



**EPX<sup>®</sup> Series**  
EN4644





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## Introduction

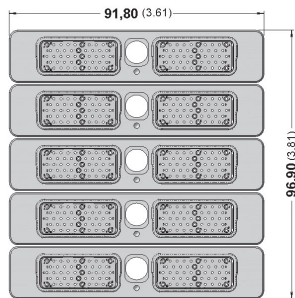
Radiall is recognized in the Aerospace and Defense industries for offering one of the broadest innovative product portfolios for connector interconnect solutions. The benefit of our experience with ARINC connectors permits Radiall to provide customers with a strong and global solution.

The EPX® series offers a wide range of solutions based on two insert sizes with a large variety of shells and contacts. This product range provides an excellent trade-off between the number of available contacts and the space used. The EPX® series is completely modular and expandable.

The EPX® series connectors are standardized by the EN4644 European standard.

A **high density solution** compared to circular connectors:

- Slim shell design with high contact density
- Stackable shells do not require additional space for locking and unlocking the connectors



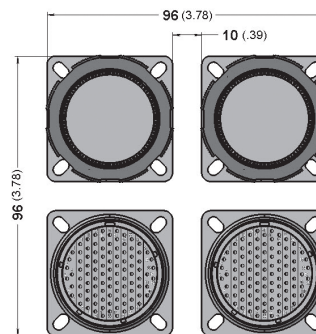
### EPXB:

5 shells #2 with 2\*48 Cts

--> Total Cts: 480

--> Total surface:  $96.90 * 91.80 = 8895.42 \text{ mm}^2$

Gives  $18.53 \text{ mm}^2/\text{contact}$



### 38999 :

4 shells #23 with 100 Cts

--> Total Cts: 400

--> Total surface:  $96.00 * 96.00 = 9216 \text{ mm}^2$

Gives  $23.04 \text{ mm}^2/\text{contact}$

A **cost saving** and **user-friendly** solution:

- Inserts can be wired in the workshop and later installed in the shells
- A common panel cut-out simplifies the connector installation
- Inserts can be easily installed and removed from the shell
- Inserts and shells are keyed to prevent mis-mating
- Standard Mil spec tools for contact crimping and contact insertion/extraction
- Field replaceable sub-assemblies
- Vibration resistant self-locking threads

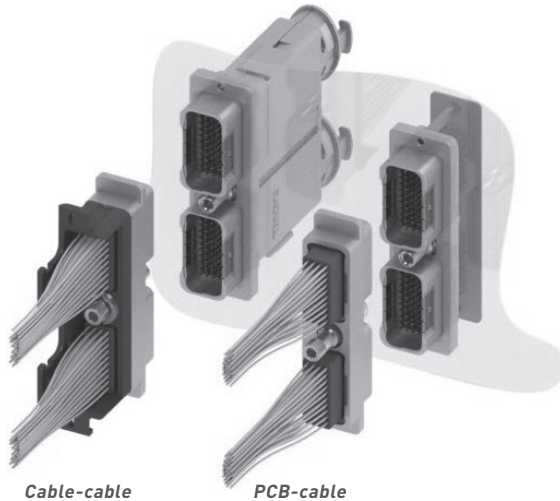
A **modular concept** with a large variety of options:

- Shell can accommodate a wide variety of inserts for signal, power, coax, data bus, fiber optic and high frequency BMA contacts
- Optional ground blocks (to meet the FAA HIRF requirements)
- Pin and socket inserts can be installed in either plug or receptacle shells (pin contacts are always fitted in the pin insert)

EPX® a **versatile solution** available in two different versions:

- Aluminium
- Composite

## Disconnect Application



EPX® connectors (EPXA, EPXB1 and EPXB2) are specially designed to be used in cable-cable disconnect applications and PCB-cable disconnect applications.

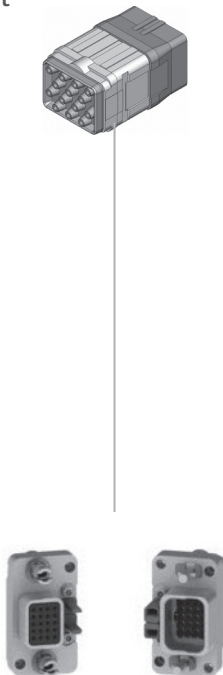
The principle of EPX® disconnect connectors is that the locking system is located on the connector itself.

EPX® connectors for disconnect applications address three main needs:

- Compactness: the design of the locking system allows an access from the back of the shell so that connectors can be stacked. Space can be easily saved
- Modularity: connectors use similar tools and accessories so that spare parts are reduced
- Ease of assembly: when on a panel, the connector is easy to mate with the use of a standard Allen wrench tool (available at Radiall or anywhere)

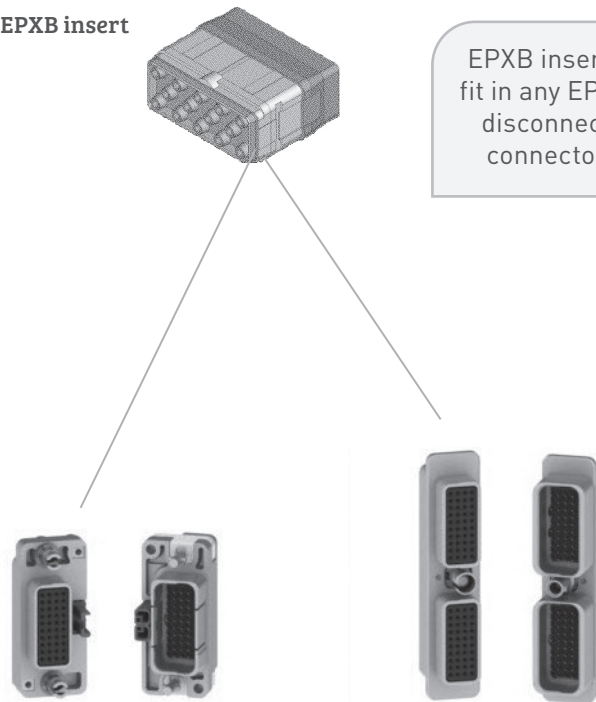
The modularity of this series allows you to configure a connector with higher performances (environmental, grounding blocks, shell mountings, etc). Several accessories offer you the possibility to create harnesses, like the 38999 series.

EPXA insert



EPXA connector

EPXB insert



EPXB1 connector

EPXB2 connector

EPXB inserts fit in any EPXB disconnect connector

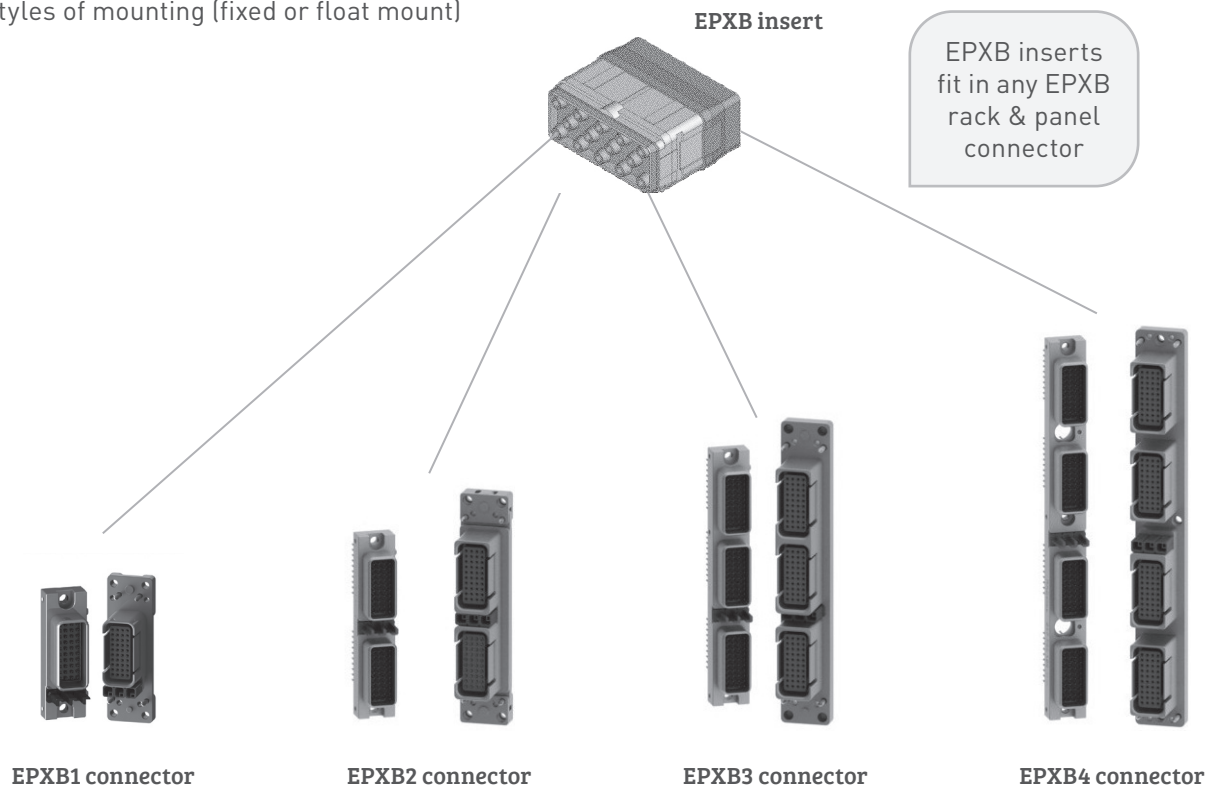
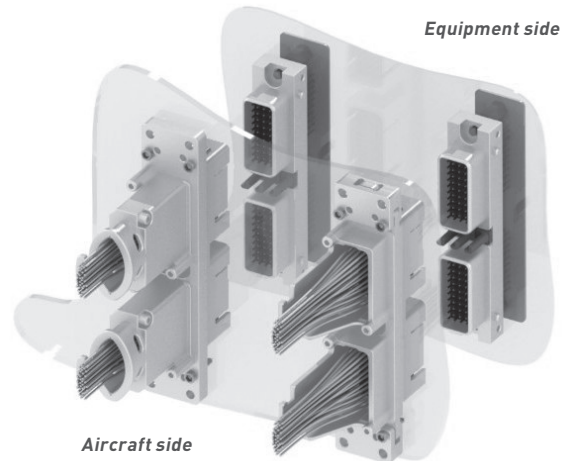
## Rack and Panel Application

In response to the need of system miniaturization and new equipment design, Radiall introduces its new rack and panel connectors dedicated to Line Replaceable Module (LRM) applications.

The EPX® rack and panel connectors are intended for blind mate applications. The plug connector is designed to be used in a Line Replaceable Module (LRM) while the receptacle is installed on the aircraft rack. There is no locking mechanism on these blind mate connectors, that feature is part of the equipment interface to the aircraft.

Radiall rack and panel modules offer:

- A wide range of connectors from size 1 to 4 based on the same design. They all use the same accessories, polarization and mounting style in order to standardize the EPX® series
- Reliable system: the polarization device prevents any mounting mistakes between the panel and the receptacle shell, and also between the plug and the receptacle shells
- Modularity in mounting EPX® connectors: EPX® rack and panel receptacles feature Arinc 600 functionality combined with a space saving design which provides several styles of mounting (fixed or float mount)



## Technical Characteristics for Disconnect Connectors

### ELECTRICAL CHARACTERISTICS

#### EMI shielding effectiveness EN2591-213

| Frequency (MHz) | Leakage attenuation (dB) |
|-----------------|--------------------------|
| 100             | 65                       |
| 200 & 300       | 63                       |
| 400             | 62                       |
| 500 & 600       | 60                       |

### OTHER CHARACTERISTICS

- **Shell to shell conductivity** < 2.5 mΩ, operating voltage: 400 Vrms or 500 Vdc at sea level, according to EN2591-205
- **Voltage stability (ground block):** Maximum variation 4mV according to SAE AS 81714 (MIL-T-81714)
- **Lightning stike:** - 5kA - 1600V for EPX® connectors in aluminium version  
- 3kA - 1600V for EPX® connectors in composite version

### MECHANICAL CHARACTERISTICS

#### Mating/unmating

| Shell type | Material  | Mating/Unmating           |
|------------|-----------|---------------------------|
| EPXA       | Aluminium | 100 cycles                |
| EPXB1      | Aluminium | 100 cycles                |
| EPXB1      | Composite | 100 cycles                |
| EPXB2      | Composite | 100 cycles <sup>(1)</sup> |
| EPXB2      | Aluminium | 100 cycles <sup>(1)</sup> |

### VIBRATION & SHOCK

| Shell type                            | Material  | Vibration                                                                | Shock                                       |
|---------------------------------------|-----------|--------------------------------------------------------------------------|---------------------------------------------|
|                                       |           | For 8 hrs on each of the 3 axis/ interruption <1µs EN2591-403 EIA 364-28 | 3 shocks on each axis EN2591-402 EIA 364-27 |
| EPXA                                  | Aluminium | Acceleration 27.8g (test condition 6 letter G)                           | Shock amplitude 50g /duration 11ms          |
| EPXB1                                 | Aluminium |                                                                          |                                             |
| EPXB1                                 | Composite |                                                                          | Shock amplitude 300g /duration 3ms          |
| EPXB2                                 | Composite |                                                                          |                                             |
| EPXB2                                 | Aluminium | Acceleration 16.9g (test condition 5 letter E)                           | Shock amplitude 50g /duration 11ms          |
| Disconnect EPX® with Quadrax contacts | /         |                                                                          |                                             |

#### NOTE:

(1) 500 mating cycles possible when using lubricant (as per the standard Mil-spec DOD G 24508) on locking device

## Technical Characteristics for Rack &amp; Panel Connectors

**ELECTRICAL CHARACTERISTICS****EMI shielding effectiveness en2591-213**

| Frequency (MHz) | Leakage attenuation (dB) |
|-----------------|--------------------------|
| 100             | 65                       |
| 200 & 300       | 63                       |
| 400             | 62                       |
| 500 & 600       | 60                       |

**OTHER CHARACTERISTICS**

- **Shell to shell conductivity** < 2.5 m Ω, operating voltage: 400 Vrms or 500 Vdc at sea level, according to EN2591-205
- **Voltage stability (ground block):** Maximum variation 4mV according to SAE AS 81714 (MIL-T-81714)
- **Lightning stike:** - 5kA - 1600V for EPX® connectors in aluminium version  
- 3kA - 1600V for EPX® connectors in composite version

**MECHANICAL CHARACTERISTICS****Mating/unmating**

| Shell type | Material  | Mating/Unmating |
|------------|-----------|-----------------|
| EPXB1      | Aluminium | 500 cycles      |
| EPXB2      |           | 500 cycles      |
| EPXB3      |           | 500 cycles      |
| EPXB4      |           | 500 cycles      |

The minimum mating forces are described in the EN4644 standard and depends on the connector size and insert arrangement. Consult Radiall for more information.

**VIBRATION & SHOCK**

| Shell type | Material  | Vibration                                                                | Shock                                       |
|------------|-----------|--------------------------------------------------------------------------|---------------------------------------------|
|            |           | For 8 hrs on each of the 3 axis/ interruption <1µs EN2591-403 EIA 364-28 | 3 shocks on each axis EN2591-402 EIA 364-27 |
| EPXB1      | Aluminium | Acceleration 16.9g (test condition 5 letter E)                           | Shock amplitude 50g /duration 11ms          |
| EPXB2      |           |                                                                          |                                             |
| EPXB3      |           |                                                                          |                                             |
| EPXB4      |           |                                                                          |                                             |

## Technical Characteristics for Inserts & Contacts

### ELECTRICAL CHARACTERISTICS

Electrical characteristics conform to SAE AS 39029 (MIL-C-39029 type A)

Contacts conform to EN3155-076 and EN3155-077

### CONTACTS

| Contact size | Wire size | Max current Amps |
|--------------|-----------|------------------|
| 22           | AWG22     | 5                |
|              | AWG24     | 3                |
|              | AWG26     | 2                |
| 20           | AWG20     | 7.5              |
|              | AWG22     | 5                |
|              | AWG24     | 3                |
| 16           | AWG16     | 13               |
|              | AWG18     | 10               |
|              | AWG20     | 7.5              |
| 12           | AWG12     | 23               |
|              | AWG14     | 17               |
|              | AWG16     | 13               |
| 8            | AWG8      | 46               |
|              | AWG10     | 33               |
| 5            | AWG8      | 80 <sup>m</sup>  |
|              | AWG10     | 33               |

**NOTE:**

(1) Size 5 contacts are not part of SAE AS 39029 (MIL-C-39029 type A). They are qualified by Radiall to 80 Amps

### GROUND BLOCK CONTACT

|                             | Contact with wire size | Max current Amps |
|-----------------------------|------------------------|------------------|
| Contact to contact          | Contact + AWG20        | 7.5              |
| Contact to mounting surface | Contact + AWG20        | 7.5              |

### DIELECTRIC WITHSTANDING VOLTAGE EN2591-207 EIA 364-20 with leakage current < 1mΩ

| Level       | Environmental inserts voltage (VRMS) | Non-environmental voltage (VRMS) |
|-------------|--------------------------------------|----------------------------------|
| Sea level   | 1500                                 | 1500                             |
| 50,000 feet | 800                                  | 600                              |
| 70,000 feet | 800                                  | 300                              |

### INSULATION RESISTANCE EN2591-206 EIA 364-21

| Temperature         | Insulation resistance |
|---------------------|-----------------------|
| Ambient temperature | > 5000 MΩ             |
| 175°C [+347°F]      | > 200 MΩ              |

## Mechanical Characteristics

### RETENTION CHARACTERISTICS

Contact retention EN2591-409 EIA 364-29 in terminated connectors.

| Contact size | Retention force  | Max displacement  |
|--------------|------------------|-------------------|
| Ground block | 88N (20 lbs)     | 0.30mm (.012 in.) |
| 22           | 53.4N (12 lbs)   | 0.38mm (.015 in.) |
| 20           | 89N (20 lbs)     | 0.38mm (.015 in.) |
| 16           | 111.2N (25 lbs)  | 0.38mm (.015 in.) |
| 12           | 133.45N (30 lbs) | 0.38mm (.015 in.) |
| 8            | 133.45N (30 lbs) | 0.38mm (.015 in.) |
| 5            | 133.45N (30 lbs) | 0.38mm (.015 in.) |

- **Insert retention:** 400N (90 lbs) EN2591-410 EIA 364-35
- **Maximum insert displacement in the shell cavity:** 0.30mm (.012 in.)

### ENVIRONMENTAL CHARACTERISTICS

#### Temperature

- **Temperature range:** -65°C/+175°C (-85°F/+347°F) according to EIA364-32 and EN2591-305
- **Temperature range:** -65°C/+125°C (-85°F/+257°F) for EPXB2 composite shell and for Rack & Panel EPXB
- **Temperature life:** 1000 hours at maximum temperature

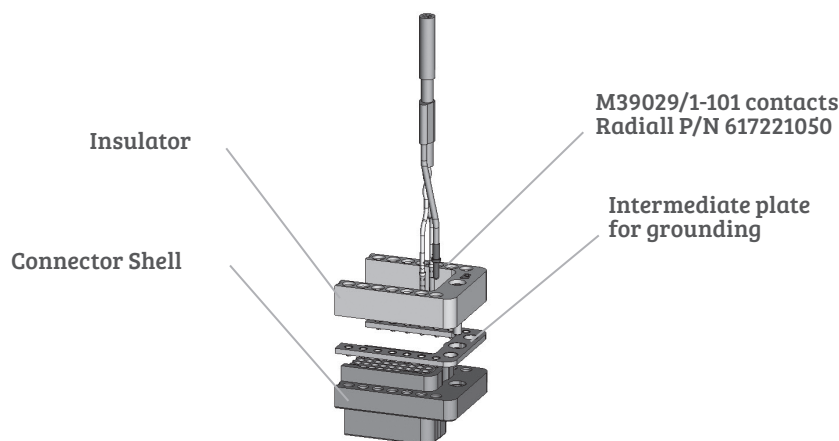
### OTHER CHARACTERISTICS

- **Salt spray:** 96 hours (nickel-plated aluminium and composite) EN2591-307 EIA 364-26 test condition A
- **Humidity:** 10 days with temperature variation from -10°C to +65°C EIA 364-31 Method 4, test condition B
- **Altitude immersion:** 3 cycles at 50,000 feet EN2591-314 EIA 364-03

### GROUND BLOCK

Radiall provides a unique patented feature by integrating a ground block directly on the shell

**This option permits very short ground terminations**



## Insert Selection Table

Insert name should be used when ordering EPX® insert  
Insert code should be used when ordering kit assembly

| Series | Insert name | Insert code | Contact Size & Type <sup>(1)</sup> |       |               |                     |                             |               |       |                   |     |               |       | Total contacts |
|--------|-------------|-------------|------------------------------------|-------|---------------|---------------------|-----------------------------|---------------|-------|-------------------|-----|---------------|-------|----------------|
|        |             |             | 22*                                | 20*   | 15 or 16*     | 16                  | 16                          | 12*           | 8     | 8                 | 8   | 5             | 5     |                |
|        |             |             | Signal                             | Power | Power or coax | LuxCis® fiber optic | Power in fiber optic cavity | Power or coax | Power | Quadrax or twinax | BMA | Coax or triax | Power |                |
| EPXA   | 00          | 0           |                                    |       |               |                     |                             |               |       |                   |     |               |       | 0              |
|        | 1C1         | A           |                                    |       |               |                     |                             |               |       |                   |     | 1             |       | 1              |
|        | 1P1         | B           |                                    |       |               |                     |                             |               |       |                   |     |               | 1     | 1              |
|        | 04          | C           |                                    |       | 2             |                     |                             | 2             |       |                   |     |               |       | 4              |
|        | 09          | D           |                                    | 3     | 6             |                     |                             |               |       |                   |     |               |       | 9              |
|        | 14          | E           |                                    | 14    |               |                     |                             |               |       |                   |     |               |       | 14             |
|        | 14M         | F           | 8                                  | 3     | 3             |                     |                             |               |       |                   |     |               |       | 14             |
|        | 17          | G           | 12                                 | 5     |               |                     |                             |               |       |                   |     |               |       | 17             |
|        | 20          | H           | 20                                 |       |               |                     |                             |               |       |                   |     |               |       | 20             |
| EPXB   | 00          | 0           |                                    |       |               |                     |                             |               |       |                   |     |               |       | 0              |
|        | C3          | A           |                                    |       |               |                     |                             |               |       |                   |     | 3             |       | 3              |
|        | P3          | B           |                                    |       |               |                     |                             |               |       |                   |     |               | 3     | 3              |
|        | 3Q3         | C           |                                    |       |               |                     |                             |               |       | 3                 |     |               |       | 3              |
|        | 06          | D           |                                    |       |               |                     |                             | 6             |       |                   |     |               |       | 6              |
|        | 10Q2        | E           |                                    | 8     |               |                     |                             |               |       | 2                 |     |               |       | 10             |
|        | 12F6        | F           |                                    |       |               | 6                   | 6                           |               |       |                   |     |               |       | 12             |
|        | F12C        | G           |                                    |       |               | 12                  |                             |               |       |                   |     |               |       | 12             |
|        | 13C1        | H           |                                    | 6     | 4             |                     |                             | 2             |       |                   |     | 1             |       | 13             |
|        | 13P1        | J           |                                    | 6     | 4             |                     |                             | 2             |       |                   |     |               | 1     | 13             |
|        | 14          | K           |                                    |       | 14            |                     |                             |               |       |                   |     |               |       | 14             |
|        | 17          | L           |                                    | 14    |               |                     |                             | 3             |       |                   |     |               |       | 17             |
|        | 20C1        | M           |                                    | 19    |               |                     |                             |               |       |                   |     | 1             |       | 20             |
|        | 20P1        | N           |                                    | 19    |               |                     |                             |               |       |                   |     |               | 1     | 20             |
|        | 22          | P           |                                    | 16    | 6             |                     |                             |               |       |                   |     |               |       | 22             |
|        | 22V         | Q           |                                    | 16    | 6             |                     |                             |               |       |                   |     |               |       | 22             |
|        | 25P1        | R           | 24                                 |       |               |                     |                             |               | 1     |                   |     |               |       | 25             |
|        | 25Q1        | S           | 24                                 |       |               |                     |                             |               |       | 1                 |     |               |       | 25             |
|        | 28          | T           | 22                                 |       | 6             |                     |                             |               |       |                   |     |               |       | 28             |
|        | 30          | U           |                                    | 30    |               |                     |                             |               |       |                   |     |               |       | 30             |
|        | 34          | W           | 18                                 | 16    |               |                     |                             |               |       |                   |     |               |       | 34             |
|        | 40          | X           | 40                                 |       |               |                     |                             |               |       |                   |     |               |       | 40             |
|        | 48          | Y           | 48                                 |       |               |                     |                             |               |       |                   |     |               |       | 48             |
|        | 3T3         | Z           |                                    |       |               |                     |                             |               |       |                   | 3   |               |       | 3              |

### NOTE:

(1) Only contacts marked with an asterisk (\*) are included with EPX® inserts  
All other contacts must be ordered separately (coax, twinax, quadrax and fiber optic contacts)

## How to order EPX® inserts

Only crimp contacts can be delivered with insert

|  |     |   |   |    |   |   |   |
|--|-----|---|---|----|---|---|---|
|  | EPX | B | E | 40 | P | B | S |
|--|-----|---|---|----|---|---|---|

**Series prefix** \_\_\_\_\_

**Insert size<sup>(1)</sup>** \_\_\_\_\_

**A:** Insert for EPXA  
**B:** Insert for EPXB1, EPXB2, EPXB3 or EPXB4

**Class<sup>(2)</sup>** \_\_\_\_\_

**E:** Environmental  
**N:** Non-environmental (no rear grommet, no interfacial seal)  
**H:** Non-environmental with a rear grommet, available for pin insert only (recommended for crimp contacts)  
**T:** Non-environmental with an interfacial seal, available for pin insert only (recommended for PC tail contacts)

**Insert name** \_\_\_\_\_  
 Refer to table on page 1-12 for insert arrangements

**Insert type** \_\_\_\_\_

**P:** Pin  
**S:** Socket

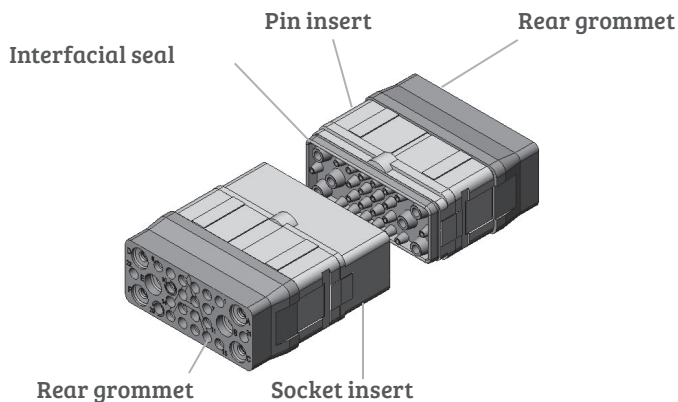
**Insert keying<sup>(3)</sup>** \_\_\_\_\_

**A:** Keying A  
**B:** Keying B

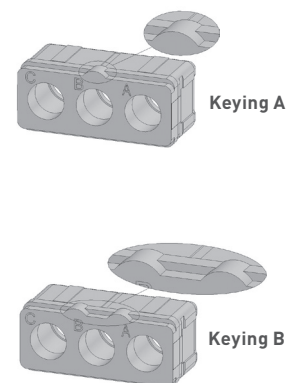
**Contact** \_\_\_\_\_

**Without code:** insert delivered without contacts  
**S:** Signal and power contacts are delivered with inserts but are uninstalled (refer to page 1-12)  
 Inserts 00, 1C1, 1P1, C3, P3, 3Q3, 12F6, F12C and 3T3 are not available in S contact version

## ENVIRONMENTAL INSERT



### Insert Keying Detail



### NOTES:

- (1) Inserts are designed for rear release & rear removable contacts
- (2) Pin and socket inserts can be installed in either plug or receptacle shell  
 F6, F12C and 12F6 are only available in E class. "Insert 00 is only available in N class"
- (3) For EPXA, EPXB1, EPXB3 and EPXB4 shells, use only insert keyed A  
 For EPXB2 shells, use one insert keyed A and one insert keyed B

## EPXA Insert Arrangements

|                                                                                                     |                                                                            |                                                                                                                              |                                                                                                     |
|-----------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
|                                                                                                     |                                                                            |                                                                                                                              |                                                                                                     |
| <b>Insert name 00</b><br><b>Insert code 0</b><br>Blank insert <sup>(1)</sup>                        | <b>Insert name 1C1</b><br><b>Insert code A</b><br>1 x size 5 coax contacts | <b>Insert name 1P1</b><br><b>Insert code B</b><br>1 x size 5 power contacts                                                  | <b>Insert name 04</b><br><b>Insert code C</b><br>2 x size 15 or 16 contacts<br>2 x size 12 contacts |
|                                                                                                     |                                                                            |                                                                                                                              |                                                                                                     |
| <b>Insert name 09</b><br><b>Insert code D</b><br>3 x size 20 contacts<br>6 x size 15 or 16 contacts | <b>Insert name 14</b><br><b>Insert code E</b><br>14 x size 20 contacts     | <b>Insert name 14M</b><br><b>Insert code F</b><br>8 x size 22 contacts<br>3 x size 20 contacts<br>3 x size 15 or 16 contacts | <b>Insert name 17</b><br><b>Insert code G</b><br>12 x size 22 contacts<br>5 x size 20 contacts      |
|                                                                                                     |                                                                            |                                                                                                                              |                                                                                                     |
| <b>Insert name 20</b><br><b>Insert code H</b><br>20 x size 22 contacts                              |                                                                            |                                                                                                                              |                                                                                                     |

**NOTE:**

(1) P/N for blank insert is EPXAN00

## EPXB Insert Arrangements

Full size inserts arrangements are compliant with EN4644

|                                                                                                                                                          |                                                                                                                                                           |                                                                                                                                   |                                                                                                |
|----------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|
|                                                                                                                                                          |                                                                                                                                                           |                                                                                                                                   |                                                                                                |
| <b>Insert name 00</b><br><b>Insert code 0</b><br>Blank insert <sup>(1)</sup>                                                                             | <b>Insert name C3</b><br><b>Insert code A</b><br>3 x size 5 coax contacts                                                                                 | <b>Insert name P3</b><br><b>Insert code B</b><br>3 x size 5 power contacts                                                        | <b>Insert name 3Q3</b><br><b>Insert code C</b><br>3 x size 8 quadrax contacts                  |
|                                                                                                                                                          |                                                                                                                                                           |                                                                                                                                   |                                                                                                |
| <b>Insert name 06</b><br><b>Insert code D</b><br>6 x size 12 medium power contacts                                                                       | <b>Insert name 10Q2</b><br><b>Insert code E</b><br>8 x size 20 contacts<br>2 x size 8 quadrax contacts                                                    | <b>Insert name 12F6</b><br><b>Insert code F</b><br>6 x size 16 Optical LuxCis® termini<br>6 x size 16 special electrical contacts | <b>Insert name F12C</b><br><b>Insert code G</b><br>12 x size 16 Optical LuxCis® termini        |
|                                                                                                                                                          |                                                                                                                                                           |                                                                                                                                   |                                                                                                |
| <b>Insert name 13C1</b><br><b>Insert code H</b><br>6 x size 20 contacts<br>4 x size 15 or 16 contacts<br>2 x size 12 contacts<br>1 x size 5 coax contact | <b>Insert name 13P1</b><br><b>Insert code J</b><br>6 x size 20 contacts<br>4 x size 15 or 16 contacts<br>2 x size 12 contacts<br>1 x size 5 power contact | <b>Insert name 14</b><br><b>Insert code K</b><br>14 x size 15 or 16 contacts                                                      | <b>Insert name 17</b><br><b>Insert code L</b><br>14 x size 20 contacts<br>3 x size 12 contacts |

**NOTE:**

(1) P/N for blank insert is EPXBN00

EPX® SERIES

INSERTS

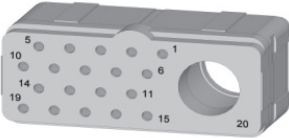
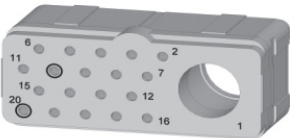
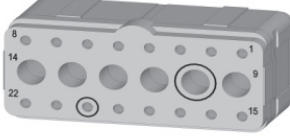
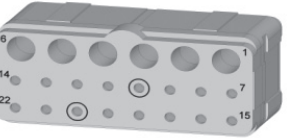
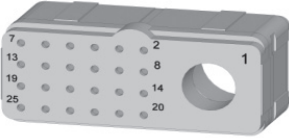
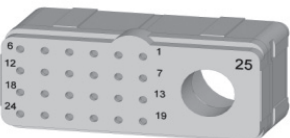
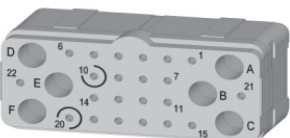
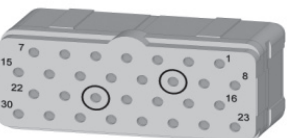
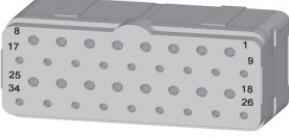
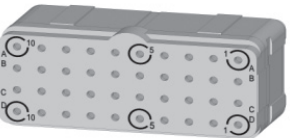
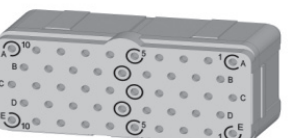
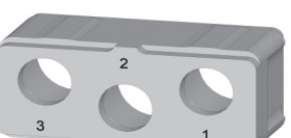
CONTACTS

DISCONNECT APPLICATION

RACK & PANEL APPLICATION

## EPXB Insert Arrangements

Full size inserts arrangements are compliant with EN 4644.

|                                                                                                      |                                                                                                        |                                                                                                      |                                                                                                 |
|------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
|                     |                       |                    |              |
| <b>Insert name 20C1</b><br><b>Insert code M</b><br>19 x size 20 contacts<br>1 x size 5 coax contact  | <b>Insert name 20P1</b><br><b>Insert code N</b><br>19 x size 20 contacts<br>1 x size 5 power contact   | <b>Insert name 22</b><br><b>Insert code P</b><br>16 x size 20 contacts<br>6 x size 15 or 16 contacts | <b>Insert name 22V</b><br><b>Insert code Q</b><br>16 x size 20 contacts<br>6 x size 16 contacts |
|                     |                       |                    |              |
| <b>Insert name 25P1</b><br><b>Insert code R</b><br>24 x size 22 contacts<br>1 x size 8 power contact | <b>Insert name 25Q1</b><br><b>Insert code S</b><br>24 x size 22 contacts<br>1 x size 8 quadrax contact | <b>Insert name 28</b><br><b>Insert code T</b><br>22 x size 22 contacts<br>6 x size 15 or 16 contacts | <b>Insert name 30</b><br><b>Insert code U</b><br>30 x size 20 contacts                          |
|                   |                     |                  |            |
| <b>Insert name 34</b><br><b>Insert code W</b><br>18 x size 22 contacts<br>16 x size 20 contacts      | <b>Insert name 40</b><br><b>Insert code X</b><br>40 x size 22 contacts                                 | <b>Insert name 48</b><br><b>Insert code Y</b><br>48 x size 22 contacts                               | <b>Insert name 3T3<sup>(1)</sup></b><br><b>Insert code Z</b><br>3 x size 8 BMA pin contacts     |

**NOTE:**

(1) 3T3 pin insert only is available. It is mateable with 3Q3 socket insert

## Signal &amp; Power Crimp Contacts

EPX series offers a wide range of contacts compliant with EN3155 and SAE AS 39029. The available contacts cover aerospace applications for terminating to both cables and printed circuit boards.

- Signal and power contacts
- High frequency with coax, twinax and triax contacts
- Ethernet links with Quadrax contacts
- Optical links with LuxCis® contacts

Discover our brand new range of signal & power contacts with selective gold plating

Features and benefits :

- Significant reduction of cost of ownership
- Reduced dependence on gold rate fluctuation
- No change in the contact crimping or soldering process

Specifications:

- Same contact design as full plated version
- Contact interface gold plated with 1.27µm
- For crimp version, no changes are required for the crimping process
- For PC tail version, use of selective plated contacts has no impact on PCB design
- Product qualification is available upon request

| Contact size |                                   | Wire size | Type   | Part number full plated        | Part number selectively plated | Crimping tool                                                      | Positioner               | Selector | Ins / ext tool              | Type of tool |
|--------------|-----------------------------------|-----------|--------|--------------------------------|--------------------------------|--------------------------------------------------------------------|--------------------------|----------|-----------------------------|--------------|
| 22           |                                   | 22        | Pin    | 617200                         | 617200100                      | 282281<br>M22520/2-01                                              | 282970<br>M22520/2-23    | 4        | 282522<br>(M81969/14-01)    | Plastic      |
|              |                                   | 24        |        |                                |                                |                                                                    |                          | 3        |                             |              |
|              |                                   | 26        | Socket | 617300                         | 617300100                      |                                                                    |                          | 3        |                             |              |
| 20           |                                   | 20        | Pin    | 617221                         | 617221100                      | 282281<br>M22520/2-01                                              | 282971<br>M22520/2-08    | 7        | 282522001<br>(M81969/39-01) | Plastic      |
|              |                                   | 22        |        |                                |                                |                                                                    |                          | 6        |                             |              |
|              |                                   | 24        | Socket | 617320                         | 617320100                      |                                                                    |                          | 5        |                             |              |
| 16           |                                   | 16        | Pin    | 617240                         | 617240100                      | 282291<br>M22520/1-01                                              | 282972<br>M22520/1-02    | 6        | 282515<br>(M81969/14-03)    | Plastic      |
|              |                                   | 18        | Socket | 617340                         | 617340100                      |                                                                    |                          | 5        |                             |              |
|              |                                   | 20        |        |                                |                                |                                                                    |                          | 4        |                             |              |
|              | Ground block                      | 20        | Pin    | 617221050                      | N/A                            | 282281<br>M22520/2-01                                              | 282581015<br>M22520/2-11 | 7        | 282886                      | Metal        |
|              |                                   |           | Socket | N/A                            | N/A                            |                                                                    |                          |          |                             |              |
|              | for optical/<br>electrical insert | 16        | Pin    | 617235003 <sup>(1)</sup>       | N/A                            | 282291<br>M22520/1-01                                              | 282581013                | 6        | 282515<br>(M81969/14-03)    | Plastic      |
|              |                                   | 18        |        |                                |                                |                                                                    |                          | 5        |                             |              |
|              |                                   | 20        |        |                                |                                |                                                                    |                          | 4        |                             |              |
| 12           |                                   | 12        | Pin    | 617250                         | 617250100                      | 282291<br>M22520/1-01                                              | 282972<br>M22520/1-02    | 8        | 282549004<br>(M81969/14-04) | Plastic      |
|              |                                   | 14        | Socket | 617350                         | 617350100                      |                                                                    |                          | 7        |                             |              |
|              |                                   | 16        |        |                                |                                |                                                                    |                          | 6        |                             |              |
| 8            |                                   | 8         | Pin    | 617291002 <sup>(2&amp;3)</sup> | N/A                            | R282600000<br>M22520/23-01 + Die set<br>R282650000<br>M22520/23-02 | 282588                   | N/A      | 282549001                   | Metal        |
|              |                                   | 10        | Socket | 617391002 <sup>(2&amp;3)</sup> | N/A                            |                                                                    |                          |          |                             |              |
| 5            |                                   | 8         | Pin    | 617280 <sup>(2&amp;4)</sup>    | N/A                            | R282600000<br>M22520/23-01 + Die set<br>R282650000<br>M22520/23-02 | 282557020                | N/A      | 282946<br>(M81969/28-01)    | Metal        |
|              |                                   | 10        | Socket | 617390 <sup>(2&amp;4)</sup>    | N/A                            |                                                                    | 282557021                |          |                             |              |
|              |                                   | 12        | Pin    | 617260001 <sup>(2&amp;4)</sup> | N/A                            | 282613                                                             | 282586003                | 6        |                             |              |
|              |                                   | 16        | Socket | 617370001 <sup>(2&amp;4)</sup> | N/A                            |                                                                    | 282586005                |          |                             |              |

## NOTES:

- (1) Electrical contacts for optical inserts are always pin contacts (hermaphrodite)  
 (2) In order to make these contacts environmental, it is necessary to add a sealing boot. Please contact us for additional information  
 (3) These power contacts can be used in power inserts only (25P1)  
 (4) These power contacts can be used in power inserts only (P3, 13P1 and 20P1)

## Oversized & Reduced Crimp Barrel Contacts

| Contact size |                                                    | Wire size | Type   | Part number fully plated       | Crimping tool         | Positioner            | Selector | Ins / ext tool              | Type of tool |
|--------------|----------------------------------------------------|-----------|--------|--------------------------------|-----------------------|-----------------------|----------|-----------------------------|--------------|
| 22           | reduced crimp barrel                               | 28        | Pin    | 617201 <sup>(1)</sup>          | 282281<br>M22520/2-01 | 282970<br>M22520/2-23 | 5        | 282522<br>(M81969/14-01)    | Plastic      |
|              |                                                    | 30        | Socket | 617301 <sup>(1)</sup>          |                       |                       | 4        |                             |              |
|              | oversize crimp barrel                              | 20        | Pin    | 617200200                      | 282281<br>M22520/2-01 | 282970<br>M22520/2-23 | 5        |                             |              |
|              |                                                    | 22        | Socket | 617300200                      |                       |                       | 4        |                             |              |
|              |                                                    | 24        |        |                                |                       |                       | 3        |                             |              |
|              |                                                    |           |        |                                |                       |                       |          |                             |              |
| 20           | reduced crimp barrel                               | 22        | Pin    | 617224001 <sup>(1)</sup>       | 282281<br>M22520/2-01 | 282971<br>M22520/2-08 | 4        | 282522001<br>(M81969/39-01) | Plastic      |
|              |                                                    | 24        | Socket | 617324001 <sup>(1)</sup>       |                       |                       | 3        |                             |              |
|              |                                                    | 26        |        |                                |                       |                       | 3        |                             |              |
|              | oversize crimp barrel                              | 18        | Pin    | 617221200                      | 282281<br>M22520/2-01 | 282971<br>M22520/2-08 | 5        |                             |              |
|              |                                                    | 20        | Socket | 617320200                      |                       |                       | 5        |                             |              |
|              |                                                    | 22        |        |                                |                       |                       | 4        |                             |              |
| 16           | reduced crimp barrel                               | 20        | Pin    | 617241 <sup>(1)</sup>          | 282291<br>M22520/1-01 | 282972<br>M22520/1-02 | 5        | 282515<br>(M81969/14-03)    | Plastic      |
|              |                                                    | 22        | Socket | 617341 <sup>(1)</sup>          |                       |                       | 5        |                             |              |
|              |                                                    | 24        |        |                                |                       |                       | 4        |                             |              |
|              | reduced crimp barrel for optical electrical insert | 20        | Pin    | 617235002 <sup>(1&amp;2)</sup> | 282291<br>M22520/1-01 | 282581013             | 5        |                             |              |
|              |                                                    | 22        |        |                                |                       |                       | 5        |                             |              |
|              |                                                    | 24        |        |                                |                       |                       | 4        |                             |              |
|              | oversize crimp barrel                              | 14        | Pin    | 617240200                      | 282291<br>M22520/1-01 | 282972<br>M22520/1-02 | 6        |                             |              |
|              |                                                    | 16        | Socket | 617340200                      |                       |                       | 5        |                             |              |
|              |                                                    | 18        |        |                                |                       |                       | 5        |                             |              |

### NOTES:

- (1) When smaller wire sizes are used on contacts with reduced crimp barrel, the wire will not provide sealing to the grommet. If sealing is required, please contact Radiall
- (2) Electrical contacts for optical insertss are always pin contacts (hermaphrodite)

## Coaxial Crimp Contacts

| Contact size | Cable type                                                | Type      | Environmental part number | Non-environmental part number | Ins/ext tool                | Type of tool |
|--------------|-----------------------------------------------------------|-----------|---------------------------|-------------------------------|-----------------------------|--------------|
| 15-16        | RG174-RG179 RG316                                         | Pin       | 617130                    |                               | 282512                      | Metal        |
|              |                                                           | Socket    | 617030                    |                               |                             |              |
|              | RG178                                                     | Pin       | 617131                    |                               |                             |              |
|              |                                                           | Socket    | 617031                    |                               |                             |              |
|              | GORE/AXON P812817<br>FILECA F1703-134<br>FILOTEX SP132868 | Pin       | 617132                    |                               |                             |              |
|              |                                                           | Socket    | 617032                    |                               |                             |              |
|              | RG178 DT                                                  | Pin       | 617133                    |                               |                             |              |
|              |                                                           | Socket    | 617033                    |                               |                             |              |
| UT .047      | Pin                                                       | 617135    |                           |                               |                             |              |
|              | Socket                                                    | 617035    |                           |                               |                             |              |
| 12           | UT.085-RG405                                              | Pin       | 617160                    |                               | 282549004<br>(M81969/14-04) | Plastic      |
|              |                                                           | Socket    | 617060                    |                               |                             |              |
| 5            | RG58-RG141                                                | Pin       | 617101001                 | 617101                        | 282946<br>(M81969/28-01)    | Metal        |
|              |                                                           | Socket    | 617001001                 | 617001                        |                             |              |
|              | RG142 - RG400                                             | Pin       | 617102001                 | 617102                        |                             |              |
|              |                                                           | Socket    | 617002001                 | 617002                        |                             |              |
|              | RG174-RG316 RG188                                         | Pin       | 617103001                 | 617103                        |                             |              |
|              |                                                           | Socket    | 617003001                 | 617003                        |                             |              |
|              | RG178-RG196                                               | Pin       | 617104001                 | 617104                        |                             |              |
|              |                                                           | Socket    | 617004001                 | 617004                        |                             |              |
| RG180        | Pin                                                       | 617105001 | 617105                    |                               |                             |              |
|              | Socket                                                    | 617005001 | 617005                    |                               |                             |              |

EPX® SERIES

INSERTS

CONTACTS

DISCONNECT APPLICATION

RACK &amp; PANEL APPLICATION

## Twinax & Triax Crimp Contacts

| Contact size | Cable type                          | Type   | Environmental part number | Non-environmental part number | Ins/ext tool                | Type of tool |
|--------------|-------------------------------------|--------|---------------------------|-------------------------------|-----------------------------|--------------|
| 12 Triax     | ECS0700                             | Pin    | 617190010                 |                               | 282549004<br>(M81969/14-04) | Plastic      |
|              |                                     | Socket | 617090010                 |                               |                             |              |
|              | M17/176-00002                       | Pin    | 617190012                 |                               |                             |              |
|              |                                     | Socket | 617090012                 |                               |                             |              |
| 8 Triax      | TENSOLITE                           | Pin    | 617165021                 | 617165020                     | 282549001                   | Metal        |
|              | 24473/03159X-2                      | Socket | 617065021                 | 617065020                     |                             |              |
|              | WHITMOR<br>W26751575                | Pin    | 617165                    | 617165001                     |                             |              |
|              |                                     | Socket | 617065                    | 617065001                     |                             |              |
| 8 Twinax     | ABS0386WF24<br>& TYCO<br>1726A1424A | Pin    | 617165011                 | 620165010                     | 282946<br>(M81969/28-01)    | Metal        |
|              |                                     | Socket | 617065011                 | 620065010                     |                             |              |
| 5 Triax      | M17/176-0002                        | Pin    | 617150001                 | 617150                        |                             |              |
|              |                                     | Socket | 617050001                 | 617050                        |                             |              |
|              | PAN6421                             | Pin    | 617152001                 | 617152                        |                             |              |
|              |                                     | Socket | 617052001                 | 617052                        |                             |              |

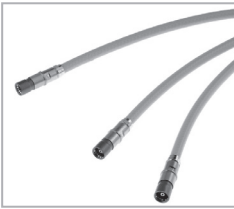
## Quadrax &amp; BMA Crimp Contacts

## QUADRAX CONTACTS



| Contact size | Cable type                          | Type   | Environmental part number | Non-environmental part number | Extraction tool in metal |
|--------------|-------------------------------------|--------|---------------------------|-------------------------------|--------------------------|
| 8            | Ethernet cable<br>ABS0972 & ABS1503 | Pin    | 617175011                 | 617175012                     | 282549001                |
|              |                                     | Socket | 617075011                 | 620075010                     |                          |
|              | TENSOLITE<br>NF24Q100               | Pin    | 617175051                 | 617175052                     |                          |
|              |                                     | Socket | 617075051                 | 620075050                     |                          |
|              | Tensolite NF26Q100<br>JSF Y18       | Pin    | 617175053                 | 617175054                     |                          |
|              |                                     | Socket | 617075053                 | 620075021                     |                          |

## BMA CONTACTS



| Contact size | Cable type                                                        | Connector Type     | Environmental part number | Non-environmental part number | Frequency range | Max VSWR | Insertion loss                      |
|--------------|-------------------------------------------------------------------|--------------------|---------------------------|-------------------------------|-----------------|----------|-------------------------------------|
| 8            | SHF5 - SHF5M <sup>(1)</sup>                                       | Pin <sup>(2)</sup> | 617171011                 | 617171010                     | DC-18 GHz       | 1.35     | 0.13 dB at max frequency (18 GHz)   |
|              | RG142                                                             | Pin <sup>(2)</sup> | 617171021                 | 617171020                     | DC-12.4 GHz     | 1.35     | 0.11 dB at max frequency (12.4 GHz) |
|              | SHF2.4M <sup>(1)</sup> /UT.085<br>Harbour SS405<br>Times Tflex405 | Pin <sup>(2)</sup> | 617171031                 | 617171030                     | DC-18 GHz       | 1.35     | 0.13 dB at max frequency (18 GHz)   |
|              | SHF5 - SHF5M <sup>(1)</sup>                                       | Socket             | 617071011                 | 617071010                     | DC-18 GHz       | 1.35     | 0.13 dB at max frequency (18 GHz)   |
|              | RG142                                                             | Socket             | 617071021                 | 617071020                     | DC-12.4 GHz     | 1.35     | 0.11 dB at max frequency (12.4 GHz) |
|              | SHF3 <sup>(1)</sup>                                               | Socket             | 617071041                 | 617071040                     | DC-18 GHz       | 1.35     | 0.13 dB at max frequency (18 GHz)   |

Extraction tool **282549001** is used for size 8 BMA contacts  
Environmental BMA contacts are all provided with sealing boots

## NOTES:

- (1) The BMA contacts which can accommodate SHF cables requires a termination by Radiall  
(2) BMA can only be installed in modified EPXB Quadrax insert such as 3T3P. Ex: EPXBE3T3PA

## LuxCis® Fiber Optic Contacts

The LuxCis® product range is a proven, flexible and always expanding fiber optic interconnect solution offering high speed communication in aerospace and other harsh environments.

### OPTICAL PERFORMANCES

|                                                      | MultiMode (PC)<br>850 / 1300 nm | SingleMode (UPC)<br>1310 / 1550 nm |
|------------------------------------------------------|---------------------------------|------------------------------------|
| Insertion Loss (IL) Mean<br>(IEC 61300-3-4 Method B) | 0.1 dB                          | 0.15 dB                            |
| Return Loss (RL)<br>(IEC 61300-3-6)                  | > 20 dB                         | > 50 dB                            |

### MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

|                                                       | Standard                   | Performances                                |
|-------------------------------------------------------|----------------------------|---------------------------------------------|
| Thermal cycling                                       | SAE AS 13441 method 1003.1 | -55°C/+125°C (cable dependant)              |
| Temperature endurance                                 | TIA/EIA 455-4              | 1000 h @ 125°C (cable dependant)            |
| Vibration                                             | TIA/EIA 455-11             | 27 Grms                                     |
| Shock                                                 | TIA/EIA 455-14             | 50 G, 11 ms                                 |
| Durability                                            | TIA / EIA 364-09           | 500 cycles <sup>(1)</sup>                   |
| Maintenance                                           | SAE AS 13441 method 2002.1 | 10 cycles                                   |
| Cable retention<br>1.8 mm diameter<br>900 µm diameter | SAE AS 13441 method 2009.1 | 68 N<br>7 N                                 |
| Humidity                                              | TIA EIA 455-5              | 10 cycles / 24 h<br>90% RH<br>-25°C / +65°C |

### LUXCIS® CONTACT PART NUMBERING SYSTEM

|      |   |    |     |
|------|---|----|-----|
| F725 | 0 | 03 | 419 |
|------|---|----|-----|

**F725:** LuxCis® series

#### Ferrule type

- 00:** PC ferrule for SingleMode fiber
- 03:** PC ferrule for 50/125 or 62,5/125 µm MultiMode fiber
- 04:** PC ferrule for 100/40 µm MultiMode fiber
- 05:** PC ferrule for 200/230 µm MultiMode fiber
- 50:** APC ferrule for SingleMode fiber

#### Cable type and diameter

- 118:** 900 µm cable
- 318:** 1.2 mm cable with strengthening members, tight structure
- 419:** 1.6 to 2.2 mm cable, loose structure
- 519:** 1.6 to 2.2 mm cable, tight structure

#### NOTES:

(1) Mating cycles are dependant on connector series  
Radiall can support you with your cable and harness assemblies  
Please contact your sales representative

## Signal PC tail Contacts

Selection table for straight PC tail contacts

| Contact termination | Contact type | Size 22                | Size 20                   | Size 16                | Size 12                   | Size 8                    | Size 5                 |
|---------------------|--------------|------------------------|---------------------------|------------------------|---------------------------|---------------------------|------------------------|
| RA                  | Pin          | 617205510              | 617222514                 | 617242510              | 617259505                 | 617291501                 | 617289506              |
|                     | Socket       | 617305500              | 617322505                 | 617342510              | 617359505                 | 617391501                 | 617389506              |
| YA                  | Pin          | 617205010              | 617222014                 | 617242010              | 617259005                 | 617291001                 | 617289006              |
|                     | Socket       | 617305                 | 617322005                 | 617342010              | 617359005                 | 617391001                 | 617389006              |
| ZA                  | Pin          | 617205710              | 617222714                 | 617242710              | 617259705                 | 617291701                 | 617289706              |
|                     | Socket       | 617305700              | 617322705                 | 617342710              | 617359705                 | 617391701                 | 617389706              |
| RB                  | Pin          | 617205501              | 617222512                 | 617242508              | 617259506                 | 617291503                 | 617289504              |
|                     | Socket       | 617305501              | 617322506                 | 617342511              | 617359506                 | 617391503                 | 617389504              |
| YB                  | Pin          | 617205001              | 617222012                 | 617242008              | 617259006                 | 617291003                 | 617289004              |
|                     | Socket       | 617305001              | 617322006                 | 617342011              | 617359006                 | 617391003                 | 617389004              |
| ZB                  | Pin          | 617205701              | 617222712                 | 617242708              | 617259706                 | 617291703                 | 617289704              |
|                     | Socket       | 617305701              | 617322706                 | 617342711              | 617359706                 | 617391703                 | 617389704              |
| RC                  | Pin          | 617205515              | 617222513                 | 617242517              | 617259503                 | 617291504                 | 617289503              |
|                     | Socket       | 617305508              | 617322507                 | 617342513              | 617359503                 | 617391504                 | 617389503              |
| YC                  | Pin          | 617205015              | 617222013                 | 617242017              | 617259003                 | 617291004                 | 617289003              |
|                     | Socket       | 617305008              | 617322007                 | 617342013              | 617359003                 | 617391004                 | 617389003              |
| ZC                  | Pin          | 617205715              | 617222713                 | 617242717              | 617259703                 | 617291704                 | 617289703              |
|                     | Socket       | 617305708              | 617322707                 | 617342713              | 617359703                 | 617391704                 | 617389703              |
| RD                  | Pin          | 617205509              | 617222510                 | 617242509              | 617259507                 | 617291505                 | 617289507              |
|                     | Socket       | 617305502              | 617322509                 | 617342515              | 617359507                 | 617391505                 | 617389507              |
| YD                  | Pin          | 617205009              | 617222010                 | 617242009              | 617259007                 | 617291005                 | 617289007              |
|                     | Socket       | 617305002              | 617322009                 | 617342015              | 617359007                 | 617391005                 | 617389007              |
| ZD                  | Pin          | 617205709              | 617222710                 | 617242709              | 617259707                 | 617291705                 | 617289707              |
|                     | Socket       | 617305702              | 617322709                 | 617342715              | 617359707                 | 617391705                 | 617389707              |
| Ins/ext. tool       |              | 282522<br>M81969/14-01 | 282522001<br>M81969/39-01 | 282515<br>M81969/14-03 | 282549004<br>M81969/14-04 | 282549001<br>M81969/28-03 | 282946<br>M81969/28-01 |

## QUADRAX SIZE 8 PC tail CONTACTS

Selection table for straight PC tail contacts

| Contact termination | Contact type | Part number size 8 |
|---------------------|--------------|--------------------|
| RA                  | Pin          | 617177512          |
|                     | Socket       | 617077512          |
| YA                  | Pin          | 617177012          |
|                     | Socket       | 617077012          |
| ZA                  | Pin          | 617177712          |
|                     | Socket       | 617077712          |
| RB                  | Pin          | 617177501          |
|                     | Socket       | 617077502          |
| YB                  | Pin          | 617177001          |
|                     | Socket       | 617077002          |
| ZB                  | Pin          | 617177701          |
|                     | Socket       | 617077702          |
| RC                  | Pin          | 617177508          |
|                     | Socket       | 617077508          |
| YC                  | Pin          | 617177008          |
|                     | Socket       | 617077008          |
| ZC                  | Pin          | 617177708          |
|                     | Socket       | 617077708          |
| RD                  | Pin          | 617177513          |
|                     | Socket       | 617077513          |
| YD                  | Pin          | 617177013          |
|                     | Socket       | 617077013          |
| ZD                  | Pin          | 617177713          |
|                     | Socket       | 617077713          |
| Ext. tool           |              | 282549001          |



## Filler Plugs & Sealing Plugs

Sealing plugs are dedicated to environmental inserts and filler plugs are dedicated to non-environmental inserts

| Contact size | Filler plug |        | Sealing plug |
|--------------|-------------|--------|--------------|
| Size 22      | 620920      |        | 616910       |
| Size 20      | 610941      |        | 616911       |
| Size 16      | 620922      |        | 616912       |
| Size 12      | 620923      |        | 616913       |
| Size 8       | Socket      | 619950 | 618915       |
|              | Pin         | 619953 |              |
| Size 5       | Socket      | 617931 | 616914013    |
|              | Pin         | 617930 |              |

## Contacts for GBE Links

Radiall offers gigabit ethernet solutions based on standard components  
These 2 solutions are perfectly suited for high speed transfers for digital audio and video signals

### QUADRAX SOLUTION:

- Available with any EPXB connector
- 2 Quadrax contacts are required for 1 Gigabit link
- Quadrax inserts: 3Q3 or 10Q2
- Up to 2 Gbit/sec

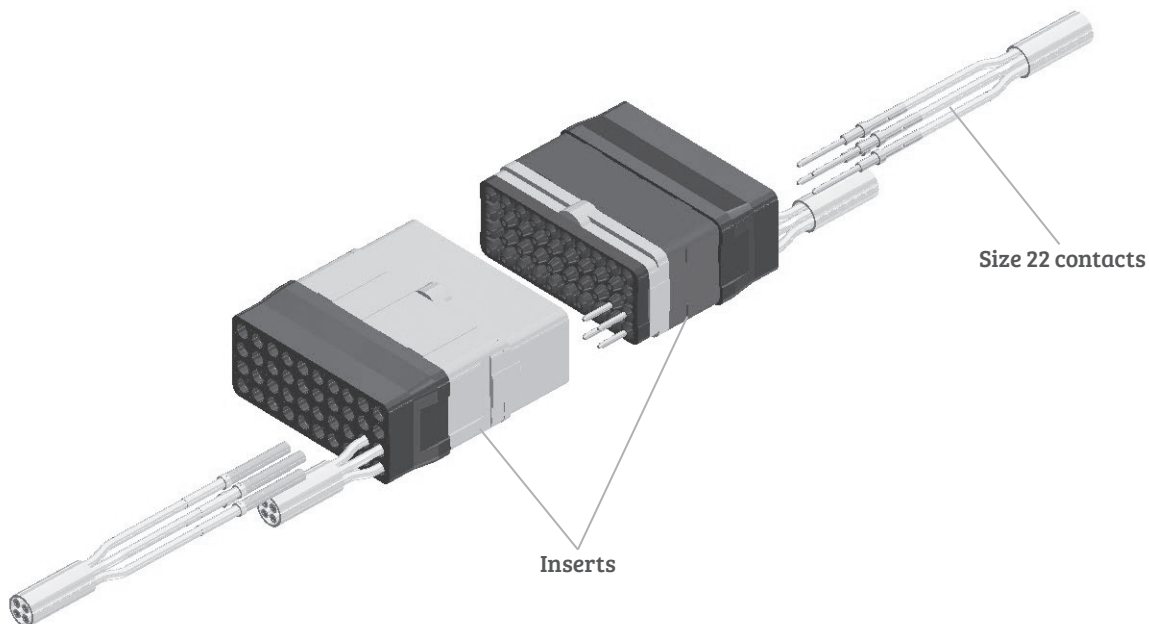
### HIGH DENSITY SOLUTION:

- Available with any EPXB connector
  - 4 twisted pairs requires 8 #22 contacts for 1 Gbit link
  - Inserts: 40 or 25Q1
  - Additional size 22 contacts can be used for ground continuity
  - EMI backshell (recommended by Radiall)
  - Up to 1 Gbit/sec
  - Short strip dimensions are required to get minimum impedance disturbance.
- Radiall solution combines short strip and easy maintenance availability.

For further information, please contact Radiall

### High density solution

Detailed view of inserts including contacts for gigabit ethernet link



EPX® SERIES

INSERTS

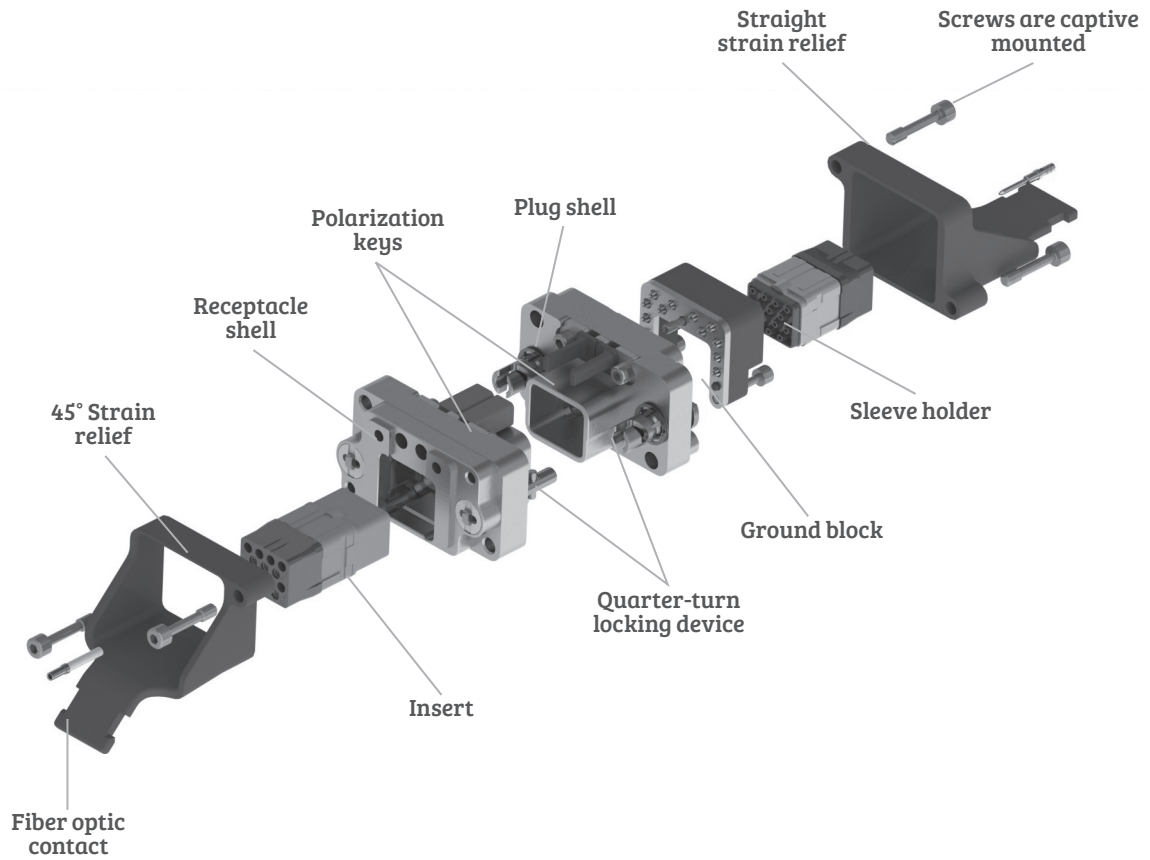
CONTACTS

DISCONNECT APPLICATION

RACK & PANEL APPLICATION

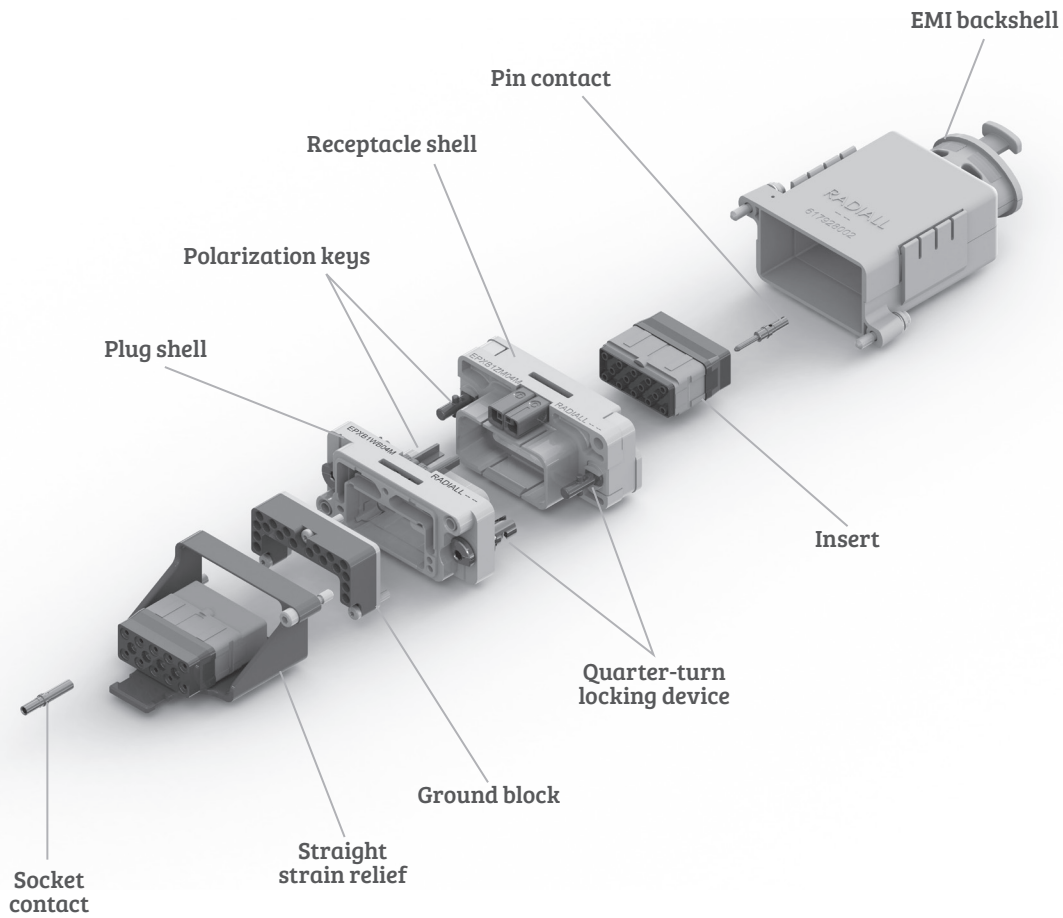
## EPXA Product Overview

Detailed view of receptacle and plug with accessories for the EPXA1 connector



## EPXB1 Product Overview

Detailed view of receptacle and plug with accessories for the EPXB1 connector



EPX® SERIES

INSERTS

CONTACTS

DISCONNECT APPLICATION

RACK & PANEL APPLICATION

## How to Order EPXA & EPXB1 Shell

|                                                                                       | EPX | B1 | P | B | 0 | 4 | M |
|---------------------------------------------------------------------------------------|-----|----|---|---|---|---|---|
| <b>Series prefix</b>                                                                  |     |    |   |   |   |   |   |
| <b>Shell size</b>                                                                     |     |    |   |   |   |   |   |
| <b>A1:</b> Single small cavity shell                                                  |     |    |   |   |   |   |   |
| <b>B1:</b> Single large cavity shell                                                  |     |    |   |   |   |   |   |
| <b>Shell style</b>                                                                    |     |    |   |   |   |   |   |
| <b>P:</b> Plug                                                                        |     |    |   |   |   |   |   |
| <b>R:</b> Receptacle                                                                  |     |    |   |   |   |   |   |
| <b>W:</b> Plug with ground block                                                      |     |    |   |   |   |   |   |
| <b>Z:</b> Receptacle with ground block and ground spring fingers                      |     |    |   |   |   |   |   |
| <b>Shell mounting option<sup>(1)</sup></b>                                            |     |    |   |   |   |   |   |
| <b>B:</b> Plug without mounting holes                                                 |     |    |   |   |   |   |   |
| <b>M:</b> Receptacle with 2 mounting holes 6-32 UNC for rear panel <sup>(2)</sup>     |     |    |   |   |   |   |   |
| <b>Locking device</b>                                                                 |     |    |   |   |   |   |   |
| <b>0:</b> Quarter-turn fastener                                                       |     |    |   |   |   |   |   |
| <b>Polarization code<sup>(3)</sup></b>                                                |     |    |   |   |   |   |   |
| <b>4:</b> Shell delivered with polarizing hardware unassembled                        |     |    |   |   |   |   |   |
| <b>5:</b> Shell delivered with no polarizing hardware                                 |     |    |   |   |   |   |   |
| <b>Shell plating</b>                                                                  |     |    |   |   |   |   |   |
| <b>M:</b> Nickel-plated composite for EPXB1                                           |     |    |   |   |   |   |   |
| <b>K:</b> Nickel-plated aluminium for EPXB1 (mateable with version M composite shell) |     |    |   |   |   |   |   |
| <b>N:</b> Nickel-plated aluminium for EPXA                                            |     |    |   |   |   |   |   |

### NOTES:

- (1) Recommended locking torque: 1.6Nm (14.16 in-lbs) for metallic shell and 1.1Nm (9.73 in-lbs) max for composite shell
- (2) Self-locking mounting holes are designed for rear panel mounting
- (3) Please see page 1-33 on how to use the polarization device

**How to Order EPXA & EPXB1 Assembly Kit**

Assembly kit is delivered fully assembled including shell with insert mounted, with or without contacts according to the selection.

Tips to help you in your selection:

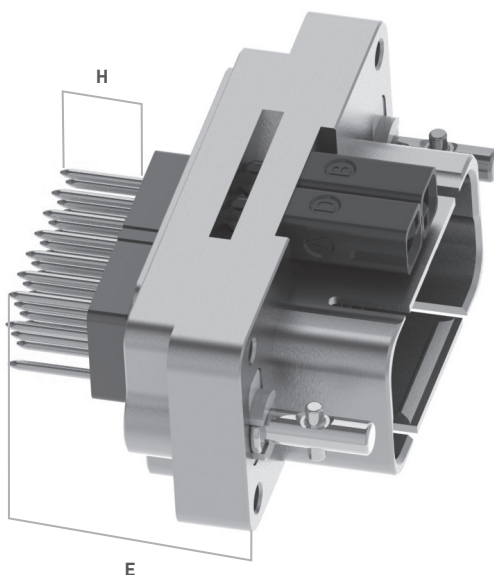
- You are free to use either pin or socket inserts in EPXA & EPXB1 plug or receptacles.
- Crimp contacts can be delivered with a kit, check which contacts would be included on page 1-12.
- If PC tail are selected then all cavities including signal, power and quadrax are populated. Size 5 coax cavities are not populated.
- If PC tail contacts are needed, remember that they are available as pin straight PC tail contacts in receptacles only.

|                                                                                                                                                                                                                                                                                                                                                        | EPX | B1 | R | 4 | M | E | M | YA |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|----|---|---|---|---|---|----|
| <b>SHELL SELECTION PART</b>                                                                                                                                                                                                                                                                                                                            |     |    |   |   |   |   |   |    |
| <b>Series prefix</b>                                                                                                                                                                                                                                                                                                                                   |     |    |   |   |   |   |   |    |
| <b>Shell size</b>                                                                                                                                                                                                                                                                                                                                      |     |    |   |   |   |   |   |    |
| <b>A1:</b> Single small cavity shell<br><b>B1:</b> Single large cavity shell                                                                                                                                                                                                                                                                           |     |    |   |   |   |   |   |    |
| <b>Shell style</b>                                                                                                                                                                                                                                                                                                                                     |     |    |   |   |   |   |   |    |
| <b>P:</b> Plug<br><b>R:</b> Receptacle<br><b>W:</b> Plug with ground block<br><b>Z:</b> Receptacle with ground block and ground fingers                                                                                                                                                                                                                |     |    |   |   |   |   |   |    |
| <b>Polarization code</b>                                                                                                                                                                                                                                                                                                                               |     |    |   |   |   |   |   |    |
| <b>4:</b> Shell delivered with polarizing hardware unassembled<br><b>5:</b> Shell delivered with no polarizing hardware                                                                                                                                                                                                                                |     |    |   |   |   |   |   |    |
| <b>Shell plating</b>                                                                                                                                                                                                                                                                                                                                   |     |    |   |   |   |   |   |    |
| <b>M:</b> Nickel-plated composite for EPXB1<br><b>K:</b> Nickel-plated aluminium for EPXB1 (mateable with version M composite shell)<br><b>N:</b> Nickel-plated aluminium for EPXA                                                                                                                                                                     |     |    |   |   |   |   |   |    |
| <b>INSERT SELECTION PART</b>                                                                                                                                                                                                                                                                                                                           |     |    |   |   |   |   |   |    |
| <b>Insert class</b>                                                                                                                                                                                                                                                                                                                                    |     |    |   |   |   |   |   |    |
| <b>E:</b> Environmental<br><b>N:</b> Non-environmental (no rear grommet, no interfacial seal)<br><b>H:</b> Non-environmental insert with a rear grommet, available for pin insert only (recommended for crimp contact)<br><b>T:</b> Non-environmental insert with an interfacial seal, available for pin insert only (recommended for PC tail contact) |     |    |   |   |   |   |   |    |
| <b>Insert code</b>                                                                                                                                                                                                                                                                                                                                     |     |    |   |   |   |   |   |    |
| Refer to page 1-12 to select insert code                                                                                                                                                                                                                                                                                                               |     |    |   |   |   |   |   |    |
| <b>Contacts termination</b>                                                                                                                                                                                                                                                                                                                            |     |    |   |   |   |   |   |    |
| <b>XS:</b> Socket insert without contacts<br><b>XP:</b> Pin insert without contacts<br><b>SS:</b> Socket insert with crimp contacts<br><b>SP:</b> Pin insert with crimp contacts                                                                                                                                                                       |     |    |   |   |   |   |   |    |
| ] These contacts are delivered uninstalled                                                                                                                                                                                                                                                                                                             |     |    |   |   |   |   |   |    |
| <b>YA:</b> Gold PC tail contacts length A                                                                                                                                                                                                                                                                                                              |     |    |   |   |   |   |   |    |
| <b>ZA:</b> Tin-lead PC tail contacts length A                                                                                                                                                                                                                                                                                                          |     |    |   |   |   |   |   |    |
| <b>RA:</b> Pure tin (RoHS) PC tail contacts length A                                                                                                                                                                                                                                                                                                   |     |    |   |   |   |   |   |    |
| ] Refer to page 1-30 to select PC tail contacts for receptacle                                                                                                                                                                                                                                                                                         |     |    |   |   |   |   |   |    |

## Contacts Termination for EPXB1

### EPXB1 RECEPTACLES (aluminium and composite shell version)

| Straight PC Tail contact termination |                           |      |          |                 |
|--------------------------------------|---------------------------|------|----------|-----------------|
| Min Length E<br>mm (inch)            | Min Length H<br>mm (inch) | Gold | Tin-lead | Pure tin (RoHS) |
| 16.20 [0.637] <sup>(1)</sup>         | /                         | YA   | ZA       | RA              |
| 19.40 [0.763] <sup>(1)</sup>         | /                         | YB   | ZB       | RB              |
| 21.25 [0.836] <sup>(1)</sup>         | /                         | YC   | ZC       | RC              |
| 25.20 [0.992]                        | 5.40 [0.212]              | YD   | ZD       | RD              |



**NOTE:**

(1) These PC tail lengths are not compatible with EPXBE and EPXBH inserts

## SINGLE PANEL CUT OUT <sup>(2)</sup>

30.40 max  
(1.197 max)  
**SEE NOTE 1**

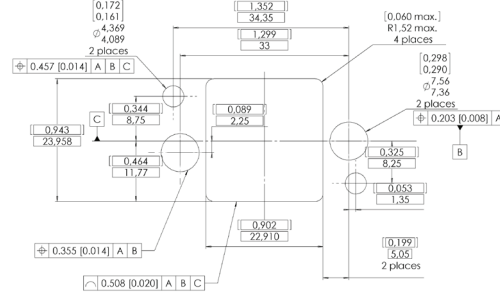
23.55 max  
(0.928 max)

13 max  
(0.512 max)

BACKSHELL MOUNTING HOLES

23.95 max  
(0.943 max)

42.35 max  
(1.668 max)



34.77 max  
(1.369 max)

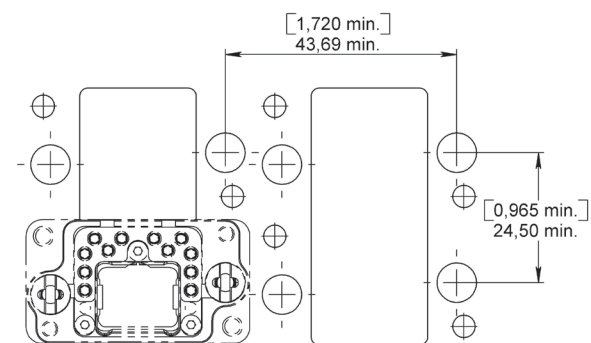
24.10 max  
(0.949 max)

BACKSHELL MOUNTING HOLES

23.95 max  
(0.943 max)

33 (1.299)

42.35 max (1.668 max)

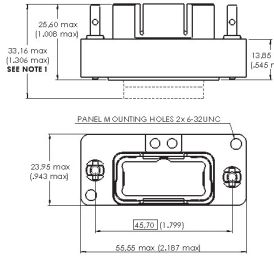


## RACK & PANEL APPLICATION

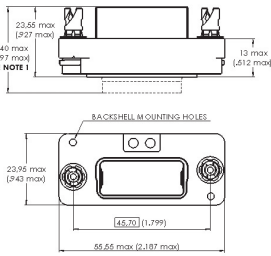
## EPXB1 Shell Dimensions

### WITHOUT GROUND BLOCK

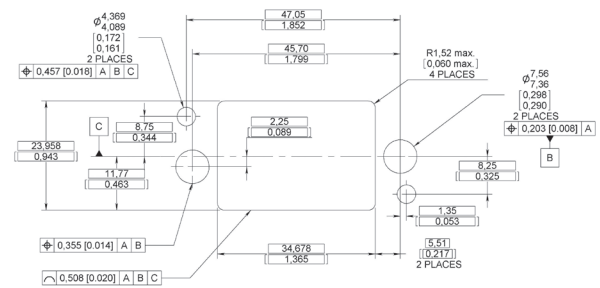
#### Receptacle



#### Plug

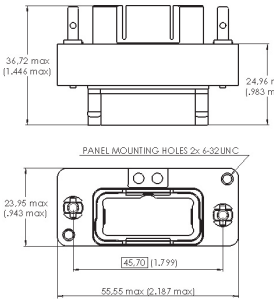


### SINGLE PANEL CUT OUT (2)

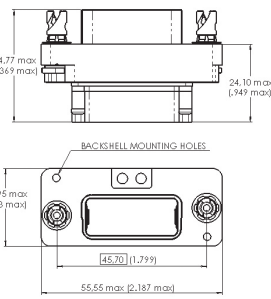


### WITH GROUND BLOCK

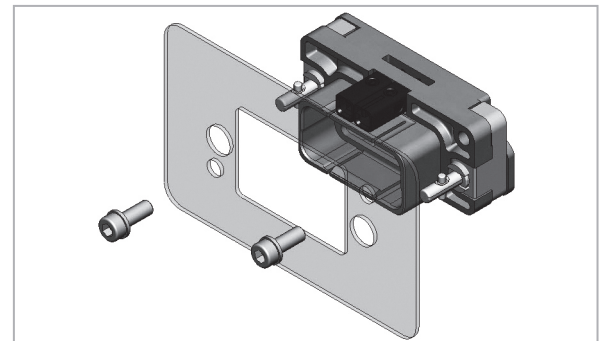
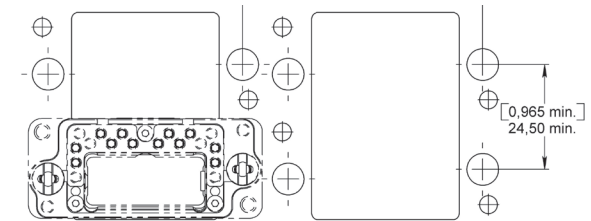
#### Receptacle



#### Plug



### MULTIPLE PANEL CUT OUT (2)



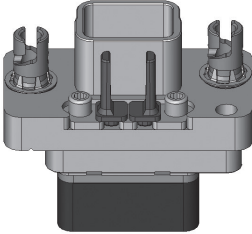
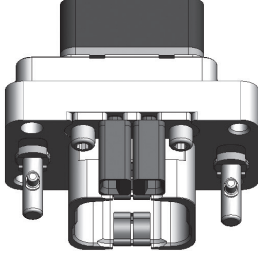
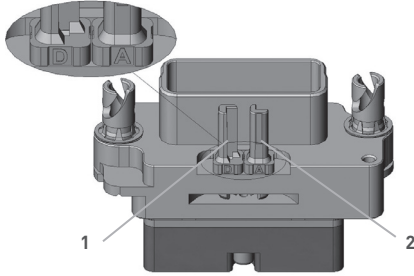
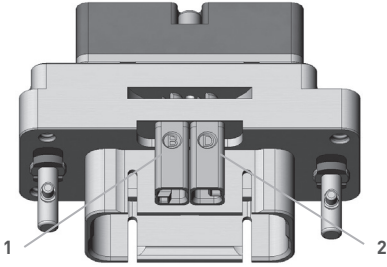
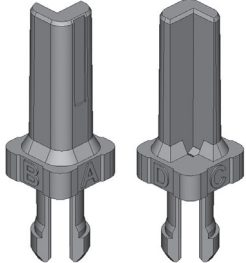
#### NOTES:

- (1) Maximum dimension for insert with grommets. For inserts without grommets: Insert is flush to the shell. Maximum dimension for the receptacle is 25.55 mm(1.006 in) and for the plug is 23.52 mm(0.926 in). For inserts with optical contacts: the maximum dimension for the receptacle is 38.70 mm(1.524 in) and the plug is 36.00 mm (1.418 in)
- (2) Rear mounting side view with key post oriented to the upper side

## Polarization Code

### EASY READING OF POLARIZATION CODE

Caution: Read the polarization code from left to right, the same way the part number marking can be read on the connector

|               | Plug                                                                                                              | Receptacle                                                                                                         |
|---------------|-------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|
| EPXA          |                                  |                                  |
| EPXB1         |                                 |                                 |
| Coding device | <br>View A & B      View C & D | <br>View A & D      View C & B |

There are 16 possible codings:

| Key position 1 | A | A | A | A | B | B | B | B | C | C | C | C | D | D | D | D |
|----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Key position 2 | A | B | C | D | A | B | C | D | A | B | C | D | A | B | C | D |

EPX® SERIES

INSERTS

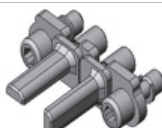
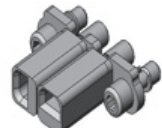
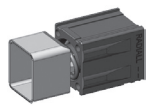
CONTACTS

DISCONNECT APPLICATION

RACK & PANEL APPLICATION

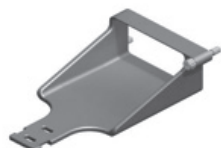
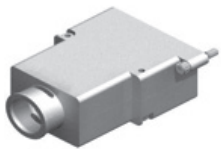
## EPXA & EPXB1 Accessories

### SPARE PARTS & DUST CAPS

|                                                                                     | Part number |           | Description                                                            | Assembly tool | Assembly torque      |
|-------------------------------------------------------------------------------------|-------------|-----------|------------------------------------------------------------------------|---------------|----------------------|
|                                                                                     | EPXA        | EPXB1     |                                                                        |               |                      |
|    | 617980032   | -         | Polarization kit for plug connector                                    | 282666002     | 0.8 Nm<br>(7 In-lbs) |
|    | 617980033   | -         | Polarization kit for receptacle connector                              |               |                      |
|    | -           | 617980030 | Polarization post                                                      | N/A           | N/A                  |
|    | -           | 617980031 | Polarization key                                                       |               |                      |
|   | 617954006   | 617954008 | Dust cap for plug shell (pink color)                                   |               |                      |
|                                                                                     | 617954007   | 617954009 | Dust cap for receptacle shell (pink color)                             |               |                      |
|  | 617954044   | 617954034 | ESD dust cap for plug shell (black color)                              |               |                      |
|                                                                                     | 617954045   | 617954028 | ESD dust cap for receptacle shell (black color)                        |               |                      |
|  | 617929033   |           | Sealing inserts for fly away applications: mateable with pin insert    | N/A           |                      |
|  |             | 617929023 |                                                                        |               |                      |
|  | 617929032   |           | Sealing inserts for fly away applications: mateable with socket insert |               |                      |
|  |             | 617929022 |                                                                        |               |                      |

## EPXA &amp; EPXB1 Accessories

## STRAIN RELIEF AND EMI BACKSHELLS

|                                                                                     | Part number |           | Description                                        | Assembly tool | Assembly torque      |
|-------------------------------------------------------------------------------------|-------------|-----------|----------------------------------------------------|---------------|----------------------|
|                                                                                     | EPXA        | EPXB1     |                                                    |               |                      |
|    | 617921030   | 617921029 | Straight strain relief (composite)                 | 282666002     | 0.8 Nm<br>(7 In-lbs) |
|    | 617921032   | 617921031 | 45° strain relief (composite)                      |               |                      |
|    | -           | 617921035 | Strain relief for fiber optic (anodized aluminium) |               |                      |
|   | -           | 617924016 | Straight EMI backshell (Nickel-plated aluminium)   |               |                      |
|  | -           | 617928002 | Straight EMI backshell (Nickel-plated composite)   |               |                      |

**NOTE:**

For mounting instructions, please contact Radiall

## EPXB2 Disconnect Connectors

When less is more.

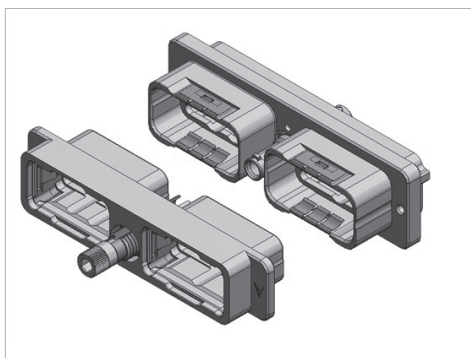
Radiall EPXB2 disconnect connectors have been widely used in aerospace industry for more than 10 years. As a worldwide leader in cable to cable and PCB to cable connections, Radiall is committed to constantly innovating to meet the demands of the industry with the most effective and reliable solutions.

Demand for weight saving connection solution is now growing more and more.

Radiall is proud to introduce:

- EPXB2 class M (Nickel plated composite)
- EPXB2 class J (Weight optimized aluminium)

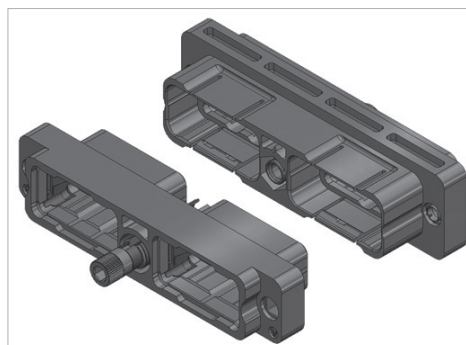
Two proven and available alternatives when you are facing weight issues in cable to cable and PCB to cable connections.



### EPXB2 class N

Performances :

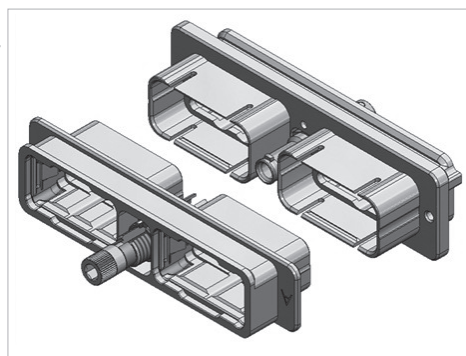
- T° range -65°C / +175°C



### EPXB2 class M

Performances:

- Weight saving compared to class N EPXB2 : -15%
- T° range: -65°C / +125°C



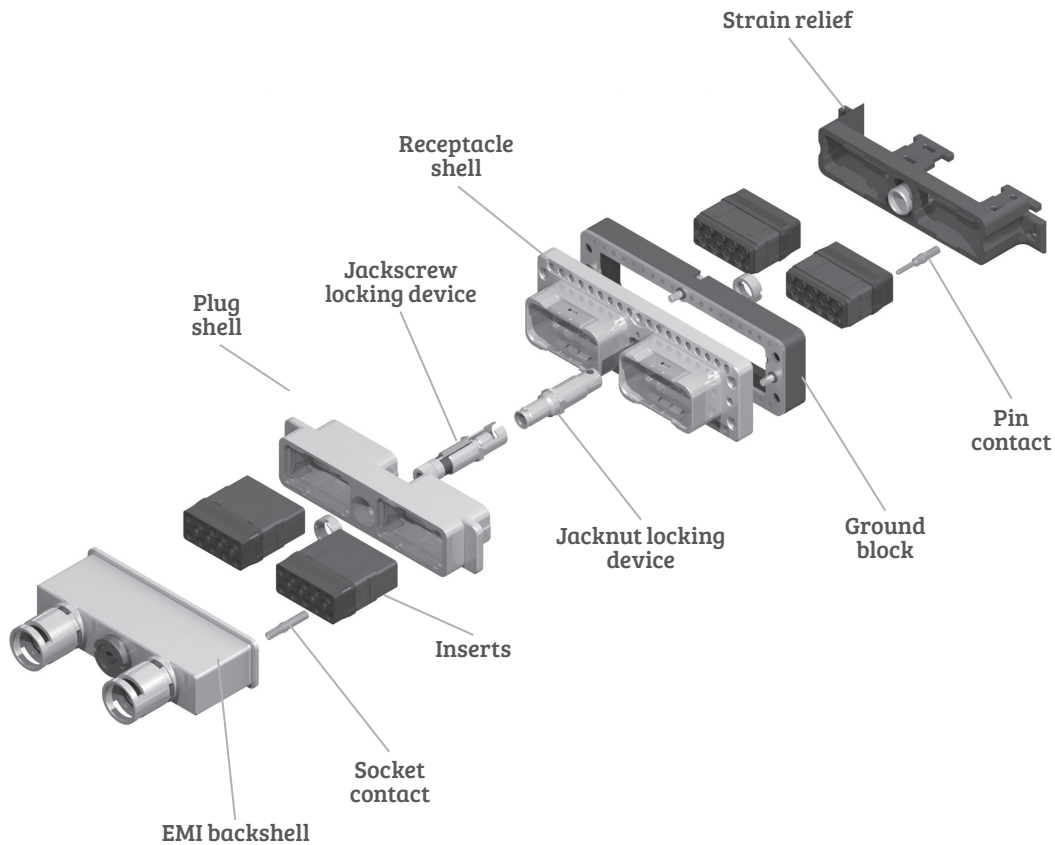
### EPXB2 class J

Performances:

- Weight saving compared to class N EPXB2: -15%
- Cost effective solution
- T° range: -65°C / +175°C

## EPXB2 Product Overview

Detailed view of receptacle and plug with accessories for the EPXB2 disconnect connector.



EPX® SERIES

INSERTS

CONTACTS

DISCONNECT APPLICATION

RACK & PANEL APPLICATION

## How to Order EPXB2 Shell

|     |    |   |   |   |   |   |
|-----|----|---|---|---|---|---|
| EPX | B2 | H | L | 2 | 2 | N |
|-----|----|---|---|---|---|---|

**Series prefix** \_\_\_\_\_

**Shell size** \_\_\_\_\_  
**B2:** Two cavity shell

**Shell style** \_\_\_\_\_  
 For option compatibility, see the table below  
**L:** Receptacle with flange and ground fingers  
**H:** Receptacle with ground fingers  
**Z:** Receptacle with ground block and ground fingers  
**R:** Receptacle without ground fingers  
**P:** Plug  
**W:** Plug with ground block

**Shell mounting** \_\_\_\_\_  
**A:** Panel rear mounted connector with 4 x 6-32 mounting holes  
**B:** No mounting holes  
**D:** Connector with 2 x Ø3.10 mm thru holes  
**F:** Panel rear mounted connector with 2 x 6-32 mounting holes  
**L:** Panel rear mounted connector with 2 x 4-40 mounting holes

**Locking & polarization device** <sup>(1)</sup> \_\_\_\_\_  
**1:** Jackscrew  
**2:** Jacknut  
**3:** Without locking device  
**4:** Pin centering guide for plug shell for LRU (*Line Replaceable Unit*) application only <sup>(2)</sup>  
**5:** Socket centering guide for receptacle shell for LRU (*Line Replaceable Unit*) application only <sup>(2)</sup>

**Polarization code** <sup>(3)</sup> \_\_\_\_\_  
**2:** Polarizing device A to F delivered unassembled  
**3:** Polarizing device N to Z delivered unassembled

**Shell plating** \_\_\_\_\_  
**N:** Nickel-plated aluminium  
**M:** Nickel-plated composite  
**J:** Nickel-plated weight optimized aluminium

## AVAILABLE SHELL MOUNTING

|                                      | Shell style | A (4 x 6.32 UNC) | B (no holes) | D (2 x Ø3.10mm) | F (2 x 6.32 UNC) | L (2 x 4.40 UNC) |
|--------------------------------------|-------------|------------------|--------------|-----------------|------------------|------------------|
| Class N (aluminium)                  | L           |                  |              | ✓               | ✓                | ✓                |
|                                      | H           |                  | ✓            | ✓               | ✓                | ✓                |
|                                      | Z           | ✓                | ✓            |                 |                  |                  |
|                                      | R           | ✓                |              |                 |                  |                  |
|                                      | P           |                  | ✓            | ✓               |                  | ✓                |
|                                      | W           | ✓                | ✓            |                 |                  |                  |
| Class J (weight optimized aluminium) | H           |                  |              |                 |                  | ✓                |
|                                      | P           |                  | ✓            |                 |                  |                  |
| Class M (composite)                  | L           |                  |              | ✓               |                  | ✓                |
|                                      | P           |                  | ✓            | ✓               |                  | ✓                |

## NOTES:

(1) Jackscrew/Jacknut can be mounted on either plug or receptacle shell. However, the standard options are:

- Jackscrew for plug shells
- Jacknut for receptacle shells

(2) Pin/Socket centering guides can be mounted on either plug or receptacle shells. However, the standard options are:

- Pin centering guide for plug shells
- Socket centering guide for receptacle shells

(3) Please see page 1-44 for how to use the polarization coding

## How to Order EPXB2 Assembly Kit

Assembly kits are delivered fully assembled including shell with inserts mounted, with or without contacts according to the selection. When selecting your insert codes, do not forget to place them in the order you want them assembled. Locking and polarizing devices are delivered uninstalled.

Tips to help you in your selection:

- You are free to use either pin or socket inserts in EPXB plug or receptacle.
- Crimp contacts can be delivered with a kit, check which contacts will be included on page 1-12.
- PC tail contacts can also delivered with a kit. Remember that only straight tpin PC tail contacts are available, and in receptacle only.
- If PC tail contacts are selected then all cavities including signal, power and quadrax are populated. Size 5 coax cavities are not populated.

All connector inserts will use the same insert class and the same contact termination.

|                                                                                                                           | EPX | B2 | H | B | 2 | N | N | BC | ZB |
|---------------------------------------------------------------------------------------------------------------------------|-----|----|---|---|---|---|---|----|----|
| <b>SHELL SELECTION PART</b>                                                                                               |     |    |   |   |   |   |   |    |    |
| <b>Series prefix</b>                                                                                                      |     |    |   |   |   |   |   |    |    |
| <b>Shell size</b>                                                                                                         |     |    |   |   |   |   |   |    |    |
| <b>B2:</b> Two cavity shell                                                                                               |     |    |   |   |   |   |   |    |    |
| <b>Shell style</b>                                                                                                        |     |    |   |   |   |   |   |    |    |
| For option compatibly, see table on page 1-36                                                                             |     |    |   |   |   |   |   |    |    |
| <b>L:</b> Receptacle with flange and ground fingers                                                                       |     |    |   |   |   |   |   |    |    |
| <b>H:</b> Receptacle with ground fingers                                                                                  |     |    |   |   |   |   |   |    |    |
| <b>Z:</b> Receptacle with ground block and ground fingers                                                                 |     |    |   |   |   |   |   |    |    |
| <b>R:</b> Receptacle without ground fingers                                                                               |     |    |   |   |   |   |   |    |    |
| <b>P:</b> Plug                                                                                                            |     |    |   |   |   |   |   |    |    |
| <b>W:</b> Plug with ground block                                                                                          |     |    |   |   |   |   |   |    |    |
| <b>Shell mounting</b>                                                                                                     |     |    |   |   |   |   |   |    |    |
| <b>A:</b> Rear panel mounted connector with 4x 6-32 mounting holes                                                        |     |    |   |   |   |   |   |    |    |
| <b>B:</b> No mounting holes                                                                                               |     |    |   |   |   |   |   |    |    |
| <b>D:</b> Connector with 2 x Ø3.10 mm thru holes                                                                          |     |    |   |   |   |   |   |    |    |
| <b>F:</b> Rear panel mounted connector with 2 x 6-32 mounting holes                                                       |     |    |   |   |   |   |   |    |    |
| <b>L:</b> Rear panel mounted connector with 2 x 4-40 mounting holes                                                       |     |    |   |   |   |   |   |    |    |
| <b>Polarization</b>                                                                                                       |     |    |   |   |   |   |   |    |    |
| <b>1:</b> Jackscrew polarizing device A to F                                                                              |     |    |   |   |   |   |   |    |    |
| <b>2:</b> Jacknut polarizing device A to F                                                                                |     |    |   |   |   |   |   |    |    |
| <b>3:</b> Without locking device                                                                                          |     |    |   |   |   |   |   |    |    |
| <b>4:</b> Pin centering guide for plug shell for LRU application only, polarizing device A to F                           |     |    |   |   |   |   |   |    |    |
| <b>5:</b> Socket centering guide for receptacle shell for LRU application only, polarizing device A to F                  |     |    |   |   |   |   |   |    |    |
| <b>6:</b> Jackscrew polarizing device N to Z                                                                              |     |    |   |   |   |   |   |    |    |
| <b>7:</b> Jacknut polarizing device N to Z                                                                                |     |    |   |   |   |   |   |    |    |
| <b>8:</b> Pin centering guide for plug shell for LRU application only, polarizing device N to Z                           |     |    |   |   |   |   |   |    |    |
| <b>9:</b> Socket centering guide for receptacle shell for LRU application only, polarizing device N to Z                  |     |    |   |   |   |   |   |    |    |
| <b>Shell plating</b>                                                                                                      |     |    |   |   |   |   |   |    |    |
| <b>N:</b> Nickel-plated aluminium                                                                                         |     |    |   |   |   |   |   |    |    |
| <b>M:</b> Nickel-plated composite                                                                                         |     |    |   |   |   |   |   |    |    |
| <b>J:</b> Nickel-plated weight optimized aluminium                                                                        |     |    |   |   |   |   |   |    |    |
| <b>INSERTS SELECTION PART</b>                                                                                             |     |    |   |   |   |   |   |    |    |
| <b>Insert class</b>                                                                                                       |     |    |   |   |   |   |   |    |    |
| <b>E:</b> Environmental                                                                                                   |     |    |   |   |   |   |   |    |    |
| <b>N:</b> Non-environmental                                                                                               |     |    |   |   |   |   |   |    |    |
| <b>H:</b> Non-environmental insert with a rear grommet, available for pin insert only (recommended for crimp contact)     |     |    |   |   |   |   |   |    |    |
| <b>T:</b> Non-environmental insert with interfacial seal, available for pin insert only (recommended for PC tail contact) |     |    |   |   |   |   |   |    |    |
| <b>Insert code</b>                                                                                                        |     |    |   |   |   |   |   |    |    |
| Refer to page 1-12 to select code insert                                                                                  |     |    |   |   |   |   |   |    |    |
| <b>Contacts termination</b>                                                                                               |     |    |   |   |   |   |   |    |    |
| <b>XS:</b> Socket insert without contacts                                                                                 |     |    |   |   |   |   |   |    |    |
| <b>XP:</b> Pin insert without contacts                                                                                    |     |    |   |   |   |   |   |    |    |
| <b>SS:</b> Socket insert with crimp contacts                                                                              |     |    |   |   |   |   |   |    |    |
| <b>SP:</b> Pin insert with crimp contacts                                                                                 |     |    |   |   |   |   |   |    |    |
| These contacts are delivered uninstalled                                                                                  |     |    |   |   |   |   |   |    |    |
| <b>YA:</b> Gold PC tail contacts length A                                                                                 |     |    |   |   |   |   |   |    |    |
| <b>ZA:</b> Tin-lead PC tail contacts length A                                                                             |     |    |   |   |   |   |   |    |    |
| <b>RA:</b> Pure tin (RoHS) PC tail contacts length A                                                                      |     |    |   |   |   |   |   |    |    |
| Refer to pages 1- 40 to select PC tail contacts for receptacle                                                            |     |    |   |   |   |   |   |    |    |

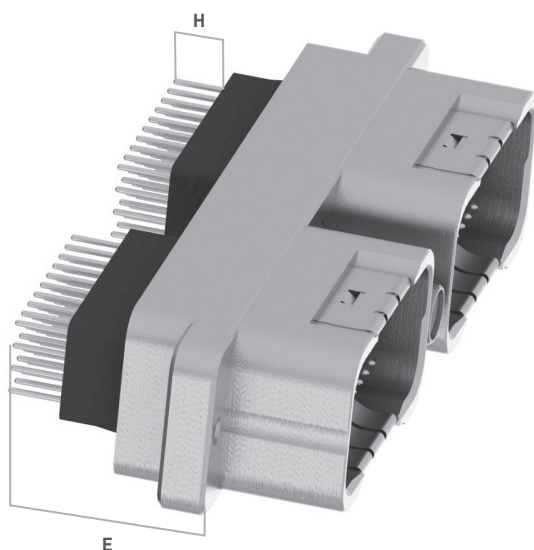
## Contacts Termination for Receptacles

### EPXB2 COMPOSITE SHELL

| Straight PC Tail contact termination |                           |      |          |                 |
|--------------------------------------|---------------------------|------|----------|-----------------|
| Min Length E<br>mm (inch)            | Min Length H<br>mm (inch) | Gold | Tin-lead | Pure tin (RoHS) |
| 14.20 [0.559] <sup>(1)</sup>         | /                         | YA   | ZA       | RA              |
| 17.35 [0.683] <sup>(1)</sup>         | /                         | YB   | ZB       | RB              |
| 19.20 [0.755] <sup>(1)</sup>         | /                         | YC   | ZC       | RC              |
| 23.10 [0.909]                        | 5.40 [0.212]              | YD   | ZD       | RD              |

### EPXB2 WEIGHT OPTIMIZED ALUMINIUM AND ALUMINIUM SHELL

| Straight PC Tail contact termination |                           |      |          |                 |
|--------------------------------------|---------------------------|------|----------|-----------------|
| Min Length E<br>mm (inch)            | Min Length H<br>mm (inch) | Gold | Tin-lead | Pure tin (RoHS) |
| 14.55 [0.572] <sup>(1)</sup>         | /                         | YA   | ZA       | RA              |
| 17.75 [0.698] <sup>(1)</sup>         | /                         | YB   | ZB       | RB              |
| 19.55 [0.769] <sup>(1)</sup>         | /                         | YC   | ZC       | RC              |
| 23.50 [0.925]                        | 5.40 [0.212]              | YD   | ZD       | RD              |



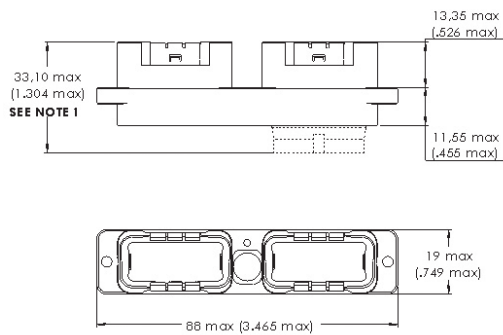
**NOTE:**

[1] These PC tail lengths are not compatible with EPXBE and EPXBH inserts

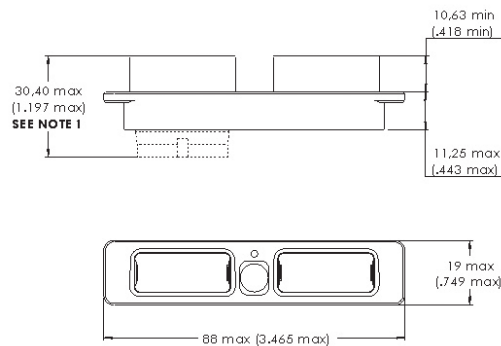
## EPXB2 Metallic Shell Dimensions

### WITHOUT GROUND BLOCK Class N & J

#### Receptacle

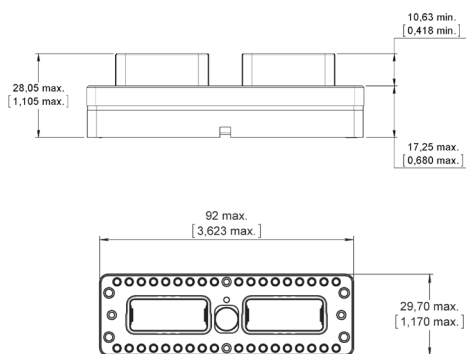


#### Plug

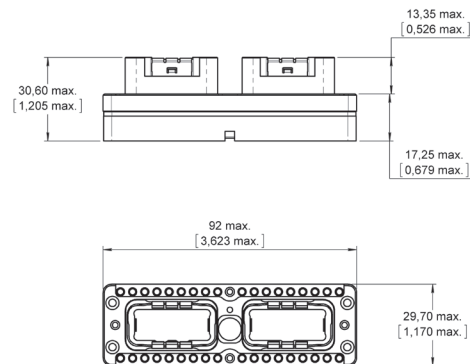


### WITH GROUND BLOCK Class N

#### Receptacle

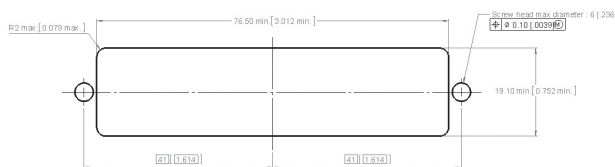


#### Plug

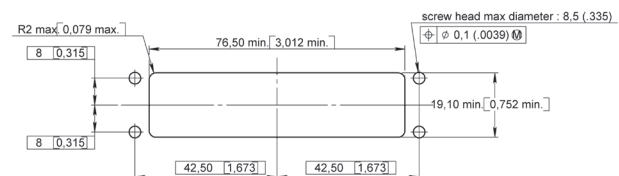


### PANEL CUT OUT Class N & J

#### Shell mounting code D, F and L



#### Shell mounting code A



#### NOTES:

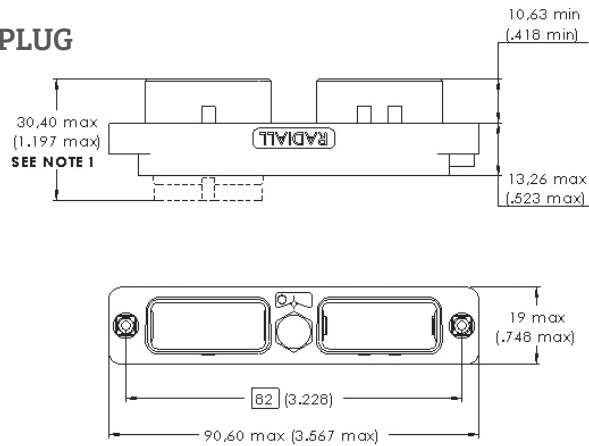
For inserts with grommets : maximum dimension is shown in the diagram

(1) For inserts without grommets: Insert is flush to the shell. Maximum dimension for the receptacle is 25,55 mm(1,006 in) and for the plug is 23,52 mm(0,926 in)

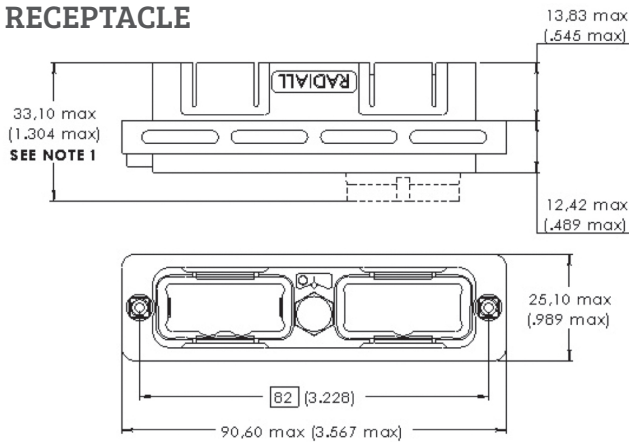
For inserts with optical contacts : the maximum dimension for the receptacle is 38,70 mm(1,524 in) and for the plug is 36,00 mm (1,418 in)

## EPXB2 Composite Shell Dimensions

### PLUG

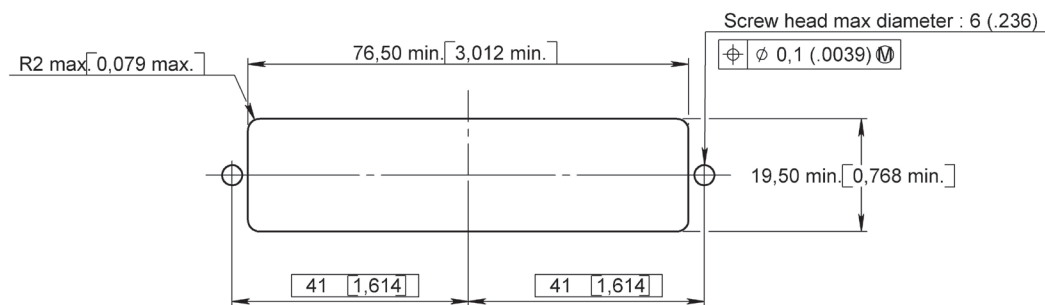


### RECEPTACLE



### PANEL CUT OUT

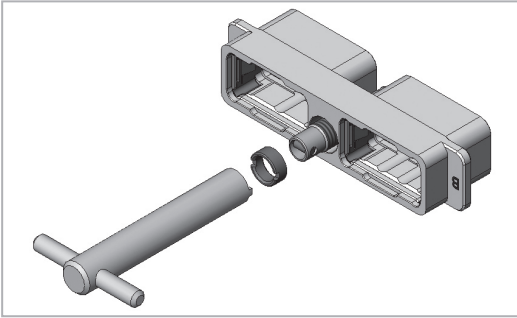
Shell mounting code D and L



#### NOTE:

- (1) For inserts with grommets (EPXBE and EPXBH) : maximum dimension is shown in the diagram
- For inserts without grommets (EPXBN) : Insert is flush to the shell. Maximum dimension for the receptacle is 25.55 mm (1.006 in) and for the plug is 23.52 mm (0.926 in)
- For inserts with optical contacts : the maximum dimension for the receptacle is 38.70 mm (1.524 in) and the plug is 36.00 mm (1.418 in)

## EPXB2 Polarization Code



As a standard, jackscrews shall be installed in plugs and jacknuts in receptacle shells.

The polarizing device must be locked by the operator at 1.2 Nm (10.62 Lb-In.) for the metallic shell and 0.8Nm (7.08 Lb-In.) for composite shell. LOCTITE™ 272 resin shall be used to assemble them.

The nut can be fixed with your automatic screwdriver and the tool bit we provide (PN 282 664)

| Designation | Polarization code                                                        | Coding device key | Part number |  |
|-------------|--------------------------------------------------------------------------|-------------------|-------------|--|
| Jackscrew   | From A to F                                                              |                   | 617980012   |  |
|             | From N to Z<br>30° offset compared to the key of jackscrew P/N 617980012 |                   | 617980013   |  |
|             | Universal                                                                |                   | 617980023   |  |
| Jacknut     | From A to F                                                              |                   | 617980029   |  |
|             | From N to Z<br>30° offset compared to the key of jacknut 617980029       |                   | 617980028   |  |
|             | Universal                                                                |                   | 617980022   |  |

EPX® SERIES

INSERTS

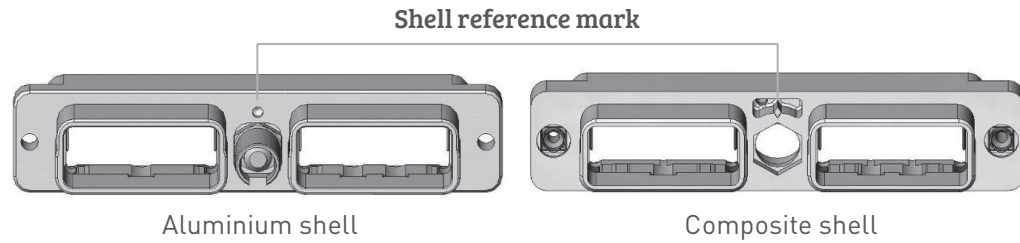
CONTACTS

DISCONNECT APPLICATION

RACK & PANEL APPLICATION

## EPXB2 Polarization Code

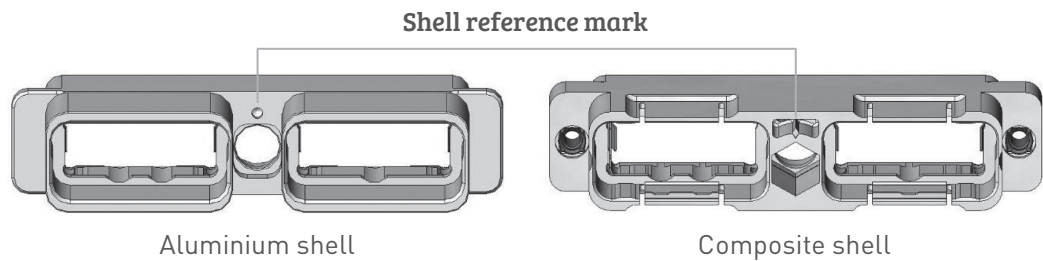
### PLUG SHELL



#### Shell reference mark Coding device key

| A | B | C | D | E | F |
|---|---|---|---|---|---|
|   |   |   |   |   |   |
| N | R | W | X | Y | Z |
|   |   |   |   |   |   |

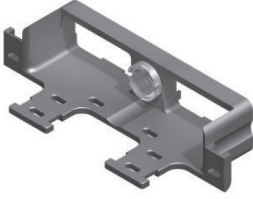
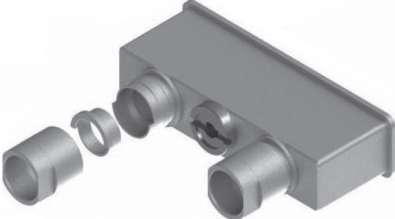
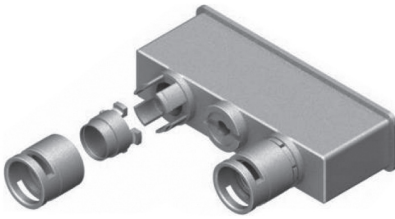
### RECEPTACLE SHELL



#### Shell reference mark Coding device key

| A | B | C | D | E | F |
|---|---|---|---|---|---|
|   |   |   |   |   |   |
| N | R | W | X | Y | Z |
|   |   |   |   |   |   |

## EPXB2 Accessories

|                                                                                     | Part number | Description                                                                       | Assembly tool <sup>(2)</sup>               | Assembly torque          |
|-------------------------------------------------------------------------------------|-------------|-----------------------------------------------------------------------------------|--------------------------------------------|--------------------------|
|    | 617922007   | Straight strain relief (composite)                                                | 282664<br>or<br>282665                     | 0.8 Nm<br>(7.08 in-lbs)  |
|    | 617922014   | Straight strain relief for fiber optic cable (anodized aluminium)                 |                                            |                          |
|   | 617928100   | Straight EMI backshell (nickel-plated composite)                                  | Allen wrench<br>1/4 inch                   |                          |
|  | 617925052   | EMI backshell for braid shield termination (nickel-plated aluminium)              | 282664<br>or<br>282665                     | 1.2 Nm<br>(10.62 in-lbs) |
|  | 617925054   | EMI backshell for screened twisted pair cables (nickel-plated aluminium)          |                                            |                          |
|  | 617925056   | Backshell for large sized wire harnesses (nickel-plated aluminium) <sup>(1)</sup> | 282664<br>or<br>282665<br>and Allen wrench |                          |

**NOTE:**

(1) Not compatible with jackscrew

(2) For more details, refer to page 1-47

EPX® SERIES

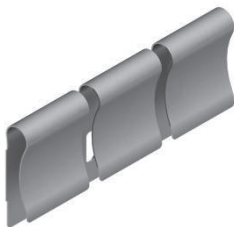
INSERTS

CONTACTS

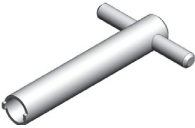
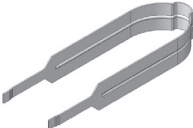
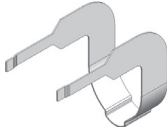
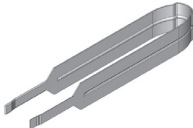
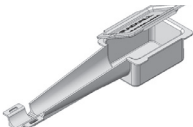
DISCONNECT APPLICATION

RACK & PANEL APPLICATION

## EPXB2 Spare Parts

|                                                                                     | Part number | Description                                    |
|-------------------------------------------------------------------------------------|-------------|------------------------------------------------|
|    | 617954101   | Grounding spring<br>(for EPXB2 aluminium only) |
|    | 617980029   | Jacknut – A/B/C/D/E/F                          |
|                                                                                     | 617980028   | Jacknut – N/R/W/X/Y/Z                          |
|                                                                                     | 617980022   | Universal jacknut                              |
|    | 617980012   | Jackscrew – A/B/C/D/E/F                        |
|                                                                                     | 617980013   | Jackscrew – N/R/W/X/Y/Z                        |
|                                                                                     | 617980023   | Universal jackscrew                            |
|  | 617954002   | Dust cap for plug shell<br>(pink color)        |
|                                                                                     | 617954003   | Dust cap for receptacle shell<br>(pink color)  |
|                                                                                     | 617954004   | ESD dust cap plug shell<br>(black color)       |
|                                                                                     | 617954005   | ESD dust cap receptacle shell<br>(black color) |

## Tools

|                                                                                     | Part number | Description                                                                                             | To be used with |       |       |
|-------------------------------------------------------------------------------------|-------------|---------------------------------------------------------------------------------------------------------|-----------------|-------|-------|
|                                                                                     |             |                                                                                                         | EPXA            | EPXB1 | EPXB2 |
|    | 282664      | 1/4 inch hex. screwdriver bit to affix the nut of the jackscrew or the jacknut to the EPXB2 accessories |                 |       | X     |
|    | 282665      | Spigot wrench to affix the nut of the jackscrew or the jacknut to the EPXB2 accessories                 |                 |       | X     |
|    | 282666      | Allen wrench for 1/4 turn fastener (3/32 inch)                                                          | X               | X     |       |
|    | 282666002   | Allen wrench for rear accessories (5/64 inch)                                                           |                 | X     |       |
|   | 282666001   | Allen wrench for jackscrew (9/64 inch)                                                                  |                 |       | X     |
|  | 282521002   | Insert extraction tool                                                                                  |                 | X     | X     |
|  | 282521004   | Right angle insert extraction tool                                                                      |                 | X     | X     |
|  | 282521005   | Insert extraction tool                                                                                  | X               |       |       |
|  | 617954020   | Plastic box to protect wired inserts during handling                                                    | X               | X     | X     |
|  | F780855000  | Hexagonal key 2mm (5/64inch)<br>Flats for sleeve holder removal                                         |                 | X     | X     |
|  | 282668001   | Tweezers to change polarizing posts and keys                                                            |                 | X     |       |

# EPX® SERIES

INSERTS

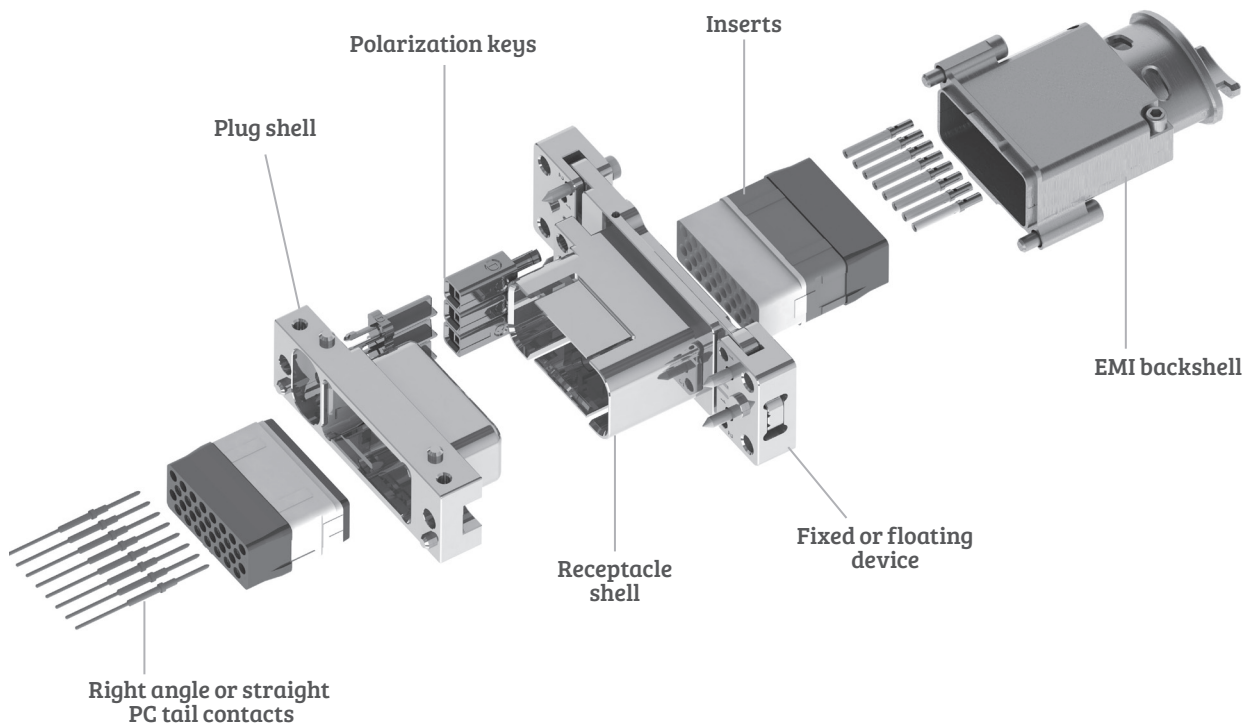
CONTACTS

DISCONNECT APPLICATION

RACK & PANEL APPLICATION

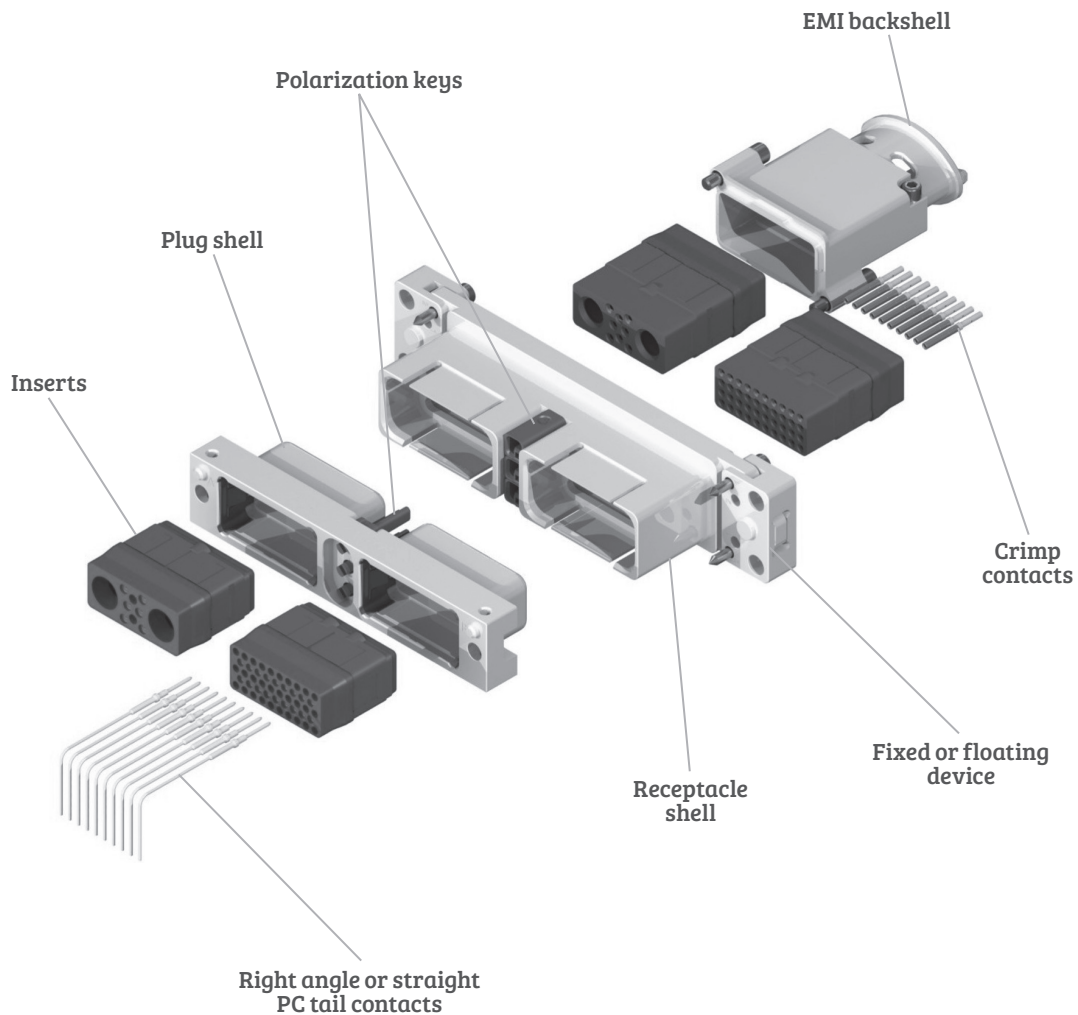
## EPXB1 Product Overview

Detailed view of receptacle and plug with accessories for the EPXB1 rack and panel connector.



## EPXB2 Product Overview

Detailed view of receptacle and plug with accessories for the EPXB2 rack and panel connector.



EPX® SERIES

INSERTS

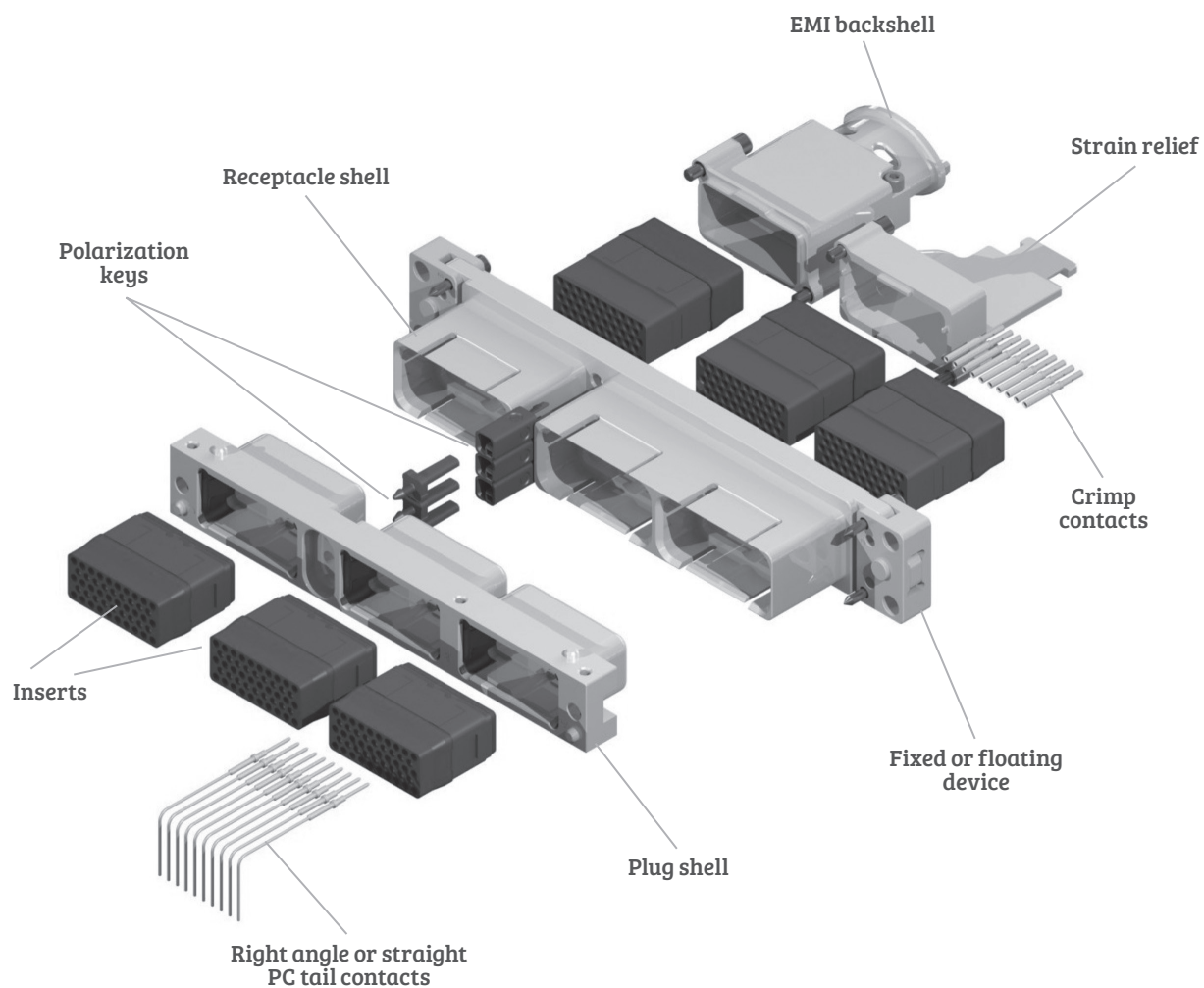
CONTACTS

DISCONNECT APPLICATION

RACK & PANEL APPLICATION

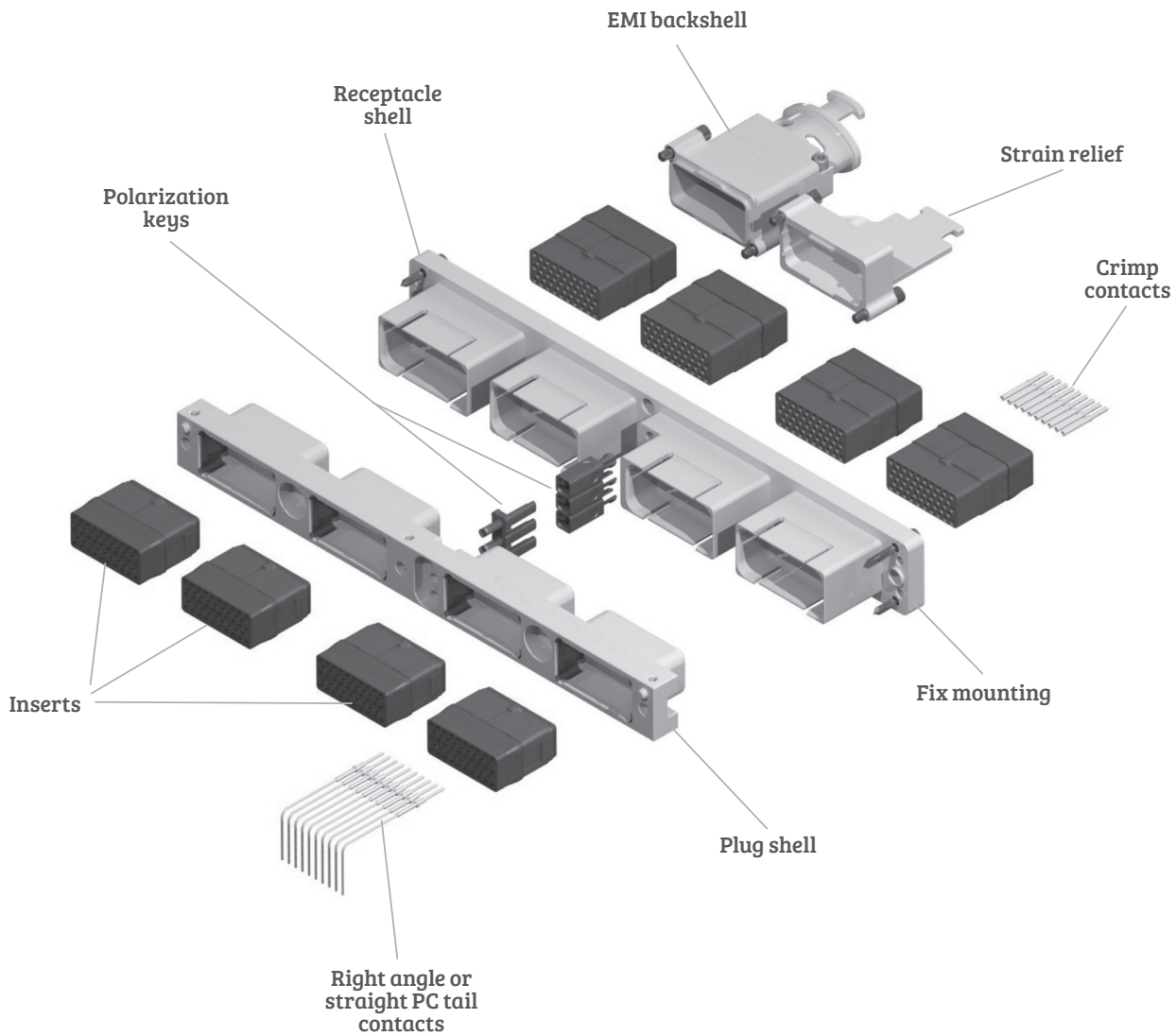
## EPXB3 Product Overview

Detailed view of receptacle and plug with accessories for the EPXB3 rack and panel connector



## EPXB4 Product Overview

Detailed view of receptacle and plug with accessories for the EPXB4 rack and panel connector



EPX® SERIES

INSERTS

CONTACTS

DISCONNECT APPLICATION

RACK & PANEL APPLICATION

## How to Order EPXB1, B2, B3 & B4 Shell

|                                                                            | EPX | B3 | P | N | 1 | 0 |
|----------------------------------------------------------------------------|-----|----|---|---|---|---|
| <b>Series prefix</b>                                                       |     |    |   |   |   |   |
| <b>Shell size</b>                                                          |     |    |   |   |   |   |
| <b>B1:</b> One cavity shell                                                |     |    |   |   |   |   |
| <b>B2:</b> Two cavity shell                                                |     |    |   |   |   |   |
| <b>B3:</b> Three cavity shell                                              |     |    |   |   |   |   |
| <b>B4:</b> Four cavity shell                                               |     |    |   |   |   |   |
| <b>Shell style</b>                                                         |     |    |   |   |   |   |
| <b>P:</b> Plug, nickel-plated                                              |     |    |   |   |   |   |
| <b>R:</b> Receptacle, nickel-plated                                        |     |    |   |   |   |   |
| <b>Shell mounting</b> (refer to page 1-54 for coding)                      |     |    |   |   |   |   |
| <b>M:</b> Plug, fixed connector with Ø3.96mm holes & 4-40UNC on side       |     |    |   |   |   |   |
| <b>N:</b> Plug, fixed connector with 8-32 UNC & 4-40UNC on side            |     |    |   |   |   |   |
| <b>S:</b> Receptacle, fixed with 4 x 8-32UNC                               |     |    |   |   |   |   |
| <b>T:</b> Receptacle, floating with 4 x 8-32 UNC (two axes) <sup>(1)</sup> |     |    |   |   |   |   |
| <b>Polarization code</b>                                                   |     |    |   |   |   |   |
| <b>1:</b> Shell delivered with polarizing keys unassembled                 |     |    |   |   |   |   |
| <b>2:</b> Shell delivered with no polarizing keys                          |     |    |   |   |   |   |
| <b>Panel cut-out coding</b>                                                |     |    |   |   |   |   |
| <b>A to Z:</b> Receptacle, refer to page 1-59 for the code selection       |     |    |   |   |   |   |
| <b>0 (zero):</b> Plug, no panel cut out coding                             |     |    |   |   |   |   |

**NOTE:**

(1) This floating option is not available in EPXB4 version

**How to Order EPXB1, EPXB2, B3 & B4 Assembly Kit**

Assembly kit is delivered fully assembled including shell with inserts mounted, with or without contacts according to the selection. When selecting your insert codes, do not forget to place them in the order you want them assembled. Polarization keys are always provided unassembled with assembly kits.

Tips to help you in your selection:

- You are free to use either pin or socket inserts in EPXB plug or receptacle.
- Crimp contacts can be delivered with a kit, check which contacts will be included on page 1-12.
- If PC tail contacts are selected then all cavities including signal, power and quadrax are populated. Size 5 coax cavities are not populated.
- If PC tail contacts are needed, remember that only straight pin PC tail contacts are available, and in plug only. All connector inserts will use the same insert class and the same contact termination.

|                                                                                            | EPX | B4 | P | N | 0 | E | ABDC | YA |
|--------------------------------------------------------------------------------------------|-----|----|---|---|---|---|------|----|
| <b>SHELL SELECTION PART</b>                                                                |     |    |   |   |   |   |      |    |
| <b>Series prefix</b> _____                                                                 |     |    |   |   |   |   |      |    |
| <b>Shell size</b> _____                                                                    |     |    |   |   |   |   |      |    |
| <b>B1:</b> One cavity shell                                                                |     |    |   |   |   |   |      |    |
| <b>B2:</b> Two cavity shell                                                                |     |    |   |   |   |   |      |    |
| <b>B3:</b> Three cavity shell                                                              |     |    |   |   |   |   |      |    |
| <b>B4:</b> Four cavity shell                                                               |     |    |   |   |   |   |      |    |
| <b>Shell style</b> _____                                                                   |     |    |   |   |   |   |      |    |
| <b>P:</b> Plug, nickel-plated                                                              |     |    |   |   |   |   |      |    |
| <b>R:</b> Receptacle, nickel-plated                                                        |     |    |   |   |   |   |      |    |
| <b>Shell mounting</b> (refer to page 1-54 for codes) _____                                 |     |    |   |   |   |   |      |    |
| <b>M:</b> Plug, fixed connector with Ø3.96mm holes & 4-40UNC on side                       |     |    |   |   |   |   |      |    |
| <b>N:</b> Plug, fixed connector with 8-32 UNC & 4-40 UNC on side                           |     |    |   |   |   |   |      |    |
| <b>S:</b> Receptacle, fixed with 4 x 8-32 UNC                                              |     |    |   |   |   |   |      |    |
| <b>T:</b> Receptacle, floating with 4 x 8-32 UNC (two axes) <sup>(1)</sup>                 |     |    |   |   |   |   |      |    |
| <b>Panel cut-out coding</b> _____                                                          |     |    |   |   |   |   |      |    |
| <b>A to Z:</b> For receptacle, refer to page 1-59 for the code selection                   |     |    |   |   |   |   |      |    |
| <b>0 (zero):</b> For plug, no panel cut out coding                                         |     |    |   |   |   |   |      |    |
| <b>INSERT SELECTION PART</b>                                                               |     |    |   |   |   |   |      |    |
| <b>Insert class</b> _____                                                                  |     |    |   |   |   |   |      |    |
| <b>E:</b> Environmental                                                                    |     |    |   |   |   |   |      |    |
| <b>N:</b> Non-environmental (no rear grommet, no interfacial seal)                         |     |    |   |   |   |   |      |    |
| <b>H:</b> Non-environmental insert with a rear grommet (recommended for crimp contact)     |     |    |   |   |   |   |      |    |
| <b>T:</b> Non-environmental insert with interfacial seal (recommended for PC tail contact) |     |    |   |   |   |   |      |    |
| <b>Insert code</b> _____                                                                   |     |    |   |   |   |   |      |    |
| Refer to page 1-12 to select insert code                                                   |     |    |   |   |   |   |      |    |
| <b>Contacts termination</b> _____                                                          |     |    |   |   |   |   |      |    |
| <b>XS:</b> Female insert without contacts                                                  |     |    |   |   |   |   |      |    |
| <b>XP:</b> Male insert without contacts                                                    |     |    |   |   |   |   |      |    |
| <b>SS:</b> Female insert with crimp contacts                                               |     |    |   |   |   |   |      |    |
| <b>SP:</b> Male insert with crimp contacts                                                 |     |    |   |   |   |   |      |    |
| These contacts are delivered uninstalled.                                                  |     |    |   |   |   |   |      |    |
| <b>YA:</b> Gold PC tail contacts length A                                                  |     |    |   |   |   |   |      |    |
| <b>ZA:</b> Tin-lead PC tail contacts length A                                              |     |    |   |   |   |   |      |    |
| <b>RA:</b> pure tin (RoHS) PC tail contacts length A                                       |     |    |   |   |   |   |      |    |
| Refer to page 1- 54 to select PC tail contacts for plug                                    |     |    |   |   |   |   |      |    |

**NOTE:**

(1) This floating option is not available in EPXB4 version

## Contacts Termination for EPXB1, EPXB2, EPXB3 and EPXB4 Plugs

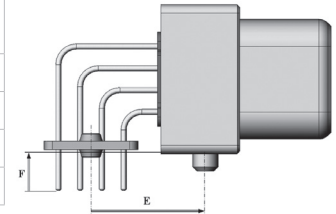
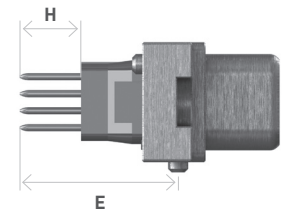
| Straight PC Tail contact termination |                            |      |          |                    |
|--------------------------------------|----------------------------|------|----------|--------------------|
| Mini Length E<br>mm (inch)           | Mini Length H<br>mm (inch) | Gold | Tin-lead | Pure tin<br>(RoHS) |
| 10.60 [0.417] <sup>(1)</sup>         | /                          | YA   | ZA       | RA                 |
| 13.80 [0.543] <sup>(1)</sup>         | /                          | YB   | ZB       | RB                 |
| 15.60 [0.614] <sup>(1)</sup>         | /                          | YC   | ZC       | RC                 |
| 19.55 [0.769]                        | 5.40 [0.212]               | YD   | ZD       | RD                 |

| Right Angle PC Tail contact termination <sup>(2)</sup> |                              |      |          |                 |
|--------------------------------------------------------|------------------------------|------|----------|-----------------|
| Mini length F<br>mm (inch)                             | Mini length E<br>mm (inch)   | Gold | Tin-lead | Pure tin (RoHS) |
| 2.20 [0.086]                                           | 12.85 [0.505] <sup>(1)</sup> | GA   | LA       | TA              |
| 3.60 [0.141]                                           | 20.10 [0.791]                | GB   | LB       | TB              |
| 3.60 [0.141]                                           | 12.85 [0.505] <sup>(1)</sup> | GC   | LC       | TC              |
| 2.20 [0.141]                                           | 20.10 [0.791]                | GD   | LD       | TD              |

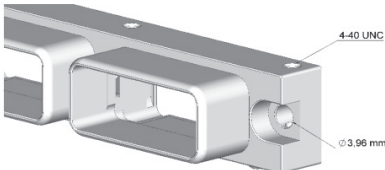
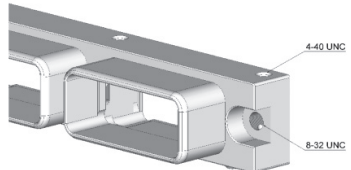
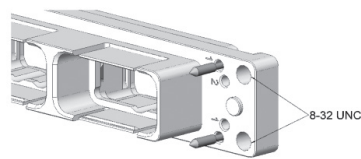
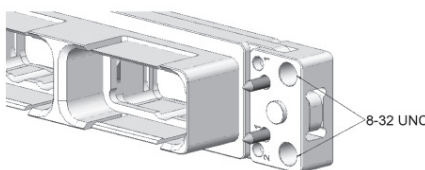
### NOTES:

(1) These PC tail lengths are not compatible with EPXBE and EPXBH inserts

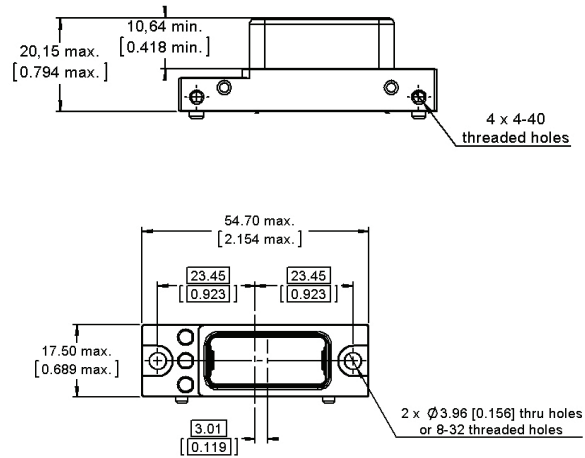
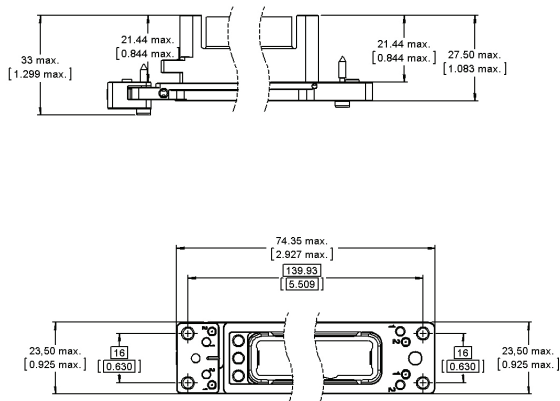
(2) Right angle PC tail lengths GA, LA, TA and GD, LD, TD are not available for #5 and #8 power contacts



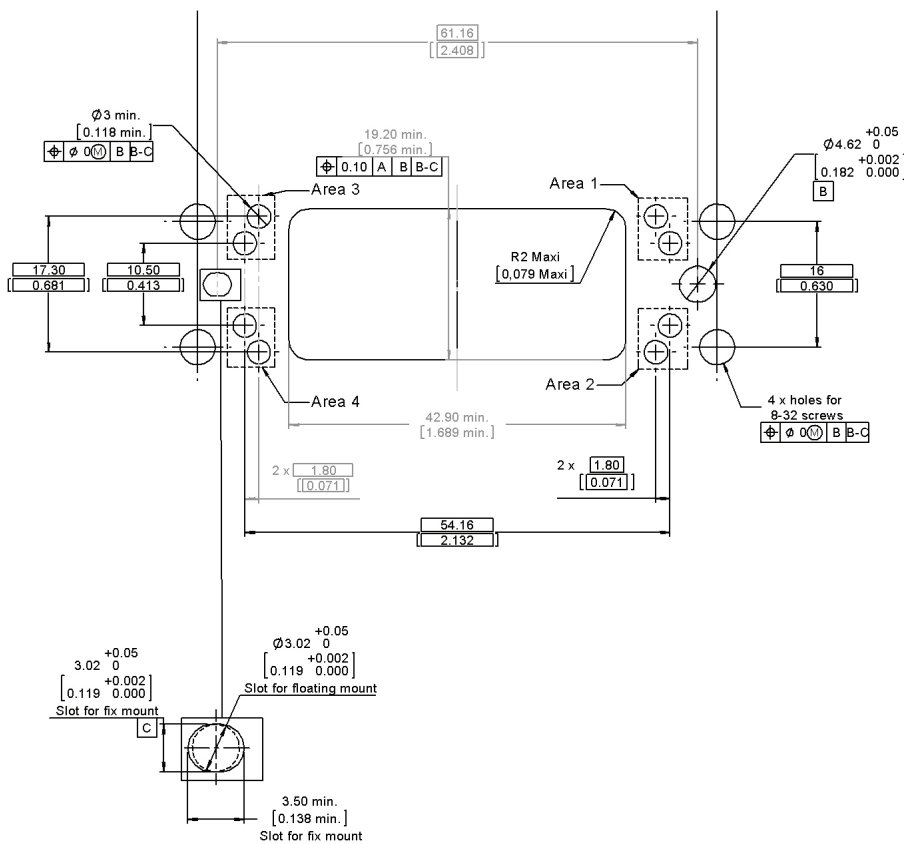
## EPXB Shell Mounting

| Receptacle side                                                                                                                    | Code | Plug sides                                                                                                                                                  |
|------------------------------------------------------------------------------------------------------------------------------------|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| N/A                                                                                                                                | M    | Fixed connector with Ø 3.96 mm holes & 4-40 UNC front or side mount<br> |
| N/A                                                                                                                                | N    | Connector with 8-32 UNC & 4-40 UNC front or side mount<br>             |
| Fixed with 4 x 8-32 UNC panel rear mount<br>    | S    | N/A                                                                                                                                                         |
| Floating with 4 x 8-32 UNC panel rear mount<br> | T    | N/A                                                                                                                                                         |

## PLUG



**PANEL CUT OUT <sup>(1)</sup>**



**NOTE:**

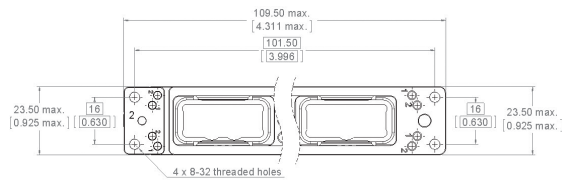
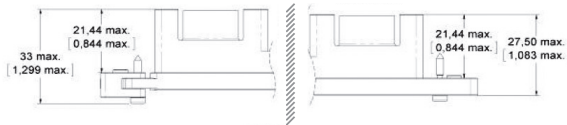
(1) The panel cut-out is shown from the rear of the panel

## EPXB2 Shell Dimensions & Panel Cut-outs

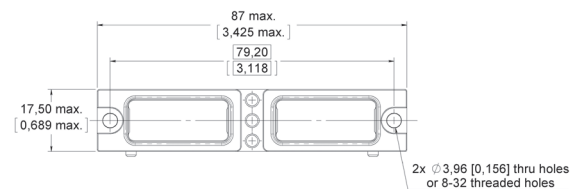
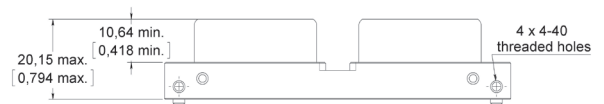
### RECEPTACLE

Floating Mount

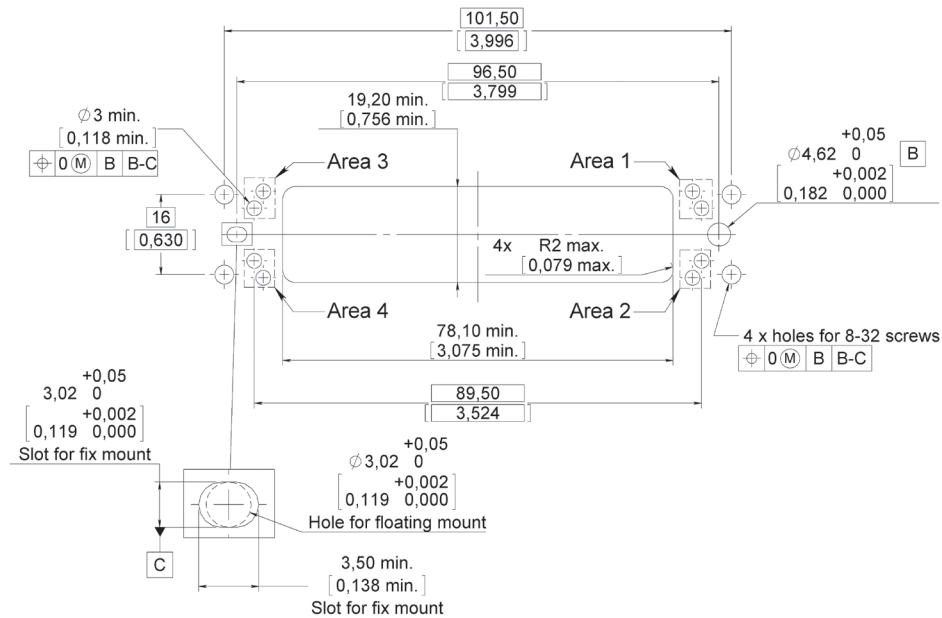
Fixed Mount



### PLUG



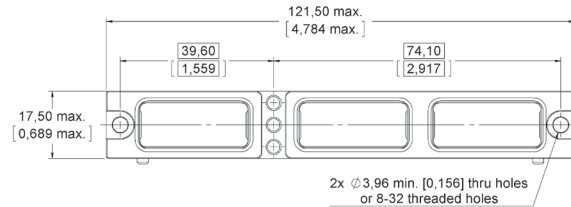
### PANEL CUT OUT (1)



#### NOTE:

(1) The panel cut-out is shown from the rear of the panel

## Fixed Mount



Technical drawing of the front view of a mechanical part, showing dimensions and tolerances. The drawing includes a central rectangular area divided into four quadrants labeled AREA 1, AREA 2, AREA 3, and AREA 4. Dimensions are given in millimeters with tolerances in brackets. Key features include a slot for a fix mount at the bottom left, a hole for a floating mount at the bottom center, and four holes for 8-32 screws on the right side. Tolerances are specified for various features, including a maximum of 0.118 mm for a hole diameter and a maximum of 0.079 mm for a radius. The drawing is labeled 'Fig. 1' and 'Fig. 2'.

Dimensions and Tolerances:

- Overall width: 136 [5,354]
- Overall height: 131 [5,157]
- Distance from top edge to center of AREA 3: 19,20 min. [0,756 min.]
- Distance from top edge to center of AREA 4: 16 [0,630]
- Distance from bottom edge to center of AREA 3: 112,30 min. [4,421 min.]
- Distance from bottom edge to center of AREA 4: 124 [4,882]
- Distance from left edge to center of AREA 3: 3,02 +0,05 0 [0,119 0,000]
- Distance from left edge to center of AREA 4: 3,02 +0,05 0 [0,119 0,000]
- Distance from right edge to center of AREA 1: 4,62 +0,05 0 [0,182 0,000]
- Distance from right edge to center of AREA 2: 4,62 +0,05 0 [0,182 0,000]
- Distance from right edge to center of AREA 3: 4,62 +0,05 0 [0,182 0,000]
- Distance from right edge to center of AREA 4: 4,62 +0,05 0 [0,182 0,000]
- Distance from center of AREA 3 to center of AREA 4: 3,50 min. [0,138 min.]
- Distance from center of AREA 3 to center of AREA 4: 3,50 min. [0,138 min.]
- Distance from center of AREA 3 to center of AREA 4: 3,50 min. [0,138 min.]
- Distance from center of AREA 3 to center of AREA 4: 3,50 min. [0,138 min.]

Features and Tolerances:

- Slot for fix mount: 3,02 +0,05 0 [0,119 0,000]
- Hole for floating mount: 3,02 +0,05 0 [0,119 0,000]
- 4 x holes for 8-32 screws: 4,62 +0,05 0 [0,182 0,000]
- 4 x R2 max. [0,079 max.]

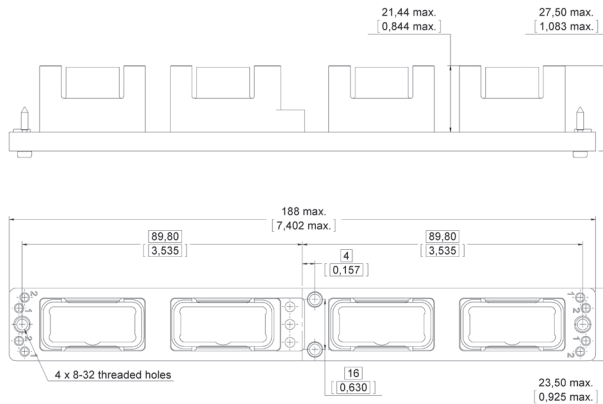
Fig. 1

Fig. 2

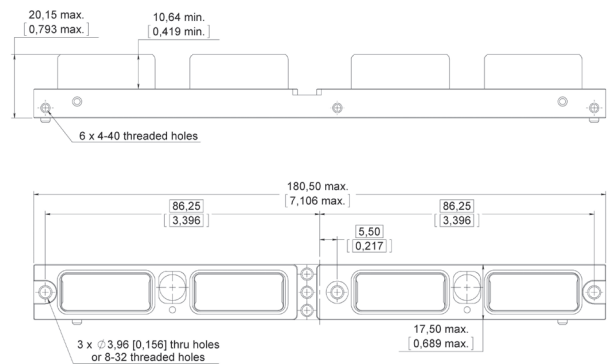
Go online for data sheets & assembly instructions

## EPXB4 Shell Dimensions & Panel Cut-outs

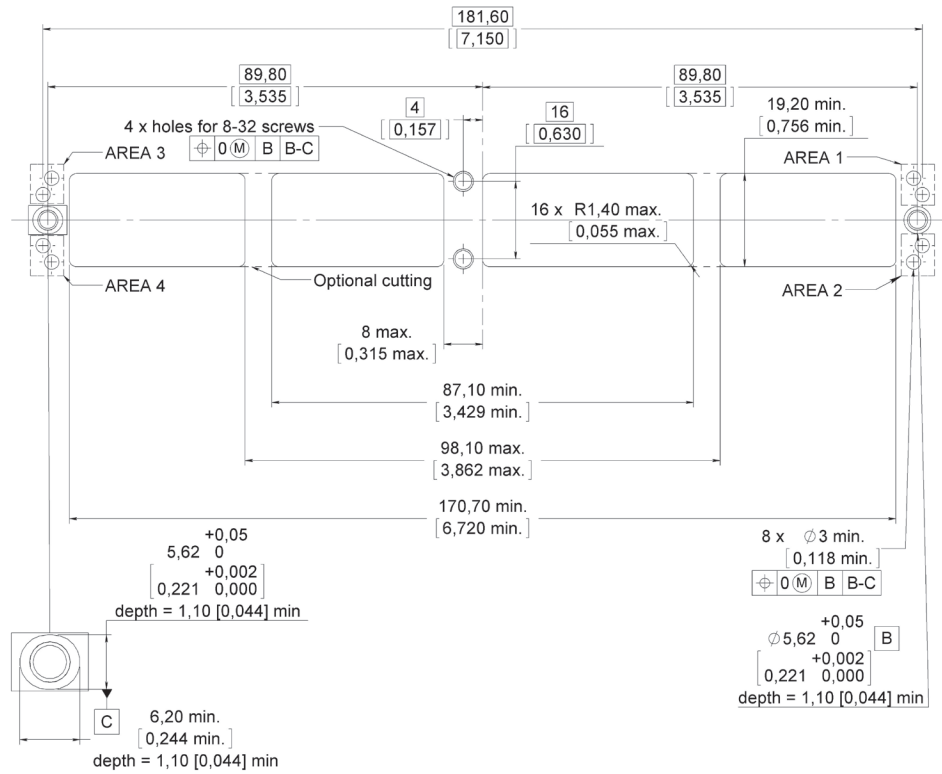
### RECEPTACLE



### PLUG



### PANEL CUT OUT <sup>(1)</sup>



#### NOTE:

(1) The panel cut-out is shown from the rear of the panel

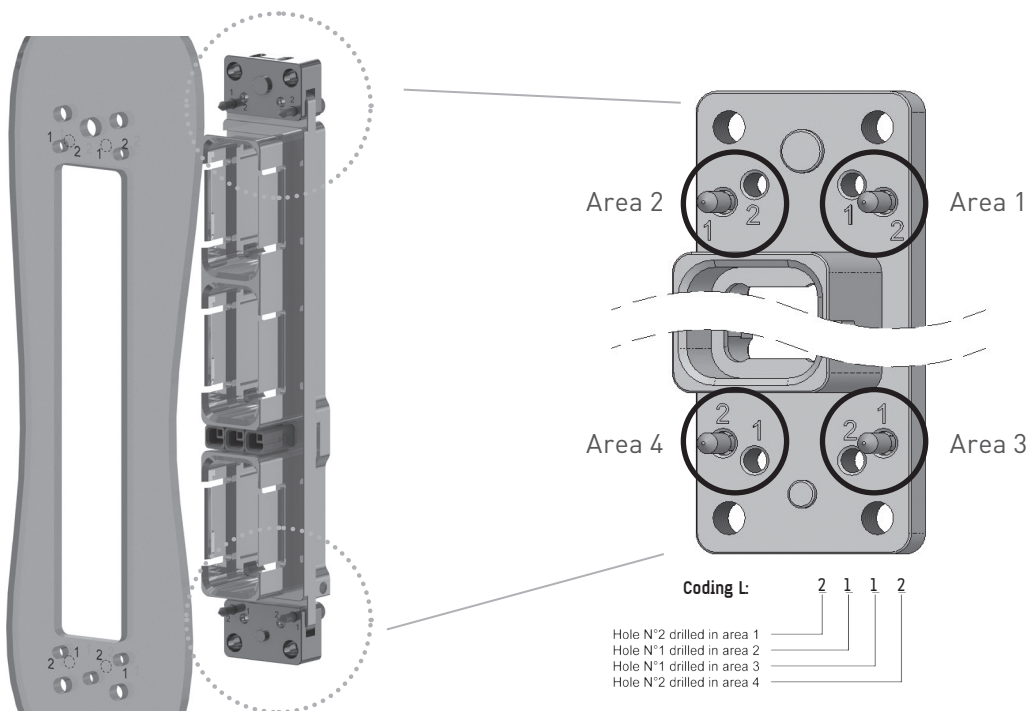
## EPXB Panel Cut-out Coding

When several EPXB connectors are used with the same equipment, a coding is available on the shell to correlate the correct shell with the correct panel cut-out.

On the panel cut-out, four areas are coded, area 1, 2, 3 and 4 (see figure below). For each area, one of the two holes should be drilled (hole n°1 or hole n°2). Each hole on the panel cut-out corresponds to the use of a coding pin on the shell.

| Panel cut-out coding | Panel hole number to drill in Area 1                  | Panel hole number to drill in Area 2 | Panel hole number to drill in Area 3 | Panel hole number to drill in Area 4 |
|----------------------|-------------------------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|
| A                    | Connector delivered with coding device uninstalled    |                                      |                                      |                                      |
| B                    | 1                                                     | 1                                    | 1                                    | 1                                    |
| C                    | 1                                                     | 1                                    | 1                                    | 2                                    |
| D                    | 1                                                     | 1                                    | 2                                    | 1                                    |
| E                    | 1                                                     | 1                                    | 2                                    | 2                                    |
| F                    | 1                                                     | 2                                    | 1                                    | 1                                    |
| G                    | 1                                                     | 2                                    | 1                                    | 2                                    |
| H                    | 1                                                     | 2                                    | 2                                    | 1                                    |
| J                    | 1                                                     | 2                                    | 2                                    | 2                                    |
| K                    | 2                                                     | 1                                    | 1                                    | 1                                    |
| L                    | 2                                                     | 1                                    | 1                                    | 2                                    |
| M                    | 2                                                     | 1                                    | 2                                    | 1                                    |
| N                    | 2                                                     | 1                                    | 2                                    | 2                                    |
| P                    | 2                                                     | 2                                    | 1                                    | 1                                    |
| R                    | 2                                                     | 2                                    | 1                                    | 2                                    |
| S                    | 2                                                     | 2                                    | 2                                    | 1                                    |
| T                    | 2                                                     | 2                                    | 2                                    | 2                                    |
| Z                    | Connector delivered without coding pin <sup>(1)</sup> |                                      |                                      |                                      |

## CODING PINS ARE FOR RECEPTACLE ONLY



### NOTE:

(1) Z panel cut out coding is only available with fix mounting

## EPXB Polarization Code

### EASY READING OF POLARIZATION CODE

Polarization device is included in the part number and could be installed as shown below

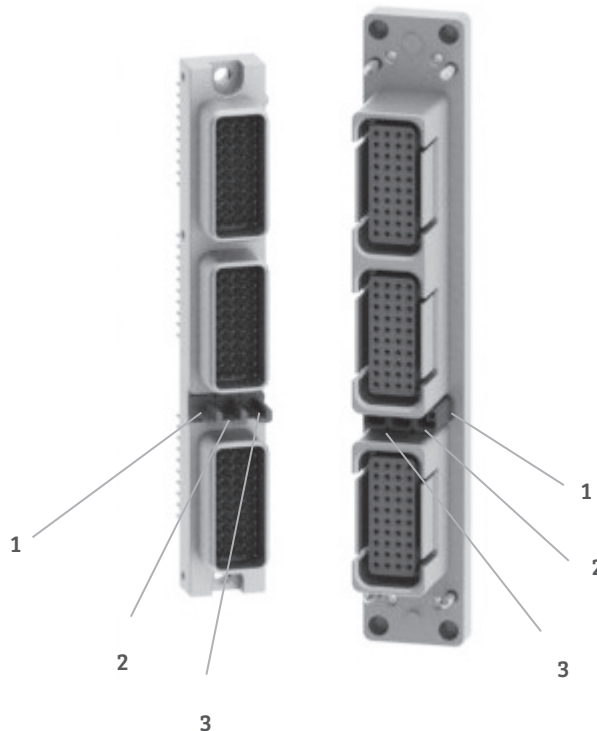
Each shell has 3 keys which can be in four different position

The three polarization keys can have their own position which allow a large range of codification

Plug size 3  
Polarization post



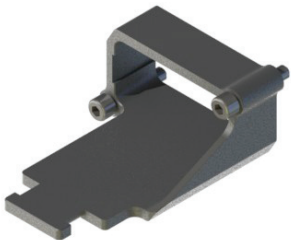
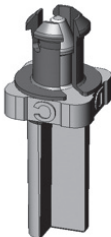
Receptacle size 3  
Polarization key



Connectors are shown front side with cavity A upwards

This is how you should read your code for either EPXB2 or EPXB3 or EPXB4

## Rack & Panel Accessories

|                                                                                     | Part number | Description                                                       | Assembly torque                    |
|-------------------------------------------------------------------------------------|-------------|-------------------------------------------------------------------|------------------------------------|
|    | 617925073   | EMI backshell<br>for receptacle only<br>(aluminium nickel-plated) | 0.55±0.05 Nm<br>(4.87±0.44 in-lbs) |
|    | 617922022   | Straight strain relief for<br>receptacle only<br>(composite)      | 0.55±0.05 Nm<br>(4.87±0.44 in-lbs) |
|   | 617954002   | Dust cap for plug shell<br>(pink color)                           | N/A                                |
|                                                                                     | 617954003   | Dust cap for receptacle shell<br>(pink color)                     | N/A                                |
|                                                                                     | 617954004   | ESD dust cap plug shell<br>(black color)                          | N/A                                |
|                                                                                     | 617954005   | ESD dust cap receptacle shell<br>(black color)                    | N/A                                |
|  | 617980052   | Coding Pin                                                        | 0.8 Nm<br>(7 in-lbs)               |
|  | 617980054   | Polarization post                                                 | N/A                                |
|  | 617980055   | Polarization key                                                  | N/A                                |

EPX® SERIES

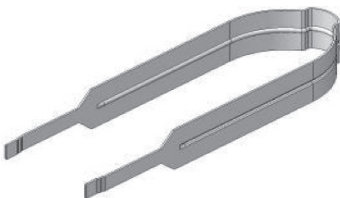
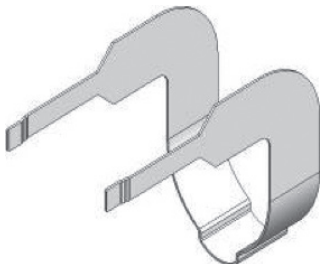
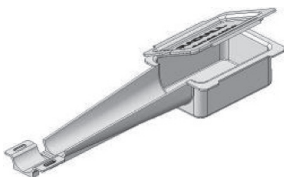
INSERTS

CONTACTS

DISCONNECT APPLICATION

RACK & PANEL APPLICATION

## Rack & Panel Tools

|                                                                                     | Part number | Description                                                  | EPXB |
|-------------------------------------------------------------------------------------|-------------|--------------------------------------------------------------|------|
|    | 282521002   | Insert extraction tool                                       | X    |
|    | 282521004   | Right angle insert extraction tool                           | X    |
|   | 617954020   | Plastic box to protect wired inserts during handling         | X    |
|  | F780855000  | Hexagonal key 2mm (5/64inch) Flats for sleeve holder removal | X    |
|  | 282549041   | Removal tool for metal coding keys (M81969/30-06)            | X    |

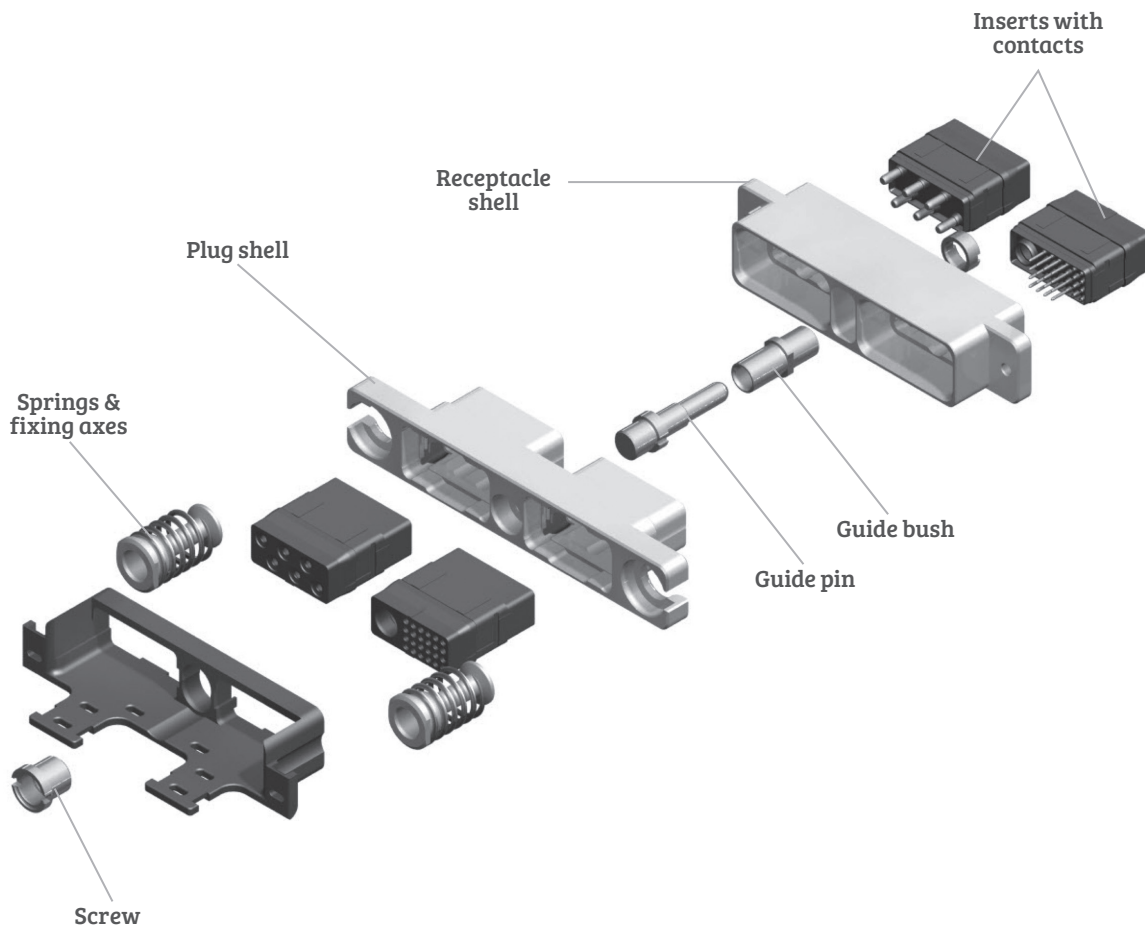
## EPX Galley Product Overview

The new EPXB2 Galley connector was specially designed for the severe conditions required by galley equipment. A floating mechanism was developed to avoid any risk of jamming and to guarantee a fully sealed connection.

The EPXB2 is used on ovens, beverage makers, refrigerators, microwave ovens and other equipment which fit within the new standardized galley layouts.

The EPXB2 connector is modular and provides extra contact density to add new contacts such as the #8 Twinax CAN data bus contact. Backshell accessories are also available.

Detailed view of receptacle and plug with accessories for the EPXB2 galley connector



EPX® SERIES

INSERTS

CONTACTS

DISCONNECT APPLICATION

RACK & PANEL APPLICATION

## How to Order EPX® Galley Equipment Connector

## RECEPTACLE AND PLUG ASSEMBLY KIT

| Part number            | Description                  |
|------------------------|------------------------------|
| 617610188 or 617610558 | Receptacle assembled kit (*) |
| 617610189              | Plug assembled kit (*)       |

(\*)Part numbers for assembly kits include: plug or receptacle shell, inserts, contacts, sealing plugs and dust caps.

Each item included in the kit is indicated in the table below and can also be ordered separately

## RECEPTACLE KITS

## 617610188

Shell with 2 self-locking threaded holes

| Part number | Description                | Quantity per kit |
|-------------|----------------------------|------------------|
| 617610212   | Receptacle shell           | 1                |
| EPXBE25Q1PA | Insert for cavity A        | 1                |
| EPXBE06PB   | Insert for cavity B        | 1                |
| 617200      | Pin crimp contacts/Size 22 | 15               |
| 617250      | Pin crimp contacts/Size 12 | 6                |
| 616910      | Filler plug                | 9                |
| 617954003   | Dust cap                   | 2                |

## 617610558

Shell with 2 thru holes

| Part number | Description                | Quantity per kit |
|-------------|----------------------------|------------------|
| 617610419   | Receptacle shell           | 1                |
| EPXBE25Q1PA | Insert for cavity A        | 1                |
| EPXBE06PB   | Insert for cavity B        | 1                |
| 617200      | Pin crimp contacts/Size 22 | 15               |
| 617250      | Pin crimp contacts/Size 12 | 6                |
| 616910      | Filler plug                | 9                |
| 617954003   | Dust cap                   | 2                |

## PLUG KIT

## 617610189 contents

| Part number | Description                   | Quantity per kit |
|-------------|-------------------------------|------------------|
| 617610213   | Plug shell                    | 1                |
| EPXBE25Q1SA | Insert for cavity A           | 1                |
| EPXBE06SB   | Insert for cavity B           | 1                |
| 617300      | Socket crimp contacts/Size 22 | 15               |
| 617350      | Socket crimp contacts/Size 12 | 6                |
| 616910      | Filler plug                   | 9                |
| 617922007   | Strain relief                 | 1                |
| 617954002   | Dust cap                      | 2                |

## CAN DATA BUS CONTACTS

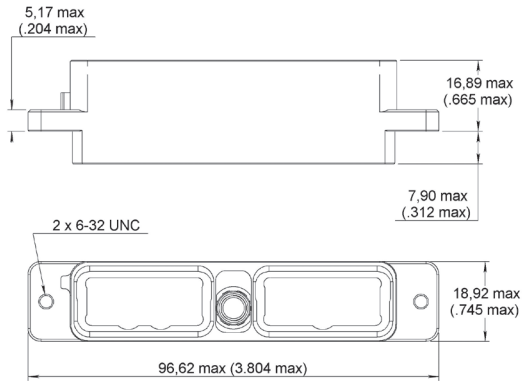
| Part number | Description               |
|-------------|---------------------------|
| 617165011   | Size 8 Twinax pin contact |
| 617065011   | Size 8 Twinax pin contact |

## Dimensions and Panel Cut Out

### EPX® GALLEY EQUIPMENT CONNECTOR PER ARINC 800

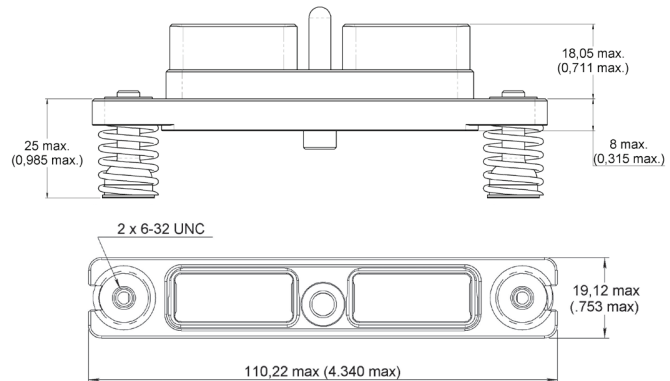
#### RECEPTACLE

Front mount

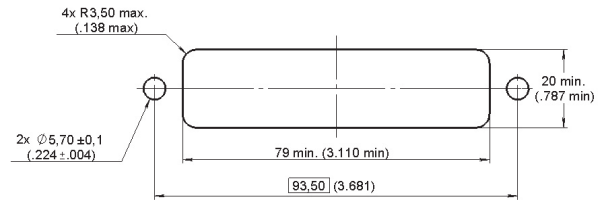
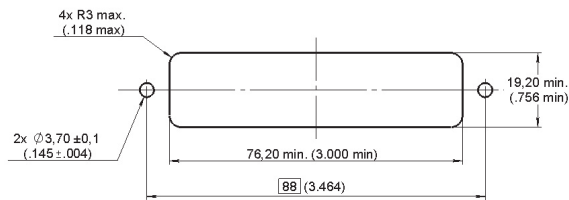


#### PLUG

Rear mount



#### PANEL CUT OUT



EPX® SERIES

INSERTS

CONTACTS

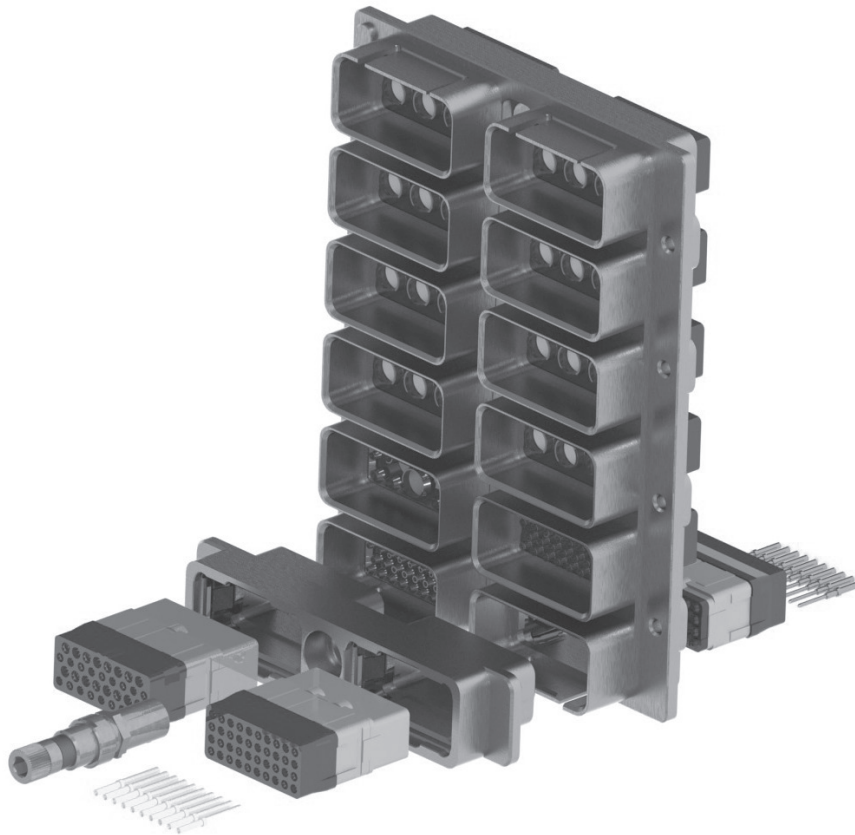
DISCONNECT APPLICATION

RACK & PANEL APPLICATION

## Multi-gang EPX® Connectors

A whole range of multigang connectors is available for disconnect and rack and panel applications. Multigang connectors features and benefits:

- Weight saving design
- Make installation easier and quicker
- Utilize EPX modularity and its whole range of inserts
- Take advantage of EPX connectors functionalities and use EPXB2 standard plug shells with a multigang shell



### Specifications

- Several cavities for EPXB inserts : from 4 to 20 cavities
- Standard EPX strain reliefs and backshells available
- In accordance with EN4644 performances

### Several options are available:

- Grounding block
- Grounding spring fingers
- Float mounting
- Spring loaded mounting



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|-----------------------|----------------------------------------------------------------------------------------------------------------------|--------------------|--------------------|--------------------|
| <b>FINLAND</b>        | Radiall Finland PO Box 202 - 90101 Oulu                                                                              | +358 407522412     |                    | infofi@radiall.com |
| <b>FRANCE</b>         | Radiall SA 101 Rue Philibert Hoffmann 93116 Rosny Sous Bois                                                          | +33 1 49 35 35 35  | +33 1 49 35 35 14  | infofr@radiall.com |
| <b>GERMANY</b>        | Radiall GmbH Carl Zeiss Str. 10 Postfach 200143 D63307 Rödermark                                                     | +49 60 74 91 07 0  | +49 60 74 91 07 70 | infofe@radiall.com |
| <b>ITALY</b>          | Radiall Elettronica S.R.L Via della Resistenza 113 - 20090 Buccinasco Milano                                         | +39 02 48 85 121   | +39 02 48 84 30 18 | infoit@radiall.com |
| <b>NETHERLANDS</b>    | Radiall Nederland BV Hogebrinkerweg 15b - 3871 KM Hoevelaken                                                         | +31 33 253 40 09   | +31 33 253 45 12   | infofl@radiall.com |
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| <b>UNITED KINGDOM</b> | Radiall Ltd Ground Floor 6 The Grand Union Office Park Packet Boat Lane<br>UXBRIDGE Middlesex UB8 2GH United Kingdom | +44 (0)1895 425000 | +44 (0)1895 425010 | infouk@radiall.com |

## Asia

|                  | ADDRESS                                                                                                                        | PHONE           | FAX             | EMAIL              |
|------------------|--------------------------------------------------------------------------------------------------------------------------------|-----------------|-----------------|--------------------|
| <b>CHINA</b>     | Shanghai Radiall Electronics CO, Ltd<br>N° 390 Yong He Rd SHANGHAI 200072 P.R.C                                                | +86 21 66523788 | +86 21 66521177 | infozh@radiall.com |
| <b>HONG KONG</b> | Radiall Electronics (Asia) Ltd Flat D, 6/F, Ford Glory Plaza,<br>37-39 Wing Hong Street - Cheung Sha Wan - Kowloon - Hong Kong | +852 29593833   | +852 29592636   | infohk@radiall.com |
| <b>INDIA</b>     | Radiall India Pvt. Ltd<br>25.D.II phase Peenya Industrial Area. Bangalore-560058                                               | +91 80 23720989 | +91 80 28397228 | infoin@radiall.com |
| <b>JAPAN</b>     | Nihon Radiall Shibuya-Ku Ebisu 1-5-2, Kougetsu Bldg 405 - Tokyo 150-0013                                                       | +81 3 34406241  | +81 3 34406242  | infojp@radiall.com |

## Americas

|                         | ADDRESS                                                          | PHONE           | FAX             | EMAIL               |
|-------------------------|------------------------------------------------------------------|-----------------|-----------------|---------------------|
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