DEUTSCH

BRANCHE CONNECTEURS AEROMILITAIRES

Single Module EN 4165

Arinc 809 - BACC65 - EN4165

Single Module EN4165

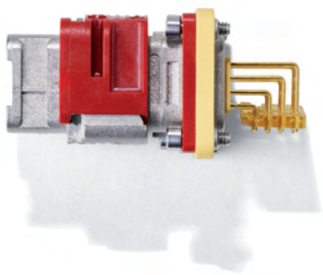
The DMC-M is a modular rectangular connector which was designed and developed by Deutsch in the 1980's. It has since set the modular connector standard in the Aerospace & Military industries, and is now standardised by European Specification EN4165.

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, quadrax 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.

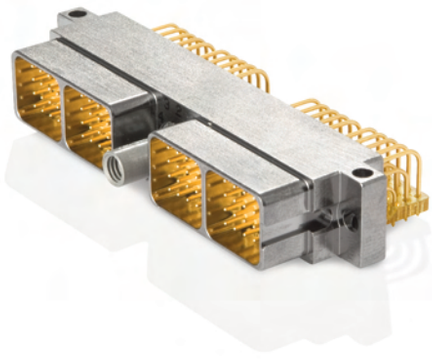
The safety

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 stritgent 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.

Single Module EN4165

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	:	*1,1.10^{-2} bar*

Electrical characteristics

Temperature range	:	*-55° C to + 175° C*
Insulation resistance	:	*≥ 5000 MΩ*
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*

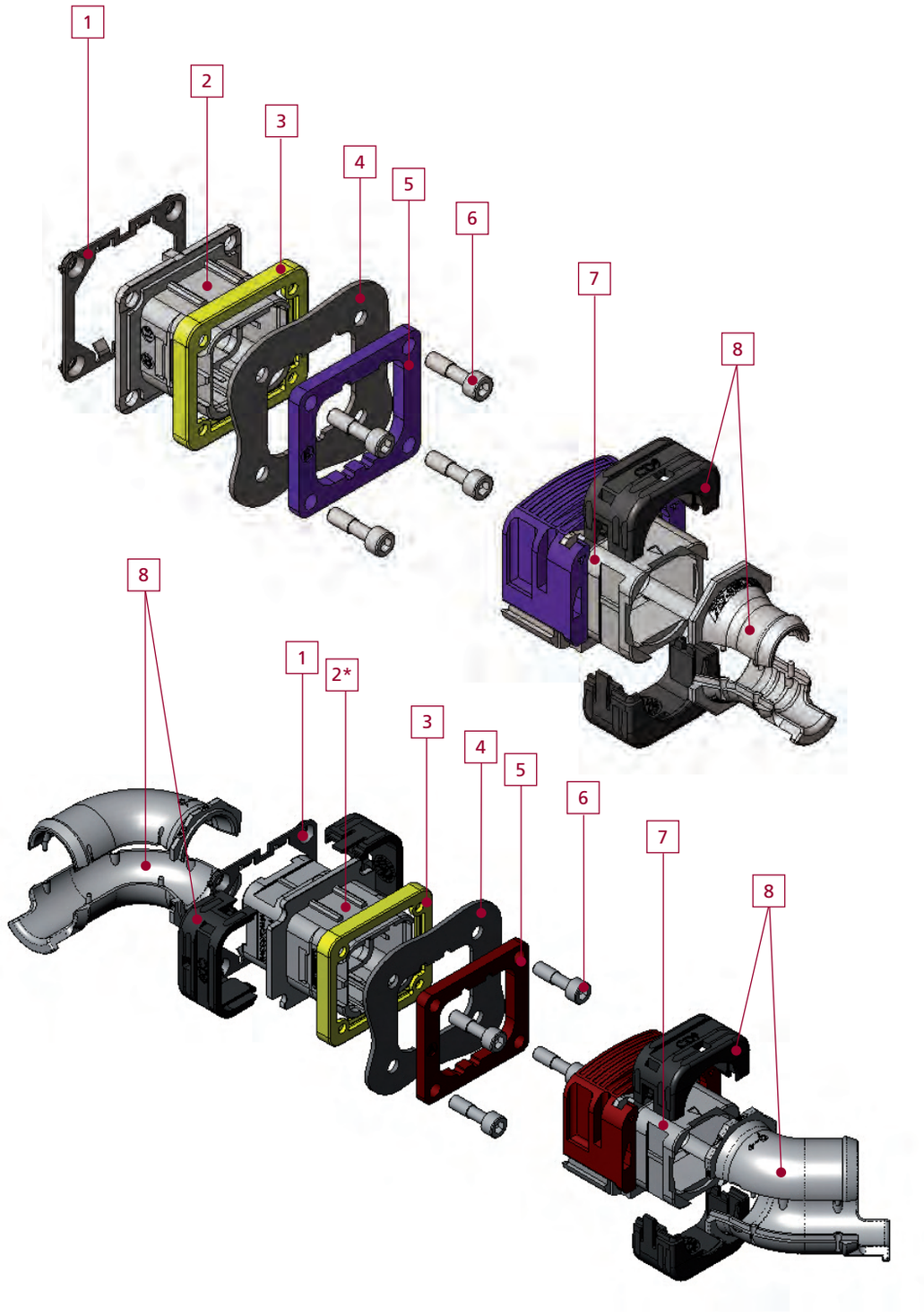
Weight

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 ± 0,1 N.m or 4,4 ± 0,9 ln. LbF
When using DEUSCH integrated. Nut plate Réf. 787-0016-00 (see page 6)

Single Module EN4165

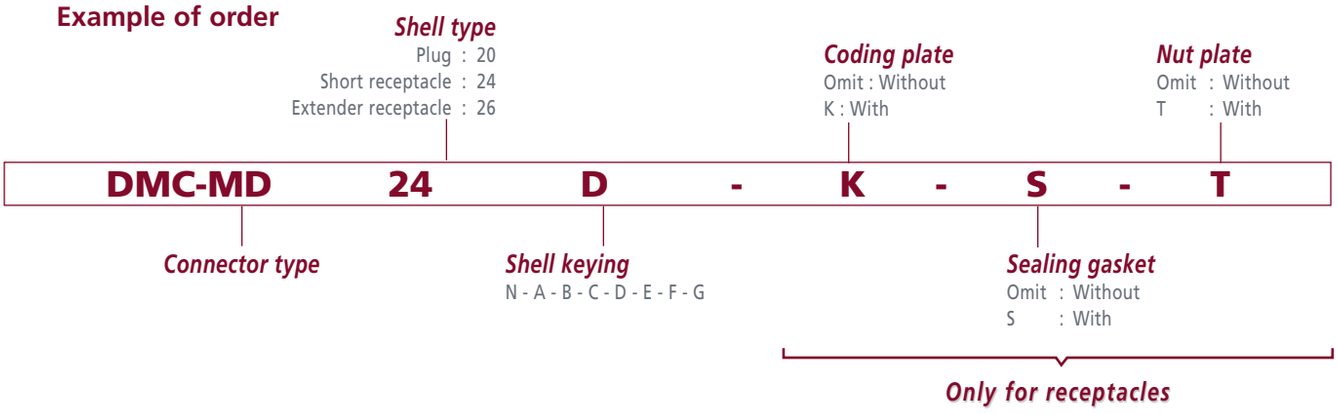


1 - Nut plate (option).
2 - Short receptacle.
2* - Extender receptacle.
3 - Sealing gasket (option).
4 - Panel (up to 2 mm thick).
5 - Color coding plate (option).
6 - Screws (ordered separately).
7 - Plug.
8 - Backshell.

Single Module EN4165

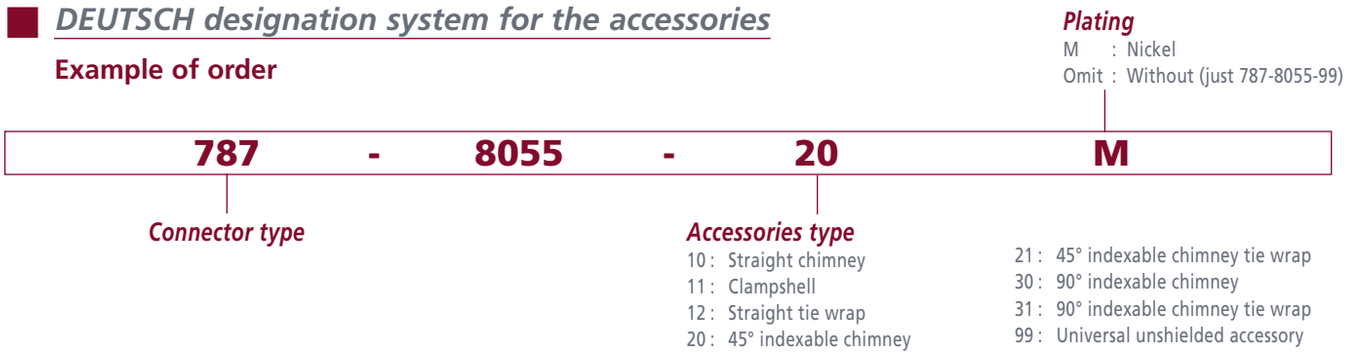
DEUTSCH designation system for the shells

Example of order



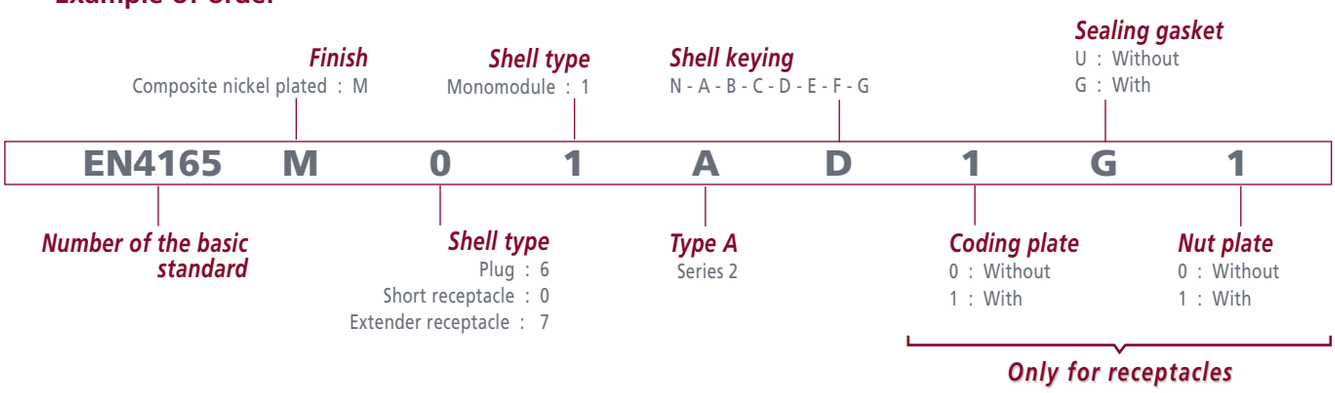
DEUTSCH designation system for the accessories

Example of order



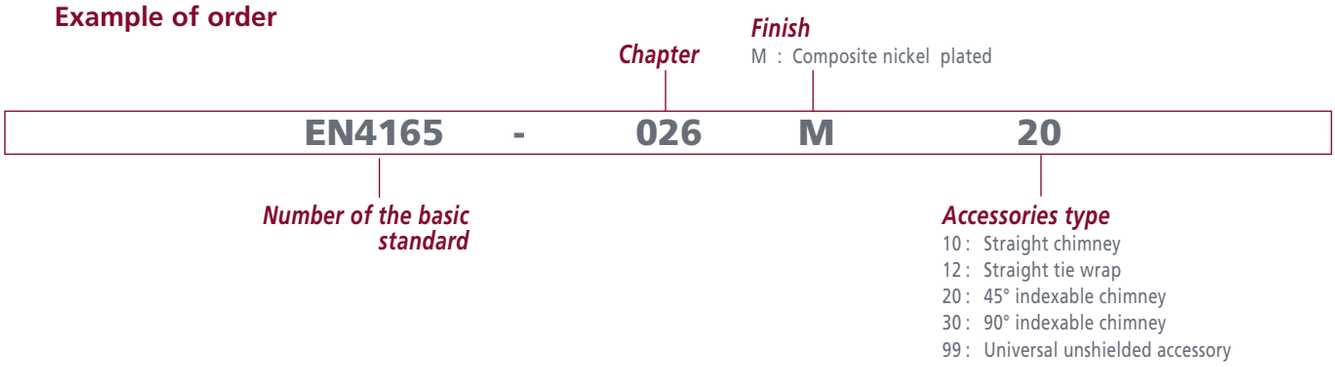
Standard designation system for the shells

Example of order



Standard designation system for the accessories

Example of order



Single Module EN4165

Backshells

Straight chimney
787-8055-10M
EN4165-026M10

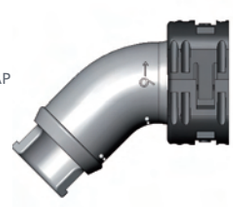
Straight clampshell
787-8055-11M

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



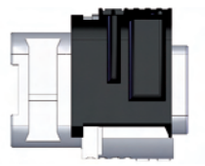
90° Indexable chimney
787-8055-30M
EN4165-026M30

90° Indexable chimney tie wrap
787-8055-31M

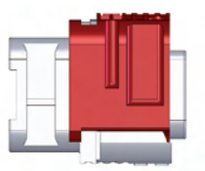
DEUTSCH Part numbers (DMC-M / 787)
BOEING Part numbers (BACC)
STANDARD Part numbers (EN4165)

Plug

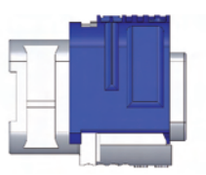
DMC-MD 20 N
BACC65BUMN
EN4165M61AN



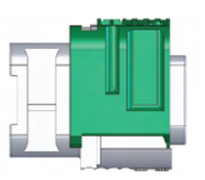
DMC-MD 20 A
BACC65BUMA
EN4165M61AA



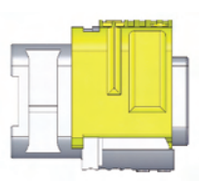
DMC-MD 20 B
BACC65BUMB
EN4165M61AB



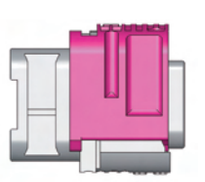
DMC-MD 20 C
BACC65BUMC
EN4165M61AC



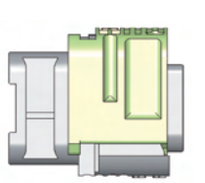
DMC-MD 20 D
BACC65BUMD
EN4165M61AD



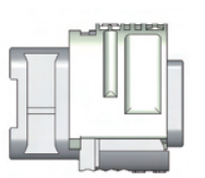
DMC-MD 20 E
EN4165M61AE



DMC-MD 20 F
EN4165M61AF



DMC-MD 20 G
EN4165M61AG



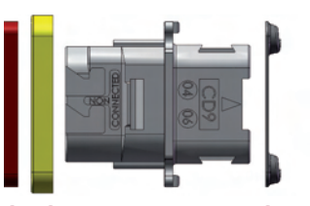
Note : EN4165 part numbers in progress to be released.

Single Module EN4165

Receptacles

Extender receptacle

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

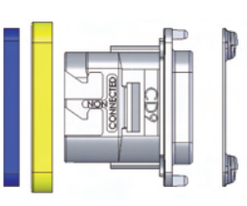


• : To be ordered separately
(no BACC65 references)

*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 ACCESSORRY CAN BE FIXED
ON THIS RECEPTACLE

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
EN4165M20

45° Indexable chimney tie wrap
787-8055-21M

90° Indexable chimney
787-8055-30M
EN4165M30

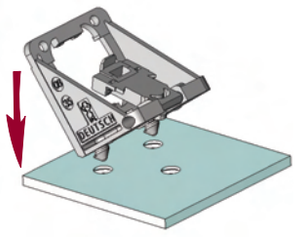
90° Indexable chimney tie wrap
787-8055-31M

Note : EN4165 part numbers in progress to be released.

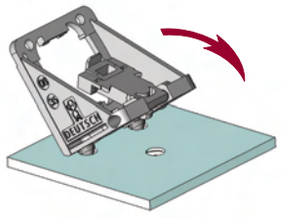
DEUTSCH Part numbers (DMC-M / 787)
BOEING Part numbers (BACC)
STANDARD Part numbers (EN4165)

Optionnal parts for receptacle

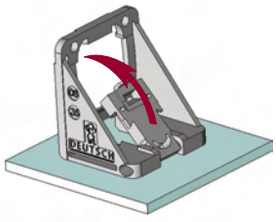
- Locate mating parts



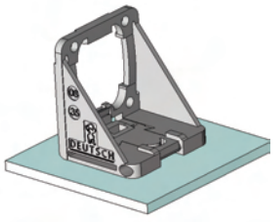
- Install rear dowels



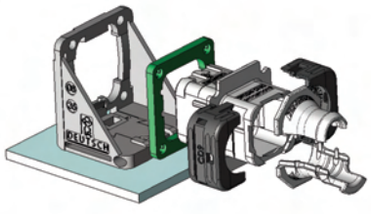
- Fix and snap in position



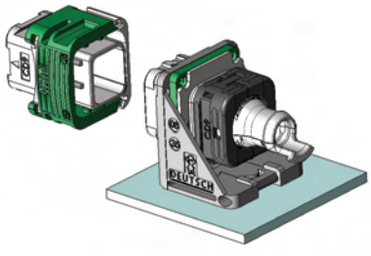
- Installed



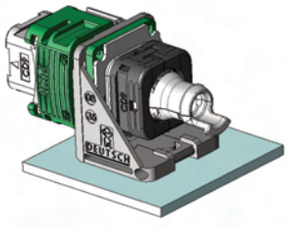
- Align receptacle with bracket



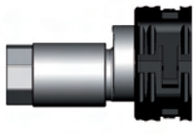
- Install and fix in position



- Assembled

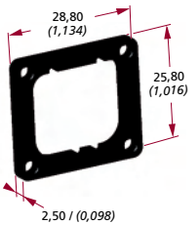


HIGH SPEED CHIMNEY
FOR PART NUMBERING,
PLEASE CONSULT US



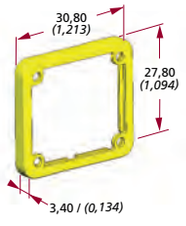
Note : These backshells have been developed specially for high speed wire management. Backshells have to be ordered with the DMC-M 99-02-XX inserts.

- Keying plate



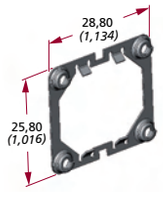
N : 787-0015-00	EN4165-25CN
A : 787-0015-01	EN4165-25CA
B : 787-0015-02	EN4165-25CB
C : 787-0015-03	EN4165-25CC
D : 787-0015-04	EN4165-25CD
E : 787-0015-05	EN4165-25CE
F : 787-0015-06	EN4165-25CF
G : 787-0015-07	EN4165-25CG

- Sealing gasket



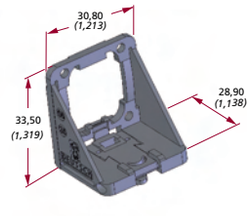
787-0011-00
EN4165-25E

- 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

Single Module EN4165

Pin contacts as per MIL C 39029/58 and EN3155

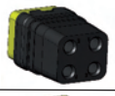
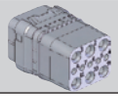
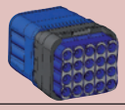
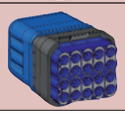
Modules	Details	PART NUMBER CROSS
	20 contacts size 22	DMC-M 20-22 AN BACI10BC2022PNB EN4165 20-22 A1NA
	12 contacts size 20	DMC-M 12-20 AN BACI10BC1220PNB EN4165 12-20 A1NA
	8 contacts size 16	DMC-M 08-16 AN BACI10BC0816PNB EN4165 08-16 A1NA
	4 contacts size 12	DMC-M 04-12 AN EN4165 04-12 A1NA
	1 contact size 8	DMC-M 01-08 AN EN4165 01-08 A1NA
	6 contacts size 16 + 5 contacts size 22	DMC-M 99-01 AN BACI10BC1622PNB 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 BACI10BC2022SNB EN4165 20-22 A1NB
	12 contacts size 20	DMC-M 12-20 BN BACI10BC1220SNB EN4165 12-20 A1NB
	8 contacts size 16	DMC-M 08-16 BN BACI10BC0816SNB 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 BACI10BC1622SNB 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

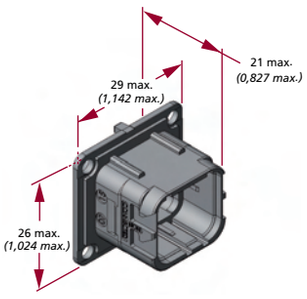
* *To be ordered with high speed chimney (see page 6)*

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

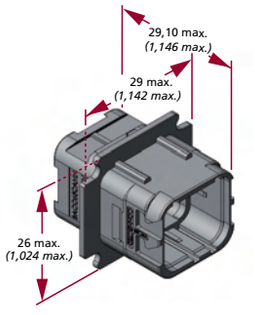
Single Module EN4165

Receptacles & Plug

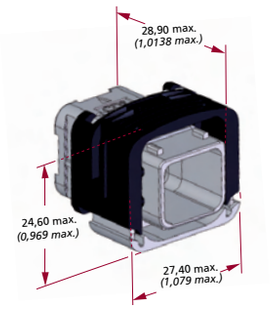
- Receptacle



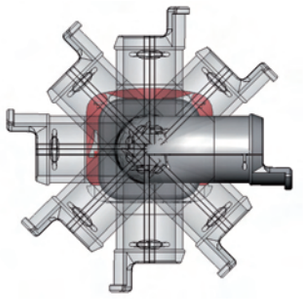
- Extender receptacle



- Plug



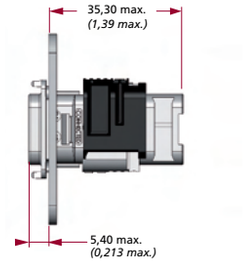
Backshell / chimney indexation



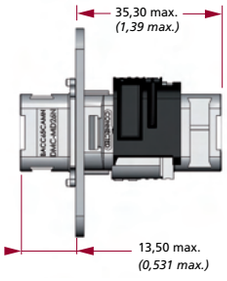
All backshells can be indexed in eight positions on the rear of plug and receptacle shell. This gives maximum flexibility during design and cable installation and reduces the number of variants and components.

Mounting panel details

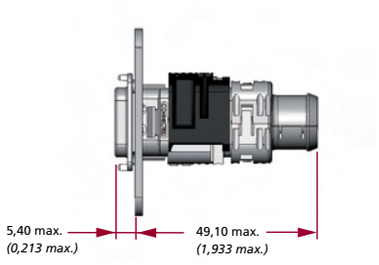
- Box mounting receptacle



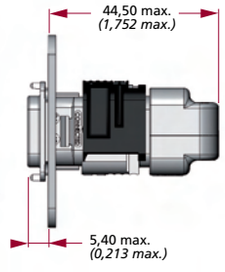
- Extender receptacle



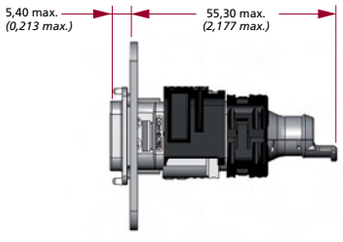
- Straight chimney



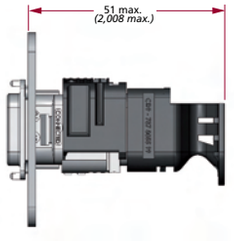
- Straight clampshell



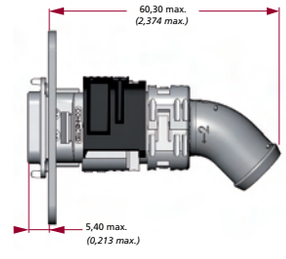
- Straight chimney tie wrap



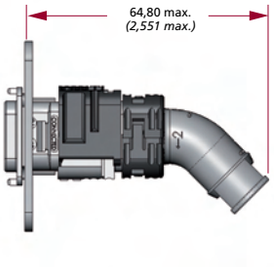
- Universal unshielded accessory



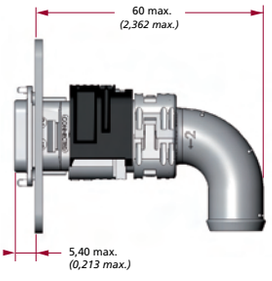
- 45° indexable chimney



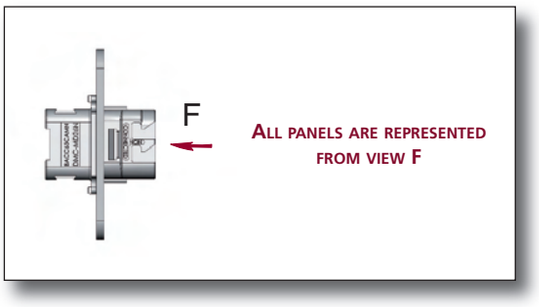
- 45° indexable chimney tie wrap



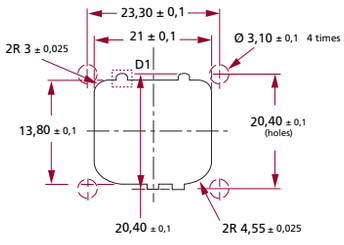
- 90° indexable chimney

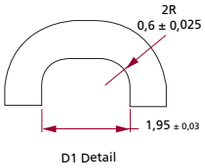


Panel mounting cutout details Single Module EN4165

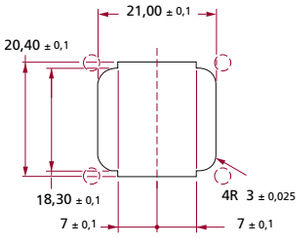


GENERIC DIMENSIONS

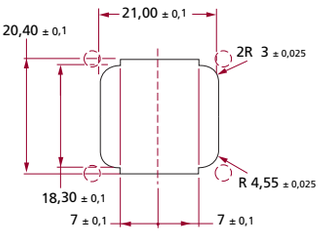




FREE

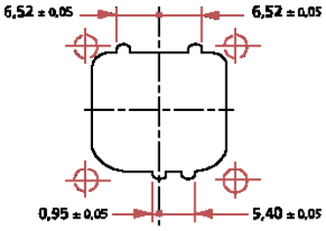


ORIENTATION

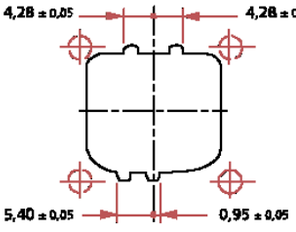


Note : Dimensions are in millimeters. Each hole Ø 3,1 mm must receive a screw (screw type 4-40)
Recommanded thickness panel : 0,8 mm mini - 2 mm max.

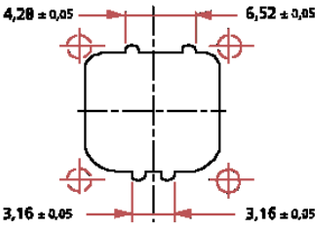
Panel coding keying



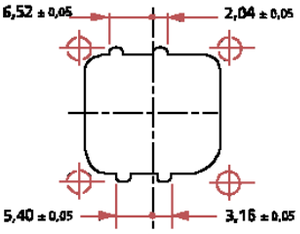
Coding N



Coding A



Coding B



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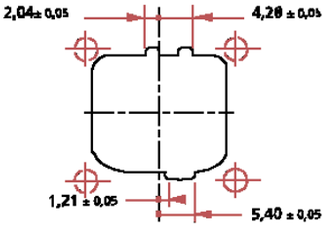

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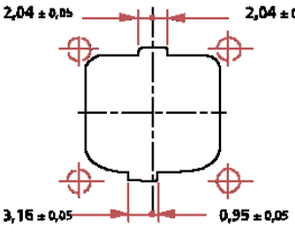
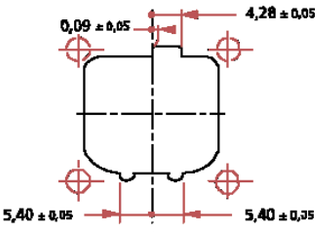


Coding E



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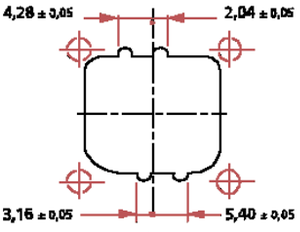
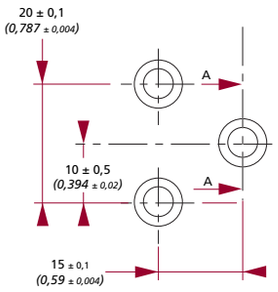
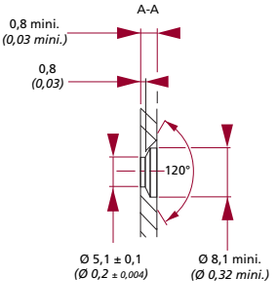


Coding G

Panel mounting bracket cutout details





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