

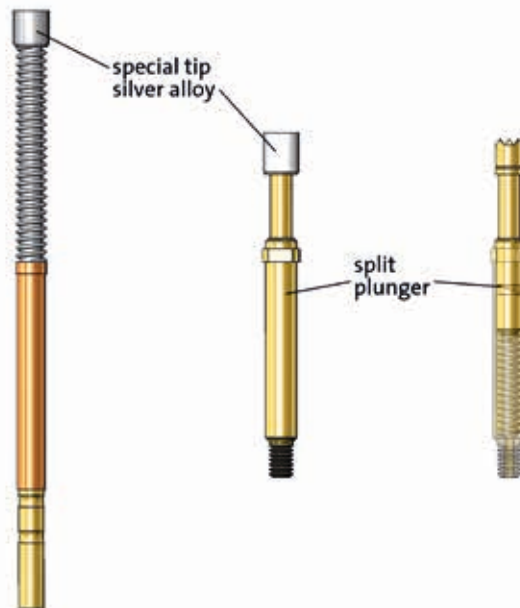
High Current Probes

For high current applications the design of a spring contact probe has to consider a minimal electrical internal probe resistance as well as contact resistance. Otherwise, especially the spring of the probe would be overheated, what would lead to a remarkable reduction of the probe life time. A low electrical resistance of the probe significantly depends of the design and the material of the contact probe.

The maximum continuous current is defined as I_{RMS} (root-mean-square value). It is mainly limited by the maximum tolerable warming of the probe. The maximum current values in the specifications all refer to this I_{RMS} .

The design of springs of FEINMETALL high current probes ensures that also high temperatures up to 250°C do not lead to damages or a reduction in lifetime.

FEINMETALL manufactures different versions of high current probes.



High current probes with continuous plunger

have the lowest resistance and therefore allow a high current loading. If the electrical connection is assembled at the end of the continuous plunger, the cable moves synchronously with the plunger, so that those contact probes always have to be furnished with flexible cables.

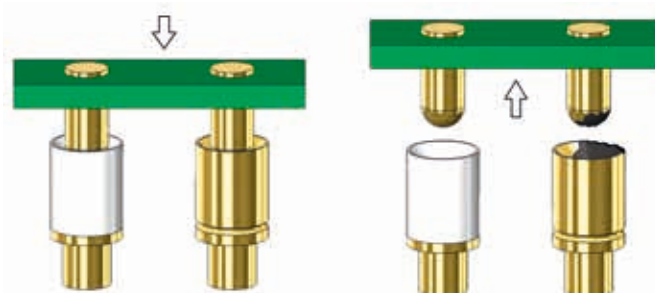
High current probes with split plungers

are designed that way, that under force effect the plunger elements optimally establish a low-resistance connection to the barrel of the contact probe. As a consequence, the current flows mainly through plunger and barrel without stressing the spring strongly.

Special head made of silver alloy

In high current applications ideally no voltage should apply and accordingly no current should flow during closing or releasing the contact. Otherwise, an electric spark may occur, which may damage the surface of the contact area.

To avoid or at least minimise such a contact-burn-off, FEINMETALL offers tips made of a special silver alloy to minimise the contact-burn-off, reducing the transition resistance and lead to a longer life time of the probes.



Application Note:

For an easy identification, FEINMETALL high current probes have a groove at the probe head. This groove makes sure that these probes can be distinguished from standard probes with identical dimensions.