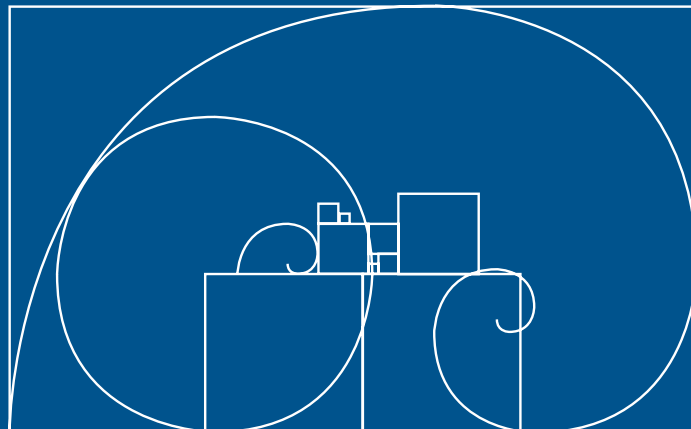


CYLINDRICAL

C48 Series/MIL-C-26500

Accessories & Application Tooling

Boeing: BACC45 / BACC63 Series



Cinch

FEATURES

- *Qualified to MIL-C-26500.*
- *Styles qualified to Boeing BACC45 Series.*
- *Styles qualified to Boeing BACC63 Series.*
- *Power Contact Sizes: 20, 16, and 12.*
- *Coax Contacts Available: Size 12 and 8.*
- *Contacts: Crimp - Front release.*
- *Optional Fixed Contacts: PC Termination.*
- *Coupling Styles: Bayonet and Threaded.*
- *Environmentally Sealed.*

MATERIALS

Shell: Aluminum, stainless-steel options available
Finish: Aluminum - Anodize, optional electroless nickel / cadmium over nickel
Rubber: Silicone / fluorosilicone
Dielectric: Glass-filled epoxy

ENVIRONMENTAL

Temperature Extremes: +200°C / 392°F to -55°C / -65°F
Ozone Resistance: 0.015% by volume
Temperature Life: Internal 238°C for 1,000 hours
Moisture Resistance: 1,000 megohms minimum / MIL-STD-202, Method 106
Thermal Shock: -55°C (-67°F) to 260°C (500°F)

ELECTRICAL

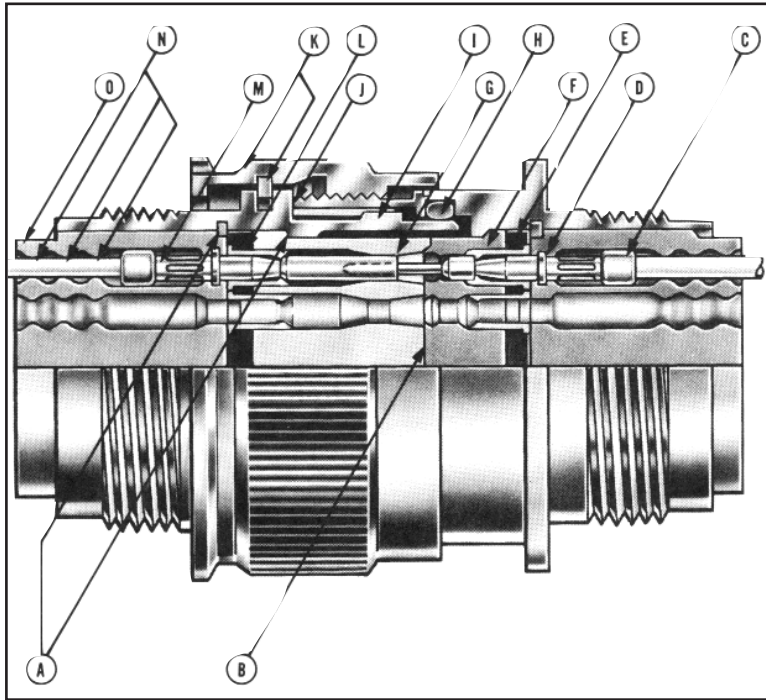
Dielectric Strength: 1,500 volts VAC RMS
Current Rating (Test): Size 20 7.5 Amps D.C.
 Size 16 13.0 Amps D.C.
 Size 12 23.0 Amps D.C.
Insulation Resistance: 5,000 megohms minimum

MECHANICAL

Contact Retention: Size 20 - 20 lb. minimum
 Size 16 - 25 lb. minimum
 Size 12 - 30 lb. minimum
Durability: Threaded - 200 mating cycles
 Bayonet - 500 mating cycles
Vibration: Std - 20 g's; 12 hours (Synasoidal)
 MMB / Self-Lock - 39.6 g's RMS, 48 hours (Random)
Shock: 50 g's

GENERAL DESCRIPTION

The C48 Series describes a family of connectors qualified to MIL-C-26500. While maintaining the MIL-C-26500 mating interface, this product has also been expanded to include qualifications to numerous Boeing specifications to satisfy general purpose requirements and unique product challenges for shielding, environmental sealing, fluid resistance, and vibration.



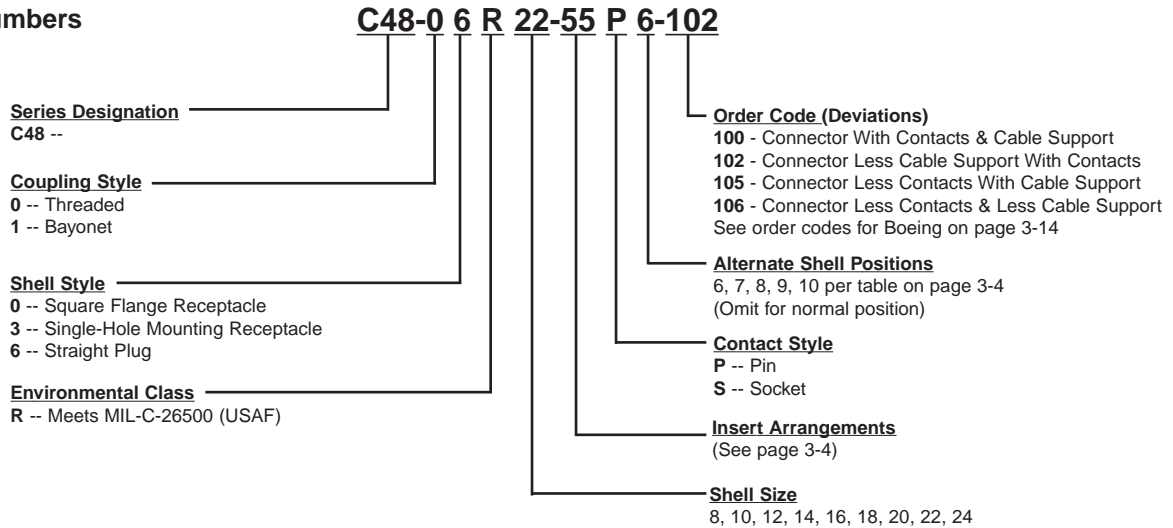
Design Features

- A. Positive Location Captivated Insert (Mechanical Interlock)
- B. Insert Face Seal
- C. Pin Contact, MIL-C-39029/31
- D. Contact Pressuring Seal
- E. Anti-Deflection Disc
- F. Resilient Pin Insert
- G. Insert Rim Seal
- H. Dynamic "O" Ring Shell Seal
- I. Five-Key Shell Polarization
- J. Metal-to-Metal Shoulder
- K. Bayonet or Threaded Coupling, Permanent Captivation
- L. Contact Retention Clip
- M. Socket Contact, MIL-C-39029/32
- N. Wire Sealing Risers
- O. Grommet

The expanded Cinch C48 product family offers numerous product options qualified to Boeing high-performance requirements and product solutions developed for alternate termination styles/low-profile packaging.

| <u>Product Description</u> | <u>Cinch Series</u> |
|--|--------------------------------------|
| • Threaded non-decoupling design | CN0966 |
| • High-vibration bayonet plug with metal-to-metal bottoming shells | C0909 CN1020 |
| • Connectors for shell grounding / shielding effectiveness, non-rotating accessory teeth, and advanced fluid-resistance elastometers | CN0966 CN0967 CN1020 CN1021 |
| • Firewall Conformance | CN0966 CN0967 |
| • Low-profile connectors - crimp - removable contacts | CN0915 |
| • Low-profile connectors - fixed contacts / alternate termination styles | CN0942 CN0944 |

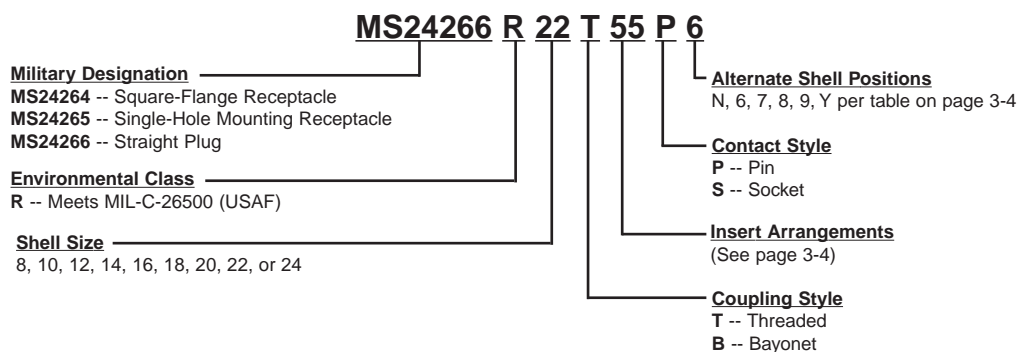
Cinch Numbers



Military Standard Part Numbers

You can use MS* as well as C48 Series part numbers when ordering C48 Series connectors.

*MS part numbers are supplied less cable support. If cable support is desired, it must be ordered separately.



Part numbers for the contacts and assembly tools are listed on page 3-12.



C48 Series

Inserts Available (Showing Front Face of Socket Inserts)



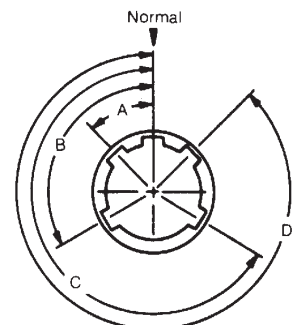
| | | |
|---|-----------------------------|-----------------------------|
| <p>Shell Size-8</p> | <p>Shell Size-10</p> | <p>Shell Size-12</p> |
| <p>Shell Size-14</p> | <p>Shell Size-16</p> | |
| <p>Shell Size-18</p> | | |
| <p>Shell Size-20</p> | | |
| <p>Shell Size-22</p> | | |
| <p>Shell Size-24</p> | | |
| <p>Shell Size-28</p> <p>CN096X CN102X Series Only</p> | | |

Alternate Shell Positions (Front face of receptacle shown)

NOTE: Alternate positions 6 through Y incorporate special shell polarizing key and keyways. All inserts remain in the normal position.

| Positions | For Connector Size 8 and 10 | | | | For Connector Size 12, 14, 16, 18, 20, 22, 24, and 28 | | | |
|------------|-----------------------------|------|------|------|---|------|------|------|
| | A | B | C | D | A | B | C | D |
| Normal (N) | 105° | 140° | 215° | 265° | 105° | 140° | 215° | 265° |
| 6 | 102° | 132° | 248° | 320° | 18° | 149° | 192° | 259° |
| 7 | 80° | 118° | 230° | 312° | 92° | 152° | 222° | 342° |
| 8 | 35° | 140° | 205° | 275° | 84° | 152° | 204° | 334° |
| 9 | 64° | 155° | 234° | 304° | 24° | 135° | 199° | 240° |
| 10 or Y* | 25° | 115° | 220° | 270° | 98° | 152° | 268° | 338° |

*Not available in Size 8 Connector. See individual part number systems.



† = #1 shielded contact is interchangeable with #12 power contact.

(Y) = Available in Boeing Insert Style.

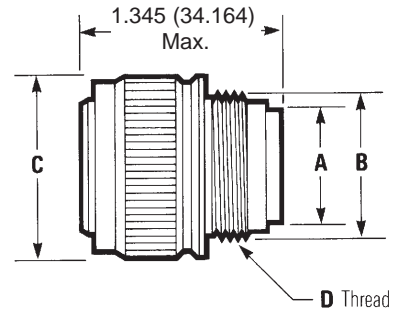
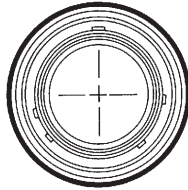
3

C48 Series Plug Connectors



Threaded Coupling

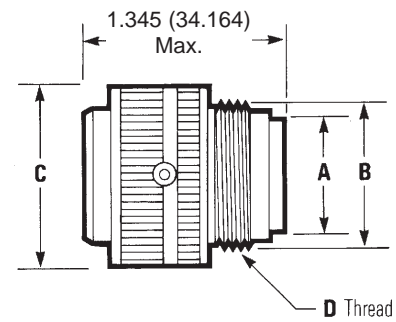
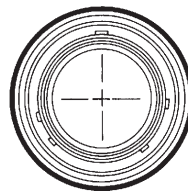
C48-06RXX-XXXX
MS24266RXXTXXXX
BACC45FS¹



3

Bayonet Coupling

C48-16RXX-XXXX
MS24266RXXBXXXX
BACC45FT¹



Dimensions

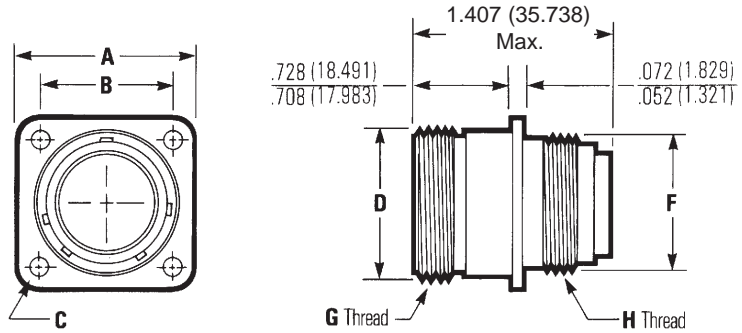
| Shell Size | A. Dia. | | B. Dia. | | C. Max. | | D. Thread UNEF-2A |
|------------|---------|--------|---------|--------|---------|--------|----------------------|
| | in | mm | in | mm | in | mm | |
| 8 | .328 | 8.331 | .437 | 11.100 | .776 | 19.712 | .437-28 |
| 10 | .420 | 10.668 | .562 | 14.275 | .906 | 23.013 | .562-24 |
| 12 | .580 | 14.732 | .750 | 19.050 | 1.078 | 27.381 | .750-20 |
| 14 | .664 | 16.866 | .812 | 20.625 | 1.141 | 28.982 | .812-20 |
| 16 | .769 | 19.533 | .938 | 23.825 | 1.266 | 32.157 | .937-20 |
| 18 | .902 | 22.911 | 1.062 | 26.975 | 1.375 | 34.925 | 1.062-18 |
| 20 | 1.033 | 26.238 | 1.182 | 30.023 | 1.510 | 38.354 | 1.187-18 |
| 22 | 1.152 | 29.261 | 1.312 | 33.325 | 1.625 | 41.275 | 1.312-18 |
| 24 | 1.282 | 32.253 | 1.432 | 36.373 | 1.760 | 44.704 | 1.437-18 |

¹Boeing Specifications, see page 3-14.

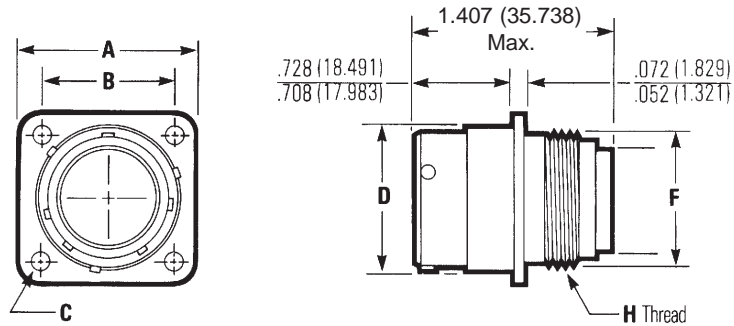
C48 Series Receptacle Connectors



**Square Flange,
Threaded Coupling**
C48-OORXX-XXXX
MS24264RXXTXXX
BACC45FM¹



**Square Flange,
Bayonet Coupling**
C48-1ORXX-XXXX
MS24264RXXBXXX
BACC45FN¹



Dimensions

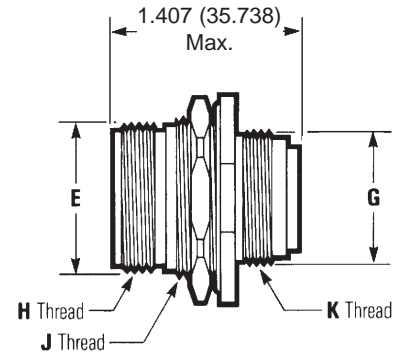
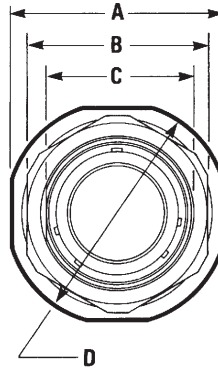
| Shell Size | A | | B | | C | | D | | F | | G | H | J | | K | |
|---------------|--------------------|--------------------|--------------------|--------------------|-----------------|-----------------|------------|------------|------------|------------|----------|----------|------------|------------|------------|------------|
| | ±.005 (.127) in | ±.005 (.127) mm | ±.005 (.127) in | ±.005 (.127) mm | Max. Dia. in | Max. Dia. mm | Max. in | Max. mm | Max. in | Max. mm | Thread | Thread | Min. in | Min. mm | Min. in | Min. mm |
| 8 | .812 | 20.625 | .594 | 15.088 | .125 | 3.175 | .561 | 14.250 | .437 | 11.100 | .562-24 | .437-28 | .620 | 15.748 | .447 | 11.354 |
| 10 | .937 | 23.800 | .719 | 18.263 | .125 | 3.175 | .696 | 17.679 | .562 | 14.275 | .687-24 | .562-24 | .748 | 18.999 | .572 | 14.529 |
| 12 | 1.031 | 26.188 | .812 | 20.625 | .125 | 3.175 | .875 | 22.225 | .750 | 19.050 | .875-20 | .750-20 | .913 | 23.190 | .760 | 19.304 |
| 14 | 1.125 | 28.575 | .906 | 23.013 | .125 | 3.175 | .935 | 23.749 | .812 | 20.625 | .937-20 | .812-20 | .980 | 24.892 | .822 | 20.879 |
| 16 | 1.250 | 31.750 | .969 | 24.613 | .125 | 3.175 | 1.062 | 26.975 | .938 | 23.825 | 1.062-18 | .937-20 | 1.107 | 28.119 | .948 | 24.079 |
| 18 | 1.343 | 34.112 | 1.062 | 26.975 | .125 | 3.175 | 1.187 | 30.150 | 1.062 | 26.975 | 1.187-18 | 1.062-18 | 1.209 | 30.709 | 1.072 | 27.229 |
| 20 | 1.437 | 36.500 | 1.156 | 29.363 | .125 | 3.175 | 1.312 | 33.325 | 1.182 | 30.023 | 1.312-18 | 1.187-18 | 1.337 | 33.960 | 1.192 | 30.277 |
| 22 | 1.562 | 39.675 | 1.250 | 31.750 | .125 | 3.175 | 1.437 | 36.500 | 1.312 | 33.325 | 1.437-18 | 1.312-18 | 1.452 | 36.881 | 1.322 | 33.579 |
| 24 | 1.703 | 43.256 | 1.375 | 34.925 | .154 | 3.912 | 1.562 | 39.675 | 1.432 | 36.373 | 1.562-18 | 1.437-18 | 1.577 | 40.056 | 1.442 | 36.627 |

¹ = Boeing specifications, see page 3-14.

C48 Series Receptacle Connectors

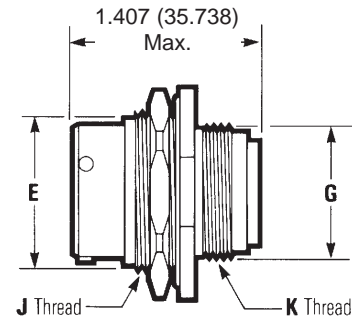
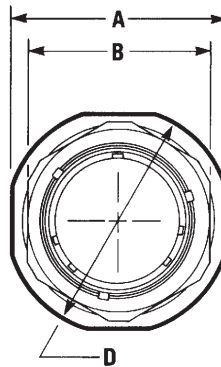


**Single-Hole Mount,
Threaded Coupling**
C48-03RXX-XXXX
MS24265RXXTXXX



3

**Single-Hole Mount,
Bayonet Coupling**
C48-13RXX-XXXX
MS24265RXXBXXX



Dimensions

| Shell Size | A | | B | | C | | D | | E | | G | | H | J | K |
|---------------|--------------------|--------|------------|-----------|--------------------|--------|------------|--------|------------|-----------------|------------|--------|----------|-----------|----------|
| | ±.005 (.127) in | mm | Max. in | Hex mm | ±.003 (.076) in | mm | Max. in | mm | Max. in | Max. Dia. mm | Max. in | mm | Thread | Thread | Thread |
| 8 | .979 | 24.867 | .828 | 21.031 | .593 | 15.062 | 1.068 | 27.127 | .561 | 14.249 | .437 | 11.100 | .562-24 | .625-20* | .437-28 |
| 10 | 1.104 | 28.042 | .953 | 24.206 | .718 | 18.237 | 1.192 | 30.277 | .696 | 17.678 | .562 | 14.275 | .687-24 | .750-20 | .562-24 |
| 12 | 1.291 | 32.791 | 1.140 | 28.956 | .905 | 22.987 | 1.380 | 35.052 | .875 | 22.225 | .750 | 19.050 | .875-20 | .937-20 | .750-20 |
| 14 | 1.391 | 35.331 | 1.250 | 31.750 | .968 | 24.587 | 1.505 | 38.227 | .935 | 23.749 | .812 | 20.625 | .937-20 | 1.000-20 | .812-20 |
| 16 | 1.516 | 38.506 | 1.329 | 33.757 | 1.093 | 27.762 | 1.630 | 41.402 | 1.062 | 26.975 | .938 | 23.825 | 1.062-18 | 1.125-20* | .937-20 |
| 18 | 1.641 | 41.681 | 1.455 | 36.957 | 1.217 | 30.912 | 1.740 | 44.196 | 1.187 | 30.150 | 1.062 | 26.975 | 1.187-18 | 1.250-20* | 1.062-18 |
| 20 | 1.766 | 44.856 | 1.642 | 41.707 | 1.342 | 34.087 | 1.860 | 47.244 | 1.312 | 33.325 | 1.182 | 30.023 | 1.312-18 | 1.375-18 | 1.187-18 |
| 22 | 1.954 | 49.632 | 1.705 | 43.307 | 1.467 | 37.262 | 2.040 | 51.816 | 1.437 | 36.500 | 1.312 | 33.325 | 1.437-18 | 1.500-20* | 1.312-18 |
| 24 | 2.079 | 52.807 | 1.892 | 48.057 | 1.592 | 40.437 | 2.160 | 54.864 | 1.562 | 39.675 | 1.432 | 36.373 | 1.562-18 | 1.625-18 | 1.437-18 |

* Thread: UN-2A

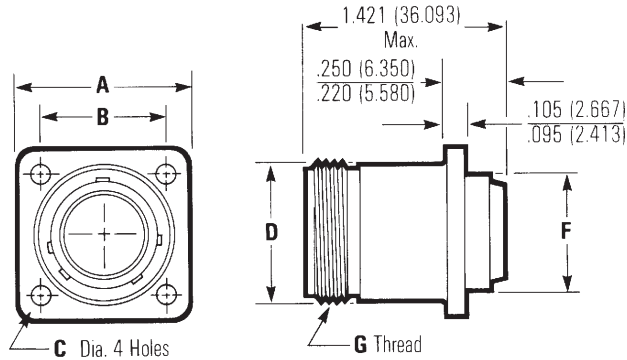
NOTES:

Contact factory for information about Boeing specifications.
For mounting hole dimensions and jam nut torques, see page 3-20.

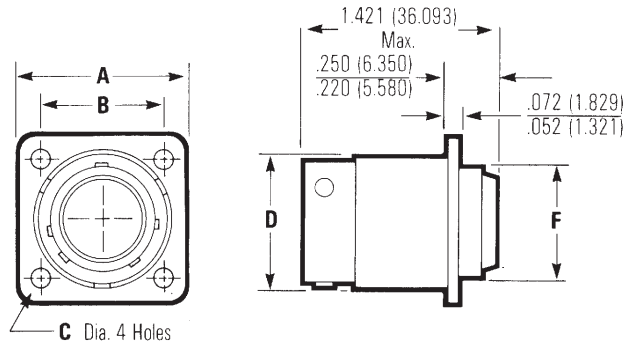
C48/CN0915 Series Limited Wiring Space Receptacle Connectors Crimp Removal Contacts



Square-Flange,
Threaded Coupling
CN0915B-XXXXXXX-XXX



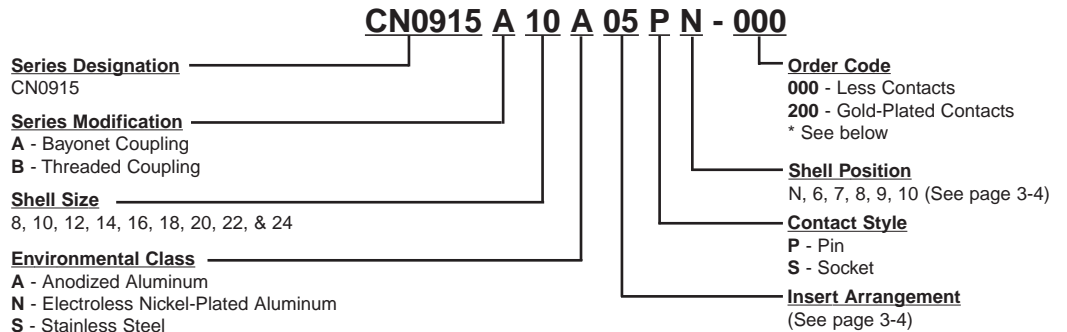
Square-Flange,
Bayonet Coupling
CN0915A-XXXXXXX-XXX



Dimensions

| Shell Size | A | | B | | C | | D | | F | | G |
|------------|---------------|--------|--------------|--------|--------------|-------|-------|--------|---------------|--------|----------|
| | ±.0045 (.114) | | ±.005 (.127) | | ±.004 (.102) | | Max. | | ±.0015 (.038) | | Thread |
| | in | mm | in | mm | in | mm | in | mm | in | mm | UNEF-2A |
| 8 | .812 | 20.625 | .594 | 15.088 | .121 | 3.073 | .561 | 14.250 | .497 | 12.624 | .562-24 |
| 10 | .937 | 23.800 | .719 | 18.263 | .121 | 3.073 | .696 | 17.679 | .503 | 15.799 | .687-24 |
| 12 | 1.031 | 26.187 | .812 | 20.625 | .121 | 3.073 | .875 | 22.225 | .745 | 18.923 | .875-20 |
| 14 | 1.125 | 28.575 | .906 | 23.012 | .121 | 3.073 | .935 | 23.749 | .871 | 22.123 | .937-20 |
| 16 | 1.150 | 29.210 | .969 | 24.613 | .121 | 3.073 | 1.062 | 26.975 | .995 | 25.273 | 1.062-18 |
| 18 | 1.343 | 35.382 | 1.062 | 26.975 | .121 | 3.073 | 1.187 | 30.150 | 1.058 | 26.873 | 1.187-18 |
| 20 | 1.437 | 36.500 | 1.156 | 29.362 | .121 | 3.073 | 1.312 | 33.325 | 1.184 | 30.074 | 1.312-18 |
| 22 | 1.562 | 39.675 | 1.250 | 31.750 | .121 | 3.073 | 1.437 | 36.500 | 1.307 | 33.198 | 1.437-18 |
| 24 | 1.703 | 43.256 | 1.375 | 34.925 | .154 | 3.912 | 1.562 | 39.675 | 1.432 | 36.373 | 1.562-18 |

Ordering Information¹



NOTES:

- ¹ For other modifications, classes, etc., contact factory.
- For mounting hole dimensions, see page 3-20.
- Uses CRIM-LOK contacts. See page 3-12.
- * Former order code - 100 designated rhodium plated contacts

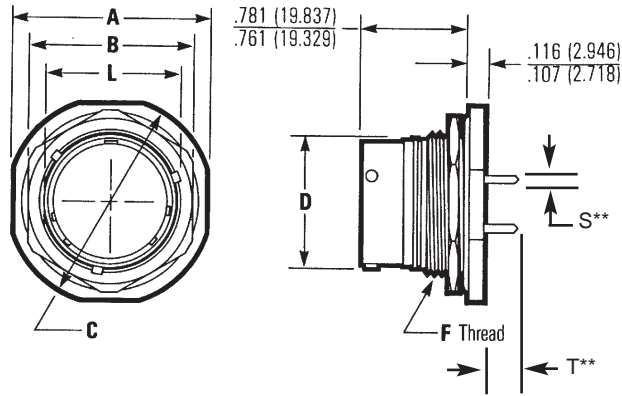
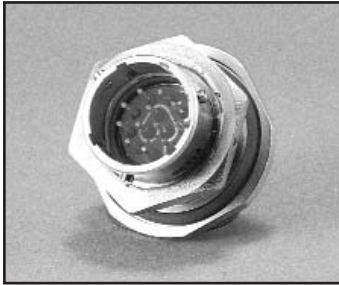
CN0942/CN0944 Series (C48 Family)

Short Receptacle Connectors

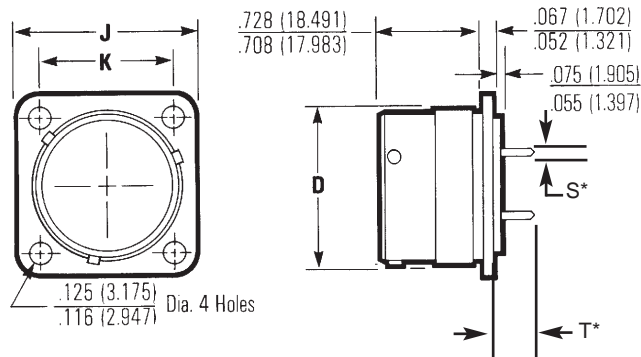
Non-Removable Contacts



Single-Hole Mount,
Bayonet Coupling
CN0942D XXXXXXXXX
CN0944D XXXXXXXXX



Square Flange,
Bayonet Coupling
CN0942B XXXXXXXXX
CN0944B XXXXXXXXX



Dimensions

| Shell Size | A Max. | | B Max. | | C Max. | | D Max. | | F Thread | J ±.005 (.127) | | K ±.005 (.127) | | L ±.003 (.176) | |
|------------|--------|--------|--------|--------|--------|--------|--------|--------|-----------|----------------|--------|----------------|--------|----------------|--------|
| | in | mm | in | mm | in | mm | in | mm | | in | mm | in | mm | in | mm |
| 8 | .984 | 24.994 | .828 | 21.031 | 1.068 | 27.127 | .561 | 14.250 | .625-20* | .812 | 20.625 | .594 | 15.088 | .593 | 15.062 |
| 10 | 1.109 | 28.169 | .953 | 24.206 | 1.192 | 30.277 | .696 | 17.679 | .750-20 | .937 | 23.800 | .719 | 18.263 | .718 | 18.237 |
| 12 | 1.296 | 32.919 | 1.140 | 28.956 | 1.380 | 35.052 | .875 | 22.225 | .937-20 | 1.031 | 26.188 | .812 | 20.625 | .905 | 22.987 |
| 14 | 1.396 | 35.459 | 1.250 | 31.750 | 1.505 | 38.227 | .935 | 23.749 | 1.000-20 | 1.125 | 28.575 | .906 | 23.013 | .968 | 24.587 |
| 16 | 1.521 | 38.634 | 1.329 | 33.757 | 1.630 | 41.402 | 1.062 | 26.975 | 1.125-20* | 1.250 | 31.750 | .969 | 24.613 | 1.093 | 27.762 |
| 18 | 1.646 | 41.809 | 1.455 | 36.957 | 1.740 | 44.196 | 1.187 | 30.150 | 1.250-20* | 1.343 | 34.112 | 1.062 | 26.975 | 1.217 | 30.912 |
| 20 | 1.771 | 44.984 | 1.642 | 41.707 | 1.860 | 47.244 | 1.312 | 33.325 | 1.375-18 | 1.437 | 36.500 | 1.156 | 29.363 | 1.342 | 34.087 |
| 22 | 1.959 | 49.759 | 1.705 | 43.307 | 2.040 | 51.816 | 1.437 | 36.500 | 1.500-20* | 1.562 | 39.675 | 1.250 | 31.750 | 1.467 | 37.262 |
| 24 | 2.084 | 52.934 | 1.892 | 48.057 | 2.160 | 54.864 | 1.562 | 39.675 | 1.625-18 | 1.703 | 43.256 | 1.375 | 34.925 | 1.592 | 40.437 |

* Th'd: UN-2A

** See "S" and "T" dimensions on page 3-10.

CN0942/CN0944 Series (C48 Family)

Short Receptacle Connectors

Non-Removable Contacts

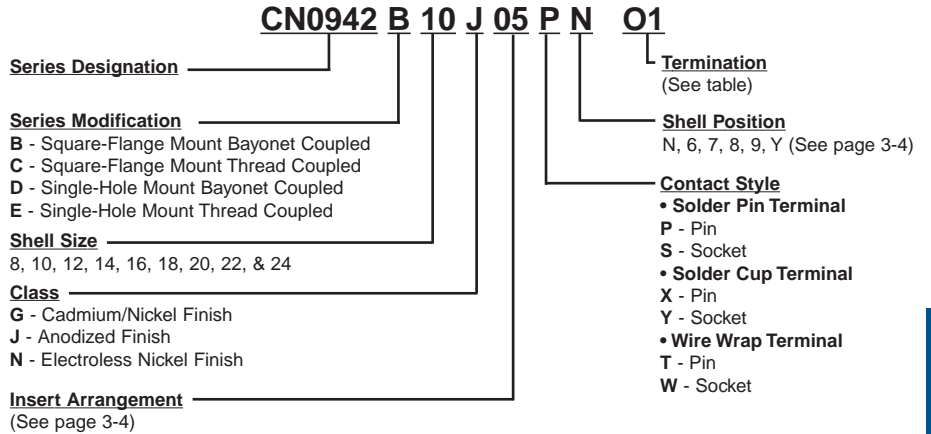


CN0942 Series: Fluorosilicone Inserts

Ordering Information¹

| Termination Designator | Contact Style | Termination T Min. | Termination S ± .002 |
|------------------------|---------------|--------------------|----------------------|
| 01* | P & S | .250 | .025 |
| 02* | X & Y | .230 | N/A |
| 03** | P & S | .144 | .025 |
| 04** | X & Y | .124 | N/A |
| 06* | T & W | .900 | .025 |

* Applies to CN0942B/CN0942C.
 ** Applies to CN0942D/CN0942E.



NOTES:

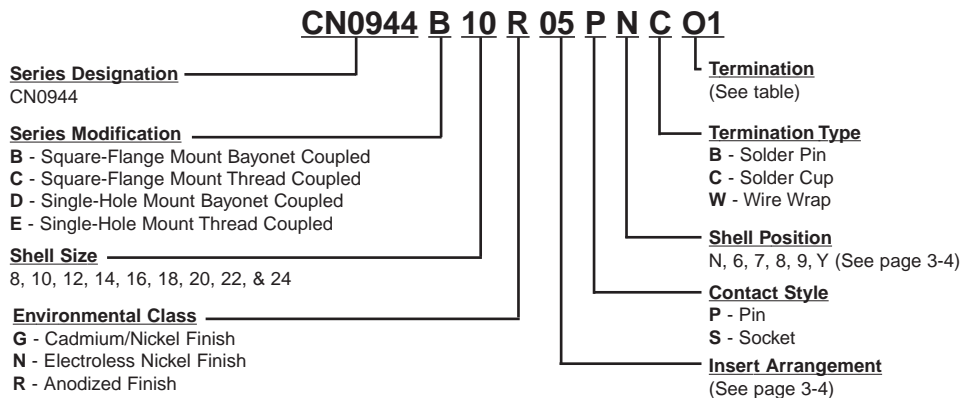
¹ For other modifications, class, etc., consult factory.
 For mounting hole dimensions, see page 3-20.

CN0944 Series: Neoprene Inserts

| Termination Designator | Term Type | Termination T Min. | Termination S ± .002 |
|------------------------|-----------|--------------------|----------------------|
| 01* | B | .250 | .025 |
| 02* | C | .230 | N/A |
| 03** | B | .144 | .025 |
| 04** | C | .124 | N/A |
| 06* | W | .900 | .025 |

* Applies to CN0944B/CN0944C.
 ** Applies to CN0944D/CN0944E.

Ordering Information¹



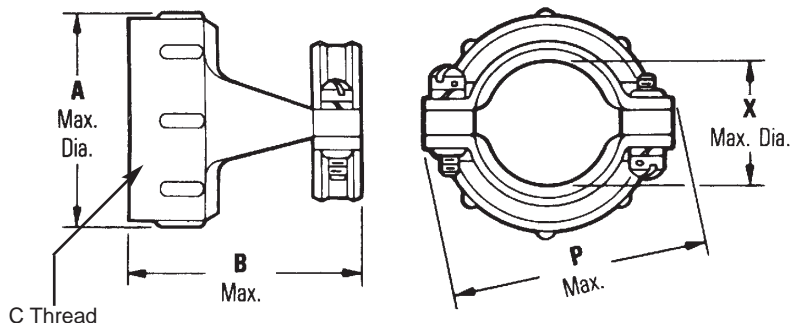
NOTES:

¹ For other modifications, class, etc., consult factory.
 For mounting hole dimensions, see page 3-20.



Cable Support Assembly

Cable clamps support cable or wire at the plug or receptacle and prevent twisting and pulling.



Dimensions

| Size | Cinch Part No. | MS | A | | B | | X | | C Th'd UNEF-2B | P | |
|------|----------------|------------|-----------------|--------|-------------------------|--------|---------------------------------|--------|-------------------|------------|--------|
| | | | Max. Dia. in | mm | $\pm .015$ (.381) in | mm | I.D. $\pm .005$ (.127) in | mm | | Max. in | mm |
| 8 | C48-2840 | MS27291-13 | .606 | 15.393 | .935 | 23.749 | .186 | 4.725 | .437-28 | .789 | 20.042 |
| 10 | C48-2341 | MS27291-1 | .731 | 18.568 | .935 | 23.749 | .270 | 6.858 | .562-24 | .914 | 23.216 |
| 12 | C48-2342 | MS27291-2 | .919 | 23.343 | .935 | 23.749 | .400 | 10.160 | .750-20 | 1.026 | 26.061 |
| 14 | C48-2343 | MS27291-3 | .981 | 24.918 | 1.170 | 29.718 | .460 | 11.684 | .812-20 | 1.090 | 27.686 |
| 16 | C48-2344 | MS27291-4 | 1.106 | 28.093 | 1.170 | 29.718 | .610 | 15.494 | .937-20 | 1.250 | 31.750 |
| 18 | C48-2345 | MS27291-5 | 1.231 | 31.268 | 1.170 | 29.718 | .690 | 17.526 | 1.062-18 | 1.358 | 34.493 |
| 20 | C48-2643 | MS27291-14 | 1.356 | 34.443 | 1.170 | 29.718 | .816 | 20.728 | 1.187-18 | 1.481 | 37.619 |
| 22 | C48-2346 | MS27291-6 | 1.481 | 37.618 | 1.170 | 29.718 | .940 | 23.876 | 1.312-18 | 1.604 | 40.742 |
| 24 | C48-2644 | MS27291-15 | 1.606 | 40.793 | 1.170 | 29.178 | 1.066 | 27.078 | 1.437-18 | 1.729 | 43.919 |

Contacts

When you order Cinch C48 Series connectors with contacts, the contact package contains enough contacts to complete the insert arrangement plus two spares. The package also includes sealing plugs for 15% of the contacts in the inserts, minimum of three. To provide proper sealing, insert unwired contacts and sealing plugs in all unused holes. (Use a #12 contact for a #1 shielded hole.) To order contacts and sealing plugs separately use the part numbers in the table below.

| Contact Size | Max. Wire Size AWG | Current Rating Amps | Cinch Part No. | | MS Part No. | |
|----------------------|--------------------|---------------------|----------------|-------------|---------------|---------------|
| | | | Pin | Socket | Pin | Socket |
| No. 20 | 24 | 3.0 | | | | |
| | 22 | 5.0 | CN0900-253 | CN0900-255 | M39029/31-241 | M39029/32-260 |
| | 20 | 7.5 | | | | |
| No. 16 | 18 | 16 | | | | |
| | 16 | 22 | CN0900-252 | CN0900-254 | M39029/31-229 | M39029/32-248 |
| | 14 | 32 | | | | |
| No. 12 | 12 | 41 | CN0900-256 | CN0900-257 | M32029/31-235 | M39029/32-254 |
| | ** | 3 | C48-1226-02 | C48-1227-02 | -- | -- |
| No. 1* (Shielded) | **** | 1 | C48-1226-54 | C48-1227-54 | -- | -- |
| | ***** | 1 | C48-1226-55 | C48-1227-55 | -- | -- |
| No. 2 (Shielded) | *** | 7.5 | C48-2187-02 | C48-2188-02 | -- | -- |

* Fits into No. 12 power contact cavity.

** Accommodates cables RG174/U, RG179U, RG179A/U, RG187/U, RG188/U, RG161/U, as well as shielded wire.

Can also accommodate Cable MIL-C-27500-22 KING (Extruded) or 22 AWG per MIL-C-7078 type II.

*** Accommodates Cable MIL-C-27500 KING; 20 KING; 18 KING (Extruded) or 22, 20, 18 AWG, per MIL-C-7078 type II.

**** For use with RG195/U and RG180/U, RG180A/U, and RG1808/U.

***** Accommodates Cables RG178/U, RG178A/U, RG1788/U, and RG196/U.

Grommet Sealing Plugs

| Color Code | Size | Cinch Part No. | MS Part No. |
|------------|------------------|----------------|-------------|
| Yellow | 12 & #1 Shielded | C48-2221-12 | MS27488-12 |
| Blue | 16 | C48-2221-16 | MS27488-16 |
| Red | 20 | C48-2221-20 | MS27488-20 |
| White | #2 Shielded | C48-1458-01 | -- |

Tools

| Contact Size | Crimp Tool | Insertion Tool | | Removal Tool | |
|--------------------------|-------------|----------------|--------------|----------------|--------------|
| | | Superseded No. | Current No. | Superseded No. | Current No. |
| No. 20 | M22520/1-01 | MS24256A20 | M81969/17-03 | MS24256R20 | M81969/19-06 |
| No. 16 | M22520/1-01 | MS24256A16 | M81969/17-04 | MS24256R16 | M81969/19-01 |
| No. 12 | M22520/1-01 | MS24256A12 | M81969/17-05 | MS24256R12 | M81969/19-02 |
| Adjustable Turret | | | | | |
| No. 20 | M22520/1-02 | | | | |
| No. 16 | M22520/1-02 | | | | |
| No. 12 | M22520/1-02 | | | | |
| No. 1 (Shielded) | | MS24256A12 | M81969/17-05 | MS24256R12 | M81969/19-09 |
| No. 2 (Shielded) | | -- | 294-128 | -- | 294-127 |

- *Cinch has qualified a series of connectors to Boeing Specifications in bayonet and threaded styles that meet high-performance requirements for:*

- + *Vibration*
- + *Shielding Effectiveness*
- + *Fluid Resistance*

BACC63 Series

| | <u>BN</u> | <u>BP</u> | <u>BV</u> | <u>CB</u> | <u>CC</u> |
|--|-----------|-----------|-----------|-----------|-----------|
| ■ <i>Vibration-resistant Bayonet Plug</i> | ● | | | ● | |
| ■ <i>Vibration-resistant Self-Locking threaded Plug</i> | | ● | | | |
| ■ <i>Optional Ground Spring on Plug</i> | | ● | | ● | |
| ■ <i>Shielded Connectors</i> | | ● | ● | ● | ● |
| ■ <i>Advanced fluid-resistant elastometers</i> | | ● | ● | ● | ● |
| ■ <i>Non-rotating accessory teeth conforming to MS3155</i> | | ● | ● | ● | ● |
| ■ <i>Optional Stainless Steel Shells</i> | | ● | ● | | |

BOEING TO Cinch CROSS-REFERENCE DATA

Cinch Part Numbers and Order Codes
For Applicable Purchase Order Exceptions, see Note 6.

| Boeing Part Numbers | No Exceptions | Less Contacts | Less Contacts & Cable Support | Less Cable Support |
|-----------------------|--------------------|---------------|-------------------------------|--------------------|
| BACC45FM**-*P6 | C48-00R**Y**P-402 | -406 | -406 | -402 |
| See Note 2 A P6 | See Note 3 P6-410 | -415 | -416 | -412 |
| B P7 | P7-420 | -425 | -426 | -422 |
| See Note 5 C P8 | P8-430 | -435 | -436 | -432 |
| D P9 | P9-440 | -445 | -446 | -442 |
| E P10 | P10-450 | -455 | -456 | -452 |
| BACC45FN**-*P6 | C48-10R**Y**P6-402 | -406 | -406 | -402 |
| BACC45FS**-*P6 | C48-06R**Y**P6-402 | -406 | -406 | -402 |
| BACC45FT**-*P6 | C48-16R**Y**P6-402 | -406 | -402 | -406 |
| (BACC63 Types) | | | | |
| BACC63BN**-*P6 | C0909A**-*P6Y402 | Y406 | Y406 | Y402 |
| See Note 5 B | See Note 3 Y420 | Y425 | Y426 | Y422 |
| C | Y430 | Y435 | Y436 | Y432 |
| BACC63BP**A**P6 | CN0966A**A**P6Y140 | Y040 | N/A | N/A |
| B | A**S**P6Y140 | Y040 | N/A | N/A |
| See Note 7 C | B**G**P6Y140 | Y040 | N/A | N/A |
| D | B**S**P6Y140 | Y040 | N/A | N/A |
| BACC63BV**A**P6 | CN0967C**A**P6Y140 | Y040 | N/A | N/A |
| B | S**P6Y140 | Y040 | N/A | N/A |
| F | G**P6Y140 | Y040 | N/A | N/A |
| BACC63CB**-*P6 | CN1020A**G**P6Y140 | Y040 | N/A | N/A |
| BACC63CC**-*P6 | CN1021A**G**P6Y140 | Y040 | N/A | N/A |

See Note 4

NOTES:

- All parts are marked with Boeing part number.
 - Part number system also applies to BACC45FN, BACC45FS, and BACC45FT.
 - May be "Y" or "-" (dash) designator
 "Y" = Insert arrangements with size 20 contacts (see page 3-4) use small wire grommet seals, Boeing insert discs, and hard socket inserts.
 "-" = Insert arrangements that contain no size 20 contact locations. Use standard "MS" grommets, discs, and inserts.
 - "P6" represents contact style and shell polarities defined in individual part numbering systems.
 - Specifies optional cable support:
 "-" = No cable support
 "A" = BACC10GH Straight Single-Leg Clamp
 "B" = MS27559 Right-Angle Saddle Clamp
 "C" = MS27291 Straight Saddle Clamp
 "D" = BACC10JC Right-Angle Single Leg Clamp
 "E" = BACC10JS Straight Single-Leg Composite Clamp
 - The Boeing specifications permit omission of contacts and/or cable support through purchase order exceptions.
 - Specifies material and shell designs. See Boeing specification.
- ** These part number fields represent shell size and insert arrangement as defined in individual part number systems.

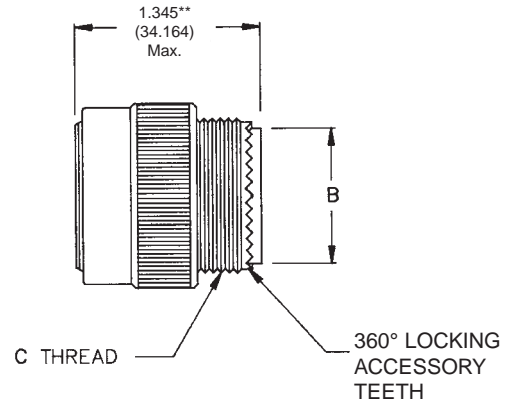
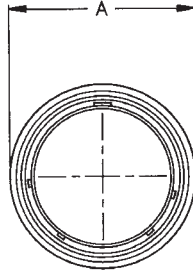
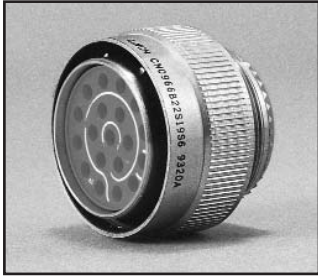
CN0966 Series (C48 Family) Self-Locking Plug Connectors



Threaded Coupling

CN0966XXXXXXXXX

BACC63BP¹



3

Dimensions

| Shell Size | A ± .005 (.127) | | B Max. Dia. | | C Thread UNEF-2A |
|------------|--------------------|--------|----------------|--------|------------------------|
| | in | mm | in | mm | |
| 8 | .835 | 21.209 | .306 | 7.773 | .500-20 |
| 10 | .972 | 23.698 | .371 | 9.423 | .625-24 |
| 12 | 1.165 | 27.254 | .547 | 13.894 | .750-20 |
| 14 | 1.230 | 30.124 | .613 | 15.570 | .875-20 |
| 16 | 1.355 | 33.198 | .758 | 19.253 | 1.000-20 |
| 18 | 1.470 | 34.798 | .865 | 21.971 | 1.0625-18 |
| 20 | 1.607 | 38.100 | .986 | 25.044 | 1.1875-18 |
| 22 | 1.735 | 41.148 | 1.106 | 28.092 | 1.3125-18 |
| 24 | 1.858 | 44.069 | 1.235 | 31.369 | 1.4375-18 |
| 28 | 2.113 | 52.070 | 1.485 | 37.719 | 1.750-18* |

Ordering Information²

CN0966 B 10 S 05 P N - 000

Series Designation

CN0966

Series Modification

A - Ungrounded

B - Grounded (Conductive)

Shell Size

8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28

Class

A - Anodized Aluminum

G - Cadmium/Nickel-Plated Aluminum

K - Stainless Steel Flame Resistant

N - Electroless Nickel-Plated Aluminum

S - Stainless Steel

Order Code (Deviations)¹

000 - Less Contacts

100 - * See below

200 - With Gold-Plated Contacts

Alternate Shell Positions

N, 6, 7, 8, 9, 10

Per table on page 3-4

Contact Style

P - Pin Insert

S - Socket Insert

Insert Arrangements

(See page 3-4)

Notes:

¹ For Boeing Specification, see page 3-14.

² For modifications, classes, etc. not listed, consult factory.

* Th'd: UNS-2A

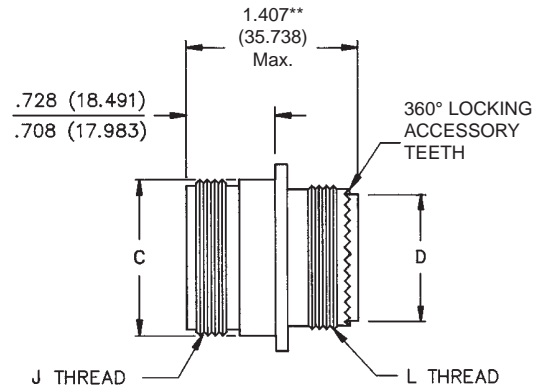
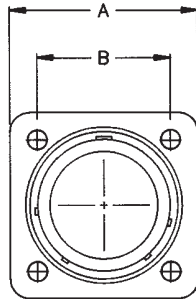
** Size 28 = 1.395 (35.434)

* Former order code - 100 designated rhodium plated contacts

CN0967 (C48 Series) Vibration-Resistant Receptacle



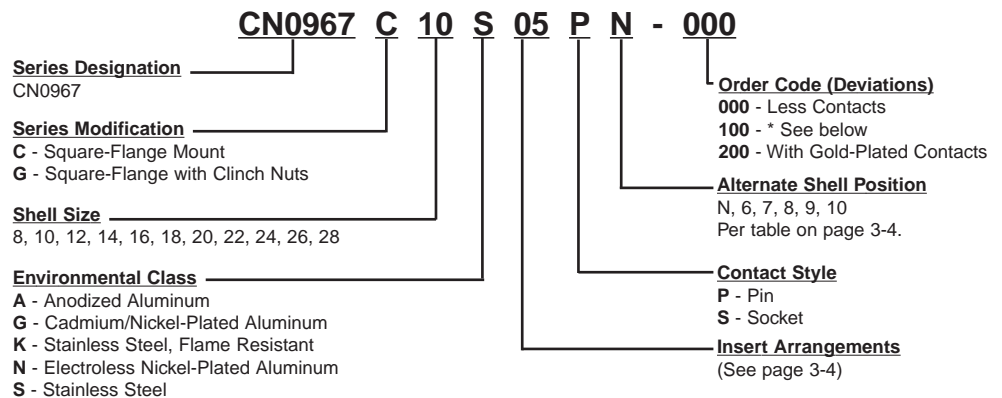
Threaded Coupling
CN0967XXXXXXXXX
BACC63BV¹



Dimensions

| Shell Size | A | | B | | C | | D | | J | L |
|------------|----------------------|----------------------|---------------------|---------------------|------------|------------|-----------------|-----------------|-------------------|-------------------|
| | +0.0045 (.114) in | +0.0045 (.114) mm | +0.005 (.127) in | +0.005 (.127) mm | Max. in | Max. mm | Max. Dia. in | Max. Dia. mm | Thread UNEF-2A | Thread UNEF-2A |
| 8 | .812 | 20.625 | .594 | 15.088 | .561 | 14.250 | .328 | 8.331 | .5265-24 | .5000-20 |
| 10 | .937 | 23.800 | .719 | 18.263 | .696 | 14.250 | .371 | 9.423 | .6875-24 | .6250-24 |
| 12 | 1.031 | 26.187 | .812 | 20.625 | .875 | 17.679 | .547 | 13.894 | .8750-20 | .7500-20 |
| 14 | 1.125 | 28.575 | .906 | 23.012 | .935 | 22.225 | .609 | 15.469 | .9375-20 | .8750-20 |
| 16 | 1.250 | 31.750 | .969 | 24.613 | 1.062 | 23.749 | .758 | 19.253 | 1.0625-18 | 1.0000-20 |
| 18 | 1.343 | 34.112 | 1.062 | 26.975 | 1.187 | 30.150 | .865 | 21.971 | 1.1875-18 | 1.0625-18 |
| 20 | 1.437 | 36.500 | 1.156 | 29.362 | 1.312 | 33.325 | .986 | 25.044 | 1.3125-18 | 1.1875-18 |
| 22 | 1.562 | 39.675 | 1.250 | 31.750 | 1.437 | 36.500 | 1.106 | 28.092 | 1.4375-18 | 1.3125-18 |
| 24 | 1.703 | 43.256 | 1.375 | 34.925 | 1.562 | 39.675 | 1.235 | 31.369 | 1.5625-18 | 1.4375-18 |
| 28 | 2.000 | 50.800 | 1.562 | 39.675 | 1.810 | 45.976 | 1.485 | 37.719 | 1.8125-16 | 1.750-18* |

Ordering Information²



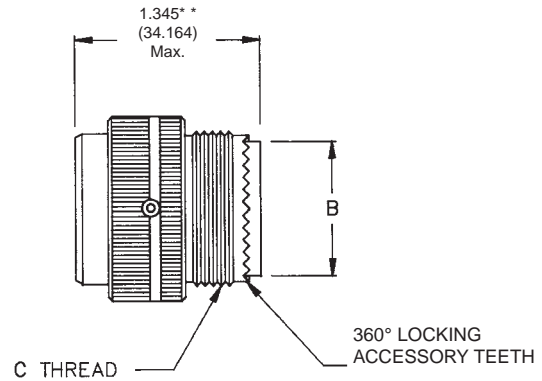
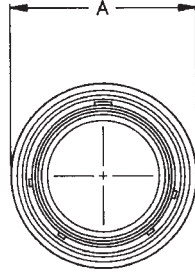
NOTES:

- ¹ For Boeing Specification, see page 3-14.
 - ² For modifications, classes, etc., not listed, consult factory.
- For mounting hole dimensions, see page 3-20.
 - * Th'd: UNS-2A
 - **Size 28 = 1.457 (37.008)
 - * Former order code - 100 designated rhodium plated contacts

CN1020 Series (C48 Family) Vibration-Proof Plug Connector



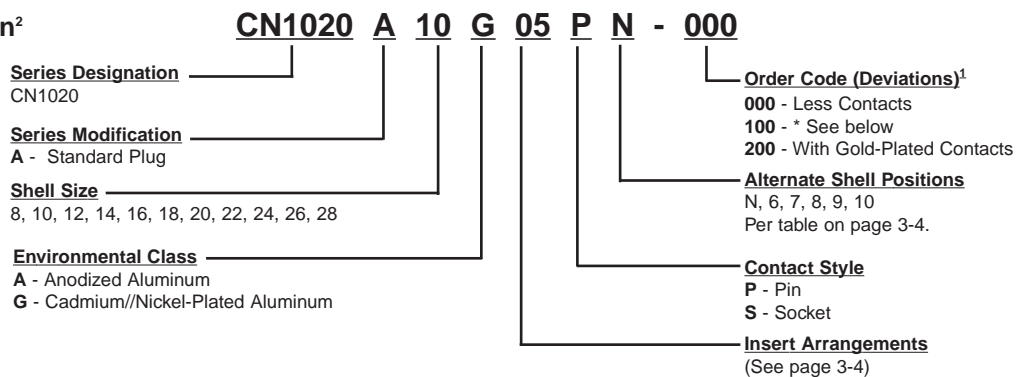
Bayonet Coupling
CN1020-XXXXXXXX
BACC63CB¹



Dimensions

| Shell Size | A | | B | | C |
|------------|---------------|--------|-----------|--------|-----------|
| | + .005 (.127) | | Max. Dia. | | Thread |
| | in | mm | in | mm | UNEF-2A |
| 8 | .765 | 19.447 | .306 | 7.773 | .500-20 |
| 10 | .967 | 24.561 | .371 | 9.423 | .625-24 |
| 12 | 1.078 | 27.381 | .547 | 13.894 | .750-20 |
| 14 | 1.187 | 30.149 | .613 | 15.570 | .875-20 |
| 16 | 1.309 | 33.248 | .758 | 19.253 | 1.000-20 |
| 18 | 1.375 | 34.925 | .865 | 21.971 | 1.0625-18 |
| 20 | 1.505 | 38.227 | .986 | 25.044 | 1.1875-18 |
| 22 | 1.625 | 41.275 | 1.106 | 28.092 | 1.3125-18 |
| 24 | 1.755 | 44.577 | 1.235 | 31.369 | 1.4375-18 |
| 28 | 2.161 | 54.889 | 1.485 | 37.719 | 1.750-18* |

Ordering Information²



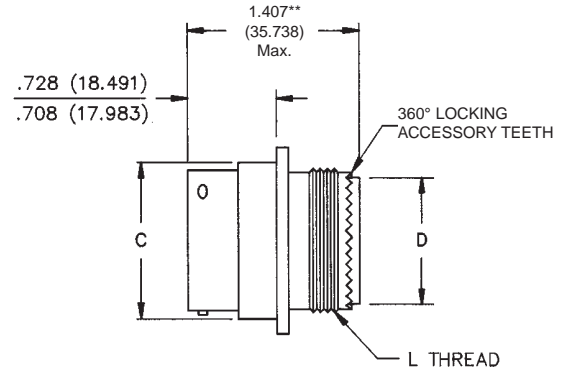
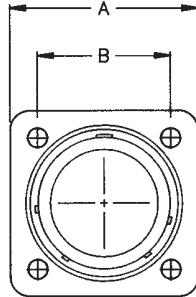
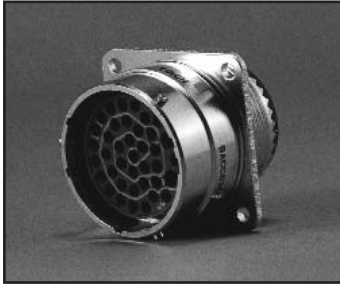
Notes:

- ¹ For Boeing Specification, see page 3-14.
- ² For modification, classes, etc., not listed, consult factory.
- * Th'd: UNS-2A
- ** Size 28 = 1.395 (35.434)
- * Former order code - 100 designated rhodium plated contacts

CN1021 Series (C48 Family) Vibration-Resistant Receptacle



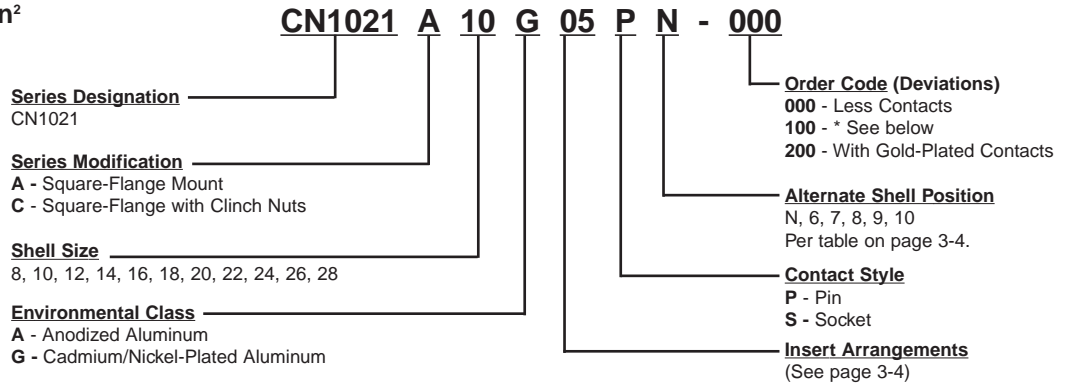
Bayonet Coupling
CN1021XXXXXXXXX
BACC63CC¹



Dimensions

| Shell Size | A +.0045 (.114) | | B +.005 (.127) | | C Max. | | D Max. Dia. | | L Thread UNEF-2A |
|------------|--------------------|--------|-------------------|--------|-----------|--------|----------------|--------|------------------------|
| | in | mm | in | mm | in | mm | in | mm | |
| 8 | .812 | 20.625 | .594 | 15.088 | .561 | 14.250 | .328 | 8.331 | .500-20 |
| 10 | .937 | 23.800 | .719 | 18.263 | .696 | 14.250 | .371 | 9.423 | .625-24 |
| 12 | 1.031 | 26.187 | .812 | 20.625 | .875 | 17.679 | .547 | 13.894 | .750-20 |
| 14 | 1.125 | 28.575 | .906 | 23.012 | .935 | 22.225 | .609 | 15.469 | .875-20 |
| 16 | 1.250 | 31.750 | .969 | 24.613 | 1.062 | 23.749 | .758 | 19.253 | 1.000-20 |
| 18 | 1.343 | 34.112 | 1.062 | 26.975 | 1.187 | 30.150 | .865 | 21.971 | 1.0625-18 |
| 20 | 1.437 | 36.500 | 1.156 | 29.362 | 1.312 | 33.325 | .986 | 25.044 | 1.1875-18 |
| 22 | 1.562 | 39.675 | 1.250 | 31.750 | 1.437 | 36.500 | 1.106 | 28.092 | 1.3125-18 |
| 24 | 1.703 | 43.256 | 1.375 | 34.925 | 1.562 | 39.675 | 1.235 | 31.369 | 1.4375-18 |
| 28 | 2.000 | 50.800 | 1.562 | 39.675 | 1.810 | 45.976 | 1.485 | 37.719 | 1.750-18* |

Ordering Information²



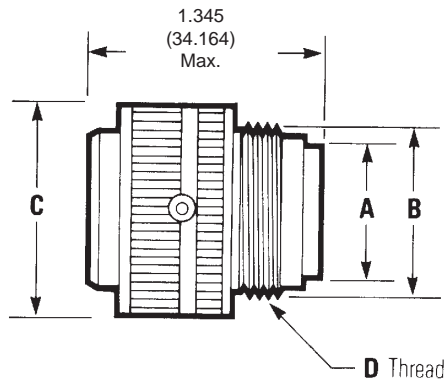
Notes:

- ¹ For Boeing Specification, see page 3-14.
- ² For modifications, classes, etc. not listed, consult factory.
- For mounting hole dimensions, see page 3-20.
- * Th'd: UNS-2A
- ** Size 28 = 1.457 (37.008)
- * Former order code - 100 designated rhodium plated contacts

C0909A MMB Series (C48 Family) Vibration-Proof Plug Connector



Bayonet Coupling
C0909AXXXXXXX
BACC63BN¹

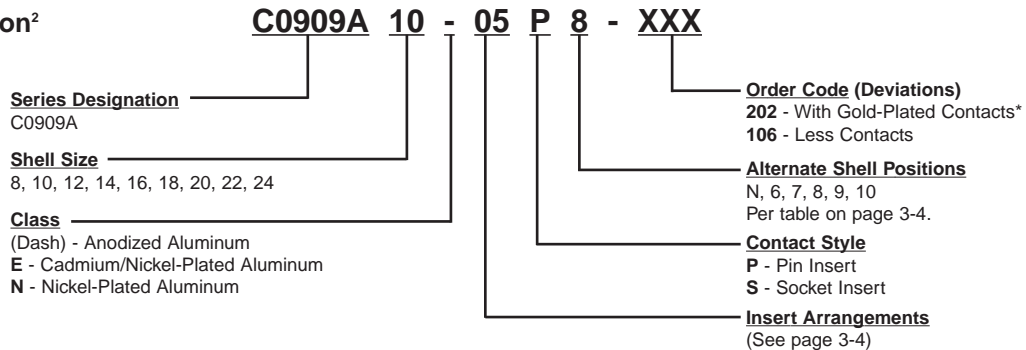


3

Dimensions

| Shell Size | A Dia. | | B Dia. | | C Max. | | D Thread UNEF-2A |
|------------|--------|--------|--------|--------|--------|--------|------------------|
| | in | mm | in | mm | in | mm | |
| 8 | .328 | 8.331 | .437 | 11.100 | .766 | 19.456 | .437-28 |
| 10 | .420 | 10.668 | .562 | 14.275 | .906 | 23.012 | .562-24 |
| 12 | .580 | 14.732 | .750 | 19.050 | 1.078 | 27.381 | .750-20 |
| 14 | .664 | 16.866 | .812 | 20.625 | 1.141 | 28.981 | .812-20 |
| 16 | .769 | 19.533 | .938 | 23.825 | 1.266 | 32.156 | .937-20 |
| 18 | .902 | 22.911 | 1.062 | 26.975 | 1.375 | 34.925 | 1.062-18 |
| 20 | 1.033 | 26.238 | 1.182 | 30.023 | 1.510 | 38.354 | 1.187-18 |
| 22 | 1.152 | 29.261 | 1.312 | 33.325 | 1.625 | 41.275 | 1.312-18 |
| 24 | 1.282 | 32.253 | 1.432 | 36.373 | 1.760 | 44.704 | 1.437-18 |

Ordering Information²



Notes:

¹ For Boeing Specification, see page 3-14.

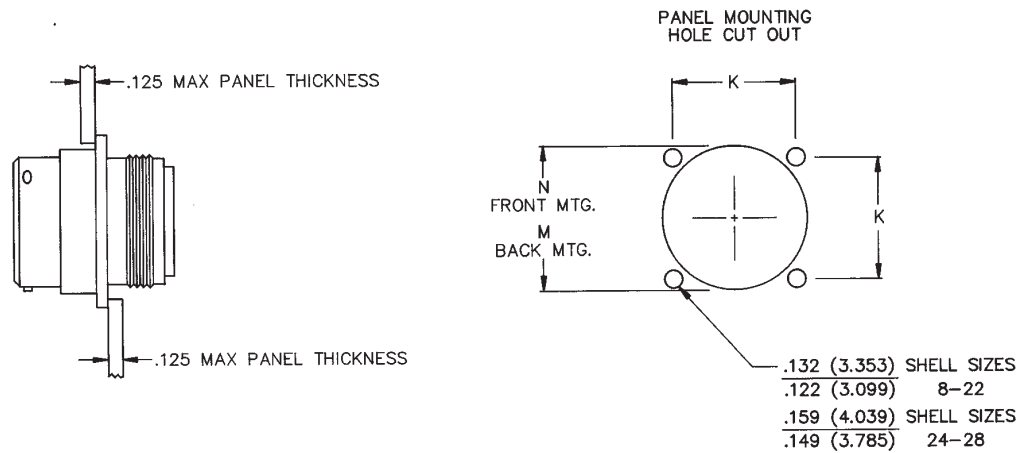
² For deviations, classes, etc. not listed, consult factory.

* Former order code - 102 designated rhodium plated contacts

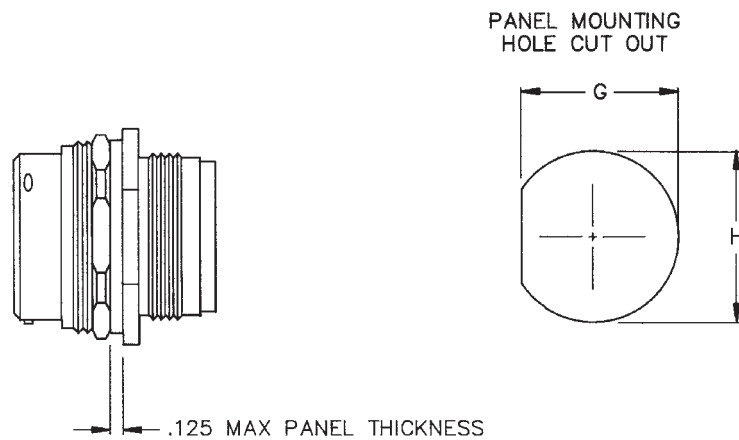
C48 Series & C48 Family Mounting Panel Data



Square-Flange Mount



Single-Hole Mount (Jam-Nut Mount)



Dimensions

| Shell Size | M Min. | | N Min. | | G ±.005 (.127) | | H ±.005 (.127) | | K ±.005 (.127) | |
|------------|--------|--------|--------|--------|----------------|--------|----------------|--------|----------------|--------|
| | in | mm | in | mm | in | mm | in | mm | in | mm |
| 8 | .620 | 15.748 | .447 | 11.354 | .605 | 15.638 | .635 | 16.129 | .594 | 15.088 |
| 10 | .748 | 18.999 | .572 | 14.529 | .730 | 18.542 | .760 | 19.304 | .719 | 18.263 |
| 12 | .913 | 23.190 | .760 | 19.304 | .917 | 23.292 | .947 | 24.054 | .812 | 20.625 |
| 14 | .980 | 24.892 | .822 | 20.879 | .980 | 24.892 | 1.010 | 25.654 | .906 | 23.013 |
| 16 | 1.107 | 28.119 | .948 | 24.079 | 1.105 | 28.067 | 1.135 | 28.829 | .969 | 24.613 |
| 18 | 1.209 | 30.709 | 1.072 | 27.229 | 1.225 | 31.115 | 1.260 | 32.004 | 1.062 | 26.975 |
| 20 | 1.337 | 33.906 | 1.192 | 30.277 | 1.350 | 34.290 | 1.385 | 35.179 | 1.156 | 29.363 |
| 22 | 1.452 | 36.881 | 1.322 | 33.579 | 1.475 | 37.465 | 1.510 | 38.354 | 1.250 | 31.750 |
| 24 | 1.577 | 40.056 | 1.442 | 36.627 | 1.600 | 40.640 | 1.635 | 41.529 | 1.375 | 34.925 |
| 28 | 1.827 | 46.406 | 1.760 | 44.704 | 1.856 | 47.143 | 1.885 | 47.879 | 1.562 | 39.675 |

Recommended Minimum Torque for Jam Nut

| Shell Size | 8 | 10 | 12 | 14 | 16 | 18 | 20 | 22 | 24 |
|-------------------|----|----|----|------|----|----|-----|-------|-----|
| Torque (Inch/lb.) | 28 | 36 | 56 | 64.5 | 69 | 81 | 102 | 122.5 | 144 |

Mouser Electronics

Authorized Distributor

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Cinch Connectivity Solutions:

[C48-2221-12](#) [C48-2221-16](#) [C48-2221-20](#) [C48-2342](#) [C48-2344](#) [C48-2345](#) [C48-2643](#) [C48-2644](#) [C48-2840](#)
[BACC63BP24H57PN](#) [BACC63BP24H57PNH](#) [BACC63BP24H61P6](#) [BACC63BP24H61P6H](#) [BACC63BP24H61P7](#)
[BACC63BP24H61P7H](#) [BACC63BP24H61P8](#) [BACC63BP24H61P8H](#) [BACC63BP24H61PN](#) [BACC63BP24H61PNH](#)
[BACC63BP24H61S6](#) [BACC63BP24H61S6H](#) [BACC63BP24H61S7](#) [BACC63BP24H61S7H](#) [BACC63BP24H61S8](#)
[BACC63BP24H61S8H](#) [BACC63BP24H61SN](#) [BACC63BP24H61SNH](#) [BACC63BP28C42P6](#) [BACC63BP28C42P6H](#)
[BACC63BP28C42P7](#) [BACC63BP28C42P7H](#) [BACC63BP28C42P8](#) [BACC63BP28C42P8H](#) [BACC63BP28C42P9](#)
[BACC63BP28C42P9H](#) [BACC63BP28C42PN](#) [BACC63BP28C42PNH](#) [BACC63BP28C42S6](#) [BACC63BP28C42S6H](#)
[BACC63BP28C42S7](#) [BACC63BP28C42S7H](#) [BACC63BP28C42S8](#) [BACC63BP28C42S8H](#) [BACC63BP28C42S9](#)
[BACC63BP28C42S9H](#) [BACC63BP28C42SN](#) [BACC63BP28C42SNH](#) [BACC63BP28D42P10](#) [BACC63BP28D42P10H](#)
[BACC63BP28D42P6](#) [BACC63BP28D42P6H](#) [BACC63BP28D42P7](#) [BACC63BP28D42P7H](#) [BACC63BP28D42P8](#)
[BACC63BP28D42P8H](#) [BACC63BP28D42P9](#) [BACC63BP28D42P9H](#) [BACC63BP28D42PN](#) [BACC63BP28D42PNH](#)
[BACC63BP28D42S10](#) [BACC63BP28D42S10H](#) [BACC63BP28D42S6](#) [BACC63BP28D42S6H](#) [BACC63BP28D42S7](#)
[BACC63BP28D42S7H](#) [BACC63BP28D42S8](#) [BACC63BP28D42S8H](#) [BACC63BP28D42S9](#) [BACC63BP28D42S9H](#)
[BACC63BP28D42SN](#) [BACC63BP28D42SNH](#) [BACC63BP28H42P6](#) [BACC63BP28H42P6H](#) [BACC63BP28H42PN](#)
[BACC63BP28H42PNH](#) [BACC63BP28H42S6](#) [BACC63BP28H42S6H](#) [BACC63BP28H42SN](#) [BACC63BP28H42SNH](#)
[BACC63BP8D3PN](#) [BACC63BP8D3PNH](#) [BACC63BP8D3SN](#) [BACC63BP8D3SNH](#) [BACC63BV10B20P6](#)
[BACC63BV10B20P6H](#) [BACC63BV10B20P7](#) [BACC63BV10B20P7H](#) [BACC63BV10B20P8](#) [BACC63BV10B20P8H](#)
[BACC63BV10B20P9](#) [BACC63BV10B20P9H](#) [BACC63BV10B20PN](#) [BACC63BV10B20PNH](#) [BACC63BV10B20S6](#)
[BACC63BV10B20S6H](#) [BACC63BV10B20S7](#) [BACC63BV10B20S7H](#) [BACC63BV10B20S8](#) [BACC63BV10B20S8H](#)
[BACC63BV10B20S9](#)