

High current-carrying capacity contacts and connectors

INTRODUCTION

POWERPLAY CONNECTOR MATERIALS AND DESIGN MAXIMIZE CURRENT CARRYING CAPACITY

PowerPlay connectors employ high-performance, high-temperature materials throughout. This means that the interconnect system can withstand higher temperature rise than the typical Mil-Aero connector. In the case where the application can allow wire and connector temperatures to run at or near their rated temperatures (up to 230°C), PowerPlay connectors can handle even higher current levels than already afforded by the low-resistance Crown Ring contacts.

Current carrying capacity is an application-specific rating, requiring many system level inputs. Some of these inputs are: maximum ambient temperature(s), operating altitudes, physical environment (operating in enclosure or open air), cable construction/insulation and others.

For most aerospace applications, Glenair suggests using SAE AS50881 as a baseline for current carrying capacity for PowerPlay connectors. These baseline current levels are shown in the graphs here for single pin connectors. Glenair welcomes the opportunity to work with your team to provide performance estimates and product suggestions, maximizing the power delivered by PowerPlay connectors for your specific application.

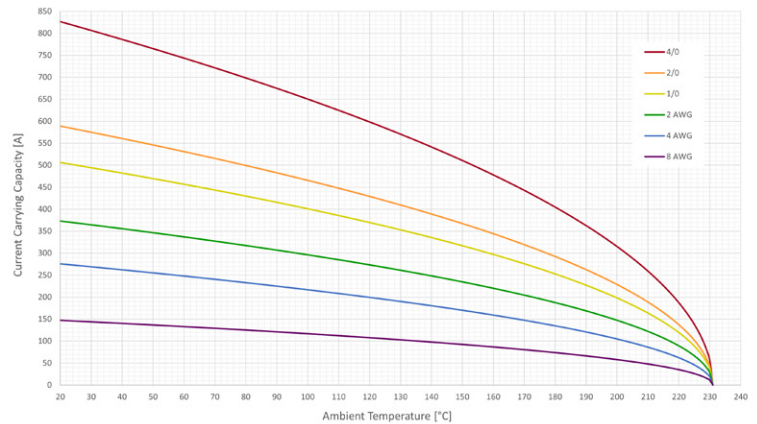
HIGH CURRENT-CARRYING CONTACTS: PARTIAL DISCHARGE, HOT-SIDE CONNECTORS, AND “SAFE-TOUCH” DESIGN

Glenair Series 973 PowerPlay connectors may be specified with pin or socket contact genders in plugs and receptacles. The raised socket contact towers serve to prevent partial discharge (surface tracking) and arcing events. The design has the additional benefit of functioning as a “safe-touch” system on hot-side components, protecting the user from exposed live contacts.

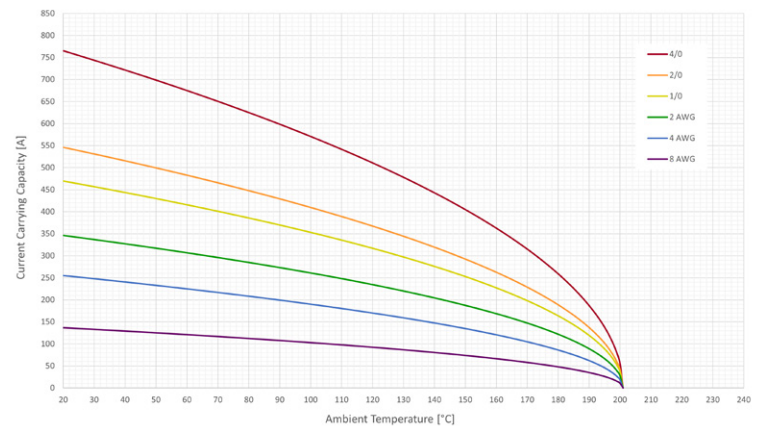


PowerPlay with “safe-touch”

MAX CURRENT CARRYING CAPACITY VS. AMBIENT TEMPERATURE: CROWN RING CONTACTS IN 230°C RATED SST POWERPLAY CONNECTORS



MAX CURRENT CARRYING CAPACITY VS. AMBIENT TEMPERATURE: CROWN RING CONTACTS IN 200°C RATED AL POWERPLAY CONNECTORS



MAX CURRENT CARRYING CAPACITY VS. AMBIENT TEMPERATURE: CROWN RING CONTACTS IN 175°C RATED AL POWERPLAY CONNECTORS

