APPLICATIONS

- Oil & Gas
- Energy production and distribution
- Process controls
- Transportation
- Safety
- Telecommunications
- Tertiary

SINGLE-LINE DIAGRAM



AVAILABLE ACCESSORIES (OPTIONAL)

- uP card for function: AUT/MAN BATTERY TEST
- uP card for function: BOOST & MANUAL CHARGE
- uP card for function: TEMPERATURE COMPENSATION
- External Temp. Probe (3mt. cables max)
- uP card for function: DC EARTHED PROBE (with polarity discrimination +/-)
- END DISCHARGE POWER CONTACTOR



LED SIGNALS

- SYSTEM OK ●
- SYSTEM FAILURE ●

MULTIPURPOSE BUTTON

- Buzzer OFF

ELECTRICAL MEASURES ON LCD

- Output voltage
- Output current

DISPLAY MESSAGES

- Rectifiers ON
- Overload
- V OUT Rectifiers MAX
- Battery discharging
- Low battery voltage
- End of battery autonomy
- Grounding pole
- Ongoing/failed battery test

TITANIUM ECO 1R-CH

GENERAL	BATTERY	Suited for sealed (VRLA) Lead Acid or NiCd battery		
	CHARGING CHARACTERISTICS	IU (according to DIN 41773)		
OUTPUT	NOMINAL VOLTAGE (V)	24	48	110
	CURRENT RANGE	10 ÷ 60 A		
	MAXIMUM POWER (W)	1440	2880	6600
	RIPPLE NOISE (RMS)	≤ 0.5% V _n		
	V _{out} SETTING RANGE	+/- 5%		
	STABILITY	+/- 1%		
	V _{in} VARIATION SETTING	+/- 1%		
	LOAD VARIATION SETTING	+/- 1%		
	START-UP TIME	2 sec.		
	INPUT	VOLTAGE RANGE	230 Vac ±10% or 400 Vac ±10% (1F or 3F)	
INPUT FREQUENCY		50 ÷ 60 +/-7%		
EFFICIENCY (Typ.)		≥ 90 %		
I7O INSULATION		4kV		
PROTECTIONS	INPUT	Automatic circuit breaker		
	BATTERY	Fuses		
	OVERLOAD	2In x 5mS without battery 3In x 30S with battery		
	CURRENT CURVE	Constant		
	OVERVOLTAGE	+ 10% V _n		
	UNDERVOLTAGE	- 50% V _n		
	OVERTEMPERATURE	Shut down - Restart Automatic restart after temperature reset		
ALARMS SPDT 5Amp/250Vac	BATTERY LOW VOLTAGE			
	GENERAL FAILURE			
	MAINS FAILURE			
AMBIENT	OPERATING TEMPERATURE	-10+40°C		
	OPERATING HUMIDITY	2090% (NO COND.)		
	STORAGE TEMPERATURE	-20+50°C		
STANDARDS	MARKING	CE		
	PROTECTION DEGREE	IEC 60529		
	EMC	EN 61000-6-2 EN 61000-6-4		
	STATIC CONVERTERS	EN 60146-1-2		
	DC-UPS (performance, routine test, requirements)	IEC 62040-5-3		
EXECUTION		Metallic cabinet for floor mounting dimensions WxLxH 600x650x1600		
PROTECTION DEGREE (closed door)		IP30		
COLOR		RAL 7035		

* Relay normally operating in positive safety



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