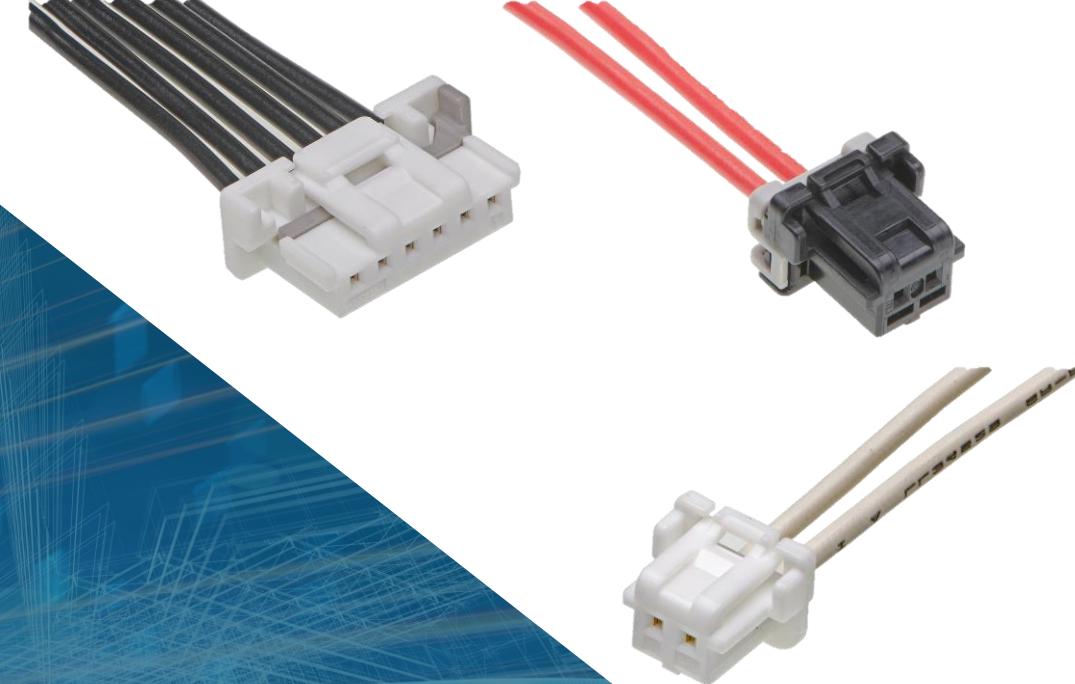


DURACLIK WIRE-TO-WIRE CONNECTOR SYSTEM

PRODUCT REFRESH
SEPTEMBER 2023

creating connections for life

molex



DURACLIK CONNECTORS

Molex's DuraClik 2.00mm-Pitch Wire-to-Board Connectors with terminal retainer options provide stable mating and high PCB retention force for applications that require high anti-vibration capability.

Key Product Information:

- Category: Wire-to-Board Connectors
- Current Rating: 3.0A
- Pitch: 2.00mm
- Circuit: 2-15



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Landing Page](#)

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PRODUCT OVERVIEW

Secure mating and PCB retention for high-vibration applications

The robust series from Molex is a simple and efficient solution that provides quick and secure connections for high-vibration environments. The automotive-grade series features ISL, inertia lock and up to 100N retention force.



Offers space savings as one of the smallest connectors on the market for harsh environments

One of Molex's highest-performing and largest derivatives, DuraClik ISL connectors are still among the smallest options on the market, helping solve space issues and reduce weight concerns.



PRODUCT OVERVIEW

Excellent Reliability in High-Heat Environments

DuraClik Wire-to-Board Connectors' ambient temperature is -40 to +125°C, and the product maintains performance in high-heat applications such as lighting systems.



Meets LV214 Specifications

LV214 and ES91500-03 specifications are designed to meet the requirements of European, Chinese and U.S. automotive markets.



MARKETS AND APPLICATIONS



Automotive

- Battery management systems
- Car navigation systems
- Door modules
- Gear shifts
- Seat adjusters



Commercial Vehicle

- Cranes
- Industrial machinery
- Tractors



Consumer

- IH cooking heaters
- LED lighting
- White goods
- Vending/gaming machines

MARKETS AND APPLICATIONS CONT'D



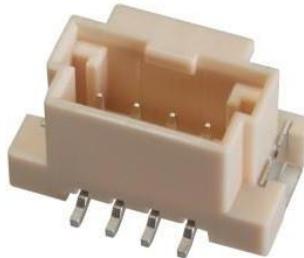
EV

- Battery management systems
- Inverter fastener components
- Vehicle connectivity systems
- Telematics modules
- Head-up displays

SOLVING INDUSTRY CHALLENGES

Industry Need	Industry Challenge	Industry Solution	Anticipated Results
Secure mating	In wire-to-board applications, sometimes operators fail to ensure that connectors are fully mated. This can lead to end-product failure.	The DuraClik Connector System features a wide latch that makes a clear audible click, ensuring a secure mate.	Secure mating assurance eliminates the time required to quality check connections and guards against end-product failures.
Contact reliability	Rugged automotive and commercial applications can be subject to shock, vibration or rough handling that can dislodge terminals and cause signal interference.	The DuraClik Wire-to-Board Connector System features a TPA and ISL, which provide high-retention force for improved reliability in rugged environments.	Product reliability is the most important factor when it comes to determining the quality and superiority of a product/technology. Using Molex's DuraClik connectors, customers can include market reliability as the USP of their products.
High-temperature operation	For some applications, consumer and automotive customers and OEMs request operating temperatures higher than 85°C.	DuraClik Wire-to-Board Connectors can operate at up to 125°C.	Higher operating temperature allows the customer to use these connectors for high-performance products. This will give a competitive advantage to the customers over their competitors

PRODUCT FEATURES AND ADVANTAGES



DuraClik Header



Two to 15 circuits in vertical and right-angle configurations
Offer design flexibility

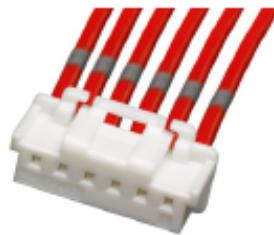
Different header circuit options in vertical and horizontal configurations
Offer design flexibility

Wide solder tabs designed and tested to SAE Automotive vibration standards

Provide secure PCB retention that can withstand upward pull force of 100N (10kgf) to meet automotive vibration requirements

Key Specifications	
Housing Receptacles	Standard, ISL and TPA
Voltage	125V
Current	3.0A
Operating Temperatures	-40 to 105°C (Standard); -40 to 125°C (ISL and TPA)
Contact Retention to Housing	Standard-9.8N, ISL-50N, TPA-20N

PRODUCT FEATURES AND ADVANTAGES (CONT'D)



DuraClik Standard receptacle

Two to 15 circuits
Offer design flexibility

High operating temperature (up to 105°C)
Allows it to meet passenger compartment requirements



DuraClik TPA receptacle

Terminal Position Assurance (TPA)
Provides 20N terminal retention force and ensures secure terminal retention

Inertia lock on TPA (2 to 8 circuits)
Helps prevent half mating, providing secure mating assurance

High operating temperature (up to 125°C)
Allows it to meet high-level automotive passenger compartment requirements

Two to 15 circuits
Offers design flexibility



DuraClik ISL receptacle

Independent Secondary Lock (ISL)
Can detect incomplete terminal insertion; provides up to 50N of terminal retention force; helps position terminals while meeting stringent automotive requirements

High operating temperature (up to 125°C)
Allows it to meet high-level automotive passenger compartment requirements

Automotive grade robustness - ISL
Receptacle is LV214 (S2 Vibration), ES91500-03, SAE/USCAR-21

Mated ISL

Eliminates the need to source ISL retainer and simplifies the assembly

Two to 10 and 12 circuits
Offers design flexibility

Inner positive lock

- Provides secure mating and space savings
- Prevents latch breakage from wire tangling

Enclosed contact design

- Protects contact against dust and debris
- Avoids tangling during harness assembly

Gold and Tin plating available

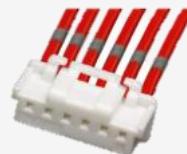
Allows for crimp terminal variation

Audible click on mating

Provides mating confirmation

PRODUCT AT A GLANCE

Product Feature	Header	Standard Receptacle	TPA Receptacle	ISL Receptacle
Termination	Surface Mount	Crimp	Crimp	Crimp
Size (Depth)	8.00mm (vertical) 9.40mm (right angle)	6.50mm	7.45mm	8.50mm
Current	3.0A	3.0A	3.0A	3.0A
Temperature Rating	-40 to +125°C	-40 to +105°C	-40 to +125°C	-40 to +125°C
Retention Force	-	9.8N	20N	50N
Retainer	-	-	Y	Y
Available Circuit Sizes	2 to 15	2 to 15	2 to 15	2 to 10, 12
Plating	Tin, Gold	Tin, Gold	Tin, Gold	Tin, Gold



PRODUCT & APPLICATION MATRIX

Trends	Applications
Miniaturization	Battery Management Systems
Zonal Architecture	Car Navigation Systems
Electrification (EV)	Cranes
Autonomy	Door Modules
Markets	Head-up Displays
Automotive	IH Cooking Heaters
Commercial Vehicle	Industrial Machinery
Consumer	Inverter Fastener
Electric Vehicle	Components
	Gaming Machines
	Gear Shifts
	LED Lighting
	Seat Adjusters
	Telematics Modules
	Tractors
	Vehicle Connectivity Systems
	Vending Machines
	White Goods

SPECIFICATIONS AND SUPPORTING INFORMATION

Reference Information

Packaging:

- Header-Embossed tape
- Housing, Retainer-Bag
- Terminal-Reel

Designed in: Millimeters

RoHS: Yes

Low Halogen: Yes

Electrical

Voltage (max.): 125V

Current (max.): 3.0A

Contact Resistance: 10 milliohms

Dielectric Withstanding Voltage: 500V AC

Insulation Resistance (min.): 1000 Megohms

Mechanical

Contact Retention to Housing:

- Standard Version-9.8N
- TPA Version-20N
- ISL Version-50N
- Robust Version-100N

Physical

Housing:

- Standard, ISL and Robust-PBT
- TPA-PA
- Retainer: PBT
- Header Housing: Polyamide
- Header Terminal: Copper Alloy
- Terminal Contact: Phosphor Bronze
- Operating Temperatures: -40 to +105°C (Standard)
- 40 to +125°C (ISL and TPA)
- 40 to +125°C (Robust Series)



THANK YOU

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