



# Phoenix Non-Magnetic Connectors

*-Exceed industry requirements for RF coils in MRIs*

## Product Description



Designed to protect against image and magnetic field distortion in MRI equipment, Phoenix's Non-Magnetic Connectors provide the necessary immunity to ensure scans are not compromised.

Connectors are manufactured under strict controls; dedicated tooling and in special manufacturing/assembly environments. This strict adherence to quality control ensures all precautions are taken to avoid any contact with ferromagnetic materials during the manufacturing process. All products are 100% tested for magnetic permeability prior to shipping.

Can be used in any industrial application where high-purity, non-corrosive, lightweight metals with non-magnetic characteristics are paramount and vital.

## Features

- Reduction of passive intermodulation (PIM).
- Magnetic measurements checked at  $\leq 1.00010 \mu\text{r}$  relative permeability.
- Snap-on, push-on, or threaded couplings.
- Available in custom non-magnetic solutions including: contacts, connectors, and cable assemblies.
- Low frequency to high frequency bands available.

## Applications

- Medical equipment.
- Military communications.
- Aerospace satellites.
- Commercial.

## Connector Types

- MMCX.
- MCX.
- SMB/SMC.
- SMA.
- BNC, TNC, N, 7/16.
- D-Sub connectors with coax/power inserts.
- PkZ and PDM contacts.
- Additional series available on request.

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The Phoenix Company of Chicago and its affiliates have manufacturing facilities in the United States, Mexico, and China.

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## Materials

**Plug And Receptacle Bodies- Non-Magnetic Brass.**

**Outer Contacts- Beryllium Copper Per ASTM-B-196 For MCX And TNC/BNC Connector Types.**

**Insulators- Teflon (PTFE) Per ASTM-D-1710.**

**Male Contacts- Non-Magnetic Brass.**

**Male Contacts- Beryllium Copper Per ASTM-B-196 For SMA Connector Types.**

**Female Contacts- Beryllium Copper Per ASTM-B-196.**

**Retaining Rings- Beryllium Copper Per ASTM-B-196 For MMCX, SMB/SMC, SMA, And TNC Connector Types.**

**Ferrules and Caps- Non-Magnetic Brass.**

**Gaskets- Silicone Rubber Per ZZ-R-765 For SMA And TNC/BNC Connector Types.**

## Finishes (Add Letter "J" To End Of Part Number)

**Gold Per Mil-G-45204.**

**Copper Per Mil-C-14550.**

**Bodies: .000020 Min. Gold Over Copper.**

**Contacts: .000030 Min. Gold Over Copper.**

**Contacts: .000050 Min. Gold Over Copper For SMA Connector Types.**

**Other Metal Parts: Gold Plated To Meet The Environmental Requirements.**

## Electrical

	MAXIMUM FREQUENCY	VOLTAGE RATING	CENTER CONTACT RESISTANCE	INSERTION LOSS	DURABILITY
MMCX	6 GHz	170 RMS	5.0 Milliohms	0.20 dB max @ 1.00 GHz	500 Cycles
MCX	6 GHz	250 RMS	5.0 Milliohms	0.10 dB max @ 1.00 GHz	500 Cycles
SMB/SMC	4 GHz	335 RMS	6.0 Milliohms	0.30 dB max @ 1.50 GHz	500 Cycles
SMA	18.5 GHz	500 RMS	2.0 Milliohms	0.03 $\sqrt{F(\text{GHz})}$	100 Cycles
BNC/TNC	11 GHz	500 RMS	1.5 Milliohms	0.18 dB max @ 3.00 GHz	500 Cycles

All d-sub catalog connectors are available in non-magnetic styles, contact sales department for availability.

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