



**KA1 SERIES: 8.5mm PITCH HIGH POWER CONNECTORS**

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**1. DESCRIPTION OF CONNECTOR SYSTEM**

The Kona range consists of male and female high-reliability mating connectors, based on an 8.5mm pitch single row format – part numbers start with the series code KA1. These connectors are designed for higher power applications with a rugged or durable requirement. Each contact on both male and female connectors is individually shrouded and scoop-proof (to prevent accidental touch). Polarization and contact 1 identification marks are also incorporated into the housing designs.

The male contact is designed to provide the spring force inside the female contact for positive engagement. Both contacts are plated with a hard acid gold finish at 98% purity for high performance and long life. Cable contacts are solder style (compatible with 8AWG cable) and are removable & replaceable inside housings.

Connector housings are fitted with stainless steel screw-lock fixings, capable of mate-before-lock for easy connection and faster fixing. Options include thumbscrews for manual assembly, board or panel mount studs for connector retention, and reverse fix style for floating screw on the male.

**2. RATINGS****2.1. MATERIALS**

Contacts.....	Beryllium Copper.
Contact plating finish.....	Hard Gold over Nickel.
Contact latching collar.....	Cupro-Nickel, 100% Tin over Nickel
Housing & Cap.....	40% Glass-Filled Thermoplastic, UL94V-0
Screw Lok Fixings.....	Stainless Steel

**2.2. ELECTRICAL CHARACTERISTICS**

Current Rating (EIA-364-70A: 1998).....	60A max per contact
Dielectric Withstanding Voltage (EIA-364-20C, Method B):	
Sea Level.....	3,000V AC for 1 minute
Altitude 70,000ft.....	500V AC for 1 minute
Voltage Rating.....	1,500V DC or AC peak
Contact Resistance (EIA-364-23B):	
Pre and Post Conditioning.....	2mΩ max
Insulation Resistance (EIA-364-21C).....	10GΩ min at 1,000V

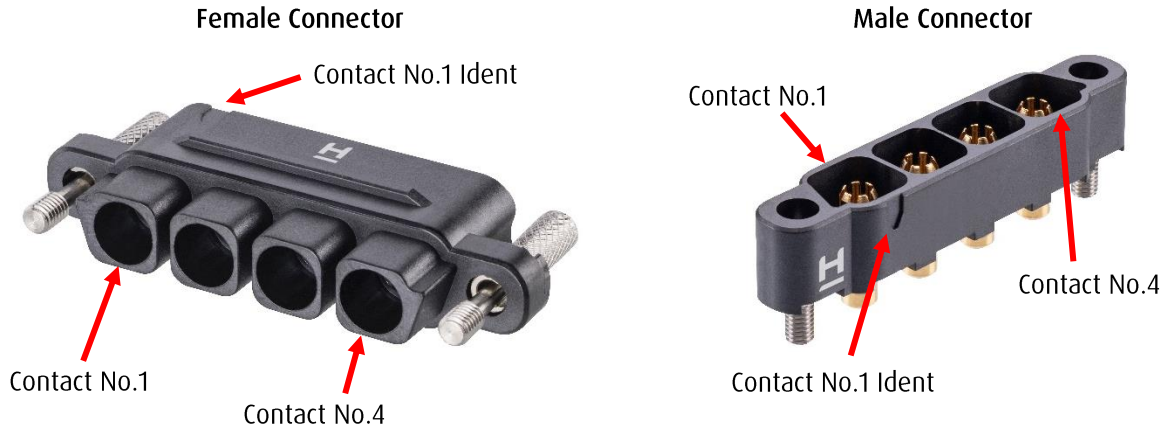
**2.3. ENVIRONMENTAL CHARACTERISTICS**

Operating Temperature Range.....	-65°C to +150°C
Vibration (EIA-364-28D, Condition IV).....	TBC
Mechanical Shock (EIA-364-27B).....	TBC
Thermal Shock (EIA-364-32C, Condition IV).....	-65°C to +150°C, 10 cycles, 30 mins each extreme
Temperature Life (EIA-364-17B, Method A).....	+150°C for 1000 hours
Humidity (EIA-364-31B, Condition A).....	96 hours, 90-95% RH at +40°C
Salt Spray (EIA-364-26B).....	24 hours at +35°C, concentration 5%

**2.4. MECHANICAL CHARACTERISTICS**

Durability (EIA-364-09C).....	250 operations
Mating and Unmating Forces (EIA-364-13C):	
Insertion Force (per contact <sup>*</sup> ):	
Initial.....	50N max
Post Conditioning.....	70N max
Withdrawal Force (per contact <sup>*</sup> ).....	5N min
<sup>*</sup> - per contact when fully assembled connector is being mated and un-mated.	
Contact Retention Force (EIA-364-29C).....	75N min per contact
Screw-Lock Torque.....	22-25cmN

### APPENDIX 1 – CONTACT NUMBERING



### APPENDIX 2 – DE-RATING GRAPH

