molex

Mini50 Sealed Panel-Mount Connectors ❯

Compact, versatile and efficient, USCAR2-8-validated and IP67/IP69K-rated Mini50 Sealed Panel-Mount Connectors offer 33 circuits and multiple header options to deliver up to 40% space savings compared with 0.64mm connectors. These connectors provide reliable operation in harsh environments subject to dust or water ingress.

ADVANTAGES AND FEATURES

Simplifies the installation process for improved system reliability and cost savings

Hand-mate assembly with inside-out (self-tapping) and outside-in (bushing) attachment methods makes maintenance easier and reduces assembly errors; also avoids spending additional time on glue sealing.

Improves design flexibility with multiple connector options

Vertical and right-angle headers help optimize wiring harness layouts and adapt to overcome space constraint challenges.

Ensures dependable long-term performance with rigorous testing to automotive validation standards and IP67/IP69K seal rating with backshell

The robust sealed design protects against water, fluid and dust ingress for use in under-hood and exterior locations, minimizing failures and corrosion.

Current (max.)	3.0A (continuous for two to six pins)
Circuit Count	33 circuits
Validation Standard	USCAR2-8
Seal Rating	IP67 and IP69K (with backshell)
Vibration Rating	USCAR V2
Operating Temperatures	-40 to +125°C

Meets demands for more circuits without requiring overly complex wiring

With 33 circuits in a small form factor, the connector helps integrate complex electronics while reducing the additional costs of using multiple connectors.

MARKETS AND APPLICATIONS

Automotive
Battery-electric vehicles (BEVs)
Plug-in hybrid electric vehicles (PHEVs)
Range-extended electric vehicles
E-bikes
On-board chargers
DC-DC converters
Power distribution units
Motor control units
E-drive combined units (N-in-1 units)

Consumer
All-terrain vehicles (ATVs)
Mobility scooters
Powered wheelchairs

BEVs

PHEVs

ATVs

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SPECIFICATIONS

Reference Information

Packaging: Housings—packed in trays
Validation Standard: USCAR2-8
Designed in: Millimeters
RoHS: Yes
Halogen Free: No
Sealing: IP67 and IP69K (with backshell)
Flammability: V0 (header), HB (receptacle)
Vibration: USCAR V2

Physical

Housing: PBT UL 94 V-0
Contact: Copper alloy
Plating: Contact area—silver
Wire Size: 0.35mm^2
Operating Temperatures: -40 to +125°C

Electrical

Voltage (max.): 14V
Current (max.): 3.0A (continuous for two to six pins)
Contact Resistance: ≤25 milliohms
Dielectric Withstanding Voltage: 1,000V
Insulation Resistance: 100 Megohms

Mechanical

Header Type: Panel-mount, vertical and right-angle, inside-out and outside-in options
Installation Type: Self-tapping (inside-out), bushing (outside-in) options
Circuit Count: 33 circuits
Durability (max.): 10 cycles

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