

INTERFACE DESIGN STANDARD		<i>The PHOENIX Company of Chicago, Inc.</i> 22 GREAT HILL RD., NAUGATUCK, CT 06770 WWW.PHOENIXOFCHICAGO.COM PHONE: (800) 323-9562	REV.	DESCRIPTION	BY	DATE	APPR.	DATE
IDS-168L			A	REL. PER ECN 14374	RA	4/16/2024	SPS	4/16/2024
SHEET 1 OF 3	DATE: 4/3/24		B	PER ECN 14379	RA	5/23/2024	DW	5/23/2024
DRAWN: RA	APPROVED: SPS							

WARNING - THIS DOCUMENT CONTAINS TECHNICAL DATA WHOSE EXPORT IS RESTRICTED BY THE ARMS EXPORT CONTROL ACT (TITLE 22, U.S.C., SEC 2751, ET. SEQ.) OR THE EXPORT ADMINISTRATION ACT OF 1979, AS AMENDED, TITLE 50, U.S.C., APP 2401 ET SEQ. VIOLATIONS OF THESE EXPORT LAWS ARE SUBJECT TO SEVERE CRIMINAL PENALTIES. DISSEMINATE IN ACCORDANCE WITH PROVISIONS OF DOD DIRECTIVE 5230.25.

**168L SERIES, SIZE 12 PkZ® FOR ARINC 600 CONNECTOR HOUSINGS, 50 OHMS, 18 GHz FREQUENCY**

**MATERIALS**

BODIES: BRASS PER ASTM B16/B16M.  
 INSULATORS: TEFLON (PTFE) PER ASTM D4894.  
 CENTER AND OUTER CONTACTS: BERYLLIUM COPPER  
 PER ASTM B196/B196M.

**PLATING**

GOLD PER MIL-DTL-45204 (ELECTRO DEPOSITED).  
 COPPER PER SAE AMS2418 (ELECTRO DEPOSITED).  
 NICKEL PER QQ-N-290.

**FINISH (ADD LETTER TO END OF PART NUMBER)**

BODIES AND CENTER CONTACTS:  
 - "A": .000050 MIN. GOLD OVER NICKEL.  
 - "C": .000050 MIN. GOLD OVER COPPER.  
 OTHER METAL PARTS: PLATED TO MEET THE  
 ENVIRONMENTAL REQUIREMENTS.

**MATING CHARACTERISTICS**

OUTER BODIES:  
 - INSERTION - 24 oz. (1.5 lbs) MAX.  
 - WITHDRAWAL - 2 oz. (.125 lbs) MIN.  
 CENTER CONTACTS:  
 - INSERTION - 14 oz. (.875 lbs) MAX.  
 - WITHDRAWAL - .5 oz. (.031 lbs) MIN.  
 HOUSING RETENTION - 192 oz. (12 lbs.) MIN.  
 AXIAL MATING TOLERANCE - .110 [2.79]

**CONFIGURATIONS**

HOUSING: ARINC 600 PLUG AND RECEPTACLE CONNECTOR SHELLS, SIZE 12 CAVITY. (REF: MIL-DTL-83527B)  
 CABLES: RG-178, RG-316, RG-405 OR EQUIVALENT FLEXIBLE CABLES.  
 INSERTION TOOL: M81969/4-01 OR M81969/14-04.  
 EXTRACTION TOOL: M81969/28-02 OR M81969/8-10 OR M81969/14-04.  
 DESIGN TERMINATION: CRIMP/CLAMP, SOLDER/CLAMP, DIRECT SOLDER, DIRECT CRIMP.  
**PKZ CONTACTS DO NOT MATE WITH OTHER INDUSTRY-STANDARD SIZE 12 CONTACTS.**

**ELECTRICAL (CONFIGURATION DEPENDENT)**

IMPEDANCE: 50 OHMS.  
 FREQUENCY RANGE: DC TO 18 GHz.  
 VOLTAGE RATING STRAIGHT: 800 VRMS.  
 VOLTAGE RATING ANGLED: 600 VRMS.  
 INSULATION RESISTANCE: 2000 MEGOHMS MIN.

CONTACT RESISTANCE:  
 - CENTER CONTACT 6 MILLIOHMS  
 - OUTER CONTACT 4 MILLIOHMS  
 VSWR: CONFIGURATION DEPENDENT.  
 INSERTION LOSS:  $.06\sqrt{f}$ (GHz) dB  
 R.F. LEAKAGE: -90 dB MIN. @ 2-3 GHz.

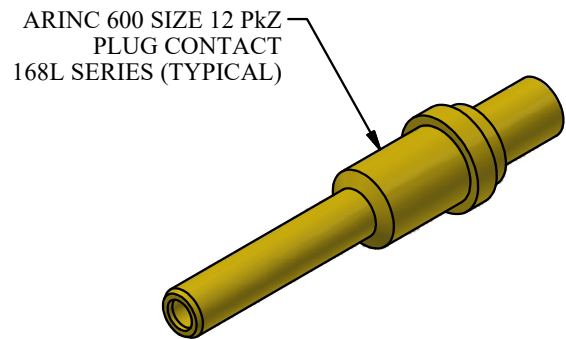
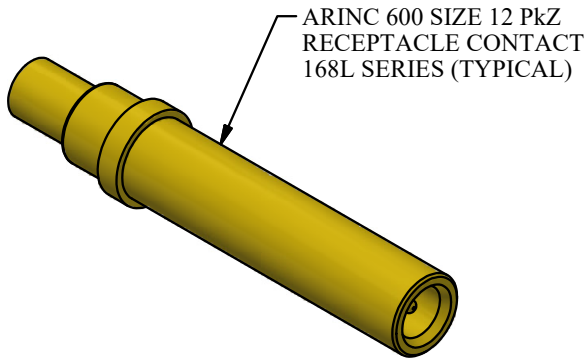
**ENVIRONMENTAL**

OPERATING TEMPERATURE: -55°C TO + 165°C  
 VIBRATION: MIL-STD-202, METHOD 204, TEST CONDITION D.  
 SHOCK: MIL-STD-202, METHOD 213, TEST CONDITION I.  
 SALT SPRAY: MIL-STD-1344, METHOD 1001, CONDITION B.  
 DURABILITY: 500 CYCLES.

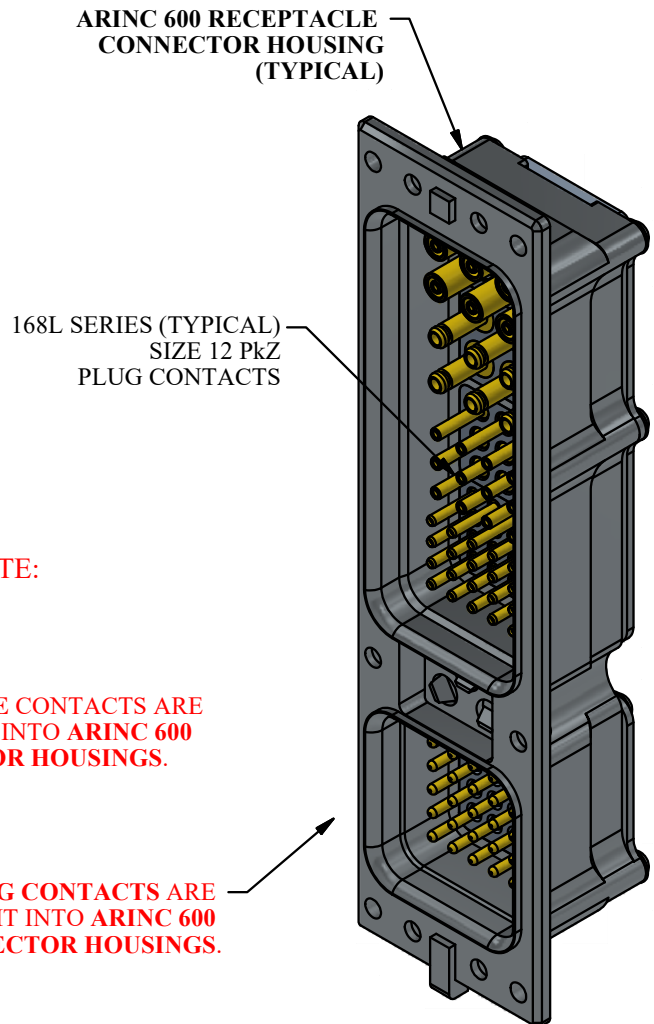
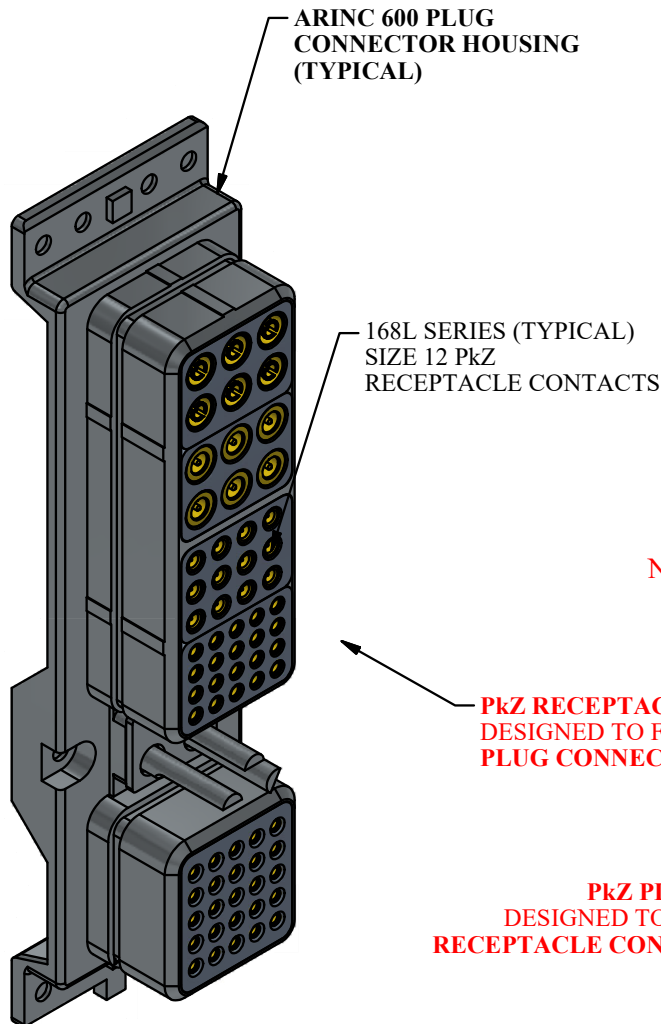
THERMAL SHOCK: MIL-STD-202, METHOD 107,  
 TEST CONDITION B, EXCEPT HIGH  
 TEMPERATURE SHALL BE +85°C.  
 MOISTURE RESISTANCE: MIL-STD-202,  
 METHOD 106.  
 INSULATION RESISTANCE: 2000 MEGOHMS  
 POST HUMIDITY.

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CONTACTS:



CONTACTS IN CONNECTOR HOUSINGS:



**NOTE:**

**PKZ RECEPTACLE CONTACTS ARE DESIGNED TO FIT INTO ARINC 600 PLUG CONNECTOR HOUSINGS.**

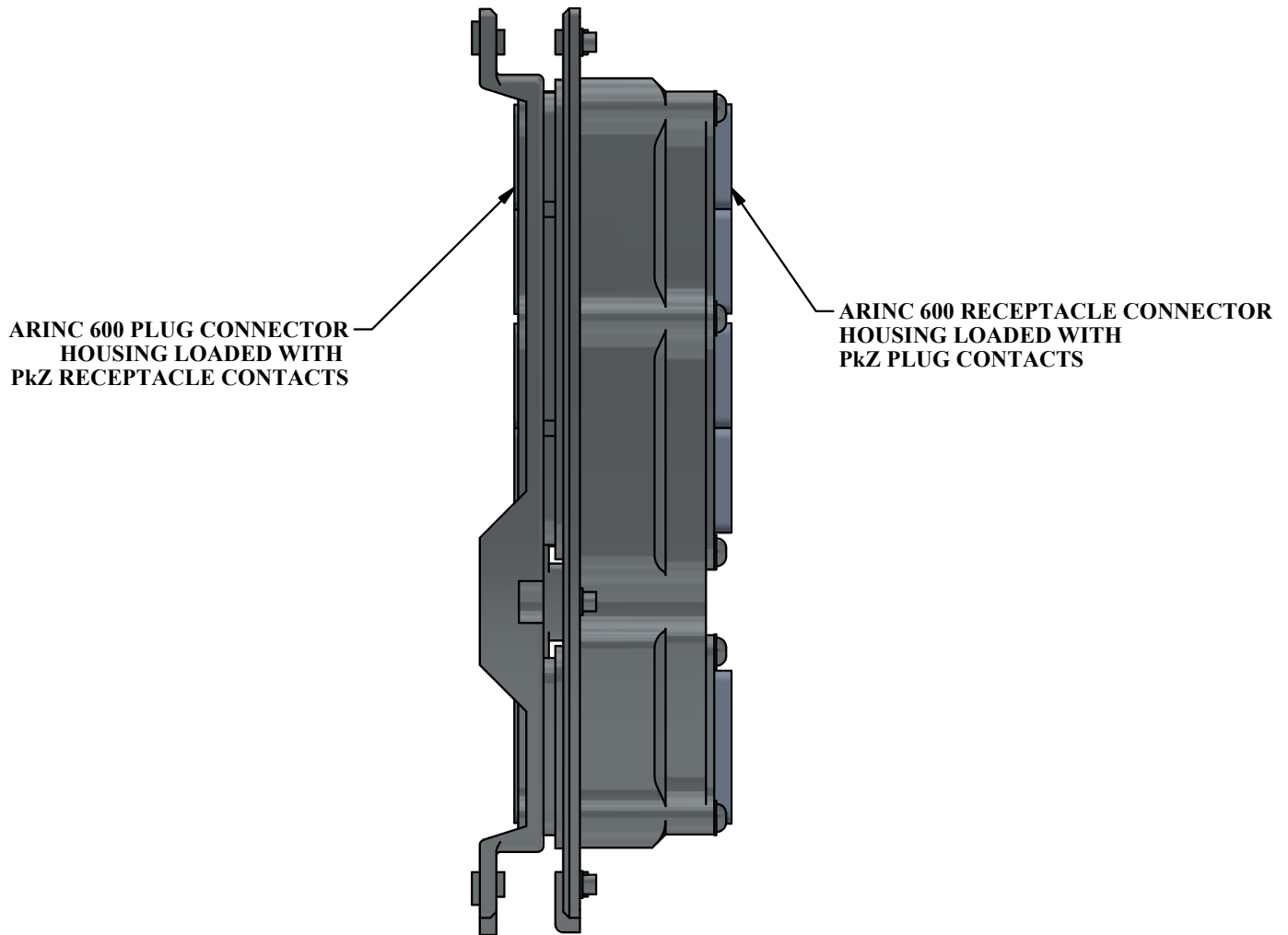
**PKZ PLUG CONTACTS ARE DESIGNED TO FIT INTO ARINC 600 RECEPTACLE CONNECTOR HOUSINGS.**

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CONTACT MATING IN CONNECTOR HOUSINGS:

**HANDLE WITH CARE**



CAUTION

- PRECISION CONTACTS WITH SMALL DIAMETERS ARE USED IN THESE CONNECTORS TO ACHIEVE SUPERIOR ELECTRICAL AND MECHANICAL PERFORMANCE.
- CARE IS REQUIRED WHEN MATING THESE CONNECTORS TO PROTECT THE CONTACTS FROM DAMAGE AND ACHIEVE OPTIMAL PERFORMANCE.
- STABILIZING RINGS FOR PkZ PLUG CONTACTS CAN BE USED TO AID IN THE MATING OF THE CONNECTORS.