

ConnTAK50 Connectors

Providing compact connectivity solutions for next-generation automotive modules, versatile 1.80mm-pitch ConnTAK50 Connectors employ the Arbeitskreis (AK) interface and deliver significant space savings and superior reliability. The connectors offer single- and dual-row versions, vertical and right-angle headers and no-void connector position assurance (CPA) options, supporting design flexibility in space-constrained applications.

ADVANTAGES AND FEATURES

Simplifies design and sourcing through its industry-standard interface

The connector uses the Arbeitskreis (AK) terminal, making it intermateable with other AK connectors, while meeting LV214 and USCAR specifications.

Eases space constraints

The 1.80mm-pitch AK interface offers one of the smallest available automotive-grade connector options and delivers exceptional electrical performance.

Streamlines assembly operations

Four polarization and color-keying options aid assembly and help prevent mis-mating errors.

Improves design flexibility

Various header options, including right-angle, vertical and pick-and-place vertical SMT types, are available to meet application needs.

Terminal	0.50mm Arbeitskreis (AK)
Pitch	1.80mm
Validation	LV214 and USCAR
Circuit Counts	No-Void CPA: 10, 12, 16, 22 (18 in development) Standard CPA: 8, 20 No CPA: 2 to 6, 10, 22 (18 in development)
Current	Up to 6.0A
Operating Temperatures	-40 to +105°C

Delivers compact reliability

No-void CPA eliminates the need for extra circuit voids, saving space and weight while ensuring secure, vibration-resistant connections and improving assembly efficiency.

Offers versatility to meet varied application needs

With multiple available circuit counts and wire sizes from 0.13 to 0.35mm², the connectors can support a wide range of devices and systems.



ConnTAK50 Connectors ➤

MARKETS AND APPLICATIONS

Automotive

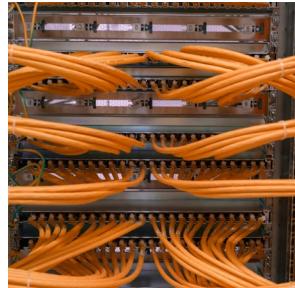
Battery management systems
Bluetooth equipment
Camera modules
HVAC systems
In-vehicle switches
Lighting systems
Seat and mirror controls



In-Vehicle Switches



Industrial Control Systems



Network Switches

Industrial Automation

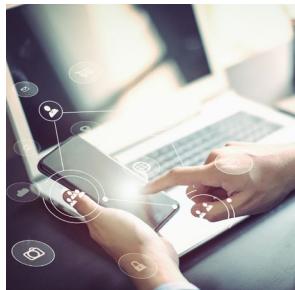
Factory automation equipment
Industrial control systems
Robotics



Imaging Systems



Refrigerators



Smartphones

Telecommunications

Base stations
Fiber optic systems
Network switches

MedTech

Diagnostic equipment
Imaging systems
Patient monitoring systems



Imaging Systems

Appliances

Dishwashers
Ovens
Refrigerators

Aerospace and Defense

Avionics systems
Communication systems
Navigation instruments

Wearables

Wearable devices

Mobile Devices

Smartphones

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SPECIFICATIONS

Reference Information

Packaging: Tape and reel
Designed in: Millimeters
RoHS: Yes
Halogen Free: Yes
Validations: LV214, USCAR
Use With: AK standard terminal interfaces

Electrical

Voltage (max.): 14V
Current (max.): 6.0A
Contact Resistance (max.): 25 milliohms
Insulation Resistance: 100 Megohms

Mechanical

Pitch: 1.80mm
Wire Sizes: 0.13 to 0.35mm²
Connector Retention Force (min.):
 Per USCAR—110N
 Per VW75174—60N
Terminal Insertion Force (max.): 1.9N
Circuit Size:
 No-Void CPA—10, 12, 16, 22 (18 in development)
 Standard CPA—8, 20
 No CPA—2 to 6, 10, 22 (18 in development)
Durability (max.): 20 cycles

Physical

Receptacle Housing: PA66
Header Housing: PA9T
Terminal: Copper alloy and stainless steel
Terminal Plating: Tin
Operating Temperatures: -40 to +105°C