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**SUMMARY SPECIFICATION**

Model Number	Input Voltage	Nominal Output Voltage	Output Current	Current Limit	Cooling	Dimensions
TWC 0400 H 54	88 – 264V a.c.	54.9V	0 – 7A	0 – 8A	Convection	177 x 86 x 285 mm 7.00 x 3.39 x 11.22 in.
TWC 0400 H 27		27.4V	0 – 14A	0 – 16A		
TRE 0600 H 54	176 – 264V a.c.	54.9V	0 – 10.5A	0 – 12A	Fan Assisted (External Fan)	177 x 86 x 285 mm 7.00 x 3.39 x 11.22 in.
TRE 0600 H 27		27.4V	0 – 21A	0 – 24A		

**INPUT SPECIFICATION**

Input Voltage See summary specification.  
 Frequency 45 to 66Hz  
 Supply Type Single phase TN-S system (as defined in IEC 364).  
 Efficiency Greater than 80% at full load. Typically 87%.  
 Power Factor Correction Greater than 0.9, typically 0.99.

**OUTPUT SPECIFICATION**

Voltage Nominal output voltage is factory to the voltage shown in the summary specification ( $\pm 0.5\%$ ). The nominal voltage may be reduced to a second preset voltage by shorting  $V_{LINK}$  to +SENSE on the connector. Alternative output voltage settings are possible up to 58V on 54V models and up to 29V on 27V models. Please contact your local sales office or agent to discuss your requirements.

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

Combined Regulation

0.2%  $V_{NOM}$  maximum under worst case combination of input voltage variation over the operating voltage range and output load variation between zero and  $I_{MAX}$ .

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

Ripple and Noise

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 rectifiers output meet "equipment noise limits" of BTR2511 Issue 3.



**PROTECTION**

Hold Up	With the output loaded to $I_{MAX}$ , a hold up time of at least 10ms is available when operating at any input within the specified range.
Output Current Limit	These rectifiers are designed to be able to operate continuously in current limit and are fully protected against output overload.
Series Output Diode	Standard units are supplied with an output diode fitted internally in series with the positive output.
Output Overvoltage	An output voltage in excess of the trip point, 59.5V on 54V units, 31.5V on 27V units, will cause the rectifier to latch into a shutdown condition. The rectifier is reset by interrupting the mains input.
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.
Thermal Overload	A thermal sensor is fitted to the main heatsink which, under thermal overload conditions, will cause the unit to inhibit until the temperature has reduced to an acceptable level.

**AUXILIARY FUNCTIONS**

Remote Sense	Available as an option, internally linked as standard.
Parallel Operation	Units may be operated with outputs connected in parallel without limitation. Passive or active current sharing can be used.
Remote On/Off	An isolated TTL input is provided to allow for remote switching of the rectifier.
Voltage Trim	An optional facility is available to allow external adjustment of the output voltage to suit battery environment.
Output Healthy Relay	Isolated changeover relay contacts indicating output voltage is within the normal operating limits.
Current Signal	Analogue output with a voltage proportional to output current.
Input Healthy	Isolated open collector output and LED indicating that the mains input is within specification.
Output Healthy	Isolated open collector output and LED indicating that the output voltage is within normal operating limits.
Current Limit	Isolated open collector output and LED indicating when current limit circuitry is operative.
Overvoltage Trip	Isolated open collector output and LED indicating when the overvoltage protection circuitry has been triggered.

**ELECTRICAL ISOLATION**

Primary to Earth	Units are tested to 1.5kV a.c. r.m.s. from input to earth with both input lines connected together.
Secondary to Earth	Units are tested to 500V a.c. r.m.s. from output to earth, with all outputs and secondary ports (signals) connected together.
Primary to Secondary	Input to output isolation barriers, including layout and wiring, are specified to 4kV a.c. r.m.s. for one minute. This is tested prior to assembly by applying an input to earth isolation test voltage of 2.5kV a.c. r.m.s. simultaneously and in phase with a 1.5kV a.c. r.m.s. output to earth test voltage.
Earth Leakage Current	The earth leakage current meets the requirements of EN60950. It is measured as the voltage across a 1.5k $\Omega$ resistor in parallel with a 1.5nF capacitor, inserted in series with the earth line.

**ELECTROMAGNETIC COMPATIBILITY**

Exported Noise	Units have been tested to and found to comply with the requirements of VDE 0871 Curve B, FCC Rules part 15 subpart J Class B, EN55022 curve B (conducted).
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**MECHANICAL CHARACTERISTICS**

Mechanical Format	All units are supplied fully enclosed as standard and are intended for rack mounting.
Mounting Orientation	The units are designed to operate with the operate with the front panel and the cooling fins vertical.
Ventilation and Cooling	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 ventilated panels must not be obstructed.

**ENVIRONMENTAL CONDITIONS**

Operating Temperature	-40°C to +55°C. Wider temperature ranges are available. Contact the sales office to discuss your requirements.
Operating Humidity	0 to 85% R.H. non-condensing.

**INTERNATIONAL SAFETY APPROVALS**

All units are designed in accordance with the requirements of EN41003, BS6301, BS6484 IEC 950/EN 60950 and UL1950. TWC0400H54 has been approved to UL1950 and C22.2 #234 by UL. TWC0400 models are CE marked to the LVD.

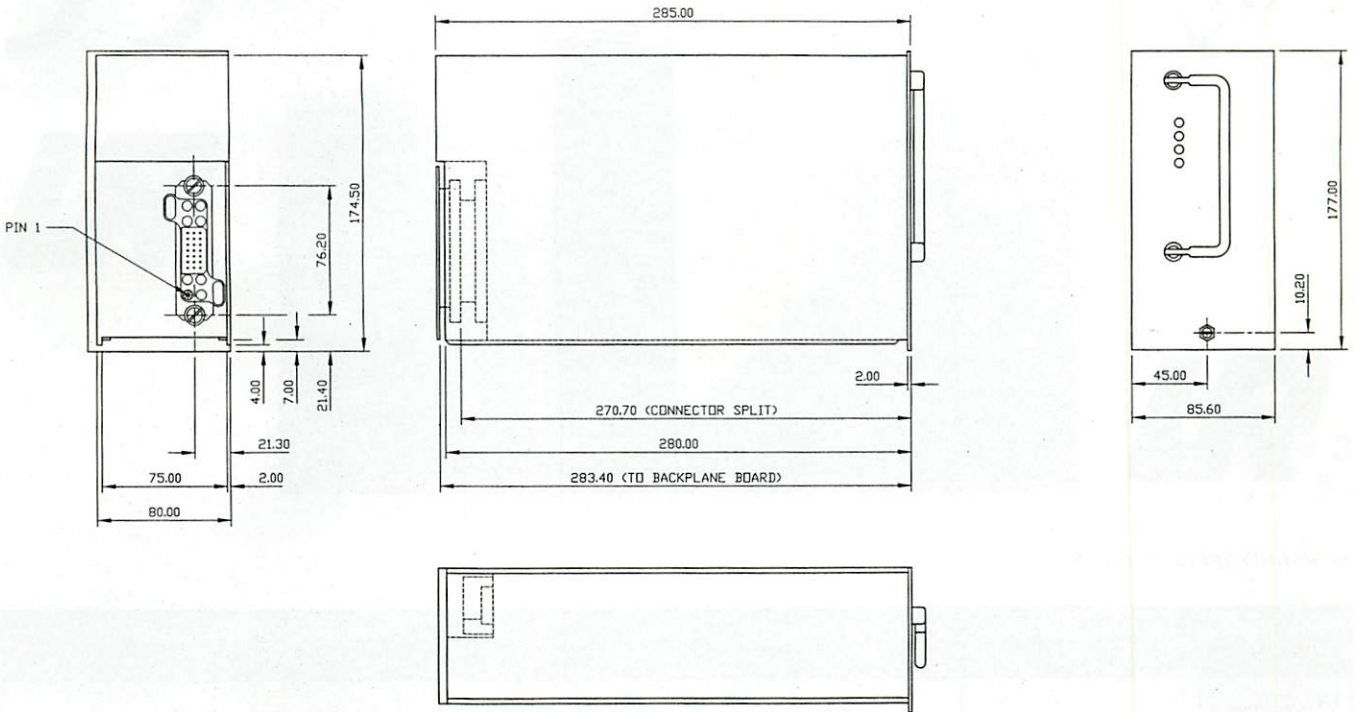
**ORDERING INFORMATION**

To order simply specify the model number. If any optional features are required it is advisable to contact your local sales office or agent to discuss your requirements. Optional features must be clearly shown on the order.



## OUTLINE DRAWING

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



- External Dimensions**    177 (7) high x 86 (3.39) wide x 285 (11.22) deep.  
 Alternative mechanical formats are available contact your local sales office or agent to discuss your requirements.
- Fixings**    Southco 'Pawl Latch' at bottom of front panel for rack mounting applications.
- Connectors**    The input, output and signals connect to the unit by an Elcon lower drawer connector mounted on the rear panel.