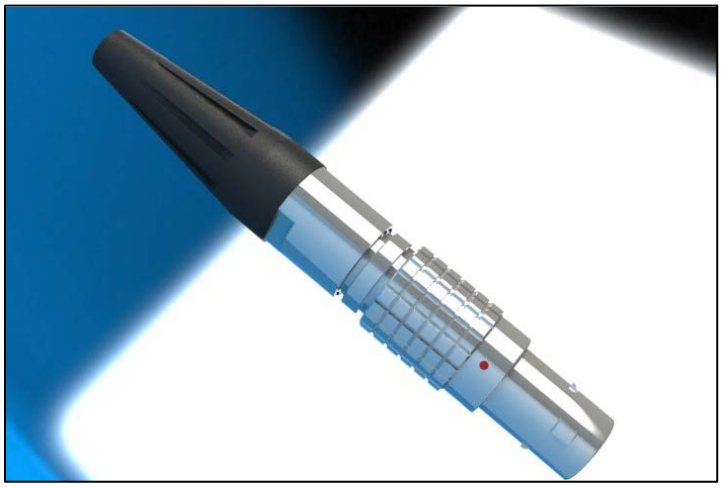


1.0 KEY FEATURES

- The KW01 miniature metal circular electrical connectors are precision engineered, multi-pin, compact and highly-robust circular push-pull connectors used in various industries where space and cost are especially critical.
- The KW01.FGG Male Solder Plug mates with the Female Solder Cable Receptacle (KW01.PHG) for cable-to-cable connections and the Female Solder Panel-Mount Socket (KW01.EGG) for enclosure or housing connections.
- Its unparalleled push-pull, self-latching mechanism allows for positive engagement giving an audible sound and clicking feel leading to a quick and secure engagement and disengagement from its mating part without having bulky, weight and space-consuming clips and bayonets.
- Connectors are designed to have their metal shells make contact with one another first during mating before pins and sockets allowing grounding and electrostatic discharge (ESD) protection. Pins are also recessed and scoop-proof preventing bent pins and allowing a blind mate.
- Gold-plated copper alloy contacts, corrosion resistant finishing allow these rugged, high-performance and light weight connectors to demonstrate high reliability in harsh and extreme environments conditions.
- Connectors include the cable collet (strain relief) and bend relief and are 0° keyed (polarization).
- Metal shells with conductive plating allow for low Grounding and Bonding resistance and 360° screening for EMI/EMC shielding.
- Designed to pass DO-160F aerospace qualification testing.
- Polyphenylene Sulfide (PPS) engineering thermoplastic used for the insulator is chemical-resistant, heat-resistant and is inherently flame retardant with a UL94 V-0 flammability rating. It has excellent dielectric characteristics and is inert to steam (no moisture absorption), strong bases, fuels and acids.
- Download Engineering Drawing for more technical information and assembly instructions.
- View video for assembly instructions.

Download Engineering Drawing for FGG (0B, 1B, 2B)
Download 3D Parasolid for FGG (0B, 1B, 2B)
Download Datasheet as PDF
Download 3D PDF

2.0 TECHNICAL SPECIFICATIONS

MECHANICAL AND ENVIRONMENTAL

Characteristics	Value
Operating Temperature Range	- 50° C, +125° C
Mating Cycles	5000 cycles MIN
Ingress Protection Rating	IP50
Humidity	up to 95% at 60° C
Vibration	10-2000 Hz, 15 g
Shock	100 g, 6 ms
Salt spray corrosion test	> 144h

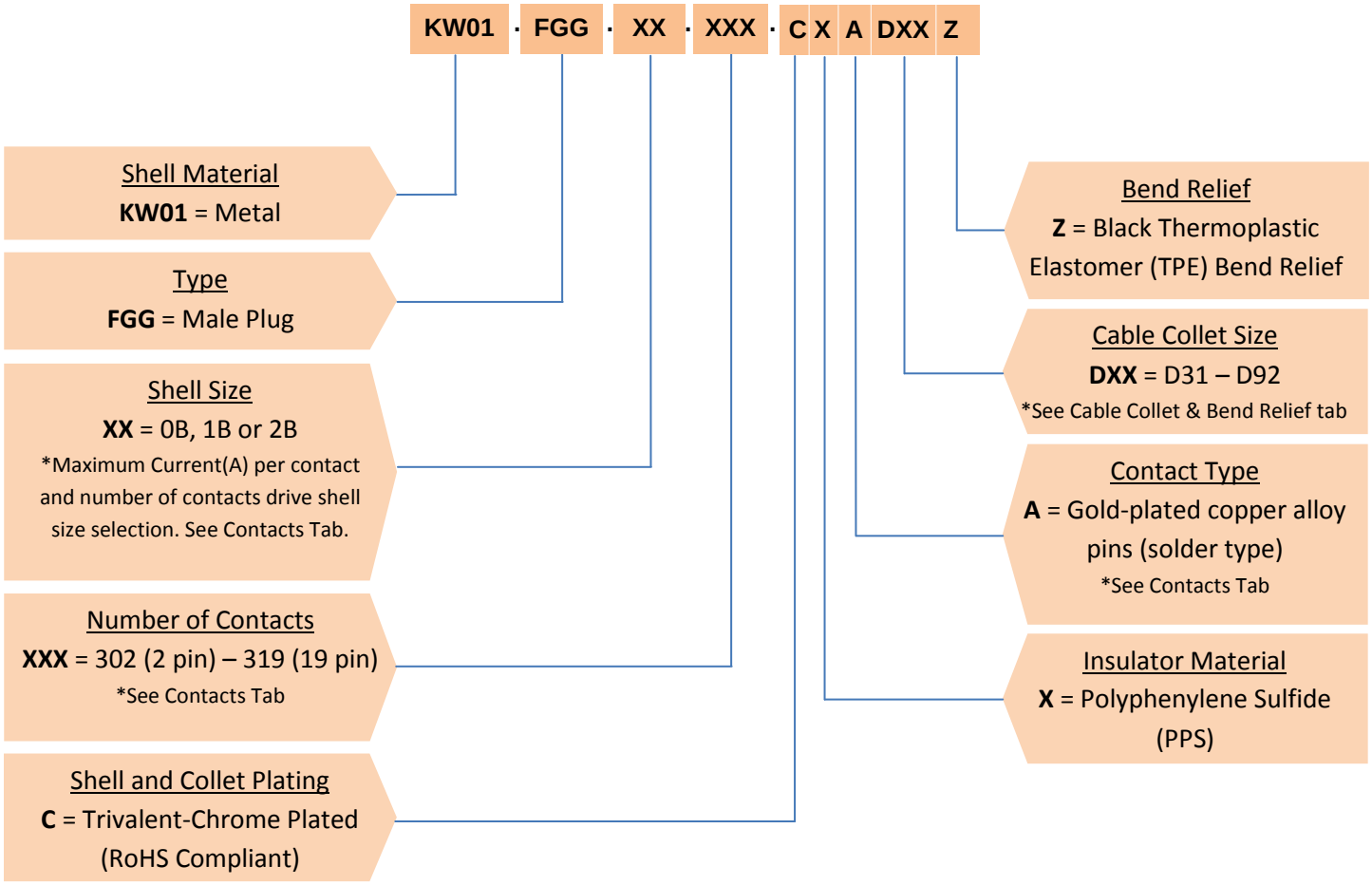
Shell Size	Max Weight (lbs)*
0B	0.025
1B	0.040
2B	0.080

* Includes weight of bend relief

ELECTRICAL

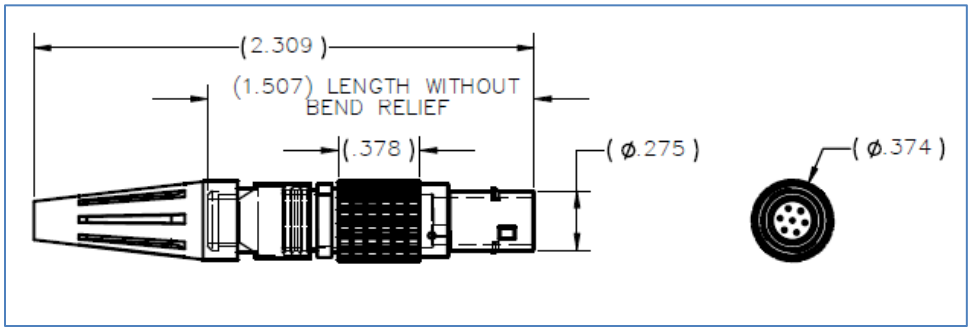
Insulation Resistance	>5000MΩ

3.0 PART NUMBER

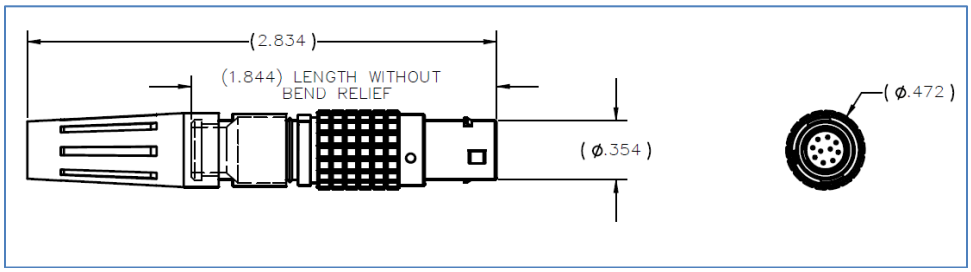


4.0 ENVELOPE

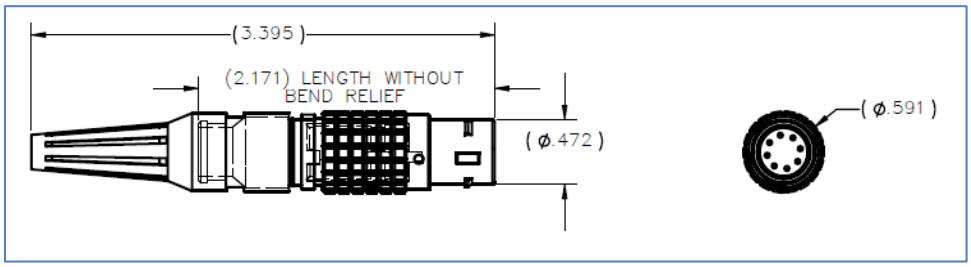
0B Shell Size



1B Shell Size

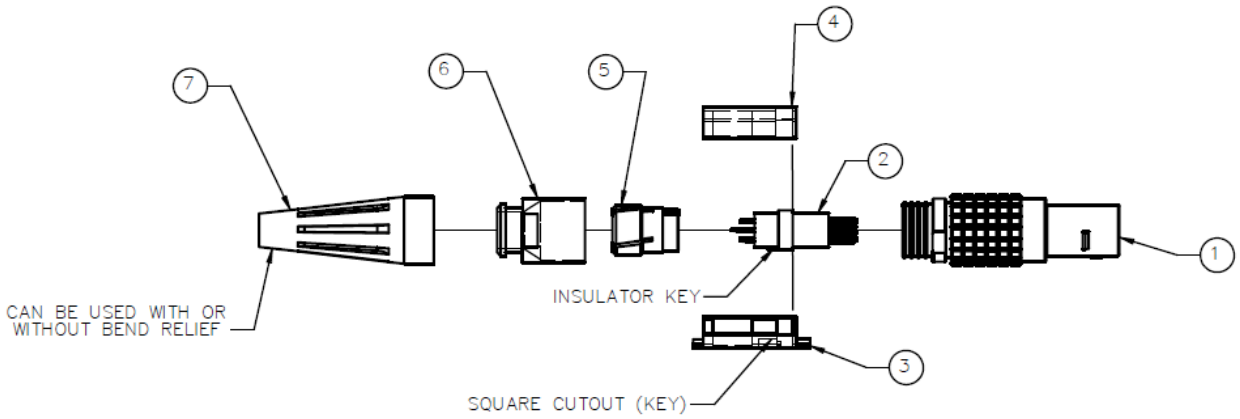


2B Shell Size



5.0 MATERIALS

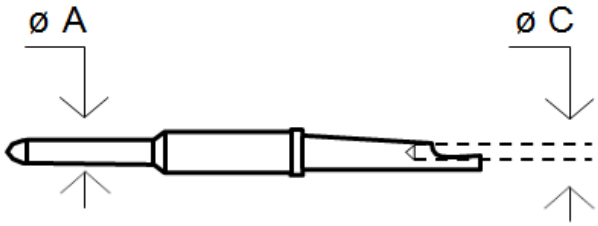
Exploded View



(0B shell shown)

Item No.	Description	Material
1	CONNECTOR SHELL	CHROME-PLATED BRASS
2	INSULATOR, MALE PIN	POLYPHENYLENE SULFIDE (PPS) WITH GOLD-PLATED COPPER ALLOY PINS
3	INSULATOR SHELL, KEY	NICKEL-PLATED BRASS
4	INSULATOR SHELL, NO KEY	NICKEL-PLATED BRASS
5	CABLE COLLET	NICKEL-PLATED BRASS
6	COLLET NUT	CHROME-PLATED BRASS
7	BEND RELIEF	THERMOPLASTIC ELASTOMER (TPE)

6.0 CONTACTS



0B Shell Size			Contact		Conductor (Wire)	
					Solid	Stranded
Number of Contacts	Contact Resistance (mΩ)	Max Current (Amps)	ø A (inches)	ø C (inches)	Max Wire Gauge (AWG)	
2 Pins (KW01.FGG.0B.302)	2.5	10	0.0354	0.0315	22	22
3 Pins (KW01.FGG.0B.303)	2.5	8	0.0354	0.0315	22	22
4 Pins (KW01.FGG.0B.304)	4	7	0.0276	0.0315	22	22
5 Pins (KW01.FGG.0B.305)	4	6.5	0.0276	0.0315	22	22
6 Pins (KW01.FGG.0B.306)	4	2.5	0.0197	0.0177	28	28
7 Pins (KW01.FGG.0B.307)	4	2.5	0.0197	0.0177	28	28

1B Shell Size			Contact		Conductor (Wire)	
					Solid	Stranded
Number of Contacts	Contact Resistance (mΩ)	Max Current (Amps)	ø A (inches)	ø C (inches)	Max Wire Gauge (AWG)	
2 Pins (KW01.FGG.1B.302)	2.5	15	0.0512	0.0394	20	20
3 Pins (KW01.FGG.1B.303)	2.5	12	0.0512	0.0394	20	20
4 Pins (KW01.FGG.1B.304)	4	10	0.0354	0.0315	22	22
5 Pins (KW01.FGG.1B.305)	4	9	0.0354	0.0315	22	22
6 Pins (KW01.FGG.1B.306)	4	7	0.0276	0.0315	22	22
7 Pins (KW01.FGG.1B.307)	4	7	0.0276	0.0315	22	22
8 Pins (KW01.FGG.1B.308)	7.5	5	0.0276	0.0315	22	22
10 Pins (KW01.FGG.1B.310)	7.5	2.5	0.0197	0.0177	28	28

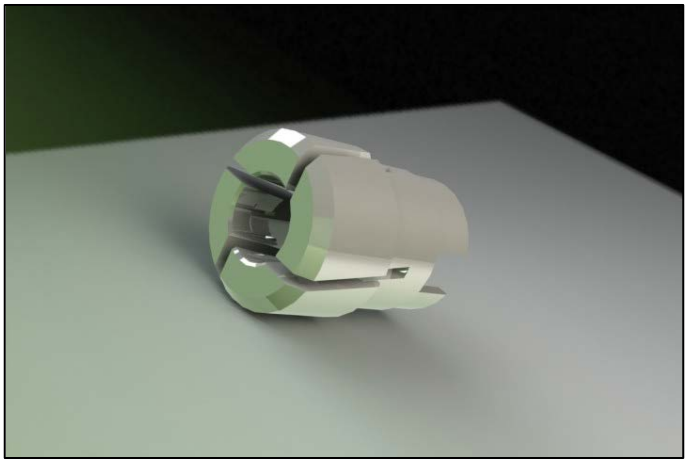
2B Shell Size			Contact		Conductor (Wire)	
					Solid	Stranded
Number of Contacts	Contact Resistance (mΩ)	Max Current (Amps)	ø A (inches)	ø C (inches)	Max Wire Gauge (AWG)	
4 Pins (KW01.FGG.2B.304)	4	15	0.0512	0.0394	20	20
6 Pins (KW01.FGG.2B.306)	4	12	0.0512	0.0394	20	20
8 Pins (KW01.FGG.2B.308)	7.5	10	0.0354	0.0315	22	22
10 Pins (KW01.FGG.2B.310)	7.5	8	0.0354	0.0315	22	22
12 Pins (KW01.FGG.2B.312)	7.5	7	0.0276	0.0315	22	22
14 Pins (KW01.FGG.2B.314)	7	6.5	0.0276	0.0315	22	22
16 Pins (KW01.FGG.2B.316)	7	6	0.0276	0.0315	22	22
19 Pins (KW01.FGG.2B.319)	7	5	0.0276	0.0315	22	22

* The above tables should be used as guidelines only, testing is recommended for the specific application requirements.

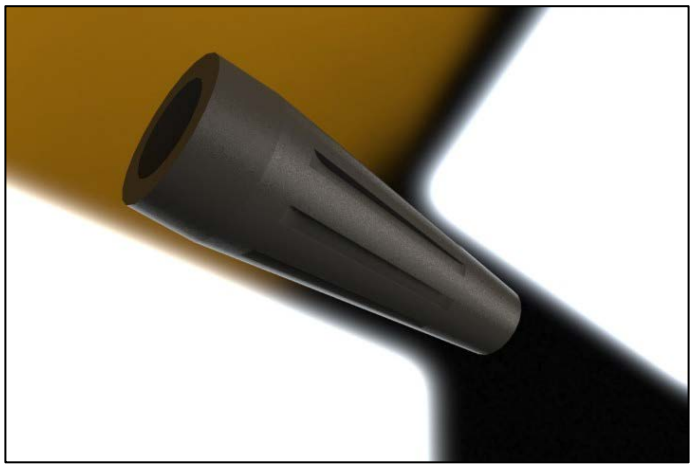
7.0 CABLE COLLET & BEND RELIEF

- FGG.0B, FGG.1B and FGG.2B male solder plugs comes with an internal cable collet that works as a strain relief and tightens down on the electrical cable.
- When a cable collet is selected (DXX) using the outer diameter of the application's electrical cable, the corresponding bend relief is supplied to match the same electrical cable for all shell sizes.

Cable Collet



Bend Relief



Collet (DXX)	Cable ø
0B Shell Size	Range (inches)
D31	0.082-0.118
D42	0.121-0.158
D52	0.161-0.197

Collet (DXX)	Cable ø
1B Shell Size	Range (inches)
D42	0.121-0.158
D52	0.161-0.197
D62	0.200-0.237
D72	0.240-0.276

Collet (DXX)	Cable ø
2B Shell Size	Range (inches)
D42	0.121-0.158
D52	0.161-0.197
D62	0.200-0.237
D72	0.240-0.276
D92	0.318-0.355

8.0 CONNECTOR MATING