



# TRD SERIES

RECTIFIER

3 phase

## GENERAL SPECIFICATIONS

- Internal isolation transformer at input
- Full controlled conventional rectifier
- Smart control and high reliability with DSP (Digital Signal Processor)
- Float charge, equalizing charge and boost charge modes
- Automatic and manual charge modes
- Low output voltage ripple and high reliability
- 2x16 character LCD display, showing measurements, status and alarm messages
- Soft start
- Led displays for easy observation of rectifier status.
- Audible alarm
- Programmable current limitation
- Operation as voltage source or current source
- Calibration of measurements from front panel
- Language selection from front panel. (English / German / Turkish / Dutch / Portuguese)
- DC Low / High, Line failure, Over temperature, Short circuit protections
- Ability to program all operation parameters (Password protected)
- Programmable alarm relay contact outputs (4 standart, up to 16 relays as option)
- Possibility of monitor and control over RS232-RS485
- Modbus communication
- Earth leakage monitoring (DC leakage)
- Log records with date and time stamp up the 200 events
- 12V / 24V / 48V / 110V / 220V output options

## OPTIONS

- Active parallel (current sharing) operation up to 4 devices
- Ability to monitor batteries and battery low alarm, even when the AC input fails.
- Battery temperature compensation
- Easy observation via analog gauges
- Battery test with adjustable voltage and duration
- Transducers for input / output voltage(s) / current(s) (4-20mA and 0-10V)
- 12 pulse option to limit input current distortion
- Input Power / kVA / kW measurement
- Internal cabinet light / cabinet anticondensation heater
- Touch screen





# TECHNICAL SPECIFICATIONS

<b>MODEL</b>	<b>3 PHASE INPUT</b>
<b>INPUT</b>	
Nominal voltage	190VAC / 200VAC / 380VAC / 400VAC / 415VAC (Faz - Faz)
Input voltage tolerance	± 15%
Nominal frequency	50Hz / 60Hz
Transformer	Galvanically isolated
ITHD	< 30-35% standard, <10% on 12pulse (Optional)
Input protection	Thermic Magnetic Overcurrent protection MCB, Overvoltage protection)
<b>OUTPUT</b>	
Output voltage	12VDC / 24VDC / 48VDC / 110VDC / 220VDC
Output voltage adjustment	120% of Nominal Output Voltage
Output current adjustment	10% - 100% of Nominal Output Current
Battery charging current adjustment	10% - 100% of Nominal Output Current
Boost charger voltage	100% - 120% of Floating Output Current
Boost voltage (VAC)	2,4 Lead Acid Battery 1,50 NiCd Battery
Float Voltage (VAC)	2,23 Lead Acid Battery 1,40 NiCd Battery
Nominal output current	0 - 10000A (According to request)
Maximum output current	%100 of Nominal Output Current
Filtering	L-C Filter
<b>GENERAL PROPERTIES</b>	
Boost timer	0-600 hours adjustable
Cooling	Fan forced cooling (Standard), Natural cooling (Optional)
Isolation voltage	1500 or 3000VAC input/chassis and output/chassis
Efficiency at full load	85% to 93%
Protection level	IP20 (Standard); IP21 - IP54 (Optional), (Consult for IP54 to IP64)
Cable entry	Front bottom (Top entry, optional)
Access to battery	Batteries and rectifier in the same cabinet with front access (optional)
Circuit breakers	Thermic-magnetic circuit breakers for input, output and battery
Reset button	Auto start
Measurements	Load output voltage and current / Batt.. output voltage and current / Utility voltage / Line voltage / Frequency / Power factor (Optional) / Batt. ambient temperature (Optional)
<b>ENVIRONMENT</b>	
Acoustic noise	55 - 65 dB (According to power rating)
Storage temperature	(- 20°C) - (+70°C)
Operation temperature	(-5°C) - (+50°C)
Humidity	0-%95 (Non-condensing)
Altitude	1000m (-1% Power for every 100m after 1000m) Max. 4000m
Color	RAL7035, RAL7032 (Standard), others (Optional)
<b>COMMUNICATION &amp; PARALLELING</b>	
Communication	RS232 (Standard), Dry Contacts (Standard), RS485 (Optional), Modbus TCP (Optional), SNMP (Optional), GSM (Optional)
Paralleling	Parallel redundant (No need for extra kit for paralleling)
<b>STANDARDS</b>	
Standards	IEC60146, IEC62040 1-2, ISO9001, ISO14001