



BOSCH

ELECTRICS

Identify where measures may need to be taken in good time – with the Bosch temperature measuring tools

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It's in your hands. Bosch Professional.



ELECTRICS

With the Bosch temperature measuring tools, you'll have the perfect assistants for your everyday electrical tasks at your fingertips.

They will help you to safely and effectively detect faults, loads, corrosions, internal defects and resistance by visualising temperatures on the large-scale display in a manner that is quick and easy to understand. One click is all that's required for you to obtain a detailed overview of the temperature distribution throughout the system.

Potential applications

1. Monitoring of fuse boxes

Fuse boxes play an important role in your everyday work as an electrician. Yet the details of such systems often cannot be detected with the naked eye. Regardless of whether it concerns preventative measures or takes place in the course of troubleshooting – whenever weak, defective or overloaded fuses need to be located or a sub-distribution needs to be identified, the GTC models from Bosch will show you at the press of a button where anomalies have crept in.

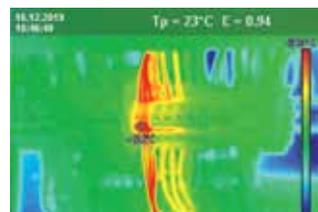
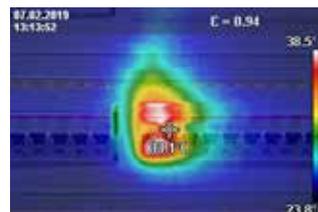
In doing so, note the following: Always consider the temperature difference of the abnormal components in comparison to those that are identical in design and equally loaded, yet do not exhibit any abnormalities. In other words, a hot fuse should initially be compared to another fuse, in case a judgement can already be made about whether the increased temperature actually represents a problem or not. The evaluation of the temperature distribution also depends on the operating status of the system.

As you see, our thermal imaging cameras are no substitute for making a decision on how to deal with abnormal components – for this, your expertise as an electrician is still required as ever – yet these will nonetheless direct you to problem areas more quickly, which saves you time and lets you concentrate on the important matters.

As well as saving time, our thermal trio will also guarantee additional safety when it comes to dealing with sensitive heat. In such situations, it's always appreciated when you are able to obtain precise information for planning out your next steps at a safe distance.

If you then later need to clarify the existing situation to the customer or explain a repair process, clear and transparent representations can be extremely helpful. The ability to link our tools to a PC or smartphone app can also support you in this regard: This way, you can quickly and simply create conclusive documentation and detailed reports.

You can even record voice memos when using the GTC 600 C Professional thermal imaging camera, ensuring that all relevant information is included and that every thermal image can later be unequivocally assigned to the respective control cabinet. With the GIS 1000 C Professional infrared thermometer, you can go into even greater detail: It will provide you with additional information on aspects such as relative humidity.



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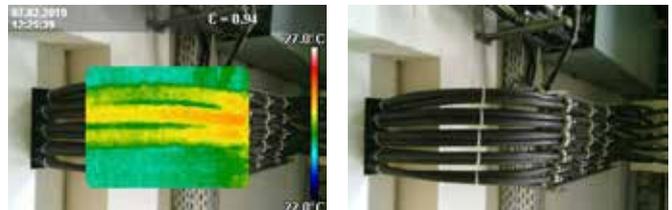
Potential applications

2. Inspection of cable connections

Loose or overloaded cable connections can also be detected much more quickly with the Bosch thermal imaging cameras. A single glance is all that's required, since the cable connections with a higher temperature stand out clearly from those with normal temperatures thanks to the colour differences on the GTC's large-scale display.

As an electrician, you can therefore act immediately and rectify the overload problem – particularly before it leads to anything worse. Yet even if the smell of burning is already in the air and a hazardous situation has developed, you can still use the GTC models to reliably locate the overheated problem area and counteract it with the necessary measures.

Also note in this regard: Always compare the warmer areas with components that are identical in design and use this to ensure that the excess heat is not purely the result of a reflection on the surface (e.g. on metallic connecting elements). *Recommended reading: Our explanations on emissivity in the Thermal Campus.*



3. Inspection of electrical components

The inspection of electrical components is an often complex task that can become extremely dangerous due to significant overheating. Thanks to the thermal imaging cameras from Bosch, however, you can determine contact faults or problematic wrapped connections, such as those on printed circuit boards, simply and from a safe distance. If high temperatures can be detected, the branches and loads of the electrical circuit should be examined to determine if a problem is actually present. If cold areas are displayed, however, this may for example indicate that a component has failed.

In doing so, note that you should not examine the components at low load, but at full load instead. This way, you avoid having hotspots appear colder than they actually are at full load. Also consider that our thermal imaging cameras only indicate the temperature of the surface. Encapsulated components in housings or behind covers may well be much higher in temperature.

Whatever challenges you need to overcome – our powerful thermal imaging cameras will give you the conclusive information that you need to determine the next steps or additional measures to be taken in the blink of an eye.

