

TE Connectivity DEUTSCH

2 or 4 Way Module EN4165 Connectors



INHERENT FLEXIBILITY ALLOWS FOR NEW AEROSPACE APPLICATIONS

The DMC-M has set the modular connector standard in the Aerospace & Military industries since the 1980's, and is now standardized by European Specification EN4165.

The DMC-M 2 or 4 Way Module is a rectangular modular connector that continues to attract new users and applications because of its inherent flexibility, space/weight savings and robustness. In addition, this product range has increased to offer composite housings, aluminum wire capability and shunting configurations. The modularity of the DMC-M allows you to configure and build your own part numbers from a set of standard elements. You are also able to customize and develop designs for special applications by modifying housing. DMC-M housings are available in aluminum alloy or composite, and nickel or cadmium plating finishes to resist severe environments. Screening and electromagnetic protection is guaranteed 360 degrees around. Designed with a lightweight material and metal plating, the 2 or 4 Way Module DMC-M is ideal for weight and mass saving.

APPLICATIONS

- Cabin and avionic systems
- High-performance military aircraft
- Commercial airlines
- Communications equipment
- Missiles
- Military
- Railway
- Medical

FEATURES

- Light weight composite
- Modularity
- Color and mechanical coded
- Push-pull coupling
- Aluminum cable contact compliant

MATERIALS AND FINISHES

Housing Material	Aluminum alloy or Composite
Plating Finish	Black nickel (F) Olive drab cadmium (W) Nickel on composite (M) Olive drab on composite (J)
Module Material	Thermoplastic and fluorinated silicone
Gasket Material	Conductive silicone (only for shielded versions)
Contact	Copper alloy
Contact Plating Finish	Gold over nickel

ELECTRICAL DATA

Withstanding Voltage At Sea Level	Service Rating I - 1300V 50Hz (R.M.S.) module size 22 Service Rating II - 1500V 50Hz (R.M.S.) modules sizes 20, 16, 12, and 8
Withstanding Voltage Altitude Immersion to 121 hPa	Service Rating I - 1000V 50Hz (R.M.S.) module size 22 Service Rating II - 1000V 50Hz (R.M.S.) modules sizes 20, 16, 12, and 8
Insulation Resistance At Sea Level	≥ 5000MΩ
Insulation Resistance Altitude Immersion to 121 hPa	≥ 1000MΩ
Contact Maximum Current Sealed Version	Size 22 - 5.0A Size 20 - 7.5A Size 16 - 13.0A Size 12 - 23.0A Size 8 - 46.0A (up to 90A with specific contacts)

(Characteristics as per EN4165 & EN3155)

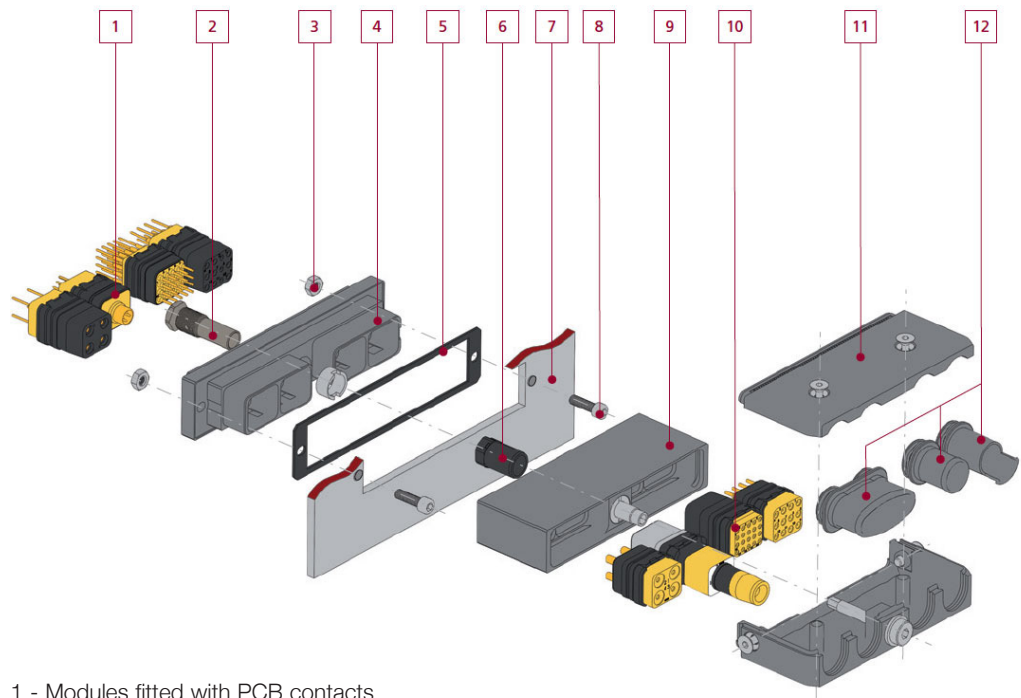
EMI Shielding Performance

FREQUENCY (MHz)	MINIMUM ATTENUATION (dB)	
	MODELS F - W	MODELS J - M
100	80	65
200	78	60
300	78	55
400	77	55
800	75	45
1000	75	45
1500	59	43
2000	55	40
3000	51	37
4000	48	35
6000	45	33
10000	40	30

MECHANICAL DATA

Module Retention	In housing - $\geq 25.4\text{daN}$
Contact Retention In Module	Size 22 - 4.5daN
	Size 20 - 9.0daN
	Size 16 - 11.0daN
	Size 12 - 13.0daN
	Size 8 - 15.6daN
Coupling Endurance	500 mating cycles
Vibration	20 g
Shock	100 g
Salt Spray	96 hours (class F)
	500 hours (class W, M, J)
Service Temperature	-55°C to $+175^{\circ}\text{C}$

(Characteristics as per EN4165)



- 1 - Modules fitted with PCB contacts
- 2 - Receptacle keying component
- 3 - Fixing panel nuts
- 4 - Receptacle housing
- 5 - Conductive flat gasket
- 6 - Plug keying component
- 7 - Panel
- 8 - Fixing panel screws
- 9 - Plug housing
- 10 - Modules fitted with crimped contacts
- 11 - Accessory in 2 halves
- 12 - Chimneys

HOW TO ORDER RECEPTACLE HOUSING COMMERCIAL

	1	2	3	4	5	6*		7**
DMC-M	D	84	B	3	5	W	01	****
CONNECTOR TYPE	SHIELDING	HOUSING TYPE	DELIVERY CONFIGURATION	KEYING COMPONENT TYPE	KEYING COMPONENT ORIENTATION	PLATING FINISH*	ISSUE	SPECIAL MODIFICATIONS**

Example part number: DMC-MD 84 B 35 W 01

STEP 1: CHOOSE SHIELDING

OMIT
Standard

D
Shielded

STEP 2: CHOOSE HOUSING TYPE

42
Receptacle housing
2 module

43
Short receptacle
housing 2 module

44
Flange mounting
receptacle housing
2 module

45
Short flange
mounting receptacle
housing 2 module

82
Receptacle housing
4 module

83
Short receptacle
housing 4 module

84
Flange mounting
receptacle housing
4 module

85
Short flange
mounting receptacle
housing 4 module

STEP 3: CHOOSE DELIVERY CONFIGURATION

Omit or B00
Receptacle housing delivered with
the standard keying component
not mounted

A
Receptacle housing delivered
without keying component

B
Receptacle housing delivered
with keying component coded,
mounted or not mounted

STEP 4: CHOOSE KEYING COMPONENT TYPE (ONLY FOR B CONFIGURATION)

0
Standard keying
component type 0
(black color)

1
Keying component
type 1 (purple color)

2
Keying component
type 2 (yellow color)

3
Keying component
type 3 (green color)

4
Keying component
type 4 (blue color)

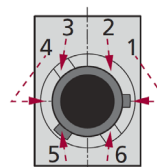
5
Keying component
type 5 (orange color)

6
Keying component
type 6 (white color)

STEP 5: CHOOSE KEYING COMPONENT ORIENTATION - RECEPTACLE HOUSING

0
Not mounted

See right for configuration
Mounted



Receptacle housing view from front face
Orientation is indicated by the largest keyway

* Composite version, contact us.
** More information, contact us.

STEP 6: CHOOSE PLATING FINISH*

Aluminum Alloy:

OMIT
Black nickel

W
Olive drab cadmium

STEP 7: CHOOSE SPECIAL MODIFICATIONS**

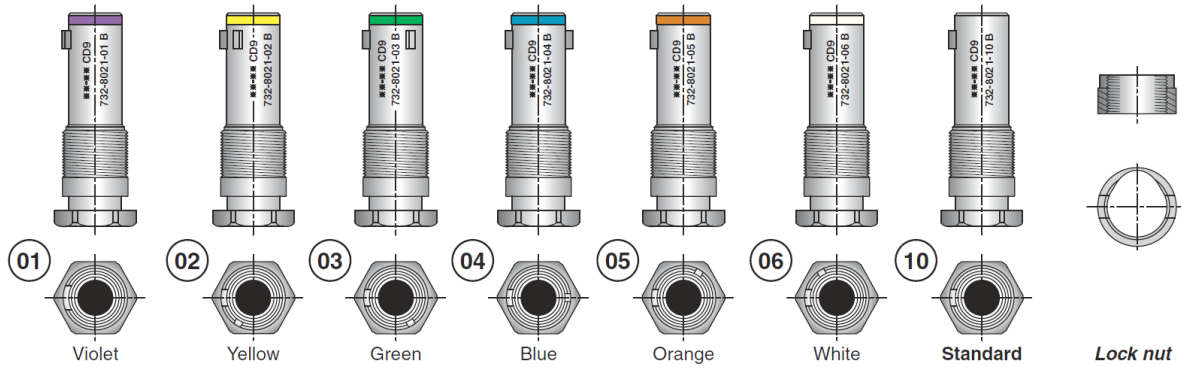
A1064
Electroless nickel

* Composite version, contact us.
** More information, contact us.

RECEPTACLE KEYING

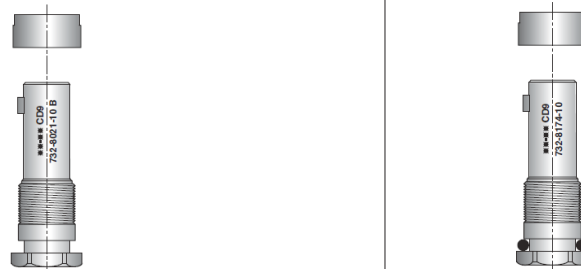
DMC-M receptacle housings can be delivered with a keying component allowing 6 mating possibilities. An additional 6 keying orientations are possible providing a total of 36 keying options thereby preventing connector misalignment and mismounting. This is especially useful for rack and multi connector applications.

RECEPTACLE KEYING COMPONENT



The assembly coupling mechanism requires the use of the tool part number 057-0590-80. It is delivered with a removable lock nut (coupling torque 0.1 to 0.13 daN.m).

PART NUMBERING SYSTEM



VERSION	DEUTSCH STANDARD VERSION	EN STANDARD VERSION	DEUTSCH SEALED VERSION
MATERIAL	ALUMINUM ALLOY AND STAINLESS STEEL LOCK NUT		
01	732-8021-01 B	EN4165R01	732-8174-01
02	732-8021-02 B	EN4165R02	732-8174-02
03	732-8021-03 B	EN4165R03	732-8174-03
04	732-8021-04 B	EN4165R04	732-8174-04
05	732-8021-05 B	EN4165R05	732-8174-05
06	732-8021-06 B	EN4165R06	732-8174-06
10	732-8021-10 B	EN4165R10	732-8174-10

HOW TO ORDER PLUGS COMMERCIAL

	1	2	3	4	5	6*		7**
DMC-M	D	89	B	3	5	W	01	****
CONNECTOR TYPE	SHIELDING	HOUSING TYPE	DELIVERY CONFIGURATION	KEYING COMPONENT TYPE	KEYING COMPONENT ORIENTATION	PLATING FINISH	ISSUE	SPECIAL MODIFICATIONS

Example part number: DMC-MD 89 B 35 W 01

STEP 1: CHOOSE SHIELDING

OMIT
Standard

D
Shielded

STEP 2: CHOOSE HOUSING TYPE

40
Free plug 2 module

48
Rack and panel plug 2 module

49
Reversed rack and panel plug 2 module

80
Free plug 4 module

88
Rack and panel plug 4 module

89
Reversed rack and panel 4 module

STEP 3: CHOOSE DELIVERY CONFIGURATION

Omit or B00
Plug housing delivered with the standard keying component not mounted

A
Plug housing delivered without keying component

B
Plug housing delivered with keying component coded, mounted or not mounted

STEP 4: CHOOSE KEYING COMPONENT TYPE (ONLY FOR B CONFIGURATION)

0
Standard keying component type 0 (black color)

1
Keying component type 1 (purple color)

2
Keying component type 2 (yellow color)

3
Keying component type 3 (green color)

4
Keying component type 4 (blue color)

5
Keying component type 5 (orange color)

6
Keying component type 6 (white color)

*Composite version, contact us.
** More information, contact us.

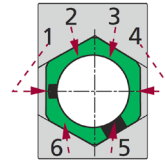
STEP 5: CHOOSE KEYING COMPONENT ORIENTATION - PLUG HOUSING

0

Not mounted

See right for configuration

Mounted



Plug housing view from front face
Orientation is indicated by the largest keyway

STEP 6: CHOOSE PLATING FINISH*

Aluminum Alloy:

OMIT

Black nickel

W

Olive drab cadmium

Composite*:

(not for rack and panel plugs)

M

Nickel on composite

J

Olive drab cadmium on composite

STEP 7: CHOOSE SPECIAL MODIFICATIONS**

A1064

Electroless nickel

* Composite version, contact us.

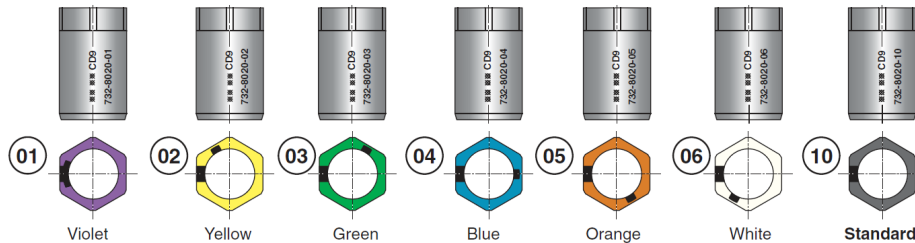
** More information, contact us.

PLUG KEYING

DMC-M plug housings can be delivered with a keying component allowing 6 mating possibilities. An additional 6 keying orientations are possible providing a total of 36 keying options thereby preventing connector misalignment and mismatching. This is especially useful for rack and multi connector applications.

PLUG KEYING COMPONENT

The assembly of these keys does not require the use of a tool. Once clipped into their cavities, these keys must be broken to be removed.



PART NUMBERING SYSTEM		
VERSION	DEUTSCH PART NUMBER	EN PART NUMBER
01	732-8020-01	EN4165P01
02	732-8020-02	EN4165P02
03	732-8020-03	EN4165P03
04	732-8020-04	EN4165P04
05	732-8020-05	EN4165P05
06	732-8020-06	EN4165P06
10	732-8020-10	EN4165P10

HOW TO ORDER SHIELDED ACCESSORIES COMMERCIAL

1	2	3		
732-	8052-	00	W	A
DMC-M FAMILY	ACCESSORY	CHIMNEY	PLATING FINISH	ISSUE

Example part number: 732-8052-00 WA

STEP 1: CHOOSE ACCESSORY

8052

Accessory for free plug

8053

Accessory for rack and panel plug

8054

Accessory for receptacle housing

STEP 2: CHOOSE CHIMNEY

00

4 module version equipped with 4 round chimneys

01

2 module version equipped with 2 round chimneys

10

4 module version supplied without chimney

14

2 module version supplied without chimney

STEP 3: CHOOSE PLATING FINISH

Aluminum Alloy:

OMIT

Black nickel

W

Olive drab cadmium

Composite:

(only for free plug accessory)

M

Nickel on composite

J

Olive drab cadmium on composite

HOW TO ORDER METAL NON-SHIELDED CABLE CLAMPS COMMERCIAL

732-	8002-	1 00	2 W
DMC-M FAMILY	METAL VERSION	COMPOSITION	PLATING FINISH

Example part number: 732-8002-00 W

STEP 1: CHOOSE COMPOSITION

00

4 module version

01

2 module version

STEP 2: CHOOSE PLATING FINISH

OMIT

Black nickel

W

Olive drab cadmium

HOW TO ORDER ULTEM NON-SHIELDED CABLE CLAMPS PN COMMERCIAL

732-	8040-	1 00
DMC-M FAMILY	ULTEM VERSION	COMPOSITION

STEP 1: CHOOSE COMPOSITION

00 A

4 module version

01

2 module version

MODULES

PIN CONTACTS PER AS39029/58 AND EN3155

MODULES	DETAILS	PART NUMBER CROSS
	20 contacts size 22	DMC-M 20-22 AN BAC10BC2022PNB EN4165A20-221NA
	20 contacts size 22	DMC-MA 20-22 AN EN4165A20A221NA
	12 contacts size 20	DMC-M 12-20 AN BAC10BC1220PNB EN4165A12-201NA
	8 contacts size 16	DMC-M 08-16 AN BAC10BC0816PNB EN4165A08-161NA
	4 contacts size 12	DMC-M 04-12 AN EN4165A04-121NA
	1 contact size 8	DMC-M 01-08 AN EN4165A01-081NA
	6 contacts size 16 2 contacts size 22 8 contacts size 24	DMC-M 16-02 AN 2226454-1
	6 contacts size 16 5 contacts size 22	DMC-M 99-01 AN BAC10BC1622PNB EN4165A99-011NA
	6 contacts size 16 5 contacts size 22	DMC-MA 99-01 AN EN4165A99A011NA
	8 contacts size 22 3 contacts size 20	DMC-M 99-02 AN
	8 contacts size 20 8 contacts size 24	DMC-M 99-03 AN
	6 contacts size 20 2 contacts size 22 8 contacts size 24	DMC-M 99-04 AN
	8 contacts size 22 2 contacts size 12	DMC-M 99-06 AN BAC10BC1001PNB
	8 contacts size 20 2 contacts size 16	DMC-M 99-10 AN EN4165A99-101NA
	6 optical contacts	DMC-M MC5 AN
	2 optical contacts 5 contacts size 16 2 contacts size 22	DMC-M T47 AN
	12 or 24 optical contacts for round or ribbon cable	Hermaphrodite DMC-M MC6
	Blanking module	DMC-M 00-00 PN EN4165-1N

SOCKET CONTACTS PER AS39029/57 AND EN3155

MODULES	DETAILS	PART NUMBER CROSS
	20 contacts size 22	DMC-M 20-22 BN BAC10BC2022SNB EN4165 20-22 A1NB
	20 contacts size 22	DMC-MA 20-22 BN EN4165A20A221NB
	12 contacts size 20	DMC-M 12-20 BN BAC10BC1220SNB EN4165A12-201NB
	8 contacts size 16	DMC-M 08-16 BN BAC10BC0816SNB EN4165A08-161NB
	4 contacts size 12	DMC-M 04-12 BN EN4165A04-121NB
	1 contact size 8	DMC-M 01-08 BN EN4165A01-081NB
	6 contacts size 16 2 contacts size 22 8 contacts size 24	DMC-M 16-02 BN 2226455-1
	6 contacts size 16 5 contacts size 22	DMC-M 99-01 BN BAC10BC1622SNB EN4165A99-011NB
	6 contacts size 16 5 contacts size 22	DMC-MA 99-01 BN EN4165A99A011NB
	8 contacts size 22 3 contacts size 20	DMC-M 99-02 BN
	8 contacts size 20 8 contacts size 24	DMC-M 99-03 BN
	6 contacts size 20 2 contacts size 22 8 contacts size 24	DMC-M 99-04 BN
	8 contacts size 22 2 contacts size 12	DMC-M 99-06 BN BAC10BC1001SNB
	8 contacts size 20 2 contacts size 16	DMC-M 99-10 BN EN4165A99-101NB
	6 optical contacts	DMC-M MC5 BN
	2 optical contacts 5 contacts size 16 2 contacts size 22	DMC-M T47 BN
	20 contacts size 22 5 shunts 4 ways	DMC-M 22-05 BN EN4165A20Y221NB
	20 contacts size 22 3 shunts 4 ways 4 shunts 2 ways	DMC-M 22-07 BN EN4165A2AY221NB
	20 contacts size 22 10 shunts 2 ways	DMC-M 22-10 BN EN4165A2BY221NB

Aluminum Cable Technology
High Speed Modules
Distribution Shunt Modules

Note: 1) DMC-M modules are compatible with Aluminum Cable contacts and with EN3155-70 / 71 size 22. 2) Distribution shunt modules use dedicated contacts based on standard M39029. 3) DMC-M 99-02, 99-03, 99-04, 16-02 are specific modules for high speed Ethernet application.

TE/DEUTSCH Part Numbers (DMC-M / 787)
BOEING Part Numbers (BAC10)
STANDARD Part Numbers (EN4165)

	1*	2	3	4	5	6
EN4165	W	7	A	4	3	5
NUMBER OF THE STANDARD	PLATING FINISH	HOUSING TYPE	SERIES	COMPOSITION	KEYING COMPONENT TYPE	HOUSING COMPONENT ORIENTATION IN THE RECEPTACLE HOUSING

Example part number: EN4165W7A435

STEP 1: CHOOSE PLATING FINISH*

Aluminum Alloy:

F
Black nickel

W
Olive drab cadmium

Composite*:
(only for free plug accessory)

M
Nickel on composite

J
Olive drab cadmium on composite

STEP 2: CHOOSE HOUSING TYPE

0
Receptacle housing

7
Flange mounting receptacle housing

STEP 3: CHOOSE SERIES

A
Series 2

B**
Series 3

STEP 4: CHOOSE COMPOSITION

2
2 module version

4
4 module version

STEP 5: CHOOSE KEYING COMPONENT TYPE

A
Standard keying component type (black color)

0
Without keying component

1
Keying component type 1 (purple color)

2
Keying component type 2 (yellow color)

3
Keying component type 3 (green color)

4
Keying component type 4 (blue color)

5
Keying component type 5 (orange color)

6
Keying component type 6 (white color)

* Composite version, contact us.

** Series 3, contact us.

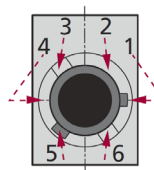
STEP 6: CHOOSE KEYING COMPONENT ORIENTATION -RECEPTACLE HOUSING

0

Not mounted

See right for configuration

Mounted

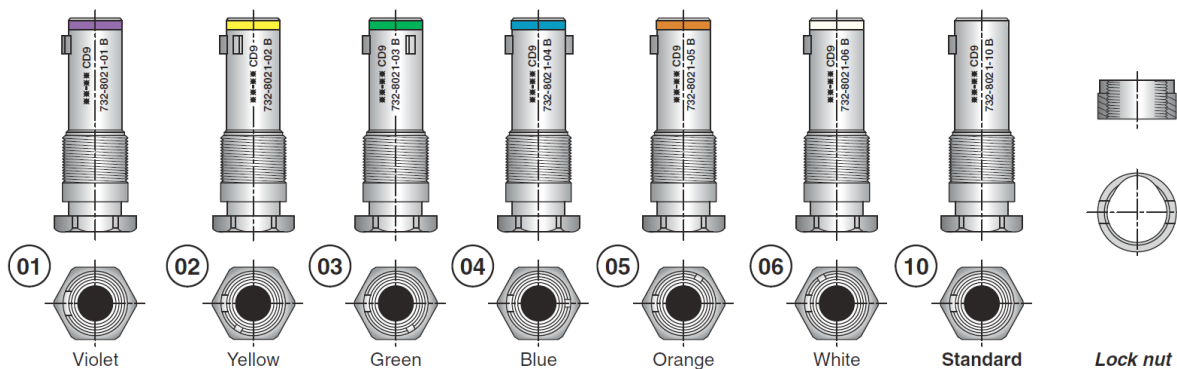


Receptacle housing view from front face
Orientation is indicated by the largest keyway

RECEPTACLE KEYING

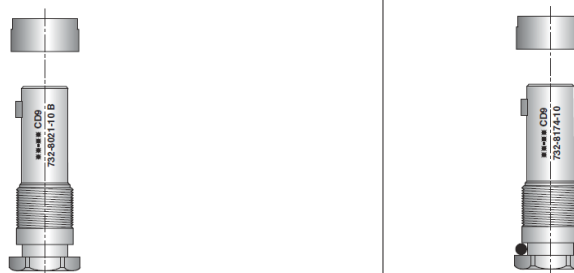
DMC-M receptacle housings can be delivered with a keying component allowing 6 mating possibilities. An additional 6 keying orientations are possible providing a total of 36 keying options thereby preventing connector misalignment and mismounting. This is especially useful for rack and multi connector applications.

RECEPTACLE KEYING COMPONENT



The assembly coupling mechanism requires the use of the tool part number 057-0590-80. It is delivered with a removable lock nut (coupling torque 0.1 to 0.13 daN.m).

PART NUMBERING SYSTEM



VERSION	DEUTSCH STANDARD VERSION	EN STANDARD VERSION	DEUTSCH SEALED VERSION
MATERIAL	ALUMINUM ALLOY AND STAINLESS STEEL LOCK NUT		
01	732-8021-01 B	EN4165R01	732-8174-01
02	732-8021-02 B	EN4165R02	732-8174-02
03	732-8021-03 B	EN4165R03	732-8174-03
04	732-8021-04 B	EN4165R04	732-8174-04
05	732-8021-05 B	EN4165R05	732-8174-05
06	732-8021-06 B	EN4165R06	732-8174-06
10	732-8021-10 B	EN4165R10	732-8174-10

HOW TO ORDER PLUGS - EN4165

	1*	2	3**	4	5	6	7
EN4165	W	9	A	4	R	3	5
NUMBER OF THE STANDARD	PLATING FINISH	HOUSING TYPE	SERIES	COMPOSITION	REVERSED	KEYING COMPONENT TYPE	KEYING COMPONENT ORIENTATION

Example part number: EN4165W9A4R35

STEP 1: CHOOSE PLATING FINISH*

Aluminum Alloy:

F
Black nickel

W
Olive drab cadmium

Composite*: (not for rack and panel plugs)

M
Nickel on composite

J
Olive drab cadmium on composite

STEP 2: CHOOSE HOUSING TYPE

6
Free plug

9
Rack and panel plug

STEP 3: CHOOSE SERIES**

A
Series 2

B**
Series 3

STEP 4: CHOOSE COMPOSITION

2
2 module version

4
4 module version

STEP 5: CHOOSE REVERSED

Omit
Standard

R
Reversed

* Composite version, contact us.

** Series 3, contact us.

STEP 6: CHOOSE KEYING COMPONENT TYPE

A

Standard keying component type (black color)

0

Without keying component

1

Keying component type 1 (purple color)

2

Keying component type 2 (yellow color)

3

Keying component type 3 (green color)

4

Keying component type 4 (blue color)

5

Keying component type 5 (orange color)

6

Keying component type 6 (white color)

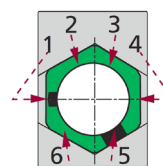
STEP 7: CHOOSE KEYING COMPONENT ORIENTATION - PLUG HOUSING

0

Not mounted

See right for configuration

Mounted



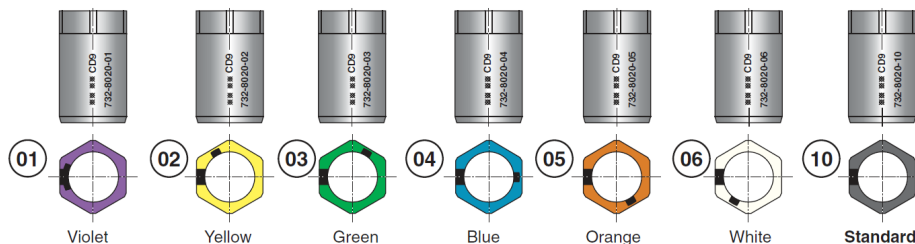
Plug housing view from front face
Orientation is indicated by the largest keyway

PLUG KEYING

DMC-M plug housings can be delivered with a keying component allowing 6 mating possibilities. An additional 6 keying orientations are possible providing a total of 36 keying options thereby preventing connector misalignment and mismatching. This is especially useful for rack and multi connector applications.

PLUG KEYING COMPONENT

The assembly of these keys does not require the use of a tool. Once clipped into their cavities, these keys must be broken to be removed.



PART NUMBERING SYSTEM		
VERSION	DEUTSCH PART NUMBER	EN PART NUMBER
01	732-8020-01	EN4165P01
02	732-8020-02	EN4165P02
03	732-8020-03	EN4165P03
04	732-8020-04	EN4165P04
05	732-8020-05	EN4165P05
06	732-8020-06	EN4165P06
10	732-8020-10	EN4165P10

HOW TO ORDER SHIELDED ACCESSORY BODIES - EN4165

1	2	3		
EN4165	F	14	P	4
NUMBER OF THE STANDARD	PLATING FINISH	SHIELDED ACCESSORY BODY	PLUG	COMPOSITION

Example part number: EN4165F14P4

STEP 1: CHOOSE PLATING FINISH

Aluminum Alloy:

F
Black nickel

W
Olive drab cadmium

Composite: (only for free plug accessory)

M
Nickel on composite

J
Olive drab cadmium on composite

STEP 2: CHOOSE PLUG

P
For free plug

R
For receptacle & rack and panel plug

STEP 3: CHOOSE COMPOSITION

2
2 module version

4
4 module version

HOW TO ORDER NON-SHIELDED CABLE CLAMPS - EN4165

1	2*	3		
EN4165	F	13	A	4
NUMBER OF THE STANDARD	PLATING FINISH	CABLE CLAMP	MODULE SERIES	COMPOSITION

STEP 1: CHOOSE PLATING FINISH

F
Black nickel

W
Olive drab cadmium

STEP 2: CHOOSE MODULE SERIES*

A
Series 2

B*
Series 3

STEP 3: CHOOSE COMPOSITION



















2
2 module version

4
4 module version




















*Series 3, contact us.

MODULES

PIN CONTACTS PER AS39029/58 AND EN3155

MODULES	DETAILS	PART NUMBER CROSS
	20 contacts size 22	DMC-M 20-22 AN BAC10BC2022PNB EN4165A20-221NA
	20 contacts size 22	DMC-MA 20-22 AN EN4165A20A221NA
	12 contacts size 20	DMC-M 12-20 AN BAC10BC1220PNB EN4165A12-201NA
	8 contacts size 16	DMC-M 08-16 AN BAC10BC0816PNB EN4165A08-161NA
	4 contacts size 12	DMC-M 04-12 AN EN4165A04-121NA
	1 contact size 8	DMC-M 01-08 AN EN4165A01-081NA
	6 contacts size 16 2 contacts size 22 8 contacts size 24	DMC-M 16-02 AN 2226454-1
	6 contacts size 16 5 contacts size 22	DMC-M 99-01 AN BAC10BC1622PNB EN4165A99-011NA
	6 contacts size 16 5 contacts size 22	DMC-MA 99-01 AN EN4165A99A011NA
	8 contacts size 22 3 contacts size 20	DMC-M 99-02 AN
	8 contacts size 20 8 contacts size 24	DMC-M 99-03 AN
	6 contacts size 20 2 contacts size 22 8 contacts size 24	DMC-M 99-04 AN
	8 contacts size 22 2 contacts size 12	DMC-M 99-06 AN BAC10BC1001PNB
	8 contacts size 20 2 contacts size 16	DMC-M 99-10 AN EN4165A99-101NA
	6 optical contacts	DMC-M MC5 AN
	2 optical contacts 5 contacts size 16 2 contacts size 22	DMC-M T47 AN
	12 or 24 optical contacts for round or ribbon cable	Hermaphrodite DMC-M MC6
	Blanking module	DMC-M 00-00 PN EN4165-1N

SOCKET CONTACTS PER AS39029/57 AND EN3155

MODULES	DETAILS	PART NUMBER CROSS
	20 contacts size 22	DMC-M 20-22 BN BAC10BC2022SNB EN4165 20-22 A1NB
	20 contacts size 22	DMC-MA 20-22 BN EN4165A20A221NB
	12 contacts size 20	DMC-M 12-20 BN BAC10BC1220SNB EN4165A12-201NB
	8 contacts size 16	DMC-M 08-16 BN BAC10BC0816SNB EN4165A08-161NB
	4 contacts size 12	DMC-M 04-12 BN EN4165A04-121NB
	1 contact size 8	DMC-M 01-08 BN EN4165A01-081NB
	6 contacts size 16 2 contacts size 22 8 contacts size 24	DMC-M 16-02 BN 2226455-1
	6 contacts size 16 5 contacts size 22	DMC-M 99-01 BN BAC10BC1622SNB EN4165A99-011NB
	6 contacts size 16 5 contacts size 22	DMC-MA 99-01 BN EN4165A99A011NB
	8 contacts size 22 3 contacts size 20	DMC-M 99-02 BN
	8 contacts size 20 8 contacts size 24	DMC-M 99-03 BN
	6 contacts size 20 2 contacts size 22 8 contacts size 24	DMC-M 99-04 BN
	8 contacts size 22 2 contacts size 12	DMC-M 99-06 BN BAC10BC1001SNB
	8 contacts size 20 2 contacts size 16	DMC-M 99-10 BN EN4165A99-101NB
	6 optical contacts	DMC-M MC5 BN
	2 optical contacts 5 contacts size 16 2 contacts size 22	DMC-M T47 BN
	20 contacts size 22 5 shunts 4 ways	DMC-M 22-05 BN EN4165A20Y221NB
	20 contacts size 22 3 shunts 4 ways 4 shunts 2 ways	DMC-M 22-07 BN EN4165A2AY221NB
	20 contacts size 22 10 shunts 2 ways	DMC-M 22-10 BN EN4165A2BY221NB

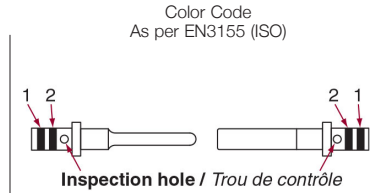
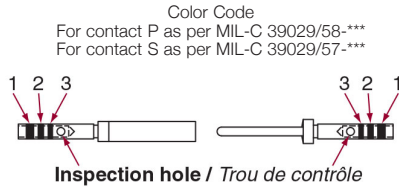
Aluminum Cable Technology
High Speed Modules

Distribution Shunt Modules

Note: 1) DMC-M modules are compatible with Aluminum Cable contacts and with EN3155-70 / 71 size 22. 2) Distribution shunt modules use dedicated contacts based on standard M39029. 3) DMC-M 99-02, 99-03, 99-04, 16-02 are specific modules for high speed Ethernet application.

TE/DEUTSCH Part Numbers (DMC-M / 787)
BOEING Part Numbers (BAC10)
STANDARD Part Numbers (EN4165)

CONTACTS



CONTACTS								CABLES	
PART NUMBER DEUTSCH	TYPE	SIZE	COLOR CODES AS PER MIL			COLOR CODES AS PER EN3155		Ø OVER INSULATION IN/MM (GAUGE AWG)	WIRE SECTION IN/ MM²
			1	2	3	1	2		
724-0001-22	P	22/22	Orange	Blue	Black	-	-	0.71 to 1.37 (22 - 26)	0.095 to 0.40
724-0003-22	S		Orange	Green	Yellow	-	-		
182-0860-22	P	22/20	-	-	-	Red	Green	0.71 to 1.37 (22 - 26)	0.095 to 0.40
182-0862-22	S		-	-	-				
724-0001-20	P	20/20	Orange	Blue	Orange	-	-	0.85 to 2.11 (20 - 24)	0.25 to 0.60
724-0003-20	S		Orange	Green	Violet	-	-		
724-1063-20	P	20/18	-	-	-	Red	Brown	(18 - 24)	0.25 to 1.00
724-1064-20	S		-	-	-				
724-0001-16	P	16/16	Orange	Blue	Yellow	-	-	1.20 to 2.77 (16 - 20)	0.60 to 1.20
724-0003-16	S		Orange	Green	Gray	-	-		
724-1063-16	P	16/14	-	-	-	Blue	White	(14 - 20)	0.60 to 2.00
724-1064-16	S		-	-	-				
724-0001-12	P	12/12	Orange	Blue	Green	-	-	1.90 to 3.61 (12 - 14)	2.00 to 3.00
724-0003-12	S		Orange	Green	White	-	-		
724-1063-12	P	12/10	-	-	-	Yellow	White	1.90 to 2.90 (14 - 10)	2.00 to 5.00
724-1064-12	S		-	-	-				
724-0001-08	P	Power 8	-	-	-	-	-	3.80 to 5.15 (8)	5.30 to 8.98
724-0003-08	S		-	-	-	-	-		
182-0001-08	P	Power 8	-	-	-	-	-	3.80 to 5.15 (8)	5.30 to 8.98
182-0003-08	S		-	-	-	-	-		
724-0004-16	P	Micro-Coax 16	Yellow	Red	Yellow	-	-	KX 22	0.057 to 0.158
724-0005-16	S		Yellow	Orange	Red	-	-		
182-0125-08	P	8	-	-	-	-	-	ALPEN A 26 DT	-
182-0126-08	S		-	-	-	-	-		
182-0048-08	P	8	-	-	-	-	-	Interface SMA	-
182-0044-08	S		-	-	-	-	-		
724-1272-22	S	Shunt 22	-	-	-	-	-	0.71 to 1.37 (22 - 26)	0.095 to 0.40

DATABUS CONTACTS

DATABUS CONTACTS (TWISTED PAIR) AS PER MIL-C 38999 SERIES I, III AND IV STANDARD						
CONTACTS				CABLES		
PART NUMBER	TYPE	SIZE	COLOR CODE	TYPES	CONDUCT. MAX. SECTION	BRAID Ø MAX.
182-0034-03	P	8	Brown-Red	Braid Simple	2 x 0.34 mm²	3.48
182-0035-03	S					
182-0034-04	P	8	Red-Red	High Immunity Double Braid	2 x 0.34 mm²	3.91
182-0035-04	S					

Part numbers in red - Standard contacts delivered with modules

Note: Contacts for aluminium cable, contact us.

CONTACTS AND TOOLING



CONTACTS	TOOLING				
PART NUMBER DEUTSCH	CRIMPING TOOL P/N DEUTSCH	CRIMPING TOOL P/N MIL	LOCATOR P/N DEUTSCH	LOCATOR P/N MIL	INSERTION AND EXTRACTION TOOL
724-0001-22	057-0463-12	M22520/2-01	057-0467-32	M22520/2-09	M81969/14-01
724-0003-22			057-0515-32	M22520/2-06	
182-0860-22	057-0463-12	M22520/2-01	057-0467-32	M22520/2-09	M81969/14-01
182-0862-22					
724-0001-20	057-0461-11	M22520/1-01	057-0466-21	M22520/1-04	M15570-20
724-0003-20					
724-1063-20	057-0461-11	M22520/1-01	056-0466-21	M22520/1-04	-
724-1064-20					
724-0001-16	057-0461-11	M22520/1-01	057-0466-21	M22520/1-04	M15570-16
724-0003-16					
724-1063-16	057-0461-11	M22520/1-01	056-0466-21	M22520/1-04	-
724-1064-16					
724-0001-12	057-0461-11	M22520/1-01	057-0466-21	M22520/1-04	M15570-12
724-0003-12					
724-1063-12	057-0461-11	-	056-0466-21	M22520/1-04	-
724-1064-12					
724-0001-08	057-0064-05 A	-	057-0065-05 A	-	114-008 or M81969/14-06
724-0003-08					
182-0001-08	057-0064-05 A	-	057-0065-05 A	-	114-008 or M81969/14-06
182-0003-08					
724-0004-16	057-0463-12*	-	057-0539-32*	-	M15570-16
724-0005-16	057-0509-14**		057-0511-34**		
182-0125-08	-	-	-	-	-
182-0126-08	-	-	-	-	-
182-0048-08	-	-	-	-	-
182-0044-08	-	-	-	-	-
724-1272-22	057-0463-12	M22520/2-01	057-0467-32	M22520/2-09	M81969/14-01

Part numbers in red - Standard contacts delivered with modules

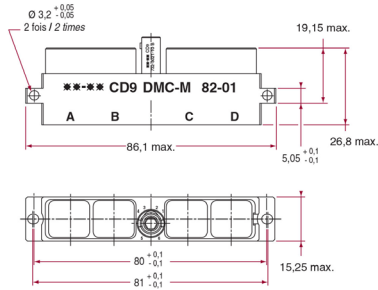
*For central contact **For exterior contact

DATABUS CONTACTS

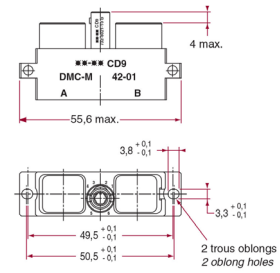
DATABUS CONTACTS (TWISTED PAIR) AS PER MIL-C 38999 SERIES I, III AND IV STANDARD			
SLEEVE TYPE	CRIMPING TOOL CENTRAL CONDUCTOR	CRIMPING TOOL FERRULE	INSERTION AND EXTRACTION TOOL
Thermoplastic and silicone	TDB-CY-08	TDB-CT-HEX Mark C	114-008 or M81969/14-06
Thermoplastic and silicone	TDB-CT-08	TDB-CT-HEX Mark D	114-008 or M81969/14-06

STACKABLE RECEPTACLE HOUSING

DMC-M 82-01
4 Module Version

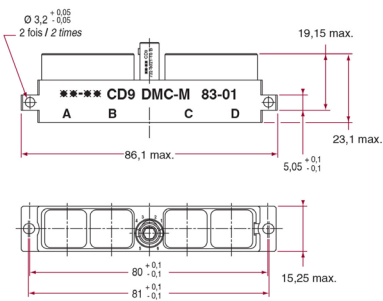


DMC-M 42-01
2 Module Version

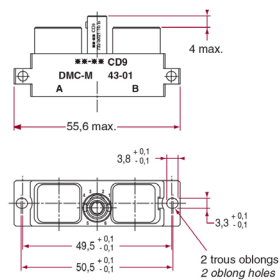


SHORT STACKABLE RECEPTACLE HOUSINGS

DMC-M 83-01
4 Module Version

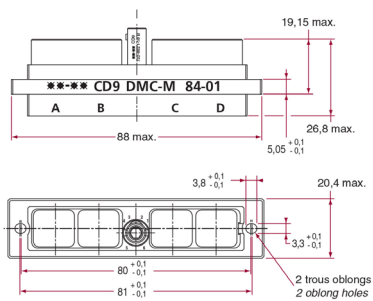


DMC-M 43-01
2 Module Version

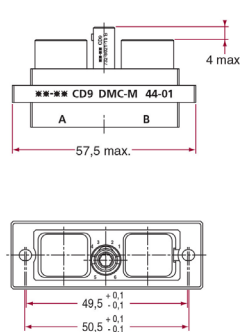


FLANGE MOUNTING RECEPTACLE HOUSINGS

DMC-M 84-01
4 Module Version*

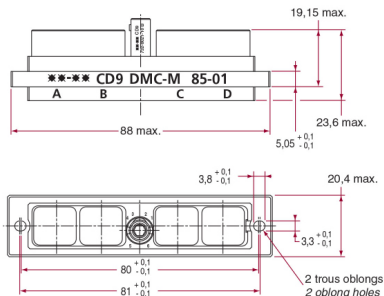


DMC-M 44-01
2 Module Version*

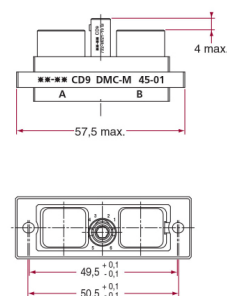


SHORT FLANGE MOUNTING RECEPTACLE HOUSINGS

DMC-M 85-01
4 Module Version*

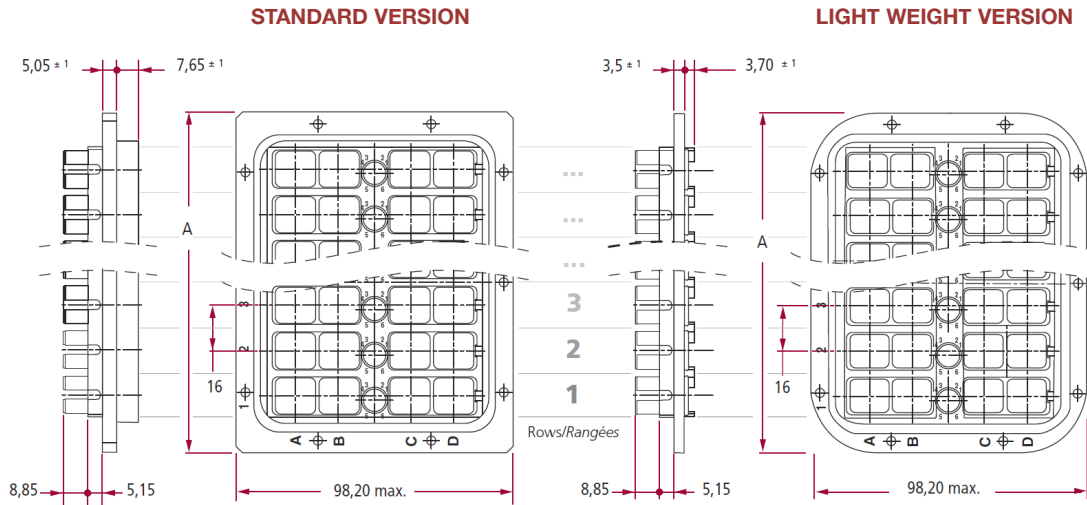


DMC-M 45-01
2 Module Version*



*DMC-MD shielded version (D): delivered with a conductive flat gasket part number 108-0019-00 A1142 for the 4 module version and 108-0019-01 A1142 for the 2 module version. Also, there is a sealing flat gasket part number 108-0019-00 for the 4 module version and 108-0019-01 for the 2 module version, not supplied with receptacles. **Note:** No accessory can be mounted on the rear of short receptacle housing.

MULTI-RECEPTACLE HOUSINGS



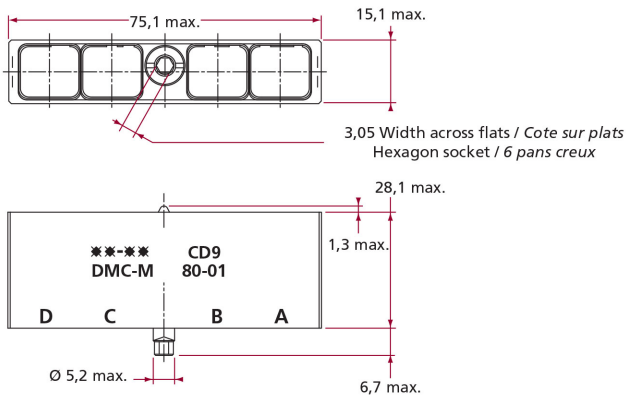
Note: These multi-receptacle housing plates receive 4 module rack and panel plugs or free plugs version. No accessory can be mounted on the rear of light weight multi-receptacle housings version.

VERSION	1044	0964	0804	0644	0484	0324	0244	0164
A (mm)	232.2	216.2	184.2	152.2	120.2	68.6	52.6	36.6
Number of rows	13	12	10	8	6	4	3	2

FREE PLUGS

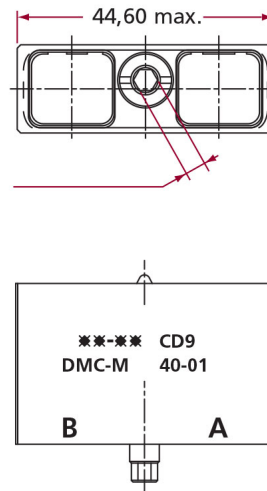
DMC-M 80-01

4 Module Version



DMC-M 40-01

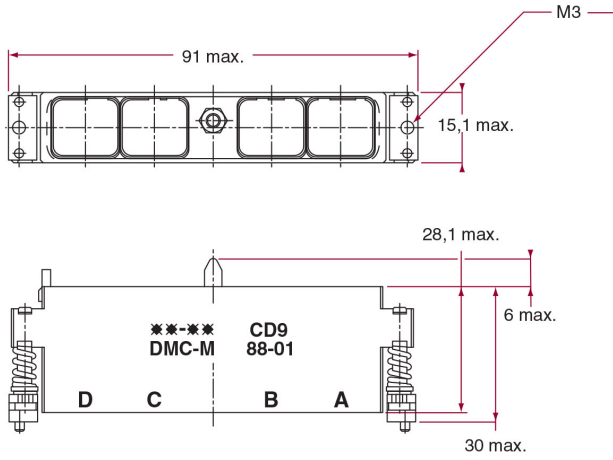
2 Module Version



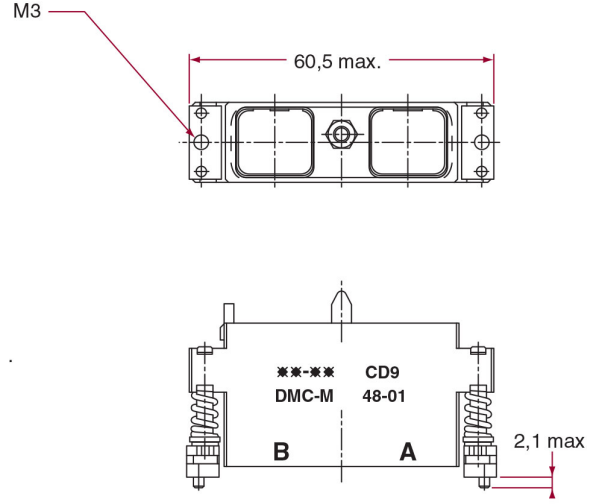
The receptacle/plug coupling is done with the tool part number 057-0592-80 or a standard allen key (coupling torque 0.1±0.03 daN.m).

RACK & PANEL PLUGS

DMC-M 88-01
4 Module Version*

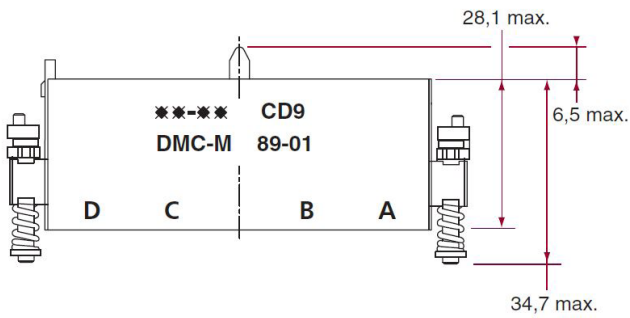


DMC-M 48-01
2 Module Version*

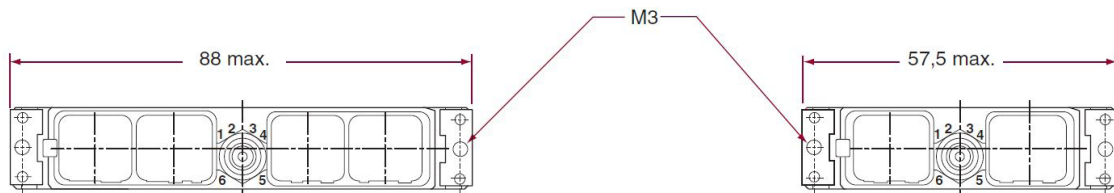
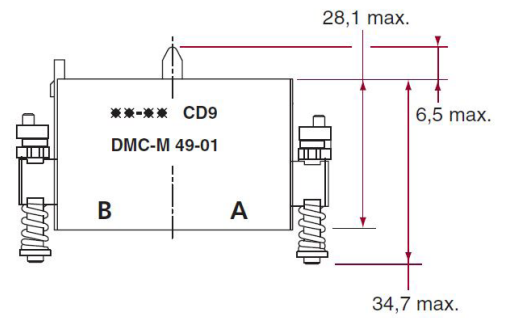


REVERSED RACK & PANEL PLUGS

DMC-M 89-01
4 Module Version*



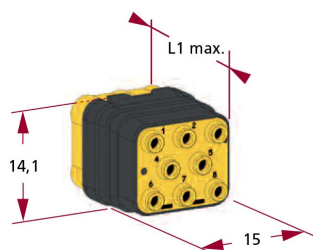
DMC-M 49-01
2 Module Version*



*Panel cut out, → See page 157.

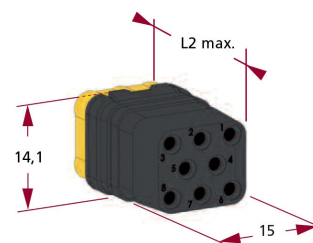
MODULES

MALE MODULE



SIZES	L1 MAX. MM
22 to 12	16.46
8	18.70

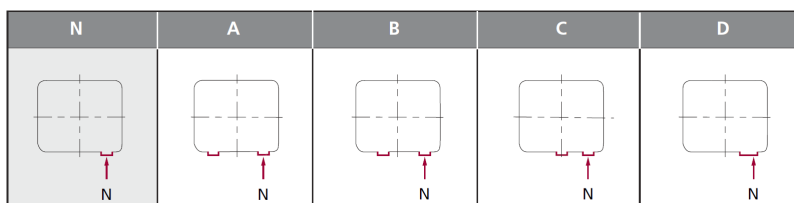
FEMALE MODULE



SIZES	L2 MAX. MM
22 to 12	22.40
8	33.20

Module extraction is done with the tool part number 057-0289-00 A or B. The module insertion in the housing (plug or receptacle) is done manually.

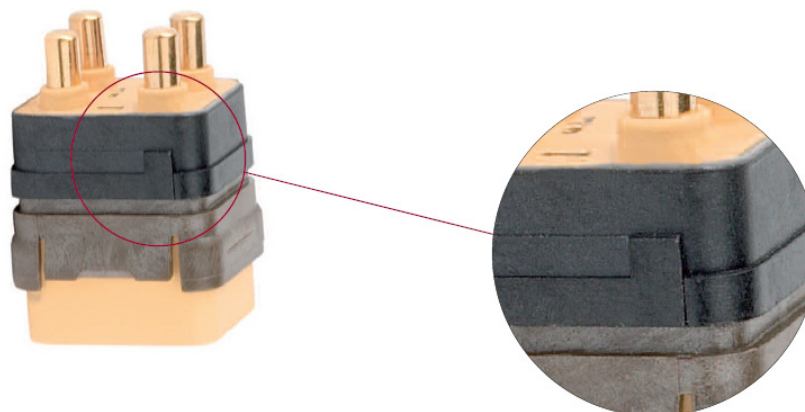
KEY POLARIZATION



Module view from front face

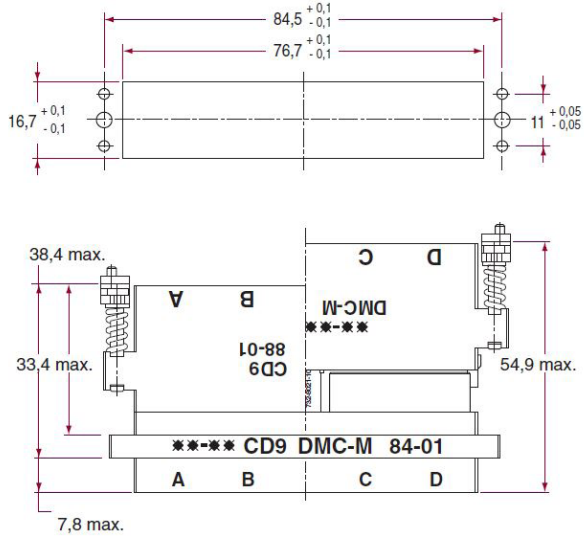
Each module can have a specific polarization key **A**, **B**, **C** or **D**.
The polarized modules must be installed in their respective **A**, **B**, **C** or **D** housing cavities.

The modules with standard polarization N can be installed in all keyway options.

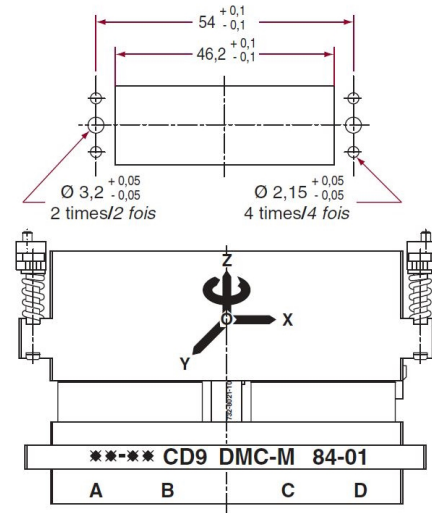


PANEL CUTOUTS FOR RACK AND PANEL PLUGS

TYPE 88, 89



TYPE 48, 49

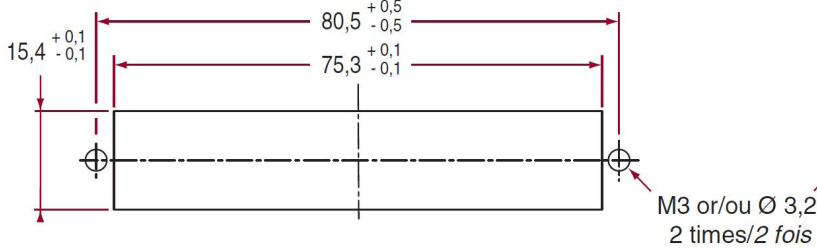


DMC-M 88, 89 with receptacle housing 82, 83, 84, 85
 DMC-M 48, 89 with receptacle housing 42, 43, 44, 45

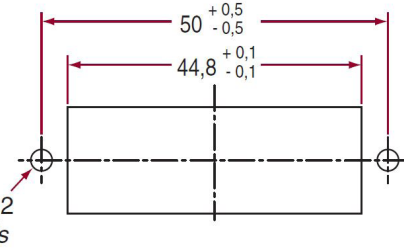
Misalignment max between.
 Rack and Panel to receptacle housing.
 OZ : ± 2 mm
 OY : ± 0.75 mm
 OX : ± 0.75 mm
 θ : ± 1°

PANEL CUTOUTS FOR RECEPTACLE HOUSINGS

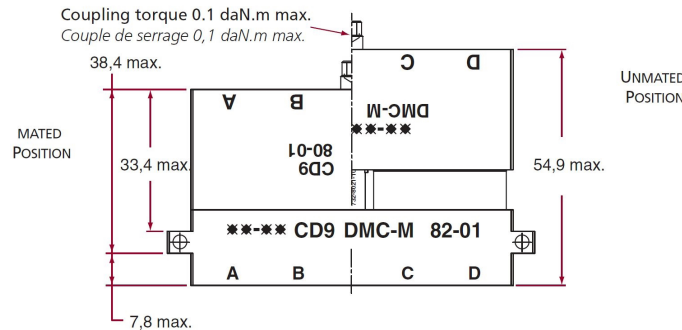
TYPE 82, 83, 84, 85



TYPE 42, 43, 44, 45



Coupling torque for panel screw 0.2 daN.m max.

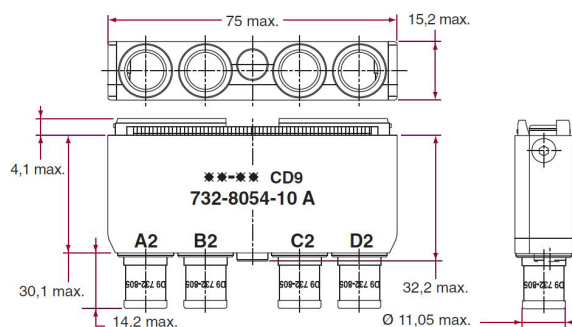


DMC-M 80 with receptacle housing 82, 83, 84, 85
 DMC-M 40 with receptacle housing 42, 43, 44, 45
NOTE: Multi-receptacle housing panel cut out contact us.

SHIELDED ACCESSORY BODIES

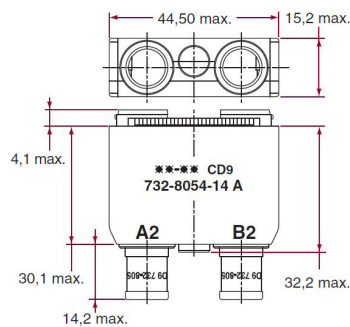
732-8054-10 A

4 Module Version



732-8054-14 A

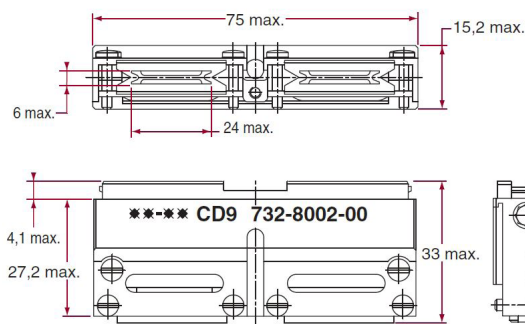
2 Module Version



NON SHIELDED CABLE CLAMPS

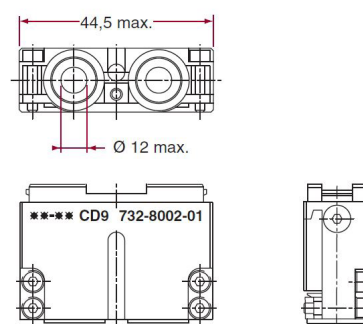
732-8002-00

4 Module Version



732-8002-01

2 Module Version

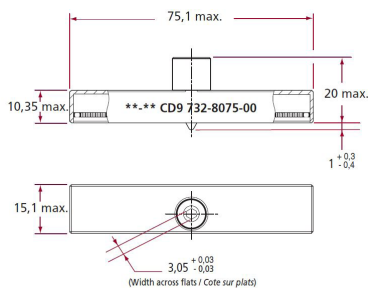


FLIGHT PROTECTION CAPS

732-8075-00

EN4165F3B

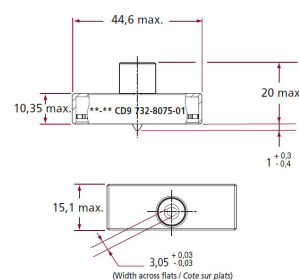
Shielded Cap for 4 Module Receptacle Housings



732-8075-01

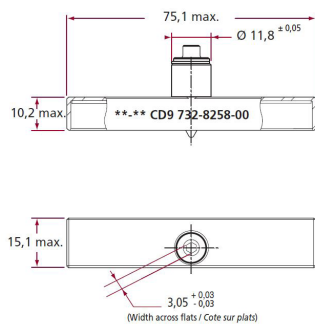
EN4165F3A

Shielded Cap for 2 Module Receptacle Housings



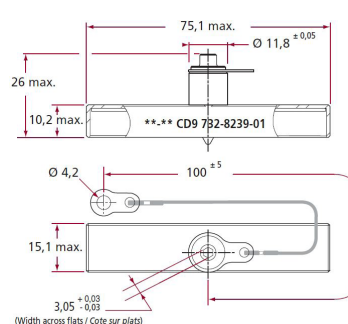
732-8258-00

Sealed Cap for 4 Module Receptacle Housings



732-8239-01

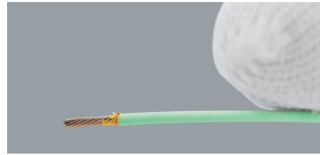
Captive Sealed Cap for 4 Module Receptacle Housings



CONTACT CRIMPING



STEP 1: Use a crimping tool with the appropriate pilot stop.



STEP 2: Strip the copper wire over* 5 mm maximum.



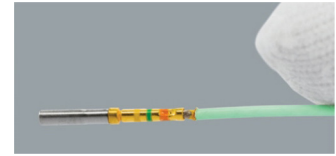
STEP 3: Insert the contact in the crimping tool.



STEP 4: Insert the wire in the contact.



STEP 5: Tighten the crimping tool.



STEP 6: Inspect the contact. It must have 8 markings, and the wire must be seen in the contact side hole.

*For aluminum wire, contact us.

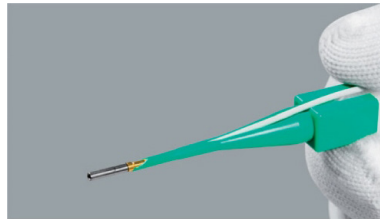
Note: For the use of a shielded version, do not forget to slide the cables in the chimney before crimping the contacts.

CONTACT INSERTION / EXTRACTION

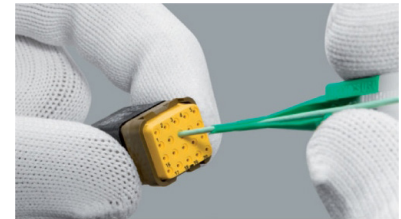


STEP 1: Use the appropriate plastic tool. There is one tool for each contact size.

TOOLS PART NUMBERS	CONTACTS SIZE
M81969/14-01	22
M15570-20	20
M15570-16	16
M15570-12	12
114-008 or M81969/14-06	8



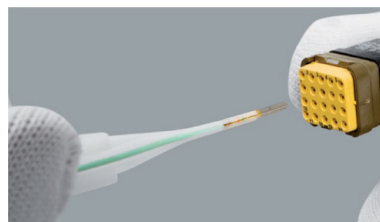
STEP 2: Insert the wire in the slot of the colored side of tool. Pull the wire until the contact butts against the tool.



STEP 3: Insert the contact in the corresponding module cavity. Push the contact fully home. Then remove the tool and lightly pull the wire back to make sure that the contact is well inserted.

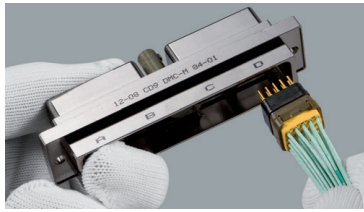


STEP 4: For extraction, insert the wire in the slot of the white side of the tool. Slide the tool into the cavity and push fully home until it is butted against the contact shoulder.



STEP 5: Press the wire between the fingers and the tool. Then pull the overall wire and tool back.

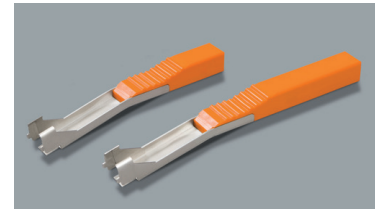
MODULE INSERTION / EXTRACTION



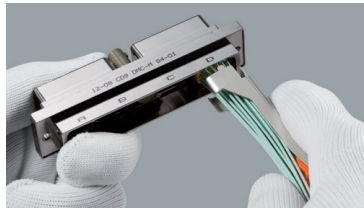
STEP 1: The module must be inserted from the rear side of the housing. The module polarization key must be visible from the marked side of the housing.



STEP 2: Push manually the module (wired or not) until butting. For sealed modules use the insertion tool part number 057-0699-00 A or B. Make sure that the module is well inserted either by pulling back the wires (if wired) or by pushing the module from the front of the housing



STEP 3: For extraction use the tool part number 057-0289-00 A or B.



STEP 4: Slide the tool around the cable. Then push the tool inside the housing until butting.



STEP 5: Note the different tool's position depending on the A, B, C or D cavities.



STEP 6: Press the cable between the tool and the fingers and pull the overall back. If the module is not wired, use the same tool, but push the module from the front of the housing.

RECEPTACLE KEYING COMPONENT MOUNTING



STEP 1: The receptacle keying component must be inserted by the rear side of the receptacle housing. Choose the orientation 1, 2, 3, 4, 5 or 6 by 60° rotation. Orientation is indicated by the largest keyway.



STEP 2: Insert the nut from the front of the receptacle housing.

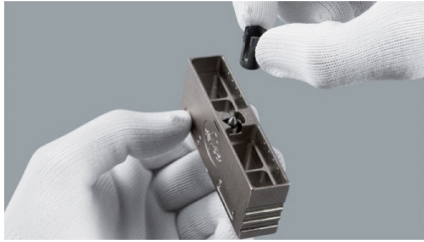


STEP 3: For mounting and dismounting, use the tool part number 057-0590-80.

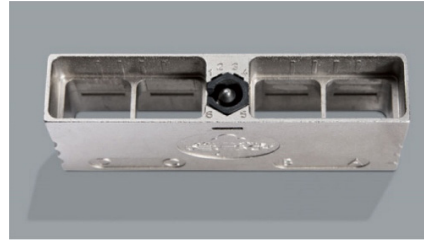


STEP 4: Tighten the nut with the tool, by applying a 0.15 ± 0.02 daN.m coupling torque.

PLUG KEYING COMPONENT MOUNTING

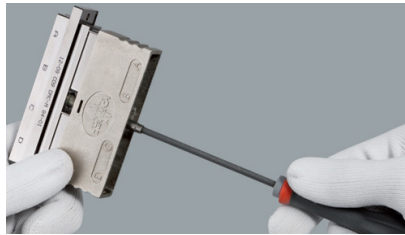


STEP 1: Use the plug keying component corresponding to the receptacle keying component (same color code). Choose the orientation 1, 2, 3, 4, 5 or 6 by 60° rotation. Orientation is indicated by the largest keyway.



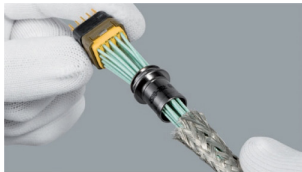
STEP 2: Insert the plug keying component in the front side of the plug housing. Make sure that the orientation allows the insertion of the receptacle keying component. Then fix the plug keying component manually by pushing it down to the bottom of its cavity.

FREE PLUG / RECEPTACLE COUPLING

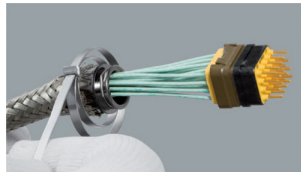


STEP 1: Use the tool part number 057-0592-80 or a standard allen key and apply a 0.1 ± 0.03 daN.m coupling torque.

SHIELDED BRAID MOUNT ON CHIMNEY



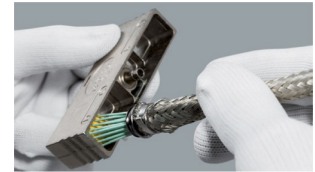
STEP 1: Slide the chimney and the shielded braid around the cable.



STEP 2: Slide the shielded braid and the 3 mm "band it" ring over the chimney.

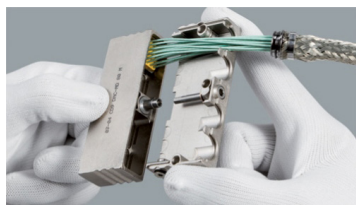


STEP 3: Use the tool part number 057-0450-00 to tighten the ring around the shielded braid over the chimney.

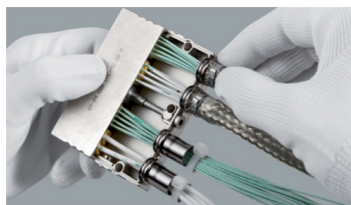


STEP 4: Clip the module in the housing.

SHIELDED ACCESSORIES



STEP 1: Choose the appropriate plug or receptacle accessory. Insert the accessory in the housing. Make sure that the marking of the accessory is in front of the respective housing's cavities.



STEP 2: Insert the chimneys in their respective cavities.



STEP 3: Fit the accessory cover, and tighten the overall screws by applying a $0.05^{+0.02}$ daN.m coupling torque with a standard allen key.

TOOLING ASSEMBLY

Mounting and dismounting of receptacle keying component.
Montage et démontage de la noix de détrompage.

057-0590-80
 EN4165TC

Mounting of plug keying component
Montage de la clé de détrompage

Manual insertion and extraction
Insertion et extraction manuelle

Insertion tool (only for sealed module)
Outil d'insertion (uniquement pour les modules étanches en périphérie)

Long version / *Version longue*
 057-0699-00 A / EN4165TS

Short version / *Version courte*
 057-0699-00 B / EN4165TS

Extraction tool / Outil d'extraction

Long version / *Version longue*
 057-0289-00 A / EN4165TN

Short version / *Version courte*
 057-0289-00 B / EN4165TN

Contact tools / Plumes *

Size / *Taille* 22 : M 81969/14-01

Size / *Taille* 20 : M 15570-20

Size / *Taille* 16 : M 15570-16

Size / *Taille* 12 : M 15570-12

Size / *Taille* 8 : M 81969/14-06

Standard allen keys
Clés allen standard

* Delivered with contacts. *Fournis avec les contacts*