

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			F	PER ECN 13509	JEM	04/07/2020	RMB	04/07/2020
DATE: 08/12/15	APPROVED: RMB		G	PER ECN 13787	JEM	06/18/2020	RMB	06/18/2020
DRAWN: JEM			H	PER ECN 14379	SPS	05/08/2024	SJG	05/08/2024
		J	PER ECN 14215	BAK	7/26/2024	DW	7/29/2024	

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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.
INSULATORS: TEFLON (PTFE) PER ASTM D710.
CENTER AND OUTER CONTACTS: BERYLLIUM COPPER
PER ASTM B196.

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√f(GHz) dB
R.F. LEAKAGE: -90 dB MIN. @ 2-3 GHz.

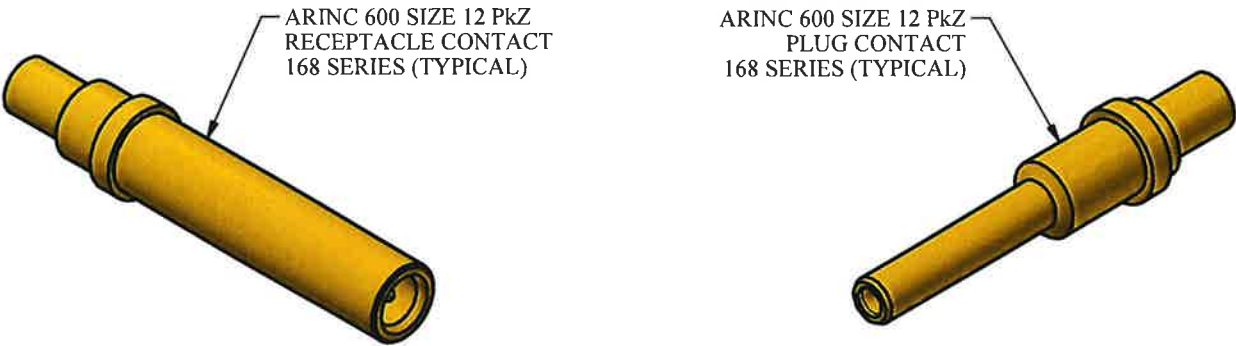
ENVIRONMENTAL

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.

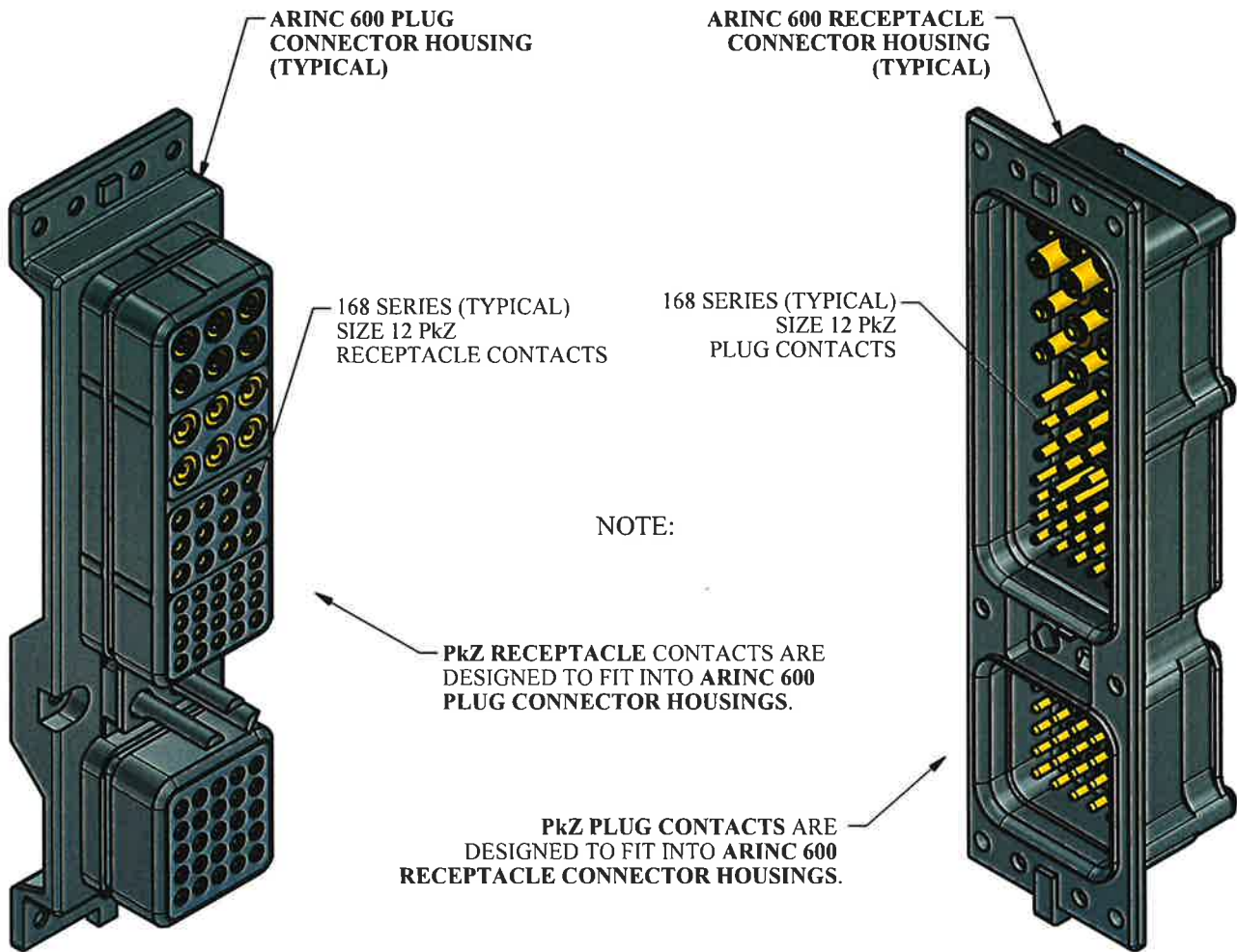
THERMAL SHOCK: MIL-STD-202, METHOD 107,
TEST CONDITION B, EXCEPT HIGH
TEMPERATURE SHALL BE+85°C.
MOISTURE RESISTANCE: MIL-STD-202,
METHOD 106.
INSULATION RESISTANCE: 2000 MEGOHMS
POST HUMIDITY.

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IDS-168			
SHEET 2 OF 3	DATE: 08/12/15		
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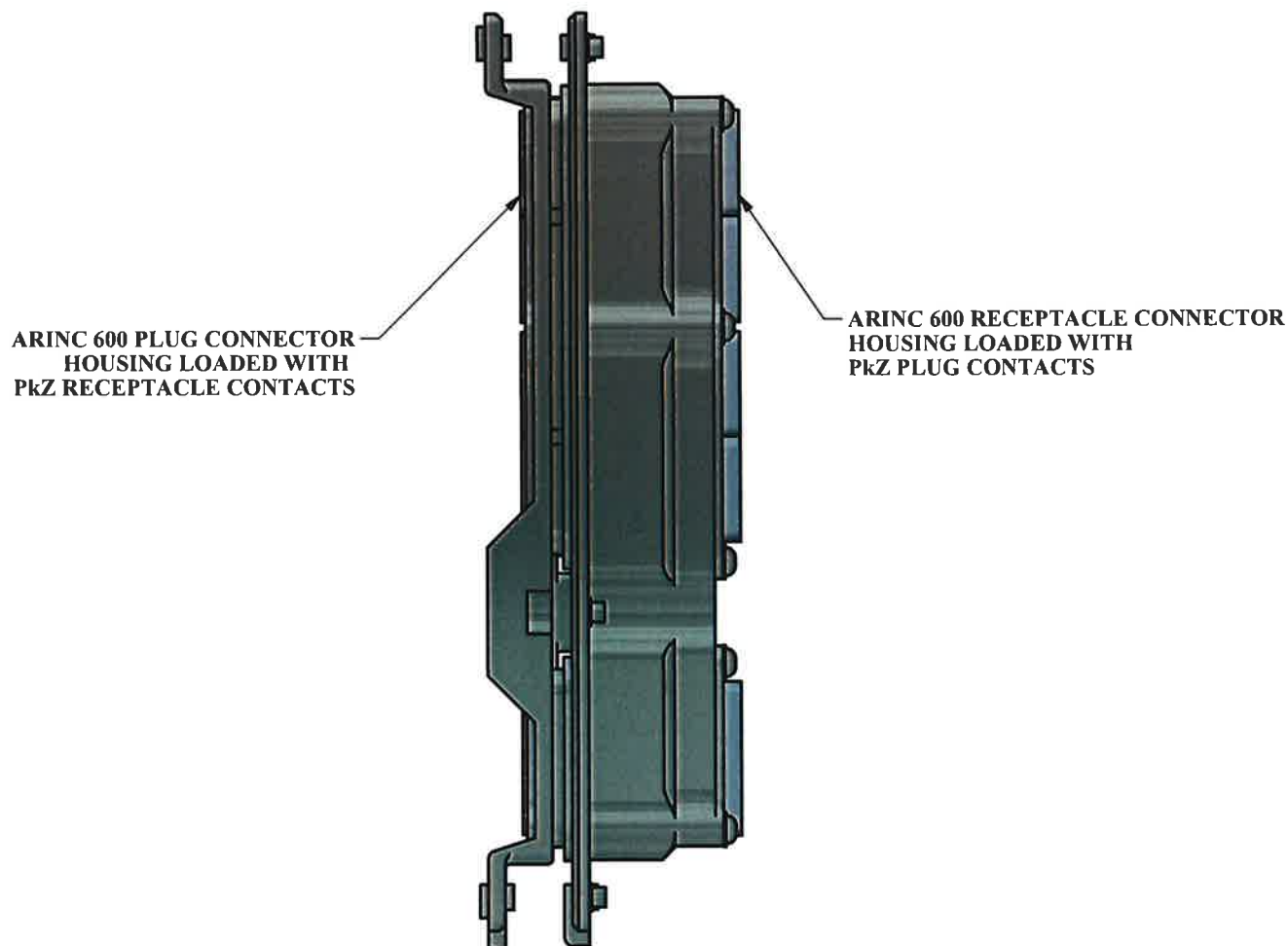
CONTACTS IN CONNECTOR HOUSINGS:



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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.