

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-168			E	PER ECN 13488	JEM	09/10/2019	RMB	09/10/2019
SHEET 1 OF 3	DATE: 08/12/15		F	PER ECN 13509	JEM	04/07/2020	RMB	04/07/2020
DRAWN: JEM	APPROVED: RMB		G	PER ECN 13787	JEM	06/18/2020	RMB	06/18/2020
			H	PER ECN 14379	SPS	05/08/2024	SJG	05/08/2024

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168 SERIES, SIZE 12 PkZ® FOR ARINC 600 CONNECTOR HOUSINGS, 50 OHMS, 50 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 50 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.

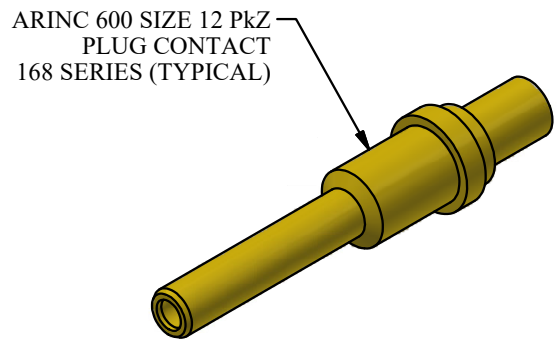
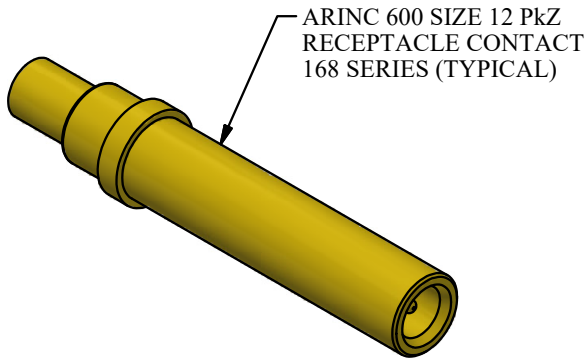
ENVIRONMENTAL

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.

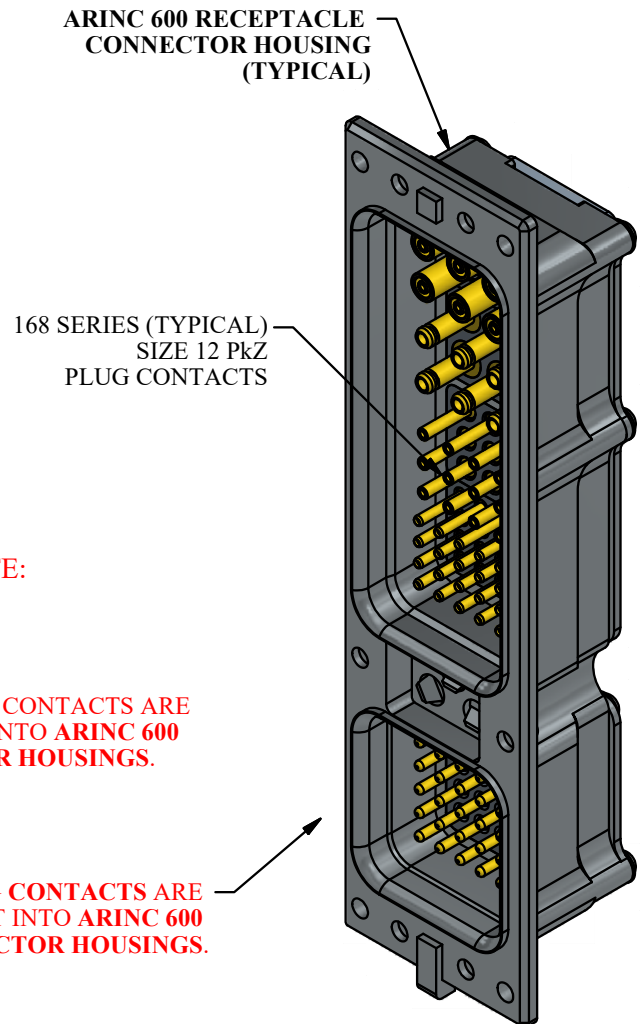
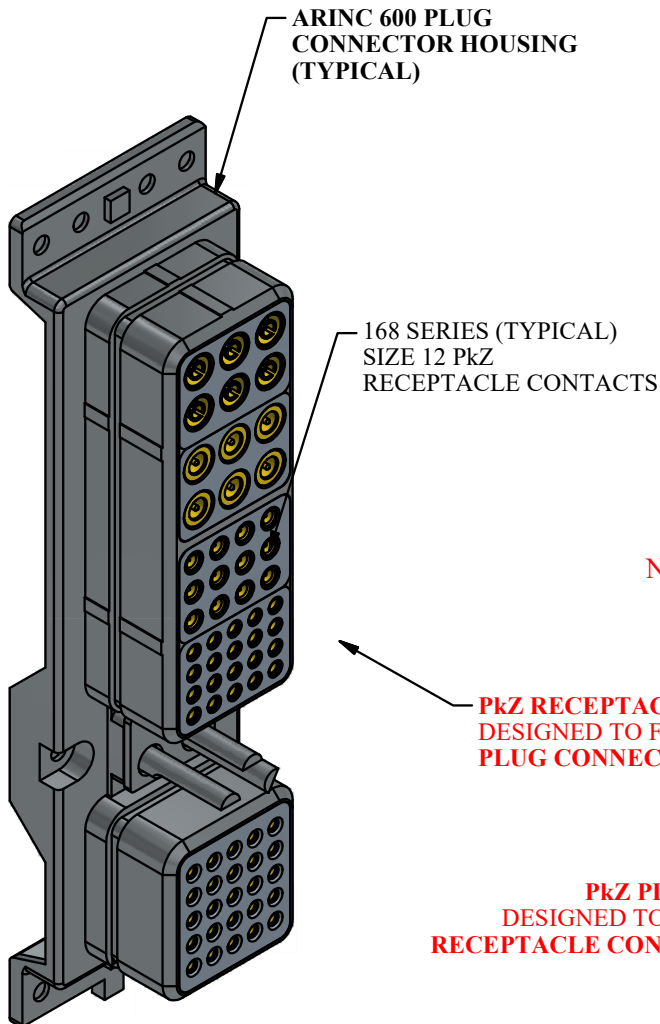
THERMAL SHOCK: MIL-STD-202, METHOD 107,
 TEST CONDITION B, EXCEPT HIGH
 TEMPERATURE SHALL BE +85°C.
 MOISTURE RESISTANCE: MIL-STD-202,
 METHOD 106.
 INSULATION RESISTANCE: 2000 MEGOHMS
 POST HUMIDITY.

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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.**

INTERFACE DESIGN STANDARD

IDS-168

SHEET 3 OF 3

DATE: 08/12/15

DRAWN: JEM

APPROVED: RMB

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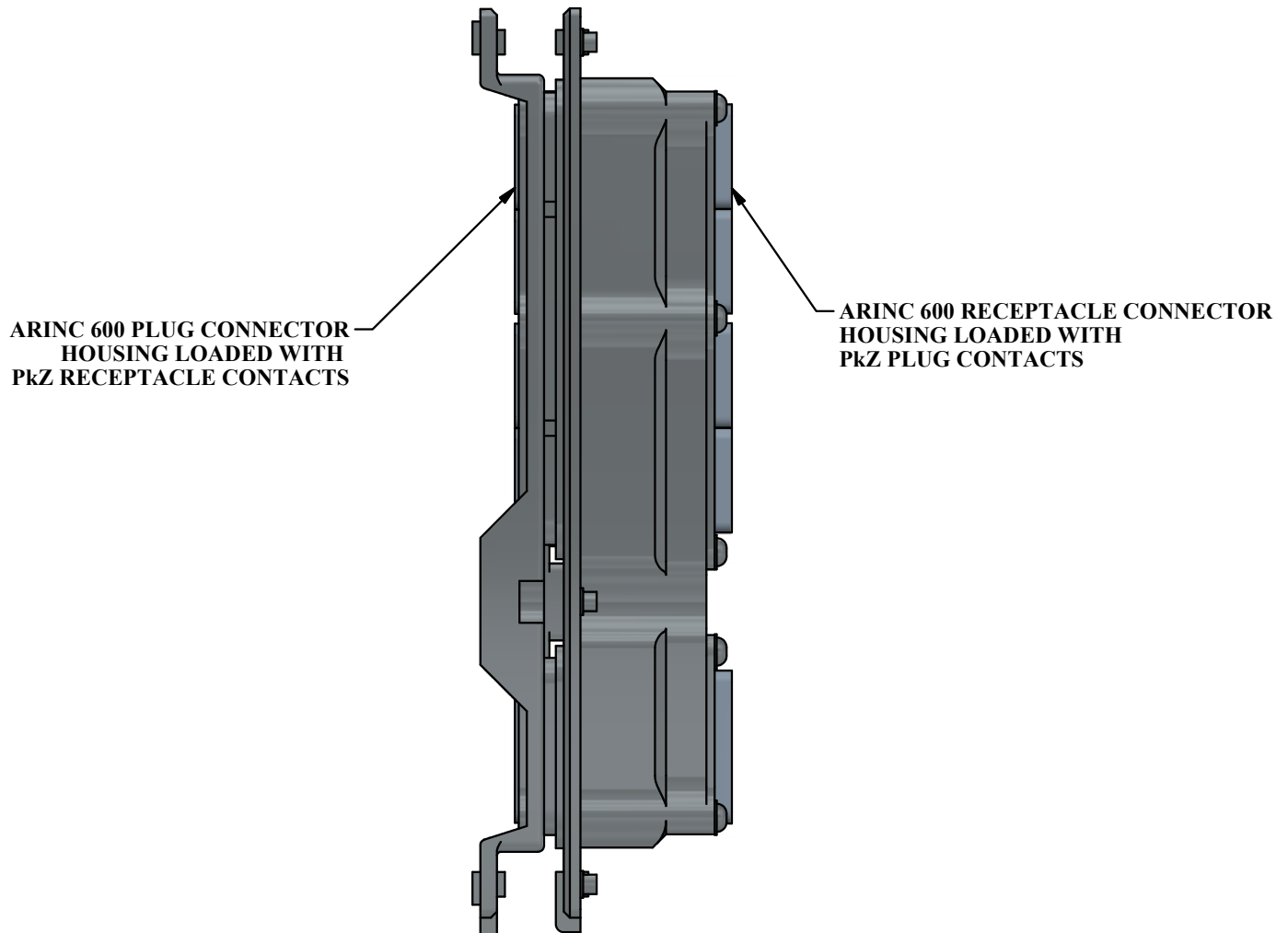
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CONTACT MATING IN CONNECTOR HOUSINGS:

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.