# T SERIES

## 2100 WATT RANGE

**CF** 

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### SUMMARY SPECIFICATION

Model Number	Input Voltage	Output Voltage	Setting Range	Output Current	Current Limit	Cooling	Dimensions
TRE2100B54	216 – 264V a.c.	54.9V	52 – 58V	0 – 38A	38 – 42A	Convection	266 x 160 x 447 mm
TRE2100B27		27.4V	25 – 29V	0 – 75A	75 – 83A	Convection	10.47 x 6.30 x 17.60 in.

#### INPUT SPECIFICATION

Voltage	216 – 264V r.m.s.		
Frequency	45 – 66Hz		
Supply Type	Single phase TN-S system (as defined in IEC 364).		
Efficiency	Greater than 85% for output loads in excess of 50% I <sub>MAX</sub> . Typically 87%.		
Power Factor Correction	All units have input current correctors to comply with the requirements of EN61000-3-2.		

#### OUTPUT SPECIFICATION

Voltage

The output voltage is factory set to the voltage shown in the summary specification. The nominal voltage may be reduced to a second preset voltage by shorting  $V_{\text{LINK}}$  to +SENSE on the 'D' connector. Alternative output voltage settings are possible in the range shown in the summary specification. Please contact your local sales office or agent to discuss your requirement.

Current

Continuous output current is available up to the current limit point  $I_{LIM}$ . For test purposes, measurements are made at the maximum rated output current,  $I_{MAX}$ . Combined Regulation

Ripple and Noise

A worst case combination of input voltage variation of 216V to 264V and output load variation between zero and  $I_{MAX}$  results in an output voltage change of less than 0.1% nominal.

Optional output droop: This is available to assist current sharing when rectifiers are connected in parallel in a passive sharing system.

The wideband differential output noise over the frequency range 10Hz - 100MHz does not exceed 50mV r.m.s. Individual harmonics do not exceed 2mV r.m.s. (typically  $200\mu V$ ). The psophometrically weighted noise, in accordance with C.C.I.T.T. No 1, does not exceed 2mV r.m.s. The rectifier output noise meets "equipment noise limits" of BTR2511 Issue 3.

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PROTECTION		ELECTRICAL ISOLATIO	N	
Hold Up	With the output loaded to 2100W, a hold up time of at least 20ms is available when operating at 216V input.	Primary to Earth	Units are tested to 1.5kV a.c. r.m.s. from input to earth with both input lines connected together.	
Output Current Limit	These rectifiers are designed to be able to operate continuously in current limit and are fully protected against output overload.	Secondary to Earth	Units are tested to 1.5kV a.c. r.m.s. from output to earth, with all outputs and secondary ports (signals) connected together.	
Output Overvoltage	An output voltage in excess of the trip point of 59.5V on 54V units and 31.5V on 27V units, will cause the rectifier to latch into a shutdown condition. The rectifier is reset by interrupting the mains input.	Primary to Secondary	Reinforced insulation to 3kV a.c. r.m.s. for one minute. Where a safety earth is interposed between primary and secondary, this potential is split equally between input to earth and output to	
Parallel Voltage	The rectifier can withstand voltages of up to 63V on 54V models and up to 35V on 27V models applied to the output terminals when it is inoperative.		earth. Complete units are tested to 1.5kV a.c. between input and output with all output terminals connected together and connected to earth	
Thermal Overload	A thermal sensor is fitted to the main heatsink which, under thermal overload conditions, will cause the unit to inhibit	Earth Leakage Current	The earth leakage current meets the requirements of EN60950.	
	until the temperature has reduced to an acceptable level	ELECTROMAGNETIC COMPATIBILITY		
AUXILIARY FUNCTIONS		Exported Noise	Units have been tested to and found to comply with the requirements of VDE 0871 Curve B, FCC Rules part 15 subpart	
Remote Sense	Available as an option.		J Class B, EN55022 curve B (conducted).	
Parallel Operation	Units may be operated with outputs connected in parallel without limitation.	MECHANICAL SPECIFICATION		
	Passive or active current sharing can be used.	Mechanical Format	All units are fully enclosed and are	
Remote On/Off	An isolated TTL input is provided to allow for remote switching of the rectifier.	Mounting Orientation	The units are designed to operate with	
Voltage Trim	An optional facility is available to allow external adjustment of the output voltage to suit battery environment.	Ventilation and Cooling	the front panel and the cooling fins vertical. Units require vertical air flow for cooling. Both top and bottom faces are ventilated and the left hand side of the unit is fitted with a heatsink. The top and bottom of the units are ventilated and must not be obstructed.	
Output Healthy Relay	Isolated changeover relay contacts indicating that the output voltage is within the normal operating range.			
Current Signal Analogue output with a voltage		ENVIRONMENTAL CONDITIONS		
Input Healthy	Isolated open collector output and LED indicating that the mains input is within specification.	Operating Temperature	-5°C to +40°C operating. For systems using integral fans for rectifier cooling,	
Output Healthy	Isolated open collector output and LED indicating that the output voltage is within	Operating Humidity	the temperature range can be extended to +55°C.	
Current Limit	Isolated open collector output and LED indicating that the current limit circuitry is operative	INTERNATIONAL SAFETY APPROVALS		
Overvoltage Trip Isolated open collector output and LED indicating that the unit's overvoltage trip has operated.		All units are designed in accordance with the requirements of EN60950. For more detailed information on these units please contact your local sales office or agent.		

CE marked to the Low Voltage Directive

#### **ORDERING INFORMATION**

To order specify the model number. As there are many optional features available, it is advisable to contact your local sales office or agent in the first instance. Optional features must be clearly shown on the order.

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#### **OUTLINE DRAWING**

All dimensions are nominal and are given in mm (inches).



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#### TRE2100B27 Front Panel



TRE2100B54 Front Panel

#### External Dimensions and Mass

	266 (10.47) high x 160 (6.30) wide x 450 (17.72) deep. 12kg (26.5lb).
Fixings	'DZUS' fastener at bottom of front panel for rack mounting applications.
Connectors	The following connectors are required for connection to the rectifier:
Input	IEC 320.
Output and Signals	TRE2100B27
	4 x 60A Anderson power poles. For mating connector, order connector kit 1TKP100A01.
	15 way female 'D' connector. For mating connector, order connector kit 1TKD15W02.
	TRE2100B54

Golden "D" connector "C" shell size, 21WA4 female connector with four power receptacles. For mating connector, order connector kit 1TKD21W02. TELECOM POWER