



DEUTSCH

BRANCHE CONNECTEURS AEROMILITAIRES



Single Module EN 4165

Arinc 809 - BACC65 - EN4165

The DMC-M is a modular rectangular connector which was designed and developed by Deutsch in the 1980's. It has since set the modular connector standard in the Aerospace & Military industries, and is now standardised by European Specification EN4165.

■ The modularity

The DMC-M is designed to address a wide range of requirements due to its wide range of contacts arrangements : from contacts size 22 to size 8, but also coaxial, quadax or optical contacts.

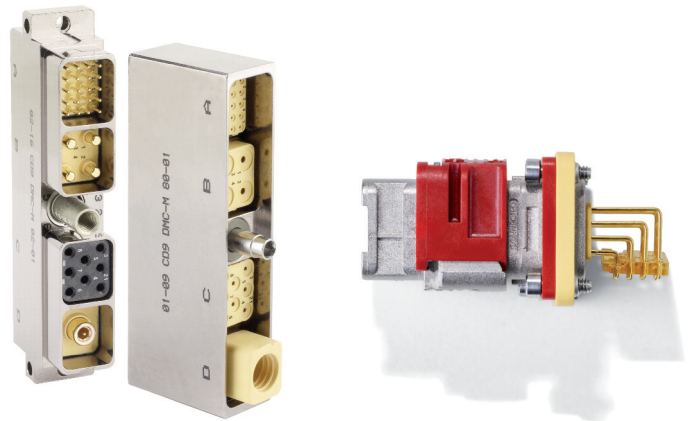
Each mated half of the DMC-M connector can contain both male and female configurations which allow you to mix input and output with signal and power supply. You can easily modify your system by simply removing modules from the shells and replace them with a new layout. This makes the DMC-M perfect for both new designs and retrofit applications.



■ The safety

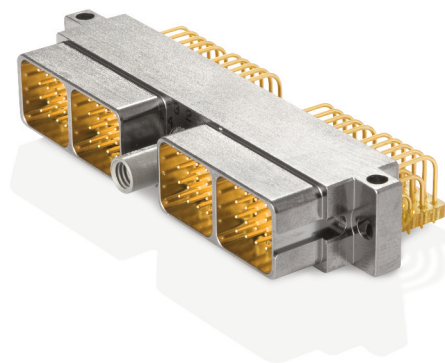
The DMC-M provides a large number of insert layout possibilities. It allows different keying possibilities between plugs and receptacles.

DMC-M provides a real EMI protection following most stringent Aerospace and Military specifications.



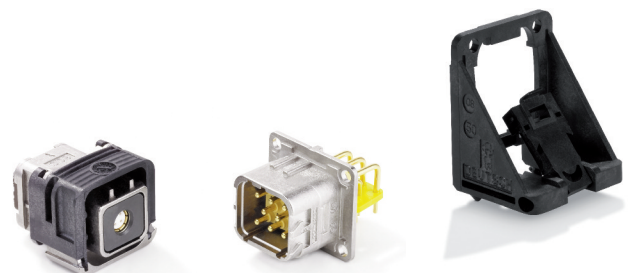
■ The reliability

To increase the level of reliability of the cabin interconnections, the Single Module DMC-M is compliant with the most demanding avionic specifications, in terms of sealing, vibrations or mechanical endurance in accordance with EN 4165.



■ The weight optimization

Weight saving is commonly a high concern, the Single Module DMC-M has been designed in composite with a metallized plating for weight and mass saving.





ARINC809 - BACC65 - EN4165

The New Standard Connector for Aircraft equipment and cabin systems.

Advantages

Light weight composite, modularity, color and mechanical coded, push pull coupling are the key features of this connector

Standard

ARINC809, BACC65, EN4165 qualified

Markets & Application

Cabin and avionic systems
Military - Railway

Technical characteristics

Housing : Composite
Plating : Nickel
Inserts : Thermoplastic and FSR
Vibrations : 20 g
Durability : 500 mating cycles
Salt spray : 500 hours
Contacts : Copper alloy with gold on nickel plating
Interfacial sealing : $1,1 \cdot 10^{-2}$ bar

Electrical characteristics

Temperature range : -55°C to $+175^{\circ}\text{C}$
Insulation resistance : $\geq 5000\text{ M}\Omega$
Maximum current : Size 22 : 5 A
Size 20 : 7,5 A
Size 16 : 13 A
Size 12 : 23 A
Size 8 : 46 A

EMI shielding performance

| MHz frequency | 100 | 200 | 300 | 400 | 800 | 1000 |
|------------------|-----|-----|-----|-----|-----|------|
| Attenuation (dB) | 90 | 88 | 88 | 87 | 85 | 85 |

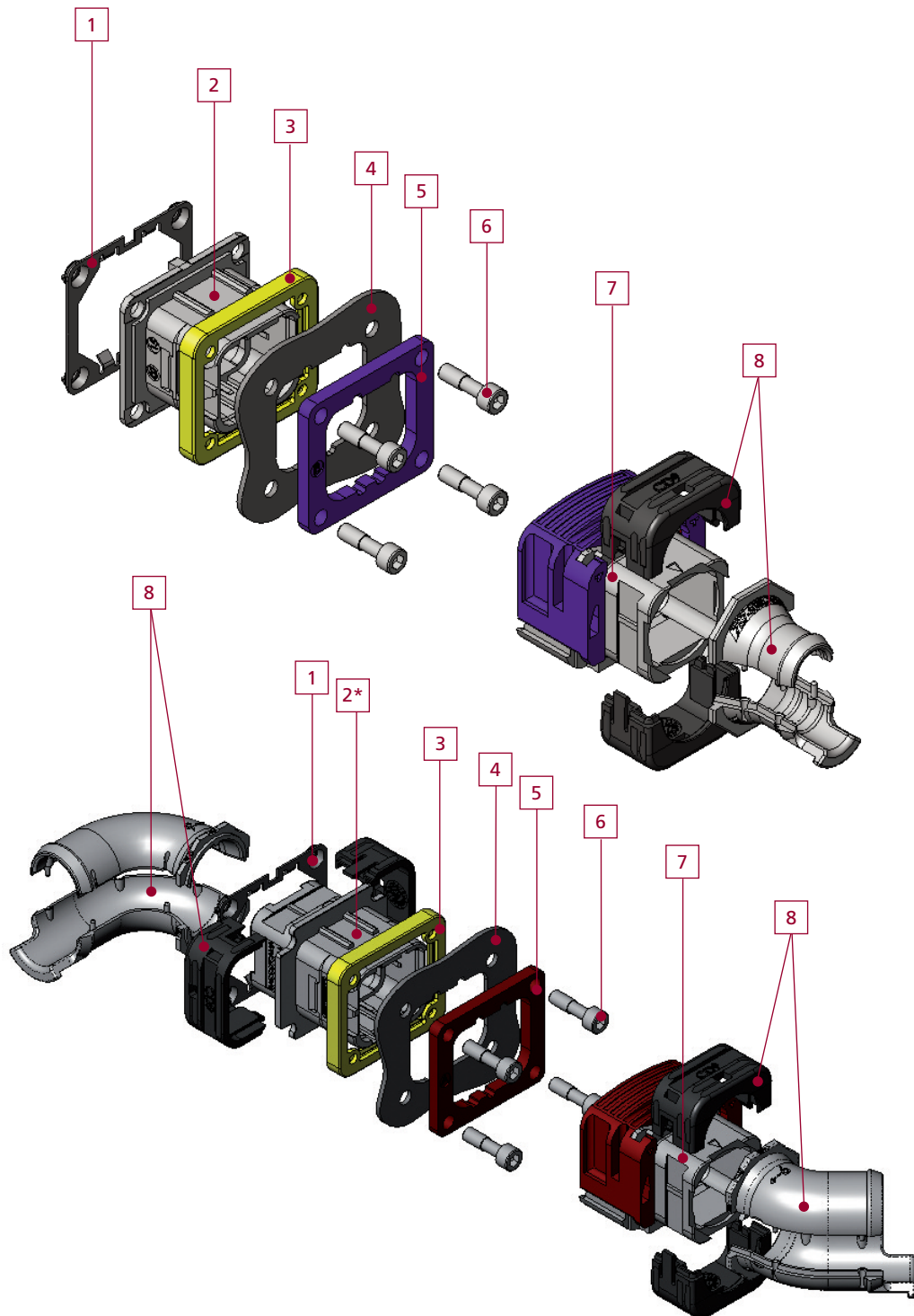
Weight

| Extender Receptacle | Short Receptacle | Plug | Backshell |
|---------------------|------------------|-----------|-------------------|
| 7 gr | 6 gr | 9 gr | 4 - 7gr |
| 0,015 lbs | 0,013 lbs | 0,020 lbs | 0,009 - 0,015 lbs |

Recommended mounting for receptacle screw torque

$0,5 \pm 0,1\text{ N.m}$ or $4,4 \pm 0,9\text{ In. Lbf}$

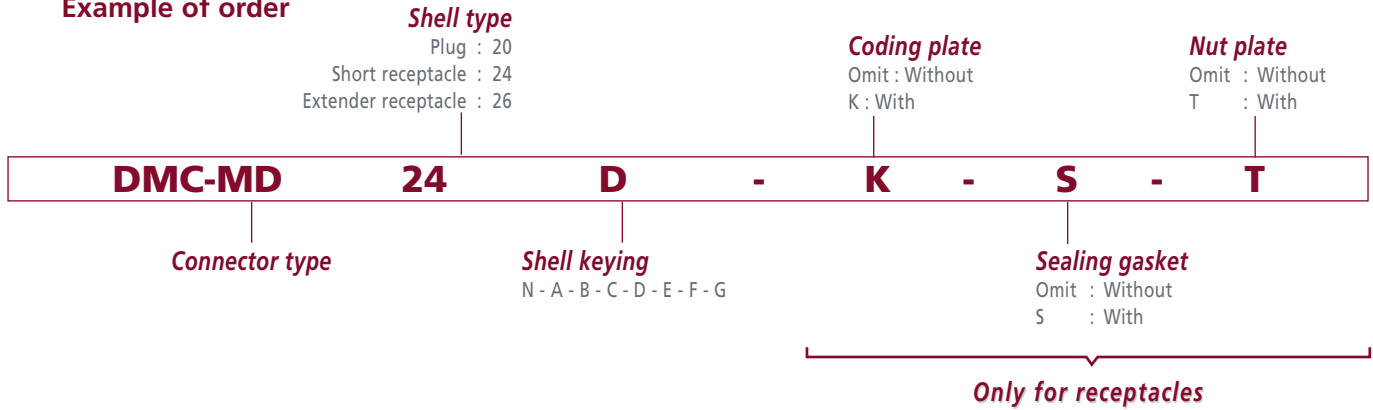
When using DEUSCH integrated. Nut plate Réf. 787-0016-00 (see page 6)



- 1 - Nut plate (option).
- 2 - Short receptacle.
- 2* - Extender receptacle.
- 3 - Sealing gasket (option).
- 4 - Panel (up to 2 mm thick).
- 5 - Color coding plate (option).
- 6 - Screws (ordered separately).
- 7 - Plug.
- 8 - Backshell.

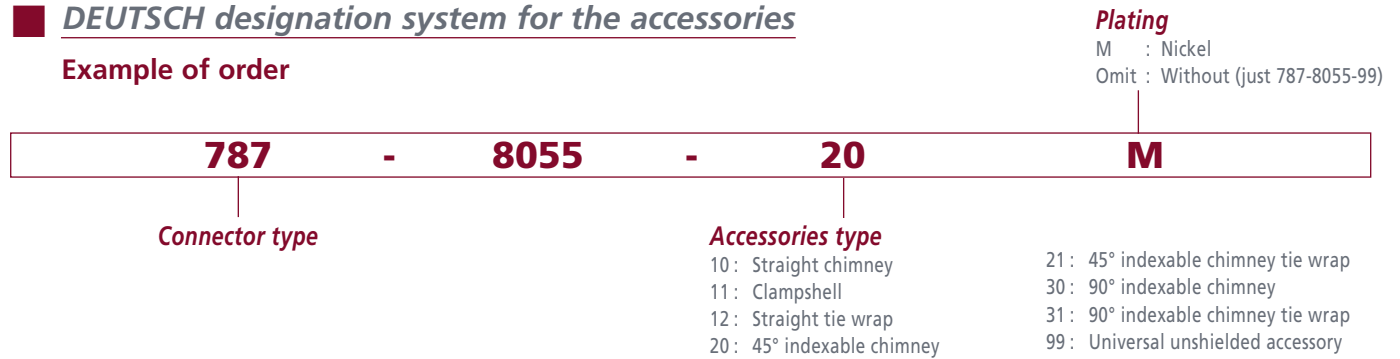
DEUTSCH designation system for the shells

Example of order



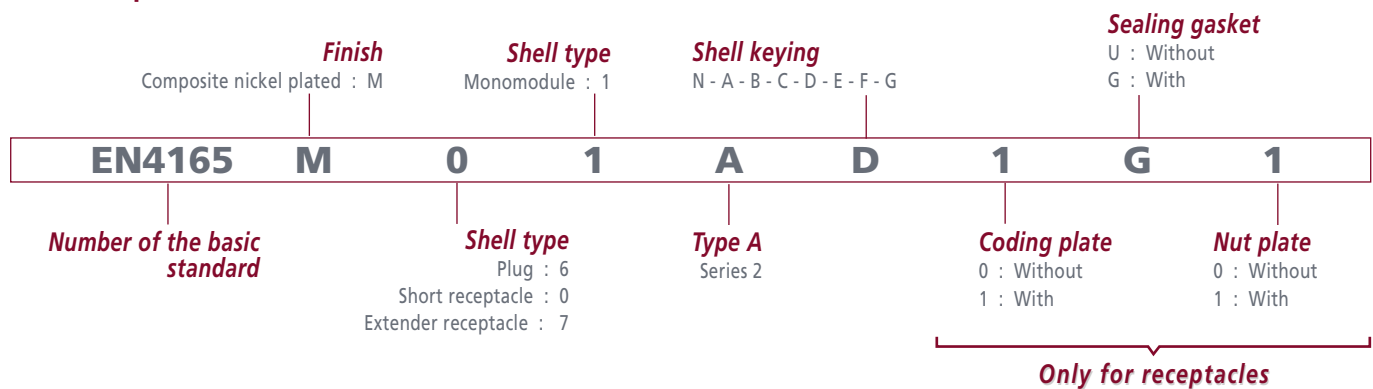
DEUTSCH designation system for the accessories

Example of order



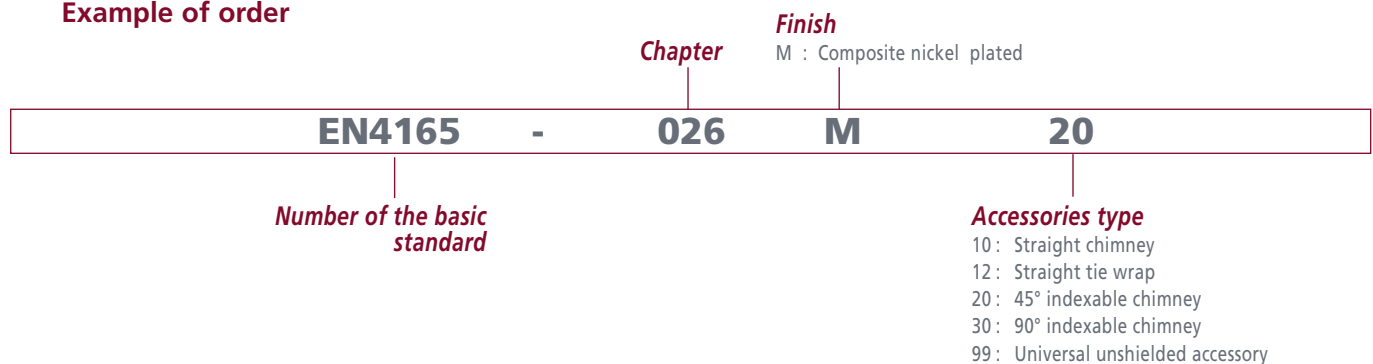
Standard designation system for the shells

Example of order



Standard designation system for the accessories

Example of order



Backshells

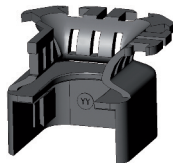
STRAIGHT CHIMNEY
787-8055-10M
EN4165-026M10



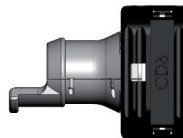
STRAIGHT CLAMPSHELL
787-8055-11M



UNIVERSAL UNSHIELDED ACCESSORY
787-8055-99
EN4165-026-99



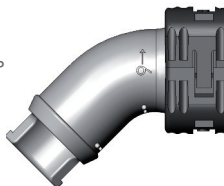
STRAIGHT CHIMNEY TIE WRAP
787-8055-12M
EN4165-026M12



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



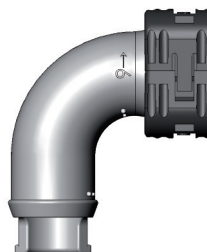
45° INDEXABLE CHIMNEY TIE WRAP
787-8055-21M



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

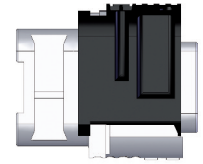


90° INDEXABLE CHIMNEY TIE WRAP
787-8055-31M

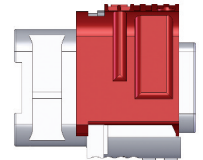


Plug

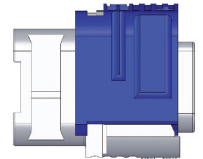
DMC-MD 20 N
BACC65BUMN
EN4165M61AN



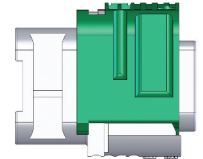
DMC-MD 20 A
BACC65BUMA
EN4165M61AA



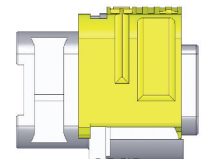
DMC-MD 20 B
BACC65BUMB
EN4165M61AB



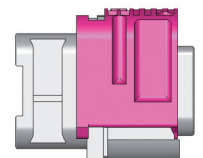
DMC-MD 20 C
BACC65BUMC
EN4165M61AC



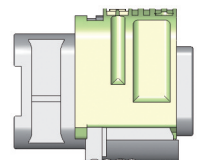
DMC-MD 20 D
BACC65BUMD
EN4165M61AD



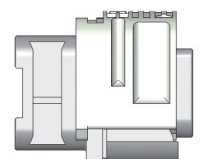
DMC-MD 20 E
EN4165M61AE



DMC-MD 20 F
EN4165M61AF



DMC-MD 20 G
EN4165M61AG



Note : EN4165 part numbers in progress to be released.

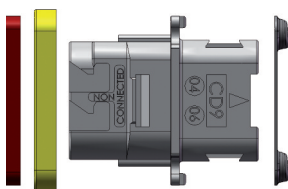
DEUTSCH Part numbers (DMC-M / 787)
BOEING Part numbers (BACC)
STANDARD Part numbers (EN4165)

Receptacles

Backshells

EXTENDER RECEPTACLE

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

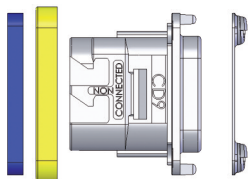


• : To be ordered separately
(no BACC65 references)

| | | | | | | | |
|----|---|---|---|---|---|---|---|
| *X | | | | | | | |
| N | A | B | C | D | E | F | G |

SHORT RECEPTACLE

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

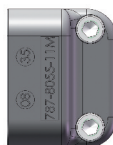


• : To be ordered separately
(no BACC65 references)

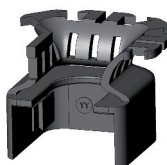
**NO ACCESSORY CAN BE FIXED
ON THIS RECEPTACLE**



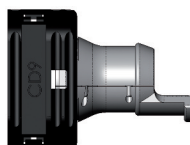
STRAIGHT CHIMNEY
787-8055-10M
EN4165-026M10



STRAIGHT CLAMPHELL
787-8055-11M



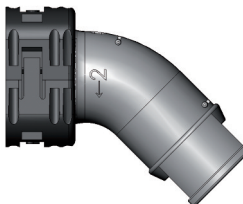
UNIVERSAL UNSHIELDED ACCESSORY
787-8055-99
EN4165-026-99



STRAIGHT CHIMNEY TIE WRAP
787-8055-12M
EN4165-026M12



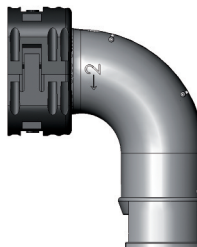
45° INDEXABLE CHIMNEY
787-8055-20M
EN4165M20



45° INDEXABLE CHIMNEY TIE WRAP
787-8055-21M



90° INDEXABLE CHIMNEY
787-8055-30M
EN4165M30

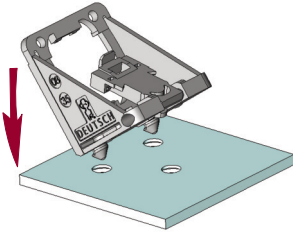


90° INDEXABLE CHIMNEY TIE WRAP
787-8055-31M

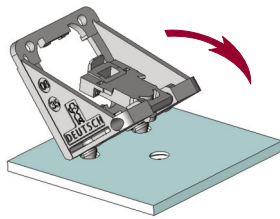
Note : EN4165 part numbers in progress to be released.

Optionnal parts for receptacle

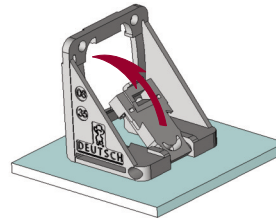
• Locate mating parts



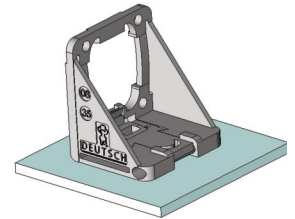
• Install rear dowels



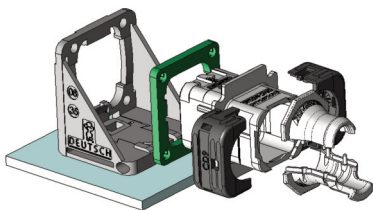
• Fix and snap in position



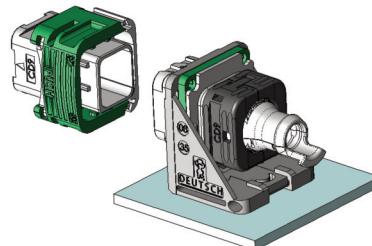
• Installed



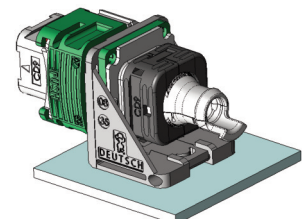
• Align receptacle with bracket



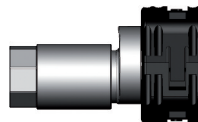
• Install and fix in position



• Assembled

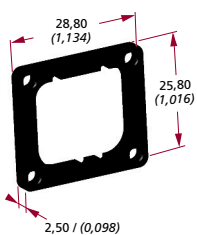


HIGH SPEED CHIMNEY
FOR PART NUMBERING,
PLEASE CONSULT US



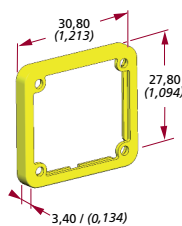
Note : These backshells have been developed specially for high speed wire management. Backshells have to be ordered with the DMC-M 99-02-XX inserts.

• Keying plate



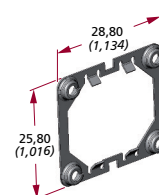
| | |
|-----------------|-------------|
| N : 787-0015-00 | EN4165-25CN |
| A : 787-0015-01 | EN4165-25CA |
| B : 787-0015-02 | EN4165-25CB |
| C : 787-0015-03 | EN4165-25CC |
| D : 787-0015-04 | EN4165-25CD |
| E : 787-0015-05 | EN4165-25CE |
| F : 787-0015-06 | EN4165-25CF |
| G : 787-0015-07 | EN4165-25CG |

• Sealing gasket



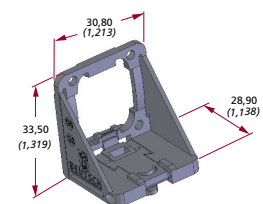
787-0011-00
EN4165-25E

• Nut plate



787-0016-00
EN4165-25D

• Panel mounting bracket



787-0014-00

Protective caps



SHIPPING AND
DUST PLUG CAP
104-0236-00



SHIPPING AND
DUST RECEPTACLE CAP
104-0235-00



RECEPTACLE AND EXTENDER EMC CAP
WITH LANYARD 787-8011-00
WITHOUT LANYARD 787-8009-00



PLUG
FLIGHT CAP
787-8010-00














RECEPTACLE AND EXTENDER FLIGHT CAP
WITH LANYARD 787-8017-00
WITHOUT LANYARD 787-8016-00



LANYARD
787-8013-00

Pin contacts as per MIL C 39029/58 and EN3155

| Modules | Details | PART NUMBER CROSS |
|---|---|--|
|  | 20 contacts size 22 | DMC-M 20-22 AN BAC110BC2022PNB EN4165 20-22 A1NA |
|  | 12 contacts size 20 | DMC-M 12-20 AN BAC110BC1220PNB EN4165 12-20 A1NA |
|  | 8 contacts size 16 | DMC-M 08-16 AN BAC110BC0816PNB EN4165 08-16 A1NA |
|  | 4 contacts size 12 | DMC-M 04-12 AN EN4165 04-12 A1NA |
|  | 1 contact size 8 | DMC-M 01-08 AN EN4165 01-08 A1NA |
|  | 6 contacts size 16 + 5 contacts size 22 | DMC-M 99-01 AN BAC110BC1622PNB EN4165 99-01 A1NA |
|  | 20 contacts size 22 | DMC-MA 20-22 AN EN4165 20A22 A1NA |
|  | 6 contacts size 16 + 5 contacts size 22 | DMC-MA 99-01 AN EN4165 99A01A1NA |
|  | 3 contacts size 20 + 8 contacts size 22 | DMC-M 99-02 AN * |
|  | 8 contacts size 20 + 2 contacts size 16 | DMC-M 99-10 AN EN4165 09-10 A1NA |
|  | Blanking module | DMC-M 00-00 AN EN4165 00-00 A1NA |

Note : DMC-MA modules are compatible with Aluminium Cable contacts and with EN3155-70 / 71 size 22.

Distribution shunt modules use dedicated contacts based on standard M39029.

DMC-M 99-02 are specific modules for highspeed application.

Socket contacts as per MIL C 39029/57 and EN3155

| Modules | Details | PART NUMBER CROSS |
|--|---|--|
|  | 20 contacts size 22 | DMC-M 20-22 BN BAC110BC2022SNB EN4165 20-22 A1NB |
|  | 12 contacts size 20 | DMC-M 12-20 BN BAC110BC1220SNB EN4165 12-20 A1NB |
|  | 8 contacts size 16 | DMC-M 08-16 BN BAC110BC0816SNB EN4165 08-16 A1NB |
|  | 4 contacts size 12 | DMC-M 04-12 BN EN4165 04-12 A1NB |
|  | 1 contact size 8 | DMC-M 01-08 BN EN4165 01-08 A1NB |
|  | 6 contacts size 16 + 5 contacts size 22 | DMC-M 99-01 BN BAC110BC1622SNB EN4165 99-01 A1NB |
|  | 20 contacts size 22 | DMC-MA 20-22 BN EN4165 20A22A1NB |
|  | 6 contacts size 16 + 5 contacts size 22 | DMC-MA 99-01 BN EN4165 99A01 A1NB |
|  | 3 contacts size 20 + 8 contacts size 22 | DMC-M 99-02 BN * |
|  | 8 contacts size 20 + 2 contacts size 16 | DMC-M 99-10 BN EN4165 09-10 A1NB |
|  | 3 x 4 + 4 x 2 Shunted contacts size 22 | DMC-M 22-07 SN MBBN 3330 Y2A22S |
|  | 5 x 4 Shunted contacts size 22 | DMC-M 22-05 SN MBBN 3330 Y2022S |
|  | 10 x 2 Shunted contacts size 22 | DMC-M 22-10 SN MBBN 3330 Y2B22S |

Aluminium cable technology

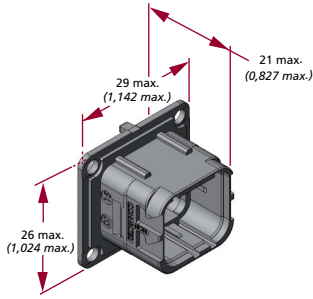
Distribution shunt modules

* To be ordered with high speed chimney (see page 6)

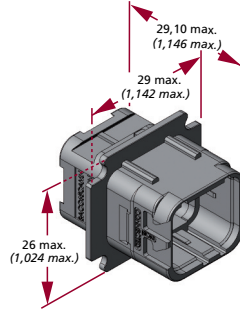
DEUTSCH Part numbers (DMC-M / 787)
BOEING Part numbers (BACC)
STANDARD Part numbers (EN4165)

Receptacles & Plug

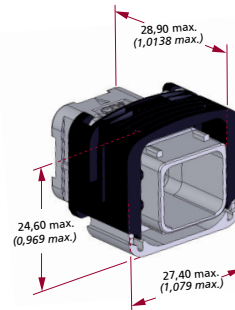
Receptacle



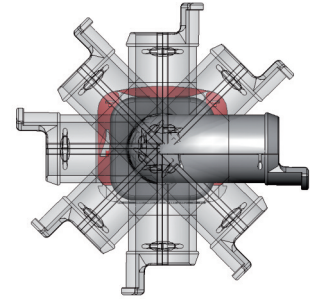
Extender receptacle



Plug



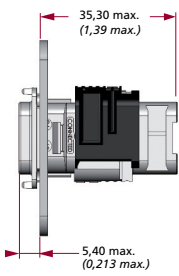
Backshell / chimney indexation



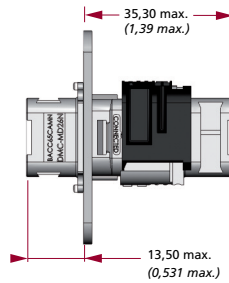
All backshells can be indexed in eight positions on the rear of plug and receptacle shell. This gives maximum flexibility during design and cable installation and reduces the number of variants and components.

Mounting panel details

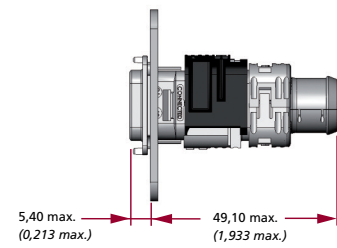
Box mounting receptacle



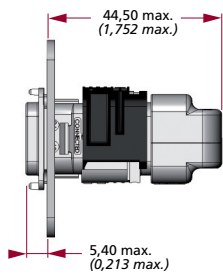
Extender receptacle



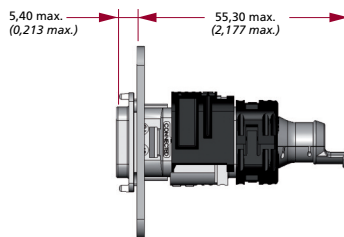
Straight chimney



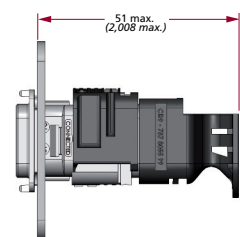
Straight clampshell



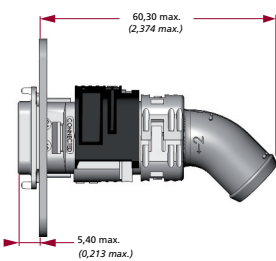
Straight chimney tie wrap



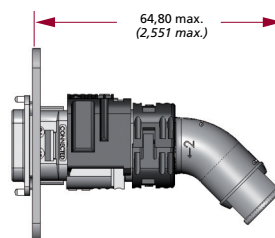
Universal unshielded accessory



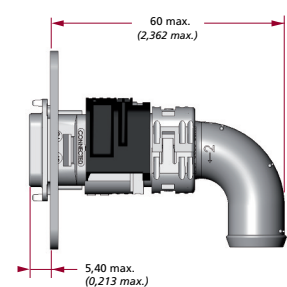
45° indexable chimney



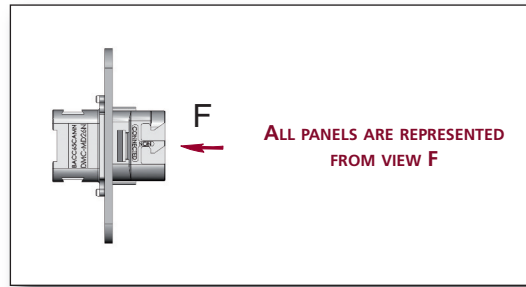
45° indexable chimney tie wrap



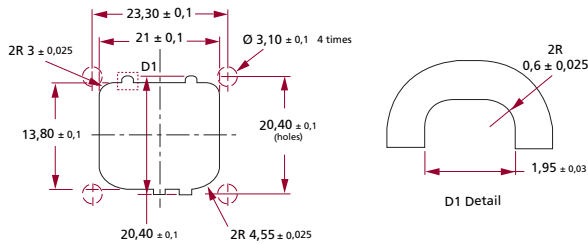
90° indexable chimney



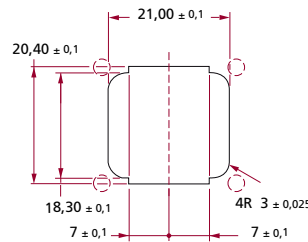
Panel mounting cutout details Single Module EN4165



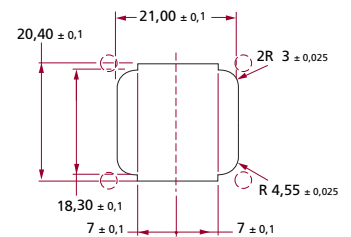
GENERIC DIMENSIONS



FREE

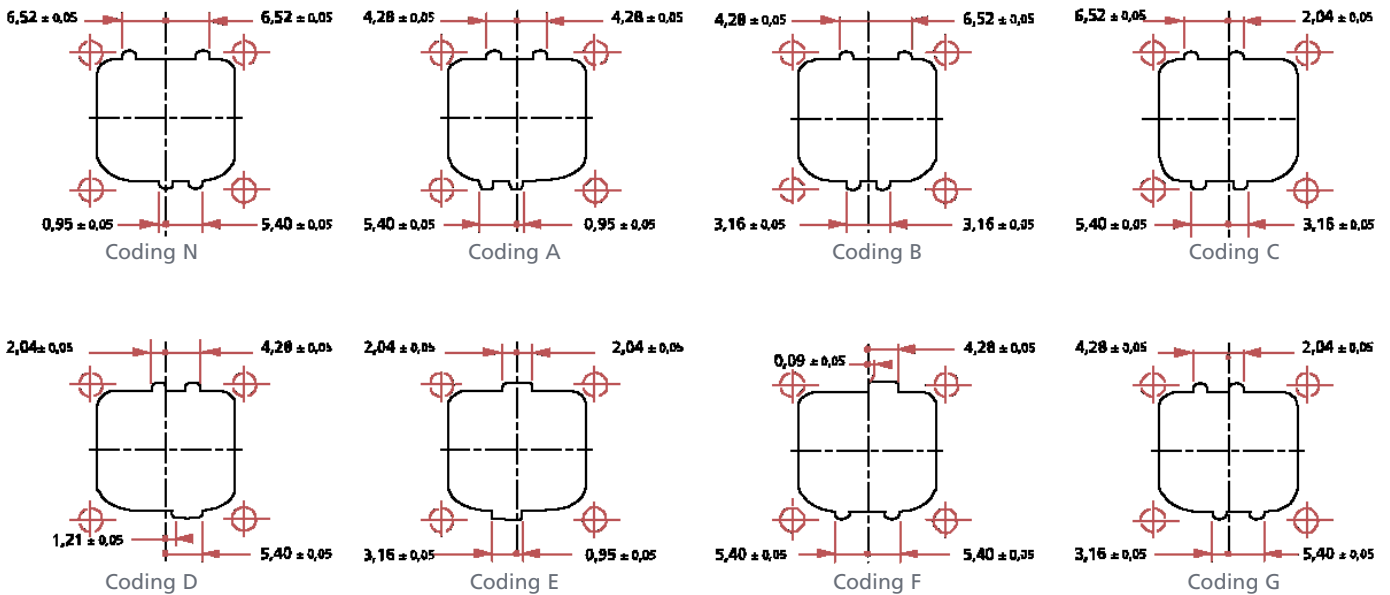


ORIENTATION

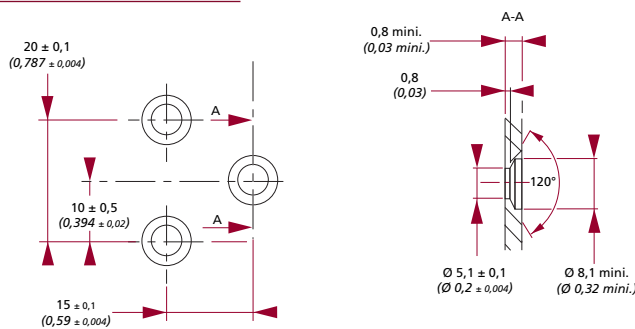


Note : Dimensions are in millimeters. Each hole $\varnothing 3,1$ mm must receive a screw (screw type 4-40)
Recommended thickness panel : 0,8 mm mini - 2 mm max.

Panel coding keying



Panel mounting bracket cutout details



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



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