

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 Cable
for TCP 1 unit
Ref. 0036000
Length: 50 cm



Display 1 unit

Manual 1 unit
Ref. 0036459

Features

TCPK Thermocouple Pointer Kit monitors the surface temperature of PCBs and their components with high positioning precision. It includes its own display for reading the measured data. TCP works on any material and measures temperatures up to 300 °C / 572 °F with an accuracy of ± 10 °C / ± 18 °F. Its design allows quick, accurate placement on high-density PCBs, reducing setup time even at high temperatures.

TCP provides a K-type signal output, so the monitoring device must have a K-type compatible connector. For compatibility with JBC devices, see the product page at www.jbctools.com. For external devices, contact JBC Technical Support.

The sensor is electrically isolated from all external parts of the product.

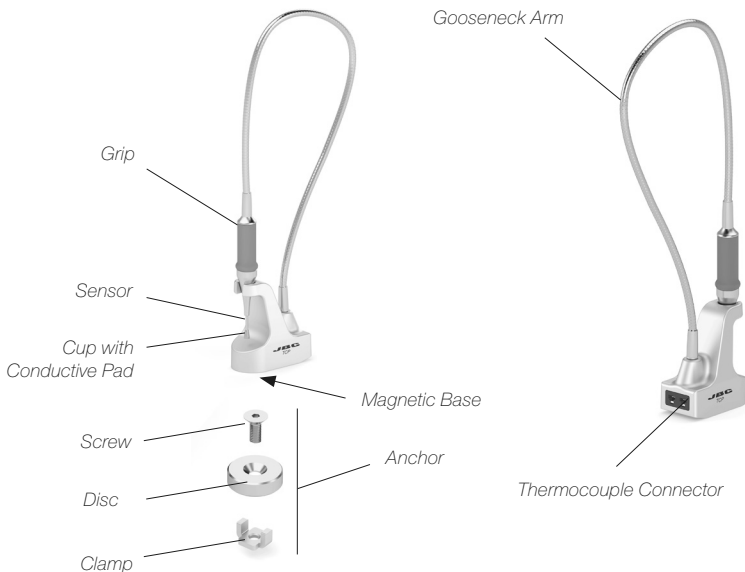
TCP is ESD safe without additional connections when placed on any ESD-safe surface, such as a JBC ESD table mat, a grounded metal surface or a JBC preheater. It can also be grounded through any of its metal surfaces.

Do not use TCP in fluids such as flux or molten solder, or to measure hot air temperature.

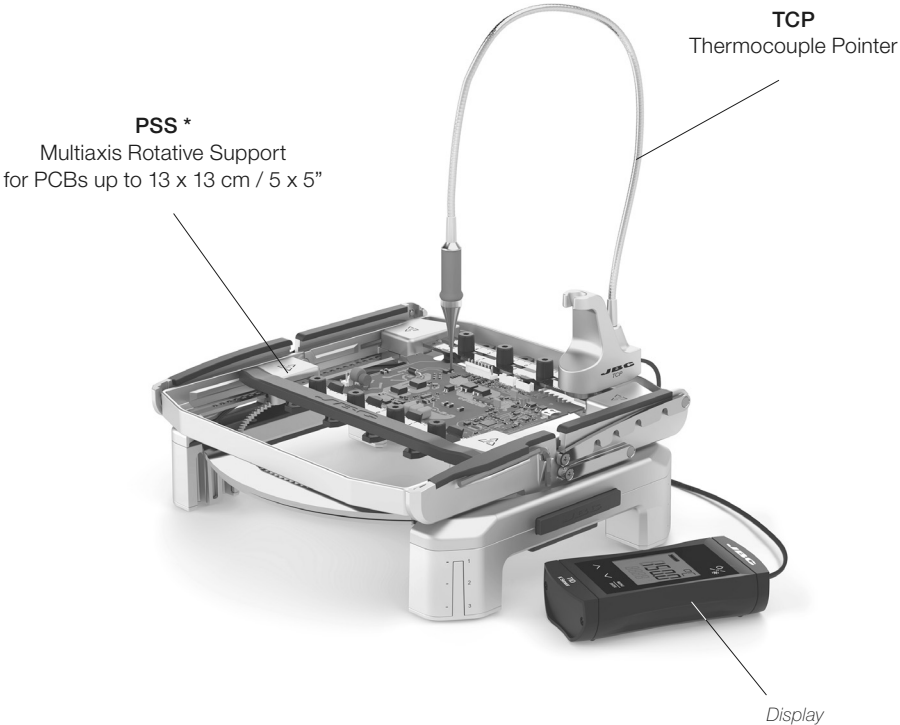


When connecting TCP to a monitoring device (K-type compatible connector required), always use the thermocouple extension cable supplied with this product.

Air currents can affect the measurement. Take this into account when using hot air tools (JTT, 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 cup and a piece of conductive pad are attached to the sensor tip. If they have come loose, see *Replacing the Conductive Pad Set*.
2. Connect the thermocouple pointer to a monitoring device with a K-type connector, using the supplied extension cable.
3. Place TCP on a magnetic surface; its magnetic base keeps it stable. If no magnetic surface is available, see *Anchor Assembly*.

 Do not place the TCP base in direct contact with a heat source.

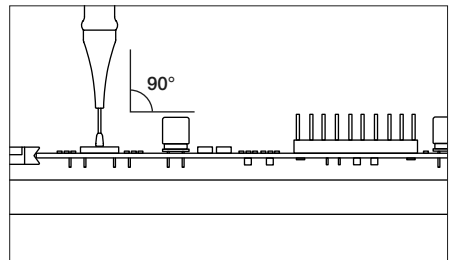
Do not place the TCP base on the heating surface or on the frame around it, as heat from the heating area may affect the readings.



Place TCP on the area of the preheater farthest from the heating surface, considered as the cold area.

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

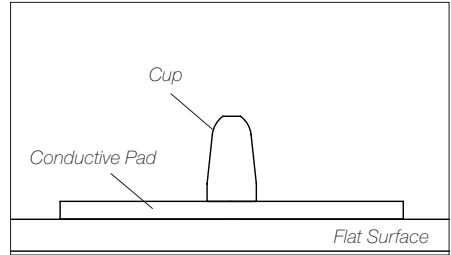
5. **Important:** Press the pointer lightly against the measurement spot to ensure that the conductive pad makes contact around the entire perimeter.



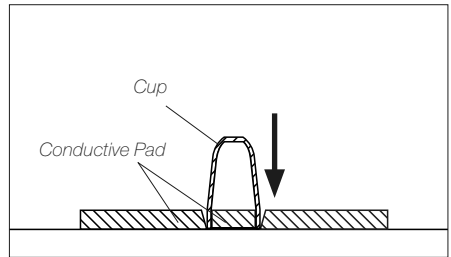
Replacing the Conductive Pad Set

1. Hold the assembled cup in one hand and gently move the pointer inside it to remove any remaining pad residue. Detach the cup from the sensor and replace it if necessary.

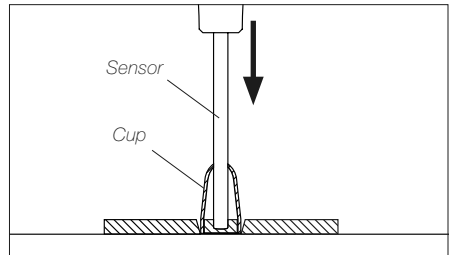
2. Remove the protective film from both sides of the conductive pad. Place the pad on a flat surface and set the cup on top of it.



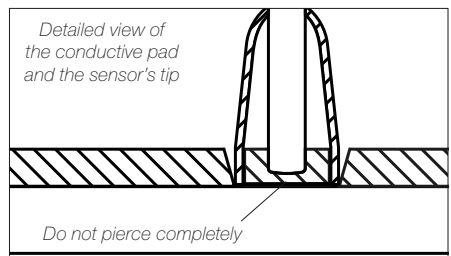
3. Press the cup down firmly to cut out a piece of the conductive pad, which stays embedded in the cup.



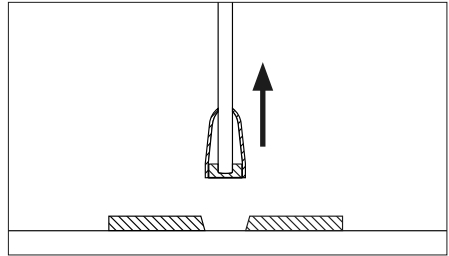
4. Insert the sensor through the top opening of the cup until it touches the pad. Press down lightly two or three times to seat the sensor in the pad without piercing it.



⚠ 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 together with the cup and the embedded pad.

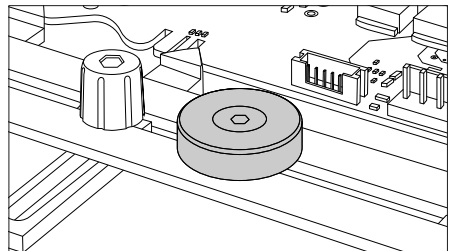
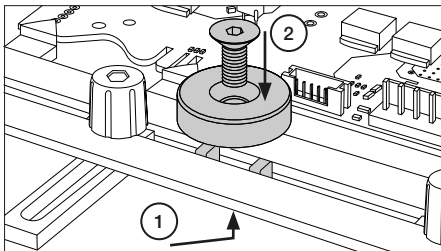


Anchor Assembly

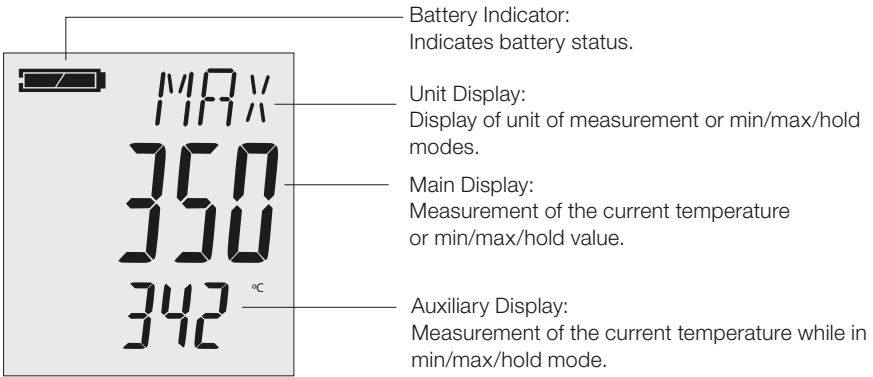
If no magnetic surface is available for the base, use the supplied magnetic anchor. When mounted on a JBC support, it holds the thermocouple pointer (TCP) in place. After use, tilt the base to detach it easily from the anchor or magnetic surface.

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

1. Unscrew the anchor using a 2.5 Allen key (DIN 911).
2. From below, insert the anchor clamp into one of the support guides (1).
3. Place the disc on the guide, centred over the lower piece.
4. From above, screw the two pieces together to secure the anchor (2).
5. Place the TCP base 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	oFF: No automatic shut-off. 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).
LiTE	Backlight	oFF: Backlight deactivated. 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). on: No automatic shut-off of the backlight.
Unit	Display unit	Configure whether the temperature is displayed in °C or °F.
Init	Factory settings	To use current configuration; enter value “no”. Reset device to factory settings; enter value “yes”. After confirming with the Menu/Enter button, the display shows: “Init done”.

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

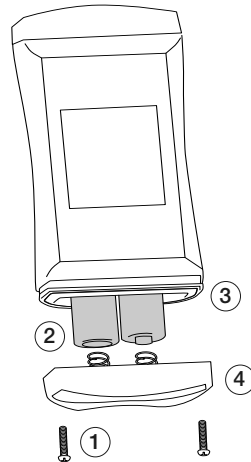
Unscrews the Phillips screws (1) and remove the cover.

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 cable 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 cable 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.

Notes

[illegible]

Specifications

TCPK

Thermocouple Pointer Kit

Ref.: TCP-KA

- | | |
|---------------------------------|---|
| - Output: | K-Type |
| - 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.

