

JBC

www.jbctools.com

INSTRUCTION MANUAL

Product
website



Product
videoguide



TCPK

Thermocouple Pointer Kit

This manual corresponds to the following reference:

- TCP-KA

Packing List

The following items are included:

Case includes:



Case 1 unit



TCP Thermocouple Pointer 1 unit
Already assembled: cup with conductive pad.



Anchor 1 unit
Comes with M4 x 10 mm screw DIN 7991



Conductive Pad Set for TCP 1 box
Ref. TCP10
Includes: 10 cups + 3 conductive pads



Thermocouple Extension Wire
for TCP 1 unit
Ref. 0036000
Length: 50 cm



Display 1 unit

Manual 1 unit
Ref. 0036459

Features

TCPK Thermocouple Pointer Kit is designed to monitor the surface temperature of the PCB or its components with high precision positioning, and features its own display for viewing the measured data. It works on any type of material and can measure temperatures of up to 300 °C / 572 °F with an accuracy of ± 10 °C / 50 °F. Its design allows for quick and accurate placement on high-density printed circuit boards, reducing setup time, even at high temperatures.

TCP features a K-type signal output, so the monitoring device to which it is connected must have a K-type compatible connector. For compatibility information with JBC devices, visit the product's page at www.jbctools.com. For more information on compatibility with external devices, contact JBC Technical Support.

The sensor is completely isolated (electrically) from the outer parts of the product.

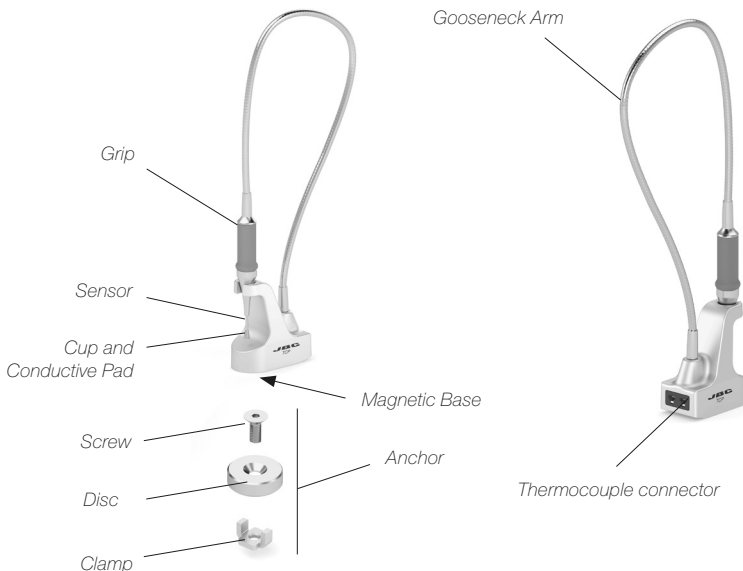
TCP is ESD safe with no extra connections, as long as it sits on any kind of ESD safe surface, e.g. JBC ESD safe table mats, a ground-wired metal surface, JBC preheater range, etc. It is also possible to ground the product from any of its metal surfaces.

TCP is not intended for use in fluids such as flux or molten tin, nor is it designed for measurement of hot air.

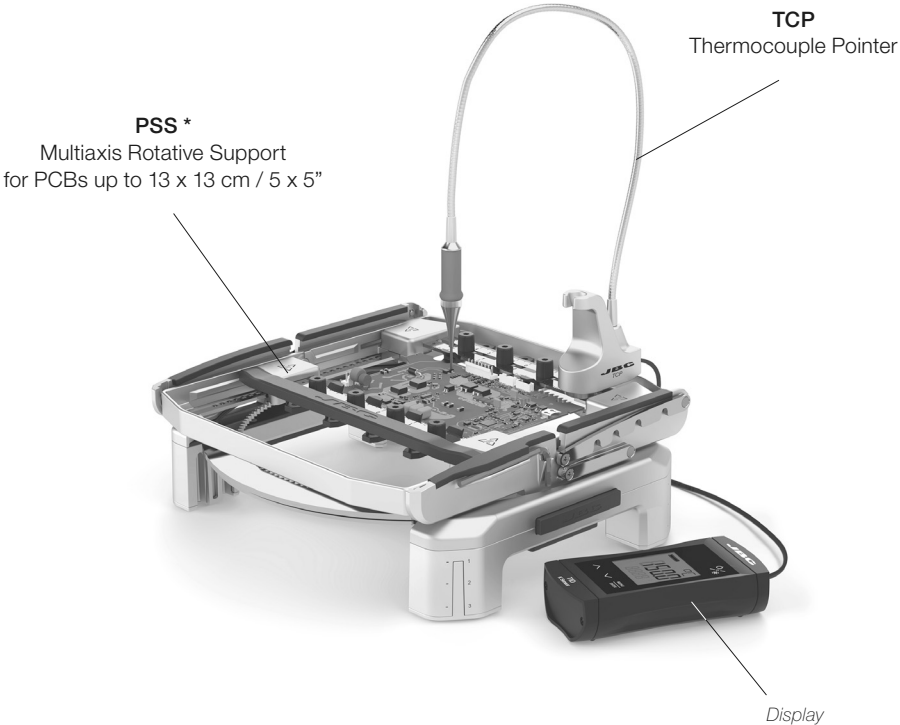


When connecting TCP to a monitoring device (K-type compatible connector required), always use the thermocouple extension wire supplied with this product.

The temperature measurement can be affected by air currents. Keep this in mind when using hot air tools (JTT or NH) or fume extractors (FAE1, FAE2).




Workplace Example



** TCP also works with other JBC preheater supports and preheater sets.*

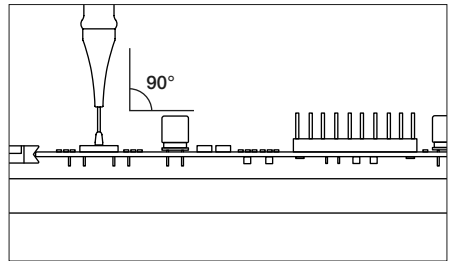
How To Use

1. Check that the sensor has the cup and a portion of conductive pad attached to the tip. If it has come loose, see the next section *Replacing the Conductive Pad Set*.
2. Connect the thermocouple pointer to TCPK's display with the supplied thermocouple extension wire.
3. Thanks to its magnetic base, TCP can be placed and stabilized onto magnetic surfaces. If there is no magnetic surface available, see the "Anchor Assembly" section.

 Avoid placing the base of TCP in direct contact with a heat source.

4. Take the pointer from its base and place it completely vertical on the exact spot you want to measure.

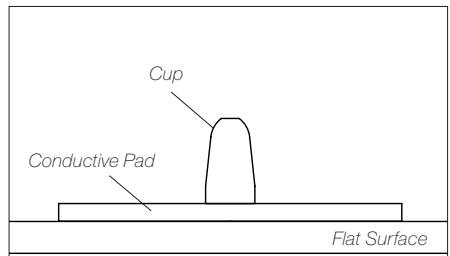
5. **Important:** Press the pointer lightly against the measurement spot to ensure that the conductive pad makes contact around the entire perimeter.



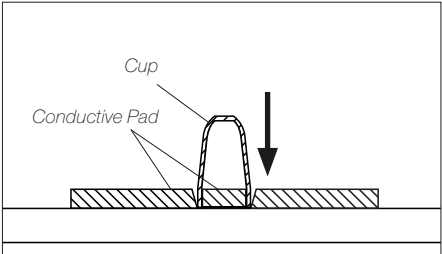
Replacing the Conductive Pad

1. Hold the assembled cup with one hand and remove any residue of the conductive pad by gently moving the pointer inside it. Then, detach the cup from the sensor. If necessary, replace the cup with a new one.

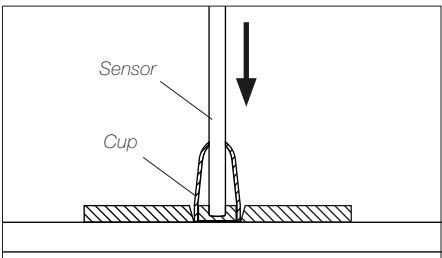
2. Unwrap both sides of the conductive pad. Place it on a flat surface and place the cup on top of the conductive pad.



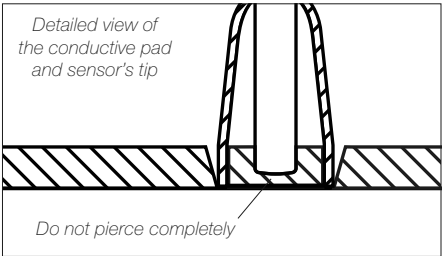
3. Then, exert pressure down to crop off a portion of the conductive pad, which remains embedded in the cup.



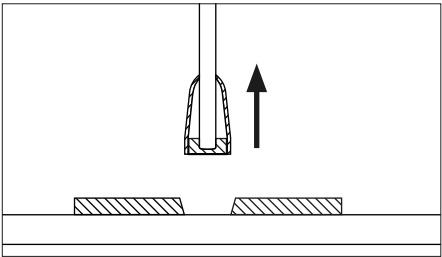
4. Insert the sensor through the top opening of the cup until it reaches the pad. Lightly press down the sensor a couple of times so that it is inserted into the pad, but without piercing it completely.



⚠ Important: Do not pierce the conductive pad completely. Leave a thin layer of conductive material between the tip of the sensor and the bottom surface of the pad.



5. Carefully lift the sensor with the cup and the pad embedded inside.

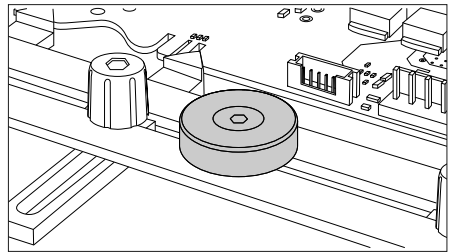
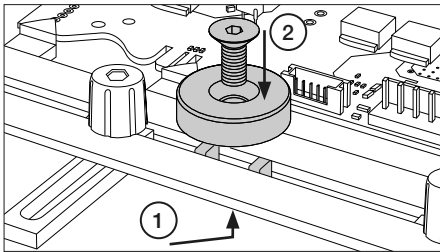


Anchor Assembly

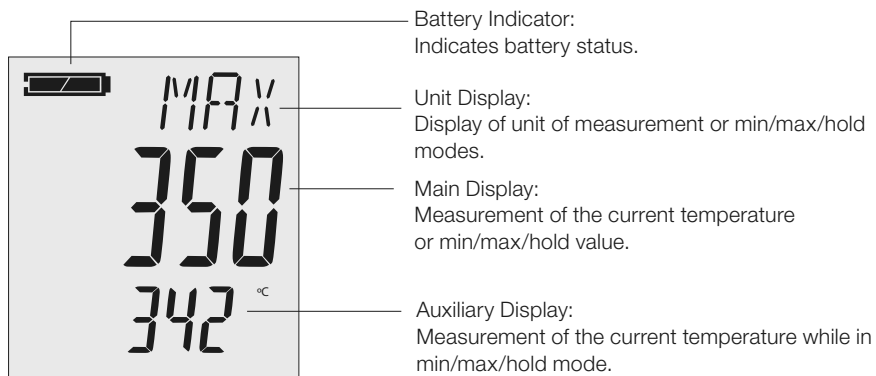
If there is no magnetic surface available to place the base onto, the supplied anchor (magnetic) can be placed on a JBC support, allowing TCP to be fixed onto it. After its use, the base can be more easily separated from the anchor/magnetic surface by tilting it apart.

To assemble the magnetic anchor onto the guides of the support:

1. Unscrew the anchor using a 2.5 Allen key (DIN911).
2. Fit the clamp of the anchor into one of the guides on the support from below (1).
3. Position the disc on the guide, aligning its center with that of the lower piece.
4. Fix the anchor by screwing the two pieces together from the top (2).
5. Place the base of the thermocouple pointer on the anchor.



Display



Operating Buttons

On / Off Button



One-click: Turn on the device or turn the display backlight on or off.

Press and hold: Turn off the device.
In the Configuration menu, reject changes.

Up / Down Buttons



One-click: Display of the min/max value.
In the Configuration menu, change the value of the parameter.

Press and hold: Reset the min/max value of the current measurement.

Press and hold both: Rotate the display upside down.




Menu/Enter Button



One-click: Hold-measurement (freeze) function.
In the Configuration menu, enter the current parameter and call up next parameter.

Press and hold, 2 s: Open the Configuration menu ("Conf" appears on screen).

Configuration Menu

Press  for 2 seconds to open the Configuration menu; when “**Conf**” appears on screen, release the menu button. Use  and  to change values.

Parameter	Description	Details
PoFF	Shut-off time	<p>oFF: No automatic shut-off.</p> <p>Automatic shut-off after a selected time in hours:minutes, during which no buttons have been pressed. For example 1:15 (1 hour, 15 minutes).</p>
LiTE	Backlight	<p>oFF: Backlight deactivated.</p> <p>Automatic shut-off of the backlight after a selected time in minutes:seconds, during which no buttons have been pressed. For example 0:30 (0 minutes, 30 seconds).</p> <p>on: No automatic shut-off of the backlight.</p>
Unit	Display unit	Configure whether the temperature is displayed in °C or °F.
Init	Factory settings	<p>To use current configuration; enter value “no”.</p> <p>Reset device to factory settings; enter value “yes”. After confirming with the Menu/Enter button, the display shows: “Init done”.</p>

Battery

Battery Indicator

If the empty battery sign blinks on screen, the batteries are almost depleted. However, the device will still operate for some time.

If **BAT** appears on screen, the battery voltage is no longer adequate for device operation. The batteries must be replaced to use the device.

Changing Battery

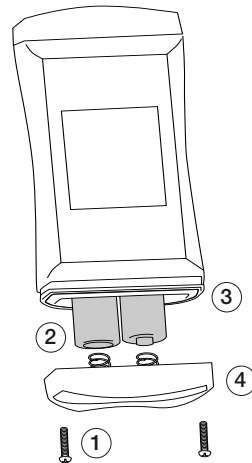
Unscrews the Phillips screws (1) and remove the cover.

Replace the two AA batteries (2). Make sure that the polarity is correct. It must be possible to insert the batteries in the correct position without using force.

The O-ring (3) must be undamaged, clean and positioned at the intended depth.

Fit the cover (4) on evenly. The O-ring must remain at the intended depth.

Tighten the Phillips screws (1).



Note: If the display is not used for an extended period of time, the batteries must be removed. This prevents the batteries from leaking.

Error Messages

Display	Meaning	Possible Causes	Remedy
bAt	Empty batteries.	Empty batteries.	Replace batteries.
Err.1	Measuring range exceeded.	Measurement too high.	Stay within allowable measurement range.
		Incorrect measuring probe connected.	Check TC wire and TCP connection.
		Sensor or display defect.	Contact with technical service.
Err.2	Measuring range is undercut.	Measurement too low.	Stay within allowable measurement range.
		Incorrect measuring probe connected.	Check TC wire and TCP connection.
		Sensor or display defect.	Contact with technical service.
SYSErr	System error.	Error in the device.	Switch the display on/off. Replace batteries and restart the device.

If the problem persists, contact with JBC's Technical Support at: www.jbctools.com/contact-us

Maintenance

- Check periodically that the sensor is clean.
- Use a damp cloth when cleaning. Alcohol can only be used to clean the metal parts.
- Unnecessary unscrewing of the display endangers the protection against moisture and should therefore be avoided.
- Replace any defective or damaged parts. Use original JBC spare parts only.
- Repairs should only be performed by a JBC authorized technical service.

Batteries

- If the display is not used for a long period of time, the batteries must be removed to avoid leaking.
- If the batteries have different charge levels, they may leak and damage the device.
- Do not use different types of batteries.
- Only use high-quality and suitable alkaline batteries.
- Remove depleted batteries immediately and dispose of them at a suitable collection point.
- ⚠ Using damaged or unsuitable batteries can generate heat, which can cause the batteries to crack and possibly explode.

Safety



It is imperative to follow safety guidelines to prevent electric shock, injury, fire or explosion.

- If there is any risk during its use, the display must be turned off immediately and marked accordingly to avoid being used again.
- Operator safety may be at risk if there is visible damage to the device, the device is not working as specified or the device has been stored under unsuitable conditions for a long time. If in doubt, please return the device to the manufacturer for repair or maintenance.
- Do not use the product for any purpose other than temperature measurement in accordance with the instructions in this manual.
- Keep your workplace clean and tidy. Wear appropriate protection glasses and gloves when working to avoid personal harm.

Notes

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

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Specifications

TCPK

Thermocouple Pointer Kit

Ref.: TCP-KA

- | | |
|---------------------------------|---|
| - Output: | Type K |
| - Measurable Temperature Range: | 25-300 °C / 77-572 °F |
| - Display Power Supply | |
| - Batteries: | 2x AA |
| - Power Requirements: | approx. 1mA, approx. 3mA with backlight |
| - Battery Life: | Service life > 2500h with alkaline batteries
(without backlight) |
| - Total Net Weight: | 783 g / 1.73 lb |
| - Package Dimensions / Weight: | 280 x 280 x 164 mm / 1293 g |
| (L x W x H) | 11.02 x 11.02 x 6.46 in / 2.85 lb |

Complies with CE standards.
ESD safe.

JBC

Warranty

JBC's 2 year warranty covers this equipment against all manufacturing defects, including the replacement of defective parts and labor.

Warranty does not cover product wear or misuse.

In order for the warranty to be valid, equipment must be returned, postage paid, to the dealer where it was purchased.



This product should not be thrown in the garbage.

In accordance with the European directive 2012/19/EU, electronic equipment at the end of its life must be collected and returned to an authorized recycling facility.

