

KONA

HIGH RELIABILITY | HIGH POWER

60A PER CONTACT ON 8.5MM PITCH

HARWIN

Kona High-Reliability Connectors

Why go **BIGGER?**



Since the addition of [Datamate High Power](#) contacts to the Harwin range of Hi-Rel products, customers like you have demanded:

- More current per contact from the hi-rel connections;
- Ease of use and great performance in vibration conditions;
- Harwin's high quality standard.

We listened.



Kona High-Reliability Connectors

Hi-Rel with high power



Introducing **Kona** from Harwin.

Built to take our largest current capacity in a single contact – 60A at 8.5mm (0.335”) pitch. It more than doubles the 4mm pitch of Datamate Power connectors, and improves on the 20A & 40A power contacts. Yet the design is still very compact, standing at just 21.5mm (0.85”) above the PCB for a cable-to-board mated pair. With up to 48A per centimeter (121A per inch), no space is wasted.



Kona High-Reliability Connectors

The **heart** of the connector system

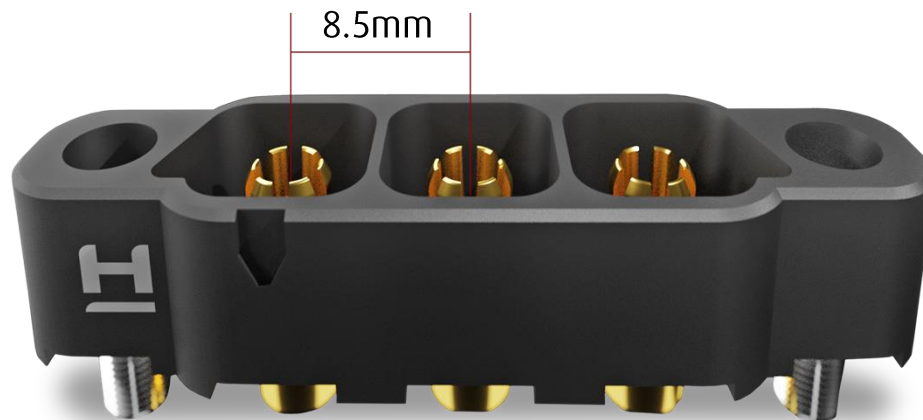


In contrast to the other [Hi-Rel connectors](#) (where the female contact is the heart), here you'll find a 6-fingered Beryllium Copper male contact providing a positive normal spring force against the female mating contact. The durable hard-acid gold finish ensures repeated mating cycles and long-term environmental exposure do not affect the connection surfaces.

Resistance to high levels of shock & vibration and temperatures up to 150 degrees C is built in, with the spring performance required for superior electrical and mechanical specifications.

Kona High-Reliability Connectors

8.5mm pitch for **Current & Voltage**



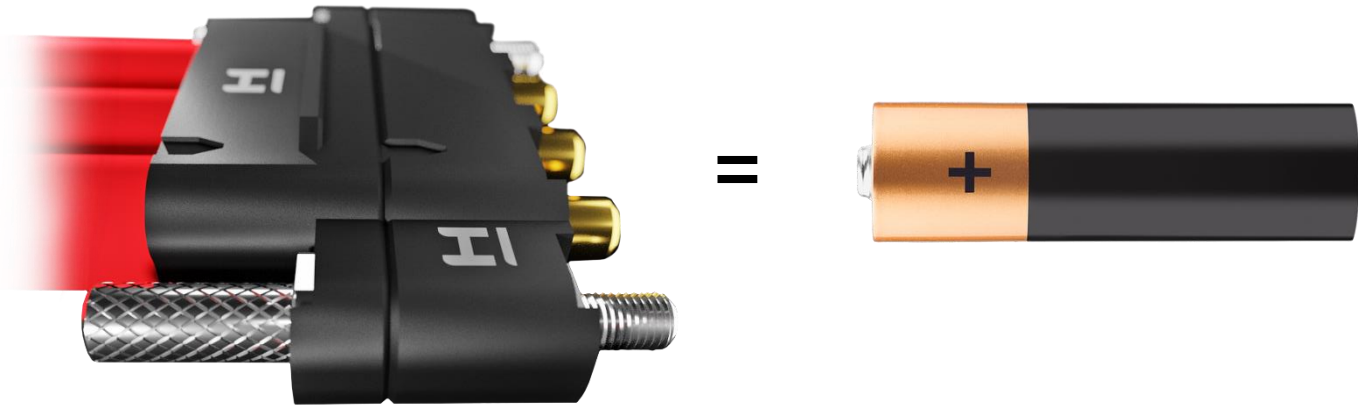
By increasing the pitch of the connector to 8.5mm, you get increased electrical specifications:

- Current rating – 60A max per contact simultaneously;
- Voltage rating – 3,000V AC maximum for 1 minute; 1,500V DC or AC peak working voltage at sea level.

Commercial or COTS, the Kona range is a professional high-performing connection system.

Kona High-Reliability Connectors

Compact & **Lightweight**



A mated pair of connectors will weigh just 25g (0.88oz), which is the same as a standard AA battery. The lengths are also comparable – the 3-contact version is 50mm long, also the same length as that AA battery.

Specifying this connector for power connections will keep the component weight low and PCB real estate minimal, releasing more weight and space for your other functions.

Kona High-Reliability Connectors

Features – **Shrouding** and Polarization

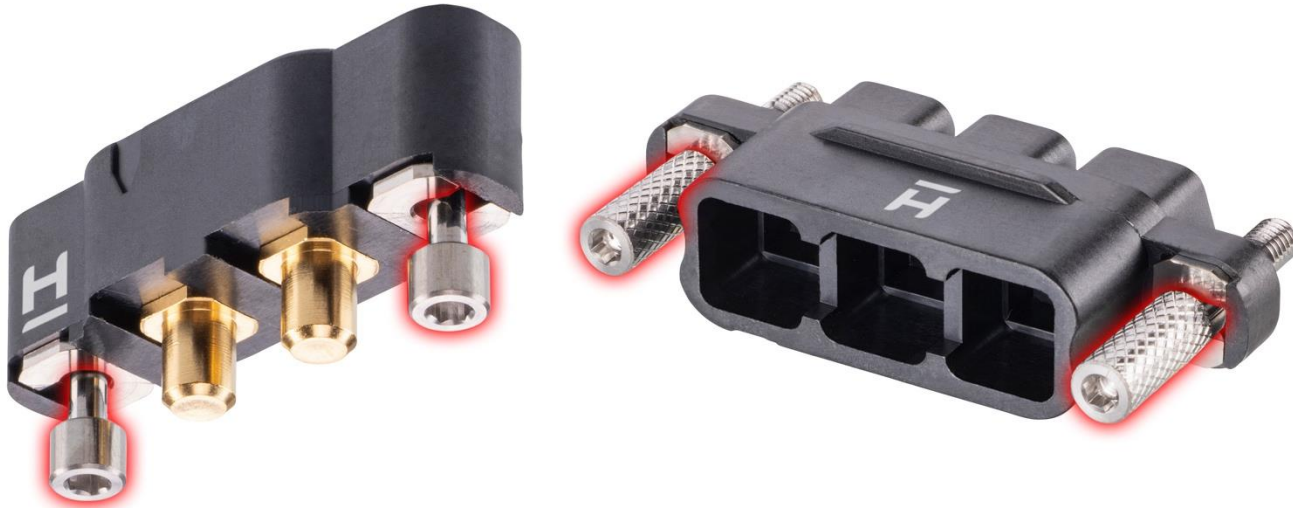


Contacts on the Kona range are all individually shrouded, with a recessed design. This helps prevent accidental touch of contacts by locating the contact end below the housing face. The contacts are also better protected against incidental damage from physical knocks or mis-mating.

Polarizing features can be seen on the outer edge of the shrouding, to prevent mating round the wrong way.

Kona High-Reliability Connectors

Features – **Secure** mating connections



All Kona connectors are fitted with screw-lock fixings, to achieve the maximum vibration and shock specifications. They are also mate-before-lock, so connectors are easier and faster to mate before the screws are engaged and screwed together.

For the standard gender fixings, board-mount retention is added to the male connector. The female connector has large floating thumbscrews with hex-socket heads, for either finger or torque tightening. The reverse fix style has floating hex socket screws on the male connector, and panel mount on the female cable connector.

Kona High-Reliability Connectors

Cable-to-Board, 8 AWG



The Kona range has launched with a cable-to-board configuration – the male is a vertical PCB-mounted throughboard connector with 4.5mm PCB tails. The female connector is cable-mount, with housings and contacts available separately.

For the 8 AWG equipment wire, we recommend a Ø7.5mm maximum insulation diameter, Silicone Rubber insulation.

Kona High-Reliability Connectors

Female connectors, solder cable



The [female connector range](#) currently includes 2, 3 and 4-contact single row housings for cable connections, all with a visible contact no. 1 marker. Housings are supplied separately to the KA1-0400005 solder contact.

Standard gender fixings have floating thumbscrews with added hex socket cavities for use with torque drivers. Reverse Fix has 5.2mm long panel mount studs for front-panel mounting on an enclosure. Use with slotted nut [KA1-4240000](#).

Kona High-Reliability Connectors

Male connectors, board mount



For the [male connectors](#), these are also available in 2, 3 and 4-contact single row options for PCB throughboard mounting in vertical, with 4.5mm PC tails. They also display a contact no. 1 marker, and are supplied in tubes with pick and place caps fitted.

Standard gender fixings have a 5.2mm long board mount stud for additional security on the PCB – the slotted nut [KA1-4240000](#) is available separately for use with these. Reverse Fix has the floating hex socket screws, which will require a clearance hole in the PCB.

Kona High-Reliability Connectors

Electrical Specification highlights

Current Rating	60A max per contact
Maximum Voltage	3,000V AC for 1 minute
Working voltage (<i>sea level</i>)	1,500V DC or AC _{peak}
Contact Resistance	2mΩ max

Kona is capable of the highest current rating per contact from Harwin. At 121A per inch or 48A per centimeter for the 4-contact model, it's the highest power density in our portfolio.

The full Kona [Component Specification C052xx](#) includes additional information and a de-rating curve.

Kona High-Reliability Connectors

Mechanical & Environmental Specification highlights

Temperature Range	-65°C to +150°C
Vibration	20G for 12 hours (TBC)
Shock	100G for 6ms (TBC)
Durability	T-Contact = 1,000 mating cycles Others = 500 mating cycles

Final testing is still underway, but initial testing confirms that the vibration and shock resistance is in line with the rest of the Harwin high-reliability connectors.

The full Kona [Component Specification C052xx](#) includes additional information and a de-rating curve.

Kona High-Reliability Connectors

Accessories and Tooling



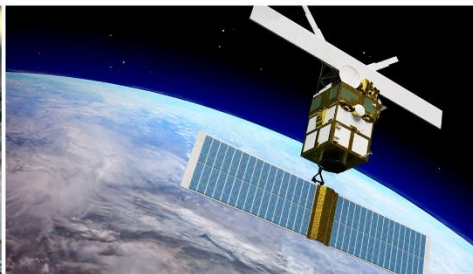
As the cable connection is soldered, no tooling is required for wire attachment. Contacts are push-in without tooling as well. There are two tools for the Kona range:

- Removal tool [ZA1-9040000](#) - if a cable contact requires removal and replacement,
- Slotted screwdriver [ZA1-9020000](#) - to tighten or loosen slotted nuts [KA1-4240000](#) on mounting studs.

Tools and nuts are available separately. [Instruction Sheet IS-49](#) includes instructions for assembling and removing cable contacts.

Kona High-Reliability Connectors

Markets



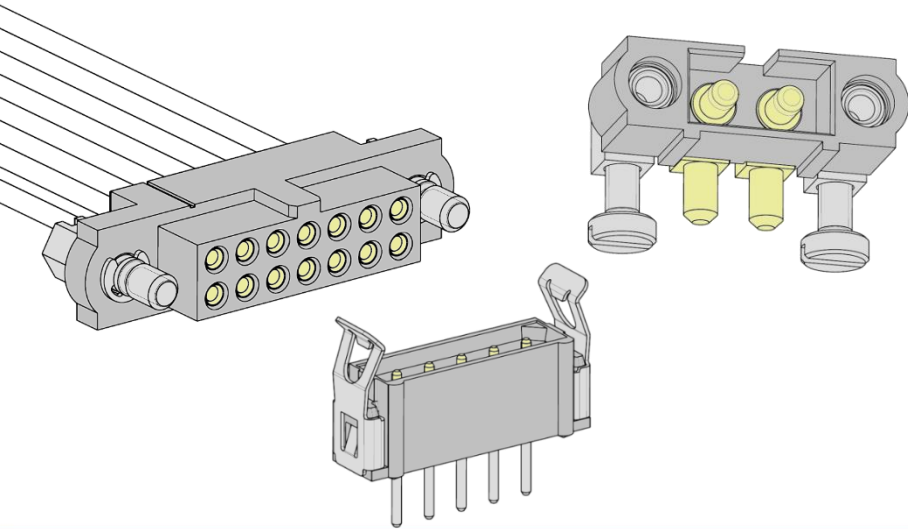
Rugged, high-reliability connectors continue to be in strong demand in many varied environments. With the added current-carrying capacity in a small size, Kona is expected to deliver power supply requirements for many modern technology markets.


- Aerospace
- Autosport
- Drives & Controls
- Robotics
- Oil & Gas

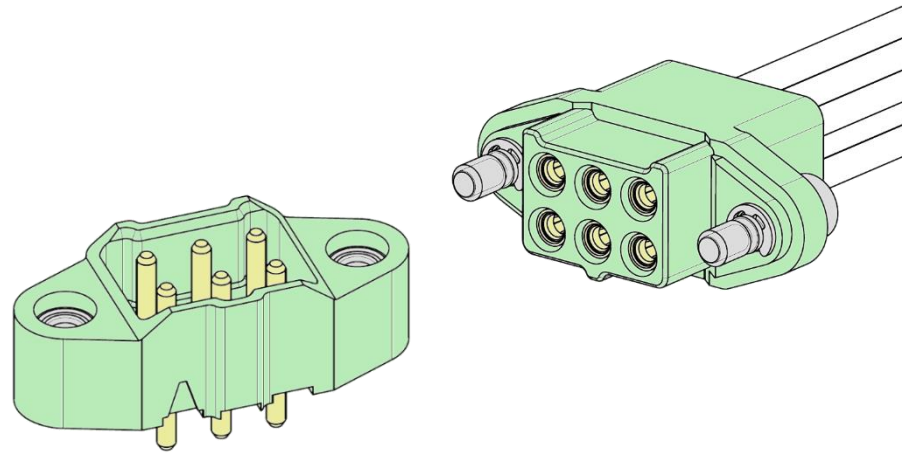


If you like this product, try...

Datamate - 2/4mm Pitch



 M300 - 3.00mm Pitch



- 3A per signal, up to 40A per power contact
- Jackscrew or latching system for strain relief
- Resists Vibration to 10G and Shock to 100G
- Temperature range -55 deg C to +125 deg C
- PCB connectors in Throughboard or SMT, Cable options

- Up to 10A per contact
- Jackscrew fixing system for strain relief
- Resists Vibration to 10G and Shock to 100G
- Temperature range -65 deg C to +175 deg C
- Vertical and Cable options



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