



Different Types of Spring Contact Probes

Contact Probes are available for various applications. Here is a brief overview of the most important types.

ICT/FCT probes for test fixtures

At test fixtures for In-Circuit-Test (ICT) und Functional Test (FCT) mainly standard probes for the centers 50mil, 75mil und 100mil are used.

Short Travel Probes

Short travel probes are compact probes with a limited travel. They are frequently used as battery or charge contact. Additionally, short travel probes can be integrated in end user products whenever low-wear electrical contacts are demanded.

Interface Probes

The interface between test fixture and test system is usually realized by interface probes which are specifically standardized for each test system.

Probes with rolling ball

For side contacts with laterally moved test items FEINMETALL has developed a special contact probe series with a rolling ball as contact element. These probes are less sensitive to lateral forces and have a remarkably higher durability compared to standard probes with only round tip styles.

Pneumatic Probes

For selective contacting of single test points or for contacting test points with limited access, it can be helpful to use pneumatic probes, operated by compressed air.

Threaded Probes

Contact probes with thread are mainly used in modules for the test of wire harnesses and connectors. The advantage is that even under difficult conditions the probes do not move out of the receptacle and so a secure seat in the module or fixture is guaranteed.

High Current Probes

For high current applications spring contact probes need to be designed for a very small probe resistance. High current probes are available in different versions. You will find a detailed description of the different designs in the chapter „High Current Probes“.

Switch Probes

Special probes with integrated switch element are mainly used for presence tests. Switch probes close or open an electric circuit after a defined travel of the plunger (switch travel). For non-conductive contacting switch probes are available with various insulated tips.

Push Back Probes

During the push back test of connectors the tight seat of the connector elements is verified. For this application contact probes with very high spring forces are used.

Kelvin Probes

Very low resistances of components are measured by the „Kelvin 4-wire measurement“. For this application the connection of the current source and the voltmeter need to be very close to the component because otherwise the resistance of the conductors are leading to false results. These connections can be realized by special coaxial probes (Kelvin Probes), using the outer conductor for the constant current and the inner conductor for measuring the drop in voltage.

Radio Frequency Probes

In many test applications, like testing RF-connectors, high frequency signals need to be transmitted. To carry these signals special coaxial contact probes are used. RF-probes have an inner conductor for the transmission of the signal and an outer conductor for the electromagnetic shielding.

