

M39029 Electrical Contacts

Aptiv's M39029 contacts are manufactured to precise military specifications and provide trusted performance in connector systems including MIL-DTL-38999, MIL-DTL-26482, MIL-DTL-5015 and MIL-DTL-24308. Available as removable pin and socket contacts, they support convenient installation, repair and field maintenance with consistent electrical performance.

KEY FEATURES & BENEFITS

- Removable Crimp & Solder Contacts- Simple assembly, rework, and repair in the field, minimizing downtime and maintenance costs.
- High Reliability & Durability - Designed for a minimum of 500 mating cycles (up to 1500 cycles for some variants) and engineered to withstand high tensile and mechanical stress.
- Gold Plated for Performance - Gold over nickel plating provides excellent conductivity, corrosion resistance, and extended contact life.
- Versatile Contact Types - Available in signal, power, thermocouple, coaxial, and twinaxial configurations to support diverse electrical requirements.
- Wide Wire Gauge Range - Accommodates wires from 28 AWG to 10 AWG, covering both fine signal lines and heavy power applications.
- Precision Manufacturing - Produced to strict dimensional tolerances for consistent performance, proper mating, and interchangeability across manufacturers.
- Tooling Support - Fully supported by standard military tooling systems (e.g., M22520 crimp tools and M81969 insertion/extraction tools).

PRODUCT SPECIFICATIONS

Electrical Properties	
Current Rating (Signal)	3A to 13A (per contact)
Current Rating (Power)	23A to 40A (per contact)
Voltage Rating	600 VAC / VDC max (sea level)
Insulation Resistance	5000 MΩ min at 500 VDC
Dielectric Withstanding Voltage (DWV)	1000 VAC to 2500 VAC (sea level)
Contact Resistance	5 mΩ to 20 mΩ max
Shielding Effectiveness (Coax/Twinax)	Excellent
Operating Frequency (Coax/Twinax)	Up to 20 MHz (Twinax), higher for RF Coax

PRODUCT SPECIFICATIONS CONTD.

Environmental Properties	
Operating Temperature	to +200°C
Thermal Shock	SAE-AS39029 requirements
Humidity	SAE-AS39029 requirements
Salt Spray / Corrosion	SAE-AS39029 requirements (48 hours)
Vibration	SAE-AS39029 requirements
Mechanical Shock	SAE-AS39029 requirements
Temperature Life	1000 hours at max operating temp
Fluid Resistance	Resistant to common aerospace fluids
Permeability (Magnetic)	≤2.0 relative magnetic permeability

PRODUCT SPECIFICATIONS CONTD.

Mechanical Properties	
Mating Life	500 cycles min
Contact Retention (Axial)	3 lbs (13 N) to 6 lbs (27 N) min
Wire Sizes Accepted	28 AWG to 10 AWG
Contact Material	Copper Alloy
Contact Plating	Gold (50 microinches min) over Nickel underplate per MIL-G-45204
Termination Method	Crimp, Solder, PC Tail, Wire-Wrap
Contact Sizes	23, 22D, 22M, 22, 20, 16, 12, 10, 8
Crimp Tooling	MIL-SPEC qualified tools (e.g., M22520 series)
Workmanship	Free from burrs or sharp corners