



Product Technical Bulletin #16

LF5 Helix ® Connectors Low Force Socket Contacts

AirBorn is introducing the Helix ® type socket contact as an alternative to the established W-series, MIL-C-55302 connectors. The low force #22 socket contains 5 wires which partially wrap themselves around the Ø.030" mating pin. This condition is enhanced by total control of each wires position on the cage or wire frame. This results in very stable insertion / withdrawal forces and contact resistance values. This product meets or exceeds all requirements of MIL-C-55302.

Specifications:

Contact size:	#22 (Ø .030")
Contact terminal:	Dip terminal and Solder Cup, others available on request
Contact base:	Copper alloy
Contact wire:	BeCu alloy, Ø.005" , 5 wires
Wire plating:	50µ" Gold over Nickel

Performance:

Connector mating forces:	2.0 ounce average per contact
Connector unmating forces:	.64 ounces minimum per contact
Insertion force (gage pin):	.50 ounce minimum
Current rating:	5 amps per contact
Contact resistnace:	.005 ohms (interface measurements)
Qualification:	Test report 55302-92-92

Testing included the appropriate qualification requirements of MIL-C-55302.
Abstract of qualification tests and results available upon request.

Features:

- Low insertion and withdrawal forces.
- Low and predictable contact resistance at normal current levels.
- Unsurpassed electrical continuity under shock and vibration.
- Contact life tested to 25,000 cycles with minimum wear.
- Controlled uniformity – notched wire (patent pending) placement provides precise control of wires to assure narrow force and electrical resistance (limited deviation) performance.
- Interchangeability – mates with AirBorn MIL-C-55302, W-series connectors.

LF5 Helix ®
Mating / Unmating Forces
(Reference MIL-C-55302, Paragraph 4.7.4)

A.	<u>WHGA122SBD9</u>	<u>WHG160SBD11</u>	<u>WHG208SBD11</u>	Average per contact (<u>ounces</u>)
Mate (lbs.):	14.0	16.5	24.0	
Unmate (lbs.):	13.0	15.5	19.0	
Mate (oz./ contact):	1.84	1.65	1.78	1.78
Unmate (oz./ contact):	1.70	1.55	1.46	1.57

B.	<u>WHGA122SBD9SY</u>	<u>WHG160SBD11SY</u>	<u>WHG208SBD11SY</u>	
Mate (lbs.):	16.0	18.0	24.5	
Unmate (lbs.):	14.5	17.5	20.5	
Mate (oz./contact):	2.10	1.80	1.88	1.93
Unmate (oz./contact):	1.90	1.75	1.58	1.74

A. Connectors less hardware
B. Connectors with hardware