

GENERAL

Model / Power	RDAT 48-40 / 1.920W
Topology	6 Pulse / Full Bridge Phase Angle Controlled Thyristor Module Rectifier
Control	Microprocessor Controlled System

INPUT

Input Isolation Transformer	Galvanically isolated / Primary & Secondary Earth Screened
Nominal Voltage and Tolerance	380VAC \pm 15%
Input Wiring	3 Phase 3 Wires
Nominal Frequency	50Hz \pm 5%
THDI	<35% with 6 pulse
Cos ϕ	0.8 with 6 pulse
Input Protection	Thermic Magnetic Overcurrent protection via MCB and Overvoltage / Undervoltage protection

OUTPUT

Battery Charging Principle	Constant Current/ Constant Voltage
Rated Power	1.920 W
Nominal Output Voltage	48VDC
Output Voltage Adjustment	48VDC system between 48VDC and 60VDC
Nominal Output Current	40 A
Output Current Adjustment	0-100% of Nominal Output Current
Static Tolerance	<1% with 6 pulse
Output Voltage Ripple RMS	1% RMS AC of Output Voltage with 6 pulse
Efficiency at full load	>90%
Boost voltage (V/C)	2,4 lead acid battery 1,60 NiCd Battery (Depends on battery manufacturer recommendation)
Float voltage (V/C)	2,23 lead acid battery 1,40 NiCd battery (Depends on battery manufacturer recommendation)
Dynamic Response (w/out battery group)	\pm 10% of Output Voltage at 200msec (100% load change)
Dynamic Response (with battery group)	\pm 2% of Output Voltage at 200msec (100% load change)
Output Protection	Short Circuit, MCB and Overvoltage / Undervoltage protection
Filtering	L-C Filter

CONTROL ELEMENTS

Battery Test	Automatic or manual selectable. Please refer to user manual for details
Boost Timer	0 – 99,9 hours adjustable by 1 minute accuracy
Current Limitation	Total output current and battery current can be adjusted separately

ALARM CONTACTS

Open or closed free alarm contacts	Line MCB OFF / Mains Failure , Battery MCB OFF, Load MCB OFF, low battery failure, over output voltage, charger failure, over temperature, and earth fault
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DISPLAY PANEL & MEASUREMENT

Measurements	LCD Display for Load Output Voltage, Rectifier Total Output Current , Battery Output Voltage / Current and Line Voltage / Frequency
Indicators	Float mode, Boost mode, Current mode, Equalize mode, Battery ending, Low battery, Battery test failure, Line MCB OFF, Fan failure, Over voltage, Under voltage, Over temperature, Rectifier failure, Mains ON (LED indication), Load MCB (LED indication), Battery MCB (LED indication), Earth Fault (+ / -)
Adjustable Parameters	Boost charge voltage, Float charge voltage, Low battery voltage , Battery test , Charger output current, Battery charge current, Battery automatic boost current and float current, Auto & Manual boost selection, Manual boost time, LED test and On - OFF.
Event History	Line MCB ON / OFF, Battery MCB ON / OFF, Load MCB ON / OFF, AC Line Input High / Low / Normal , Low Battery, Battery OK, Rectifier Overvoltage / Undervoltage / OK, Overtemperature / Normal Temperature, Battery Test Fail / OK events are displayed on time base. Last 250 events recorded and displayed on front panel and on PC via RS 485
Sound Alarm	On Warning Messages 2 Short 'beep' per 2 seconds

COMMUNICATION AND PARALLELING (OPTIONAL)

Communication	Modbus, TCP/IP, Profibus and SNMP Communications via RS485 port - EXCLUDED
Paralleling	Active or Passive Load Sharing available on request - EXCLUDED

LVD (OPTIONAL)

LVD	Protection of Battery from Deep Discharge via Contactor. Available on request - EXCLUDED
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DROPPER DIODES (OPTIONAL)

Dropper Diodes	Dropper Diodes for Float and Boost Voltage Regulations. Available on request - EXCLUDED
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SAFETY & ENVIRONMENT

Circuit Breakers	Input: Miniatur circuit breakers; Output: Miniatur circuit breakers; Battery: Miniatur circuit breaker:
Over Voltage Protection	IEEE 587 4500 A, 110 Joules (standard)
Electrical Interference Reduction	FCC Part 15 Class B
Electrical Standards	EN 50091-1 (Security) / EN 50091-2 (EMC;
Protection Level / Color	IP20 / RAL7035 as standard)
Isolation Voltage	2000VAC input/chassis and output/chassis
MTBF	100,000 hrs. (w/out battery group)
Enclosure Material	Mild Steel, Zinc-phosphate coated; 100 µm electrostatic paint; 1.5 mm thickness
Cooling	Forced fans
Cable Entry	Bottom
Distribution	Available on request - EXCLUDED
Heater & Lightning	Available on request - EXCLUDED
Operating Temperature	-10 / +40 °C
Relative humidity	5 - 90 %
Operating Altitude	Max. 2000 Mt.
Noise Level	Max. 60 db
Cabin Dimension	(H)1950 (W)650 (D)700mm (For both RDAT 220-100 & RDAT 48-40