

Anderson Powerpole Connectors

DT Workshop Equipment Reference — D&T / STEM resource for school workshops | Electronics & Prototyping



Photo: Gestrandete 4,5-Volt-Taschenlampenbatterie — CC BY-SA 4.0 — via Wikimedia Commons (Anderson_Powerpole_2.jpg)

Anderson Powerpole connectors are genderless, keyed power connectors rated up to 45 A that form the standard for robotics battery and power wiring. Their colour-coded housings, solder or crimp contacts, and built-in strain relief suit competition robots and charging rigs.

Key Features

- 15/30/45 A ratings
- Genderless mating - both sides are male and female
- Keyed housings prevent reversal
- Red and black colour coding
- Crimp and solder contacts

Typical Uses in the Workshop

- Battery to robot connections
- Charging leads and distribution boards
- Competition-legal power wiring
- Quick-disconnect power in rigs

Safe Operation

1. Crimp or solder the contacts to the wire
2. Insert the contact until it clicks
3. Mate the housings by colour
4. Pull-test the connection
5. When unmated, cover with a dust cap

SAFETY NOTES

- Powerpoles can carry high current - check the rating
- Keep contacts protected when live
- Inspect for shorts before connecting
- Do not exceed the connector rating
- Use the proper contact gauge for the cable

Maintenance & Consumables

- Check contacts for burning and wear
- Re-crimp loose connections
- Keep housings in stock
- Clean contacts with contact cleaner
- Test with a multimeter

Specification & Buying Notes

Powerpole kits with a crimper and a bag of 15-45 A contacts cover robot power wiring. Genuine Anderson parts fit correctly; clones vary and loosen.