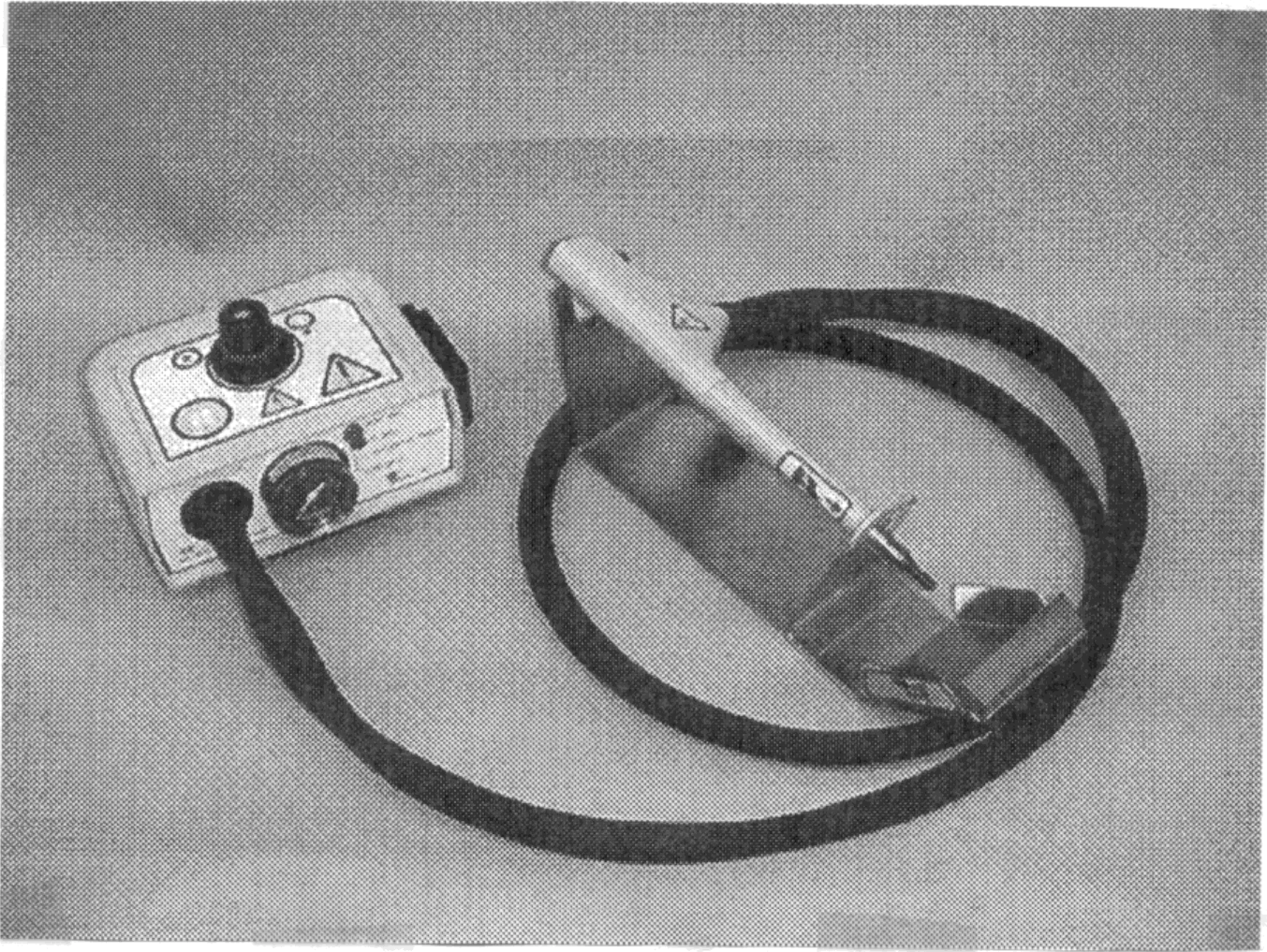




**AA-400 Mark IV
Super Heater
CE 240 Vac
Operation Manual**



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Heat Gun

The CE 240-Vac AA-400 Mark IV super heater is a compressed-air heating tool—one that offers precise control of the heated air stream, especially in confined areas. It operates with a mains voltage of 240 Vac.

The AA-400 Mark IV performs equally well in production, rework, and prototype applications. Five different reflector tips are available, providing a wide range of air-flow patterns and temperatures.

The needle-point tip is used for micro-miniature connectors. This tip comes standard with the AA-400 Mark IV.

The Mini Solder Sleeve reflector tip is used for installing Solder Tact contacts and Solder Sleeve terminations in confined areas. This tip comes standard with the AA-400 Mark IV.

The low-flow-point tip is used for installing small heat-shrinkable parts, such as micro tubing and boots. This tip must be ordered separately.

The Solder Sleeve Reflector tip is used for installing Solder Sleeve shield terminators and wire splice sleeves. This tip must be ordered separately.

The boot and tubing reflector tip is used for shrinking large-diameter Thermofit tubing products and molded heat-shrinkable components. This tip must be ordered separately.

Control Unit

The control unit contains several features:

- Mains power double-fused chassis plug.
- Two-meter removable power cord.
- Pressure regulator and gauge for adjusting air flow and temperature.
- Green HEAT ON indicator LED that illuminates when power is applied to the heating element.
- Automatic power cutoff switch to protect the heating element if the air flow is interrupted or turned down below a safe operating pressure.
- A three-pin mains inlet connector with two single-pole screwdriver-release fuse cartridges to accept five 20-mm fuses.
- A pressure-relief valve.

SECTION 2 SAFETY

General

As with all electrical equipment, the AA-400 Mark IV must be operated properly. Carefully read and observe all of the instructions and warnings in this manual.

Incorrect use of the AA-400 Mark IV can cause serious injury. This equipment must be operated and maintained only by fully trained and qualified personnel.

Failure to follow the manufacturer's instructions may void the warranty of this equipment.

The AA-400 Mark IV must be operated in accordance with safe working practices and local safety codes and regulations.

Do not use the AA-400 Mark IV for any purpose other than its intended function.

The AA-400 Mark IV carries an International Protection (IP) Code of IP30 for the control unit and IP20 for the heat gun assembly. Never expose the AA-400 Mark IV to rain or moisture.

Labels and Warning Symbols
This tool carries a label (shown below) that displays the product part number (PCN), product description, electrical rating information, air pressure information, and wiring schematic drawing number.

Warning symbols appear at right.



General Warning



Electrical Warning



Read Warning



Hot Surface

 TE Connectivity	AA-400 MK IV Super Heater PCN: 281917 Serial No: Wire Diagram: AA-400-227
240Vac 50/60Hz 1 Phase Load: 363 Watts Short Circuit Cap. : 2A Max. Air Pres.: 0.4 MPa Air Flow: 113/L/M	1999

**Safety Precautions and General Warnings**

- The heat gun must be placed on its stand when not in use.
- A fire may arise if the 240-Vac AA-400 Mark IV super heater is not used with care.
- Be careful when using the AA-400 Mark IV in places where there are combustible materials.
- Do not apply heat to the same area for a prolonged period.
- Do not use this tool in the presence of explosive atmosphere.
- Heat may be conducted to combustible materials that are out of sight.
- Place the AA-400 Mark IV on its stand after use and allow it to cool before storing it.
- Do not leave the AA-400 Mark IV unattended when it is not in use.

**Electrical**

The AA-400 Mark IV-control unit is connected directly to the AC mains electrical supply through a double-fused chassis plug and detachable power cord.

Before performing any electrical maintenance or repair, always turn off the equipment and unplug it from the mains supply.

Do not open the control unit case or heat gun case while the equipment is connected to the mains supply.

The AA-400 Mark IV equipment must be connected to an earthed power supply. It should not be hard-wired to a mains supply.

Use only specified fuse types and ratings.

Eye Protection

Safety glasses should be worn when operating this tool. Avoid aiming the heat gun nozzle's hot air stream toward your face.

Fire Prevention

Parts of the AA-400 Mark IV become heated during normal usage. Avoid aiming the heat gun nozzle's hot air stream at the unit's hose, power cord, or control unit.

Before disconnecting the operating AA-400 Mark IV air supply, first allow the heating element to cool. Failure to observe this precaution will reduce the element's product life and could lead to melting of the plastic in the heat gun handle.

Always use the AA-400 Mark IV in a well-ventilated area, away from any flammable materials, liquids, or fumes.

Be sure the AA-400 Mark IV is not placed on flammable materials between uses. Always place the heat gun in its stand when not in use.

Emergency Shutoff

The AA-400 Mark IV is not equipped with an emergency shutoff system.

To turn the equipment off, first reduce the air pressure to 0.21 MPa (30 psi) for one minute. The green HEAT ON indicator light will go off when the pressure drops below approximately 0.31 MPa (45 psi), indicating power to the heating element has been shut off. After one minute at 0.21 MPa (30 psi), reduce the air pressure to zero.

The equipment can be powered off by unplugging the power lead from the mains supply.

**Hot Surfaces**

Parts of the AA-400 Mark IV and the product being worked on will become heated during use. Always place the heat gun in the stand when not in use.

Always provide adequate ventilation and avoid overheating any products or solder devices. Charring or burning of tubing or wire insulation will produce fumes that may cause eye, skin, nose, or throat irritation.

Unpacking

Remove any packing and inspect the AA-400 Mark IV for damage. Check that all items have been supplied. Contact TE Connectivity for assistance or missing parts if necessary.

The power cable that comes with the AA-400 Mark IV is not fitted with an IEC plug. It is the responsibility of the user to install the appropriate plug that meets local and national requirements.



WARNING

The AA-400 Mak IV must be correctly earthed. Failure to do so could cause injury to the user.

Electrical

The provided power cable uses the following color codes:

- Earth – Green/Yellow
- Neutral – Blue
- Live – Brown

Installation Procedure

Step 1

Attach the fitting on the control unit to a clean, dry, oil-free compressed-air source capable of supplying a minimum of 113.3 l/m at 0.31 MPa (45 psi). The 240-Vac AA-400 Mark IV is supplied with one of the more common quick-disconnect air fittings; however, it may be necessary to replace it with one that will mate with your particular fittings.

CAUTION

Failure to use clean, dry, oil-free air will result in severe damage to the AA-400 Mark IV.

Step 2

After connecting the AA-400 Mark IV to an appropriate air supply, connect the electrical mains power cord to the control unit IEC receptacle. Connect the previously installed IEC plug to a correct wall receptacle. The AA-400 Mark IV should never be hard-wired to a mains power supply.

Step 3

Adjust the air-pressure control knob for a gauge reading of 0.35 MPa (50psi). To unlock the knob, raise the red plastic ring below the control knob. Turn the knob clockwise to increase the air pressure and flow.

Note

The heating element is powered on only when the air pressure supplied to the gun assembly exceeds approximately 0.28 MPa (40 psi). A pressure switch cuts off power to the element when the air pressure drops below this point, protecting the heat gun assembly from damage due to overheating. The green HEAT ON indicator light is illuminated whenever power is applied to the heating element. This light goes off when the pressure switch cuts off power to the element.

Step 4

Within 30 seconds of nozzle air flow, the air flow temperature should reach 260°C. After a full minute it should stabilize at the operating temperature. See Figure 1 below for the air temperature ranges reached with various air pressure and voltage combinations.

CAUTION

Air passing through the eight small holes in the nozzle cools the plastic heat gun assembly handle. UNDER NO CIRCUMSTANCES SHOULD THESE SMALL HOLES BE CLOSED.

Step 5

To turn the unit off, first reduce the air pressure to 0.21 MPa (30 psi) for one minute. The green HEAT ON indicator light will go off when the pressure drops below approximately 0.31 MPa (45 psi), indicating that power to the heating element has been shut off. After one minute at 0.21 MPa (30 psi), reduce the air pressure to zero.

CAUTION

Failure to follow this shutdown procedure may cause premature element failure or heat damage to the plastic heat gun assembly housing.

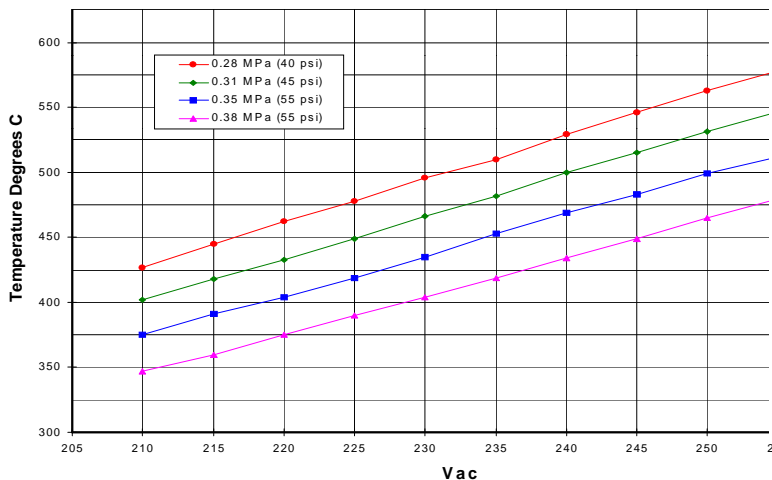


Figure 1. Output Air Temperature

 **WARNING**

Never leave the 240-Vac AA-400 Mark IV super heater running unattended.

Step 1

With the heat gun nozzle cool and power disconnected to the AA-400 Mark IV, install the appropriate reflector tip (needle point, Solder Sleeve, Mini Solder Sleeve, low flow, or boot and tubing) required for your application. Refer to Section 1 of this manual and Step 6 in this section for details on the available reflector tips.

Step 2

Follow Steps 1–3 of the Installation Procedure (see Section 3) to prepare the AA-400 Mark IV for operation. When not using the heat gun, place it in its stand to avoid possible heat damage to the surrounding area.

CAUTION

Avoid aiming the hot air stream at the control unit, hose, or power cord.

Step 3

If the air temperature appears to be too high for your particular application, increase the air pressure. If the air temperature is still too high at the maximum pressure setting, it will be necessary to reduce the voltage with a variable transformer capable of handling a 400-watt load.

Step 4

If the air temperature appears to be too low for your particular application, decrease the air pressure.

If the air temperature is still too low at the minimum pressure setting, check the mains source voltage.

CAUTION

If it is necessary to use a variable transformer to correct for a low-voltage problem, do not exceed the 240-Vac rating.

Step 5

For Solder Sleeve applications, the end of the nozzle or attached reflector should be about 7 to 12 mm away from the device. The hot air stream should be directed at the solder band. Closer placement of the nozzle tip can result in browning of the tubing or spurting of the melted solder.

Step 6

The needle-point, low-flow-point, Solder Sleeve, and Mini Solder Sleeve reflector tips are designed to slip over the small-diameter end of the nozzle. The needle-point tip reduces the heated air flow rate and air stream by about 50 percent. The low-flow tip reduces the heated air flow rate about 70 percent in a similar fashion. The Solder Sleeve reflector tip distributes all of the heated air around the slot opening for uniform heating of standard-size Solder Sleeve devices. The Mini Solder Sleeve reflector tip concentrates the hot air flow in a small area for smaller Solder Sleeve devices.

The boot and tubing tip is designed to slip over the large-diameter end of the nozzle, so that the cooling air emitted from the eight small holes mixes with the hot air. This reduces the air temperature to approximately 93°C and significantly increases the air flow rate, for recovering Thermofit heat-shrinkable molded parts and tubing.

Step 7

To turn the AA-400 Mark IV off, follow Step 5 of the Installation Procedure.

CAUTION

Never disconnect an operating AA-400 Mark IV from its air supply without first allowing the element to cool, as directed in Step 5 of the Installation Procedure (see Section 3). Failure to observe this procedure will reduce the element's product life and could lead to melting of the gun assembly plastic handle.

This appliance must not be used by children or persons with reduced physical, sensory, or mental capabilities, or lack of experience and knowledge.

If the cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.

A fire may result if the appliance is not used with care, therefore:

- be careful when using the appliance in places where there are combustible materials. Do not apply to the same place for a long time
- do not use in presence of an explosive atmosphere
- heat may be conducted to combustible materials which are out of sight
- place on its stand after use and follow to cool before storage

SECTION 5 ACCESSORIES AND REPLACEMENT PARTS

Accessories and Replacement Parts	Part Number
Solder Sleeve Reflector	979646
Needle-Point Tip	979647
Boot and Tubing Tip	979691
Mini Solder Sleeve Reflector	979663
Low-Flow-Point Tip	979672
Stand	979649
Input Air Filter	979673

SECTION 6 TECHNICAL SPECIFICATIONS

Power supply	240 Vac, 2A, 50–60 Hz
Power consumption	363 watts
Fuses	2 x 2A (5 x 20 mm)
Power supply cable length	2 meters
Lamp	240 Vac, green
Air connection requirements	1/4 NPT (female)
Maximum air pressure	0.41 MPa (60 psi)
Minimum air pressure	0.31 MPa (45 psi)
Minimum air flow	113.3 l/m (4 cfm)

Important: All information, including illustrations, is believed to be reliable. Users, however, should independently evaluate the suitability of each product for their application. TE Connectivity makes no warranties as to the accuracy or completeness of the information, and disclaims any liability regarding its use. TE Connectivity's only obligations are those in the TE Connectivity Standard Terms and Conditions of Sale for this product, and in no case will TE Connectivity or its distributors be liable for any incidental, indirect, or consequential damages arising from the sale, resale, use, or misuse of the product. Specifications are subject to change without notice. In addition, TE Connectivity reserves the right to make changes—without notification to Buyer—to processing or materials that do not affect compliance with any applicable specification.