

GB03/GB04 Series Automotive Wire-to-Board High-Reliability Connectivity Solutions for Automotive Systems



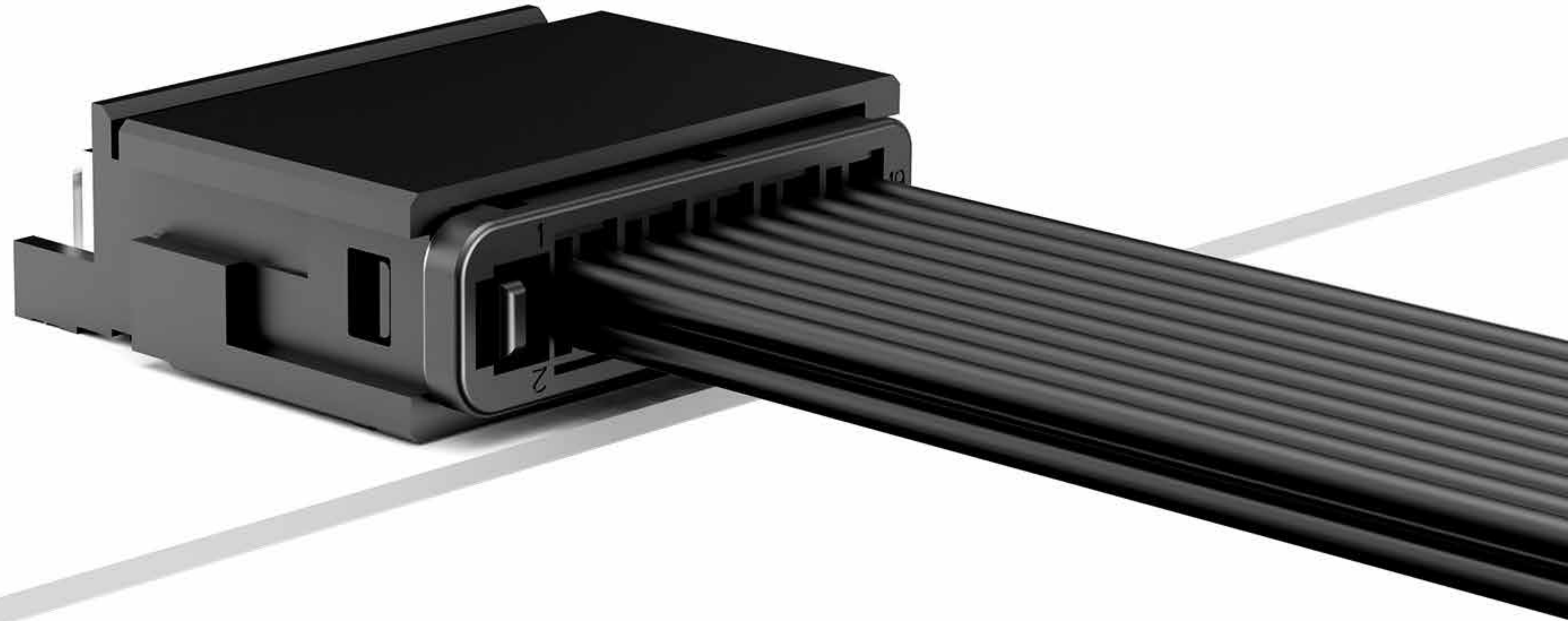
GB03 Series



GB04 Series

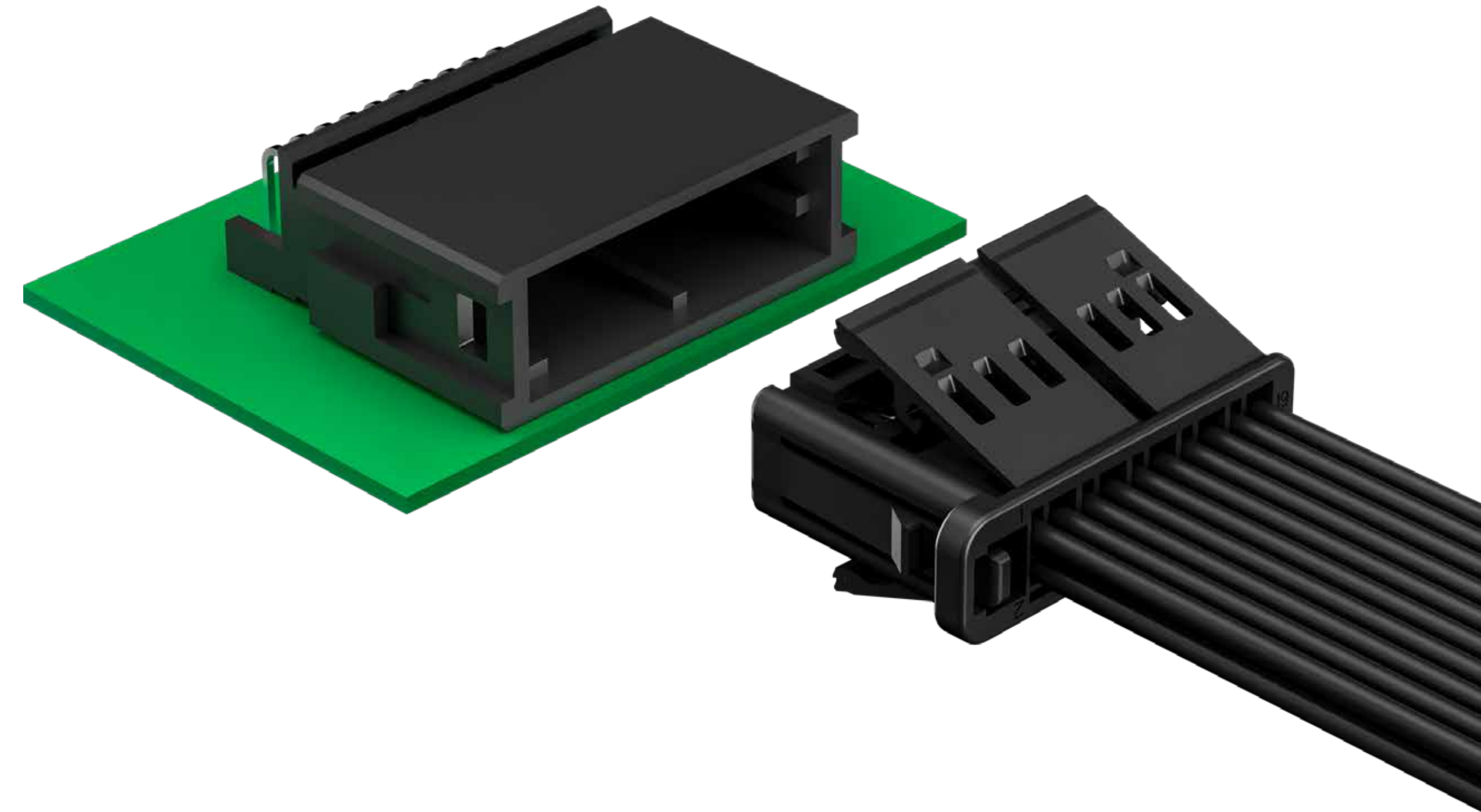
Wire-to-Board Wafer Connector

GB03 Series 1.80mm Pitch





LV214 Compliant



Applications: Automotive (In-Vehicle Entertainment Systems, Powertrain Systems, Safety Systems, Chassis Systems, and E-Bike Applications, etc.), Industrial, Medical, Smart Home, and Renewable Energy.

The GB03 series connectors, designed with premium materials and ultra-durable housing, boast advanced anti-misalignment mechanisms and robust latch structures, guaranteeing reliable connections. An audible "click" during mating confirms successful assembly, thereby bolstering user confidence. These connectors exhibit exceptional stability, combining a compact design with a high current-carrying capacity.

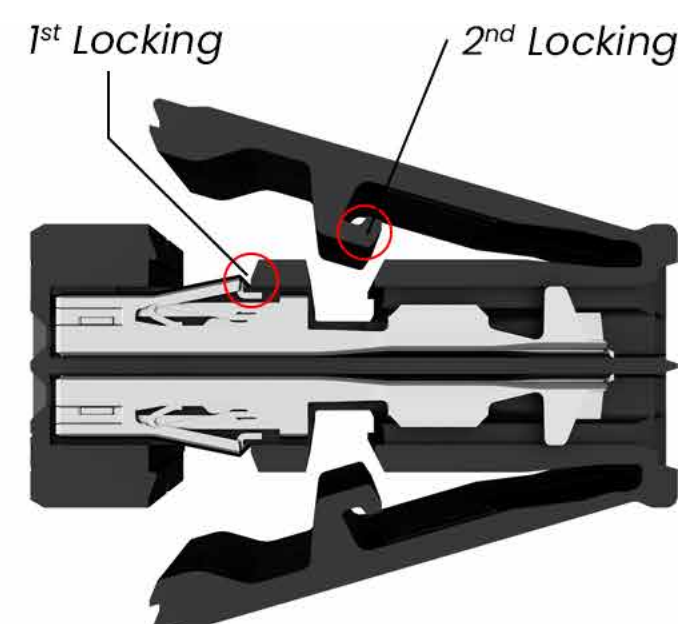
Latch Mechanism, Terminal Position Assurance (TPA)

Latch Mechanism: Designed to maintain a secure connection after insertion, mitigating the risk of accidental disconnection due to external forces or vibrations.

Terminal Position Assurance (TPA): Designed to provide enhanced terminal alignment, strengthen the retention force between the terminal and housing, and increase connector stability.



Latch Mechanism



Terminal Position Assurance

Product parameters

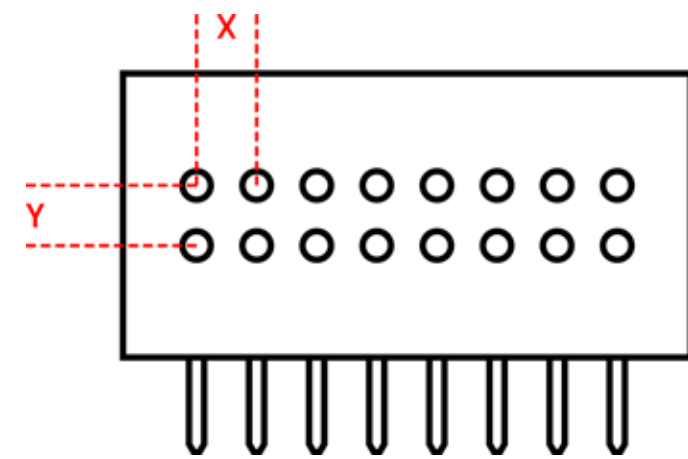
Board Side			Wire Side (Mating Part)		
Type	Pin No.	Part Number	Housing PN	Terminal PN	Wire Specs
Horizontal	20	GPZB215	LKZV210	ARZ1D2	0.13-0.17mm ² (AWG26) 0.22-0.35mm ² (AWG22-AWG20)

Material Specifications	
Insulation Material (Board End)	LCP, Black / Natural Color
Insulation Material (Wire End)	PBT, Black / Natural Color
Contact Material	Copper Alloy (Tin Plated)
Electrical Characteristics	
Rated Current	2A/Pin (AWG26) 2.5A/Pin (AWG24) 3A/Pin (AWG22)
Insulation Resistance	≥100MΩ
Contact Resistance	≤30mΩ
Withstand Voltage	500V AC for 1 minute
Mechanical Characteristics	
Mechanical Vibration	5Hz-2000Hz-5Hz; 10m/s ²
Mechanical Shock	Acceleration of 30g, single shock duration 6ms, 50 times per axis
Retention Force	≥15N/Pin
Durability	Tin-20 times; Gold-100 times
Latch Release Force	≥100N
Environmental Characteristics	
Operating Temperature	-40°C to +105°C

<p>Board Side Header</p>				
<p>Wire Side Housing</p>				
<p>Wire Side Terminal</p>				

Wire-to-Board Automotive Connector

GB04 Series



Pitch:

Plug 1 (X=2.54mm, Y=2.54mm)

Plug 2 (X=3.50mm, Y=6.50mm)

Plug 3 (X=5.25mm, Y=7.45mm)





Automobile



Industrial

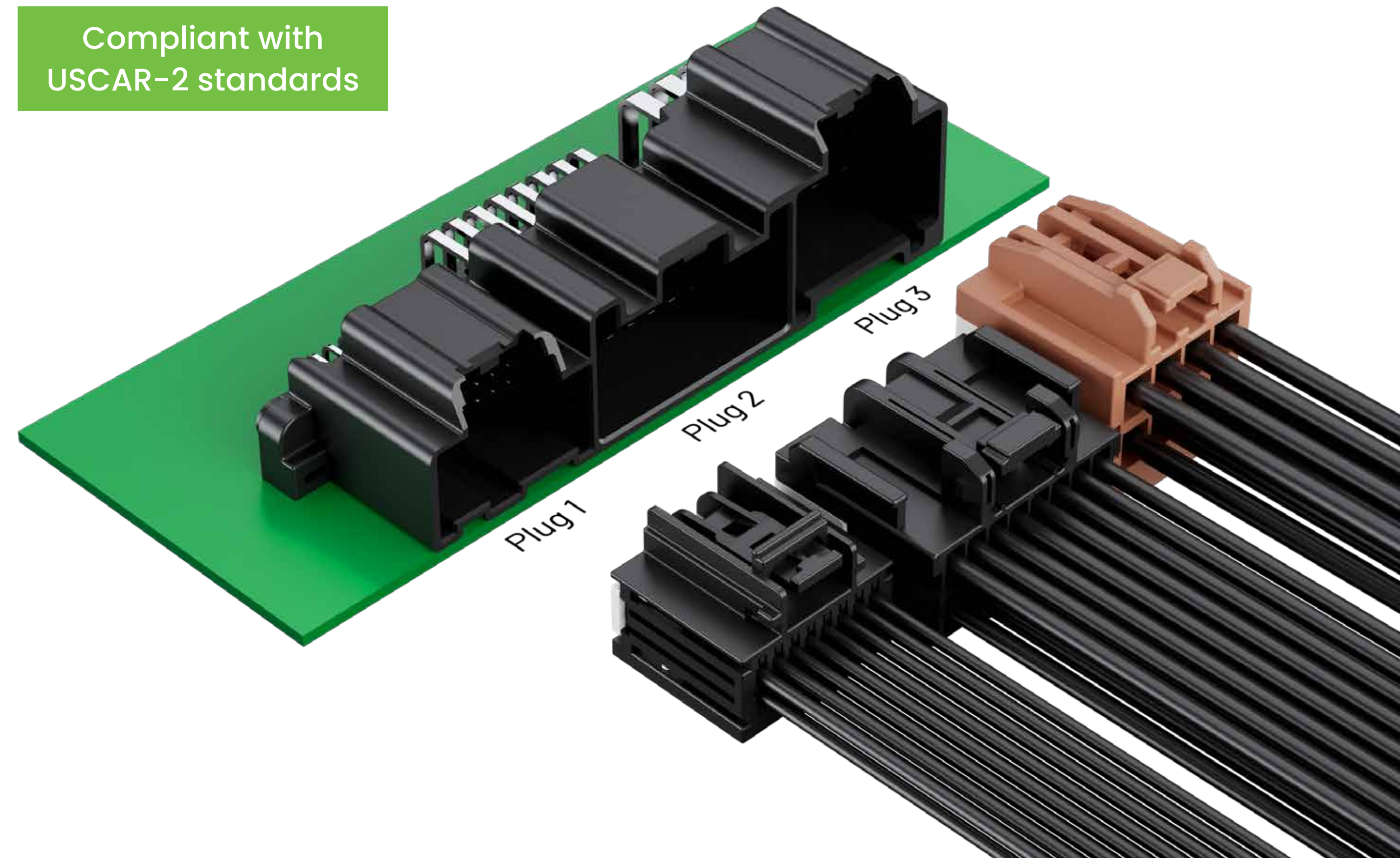


Smart Home



New Energy

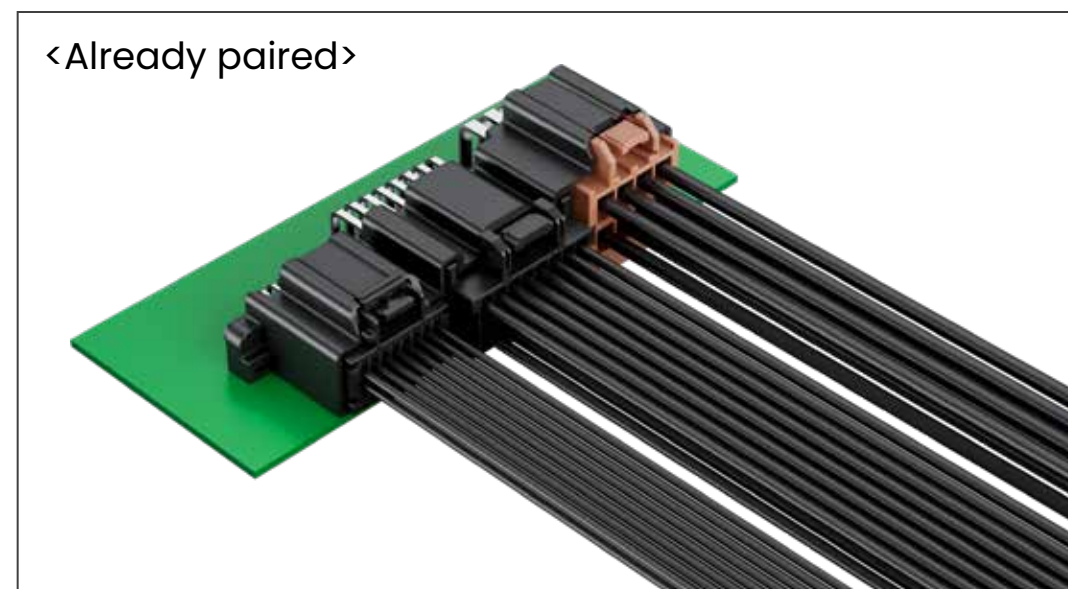
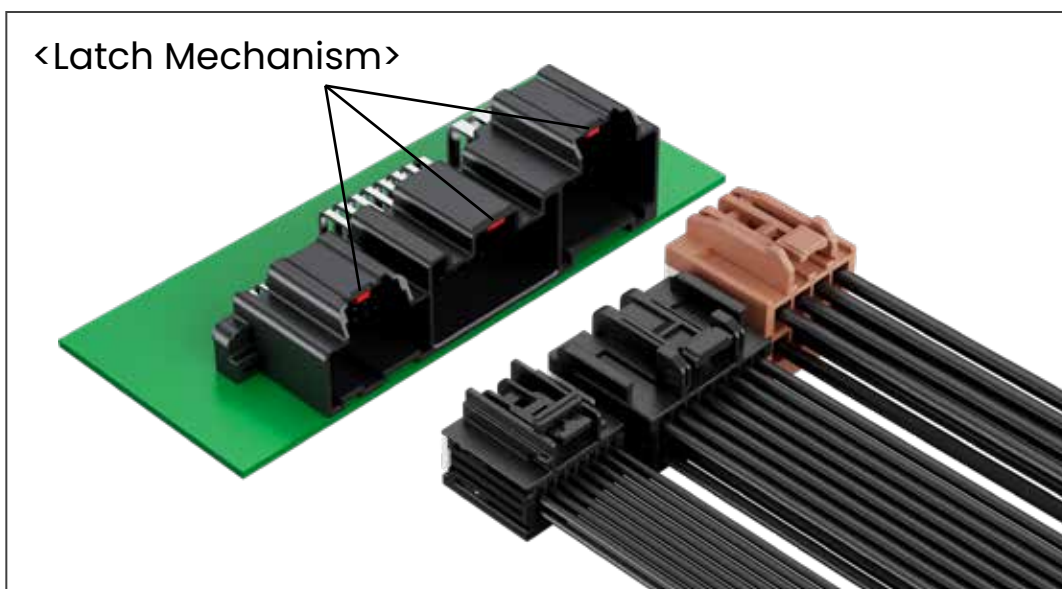
Compliant with
USCAR-2 standards



The GB04 series connectors feature an innovative integrated housing design that significantly saves PCB space. Its unique triple-plug integrated design achieves a perfect balance between size and functionality. The connectors are equipped with blind-mating and locking mechanisms, producing an audible "click" sound when each plug is inserted, ensuring correct assembly and providing high stability and durability. Each plug offers excellent high current carrying capacity, meeting the demands of various applications.

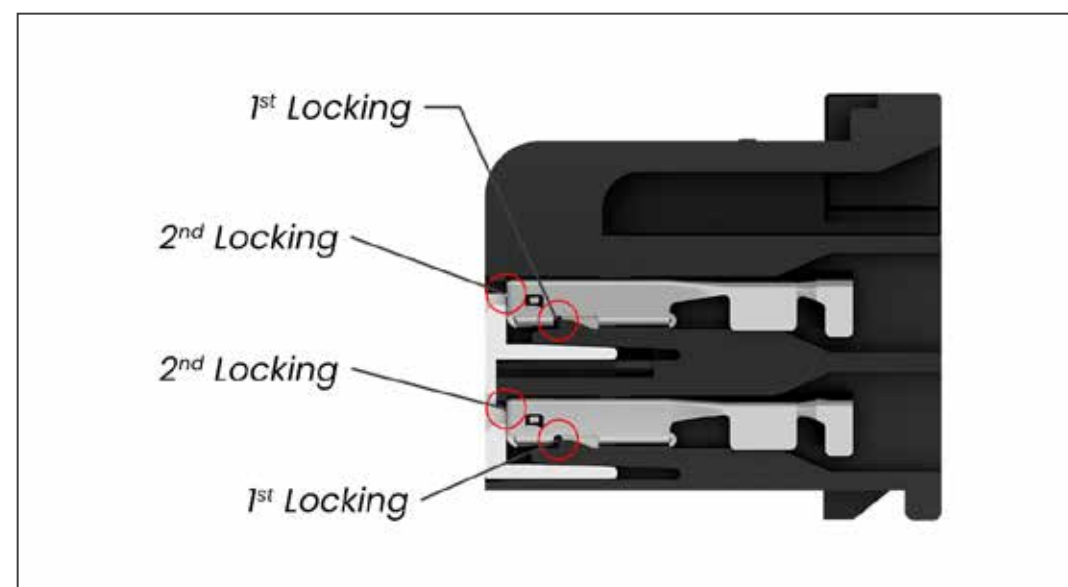
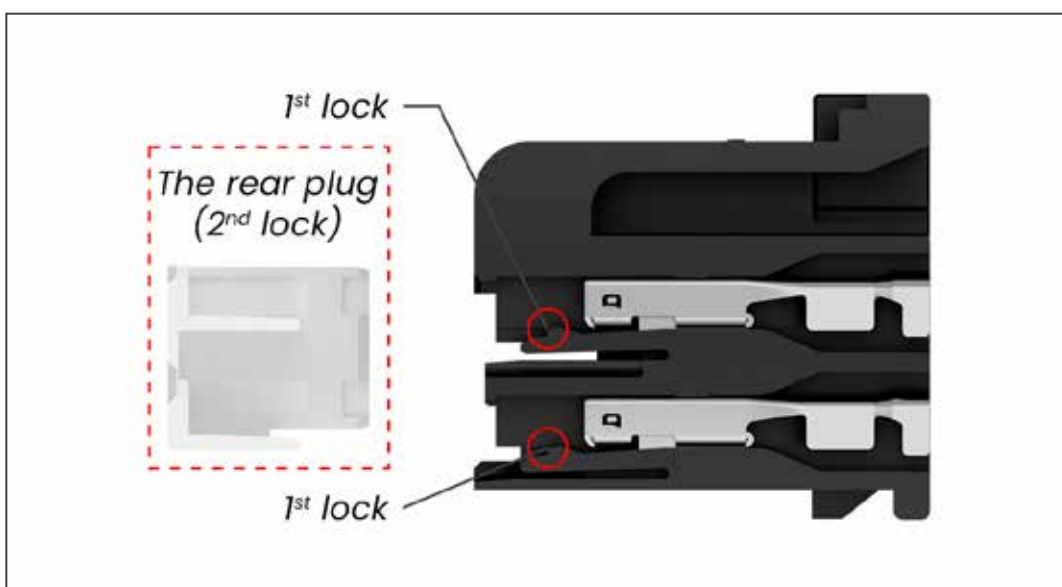
Latch Mechanism

The audible "click" sound when inserting each plug ensures proper assembly of the connector, improving stability and effectively preventing signal disruption due to vibration or impact.



Terminal Position Assurance (TPA)

The design ensures accurate terminal placement, enhancing the retention force between the terminal and the housing, effectively preventing terminal detachment, and improving the overall stability and reliability of the connector.



Product parameters

Board Side			
Type	Pin No.	Part Number	Insulation Material
Horizontal	40	GPZB223	PA66, Black

Wire Side (Mating Part)

Serial Number	Pin No.	Housing PN	Terminal PN	Wire Specs
Plug 1	16	MCZHA215	ARH160	0.35-0.5mm ² (AWG22-20)
Plug 2	16	MCZ3A201	AR3102	0.8-1.0mm ² (AWG18-16)
Plug 3	8	MCZZA210	ARZIF9	0.8-1.0mm ² (AWG18-16)

Material Specifications

Insulation Material	PBT, Black (Plug 1) PBT, Black (Plug 2) PBT, Brown (Plug 3)
Contact Material	Copper Alloy (Tin Plated)

Electrical Characteristics

Rated Current	0.64*0.64 Terminal: 6A (DC) 1.50*0.80 Terminal: 15A (DC) 2.80*0.80 Terminal: 17A (DC)
Rated Voltage	250V AC/DC
Insulation Resistance	≥100MΩ
Contact Resistance	≤20mΩ
Withstand Voltage	1000V/AC

Mechanical Characteristics

Mechanical Shock and Vibration	Compliant with USCAR V1 Standard
--------------------------------	----------------------------------

Environmental Characteristics

Operating Temperature	-40°C ~+105°C
-----------------------	---------------

Thank you!

Contact us: www.greenconn.com
sales@greenconn.com

