

# CEX multi-pin and single-pole connectors

For hazardous areas

Zone 1  
IECEX/ATEX  
NEMA 4X, 6P; IP66, IP68

9P

## Applications:

- Heavy duty control and instrumentation
- Single-pole power for hazardous areas

## Certifications and compliances:

- CE marked
- AEx listed for U.S. Ex Zone 1 applications (ETL)
- Listed for Canada Ex Zone 1 applications (ETL)
- ATEX Group II Category 2 certified (ETL)
- IECEX Zone 1 certified (ETL)

## Environmental ratings:

- NEMA 4X, 6P; IP66, IP68
- Ambient temperature: certified for use from -60°C to +55°C

## Standard materials and finishes:

- Contacts – silver plated copper, crimp style; multi-lam style contacts on single poles
- Shells – high tensile strength aluminum; hard anodic coating per MIL-A-8625, Type III, black color
- Inserts – rigid inserts: thermoplastic; resilient inserts: silicone rubber



## Application standards:

| Property                 | Standard     |
|--------------------------|--------------|
| Flameproof enclosure     | IEC60079-1   |
| Increased safety         | IEC60079-7   |
| Dust ignition protection | IEC60079-31  |
| Impact resistance        | IEC60079-0   |
| Dielectric test          | IEC60079-7   |
| Ingress                  | EN:60529     |
| Contact retention        | MIL STD 1344 |

## Electrical ratings:

### Overview of shell options with voltage ratings

| Shell size | No. of contacts | Contact size | Voltage rating |
|------------|-----------------|--------------|----------------|
| 12         | 3-10            | 16-10 AWG    | A, D           |
| 16         | 4-37            | 16-8 AWG     | A, D           |
| 20         | 7-68            | 16-8 AWG     | A, B, D, E     |
| 24         | 37-58           | 16-12 AWG    | A, D           |
| C24        | 1               | 313-777 MCM  | 1000V          |

## NEC service voltage ratings

| NEC ratings     |                      |                  |
|-----------------|----------------------|------------------|
| Service voltage | Non-circuit breaking | Circuit breaking |
|                 | DC volts RMS         | AC volts RMS     |
| A               | 250                  | 240              |
| D               | 600                  | 600              |
| E               | 600                  | 600              |
| B               | 600                  | 600              |

## Contact amperage ratings

| Contact size | Non-circuit breaking current rating at 55°C <sup>A</sup> |
|--------------|----------------------------------------------------------|
| 16 AWG       | 18                                                       |
| 12 AWG       | 30                                                       |
| 10 AWG       | 40                                                       |
| 8 AWG        | 55                                                       |
| 4 AWG        | 73                                                       |
| 1/0 AWG      | 130                                                      |
| 4/0 AWG      | 198                                                      |
| 313 MCM      | 502                                                      |
| 444 MCM      | 722                                                      |
| 535 MCM      | 815                                                      |
| 777 MCM      | 1030                                                     |

Consult the NEC General Wiring Guidelines, Article 310 prior to installing cable. Guidelines around wire temperature rating, ambient temperature correction factors and the number of conductors may limit the maximum amperage of the individual conductors.

<sup>A</sup> Cable current rating must meet or exceed the ratings of the contacts to utilize connector at fully rated current.

# CEX multi-pin and single-pole connectors

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9P

## Potting compound specifications:

### Specifications

The CEX product line is certified with Chico LiquidSeal, a proprietary formula that enables the customer to install product within a wide ambient temperature range (10°C to +30°C). Typical gel times average approximately 2 hours or less, enabling quick installation (see gel times below).

Within controlled environments, Epoxies Etc. flame retardant epoxy resin may also be used (model #50-3150 RFR with Catalyst 190 or model #50-3149 RFRBK with Catalyst 192).

All potted CEX product ships direct to the customer in a kit with the required amount of compound and does not require a separate compound order.

For full assembly and potting instructions, please reference installation instructions (IF 1683) prior to assembly.

The following CEX product types require potting compound during installation.

#### CEX potted connectors (compound ships with connector):

- CEX 17-1: panel mount adapters
- CEX 13-2/4: plugs with mechanical clamp or basketweave
- CEX 15-2/4: connectors with mechanical clamp or basketweave option

Alternative gland options can be used in place of potting compound on the plugs and connectors.

#### CEX gland connectors (no compound required):

- CEX 13-3: plug with Eex d gland
- CEX 15-3: connector with Eex d gland
- CEX 17-3: connector with Eex d gland and square flange for panel mount option

### Chico LiquidSeal gel time

| Volume of compound poured (ml) | Gel time (hours) at specific temperatures |             |             |             |             |
|--------------------------------|-------------------------------------------|-------------|-------------|-------------|-------------|
|                                | 50°F (10°C)                               | 59°F (15°C) | 68°F (20°C) | 77°F (25°C) | 86°F (30°C) |
| 50                             | 15.0                                      | 3.5         | 2.3         | 2.0         | 1.5         |
| 150                            | 10.5                                      | 2.9         | 1.8         | 1.3         | 0.9         |
| 250                            | 6.9                                       | 2.1         | 1.3         | 0.4         | 0.6         |

### Chico LiquidSeal energize time

| Volume of compound poured (ml) | Energize time (hours) at specific temperatures |             |             |             |             |
|--------------------------------|------------------------------------------------|-------------|-------------|-------------|-------------|
|                                | 50°F (10°C)                                    | 59°F (15°C) | 68°F (20°C) | 77°F (25°C) | 86°F (30°C) |
| 50                             | 48.0                                           | 36.0        | 24.0        | 18.0        | 10.0        |
| 150                            | 45.0                                           | 33.0        | 20.0        | 16.0        | 6.0         |
| 250                            | 39.0                                           | 28.0        | 14.0        | 10.0        | 5.0         |

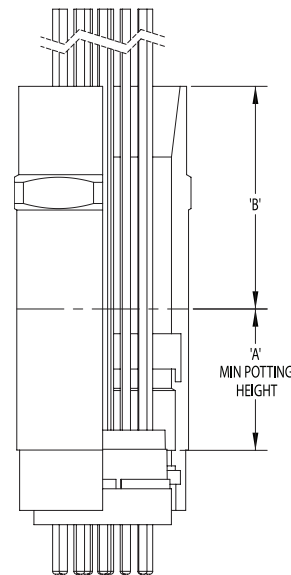


Figure A

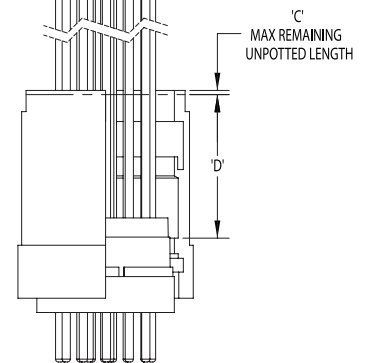


Figure B

## Potting compound fill rates

#### Cable adapter potting (Figure A)

| Shell size | Minimum potting height 'A' | Maximum unpotted length 'B' | Minimum volume (ml) |
|------------|----------------------------|-----------------------------|---------------------|
| 12         | 1.7" (42.2 cm)             | 1.4" (35.6 cm)              | 33.0                |
| 16         | 1.7" (42.2 cm)             | 3.4" (86.4 cm)              | 63.0                |
| 20         | 1.7" (42.2 cm)             | 3.4" (86.4 cm)              | 102.0               |
| 24         | 1.7" (42.2 cm)             | 3.4" (86.4 cm)              | 181.0               |
| 28         | 1.7" (42.2 cm)             | 3.4" (86.4 cm)              | 209.0               |

#### Panel mount potting (Figure B)

| Shell size | Minimum potting height 'D' | Maximum unpotted length 'C' | Minimum volume (ml) |
|------------|----------------------------|-----------------------------|---------------------|
| 12         | 1.7" (42.2 cm)             | 0.375" (9.5 cm)             | 33.0                |
| 16         | 1.7" (42.2 cm)             | 0.375" (9.5 cm)             | 63.0                |
| 20         | 1.7" (42.2 cm)             | 0.375" (9.5 cm)             | 102.0               |
| 24         | 1.7" (42.2 cm)             | 0.375" (9.5 cm)             | 181.0               |
| 28         | 1.7" (42.2 cm)             | 0.375" (9.5 cm)             | 209.0               |



## 12 shell

### Applications:

- Hazardous location control and instrumentation

### Features:

- Reversible inserts are compatible with all panel mount, in-line, male and female shells
- Exclusive visual mating alignment
- Easily accessible wire terminals
- Ample wiring space within shells
- Reversible 8-point diamond cord grip relieves strain on conductors (patent pending)
- Suited for use with Type P cable
- EX cable glands available through Eaton's Crouse-Hinds Division
- Hexagon shell design with easy wrenching surfaces ensures adequate torquing
- Impact-resistant

### Certifications and compliances:

- CE marked
- AEx listed for U.S. Ex Zone 1 applications (ETL)
- Listed for Canada Ex Zone 1 applications (ETL)
- ATEX Group II Category 2 certified (ETL)
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### Environmental ratings:

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- Ambient temperature: certified for use from -60°C to +55°C

### Standard materials and finishes:

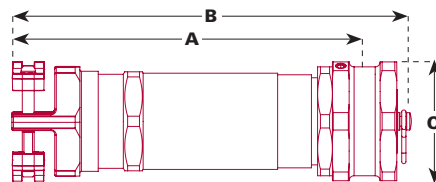
- Contacts – silver plated copper, crimp style
- Shells – high tensile strength aluminum; hard anodic coating per MIL-A-8625, Type III, black color
- Rigid insulators – thermoplastic
- Resilient inserts – silicone rubber



### Dimensions (in inches):

#### Cable mounted receptacle with mechanical clamp

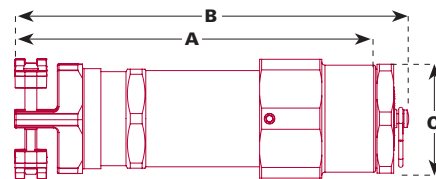
Base Cat. #  
CEX152



| A                  | B               | C     |
|--------------------|-----------------|-------|
| Length without cap | Length with cap | Width |
| 7.50               | 8.13            | 2.00  |

#### Cable mounted plug with mechanical clamp

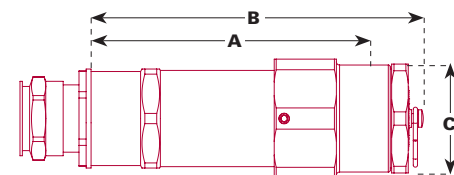
Base Cat. #  
CEX132



| A                  | B               | C     |
|--------------------|-----------------|-------|
| Length without cap | Length with cap | Width |
| 7.14               | 8.00            | 1.75  |

#### Cable mounted plug with EX cable gland

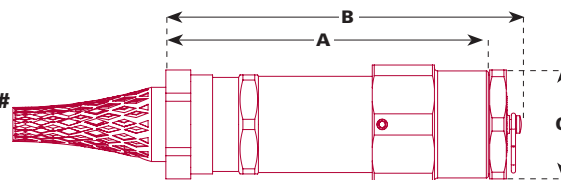
Base Cat. #  
CEX133



| A                  | B               | C     |
|--------------------|-----------------|-------|
| Length without cap | Length with cap | Width |
| 5.71               | 6.57            | 1.75  |

#### Cable mounted plug with basketweave

Base Cat. #  
CEX134



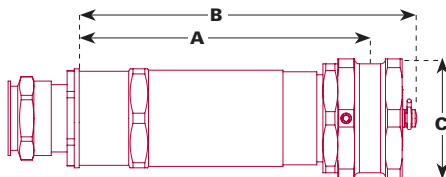
| A                  | B               | C     |
|--------------------|-----------------|-------|
| Length without cap | Length with cap | Width |
| 6.18               | 7.04            | 1.75  |

12 shell

## Dimensions (in inches) (continued):

### Cable mounted receptacle with EX cable gland

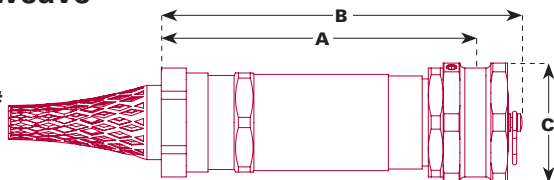
Base Cat. #  
CEX153



| A                  | B               | C     |
|--------------------|-----------------|-------|
| Length without cap | Length with cap | Width |
| 6.08               | 6.71            | 2.00  |

### Cable mounted receptacle with basketweave

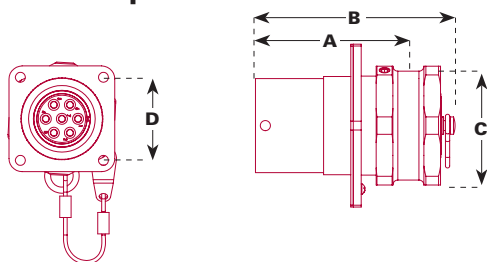
Base Cat. #  
CEX154



| A                  | B               | C     |
|--------------------|-----------------|-------|
| Length without cap | Length with cap | Width |
| 6.54               | 7.17            | 2.00  |

### Panel mounted receptacle

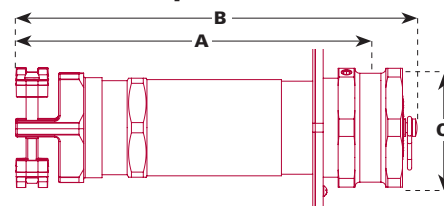
Base Cat. #  
CEX171



| A                  | B               | C     | D                      | Diameter   |
|--------------------|-----------------|-------|------------------------|------------|
| Length without cap | Length with cap | Width | Ctr. - ctr. mount hole | Mount hole |
| 4.89               | 5.52            | 2.00  | 1.65                   | 0.22       |

### Cable mounted square flange receptacle with mechanical clamp

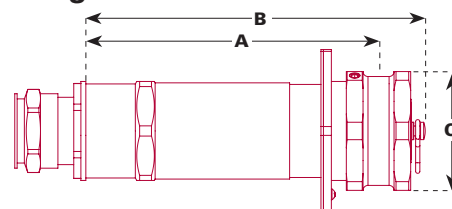
Base Cat. #  
CEX172



| A                  | B               | C     | D                      | Diameter   |
|--------------------|-----------------|-------|------------------------|------------|
| Length without cap | Length with cap | Width | Ctr. - ctr. mount hole | Mount hole |
| 7.50               | 8.13            | 2.00  | 1.65                   | 0.22       |

### Cable mounted square flange receptacle with EX cable gland

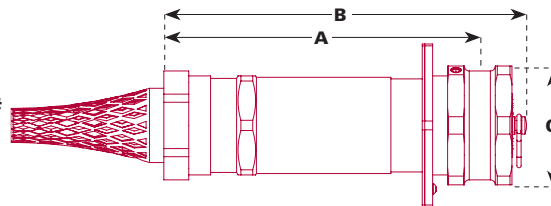
Base Cat. #  
CEX173



| A                  | B               | C     | D                      | Diameter   |
|--------------------|-----------------|-------|------------------------|------------|
| Length without cap | Length with cap | Width | Ctr. - ctr. mount hole | Mount hole |
| 6.08               | 6.71            | 2.00  | 1.65                   | 0.22       |

### Cable mounted square flange receptacle with basketweave

Base Cat. #  
CEX174



| A                  | B               | C     | D                      | Diameter   |
|--------------------|-----------------|-------|------------------------|------------|
| Length without cap | Length with cap | Width | Ctr. - ctr. mount hole | Mount hole |
| 6.54               | 7.17            | 2.00  | 1.65                   | 0.22       |

12 shell

Ordering information:

Part number example  
CEX-133B12-310PN-BS

CEX

Series

|     |                           |
|-----|---------------------------|
| CEX | Hazardous rated connector |
|-----|---------------------------|

13

Base call-out

|    |                    |
|----|--------------------|
| 13 | Male plug          |
| 15 | Female in-line     |
| 17 | Female panel mount |

3

Cable hardware

|                |                        |
|----------------|------------------------|
| 1 <sup>A</sup> | Panel mount            |
| 2 <sup>A</sup> | Mechanical clamp       |
| 3              | Eex d gland            |
| 4 <sup>A</sup> | Basketweave cable grip |

B

Grommet

|    |               |             |
|----|---------------|-------------|
| 03 | 0.125 - 0.188 | 1.6 - 3.2   |
| 04 | 0.125 - 0.250 | 3.2 - 6.4   |
| 06 | 0.250 - 0.375 | 6.4 - 9.5   |
| 08 | 0.375 - 0.500 | 9.5 - 12.7  |
| 10 | 0.500 - 0.625 | 12.7 - 15.9 |
| 12 | 0.625 - 0.750 | 15.9 - 19.1 |
| 14 | 0.750 - 0.875 | 19.1 - 22.2 |

12

Shell size

|    |                      |
|----|----------------------|
| 12 | Connector shell size |
|----|----------------------|

Panel mount  
leave blank if cable hardware #1 (panel mount) is selected

Cable gland  
refer to the cable gland table below if cable hardware #3 (Eex d gland) is selected

Grommet  
refer to the grommet table below if cable hardware #2 or #4 option is selected

EX cable gland

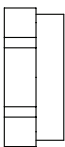
|    | Unarmored sheath | Armored      |              |              |
|----|------------------|--------------|--------------|--------------|
|    |                  | Inner sheath | Outer sheath | Armor (max.) |
| A1 | 4.0 - 8.5        | 4.5 - 8.0    | 7.0 - 12.0   | 0.9          |
| A2 | 7.0 - 12.0       | 7.0 - 12.0   | 10.5 - 16.0  | 1.3          |
| A  | 10.5 - 16.0      | 10.5 - 15.5  | 13.5 - 21.0  | 1.3          |
| B  | 13.5 - 20.5      | 13.5 - 20.5  | 18.0 - 27.5  | 1.6          |
| C  | 18.0 - 27.5      | 18.0 - 26.0  | 23.0 - 34.0  | 1.6          |

Contact amperage ratings:

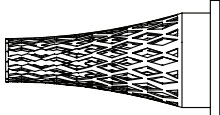
| Contact size | Non-circuit breaking current rating at 55°C <sup>B</sup> |
|--------------|----------------------------------------------------------|
| 16 AWG       | 18                                                       |
| 12 AWG       | 30                                                       |
| 10 AWG       | 40                                                       |

NEC service voltage ratings:

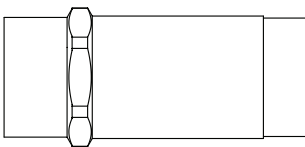
| Service voltage | Non-circuit breaking | Circuit breaking |
|-----------------|----------------------|------------------|
|                 | DC volts RMS         | AC volts RMS     |
| A               | 250                  | 240              |
| D               | 600                  | 600              |
| E               | 600                  | 600              |
| B               | 600                  | 600              |



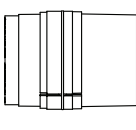
Cable hardware



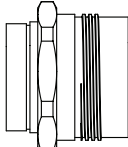
Grommet



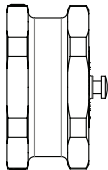
Cable adapter



Insert



Skirt



Environmental cover

<sup>A</sup>Includes potting compound.  
<sup>B</sup>Cable current rating must meet or exceed the ratings of the contacts to utilize connector at fully rated current.

12 shell

## 310

## P

## N

## BS

### Contact gender

|   |               |
|---|---------------|
| P | Male pin      |
| S | Female socket |

### Termination method

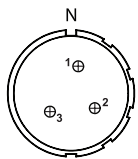
|   |       |
|---|-------|
| N | Crimp |
|---|-------|

### Alternate key position

|       |           |
|-------|-----------|
| BLANK | 0 degrees |
|-------|-----------|

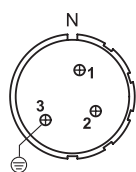
### Cable gland

|       |                      |
|-------|----------------------|
| BLANK | Unarmored            |
| BS    | Armored and sheathed |



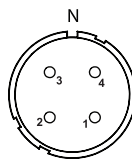
**327**

|                        |    |
|------------------------|----|
| No. contacts           | 3  |
| AWG                    | 12 |
| Service voltage rating | D  |



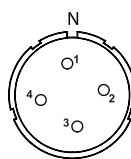
**330G**

|                        |    |
|------------------------|----|
| No. contacts           | 3  |
| AWG                    | 12 |
| Service voltage rating | D  |



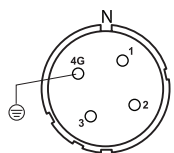
**314**

|                        |    |
|------------------------|----|
| No. contacts           | 4  |
| AWG                    | 10 |
| Service voltage rating | D  |



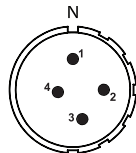
**316**

|                        |    |
|------------------------|----|
| No. contacts           | 4  |
| AWG                    | 10 |
| Service voltage rating | D  |



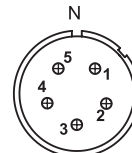
**322**

|                        |    |
|------------------------|----|
| No. contacts           | 4  |
| AWG                    | 10 |
| Service voltage rating | D  |



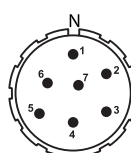
**333**

|                        |    |
|------------------------|----|
| No. contacts           | 4  |
| AWG                    | 16 |
| Service voltage rating | D  |



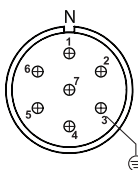
**324**

|                        |    |
|------------------------|----|
| No. contacts           | 5  |
| AWG                    | 12 |
| Service voltage rating | D  |



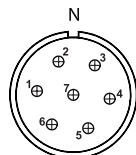
**348**

|                        |    |
|------------------------|----|
| No. contacts           | 7  |
| AWG                    | 16 |
| Service voltage rating | A  |



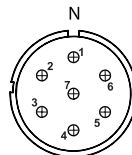
**310**

|                        |    |
|------------------------|----|
| No. contacts           | 7  |
| AWG                    | 12 |
| Service voltage rating | A  |



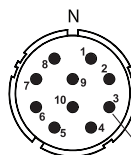
**354**

|                        |    |
|------------------------|----|
| No. contacts           | 7  |
| AWG                    | 12 |
| Service voltage rating | A  |



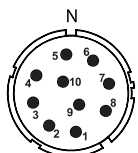
**354D**

|                        |    |
|------------------------|----|
| No. contacts           | 7  |
| AWG                    | 12 |
| Service voltage rating | A  |



**334**

|                        |    |
|------------------------|----|
| No. contacts           | 10 |
| AWG                    | 16 |
| Service voltage rating | A  |



**355**

|                        |    |
|------------------------|----|
| No. contacts           | 10 |
| AWG                    | 16 |
| Service voltage rating | A  |

|                |    |    |    |    |   |   |     |     |         |         |         |         |
|----------------|----|----|----|----|---|---|-----|-----|---------|---------|---------|---------|
| Contact symbol | ○  | ●  | ⊕  | ○  | ⊙ | ⦿ | ⊕   | ⊗   | ⊗       | ⊗       | ⊗       | ⊗       |
| AWG            | 18 | 16 | 12 | 10 | 8 | 4 | 1/0 | 4/0 | 313 MCM | 444 MCM | 535 MCM | 777 MCM |

Ⓢ Made to order item. Contact factory for availability and lead time.

## 16 shell

### Applications:

- Hazardous location control and instrumentation

### Features:

- Reversible inserts are compatible with all panel mount, in-line, male and female shells
- Exclusive visual mating alignment
- Easily accessible wire terminals
- Ample wiring space within shells
- Reversible 8-point diamond cord grip relieves strain on conductors (patent pending)
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- EX cable glands available through Eaton's Crouse-Hinds Division
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- AEx listed for U.S. Ex Zone 1 applications (ETL)
- Listed for Canada Ex Zone 1 applications (ETL)
- ATEX Group II Category 2 certified (ETL)
- IECEX Zone 1 certified (ETL)

### Environmental ratings:

- NEMA 4X, 6P; IP66, IP68
- Ambient temperature: certified for use from -60°C to +55°C

### Standard materials and finishes:

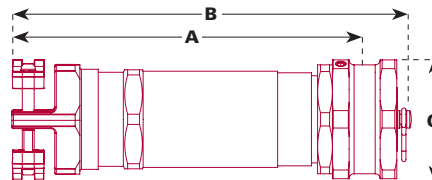
- Contacts – silver plated copper, crimp style
- Shells – high tensile strength aluminum; hard anodic coating per MIL-A-8625, Type III, black color
- Rigid insulators – thermoplastic
- Resilient inserts – silicone rubber



### Dimensions (in inches):

#### Cable mounted receptacle with mechanical clamp

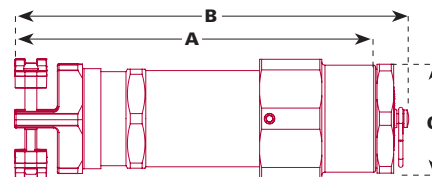
Base Cat. #  
CEX152



| A                  | B               | C     |
|--------------------|-----------------|-------|
| Length without cap | Length with cap | Width |
| 9.50               | 10.13           | 2.50  |

#### Cable mounted plug with mechanical clamp

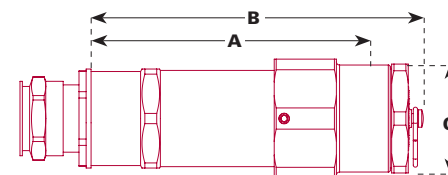
Base Cat. #  
CEX132



| A                  | B               | C     |
|--------------------|-----------------|-------|
| Length without cap | Length with cap | Width |
| 9.14               | 10.00           | 2.25  |

#### Cable mounted plug with EX cable gland

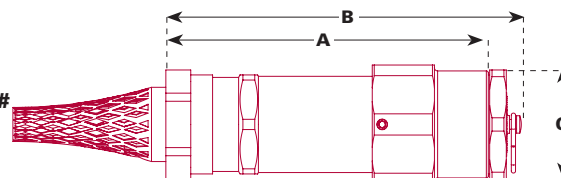
Base Cat. #  
CEX133



| A                  | B               | C     |
|--------------------|-----------------|-------|
| Length without cap | Length with cap | Width |
| 7.71               | 8.57            | 2.25  |

#### Cable mounted plug with basketweave

Base Cat. #  
CEX134



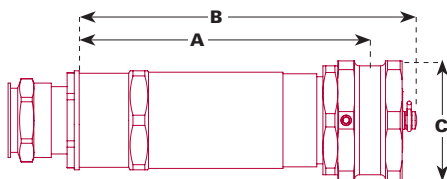
| A                  | B               | C     |
|--------------------|-----------------|-------|
| Length without cap | Length with cap | Width |
| 8.18               | 9.04            | 2.25  |

16 shell

## Dimensions (in inches) (continued):

### Cable mounted receptacle with EX gland nut

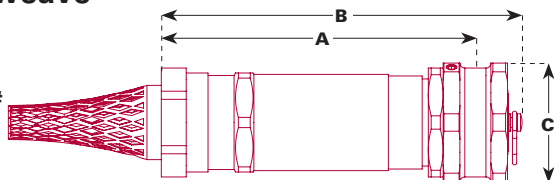
Base Cat. #  
CEX153



| A                  | B               | C     |
|--------------------|-----------------|-------|
| Length without cap | Length with cap | Width |
| 8.08               | 8.71            | 2.50  |

### Cable mounted receptacle with basketweave

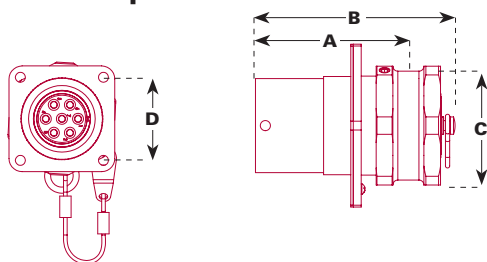
Base Cat. #  
CEX154



| A                  | B               | C     |
|--------------------|-----------------|-------|
| Length without cap | Length with cap | Width |
| 8.54               | 9.17            | 2.50  |

### Panel mounted receptacle

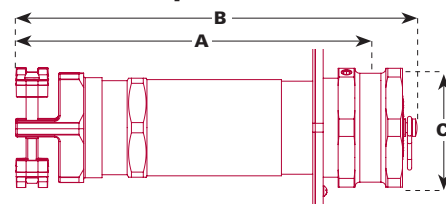
Base Cat. #  
CEX171



| A                  | B               | C     | D                      | Diameter   |
|--------------------|-----------------|-------|------------------------|------------|
| Length without cap | Length with cap | Width | Ctr. - ctr. mount hole | Mount hole |
| 4.89               | 5.52            | 2.50  | 2.05                   | 0.22       |

### Cable mounted square flange receptacle with mechanical clamp

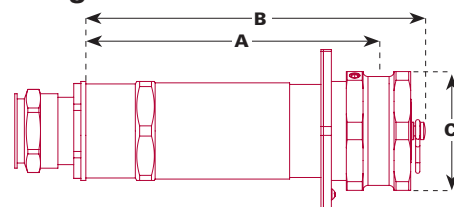
Base Cat. #  
CEX172



| A                  | B               | C     | D                      | Diameter   |
|--------------------|-----------------|-------|------------------------|------------|
| Length without cap | Length with cap | Width | Ctr. - ctr. mount hole | Mount hole |
| 9.50               | 10.13           | 2.50  | 2.05                   | 0.22       |

### Cable mounted square flange receptacle with EX cable gland

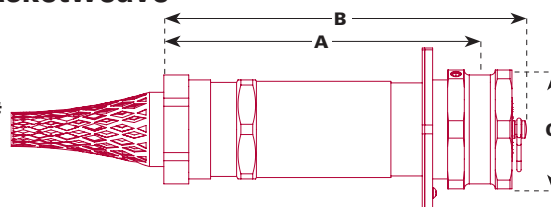
Base Cat. #  
CEX173



| A                  | B               | C     | D                      | Diameter   |
|--------------------|-----------------|-------|------------------------|------------|
| Length without cap | Length with cap | Width | Ctr. - ctr. mount hole | Mount hole |
| 8.08               | 8.71            | 2.50  | 2.05                   | 0.22       |

### Cable mounted square flange receptacle with basketweave

Base Cat. #  
CEX174



| A                  | B               | C     | D                      | Diameter   |
|--------------------|-----------------|-------|------------------------|------------|
| Length without cap | Length with cap | Width | Ctr. - ctr. mount hole | Mount hole |
| 8.54               | 9.17            | 2.50  | 2.05                   | 0.22       |



16 shell

Ordering information:

Part number example  
CEX-133B16-321PN-BS

**CEX**

**Series**

|     |                           |
|-----|---------------------------|
| CEX | Hazardous rated connector |
|-----|---------------------------|

**13**

**Base call-out**

|    |                    |
|----|--------------------|
| 13 | Male plug          |
| 15 | Female in-line     |
| 17 | Female panel mount |

**3**

**Cable hardware**

|                |                        |
|----------------|------------------------|
| 1 <sup>A</sup> | Panel mount            |
| 2 <sup>A</sup> | Mechanical clamp       |
| 3              | Eex d gland            |
| 4 <sup>A</sup> | Basketweave cable grip |

Panel mount  
leave blank if cable hardware #1 (panel mount) is selected

Cable gland  
refer to the cable gland table below if cable hardware #3 (Eex d gland) is selected

Grommet  
refer to the grommet table below if cable hardware #2 or #4 option is selected

**B**

**Grommet**

| Cable diameter |               |             |
|----------------|---------------|-------------|
|                | in.           | mm.         |
| 08             | 0.375 - 0.500 | 9.5 - 12.7  |
| 10             | 0.500 - 0.625 | 12.7 - 15.9 |
| 12             | 0.625 - 0.750 | 15.9 - 19.1 |
| 14             | 0.750 - 0.875 | 19.1 - 22.2 |
| 16             | 0.875 - 1.000 | 22.2 - 25.4 |
| 18             | 1.000 - 1.125 | 25.4 - 28.6 |
| 20             | 1.125 - 1.250 | 28.6 - 31.8 |

**16**

**Shell size**

|    |                      |
|----|----------------------|
| 16 | Connector shell size |
|----|----------------------|

**EX cable gland**

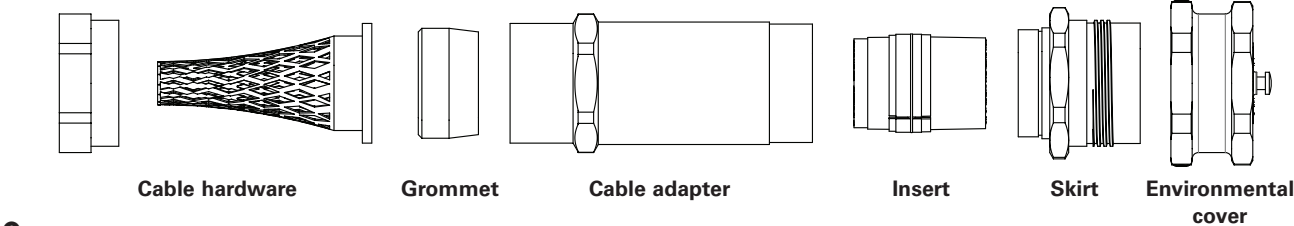
|    | Unarmored sheath | Armored      |              |              |
|----|------------------|--------------|--------------|--------------|
|    |                  | Inner sheath | Outer sheath | Armor (max.) |
| A  | 10.0 - 16.0      | 10.0 - 15.5  | 13.5 - 21.0  | 1.3          |
| B  | 13.5 - 20.5      | 13.5 - 20.5  | 18.0 - 27.5  | 1.6          |
| C  | 18.0 - 27.5      | 18.0 - 26.0  | 23.0 - 34.0  | 1.6          |
| C2 | 23.0 - 34.0      | 23.0 - 34.0  | 29.0 - 41.0  | 2.0          |
| D  | 29.0 - 41.0      | 29.0 - 41.0  | 35.0 - 48.0  | 2.5          |

Contact amperage ratings:

| Contact size | Non-circuit breaking current rating at 55°C <sup>B</sup> |
|--------------|----------------------------------------------------------|
| 16 AWG       | 18                                                       |
| 12 AWG       | 30                                                       |
| 10 AWG       | 40                                                       |
| 8 AWG        | 55                                                       |
| 4 AWG        | 73                                                       |

NEC service voltage ratings:

| Service voltage | Non-circuit breaking | Circuit breaking |
|-----------------|----------------------|------------------|
|                 | DC volts RMS         | AC volts RMS     |
| A               | 250                  | 240              |
| D               | 600                  | 600              |
| E               | 600                  | 600              |
| B               | 600                  | 600              |



<sup>A</sup>Includes potting compound.  
<sup>B</sup>Cable current rating must meet or exceed the ratings of the contacts to utilize connector at fully rated current.

16 shell

321

P

N

BS

Contact gender

|   |               |
|---|---------------|
| P | Male pin      |
| S | Female socket |

Termination method

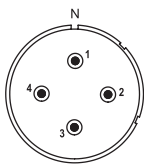
|   |          |
|---|----------|
| N | Crimp    |
| R | Pressure |

Alternate key position

|       |           |
|-------|-----------|
| BLANK | 0 degrees |
|-------|-----------|

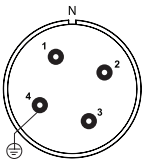
Cable gland

|       |                      |
|-------|----------------------|
| BLANK | Unarmored            |
| BS    | Armored and sheathed |



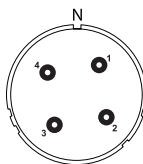
328

|                        |   |
|------------------------|---|
| No. contacts           | 4 |
| AWG                    | 8 |
| Service voltage rating | D |



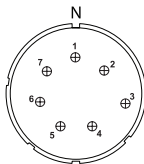
38

|                        |   |
|------------------------|---|
| No. contacts           | 4 |
| AWG                    | 4 |
| Service voltage rating | D |



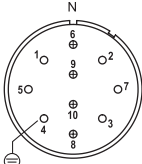
322

|                        |   |
|------------------------|---|
| No. contacts           | 4 |
| AWG                    | 4 |
| Service voltage rating | D |



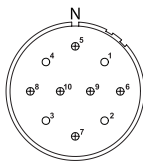
378

|                        |    |
|------------------------|----|
| No. contacts           | 7  |
| AWG                    | 12 |
| Service voltage rating | D  |



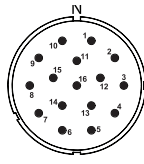
376

|                        |       |
|------------------------|-------|
| No. contacts           | 6 4   |
| AWG                    | 12 10 |
| Service voltage rating | D     |



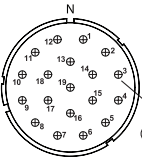
381

|                        |       |
|------------------------|-------|
| No. contacts           | 6 4   |
| AWG                    | 12 10 |
| Service voltage rating | D     |



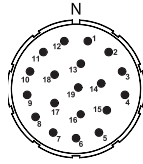
325

|                        |    |
|------------------------|----|
| No. contacts           | 16 |
| AWG                    | 16 |
| Service voltage rating | D  |



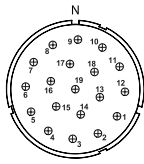
312

|                        |    |
|------------------------|----|
| No. contacts           | 19 |
| AWG                    | 12 |
| Service voltage rating | A  |



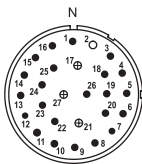
355

|                        |    |
|------------------------|----|
| No. contacts           | 19 |
| AWG                    | 16 |
| Service voltage rating | A  |



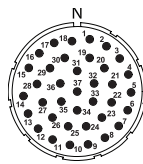
377

|                        |    |
|------------------------|----|
| No. contacts           | 19 |
| AWG                    | 12 |
| Service voltage rating | A  |



335

|                        |       |
|------------------------|-------|
| No. contacts           | 24 3  |
| AWG                    | 16 12 |
| Service voltage rating | A     |



321

|                        |    |
|------------------------|----|
| No. contacts           | 37 |
| AWG                    | 16 |
| Service voltage rating | A  |

|                |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                      |
|----------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| Contact symbol |  |  |  |  |  |  |  |  |  |  |  |  |
| AWG            | 18                                                                                  | 16                                                                                  | 12                                                                                  | 10                                                                                  | 8                                                                                   | 4                                                                                   | 1/0                                                                                 | 4/0                                                                                 | 313 MCM                                                                             | 444 MCM                                                                             | 535 MCM                                                                             | 777 MCM                                                                              |

## 20 shell

### Applications:

- Hazardous location control and instrumentation

### Features:

- Reversible inserts are compatible with all panel mount, in-line, male and female shells
- Exclusive visual mating alignment
- Easily accessible wire terminals
- Ample wiring space within shells
- Reversible 8-point diamond cord grip relieves strain on conductors (patent pending)
- Suited for use with Type P cable
- EX cable glands available through Eaton's Crouse-Hinds Division
- Hexagon shell design with easy wrenching surfaces ensures adequate torquing
- Impact-resistant

### Certifications and compliances:

- CE marked
- AEx listed for U.S. Ex Zone 1 applications (ETL)
- Listed for Canada Ex Zone 1 applications (ETL)
- ATEX Group II Category 2 certified (ETL)
- IECEX Zone 1 certified (ETL)

### Environmental ratings:

- NEMA 4X, 6P; IP66, IP68
- Ambient temperature: certified for use from -60°C to +55°C

### Standard materials and finishes:

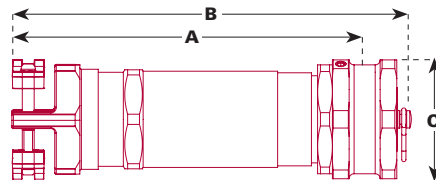
- Contacts – silver plated copper, crimp style
- Shells – high tensile strength aluminum; hard anodic coating per MIL-A-8625, Type III, black color
- Rigid insulators – thermoplastic
- Resilient inserts – silicone rubber



### Dimensions (in inches):

#### Cable mounted receptacle with EX cable gland

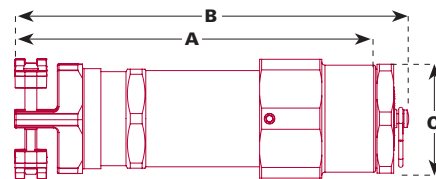
Base Cat. #  
CEX152



| A                  | B               | C     |
|--------------------|-----------------|-------|
| Length without cap | Length with cap | Width |
| 9.50               | 10.13           | 3.00  |

#### Cable mounted plug with mechanical clamp

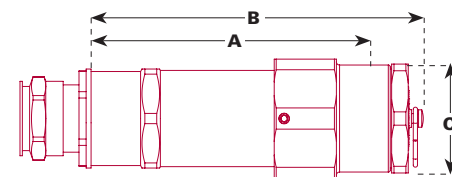
Base Cat. #  
CEX132



| A                  | B               | C     |
|--------------------|-----------------|-------|
| Length without cap | Length with cap | Width |
| 9.14               | 10.00           | 2.75  |

#### Cable mounted plug with EX cable gland

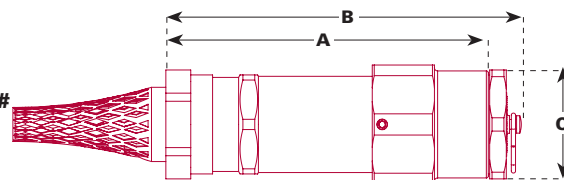
Base Cat. #  
CEX133



| A                  | B               | C     |
|--------------------|-----------------|-------|
| Length without cap | Length with cap | Width |
| 7.71               | 8.57            | 2.75  |

#### Cable mounted plug with basketweave

Base Cat. #  
CEX134



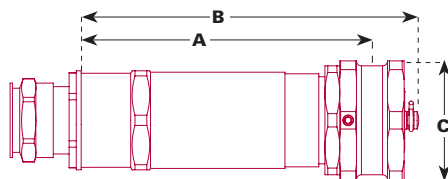
| A                  | B               | C     |
|--------------------|-----------------|-------|
| Length without cap | Length with cap | Width |
| 8.18               | 9.04            | 2.75  |

20 shell

## Dimensions (in inches) (continued):

### Cable mounted receptacle with EX cable gland

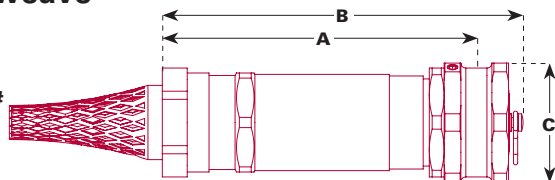
Base Cat. #  
CEX153



| A                  | B               | C     |
|--------------------|-----------------|-------|
| Length without cap | Length with cap | Width |
| 8.08               | 8.71            | 3.00  |

### Cable mounted receptacle with basketweave

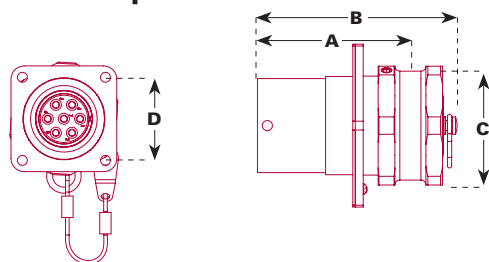
Base Cat. #  
CEX154



| A                  | B               | C     |
|--------------------|-----------------|-------|
| Length without cap | Length with cap | Width |
| 8.54               | 9.17            | 3.00  |

### Panel mounted receptacle

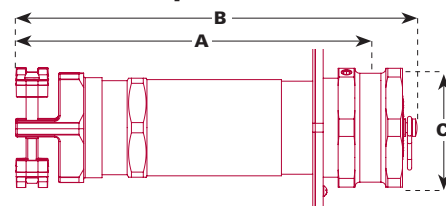
Base Cat. #  
CEX171



| A                  | B               | C     | D                      | Diameter   |
|--------------------|-----------------|-------|------------------------|------------|
| Length without cap | Length with cap | Width | Ctr. - ctr. mount hole | Mount hole |
| 4.89               | 5.52            | 3.00  | 2.44                   | 0.22       |

### Cable mounted square flange receptacle with mechanical clamp

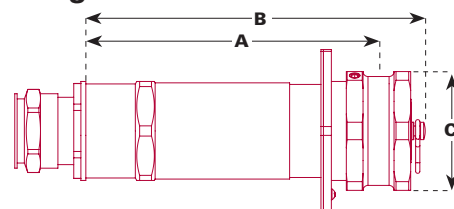
Base Cat. #  
CEX172



| A                  | B               | C     | D                      | Diameter   |
|--------------------|-----------------|-------|------------------------|------------|
| Length without cap | Length with cap | Width | Ctr. - ctr. mount hole | Mount hole |
| 9.50               | 10.13           | 3.00  | 2.44                   | 0.22       |

### Cable mounted square flange receptacle with EX cable gland

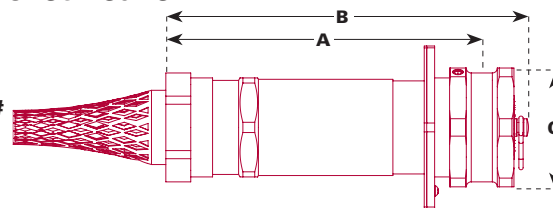
Base Cat. #  
CEX173



| A                  | B               | C     | D                      | Diameter   |
|--------------------|-----------------|-------|------------------------|------------|
| Length without cap | Length with cap | Width | Ctr. - ctr. mount hole | Mount hole |
| 8.08               | 8.71            | 3.00  | 2.44                   | 0.22       |

### Cable mounted square flange receptacle with basketweave

Base Cat. #  
CEX174



| A                  | B               | C     | D                      | Diameter   |
|--------------------|-----------------|-------|------------------------|------------|
| Length without cap | Length with cap | Width | Ctr. - ctr. mount hole | Mount hole |
| 8.54               | 9.17            | 3.00  | 2.44                   | 0.22       |

20 shell

Ordering information:

Part number example

CEX-133B20-376PN-BS

**CEX**

**Series**

|     |                           |
|-----|---------------------------|
| CEX | Hazardous rated connector |
|-----|---------------------------|

**13**

**Base call-out**

|    |                    |
|----|--------------------|
| 13 | Male plug          |
| 15 | Female in-line     |
| 17 | Female panel mount |

**3**

**Cable hardware**

|                |                        |
|----------------|------------------------|
| 1 <sup>A</sup> | Panel mount            |
| 2 <sup>A</sup> | Mechanical clamp       |
| 3              | Eex d gland            |
| 4 <sup>A</sup> | Basketweave cable grip |

**B**

**Grommet**

refer to the grommet table below if cable hardware #2 or #4 option is selected

**20**

**Shell size**

|    |                      |
|----|----------------------|
| 20 | Connector shell size |
|----|----------------------|

Panel mount  
leave blank if cable hardware #1 (panel mount) is selected

Cable gland  
refer to the cable gland table below if cable hardware #3 (Eex d gland) is selected

**EX cable gland**

|    | Unarmored sheath | Armored      |              |              |
|----|------------------|--------------|--------------|--------------|
|    |                  | Inner sheath | Outer sheath | Armor (max.) |
| A  | 10.0 - 16.0      | 10.0 - 15.5  | 13.5 - 21.0  | 1.3          |
| B  | 13.5 - 20.5      | 13.5 - 20.5  | 18.0 - 27.5  | 1.6          |
| C  | 18.0 - 27.5      | 18.0 - 27.5  | 23.0 - 34.0  | 1.6          |
| C2 | 23.0 - 34.0      | 23.0 - 34.0  | 29.0 - 41.0  | 2.0          |
| D  | 29.0 - 41.0      | 29.0 - 41.0  | 35.0 - 48.0  | 2.5          |
| D2 | 35.0 - 45.0      | 35.0 - 48.0  | 42.0 - 56.0  | 2.5          |
| E  | 42.0 - 56.0      | 42.0 - 53.0  | 50.0 - 65.0  | 2.5          |

**Cable diameter**

|    | in.           | mm.         |
|----|---------------|-------------|
| 10 | 0.500 - 0.625 | 12.7 - 15.9 |
| 12 | 0.625 - 0.750 | 15.9 - 19.1 |
| 14 | 0.750 - 0.875 | 19.1 - 22.2 |
| 16 | 0.875 - 1.000 | 22.2 - 25.4 |
| 18 | 1.000 - 1.125 | 25.4 - 28.6 |
| 20 | 1.125 - 1.250 | 28.6 - 31.8 |
| 22 | 1.250 - 1.375 | 31.8 - 34.9 |
| 24 | 1.375 - 1.500 | 34.9 - 38.1 |
| 26 | 1.500 - 1.625 | 38.1 - 41.3 |

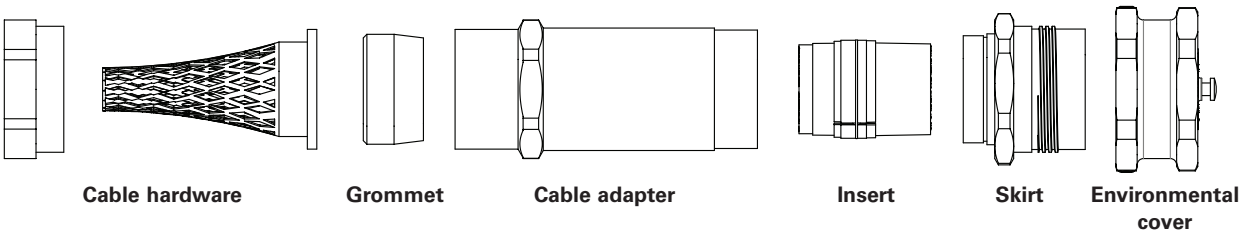
Contact amperage ratings:

| Contact size | Non-circuit breaking current rating at 55°C <sup>B</sup> |
|--------------|----------------------------------------------------------|
| 16 AWG       | 18                                                       |
| 12 AWG       | 30                                                       |
| 10 AWG       | 40                                                       |
| 8 AWG        | 55                                                       |
| 4 AWG        | 73                                                       |
| 1/0 AWG      | 130                                                      |

NEC service voltage ratings:

| Service voltage | Non-circuit breaking | Circuit breaking |
|-----------------|----------------------|------------------|
|                 | DC volts RMS         | AC volts RMS     |
| A               | 250                  | 240              |
| D               | 600                  | 600              |
| E               | 600                  | 600              |
| B               | 600                  | 600              |

9P



<sup>A</sup>Includes potting compound.  
<sup>B</sup>Cable current rating must meet or exceed the ratings of the contacts to utilize connector at fully rated current.

20 shell

## 376

## P

## N

## BS

### Contact gender

|   |               |
|---|---------------|
| P | Male pin      |
| S | Female socket |

### Termination method

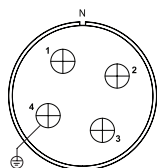
|   |          |
|---|----------|
| N | Crimp    |
| R | Pressure |

### Alternate key position

|       |           |
|-------|-----------|
| BLANK | 0 degrees |
|-------|-----------|

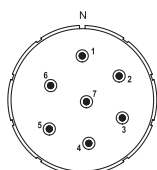
### Cable gland

|       |                      |
|-------|----------------------|
| BLANK | Unarmored            |
| BS    | Armored and sheathed |



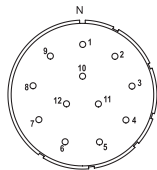
**40**

|                        |     |
|------------------------|-----|
| No. contacts           | 4   |
| AWG                    | 1/0 |
| Service voltage rating | D   |



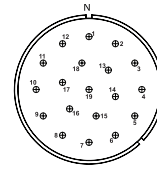
**3590**

|                        |   |
|------------------------|---|
| No. contacts           | 7 |
| AWG                    | 8 |
| Service voltage rating | E |



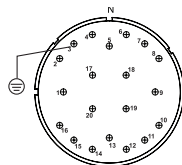
**375**

|                        |    |
|------------------------|----|
| No. contacts           | 12 |
| AWG                    | 10 |
| Service voltage rating | D  |



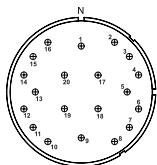
**376**

|                        |    |
|------------------------|----|
| No. contacts           | 19 |
| AWG                    | 12 |
| Service voltage rating | D  |



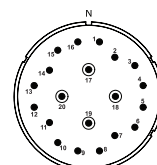
**388**

|                        |    |
|------------------------|----|
| No. contacts           | 19 |
| AWG                    | 12 |
| Service voltage rating | D  |



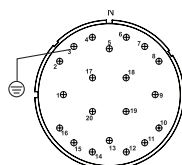
**332**

|                        |                     |
|------------------------|---------------------|
| No. contacts           | 20                  |
| AWG                    | 12                  |
| Service voltage rating | B center<br>A outer |



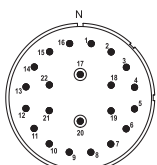
**334**

|                        |      |
|------------------------|------|
| No. contacts           | 16 4 |
| AWG                    | 16 8 |
| Service voltage rating | D    |



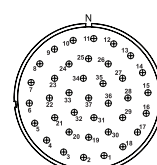
**387**

|                        |                     |
|------------------------|---------------------|
| No. contacts           | 20                  |
| AWG                    | 12                  |
| Service voltage rating | B center<br>A outer |



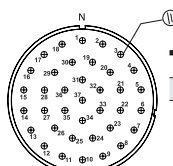
**3310**

|                        |                         |
|------------------------|-------------------------|
| No. contacts           | 20 2                    |
| AWG                    | 16 8                    |
| Service voltage rating | D (16 AWG)<br>E (8 AWG) |



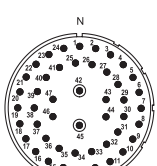
**386**

|                        |    |
|------------------------|----|
| No. contacts           | 37 |
| AWG                    | 12 |
| Service voltage rating | A  |



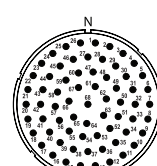
**350**

|                        |    |
|------------------------|----|
| No. contacts           | 37 |
| AWG                    | 12 |
| Service voltage rating | A  |



**3540**

|                        |                         |
|------------------------|-------------------------|
| No. contacts           | 45 2                    |
| AWG                    | 16 8                    |
| Service voltage rating | D (8 AWG)<br>A (16 AWG) |



**313**

|                        |    |
|------------------------|----|
| No. contacts           | 68 |
| AWG                    | 16 |
| Service voltage rating | A  |

|                |    |    |    |    |   |   |     |     |         |         |         |         |
|----------------|----|----|----|----|---|---|-----|-----|---------|---------|---------|---------|
| Contact symbol |    |    |    |    |   |   |     |     |         |         |         |         |
| AWG            | 18 | 16 | 12 | 10 | 8 | 4 | 1/0 | 4/0 | 313 MCM | 444 MCM | 535 MCM | 777 MCM |

Ⓢ Made to order item. Contact factory for availability and lead time.

## 24 shell

### Applications:

- Hazardous location control and instrumentation

### Features:

- Reversible inserts are compatible with all panel mount, in-line, male and female shells
- Exclusive visual mating alignment
- Easily accessible wire terminals
- Ample wiring space within shells
- Reversible 8-point diamond cord grip relieves strain on conductors (patent pending)
- Suited for use with Type P cable
- EX cable glands available through Eaton's Crouse-Hinds Division
- Hexagon shell design with easy wrenching surfaces ensures adequate torquing
- Impact-resistant

### Certifications and compliances:

- CE marked
- AEx listed for U.S. Ex Zone 1 applications (ETL)
- Listed for Canada Ex Zone 1 applications (ETL)
- ATEX Group II Category 2 certified (ETL)
- IECEX Zone 1 certified (ETL)

### Environmental ratings:

- NEMA 4X, 6P; IP66, IP68
- Ambient temperature: certified for use from -60°C to +55°C

### Standard materials and finishes:

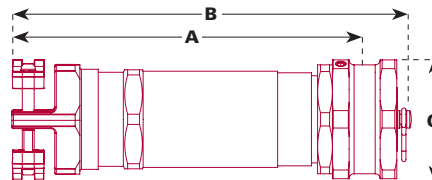
- Contacts – silver plated copper, crimp style
- Shells – high tensile strength aluminum; hard anodic coating per MIL-A-8625, Type III, black color
- Rigid insulators – thermoplastic
- Resilient inserts – silicone rubber



### Dimensions (in inches):

#### Cable mounted receptacle with mechanical clamp

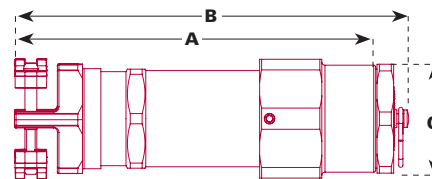
Base Cat. #  
CEX152



| A                  | B               | C     |
|--------------------|-----------------|-------|
| Length without cap | Length with cap | Width |
| 9.50               | 10.13           | 3.50  |

#### Cable mounted plug with mechanical clamp

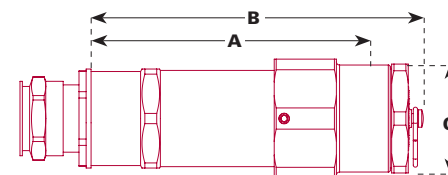
Base Cat. #  
CEX132



| A                  | B               | C     |
|--------------------|-----------------|-------|
| Length without cap | Length with cap | Width |
| 9.14               | 10.00           | 3.25  |

#### Cable mounted plug with EX cable gland

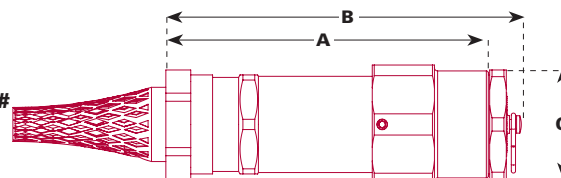
Base Cat. #  
CEX133



| A                  | B               | C     |
|--------------------|-----------------|-------|
| Length without cap | Length with cap | Width |
| 7.71               | 8.57            | 3.25  |

#### Cable mounted plug with basketweave

Base Cat. #  
CEX134



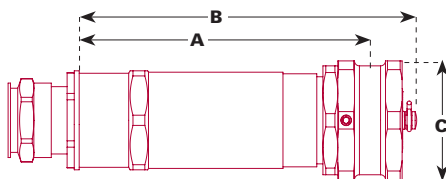
| A                  | B               | C     |
|--------------------|-----------------|-------|
| Length without cap | Length with cap | Width |
| 8.18               | 9.04            | 3.25  |

24 shell

## Dimensions (in inches) (continued):

### Cable mounted receptacle with EX cable gland

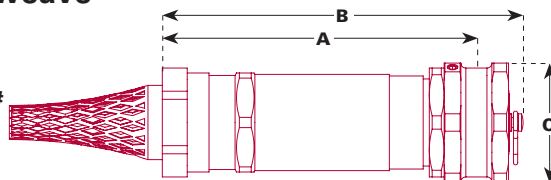
Base Cat. #  
CEX153



| A                  | B               | C     |
|--------------------|-----------------|-------|
| Length without cap | Length with cap | Width |
| 8.08               | 8.71            | 3.50  |

### Cable mounted receptacle with basketweave

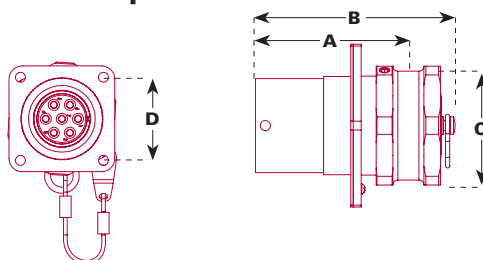
Base Cat. #  
CEX154



| A                  | B               | C     |
|--------------------|-----------------|-------|
| Length without cap | Length with cap | Width |
| 8.54               | 9.17            | 3.00  |

### Panel mounted receptacle

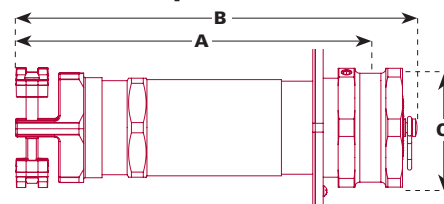
Base Cat. #  
CEX171



| A                  | B               | C     | D                      | Diameter   |
|--------------------|-----------------|-------|------------------------|------------|
| Length without cap | Length with cap | Width | Ctr. - ctr. mount hole | Mount hole |
| 4.89               | 5.52            | 3.50  | 2.84                   | 0.22       |

### Cable mounted square flange receptacle with mechanical clamp

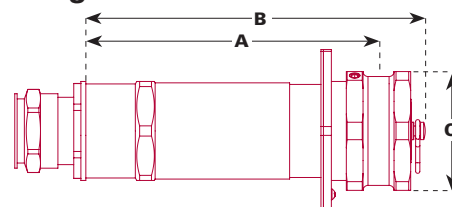
Base Cat. #  
CEX172



| A                  | B               | C     | D                      | Diameter   |
|--------------------|-----------------|-------|------------------------|------------|
| Length without cap | Length with cap | Width | Ctr. - ctr. mount hole | Mount hole |
| 9.50               | 10.13           | 3.50  | 2.84                   | 0.22       |

### Cable mounted square flange receptacle with EX cable gland

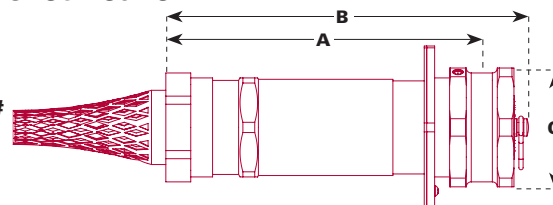
Base Cat. #  
CEX173



| A                  | B               | C     | D                      | Diameter   |
|--------------------|-----------------|-------|------------------------|------------|
| Length without cap | Length with cap | Width | Ctr. - ctr. mount hole | Mount hole |
| 8.08               | 8.71            | 3.50  | 2.84                   | 0.22       |

### Cable mounted square flange receptacle with basketweave

Base Cat. #  
CEX174



| A                  | B               | C     | D                      | Diameter   |
|--------------------|-----------------|-------|------------------------|------------|
| Length without cap | Length with cap | Width | Ctr. - ctr. mount hole | Mount hole |
| 8.54               | 9.17            | 3.50  | 2.84                   | 0.22       |



24 shell

Ordering information:

Part number example  
CEX-133D24-371PN-BS

CEX

Series

|     |                           |
|-----|---------------------------|
| CEX | Hazardous rated connector |
|-----|---------------------------|

13

Base call-out

|    |                    |
|----|--------------------|
| 13 | Male plug          |
| 15 | Female in-line     |
| 17 | Female panel mount |

3

Cable hardware

|                |                        |
|----------------|------------------------|
| 1 <sup>A</sup> | Panel mount            |
| 2 <sup>A</sup> | Mechanical clamp       |
| 3              | Ex d gland             |
| 4 <sup>A</sup> | Basketweave cable grip |

D

Grommet

|                |               |
|----------------|---------------|
| Cable diameter |               |
| in.            | mm.           |
| 16             | 0.875 - 1.000 |
| 18             | 1.000 - 1.125 |
| 20             | 1.125 - 1.250 |
| 22             | 1.250 - 1.375 |
| 24             | 1.375 - 1.500 |
| 26             | 1.500 - 1.625 |
| 28             | 1.625 - 1.750 |
| 30             | 1.750 - 1.875 |

24

Shell size

|     |                      |
|-----|----------------------|
| 24  | Connector shell size |
| C24 | C length shell size  |

Panel mount  
leave blank if cable hardware #1 (panel mount) is selected

Cable gland  
refer to the cable gland table below if cable hardware #3 (Ex d gland) is selected

Grommet  
refer to the grommet table below if cable hardware #2 or #4 option is selected

EX cable gland

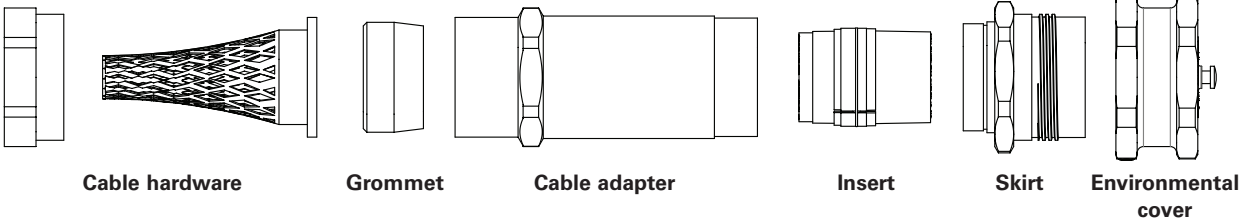
|    | Unarmored sheath | Armored      |              |              |
|----|------------------|--------------|--------------|--------------|
|    |                  | Inner sheath | Outer sheath | Armor (max.) |
| C2 | 23.0 - 34.0      | 23.0 - 34.0  | 29.0 - 41.0  | 2.0          |
| D  | 29.0 - 41.0      | 29.0 - 41.0  | 35.0 - 48.0  | 2.5          |
| D2 | 35.0 - 45.0      | 35.0 - 48.0  | 42.0 - 56.0  | 2.5          |
| E  | 42.0 - 56.0      | 42.0 - 53.0  | 50.0 - 65.0  | 2.5          |
| F  | 50.0 - 65.0      | 50.0 - 62.5  | 58.0 - 74.0  | 2.5          |

Contact amperage ratings:

| Contact size | Non-circuit breaking current rating at 55°C <sup>B</sup> |
|--------------|----------------------------------------------------------|
| 16 AWG       | 18                                                       |
| 12 AWG       | 30                                                       |
| 4/0 AWG      | 198                                                      |

NEC service voltage ratings:

| Service voltage | Non-circuit breaking | Circuit breaking |
|-----------------|----------------------|------------------|
|                 | DC volts RMS         | AC volts RMS     |
| A               | 250                  | 240              |
| D               | 600                  | 600              |
| E               | 600                  | 600              |
| B               | 600                  | 600              |



<sup>A</sup>Includes potting compound.  
<sup>B</sup>Cable current rating must meet or exceed the ratings of the contacts to utilize connector at fully rated current.

24 shell

371

P

N

BS

Contact gender

|   |               |
|---|---------------|
| P | Male pin      |
| S | Female socket |

Termination method

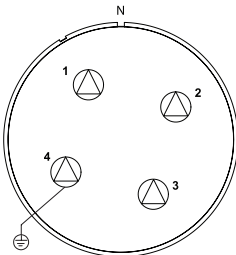
|   |          |
|---|----------|
| N | Crimp    |
| R | Pressure |

Alternate key position

|       |           |
|-------|-----------|
| BLANK | 0 degrees |
|-------|-----------|

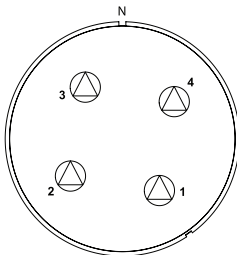
Cable gland

|       |                      |
|-------|----------------------|
| BLANK | Unarmored            |
| BS    | Armored and sheathed |



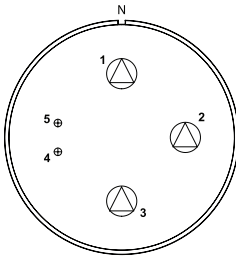
26

|                        |     |
|------------------------|-----|
| No. contacts           | 4   |
| AWG                    | 4/0 |
| Service voltage rating | D   |



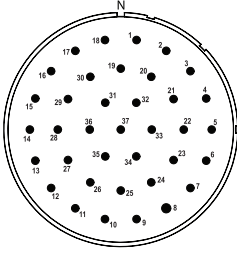
38

|                        |     |
|------------------------|-----|
| No. contacts           | 4   |
| AWG                    | 4/0 |
| Service voltage rating | D   |



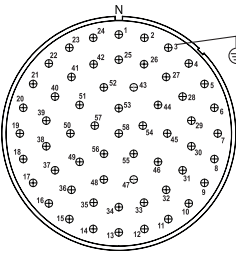
48G

|                        |    |     |
|------------------------|----|-----|
| No. contacts           | 2  | 3   |
| AWG                    | 12 | 4/0 |
| Service voltage rating | A  | D   |



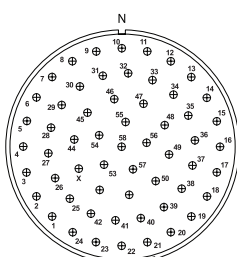
371

|                        |    |
|------------------------|----|
| No. contacts           | 37 |
| AWG                    | 16 |
| Service voltage rating | D  |



352

|                        |    |
|------------------------|----|
| No. contacts           | 58 |
| AWG                    | 12 |
| Service voltage rating | A  |



384

|                        |    |
|------------------------|----|
| No. contacts           | 58 |
| AWG                    | 12 |
| Service voltage rating | A  |

|                |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                      |                                                                                       |                                                                                       |                                                                                       |
|----------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Contact symbol |  |  |  |  |  |  |  |  |  |  |  |  |
| AWG            | 18                                                                                  | 16                                                                                  | 12                                                                                  | 10                                                                                  | 8                                                                                   | 4                                                                                   | 1/0                                                                                 | 4/0                                                                                 | 313 MCM                                                                              | 444 MCM                                                                               | 535 MCM                                                                               | 777 MCM                                                                               |

Ⓢ Made to order item. Contact factory for availability and lead time.

## 28 shell

### Applications:

- Hazardous location control and instrumentation

### Features:

- Reversible inserts are compatible with all panel mount, in-line, male and female shells
- Exclusive visual mating alignment
- Easily accessible wire terminals
- Ample wiring space within shells
- Reversible 8-point diamond cord grip relieves strain on conductors (patent pending)
- Suited for use with Type P cable
- EX cable glands available through Eaton's Crouse-Hinds Division
- Hexagon shell design with easy wrenching surfaces ensures adequate torquing
- Impact-resistant

### Certifications and compliances:

- CE marked
- AEx listed for U.S. Ex Zone 1 applications (ETL)
- Listed for Canada Ex Zone 1 applications (ETL)
- ATEX Group II Category 2 certified (ETL)
- IECEX Zone 1 certified (ETL)

### Environmental ratings:

- NEMA 4X, 6P; IP66, IP68
- Ambient temperature: certified for use from -60°C to +55°C

### Standard materials and finishes:

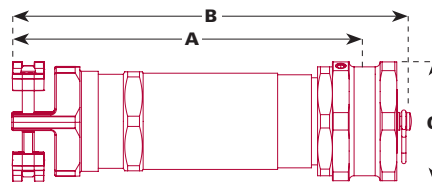
- Contacts – silver plated copper, crimp style
- Shells – high tensile strength aluminum; hard anodic coating per MIL-A-8625, Type III, black color
- Rigid insulators – thermoplastic
- Resilient inserts – silicone rubber



### Dimensions (in inches):

#### Cable mounted receptacle with mechanical clamp

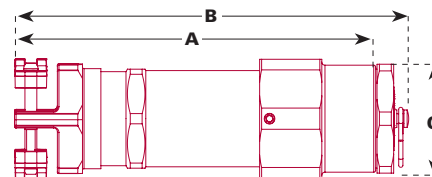
Base Cat. #  
CEX152



| A                  | B               | C     |
|--------------------|-----------------|-------|
| Length without cap | Length with cap | Width |
| 9.50               | 10.13           | 3.50  |

#### Cable mounted plug with mechanical clamp

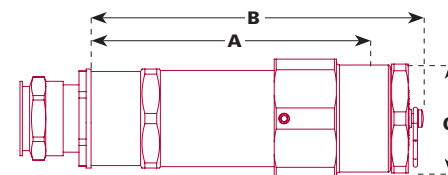
Base Cat. #  
CEX132



| A                  | B               | C     |
|--------------------|-----------------|-------|
| Length without cap | Length with cap | Width |
| 9.14               | 10.00           | 3.25  |

#### Cable mounted plug with EX cable gland

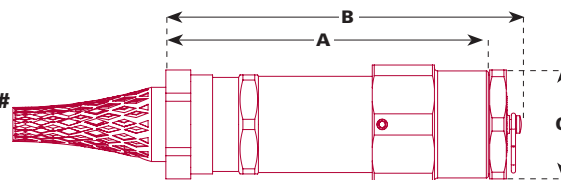
Base Cat. #  
CEX133



| A                  | B               | C     |
|--------------------|-----------------|-------|
| Length without cap | Length with cap | Width |
| 7.71               | 8.57            | 3.25  |

#### Cable mounted plug with basketweave

Base Cat. #  
CEX134



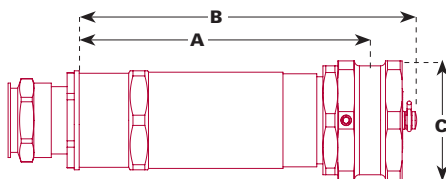
| A                  | B               | C     |
|--------------------|-----------------|-------|
| Length without cap | Length with cap | Width |
| 8.18               | 9.04            | 3.25  |

28 shell

## Dimensions (in inches) (continued):

### Cable mounted receptacle with EX cable gland

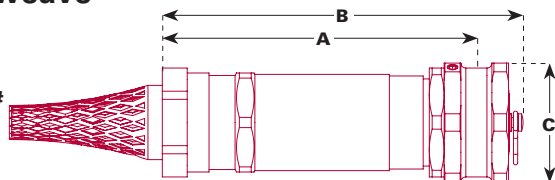
Base Cat. #  
CEX153



| A                  | B               | C     |
|--------------------|-----------------|-------|
| Length without cap | Length with cap | Width |
| 8.08               | 8.71            | 3.50  |

### Cable mounted receptacle with basketweave

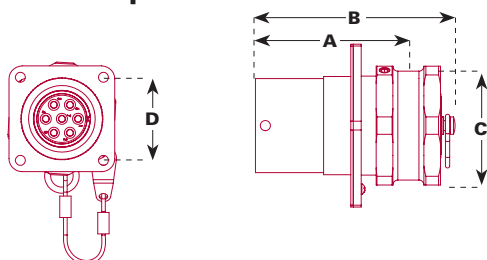
Base Cat. #  
CEX154



| A                  | B               | C     |
|--------------------|-----------------|-------|
| Length without cap | Length with cap | Width |
| 8.54               | 9.17            | 3.50  |

### Panel mounted receptacle

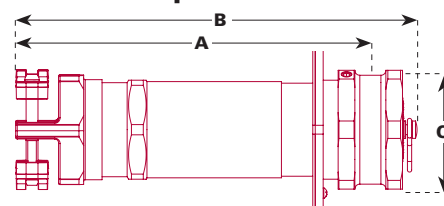
Base Cat. #  
CEX171



| A                  | B               | C     | D                      | Diameter   |
|--------------------|-----------------|-------|------------------------|------------|
| Length without cap | Length with cap | Width | Ctr. - ctr. mount hole | Mount hole |
| 4.89               | 5.52            | 3.50  | 2.84                   | 0.22       |

### Cable mounted square flange receptacle with mechanical clamp

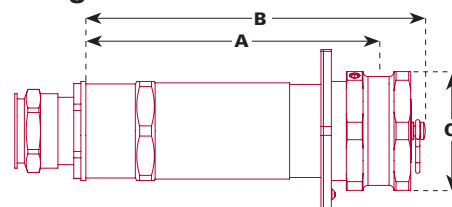
Base Cat. #  
CEX172



| A                  | B               | C     | D                      | Diameter   |
|--------------------|-----------------|-------|------------------------|------------|
| Length without cap | Length with cap | Width | Ctr. - ctr. mount hole | Mount hole |
| 9.50               | 10.13           | 3.50  | 2.84                   | 0.22       |

### Cable mounted square flange receptacle with EX cable gland

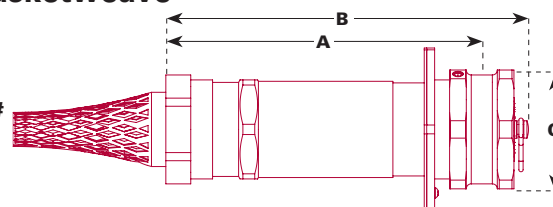
Base Cat. #  
CEX173



| A                  | B               | C     | D                      | Diameter   |
|--------------------|-----------------|-------|------------------------|------------|
| Length without cap | Length with cap | Width | Ctr. - ctr. mount hole | Mount hole |
| 8.08               | 8.71            | 3.50  | 2.84                   | 0.22       |

### Cable mounted square flange receptacle with basketweave

Base Cat. #  
CEX174



| A                  | B               | C     | D                      | Diameter   |
|--------------------|-----------------|-------|------------------------|------------|
| Length without cap | Length with cap | Width | Ctr. - ctr. mount hole | Mount hole |
| 8.54               | 9.17            | 3.50  | 2.84                   | 0.22       |

28 shell

Ordering information:

Part number example  
CEX-133D28-339PN-BS

**CEX**

**Series**  
CEX Hazardous rated connector

**13**

**Base call-out**  
13 Male plug  
15 Female in-line  
17 Female panel mount

**3**

**Cable hardware**  
1A Panel mount  
2A Mechanical clamp  
3 Eex d gland  
4A Basketweave cable grip

**D**

**Panel mount**  
leave blank if cable hardware #1 (panel mount) is selected

**Grommet**  
refer to the cable gland table below if cable hardware #3 (Eex d gland) is selected

**28**

**Shell size**  
28 Connector shell size  
C28 C length shell size

**EX cable gland**

|    | Unarmored sheath | Armored      |              |              |
|----|------------------|--------------|--------------|--------------|
|    |                  | Inner sheath | Outer sheath | Armor (max.) |
| D  | 29.0 - 41.0      | 29.0 - 41.0  | 35.0 - 48.0  | 2.5          |
| D2 | 35.0 - 45.0      | 35.0 - 48.0  | 42.0 - 56.0  | 2.5          |
| E  | 42.0 - 56.0      | 42.0 - 53.0  | 50.0 - 65.0  | 2.5          |
| F  | 50.0 - 65.0      | 50.0 - 62.5  | 58.0 - 74.0  | 2.5          |
| G  | 58.0 - 74.0      | 58.0 - 74.0  | 66.0 - 83.0  | 3.2          |
| G2 | 66.0 - 83.0      | 66.0 - 78.0  | 75.0 - 93.0  | 3.2          |

**Grommet**

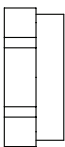
|    | Cable diameter |             |
|----|----------------|-------------|
|    | in.            | mm.         |
| 24 | 1.375 - 1.500  | 34.9 - 38.1 |
| 26 | 1.500 - 1.625  | 38.1 - 41.3 |
| 28 | 1.625 - 1.750  | 41.3 - 44.5 |
| 30 | 1.750 - 1.875  | 44.5 - 47.6 |
| 32 | 1.875 - 2.000  | 47.6 - 50.8 |
| 34 | 2.000 - 2.125  | 50.8 - 54.0 |
| 36 | 2.125 - 2.250  | 54.0 - 57.2 |
| 38 | 2.250 - 2.375  | 57.2 - 60.3 |
| 40 | 2.375 - 2.500  | 60.3 - 63.5 |
| 42 | 2.500 - 2.625  | 63.5 - 66.7 |
| 44 | 2.625 - 2.750  | 66.7 - 69.9 |
| 46 | 2.750 - 2.875  | 69.9 - 73.0 |

Contact amperage ratings:

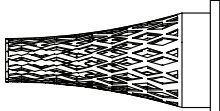
| Contact size | Non-circuit breaking current rating at 55°C <sup>B</sup> |
|--------------|----------------------------------------------------------|
| 12 AWG       | 30                                                       |
| 10 AWG       | 40                                                       |
| 8 AWG        | 55                                                       |
| 4/0 AWG      | 198                                                      |

NEC service voltage ratings:

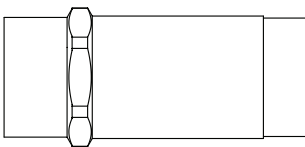
| Service voltage | Non-circuit breaking | Circuit breaking |
|-----------------|----------------------|------------------|
|                 | DC volts RMS         | AC volts RMS     |
| A               | 250                  | 240              |
| D               | 600                  | 600              |
| E               | 600                  | 600              |
| B               | 600                  | 600              |



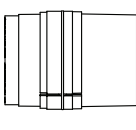
Cable hardware



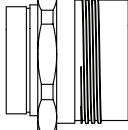
Grommet



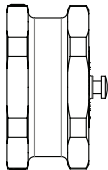
Cable adapter



Insert



Skirt



Environmental cover

<sup>A</sup>Includes potting compound.  
<sup>B</sup>Cable current rating must meet or exceed the ratings of the contacts to utilize connector at fully rated current.

28 shell

## 339

## P

## N

## BS

### Contact gender

|   |               |
|---|---------------|
| P | Male pin      |
| S | Female socket |

### Termination method

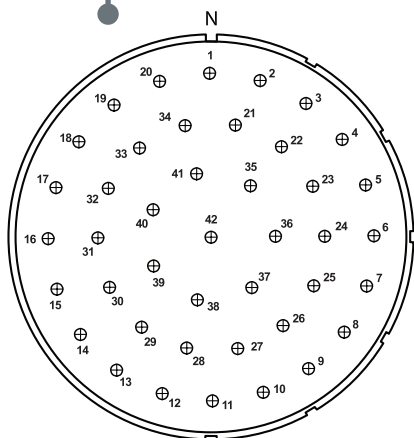
|   |          |
|---|----------|
| N | Crimp    |
| R | Pressure |

### Alternate key position

|       |           |
|-------|-----------|
| BLANK | 0 degrees |
|-------|-----------|

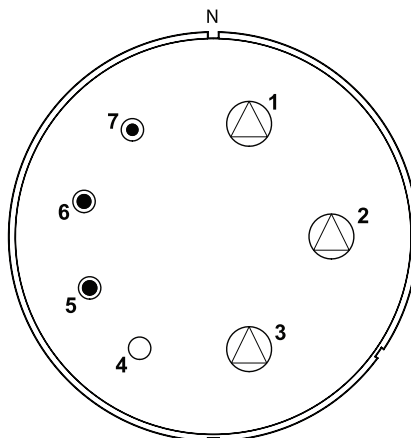
### Cable gland

|       |                      |
|-------|----------------------|
| BLANK | Unarmored            |
| BS    | Armored and sheathed |



### 339

|                        |    |
|------------------------|----|
| No. contacts           | 42 |
| AWG                    | 12 |
| Service voltage rating | D  |



### H44 (VFD insert)

|                        |     |   |    |
|------------------------|-----|---|----|
| No. contacts           | 3   | 3 | 1  |
| AWG                    | 4/0 | 8 | 10 |
| Service voltage rating | D   |   |    |

| Contact symbol |    |    |    |    |   |   |     |     |         |         |         |         |
|----------------|----|----|----|----|---|---|-----|-----|---------|---------|---------|---------|
| AWG            | 18 | 16 | 12 | 10 | 8 | 4 | 1/0 | 4/0 | 313 MCM | 444 MCM | 535 MCM | 777 MCM |

## C24 shell

### Applications:

- Hazardous location control and instrumentation

### Features:

- Reversible inserts are compatible with all panel mount, in-line, male and female shells
- Exclusive visual mating alignment
- Easily accessible wire terminals
- Ample wiring space within shells
- Reversible 8-point diamond cord grip relieves strain on conductors (patent pending)
- Suited for use with Type P cable
- EX cable glands available through Eaton's Crouse-Hinds Division
- Hexagon shell design with easy wrenching surfaces ensures adequate torquing
- Impact-resistant

### Certifications and compliances:

- CE marked
- AEx listed for U.S. Ex Zone 1 applications (ETL)
- Listed for Canada Ex Zone 1 applications (ETL)
- ATEX Group II Category 2 certified (ETL)
- IECEX Zone 1 certified (ETL)

### Environmental ratings:

- NEMA 4X, 6P; IP66, IP68
- Ambient temperature: certified for use from -60°C to +55°C

### Standard materials and finishes:

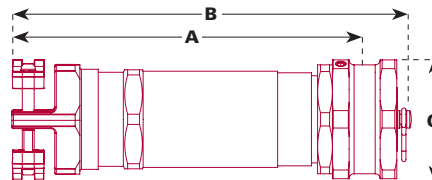
- Contacts – silver plated copper, crimp style
- Shells – high tensile strength aluminum; hard anodic coating per MIL-A-8625, Type III, black color
- Rigid insulators – thermoplastic
- Resilient inserts – silicone rubber



### Dimensions (in inches):

#### Cable mounted receptacle with mechanical clamp

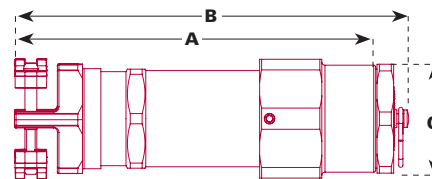
Base Cat. #  
CEX152



| A                  | B               | C     |
|--------------------|-----------------|-------|
| Length without cap | Length with cap | Width |
| 10.00              | 10.63           | 3.50  |

#### Cable mounted plug with mechanical clamp

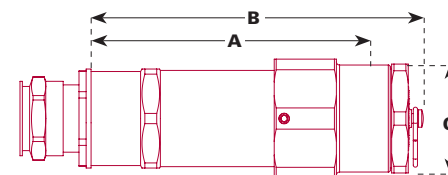
Base Cat. #  
CEX132



| A                  | B               | C     |
|--------------------|-----------------|-------|
| Length without cap | Length with cap | Width |
| 9.64               | 10.50           | 3.25  |

#### Cable mounted plug with EX cable gland

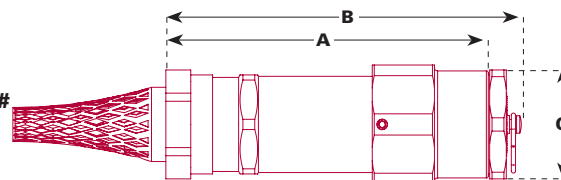
Base Cat. #  
CEX133



| A                  | B               | C     |
|--------------------|-----------------|-------|
| Length without cap | Length with cap | Width |
| 8.21               | 9.07            | 3.25  |

#### Cable mounted plug with basketweave

Base Cat. #  
CEX134



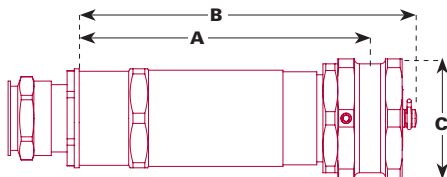
| A                  | B               | C     |
|--------------------|-----------------|-------|
| Length without cap | Length with cap | Width |
| 8.68               | 9.54            | 3.50  |

## C24 shell

### Dimensions (in inches) (continued):

#### Cable mounted receptacle with EX cable gland

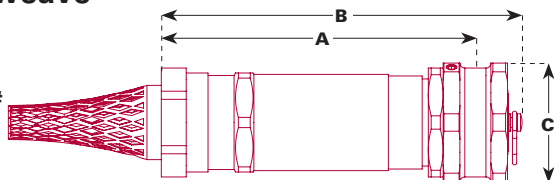
Base Cat. #  
CEX153



| A                  | B               | C     |
|--------------------|-----------------|-------|
| Length without cap | Length with cap | Width |
| 8.58               | 9.21            | 3.50  |

#### Cable mounted receptacle with basketweave

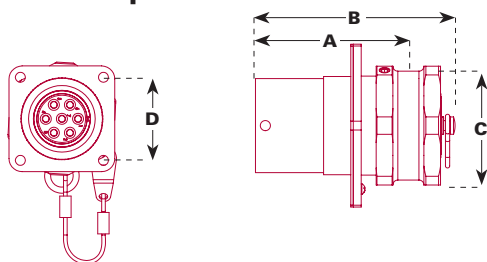
Base Cat. #  
CEX154



| A                  | B               | C     |
|--------------------|-----------------|-------|
| Length without cap | Length with cap | Width |
| 9.04               | 9.67            | 3.50  |

#### Panel mounted receptacle

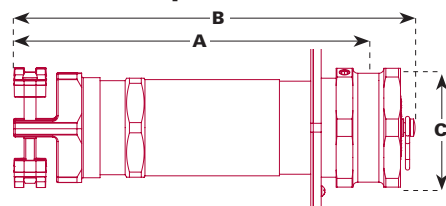
Base Cat. #  
CEX171



| A                  | B               | C     | D                      | Diameter   |
|--------------------|-----------------|-------|------------------------|------------|
| Length without cap | Length with cap | Width | Ctr. - ctr. mount hole | Mount hole |
| 5.39               | 6.02            | 3.50  | 2.84                   | 0.22       |

#### Cable mounted square flange receptacle with mechanical clamp

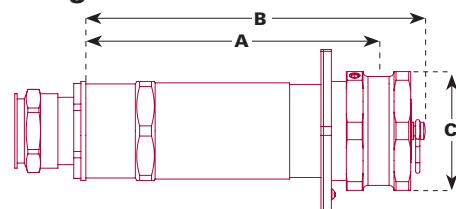
Base Cat. #  
CEX172



| A                  | B               | C     | D                      | Diameter   |
|--------------------|-----------------|-------|------------------------|------------|
| Length without cap | Length with cap | Width | Ctr. - ctr. mount hole | Mount hole |
| 10.00              | 10.63           | 3.50  | 2.84                   | 0.22       |

#### Cable mounted square flange receptacle with EX cable gland

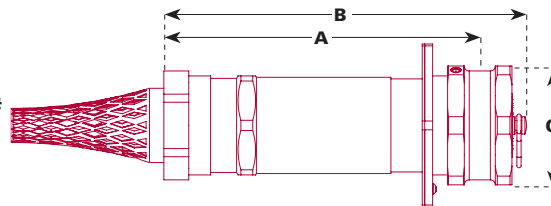
Base Cat. #  
CEX173



| A                  | B               | C     | D                      | Diameter   |
|--------------------|-----------------|-------|------------------------|------------|
| Length without cap | Length with cap | Width | Ctr. - ctr. mount hole | Mount hole |
| 8.58               | 9.21            | 3.50  | 2.84                   | 0.22       |

#### Cable mounted square flange receptacle with basketweave

Base Cat. #  
CEX174



| A                  | B               | C     | D                      | Diameter   |
|--------------------|-----------------|-------|------------------------|------------|
| Length without cap | Length with cap | Width | Ctr. - ctr. mount hole | Mount hole |
| 9.04               | 9.67            | 3.50  | 2.84                   | 0.22       |



C24 shell

Ordering information:

Part number example  
CEX-133DC24-313PN-BS

**CEX**

**Series**

|     |                           |
|-----|---------------------------|
| CEX | Hazardous rated connector |
|-----|---------------------------|

**13**

**Base call-out**

|    |                    |
|----|--------------------|
| 13 | Male plug          |
| 15 | Female in-line     |
| 17 | Female panel mount |

**3**

**Cable hardware**

|                |                        |
|----------------|------------------------|
| 1 <sup>A</sup> | Panel mount            |
| 2 <sup>A</sup> | Mechanical clamp       |
| 3              | Eex d gland            |
| 4 <sup>A</sup> | Basketweave cable grip |

Panel mount  
leave blank if cable hardware #1 (panel mount) is selected

Cable gland  
refer to the cable gland table below if cable hardware #3 (Eex d gland) is selected

Grommet  
refer to the grommet table below if cable hardware #2 or #4 option is selected

**D**

**EX cable gland**

|    | Unarmored sheath | Armored      |              |              |
|----|------------------|--------------|--------------|--------------|
|    |                  | Inner sheath | Outer sheath | Armor (max.) |
| C2 | 23.0 - 34.0      | 23.0 - 34.0  | 29.0 - 41.0  | 2.0          |
| D  | 29.0 - 41.0      | 29.0 - 41.0  | 35.0 - 48.0  | 2.5          |
| D2 | 35.0 - 45.0      | 35.0 - 48.0  | 42.0 - 56.0  | 2.5          |
| E  | 42.0 - 56.0      | 42.0 - 53.0  | 50.0 - 65.0  | 2.5          |
| F  | 50.0 - 65.0      | 50.0 - 62.5  | 58.0 - 74.0  | 2.5          |

**C24**

**Shell size**

|     |                      |
|-----|----------------------|
| C24 | Connector shell size |
|-----|----------------------|

**Grommet**

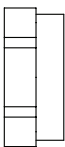
|       | Cable diameter                                              |             |
|-------|-------------------------------------------------------------|-------------|
|       | in.                                                         | mm.         |
| BLANK | If 'R' or 'N' are chosen in Cable Size/Entry category above |             |
| 16    | 0.875 - 1.000                                               | 22.2 - 25.4 |
| 18    | 1.000 - 1.125                                               | 25.4 - 28.6 |
| 20    | 1.125 - 1.250                                               | 28.6 - 31.8 |
| 22    | 1.250 - 1.375                                               | 31.8 - 34.9 |
| 24    | 1.375 - 1.500                                               | 34.9 - 38.1 |
| 26    | 1.500 - 1.625                                               | 38.1 - 41.2 |
| 28    | 1.625 - 1.750                                               | 41.2 - 44.4 |
| 30    | 1.750 - 1.875                                               | 44.4 - 47.6 |

Contact amperage ratings:

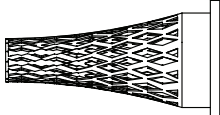
| Contact size | Non-circuit breaking current rating at 55°C <sup>B</sup> |
|--------------|----------------------------------------------------------|
| 313 MCM      | 502                                                      |
| 444 MCM      | 722                                                      |
| 535 MCM      | 815                                                      |
| 777 MCM      | 1030                                                     |

Service voltage ratings:

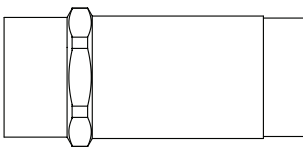
| Service voltage | Non-circuit breaking | Circuit breaking |
|-----------------|----------------------|------------------|
|                 | DC volts RMS         | AC volts RMS     |
| A               | 250                  | 240              |
| D               | 600                  | 600              |
| E               | 600                  | 600              |
| B               | 600                  | 600              |



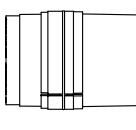
Cable hardware



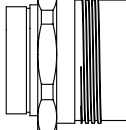
Grommet



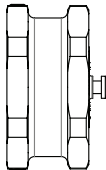
Cable adapter



Insert



Skirt



Environmental cover

<sup>A</sup>Includes potting compound.  
<sup>B</sup>Cable current rating must meet or exceed the ratings of the contacts to utilize connector at fully rated current.

C24 shell

## 313

## P

## N

## BS

### Contact gender

|          |               |
|----------|---------------|
| <b>P</b> | Male pin      |
| <b>S</b> | Female socket |

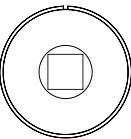
### Termination method

|          |       |
|----------|-------|
| <b>N</b> | Crimp |
|----------|-------|

### Cable gland

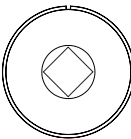
|              |                      |
|--------------|----------------------|
| <b>BLANK</b> | Unarmored            |
| <b>BS</b>    | Armored and sheathed |

### 313



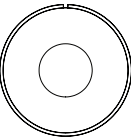
|                        |         |
|------------------------|---------|
| No. contacts           | 1       |
| AWG                    | 313 MCM |
| Service voltage rating | 1000V   |
| Current rating         | 502A    |

### 444



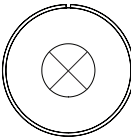
|                        |         |
|------------------------|---------|
| No. contacts           | 1       |
| AWG                    | 444 MCM |
| Service voltage rating | 1000V   |
| Current rating         | 722A    |

### 535



|                        |         |
|------------------------|---------|
| No. contacts           | 1       |
| AWG                    | 535 MCM |
| Service voltage rating | 1000V   |
| Current rating         | 815A    |

### 386



|                        |         |
|------------------------|---------|
| No. contacts           | 1       |
| AWG                    | 777 MCM |
| Service voltage rating | 1000V   |
| Current rating         | 1030A   |

| Contact symbol |    |    |    |    |   |   |     |     |         |         |         |         |  |
|----------------|----|----|----|----|---|---|-----|-----|---------|---------|---------|---------|--|
| AWG            | 18 | 16 | 12 | 10 | 8 | 4 | 1/0 | 4/0 | 313 MCM | 444 MCM | 535 MCM | 777 MCM |  |