

# DEUTSCH DMC-MD SERIES

SINGLE MODULE EN4165, ARINC 809,  
BACC65 CONNECTORS

Quick Change Modular Connector Solutions  
For Aircraft IFE and Cabin Systems

# FLEXIBLE MODULARITY FOR CABIN SYSTEMS

## Table of Contents

|                                    |         |
|------------------------------------|---------|
| Introduction                       | 3       |
| Overview and Specifications        | 4 - 5   |
| Part Numbering System              |         |
| Shells                             | 6       |
| Accessories                        | 7       |
| Backshells (and Plugs)             | 8       |
| Backshells (and Receptacles)       | 9       |
| Additional Parts                   | 10      |
| Shell Dimension and Panel Mounting | 11      |
| Modules                            | 12 - 13 |
| Panel Mount Cutout Dimensions      | 14 - 15 |

### MODULARITY

- Crimp and PCB contacts size 24 to size 8
- Signal, coaxial, Quadrax, power, and optical contacts
- High-speed Ethernet modules
- Aluminum cable compliant
- Easily replaced modules for fast reconfiguration
- Allows mixing of male and female modules in each connector half
- Wide range of modules allows great flexibility in configuration

### EASY TO INSTALL

- Multiple keying possibilities
- Quick-install coupling
- Toolless assembly

### RELIABILITY

- Environmental sealing
- Vibration resistant
- EMI protection as per EN4165 standard
- Meets FAA flammability, smoke, and toxicity requirements
- EN4165, ARINC 809, and BACC65 compliant

### WEIGHT OPTIMIZATION

- Nickel-plated composite shells
- Compact solution

Originally designed in the 1980s, DEUTSCH DMC-MD connectors have evolved into one of the most widely used connector styles for cabin applications in commercial aerospace. Standardized in European Standard EN4165, DMC-MD connectors provide a modular, flexible, and reliable system. The connectors are available in both multi-cavity and single-module configurations, using the same modules, to provide compact, lightweight connectivity.

### DEUTSCH DMC-MD Single-Module Connectors



**TE Components . . . TE Technology . . . TE Know-how . . .**  
AMP | AGASTAT | CII | HARTMAN | KILOVAC | MICRODOT | NANONICS | POLAMCO | Raychem  
SEACON | Rochester | DEUTSCH

Empower Engineers to Solve Problems, Moving the World Forward.



# THE STANDARD CONNECTOR FOR 4TH GENERATION CABIN NETWORKS

ARINC 809, BACC65, EN4165



### QUALIFIED

- EN4165
- ARINC 809
- BACC65

### APPLICATIONS

- Cabin Systems
- In-Flight Entertainment
- Avionics



### Specifications

#### MATERIALS

- **Housing:** Composite, nickel plated
- **Modules:** Thermoplastic and fluoronated silicone
- **Crimp Contacts:** Copper alloy, plated gold over nickel
- **PCB Contacts:** Copper alloy, plated gold over nickel, with lead or RoHS tinning option

#### MECHANICAL/ENVIRONMENTAL

- **Temperature Range:** -55°C to +175°C
- **Vibration:** 20 g
- **Durability:** 500 mating cycles
- **Salt Spray:** 500 hours
- **Interfacial Sealing:** 1.1 x 10<sup>-2</sup> bar

#### ELECTRICAL

- **Insulation Resistance:** 5000 MΩ
- **Contact Current Rating:**
  - Size 24: 3 A
  - Size 23: 5 A
  - Size 22: 5 A
  - Size 20: 7.5 A
  - Size 16: 13 A
  - Size 12: 23 A
  - Size 8: 46 A

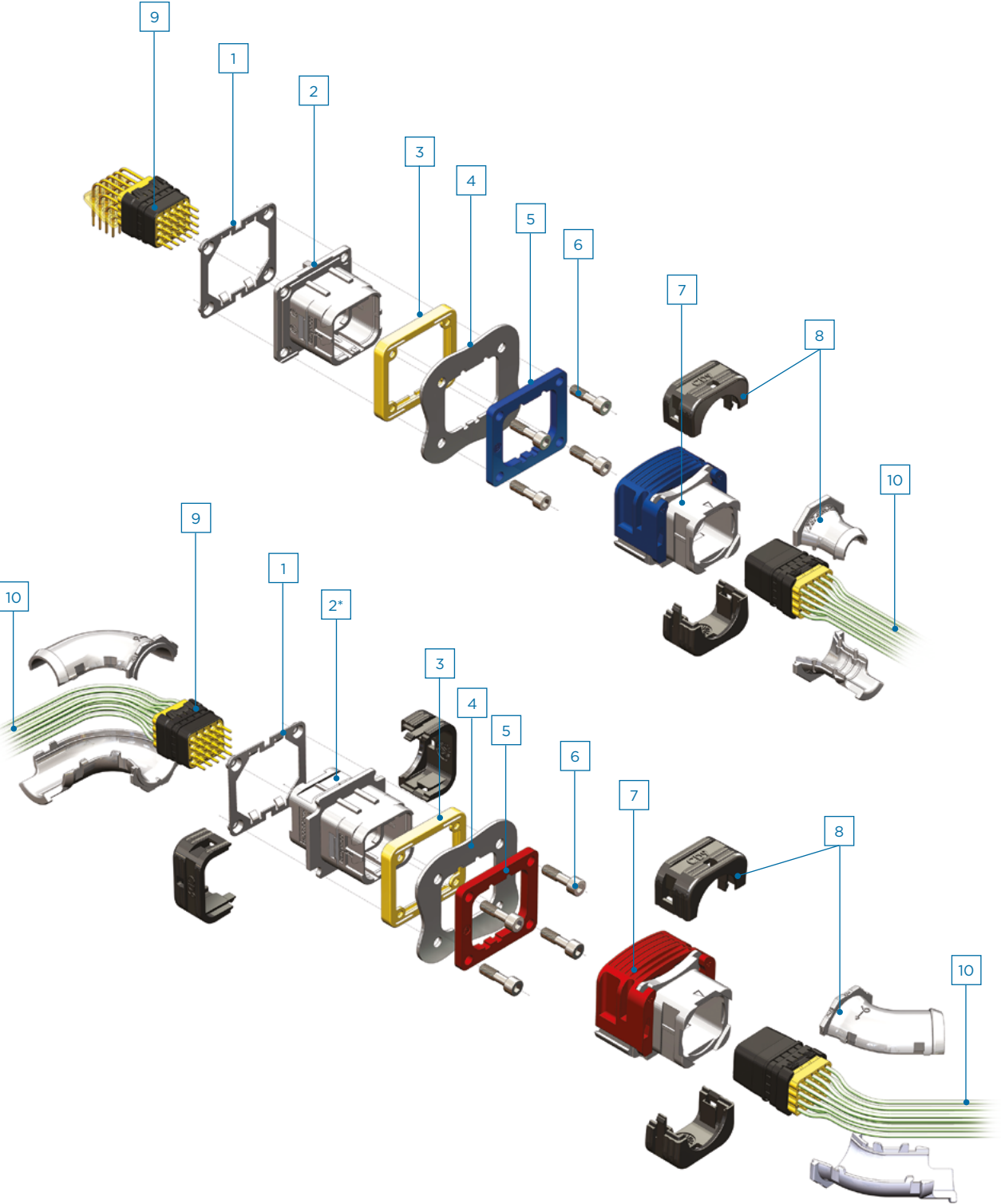
#### EMI SHIELDING PERFORMANCE

| Frequency (MHz)  | 100 | 200 | 300 | 400 | 800 | 1000 |
|------------------|-----|-----|-----|-----|-----|------|
| Attenuation (dB) | 50  | 45  | 45  | 40  | 35  | 30   |

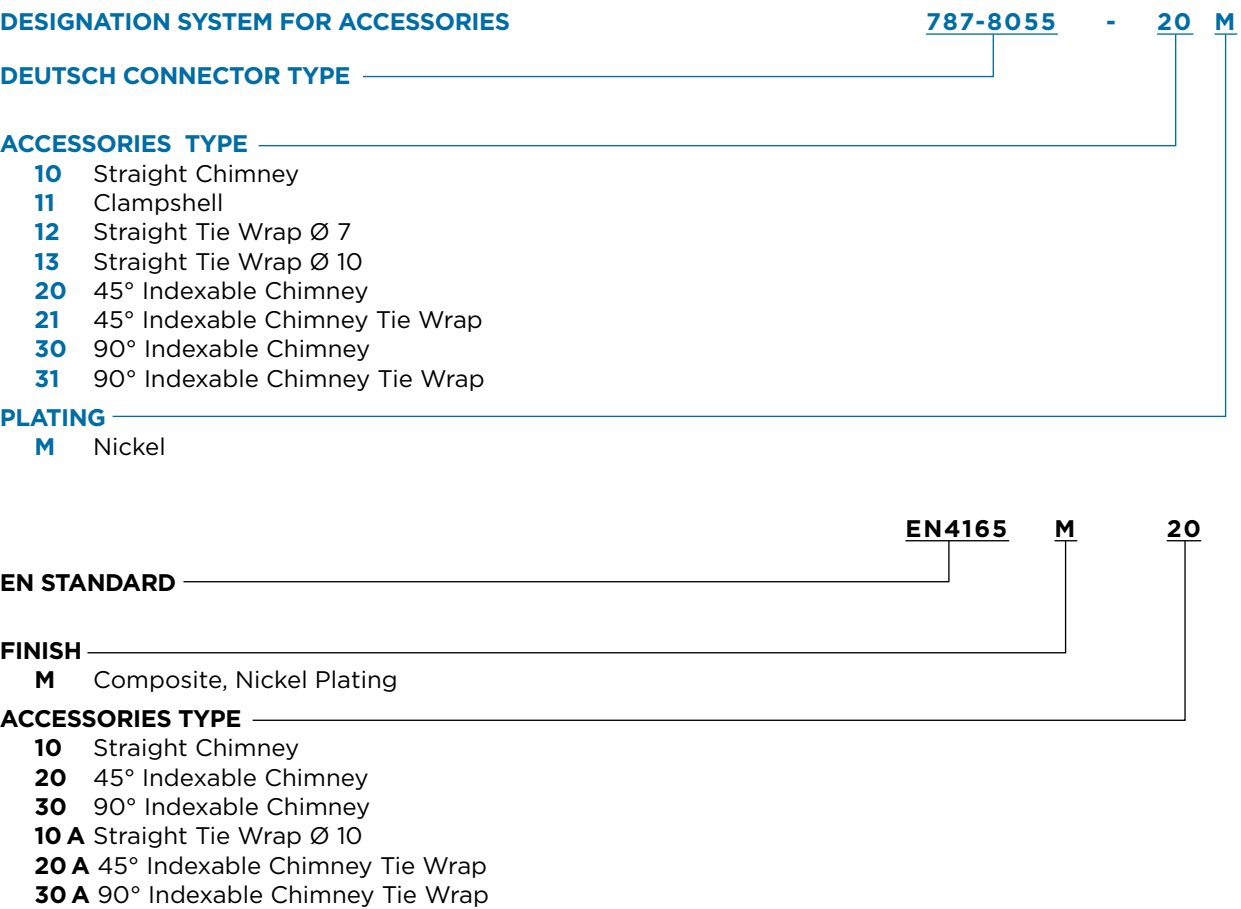
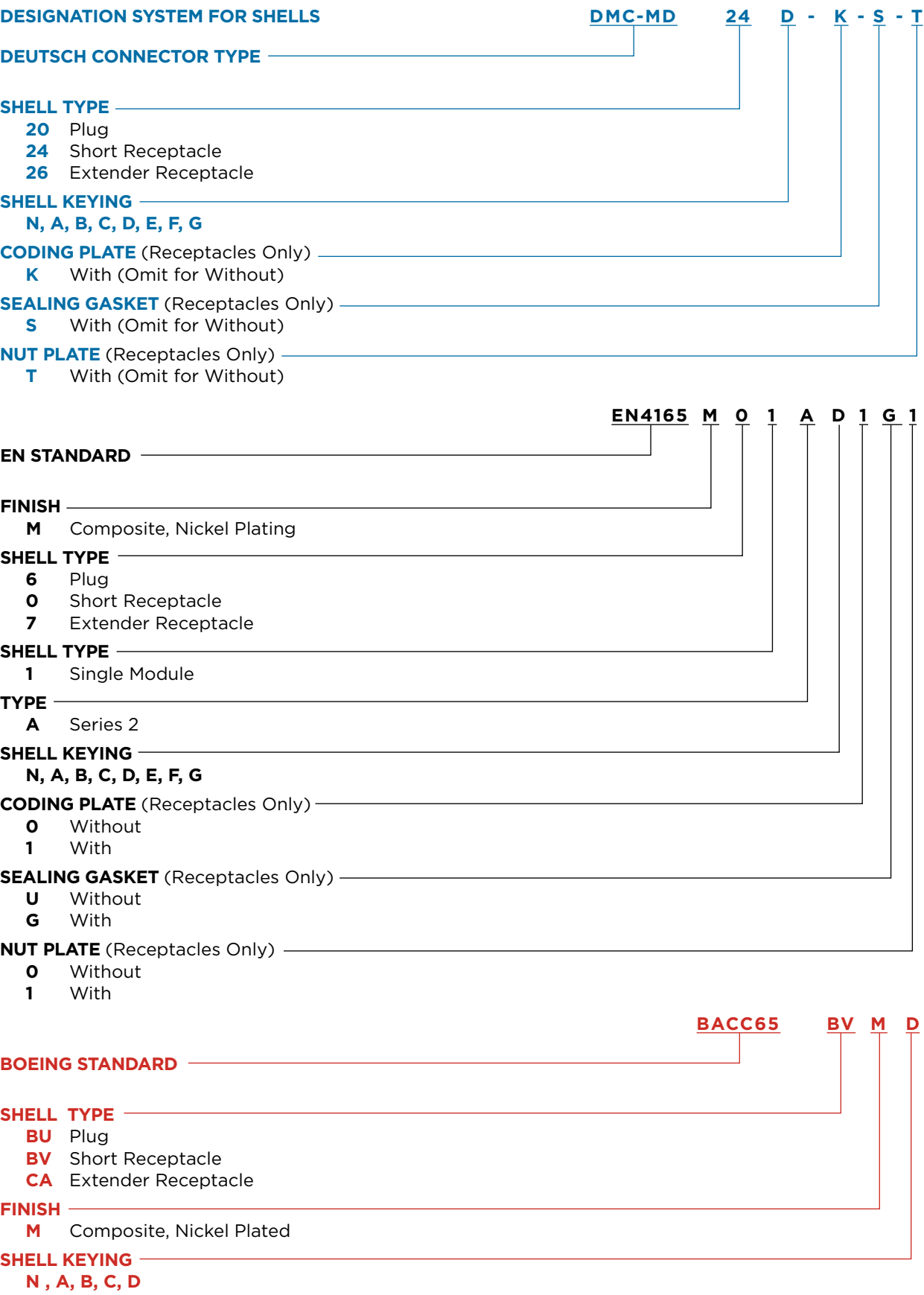
#### WEIGHT

| Extender Receptacle | Short Receptacle | Plug      | Backshell         |
|---------------------|------------------|-----------|-------------------|
| 7 gr                | 6 gr             | 9 gr      | 4 - 7 gr          |
| 0.015 lbs           | 0.013 lbs        | 0.020 lbs | 0.009 - 0.015 lbs |

### Schematic



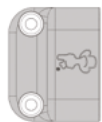
- |    |                         |   |                             |    |           |
|----|-------------------------|---|-----------------------------|----|-----------|
| 1  | Nut plate (option)      | 4 | Panel (up to 2 mm thick)    | 8  | Backshell |
| 2  | Short receptacle        | 5 | Color coding plate (option) | 9  | Modules   |
| 2* | Extender receptacle     | 6 | Screws (not supplied)       | 10 | Cables    |
| 3  | Sealing gasket (option) | 7 | Plug                        |    |           |





BACKSHELLS

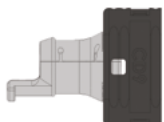
STRAIGHT CLAMPSHELL  
787-8055-11M  
Screws delivered



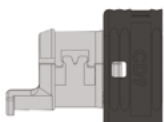
STRAIGHT CHIMNEY  
787-8055-10M  
EN4165-026M10



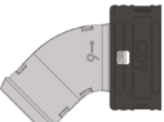
STRAIGHT CHIMNEY  
TIE WRAP Ø 7  
787-8055-12M



STRAIGHT CHIMNEY  
TIE WRAP Ø 10  
787-8055-13M  
EN4165-026M10A



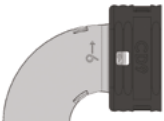
45° INDEXABLE CHIMNEY  
787-8055-20M  
EN4165-026M20



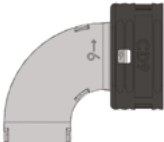
45° INDEXABLE CHIMNEY  
TIE WRAP  
787-8055-21M  
EN4165-026M20A



90° INDEXABLE CHIMNEY  
787-8055-30M  
EN4165-026M30



90° INDEXABLE CHIMNEY  
TIE WRAP  
787-8055-31M  
EN4165-026M30A



PLUGS

DMC-MD 20 N  
BACC65BUMN  
EN4165M61AN



DMC-MD 20 A  
BACC65BUMA  
EN4165M61AA



DMC-MD 20 B  
BACC65BUMB  
EN4165M61AB



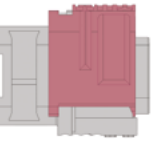
DMC-MD 20 C  
BACC65BUMC  
EN4165M61AC



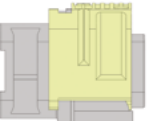
DMC-MD 20 D  
BACC65BUMD  
EN4165M61AD



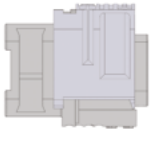
DMC-MD 20 E  
EN4165M61AE



DMC-MD 20 F  
EN4165M61AF



DMC-MD 20 G  
EN4165M61AG



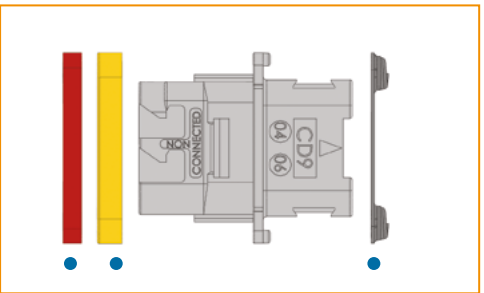
TE/DEUTSCH Part Numbers (DMC-MD / 787)  
BOEING Part Numbers (BACC65)  
STANDARD Part Numbers (EN4165)



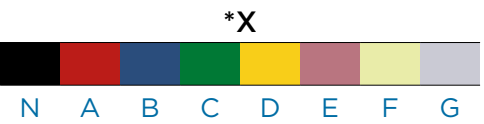
RECEPTACLES

EXTENDER RECEPTACLE

DMC-MD 26 \*X  
BACC65CAM\*X  
EN4165M71A\*X

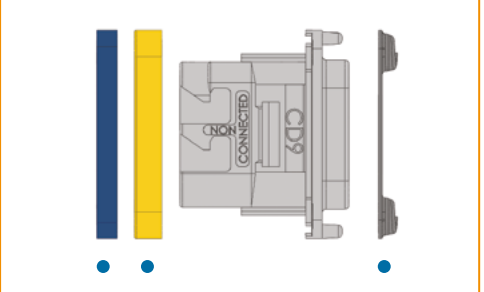


• : To be ordered separately  
(no BACC65 references)



SHORT RECEPTACLE

DMC-MD 24 \*X  
BACC65BVM\*X  
EN4165M01A\*X



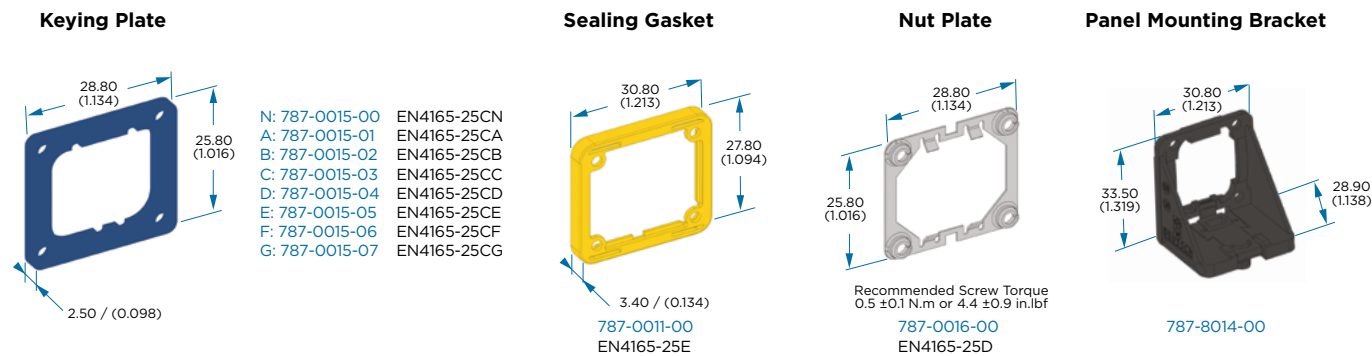
• : To be ordered separately  
(no BACC65 references)

NO ACCESSORY CAN BE USED  
WITH THIS RECEPTACLE

TE/DEUTSCH Part Numbers (DMC-MD / 787)  
BOEING Part Numbers (BACC65)  
STANDARD Part Numbers (EN4165)



OPTIONAL PARTS FOR RECEPTACLE

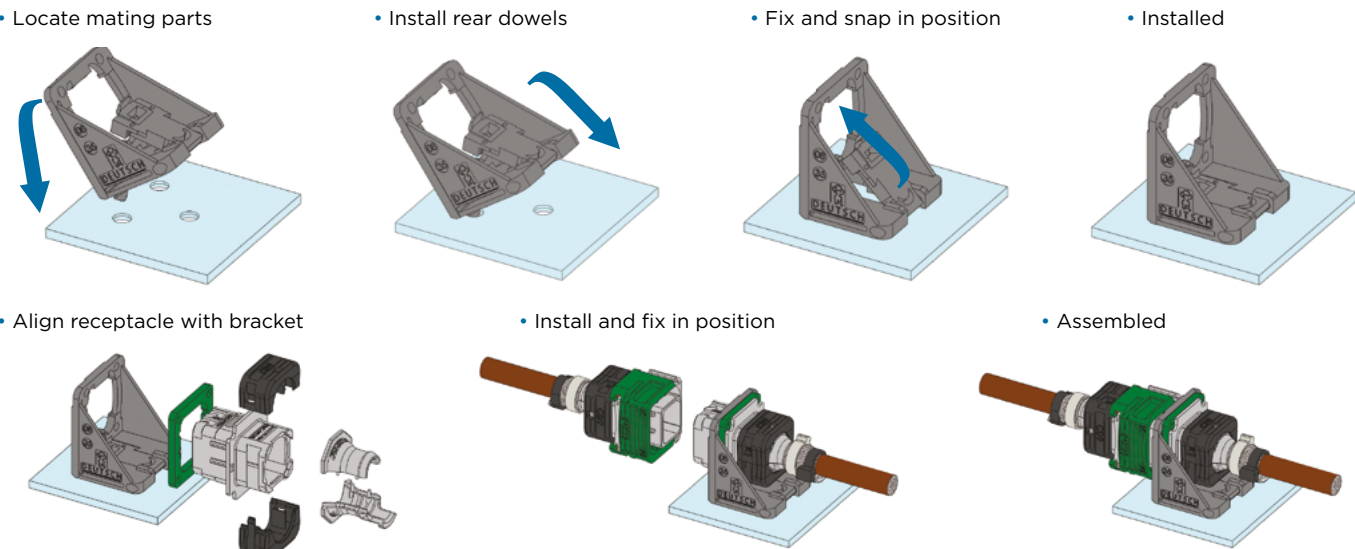


PROTECTIVE CAPS

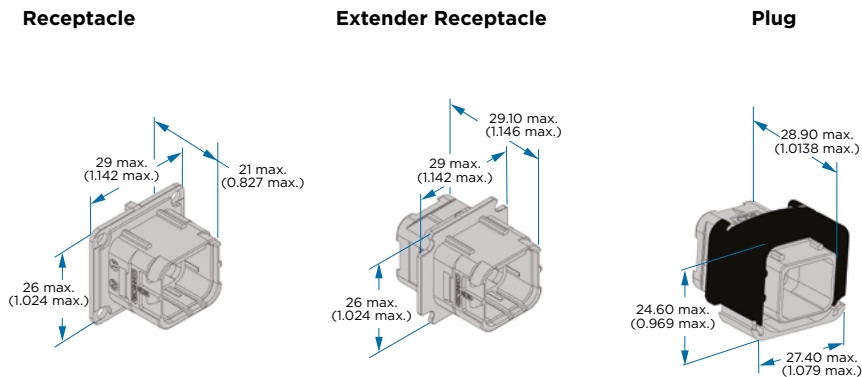
| Protection Level     | Plug Cap    | Receptacle Cap | ESD Receptacle Cap | Receptacle and Extender Cap                           | Plug Flight Cap | Receptacle and Extender Flight Cap                                 |
|----------------------|-------------|----------------|--------------------|-------------------------------------------------------|-----------------|--------------------------------------------------------------------|
|                      | 104-0236-00 | 104-0235-00    | 104-0334-00        | With Lanyard: 787-8011-00<br>W/O Lanyard: 787-8009-00 | 787-8010-00     | With Lanyard: 787-8017-00<br>EN4165M3C<br>W/O Lanyard: 787-8016-00 |
| Shipping             | X           | X              | X                  | -                                                     | -               | -                                                                  |
| Dust                 | X           | X              | X                  | X                                                     | X               | X                                                                  |
| EMI                  | -           | -              | X                  | -                                                     | X               | X                                                                  |
| Low Pressure Sealing | -           | -              | -                  | -                                                     | X               | X                                                                  |

LANYARD  
787-8013-00

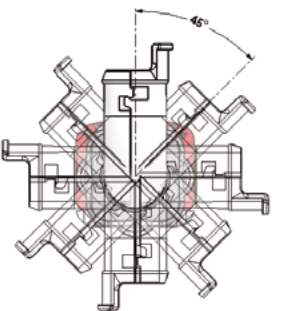
MOUNTING BRACKETS



RECEPTACLES & PLUG

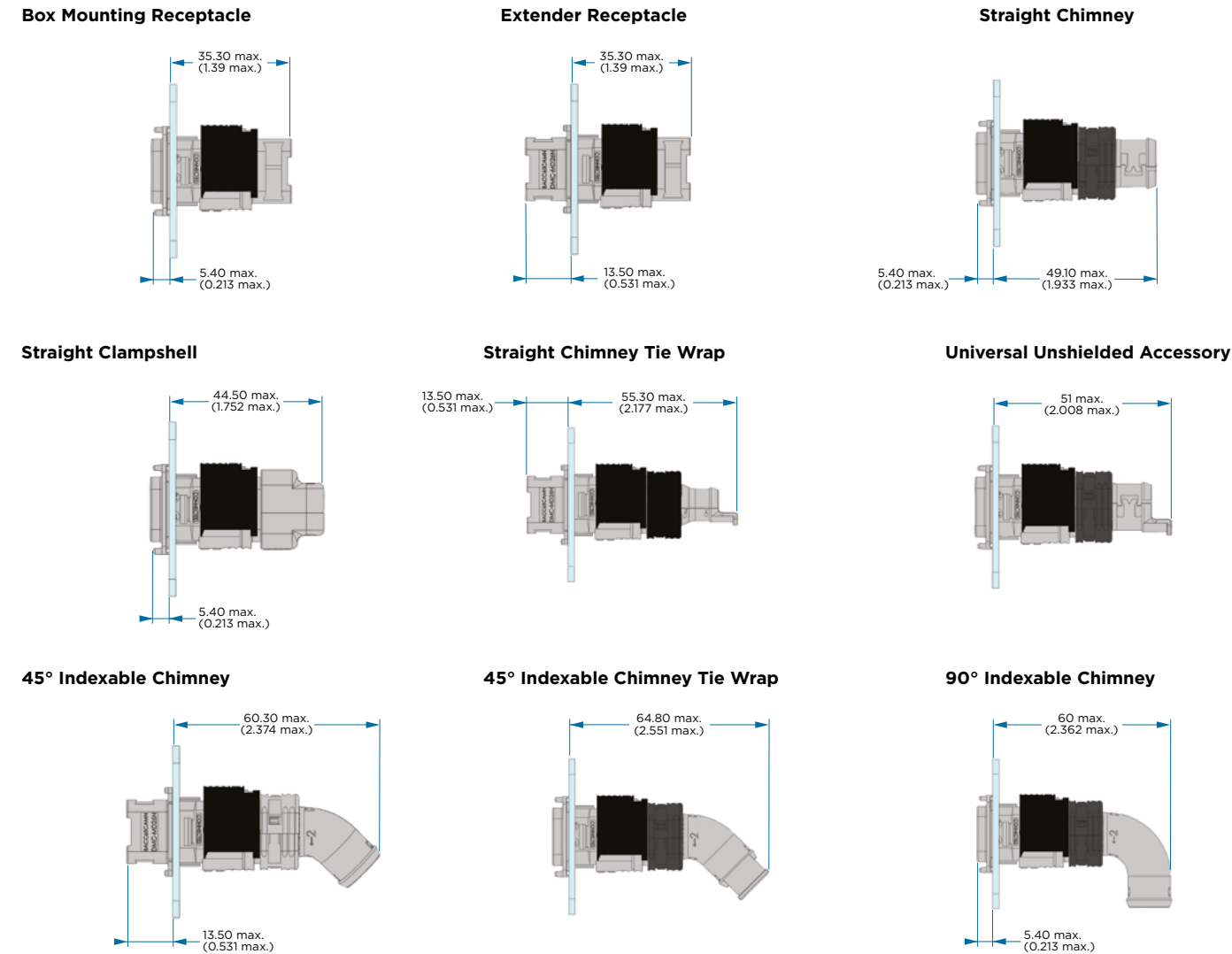


BACKSHELL / CHIMNEY INDEXATION



All backshells can be indexed in eight positions on the rear of plug and extender receptacle shell. This gives maximum flexibility during design and cable installation and reduces the number of variants and components.

MOUNTING PANEL DETAILS



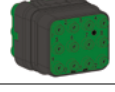
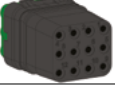




ELECTRICAL MODULES / AS39029/57 AND /58 AND EN3155 CONTACT COMPLIANT

| Configuration                            | Pin Contacts                                                                        |                                                      | Socket Contacts                                                                      |                                                       |
|------------------------------------------|-------------------------------------------------------------------------------------|------------------------------------------------------|--------------------------------------------------------------------------------------|-------------------------------------------------------|
|                                          | View                                                                                | Part No.                                             | View                                                                                 | Part No.                                              |
| 30 Size 23 Contacts                      |    | DMC-MR 30-23 AN                                      |    | DMC-MR 30-23 BN                                       |
| 20 Size 22 Contacts                      |    | DMC-M 20-22 AN<br>BACI10BC2022PNB<br>EN4165A20-221NA |    | DMC-M 20-22 BN<br>BACI10BC2022SNB<br>EN416520-22 A1NB |
| 20 Size 22 Contacts                      |    | DMC-MA 20-22 AN<br>EN4165A20A221NA                   |    | DMC-MA 20-22 BN<br>EN4165A20A221NB                    |
| 12 Size 20 Contacts                      |    | DMC-M 12-20 AN<br>BACI10BC1220PNB<br>EN4165A12-201NA |    | DMC-M 12-20 BN<br>BACI10BC1220SNB<br>EN4165A12-201NB  |
| 8 Size 16 Contacts                       |    | DMC-M 08-16 AN<br>BACI10BC0816PNB<br>EN4165A08-161NA |    | DMC-M 08-16 BN<br>BACI10BC0816SNB<br>EN4165A08-161NB  |
| 4 Size 12 Contacts                       |    | DMC-M 04-12 AN<br>EN4165A04-121NA                    |    | DMC-M 04-12 BN<br>EN4165A04-121NB                     |
| 1 Size 8 Contact                         |   | DMC-M 01-08 AN<br>EN4165A01-081NA                    |   | DMC-M 01-08 BN<br>EN4165A01-081NB                     |
| 6 Size 16 Contacts<br>5 Size 22 Contacts |  | DMC-M 99-01 AN<br>BACI10BC1622PNB<br>EN4165A99-011NA |  | DMC-M 99-01 BN<br>BACI10BC1622SNB<br>EN4165A99-011NB  |
| 8 Size 22 Contacts<br>2 Size 12 Contacts |  | DMC-M 99-06 AN<br>BACI10BC1001PNB                    |  | DMC-M 99-06 BN<br>BACI10BC1001SNB                     |
| 8 Size 20 Contacts<br>2 Size 16 Contacts |  | DMC-M 99-10 AN<br>EN4165A99-101NA                    |  | DMC-M 99-10 BN<br>EN4165A99-101NB                     |
| 6 Size 16 Contacts<br>5 Size 22 Contacts |  | DMC-MA 99-01 AN<br>EN4165A99A011NA                   |  | DMC-MA 99-01 BN<br>EN4165A99A011NB                    |

ELECTRICAL MODULES / BACC47 CONTACT COMPLIANT

| Configuration                            | Pin Contacts                                                                        |                                     | Socket Contacts                                                                      |                                     |
|------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------|--------------------------------------------------------------------------------------|-------------------------------------|
|                                          | View                                                                                | Part No.                            | View                                                                                 | Part No.                            |
| 8 Size 20 Contacts<br>2 Size 16 Contacts |  | DMC-MB 99-10 AN<br>BACI10BC0910PNB  |  | DMC-MB 99-10 BN<br>BACI10BC0910SNB  |
| 12 Size 20 Contacts                      |  | DMC-MB 12-20 AN<br>BACI10BC1220APNB |  | DMC-MB 12-20 BN<br>BACI10BC1220ASNB |

Note : DMC-MD connector modules are compatible with aluminium cable contacts and with EN3155-70 / 71 size 22.

Aluminium cable technology possible with size 22 contacts

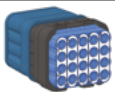
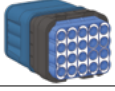
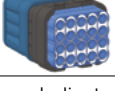
TE/DEUTSCH Part Numbers (DMC-MD / 787)  
BOEING Part Numbers (BACI10BC)  
STANDARD Part Numbers (EN4165)



BLANKING MODULES

| Configuration   | View                                                                                | Part No.                    |
|-----------------|-------------------------------------------------------------------------------------|-----------------------------|
| Blanking Module |  | DMC-M 00-00 PN<br>EN4165-1N |

SHUNT MODULES

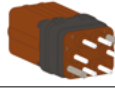
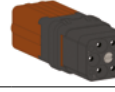
| Configuration                                             | View                                                                                | Part No.                          |
|-----------------------------------------------------------|-------------------------------------------------------------------------------------|-----------------------------------|
| 20 Size 22 Contacts<br>5 Shunts 4 Ways                    |  | DMC-M 22-05 BN<br>EN4165A20Y221NB |
| 20 Size 22 Contacts<br>3 Shunts 4 Ways<br>4 Shunts 2 Ways |  | DMC-M 22-07 BN<br>EN4165A2AY221NB |
| 20 Size 22 Contacts<br>10 Shunts 2 Ways                   |  | DMC-M 22-10 BN<br>EN4165A2BY221NB |

Distribution shunt modules use dedicated contacts based on standard AS39029. The shunt modules can only be mated with DMC-M 20-22 AN or DMC-MA 20-22 AN modules.

HIGH-SPEED ETHERNET MODULES

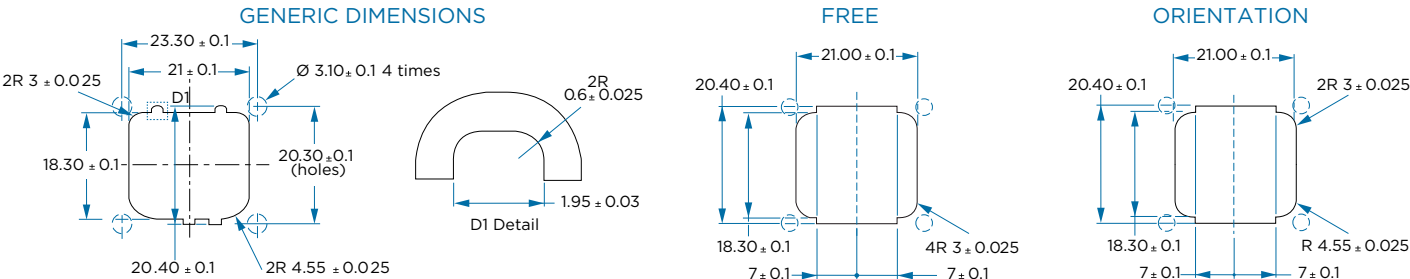
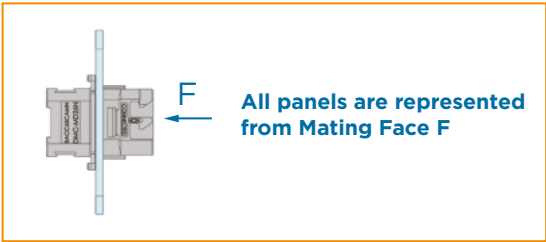
| Configuration                                                  | Pin Contacts                                                                          |                | Socket Contacts                                                                       |                |
|----------------------------------------------------------------|---------------------------------------------------------------------------------------|----------------|---------------------------------------------------------------------------------------|----------------|
|                                                                | View                                                                                  | Part No.       | View                                                                                  | Part No.       |
| 6 Size 16 Contacts<br>2 Size 22 Contacts<br>8 Size 24 Contacts |    | 2226454-1      |    | 2226455-1      |
| 8 Size 22 Contacts<br>3 Size 20 Contacts                       |    | DMC-M 99-02 AN |    | DMC-M 99-02 BN |
| 8 Size 20 Contacts<br>8 Size 24 Contacts                       |  | DMC-M 99-03 AN |  | DMC-M 99-03 BN |
| 6 Size 20 Contacts<br>2 Size 22 Contacts<br>8 Size 24 Contacts |  | DMC-M 99-04 AN |  | DMC-M 99-04 BN |

FIBER OPTIC AND HYBRID MODULES

| Configuration                                                   | Module Part No.                                                                       |                                                            |                                                                                       |                                                                                                                                          | Alignment Sleeve                       |
|-----------------------------------------------------------------|---------------------------------------------------------------------------------------|------------------------------------------------------------|---------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
|                                                                 | Pin                                                                                   | Part No.                                                   | Socket                                                                                | Part No.                                                                                                                                 |                                        |
| 6 MC5 Termini                                                   |  | 458235                                                     |  | 458238                                                                                                                                   | 458237-C (Ceramic)<br>458237-M (Metal) |
| 1 MT Ferrule<br>(12 or 24 Fibers)                               |  | DMC-M01-MC6N                                               |  | DMC-M01-MC6N                                                                                                                             | Not required                           |
| 2 ARINC 801 Termini<br>5 Size 16 Contacts<br>2 Size 22 Contacts |  | 459736<br>459736-P (With Contacts)<br>459823 (Right Angle) |  | 459737 (Ceramic Sleeve)<br>459737-S (Ceramic Sleeve with Contacts)<br>459737-M (Metal Sleeve)<br>459737-M-S (Metal Sleeve with Contacts) | Included with socket module            |

Note : DMC-M connector's modules are compatible with aluminium cable contacts and with EN3155-70 / 71 size 22.

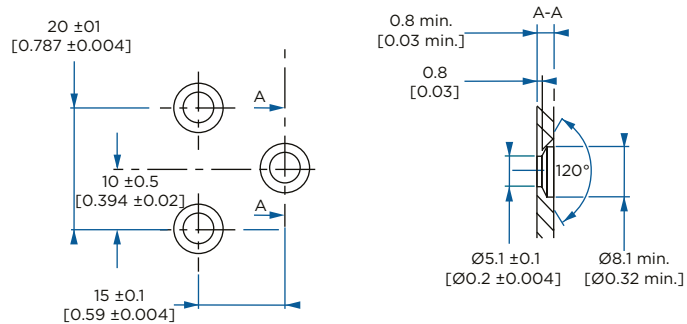
TE/DEUTSCH Part Numbers (DMC-MD / 787)  
BOEING Part Numbers (BACI10BC)  
STANDARD Part Numbers (EN4165)



Note: Dimensions are in millimeters. Each hole Ø 3.1 mm must receive a No. 4-40 screw (not supplied)  
Recommended thickness panel: 0.8 mm min. - 2 mm max.

Recommended screw torque is 0.5 ± 0.1 N.m or 4.4 ± 0.9 in.lbf

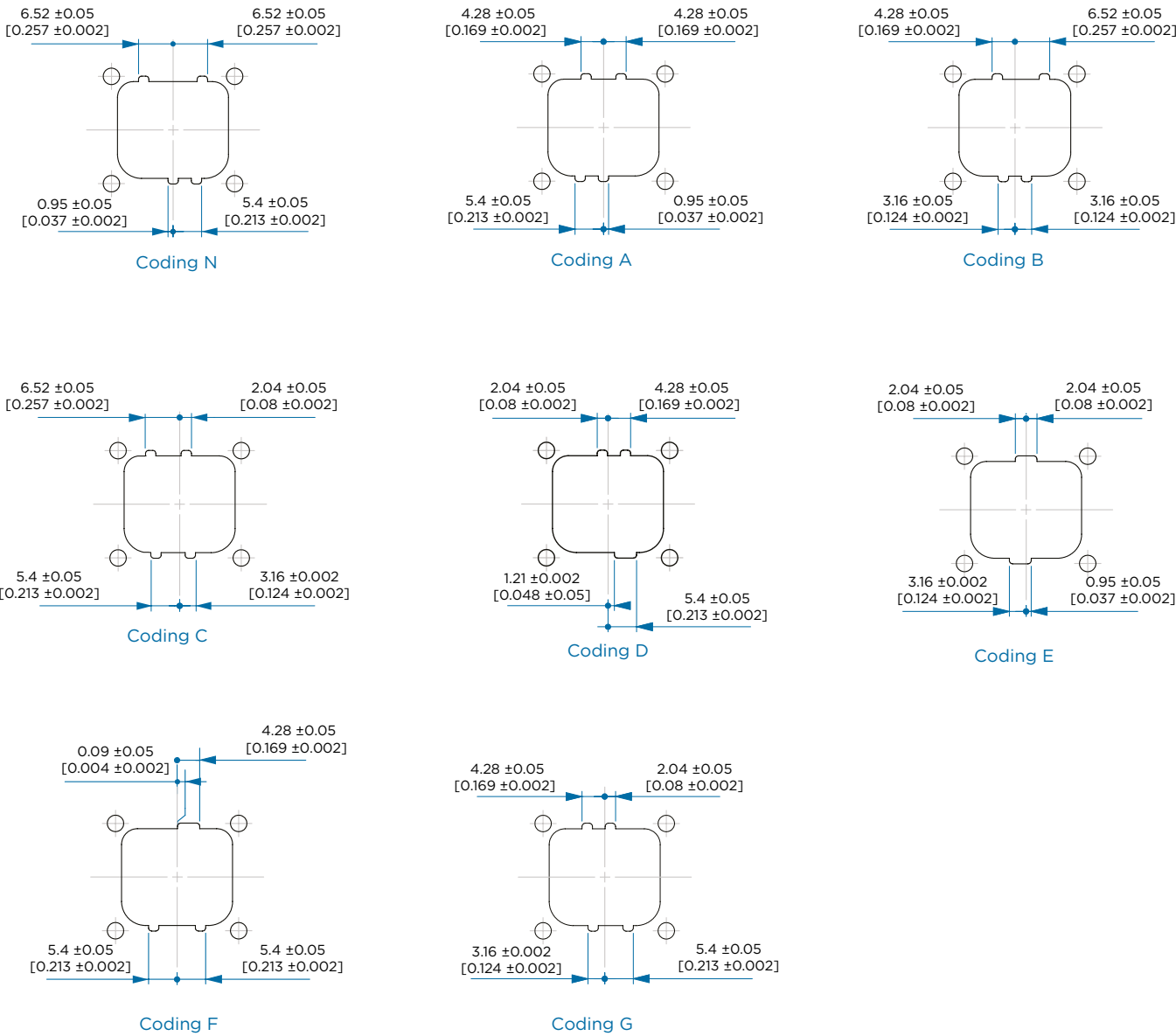
PANEL MOUNTING BRACKET CUTOUT DETAILS



Overall dimensions and characteristics are given for indication guidance only. TE Connectivity reserves the right to modify them for production improvement reasons.



PANEL CODING KEYING





## LET'S CONNECT

We make it easy to connect with our experts and are ready to provide all the support you need. Just call your local support number or visit [www.te.com/industrial](http://www.te.com/industrial) to chat with a Product Information Specialist.

## Technical Support

[te.com/support-center](http://te.com/support-center)

|                      |                 |              |                    |
|----------------------|-----------------|--------------|--------------------|
| North America        | +1 800 522 6752 | Asia Pacific | +86 400 820 6015   |
| North America (Toll) | +1 717 986 7777 | Japan        | 044 844 8180       |
| EMEA/South Africa    | +800 0440 5100  | Australia    | +61 2 9554 2695    |
| EMEA (Toll)          | +31 73 624 6999 | New Zealand  | +64 (0) 9 634 4580 |
| India (Toll-Free)    | +800 440 5100   |              |                    |

## QUICK CHANGE MODULAR CONNECTOR SOLUTIONS FOR AIRCRAFT IFE AND CABIN SYSTEMS



[te.com/dmc-m](http://te.com/dmc-m)

AMP, AGASTAT, CII, DEUTSCH, HARTMAN, KILOVAC, MICRODOT, NANONICS, POLAMCO, Raychem, Rochester, SEACON, TE, TE Connectivity and the TE connectivity (logo) are trademarks of the TE Connectivity Ltd. family of companies. Other products, logos, and company names mentioned herein may be trademarks of their respective owners.

While TE Connectivity (TE) has made every reasonable effort to ensure the accuracy of the information herein, nothing herein constitutes any guarantee that such information is error-free, or any other representation, warranty or guarantee that the information is accurate, correct, reliable or current. The TE entity issuing this publication reserves the right to make any adjustments to the information contained herein at any time without notice. All implied warranties regarding the information contained herein, including, but not limited to, any implied warranties of merchantability or fitness for a particular purpose are expressly disclaimed. The dimensions herein are for reference purposes only and are subject to change without notice. Specifications are subject to change without notice.

Consult TE for the latest dimensions and design specifications.

© 2019 TE Connectivity Ltd. family of companies All Rights Reserved.

1-1773725-9 07/19

# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[TE Connectivity:](#)

[ZPF000000000202102](#)