INTERFACE DESIGN STANDARD	
IDS-168	
SHEET 1 OF 3	DATE: 8/12/15
DRAWN: JEM	APPROVED: RMB

The PHOENIX Company of Chicago, Inc.
22 GREAT HILL RD., NAUGATUCK, CT 06770
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REV.	DESCRIPTION	DATE	APPR.
E	PER ECN 13488	09/1/2019	RMB
F	PER ECN 13509	04/07/2020	RMB
G	PER ECN 13787	06/18/2020	RMB
H	PER ECN 14379	05/08/2024	SJG
J	PER ECN 14215	11/26/2024	DW

Description: 168 Series, Size 12 PkZ® for ARINC 600 Connector

MATERIALS

BODIES

Plug: Brass Per ASTM B16
Receptacle: Brass Per ASTM B16

CONTACTS

Center Contact: Beryllium Copper Per ASTM B196
Outer Contact: Beryllium Copper Per ASTM B196

INSULATORS

Virgin Teflon (PTFE) Per ASTM D1710

PLATING

Gold Per MIL-DTL-45204 (Electro Deposited)
Copper Per SAE AMS 2418 (Electro Deposited)
Nickel Per QQ-N-290

FINISH (Ending Letter of Part Number)

A: .000050" Min. Gold Over Nickel

C: .000050" Min. Gold Over Copper

Other Metal Parts: Plated to Meet The Environmental Requirements

MATING CHARACTERISTICS

Bodies:	24 oz. (1.5 lbs.) Max. Insertion 2 oz. (0.125 lbs.) Min. Withdrawal
Contacts:	14 oz. (0.875 lbs.) Max. Insertion .5 oz. (0.031 lbs.) Min. Withdrawal
Axial Mating:	.110"
Housing Retention:	192 oz. (12 lbs.) Min.

ELECTRICAL

Frequency Range:	DC To 50 GHz
Voltage Rating Straight:	800 VRMS
Voltage Rating Angled:	600 VRMS
Insulation Resistance:	2000 Megohms Min.
Insertion Loss:	$.06\sqrt{f(GHz)}$ dB
Impedance:	50 Ohms
Contact Resistance:	Center Contact 6 Milliohms
Contact Resistance:	Outer Contact 4 Milliohms
VSWR:	Configuration Dependent
RF Leakage:	-90 dB Min. @ 2-3 GHz

ENVIRONMENTAL

Operating Temperature:	-55°C To +125°C
Insulation Resistance:	2000 Megohms Post Humidity
Vibration:	MIL-STD-202, Method 204, Test Condition D
Shock:	MIL-STD-202, Method 213, Test Condition I
Thermal Shock:	MIL-STD-202, Method 107, Test Condition B, Except High Temperature Shall Be +85°C
Durability:	500 Cycles
Moisture Resistance:	MIL-STD-202, Method 106
Salt Spray:	MIL-STD-1344, Method 1001, Condition B

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.

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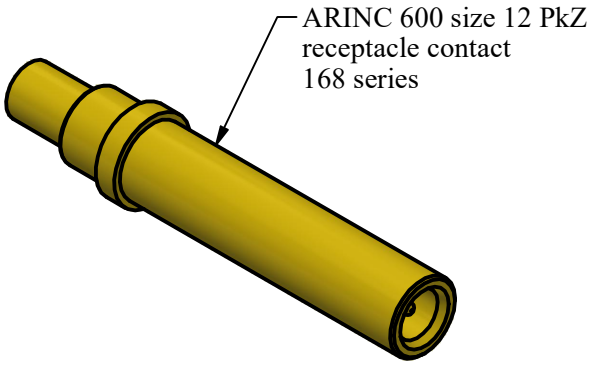
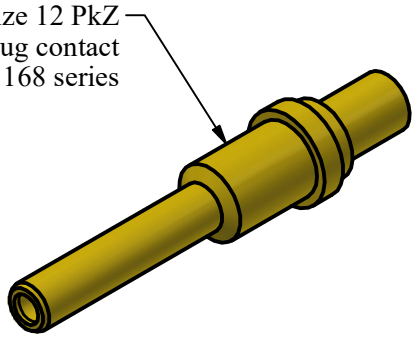
CONTACTS:

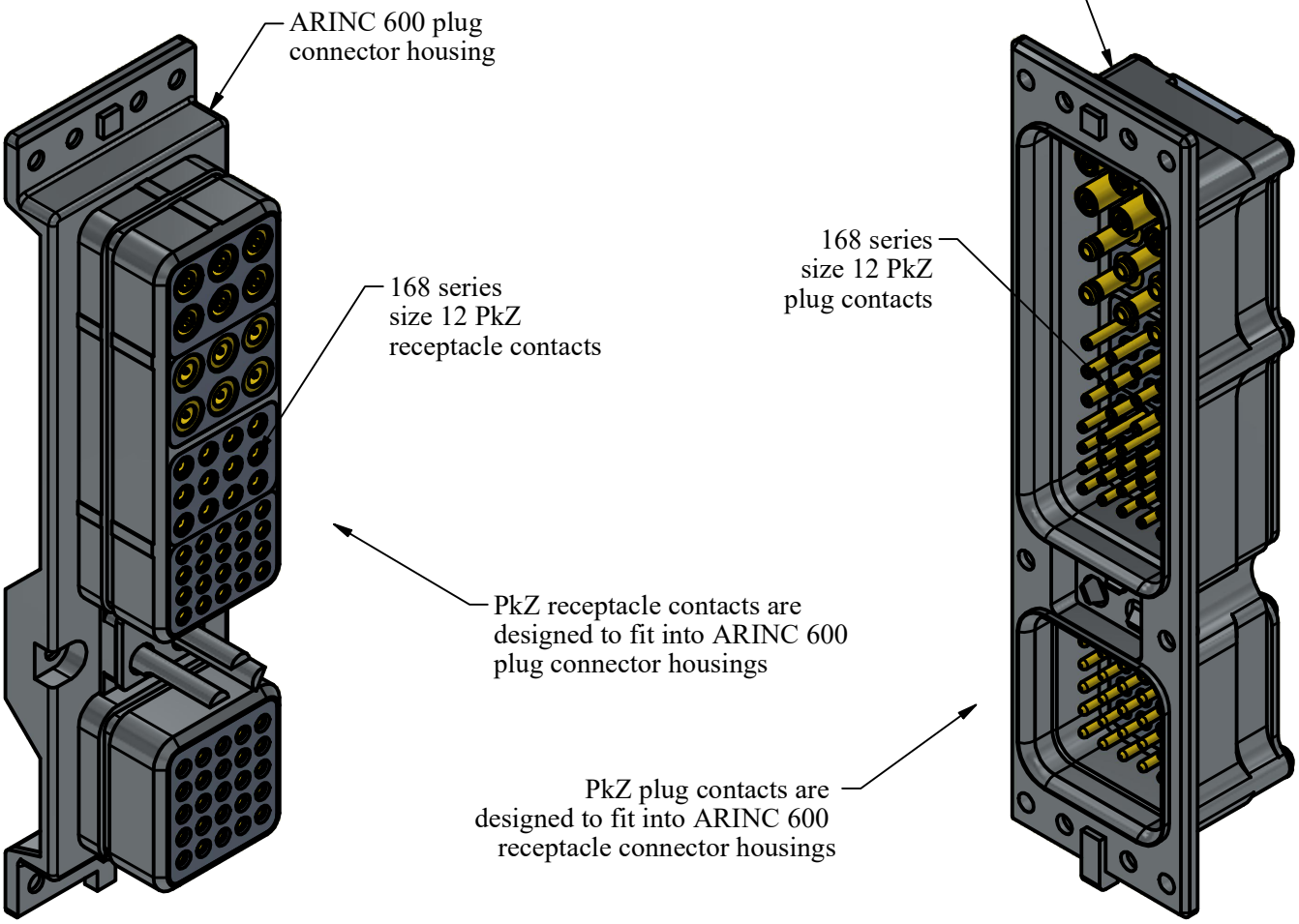




CONTACTS IN CONNECTOR HOUSINGS:

Insertion Tool: M81969/4-01 or M81969/14-04

Extraction Tool: M81969/28-02 or M81969/8-10 or M81969/14-04



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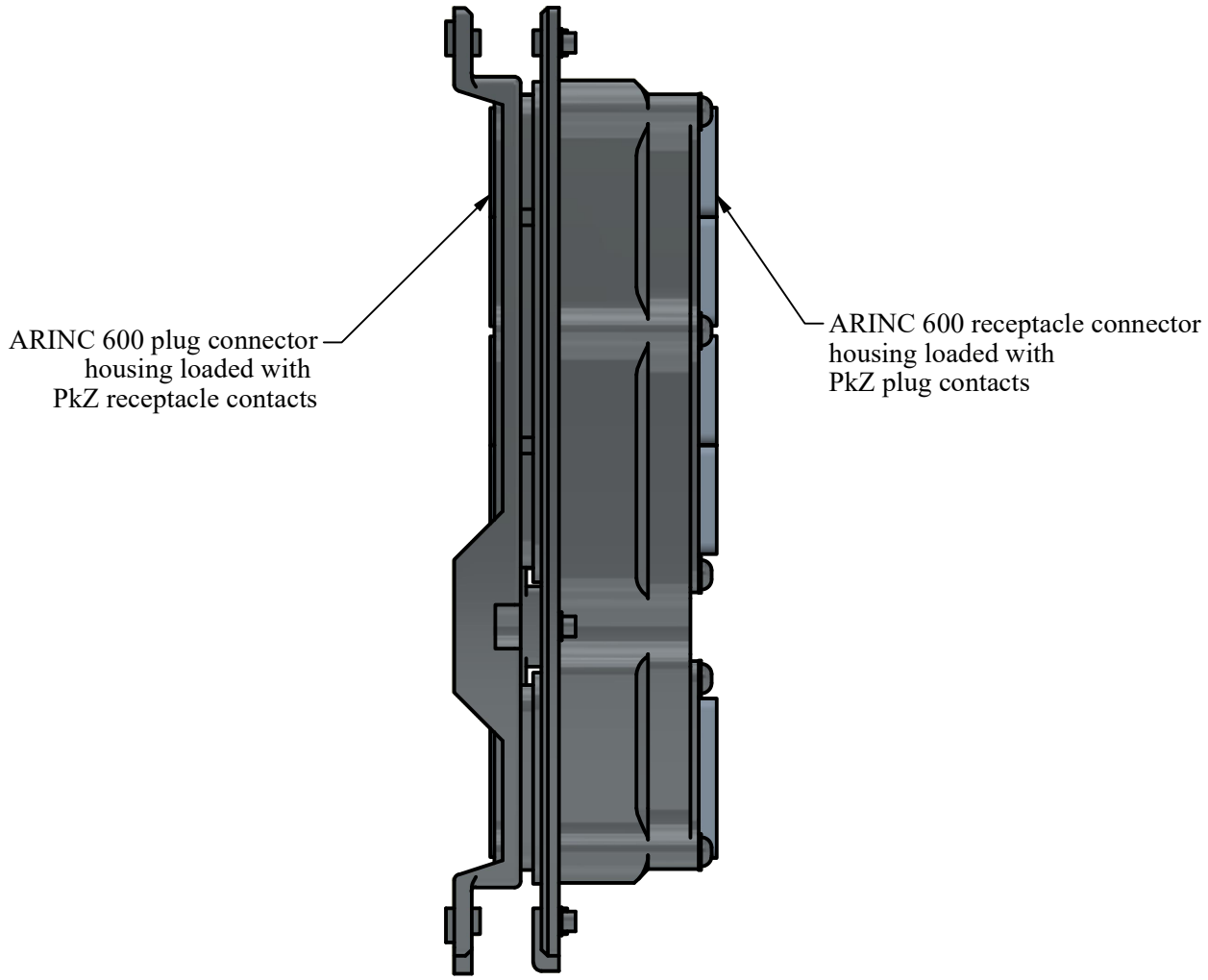
CONTACT MATING IN CONNECTOR HOUSINGS:

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.

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