



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.

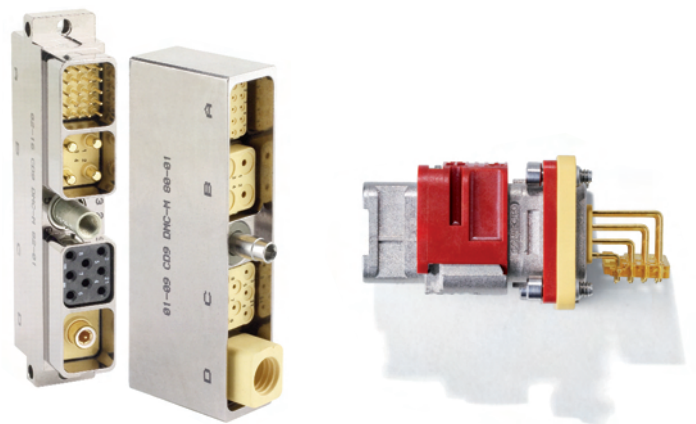
## **■ The modularity**

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 :  $-55^{\circ} \text{C}$  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**

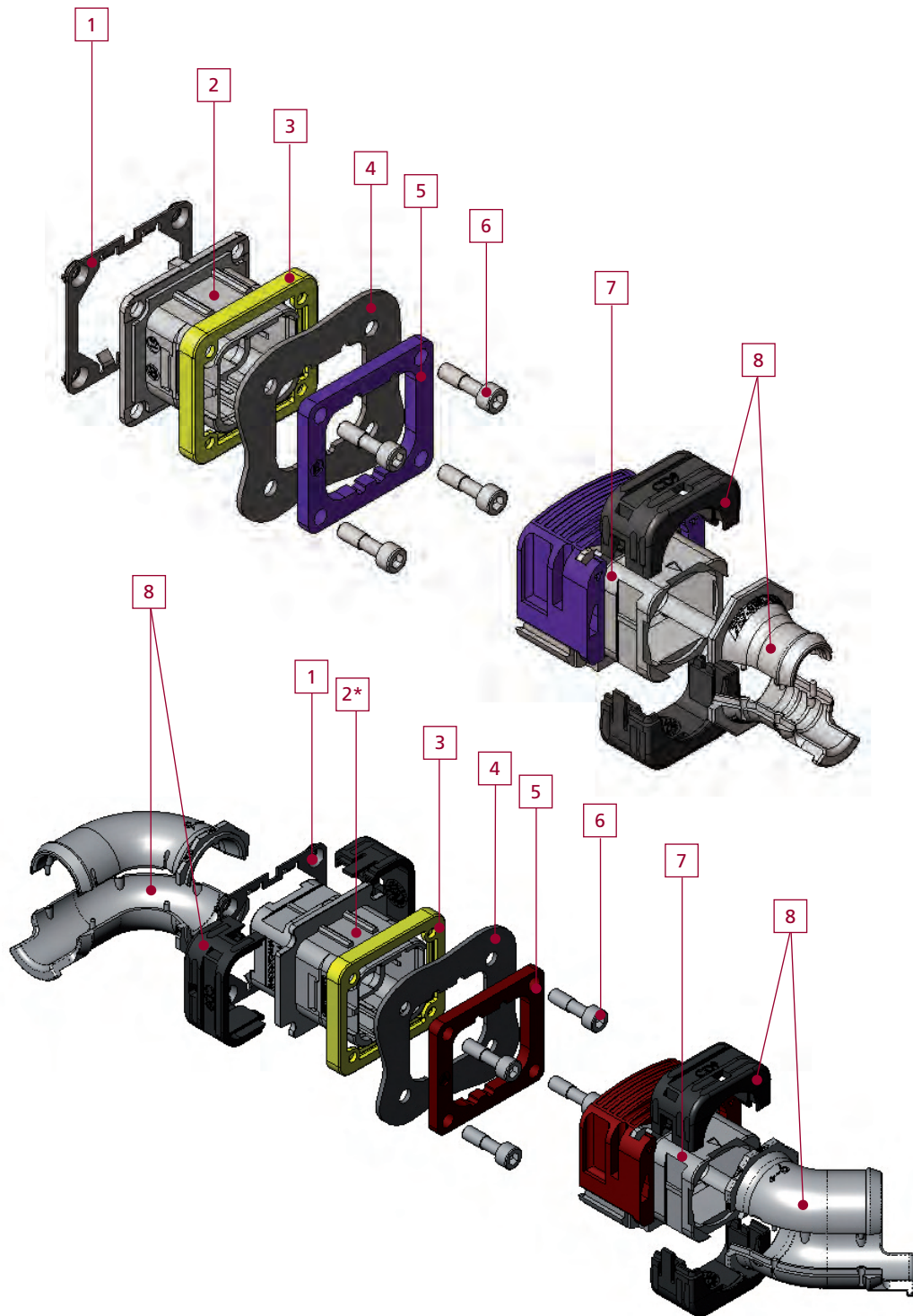
MHz frequency	100	200	300	400	800	1000
Attenuation (dB)	90	88	88	87	85	85

**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**

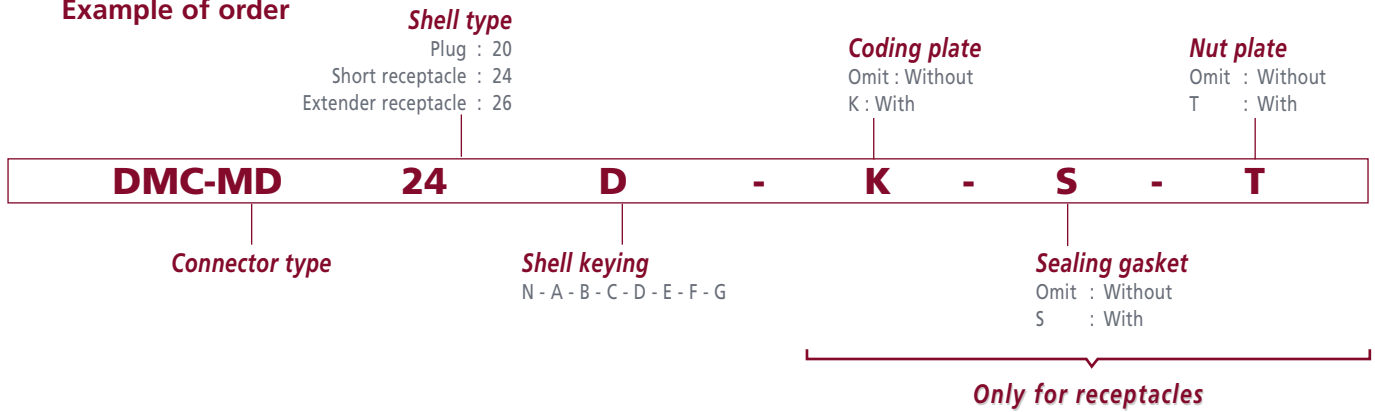
$0,5 \pm 0,1 \text{ N.m}$  or  $4,4 \pm 0,9 \text{ In. Lbf}$   
When using DEUSCH integrated. Nut plate Réf. 787-0016-00 (see page 6)



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

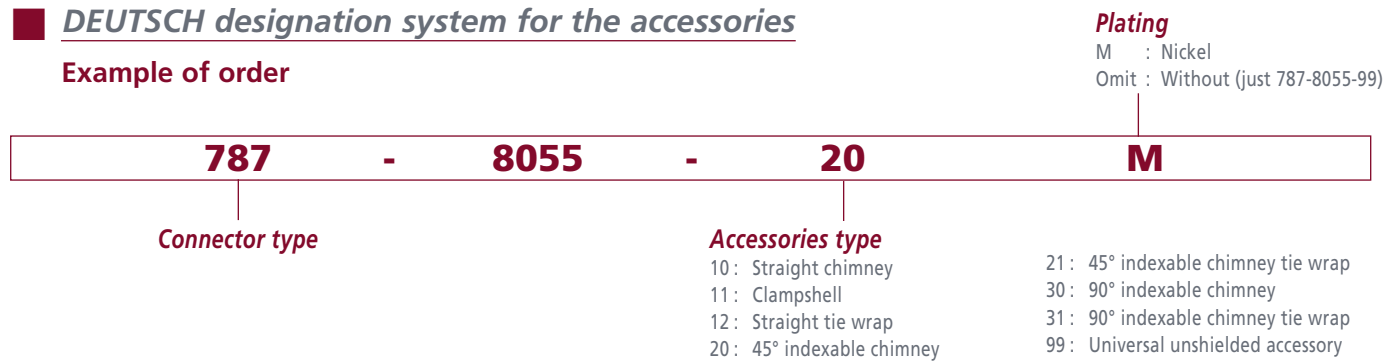
## DEUTSCH designation system for the shells

Example of order



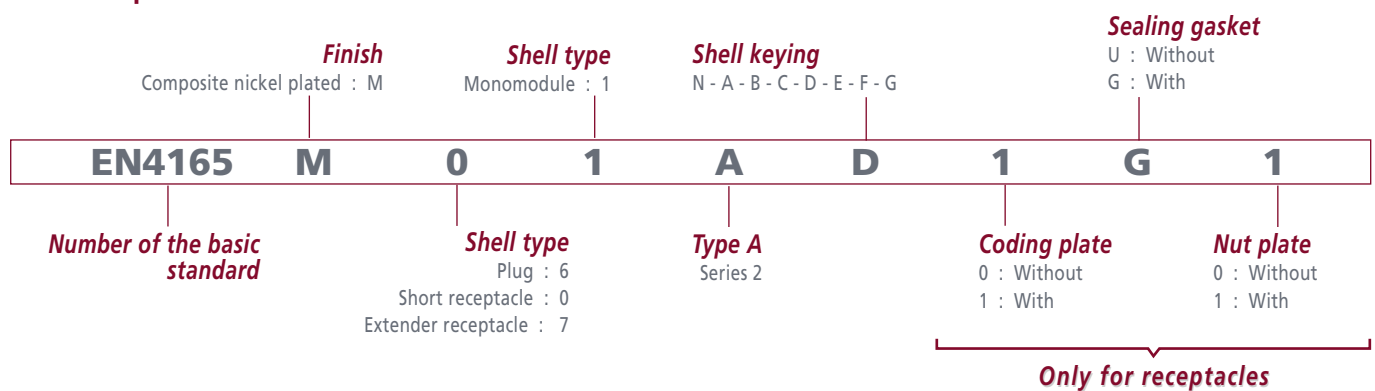
## DEUTSCH designation system for the accessories

Example of order



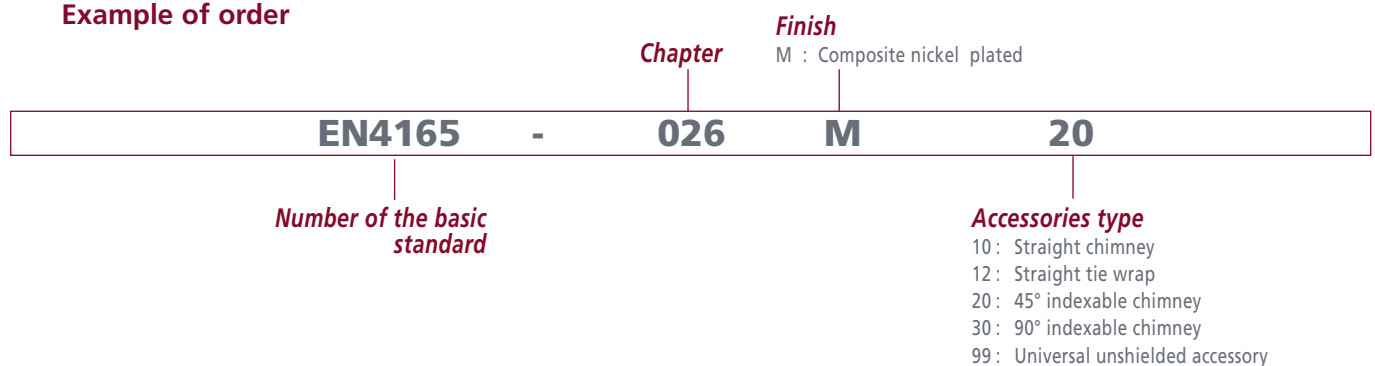
## Standard designation system for the shells

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

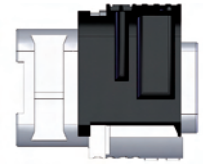


90° INDEXABLE CHIMNEY TIE WRAP  
787-8055-31M



## Plug

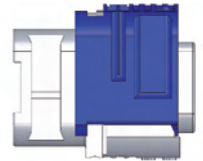
DMC-MD 20 N  
BACC65BUMN  
EN4165M61AN



DMC-MD 20 A  
BACC65BUMA  
EN4165M61AA



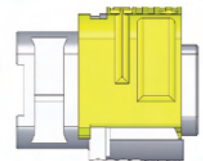
DMC-MD 20 B  
BACC65BUMB  
EN4165M61AB



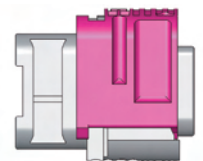
DMC-MD 20 C  
BACC65BUMC  
EN4165M61AC



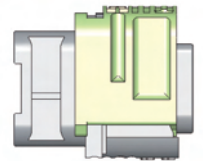
DMC-MD 20 D  
BACC65BUMD  
EN4165M61AD



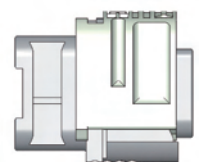
DMC-MD 20 E  
EN4165M61AE



DMC-MD 20 F  
EN4165M61AF



DMC-MD 20 G  
EN4165M61AG



Note : EN4165 part numbers in progress to be released.

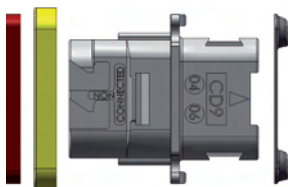
DEUTSCH Part numbers (DMC-M / 787)  
BOEING Part numbers (BACC)  
STANDARD Part numbers (EN4165)

## Receptacles

## Backshells

EXTENDER RECEPTACLE

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

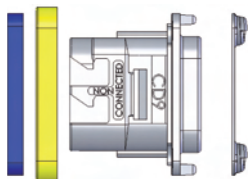


• : To be ordered separately  
(no BACC65 references)

*X						
N	A	B	C	D	E	F

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



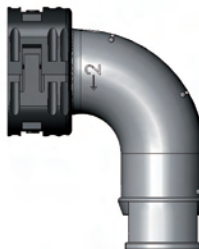
45° INDEXABLE CHIMNEY  
**787-8055-20M**  
EN4165M20



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



90° INDEXABLE CHIMNEY  
**787-8055-30M**  
EN4165M30

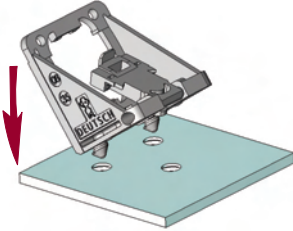


90° INDEXABLE CHIMNEY TIE WRAP  
**787-8055-31M**

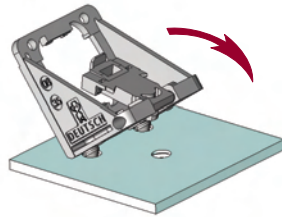
Note : EN4165 part numbers in progress to be released.

## Optionnal parts for receptacle

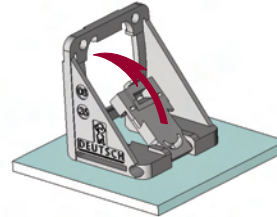
• Locate mating parts



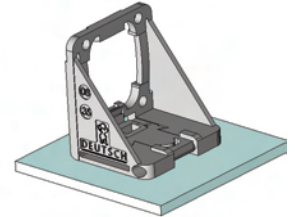
• Install rear dowels



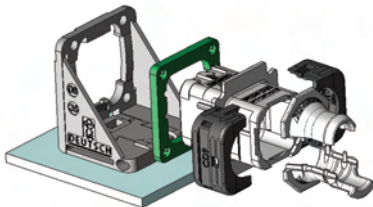
• Fix and snap in position



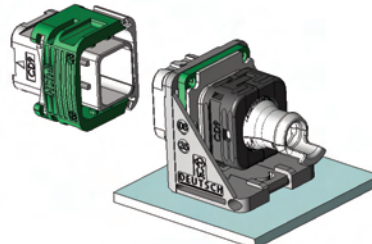
• Installed



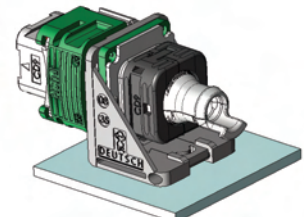
• Align receptacle with bracket



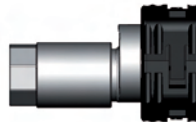
• Install and fix in position



• Assembled

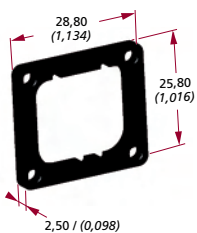


HIGH SPEED CHIMNEY  
FOR PART NUMBERING,  
PLEASE CONSULT US



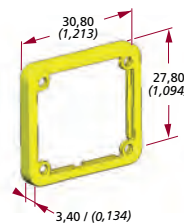
Note : These backshells have been developed specially for high speed wire management. Backshells have to be ordered with the DMC-M 99-02-XX inserts.

• Keying plate



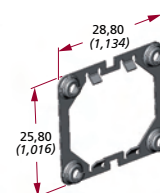
N : 787-0015-00	EN4165-25CN
A : 787-0015-01	EN4165-25CA
B : 787-0015-02	EN4165-25CB
C : 787-0015-03	EN4165-25CC
D : 787-0015-04	EN4165-25CD
E : 787-0015-05	EN4165-25CE
F : 787-0015-06	EN4165-25CF
G : 787-0015-07	EN4165-25CG

• Sealing gasket



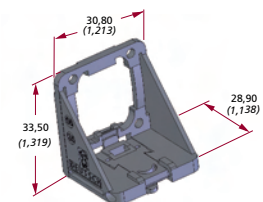
787-0011-00  
EN4165-25E

• Nut plate



787-0016-00  
EN4165-25D

• Panel mounting bracket



787-0014-00

## Protective caps



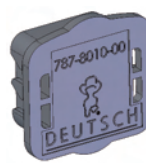
SHIPPING AND  
DUST PLUG CAP  
104-0236-00



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

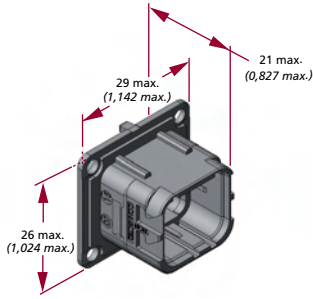
Distribution shunt modules

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

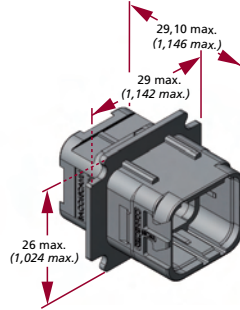
DEUTSCH Part numbers (DMC-M / 787)  
BOEING Part numbers (BACC)  
STANDARD Part numbers (EN4165)

## Receptacles & Plug

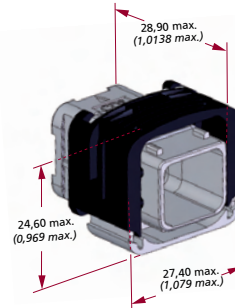
### Receptacle



### Extender receptacle



### Plug



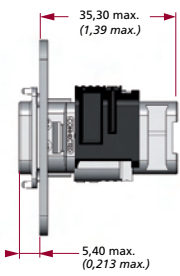
## Backshell / chimney indexation



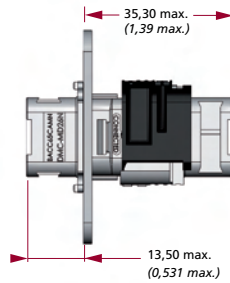
All backshells can be indexed in eight positions on the rear of plug and receptacle shell. This gives maximum flexibility during design and cable installation and reduces the number of variants and components.

## Mounting panel details

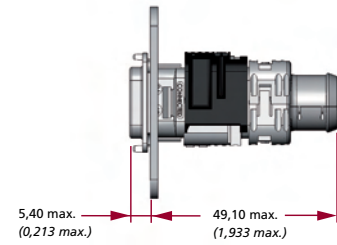
### Box mounting receptacle



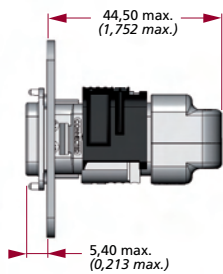
### Extender receptacle



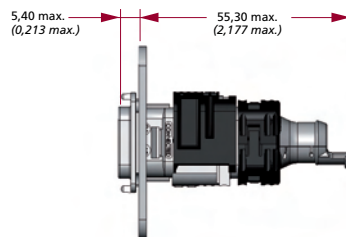
### Straight chimney



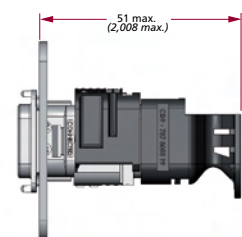
### Straight clampshell



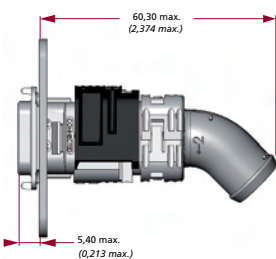
### Straight chimney tie wrap



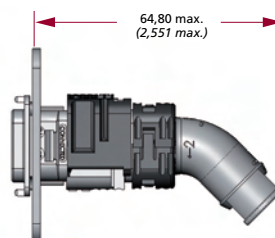
### Universal unshielded accessory



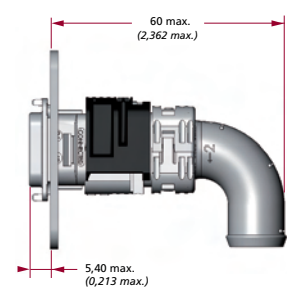
### 45° indexable chimney



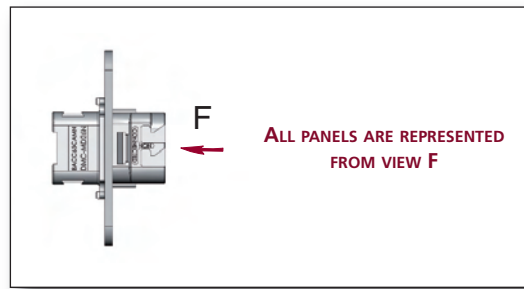
### 45° indexable chimney tie wrap



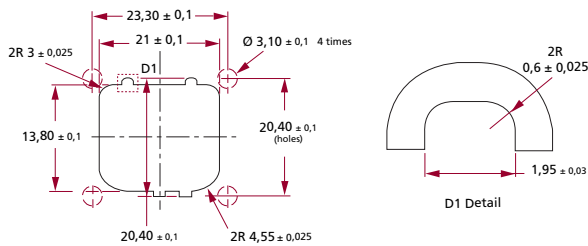
### 90° indexable chimney



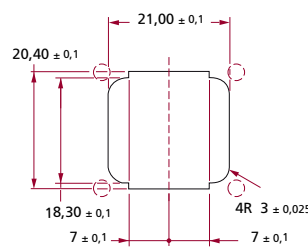
# Panel mounting cutout details Single Module EN4165



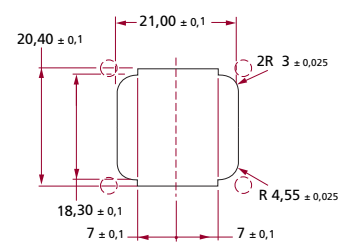
GENERIC DIMENSIONS



FREE

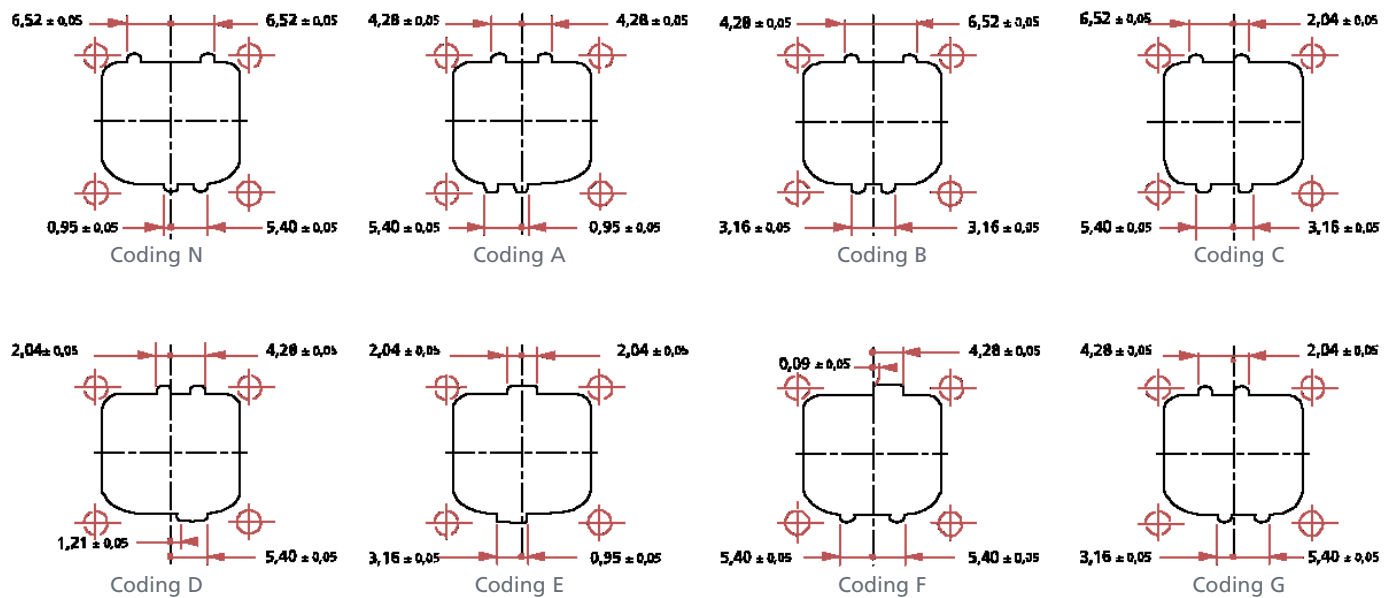


ORIENTATION

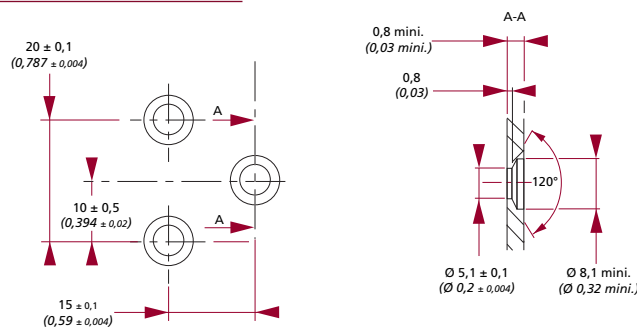


Note : Dimensions are in millimeters. Each hole  $\varnothing 3,1$  mm must receive a screw (screw type 4-40)  
Recommended thickness panel : 0,8 mm mini - 2 mm max.

## 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



[www.deutsch.net](http://www.deutsch.net)

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Tel: +49 89 89 91 570

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Tel: +91 80 28 54 13 25

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### USA

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Oceanside, CA 92054  
USA  
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DEUTSCH

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