

# STAR

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## USER MANUAL

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Model: Star 56 Power Pack

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**Star Universal (Gosport) Ltd** reserves the right to change spare parts and/or specifications without previous notice. Contents of this manual can also be changed without previous warning.

**Star Universal (Gosport) Ltd** cannot be held responsible for eventual damage caused by specifications deviating from the standard model.

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**Star Universal (Gosport) Ltd** is not responsible for damage or problems which result from the use of other than the original spare parts.

If this manual has not been supplied with instructions for certain repairs, adjustments and maintenance, you should contact **Star Universal (Gosport) Ltd**

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**Contents**

1	Introduction and check list	3
2	Safety Instructions	4
3	Machine Settings	5&6
4	Error Codes and Fault Finding	7
5	Inside the Machine	8
6	Electrical Parts List	9
7	Wiring Diagrams	10&11
8	Technical Specification	12
9	Environmental Policy	12
10	Warranty Policy	13

**1 INTRODUCTION**

With the purchase of this heat sealing machine you will be able to pack a great variety of products. **Star Universal (Gosport) Ltd** has ensured that all the machines, from the smallest to the largest model, fulfil the greatest demands. All the machines are built in-house to the highest standards and undergo vigorous testing.

**Unpacking**

The heat sealing machine is packed in either a box or pallet. We recommend you keep the box/pallet so you can transport the heat sealer safely in the future if ever required.

**Use the following list to check the contents of the box/pallet:**

<b>Manual</b>	✓
<b>Sealing Jaws (if applicable)</b>	✓

Star Heat Sealers meet the health and safety requirements of The Supply of Machinery (Safety) Regulations 1992 No. 3073 and The Machinery Directive 2006/42/EC. The CE mark will be affixed to the product where applicable.

A request is made that any known incidents that result in injury to an operator from the legitimate use of this heat sealer is reported to Star Universal Technical Department. Tel: 02392 582857 e mail: info@staruniversal.com

## 2 SAFETY

### SAFETY INSTRUCTIONS FOR HEAT SEALER OPERATION



**WARNING** this manual should be read in full prior to operating this heat sealing machine. Ensure all the operators are aware of how to use it safely.

All users of this product are requested to follow all warnings and instructions contained in this manual. In addition, all warnings and instructions affixed to the machine should be followed.

This heat sealer is supplied with a 3 wire power cable and a moulded 13 amp fused plug. A secondary fuse is located on the circuit board for additional protection. Increased user safety can be achieved by the provision of a residual current device (RCD) being used on the supply circuit to the machine.

The machine is not rated for direct water contact unless otherwise stated.

Ensure the power is switched off and the plug removed from the socket prior to carrying out any service work.

The machine should be regularly serviced using genuine Star parts and is subject to the portable appliance test regulations.

When not in use switch the machine off.

The sealer is designed to be installed on a flat level surface to ensure stability during operation.

The sealer is a heavy unit, take extra care when moving the machine using appropriate methods and equipment. For machine weights and dimensions see later in the manual.

Heat sealers are not designed to be used in flammable or explosive environments.

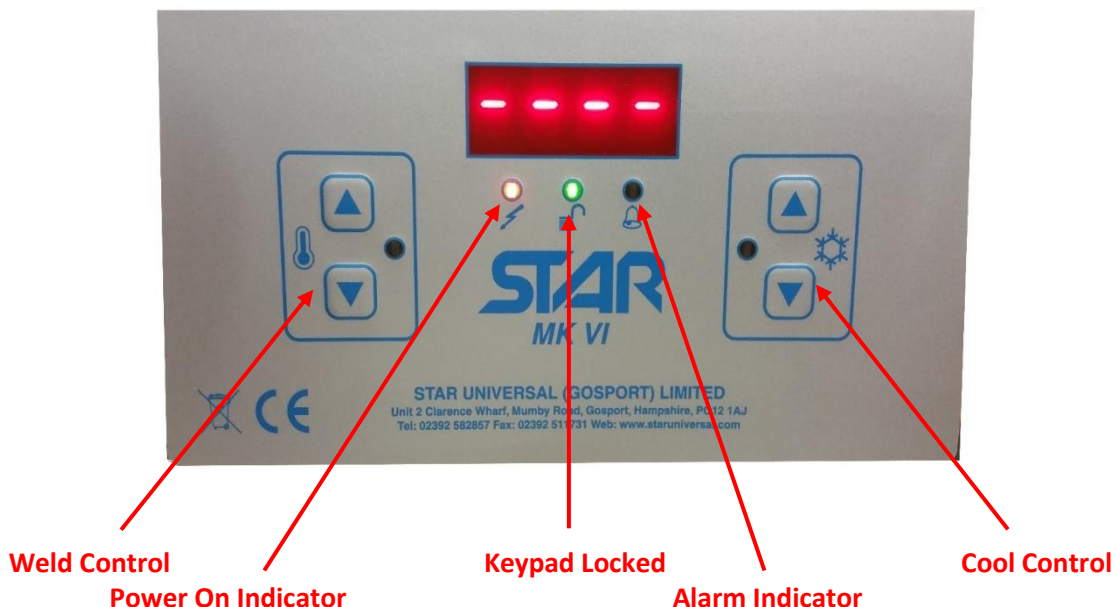
With repeated cycling residual heat can build up on the sealing jaws. Avoid touching them wherever possible.

Keep hands clear of the sealing jaws when operating the machine.

Always use heat sealers in a ventilated environment as sealing certain plastics may create fumes. Check with your bag/material manufacturer.

### 3 MACHINE SETTING

56/56C



#### SETTING THE WELD AND COOL TIMES/TEMPERATURES.

Set the weld and cool times as below. Place some of the material you wish to seal between the sealing jaws, close them and cycle the machine by pressing the foot switch/push button. When the cycle finishes open the jaws, if the material has not welded increase the weld and cool times. If the weld looks molten decrease the weld and cool times. Repeat the above process until you achieve a flat strong weld.

#### Weld Time/Temperature

With the machine turned on press the weld control ▲ or ▼ key and release, the amber weld indicator will flash. To increase the weld time/temperature press the weld control ▲ key, to decrease press the weld control ▼ key. As a starting point use 0.7/80. After 5 seconds the screen will default back and save the figure entered.

#### Cool Time/Temperature

With the machine turned on press the cool control ▲ or ▼ key and release, the blue cool indicator will flash. To increase the cool time press the cool control ▲ key, to decrease press the cool control ▼ key. Cool time should be approximately 3 times weld time. After 5 seconds the screen will default back and save the figure entered. Certain bag materials may require more or less cool time than advised above, adjust this as required.

#### SETTING THE COMPENSATION, KEY LOCK AND JAWS TIMEOUT

During machine operation a residual heat build-up can affect the quality of the weld. To try and minimise this the sealer has built in compensation which you can set. Firstly, set the weld and cool times as above from a cold start then repeat the steps as below to achieve consistent weld quality.

### Heating Compensation (time control only)

This relates to the amount of time the controller reduces the weld time after each operation to compensate for residual heat. A value of 0 indicates that heating compensation is disabled. A low value will reduce the weld time by a small amount and is suitable for a machine that warms up very slowly. A high value will reduce the weld time by a larger amount and is suitable for a machine that warms up very quickly.

To adjust the value, with the machine turned on, press both of the weld control ▲ and ▼ keys for 2 seconds and release when **hc** appears on the screen. To increase or decrease the figure use the heat ▲ or ▼ key. After 5 seconds the screen will default back and save the figure entered. Cycle the machine 15-20 times weld one of your bags. If the seal fails decrease the figure, if it is molten increase the figure.

### Cooling Compensation (time control only)

This relates to how quickly the controller increases the weld time when the machine is idle, compensating for the machine cooling down when not being used. A value of 0 indicates that cooling compensation is disabled. A low value will increase the weld time by small amount and is suitable for a machine that cools down very slowly. A high value increases the weld time by a larger amount and is suitable for a machine that cools down more rapidly.

To adjust the value, with the machine turned on press both of the cool control ▲ and ▼ keys for 2 seconds and release when **cc** appears on the screen. To increase or decrease the figure use the cool ▲ or ▼ key. After 5 seconds the screen will default back and save the figure entered. Cycle the machine 15-20 times, allow it to cool for a few seconds and weld one of your bags. If the seal fails decrease the figure, if it is molten increase the figure.

### Key Lock

To prevent unauthorised alteration, the Star MkVI has a control lockout. If the green keypad locked light is on the feature is not engaged. To engage or disengage press the cool ▲ or ▼ key and release to display the cool time, the blue indicator will flash. Press and hold both of the weld ▲ and ▼ keys for 2 seconds. The green **keypad** locked light will come on or go off once the two seconds is up. Release the keys and wait for the screen to go back to default.

### Jaws Timeout

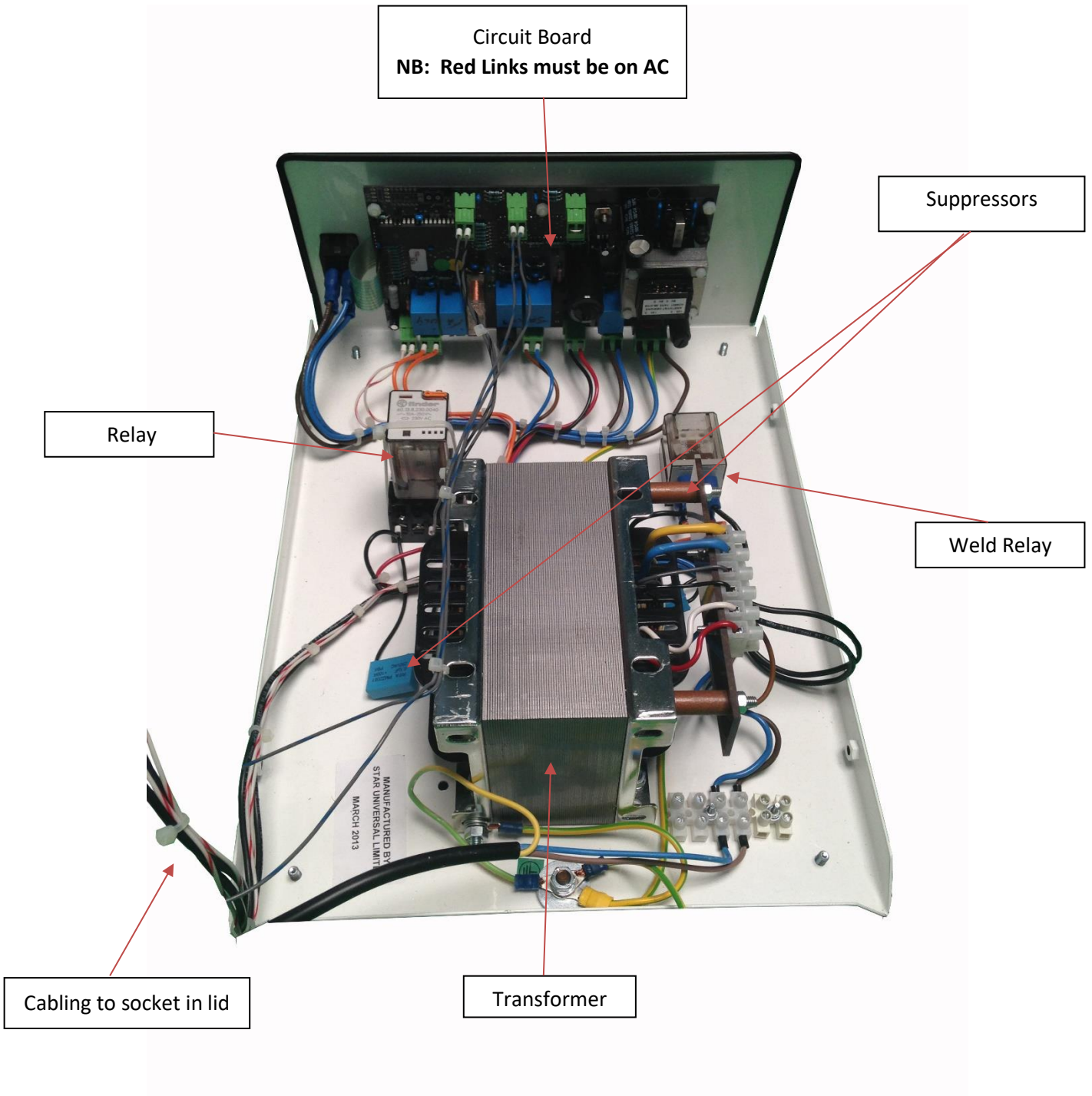
This is the time allowed for the jaws to close, jaws to open or automatic knife to complete its travel before the alarms engage. To alter press the cool ▲ key and weld ▼ key for 2 seconds until the display shows 2 digits with a decimal point between them. To alter this figure, use the weld ▲ and ▼ keys. After 5 seconds the screen will default back and save the figure entered.

**4 ERRORS AND FAULT FINDING** (To reset the machine after an error, turn the power off for 5 seconds and then turn on again)

Error	Possible Cause	Solution
The machine doesn't turn on	<ul style="list-style-type: none"> <li>• The plug is not inserted into the plug socket</li> <li>• Fuse blown</li> <li>• Internal error</li> </ul>	<ul style="list-style-type: none"> <li>• Check machine is plugged in</li> <li>• Replace fuse, external/internal</li> <li>• Contact Star Universal</li> </ul>
<p style="text-align: center;"><b>E1</b></p> <p>(power detected across elements when the machine is not cycling)</p>	<ul style="list-style-type: none"> <li>• Power relay stuck on</li> <li>• Board fault</li> </ul>	<ul style="list-style-type: none"> <li>• Replace relay</li> <li>• Replace board</li> </ul>
<p style="text-align: center;"><b>E2</b></p> <p>(Jaws failed to close after start signal received)</p>	<ul style="list-style-type: none"> <li>• Jaws timeout too low</li> <li>• Board fault</li> </ul>	<ul style="list-style-type: none"> <li>• Increase jaws timeout (see p6)</li> <li>• Replace board/contact Star universal</li> </ul>
<p style="text-align: center;"><b>E3</b></p> <p>(no power detected across the element when the machine is running a weld cycle)</p>	<ul style="list-style-type: none"> <li>• Broken element</li> <li>• Power relay stuck off</li> <li>• Board fault</li> <li>• Transformer blown</li> </ul>	<ul style="list-style-type: none"> <li>• Replace element</li> <li>• Replace power relay</li> <li>• Replace board/contact Star Universal</li> <li>• Contact Star Universal</li> </ul>
<p style="text-align: center;"><b>E4</b></p> <p>(Jaws Failed to open after cycle)</p>	<ul style="list-style-type: none"> <li>• Jaws timeout too low</li> <li>• Relay stuck on</li> <li>• Board fault</li> </ul>	<ul style="list-style-type: none"> <li>• Increase jaws timeout (see p6)</li> <li>• Replace tapes (leaving loose)</li> <li>• Replace board</li> </ul>
<p style="text-align: center;"><b>E5</b></p> <p>(Knife failed)</p>	<ul style="list-style-type: none"> <li>• Link on KNIFE I/P broken</li> </ul>	<ul style="list-style-type: none"> <li>• Replace link</li> </ul>
<p style="text-align: center;"><b>E6</b></p> <p>(Temperature rise in element not sensed within timeout)</p>	<ul style="list-style-type: none"> <li>• Timeout not set right</li> <li>• Broken element</li> <li>• Power relay stuck off</li> <li>• Board fault</li> <li>• Transformer blown</li> </ul>	<ul style="list-style-type: none"> <li>• Adjust timeout (see p6)</li> <li>• Replace element</li> <li>• Replace power relay</li> <li>• Replace board/contact Star Universal</li> <li>• Contact Star Universal</li> </ul>
<p style="text-align: center;"><b>E7</b></p> <p>(Over Temperature)</p>	<ul style="list-style-type: none"> <li>• Thermocouple not connected</li> <li>• Thermocouple broken</li> <li>• Power relay stuck on</li> <li>• Board fault</li> </ul>	<ul style="list-style-type: none"> <li>• Check thermocouple is connected to board input</li> <li>• Check thermocouple is in the correct position on jaw (see p)</li> <li>• Replace thermocouple</li> <li>• Replace power relay</li> <li>• Replace board/contact Star Universal</li> </ul>



5 INSIDE THE MACHINE



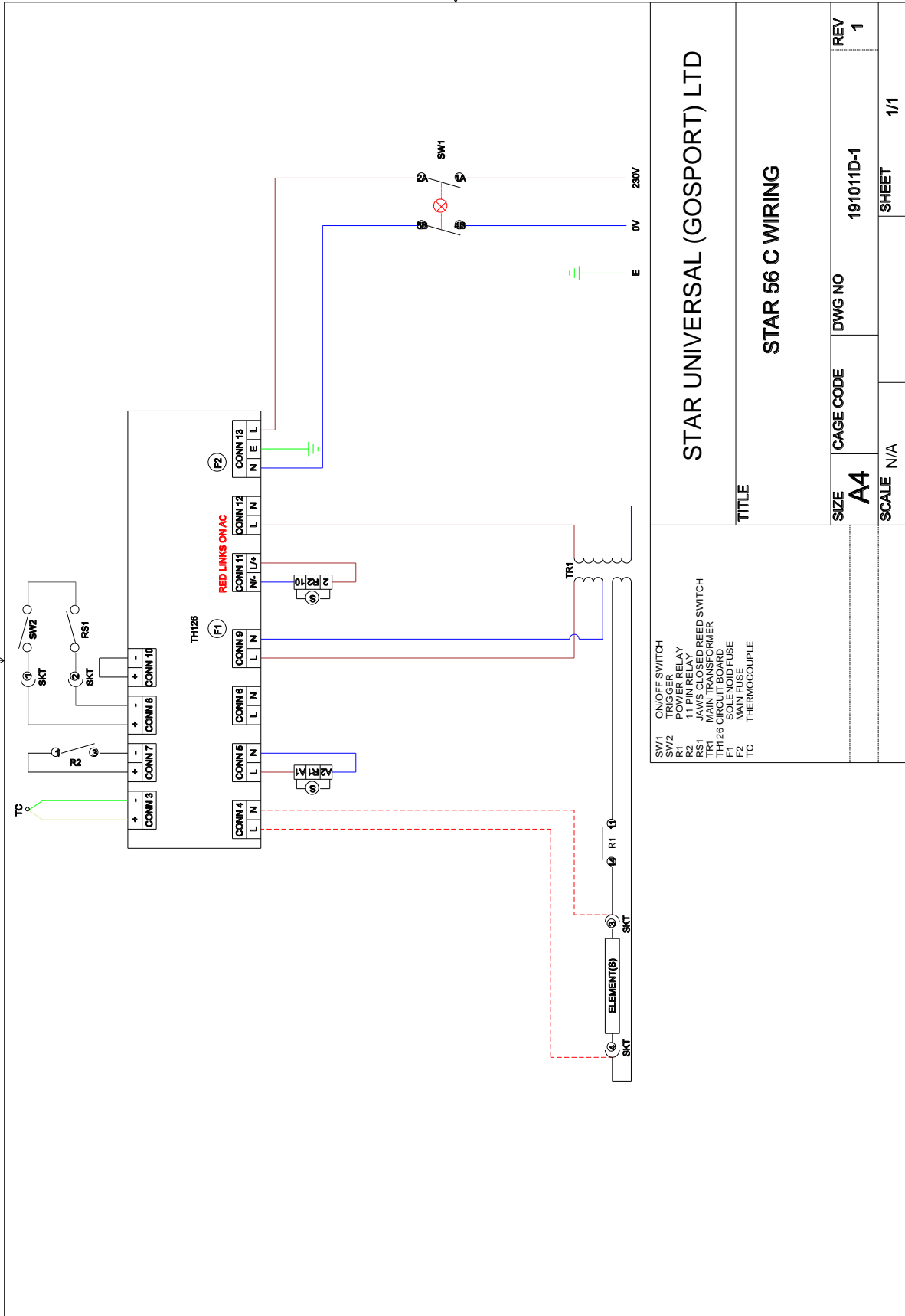


**6 ELECTRICAL PARTS LIST**

Part No	Diag No	Description
E010001 E010036	SW1	On/Off Switch Rocker Switch Cover IP65 (Stainless Steel model)
E017009 E016001	F5	Mains Fuse (115V machine only) Fuse Holder
E017003	F2	Main Fuse
E017008	F1	Solenoid Fuse
E003008	R1	Weld Relay
E003002 E004001 E021003	R2 S	Relay Relay Base Suppressor
E003001 E004001 E021003	R6 S	Relay (115V machine only) Relay Base Suppressor
E005001 E005028	TH126	MkVI Controller MkVI C Controller (Temperature control model)
B014002		Membrane Keypad
E001012	TR1	Transformer
E013021		Plug
E013001	SKT	6 Pin Socket
E013023	TC	Thermocouple Socket (Temperature control model)
B012002		Rubber Foot

**ALL PARTS QUOTED IN THIS MANUAL ARE CORRECT  
 AT THE TIME OF PUBLICATION E&OE  
 STAR UNIVERSAL RESERVE THE RIGHT TO REVIEW  
 AND ALTER THE PARTS AS NECESSARY  
 COMPONENTS AND LAYOUT MAY VARY FROM THOSE PICTURED**

7 WIRING DIAGRAM



STAR UNIVERSAL (GOSPORT) LTD

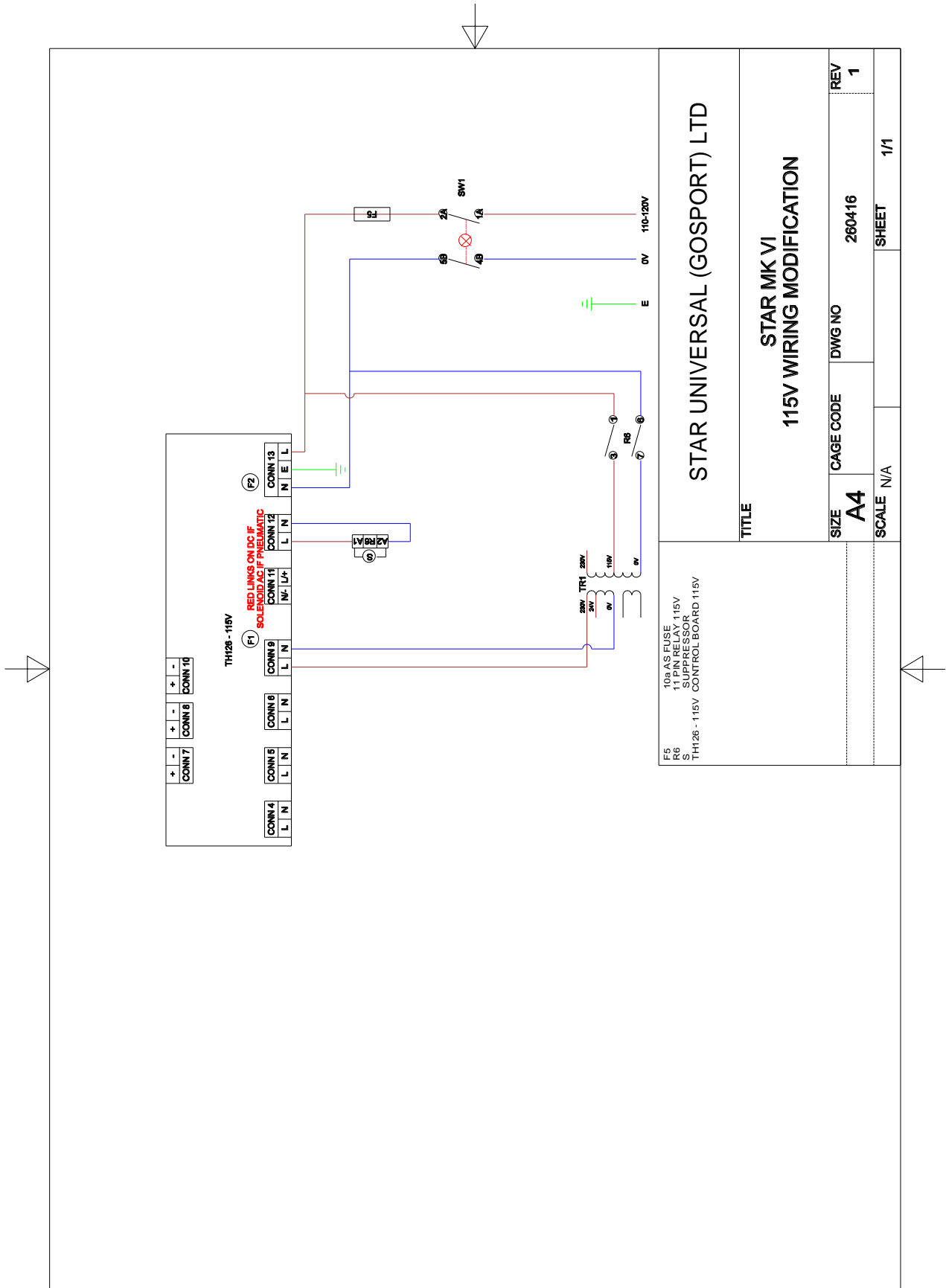
STAR 56 C WIRING

- SW1 ON/OFF SWITCH
- SW2 TRIGGER
- R1 POWER RELAY
- R2 11 PIN RELAY
- RS1 JAW'S CLOSED SWITCH
- RS2 JAW'S CLOSED SWITCH
- TR1 TRANSFORMER
- TH126 CIRCUIT BOARD
- F1 SOLENOID FUSE
- F2 MAIN FUSE
- TC THERMOCOUPLE

TITLE

SIZE	CAGE CODE	DWG NO	REV
A4	N/A	191011D-1	1
SCALE	SHEET		1/1

115V Modification



**8 TECHNICAL SPECIFICATION**

Sealing Cycle Time	Typically, 4-10s
Power Supply	230V 50/60Hz Single Phase, 115V Optional
Average Power Consumption / Cycle	0.01kWh 230V
Average Power	Weld 1730W, Cool 250W, Standby 25W 230V
Overall Length	400mm
Machine Body Width	300mm
Body Height	150mm
Weight Machine	17kg

All the above weights and dimensions are approximate and based on the standard machine E&OE.  
 Star Universal reserves the right to change the above specifications without prior notice.

**9 ENVIRONMENTAL RESPONSIBILITY**

**MACHINE RECYCLING**



As this machine contains electrical and electronic components it must be disposed of correctly and not in general land fill.

As Star Universal only build industrial equipment to individual customer requirements the responsibility for the disposal lies with the end user.

Star Universal will offer a collection service for machines we have built at the end of their useful life for recycling.

Please contact us for prices stating the machine model and serial number.

Producer Registration No. WEE/MM7018AA

## 10 STAR UNIVERSAL WARRANTY POLICY


The Company provides a 1-year warranty from the date of delivery on all Star Heat Sealing machines. If any part is found defective due to faulty manufacture, Star Universal will affect the repair or replacement to the customer free of charge providing:

- a) The fault is reported directly to the Service Department.
- b) The fault is not caused by misuse, neglect or faulty adjustments by the operator.
- c) The machine failure has not occurred through normal wear and application usage.
- d) The machine has not been serviced or repaired by any person not authorised by Star Universal during the warranty period.
- e) The machine is returned to Star Universal at the address below.

Expendable items like the jaw barrier tape and heating elements are not covered by the warranty but are readily available at a charge from the Service Department.

Travel time to attend a machine on site may be charged at the current applicable rates.

This warranty is additional to the normal customer statutory rights.

The background of the page is an abstract design consisting of multiple overlapping, wavy bands of various shades of blue, ranging from light cyan to deep navy. These bands create a sense of movement and depth, resembling water or light waves. The top and bottom of the page are solid black bars.

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