

MMC

CSMALL
BREAK-AWAY
CONNECTOR
COMPACT
LOW PROFILE
24 CONTACTS

Low-profile connector
for space-constrained
ruggedized platforms



BREAK-AWAY | COMPACT | LOW PROFILE | STAINLESS STEEL | ROBUSTNESS | WATERTIGHTNESS | EMI RFI



BERNIER

TECHNICAL DATA / MMC

CLIMATIC AND MECHANICAL CHARACTERISTICS

Unlocking system	Axial Force ($40N \leq F \leq 70N$)
Operating temperature range	-55°C to +125°C
Endurance (connect / disconnect)	5 000 Operations
Sealing performance	IP68 (connected and disconnected)
Corrosion resistance « Salt fog »	Salt fog: 96 hours (Stainless steel)
Fluids resistance	Oils and hydrocarbons

ELECTRICAL CHARACTERISTICS

Working voltage	60 V _{max}
Current rating per contact	2 A _{max}
Gauge (AWG)	24
Contact types	Soder cup / For PCB
Contact resistance	≤ 8 MOhms
Insulation resistance	>1000 MOhms
EMI RFI Protection	Yes

MATERIAL AND PLATING

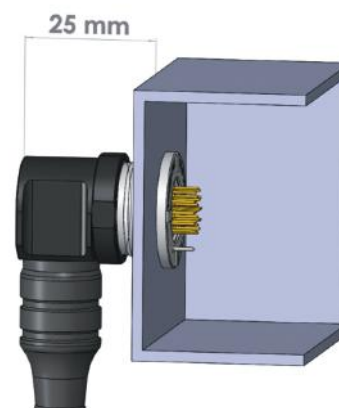
	Material	Plating
Connector shell	Stainless steel	Sandblasting
Insulator	Thermoplastic	-
Contacts	Copper alloy	Gold over nickel
Boîtier raccord	Aluminum	Black chrome

WEIGHT / MMC

Type of boxes	Weights (Max)
Plug (type 5)	7 g
Straight Backshell (MMC RDBC)	9 g
90° Elbow backshell (MMC MAI)	13 g
Receptacle (type 7)	10 g

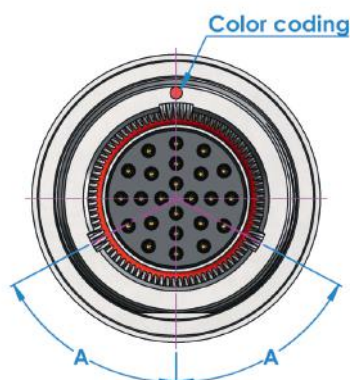


LOW PROFILE DIMENSIONS



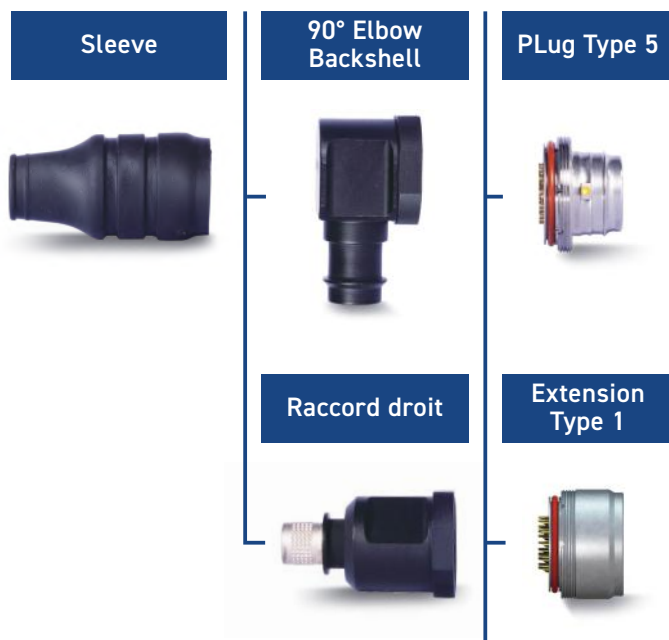
KEWAYS

Détrompage	Angle A	Color
K	70°	Orange
N	62°	Red
W	54°	White
X	46°	Green
Y	38°	Yellow
Z	30°	Blue

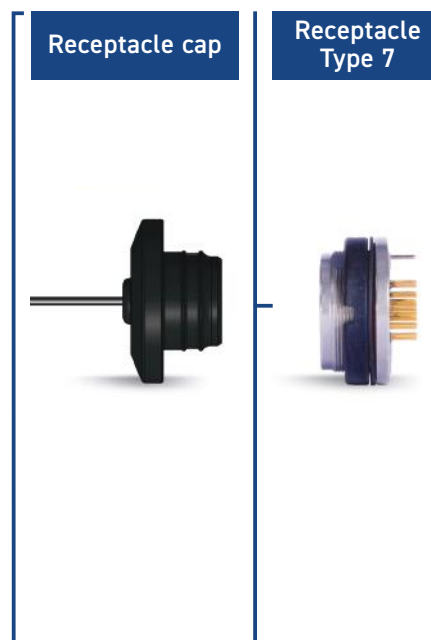


SYNOPTIC / MMC

■ ITEMS MOUNTED ON CABLE



■ ITEMS MOUNTED ON PANEL



PLUGS (TYPE 5) / MMC

PART NUMBERS: MMC 5 X 24 FS A

Description	Code
Series	MMC
Locking	Break-away
Connector type:	
Plug	5
Keyways	K, N, W, X, Y, Z, T
Contact number	24
Contact types:	
Solder cup	FS
Material:	
Stainless steel	A

PLUGS (TYPE 5) / MMC

■ PLUGS WITH SOLDER CUP CONTACTS

Male Plug MMC 5*24FSA to be soldered on wires, equipped with a thread for the mounting of a backshell. It mates all female counter parts from BERNIER MMC 24 contacts keyways K, N, X, X, Y, Z. Soldering operation on contacts can be done when insulator not mounted.

The insulator will be maintained in the plug shell with the tightening of the backshell.

Part numbers	Clé	Color
MMC 5 K 24 FSA	K	Orange
MMC 5 N 24 FSA	N	Red
MMC 5 W 24 FSA	W	White
MMC 5 X 24 FSA	X	Green
MMC 5 Y 24 FSA	Y	Yellow
MMC 5 Z 24 FSA	Z	Blue



Part number	Number of contacts	Gauge	L max
MMC 5 x 24 FS A	24	AWG 24	12.6



Ex : MMC 5N24FSA

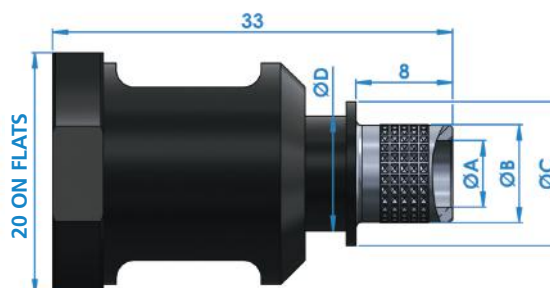
PART NUMBERS: **MMC R X B X XX**

Description	Code
Series	MMC
Type	R
Type of backshell: Straight or 90° Elbow	D C
Type of tightening	B
Type of cable shield fixing: Metallic clamp Crimping operation	C I
Size (For type 'C' cable shield fixing)	45, 55, 65

■ BACKSHELL ENDS (ON BACKSHELLS WITH THE 'I' TYPE OF CABLE SHIELD FIXING)

PART NUMBERS: **MMC MAI XX**

Description	Code
Series	MMC
Type	MAI
Size	45, 55, 65



BACKSHELLS / MMC

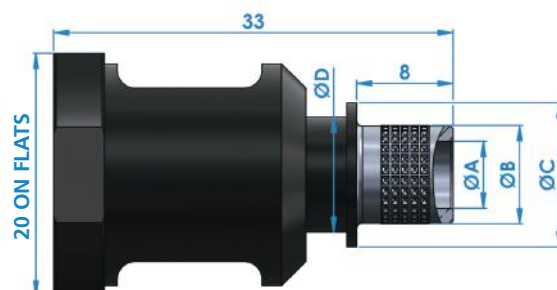


■ STRAIGHT BACKSHELL WITH KNURLING

Backshell for cable assembling with metallic collar and heat-shrink boot (not included)

Backshell also available in 90° elbow version

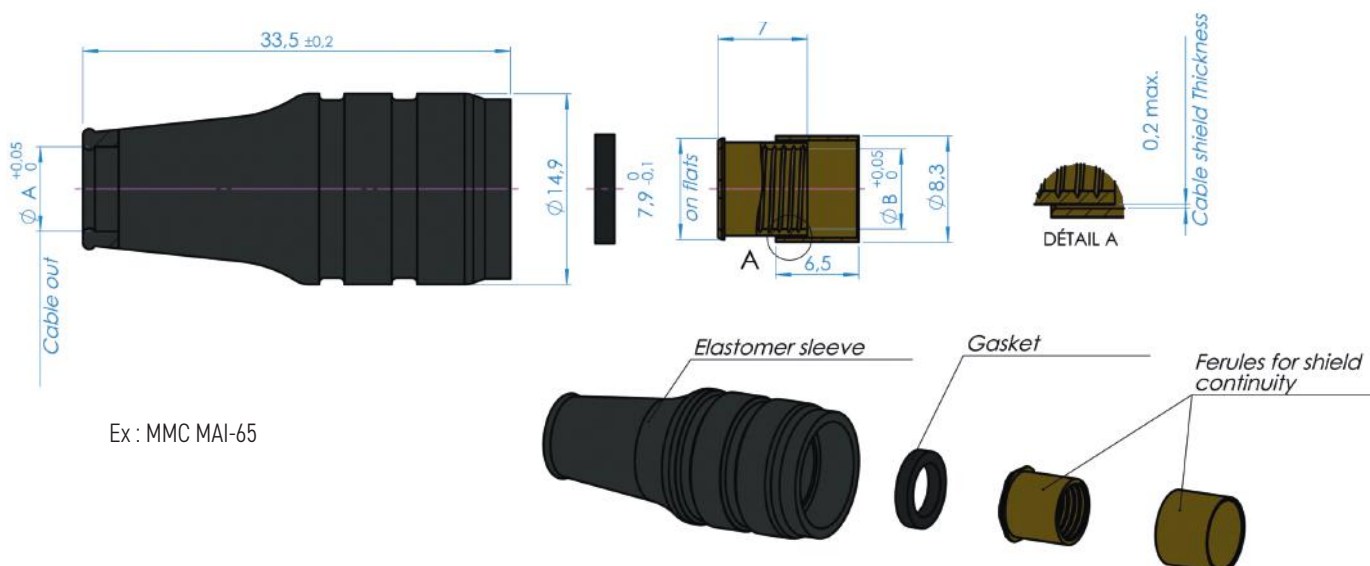
Ex : MMC RDBC - 55



MMC RDBC-xx

Part numbers	ØA
MMC RDBC-35	3,5
MMC RDBC-45	4,5
MMC RDBC-55	5,5

■ BACKSHELL ENDS MMC MAI-XX



Ex : MMC MAI-65

■ ELBOW BACKSHELL WITH CRIMPING OPERATION MMC RCBI + MANCHON "MMC MAI-XX"

MMC MAI-xx

Part numbers	Ø Cable
MMC MAI-45	4,5
MMC MAI-55	5,5
MMC MAI-65	6,5

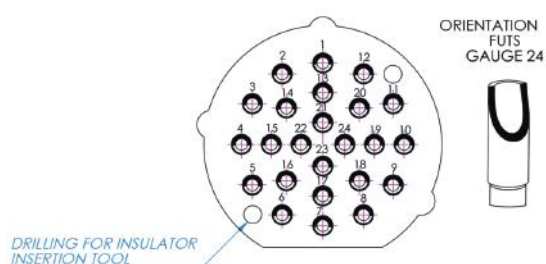
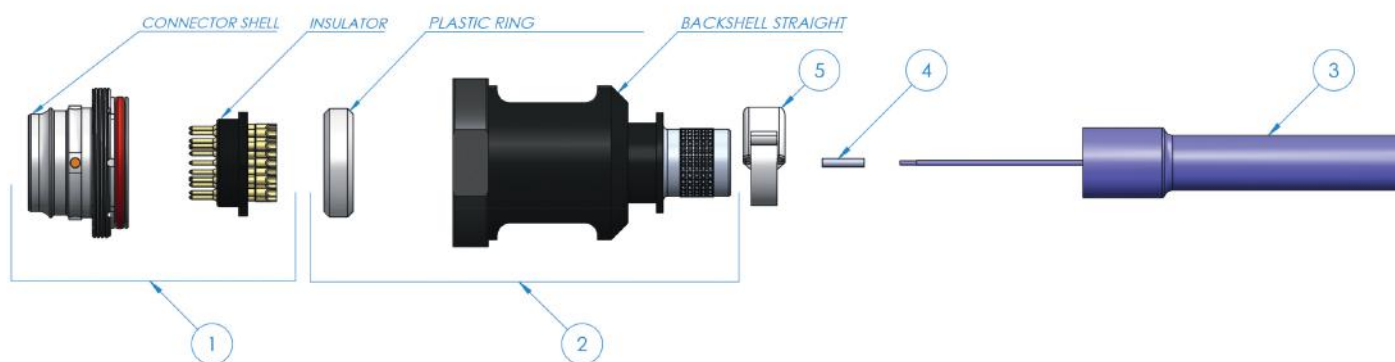
ELBOW BACKSHELL

Ex : MMC RDBI + MMC MAI-65

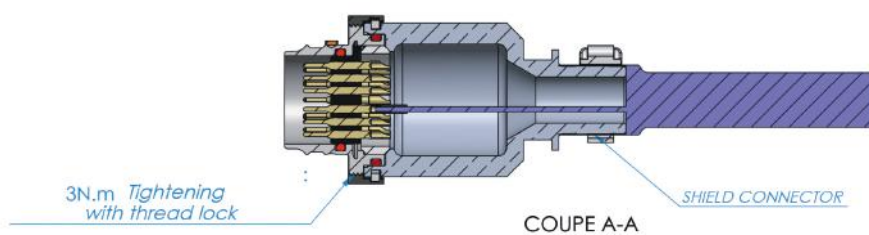


CABLING PLUGS MMC

■ MMC RDBC-XX

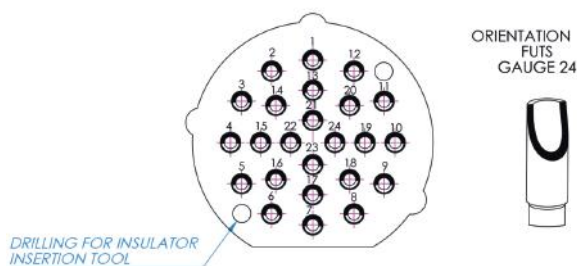
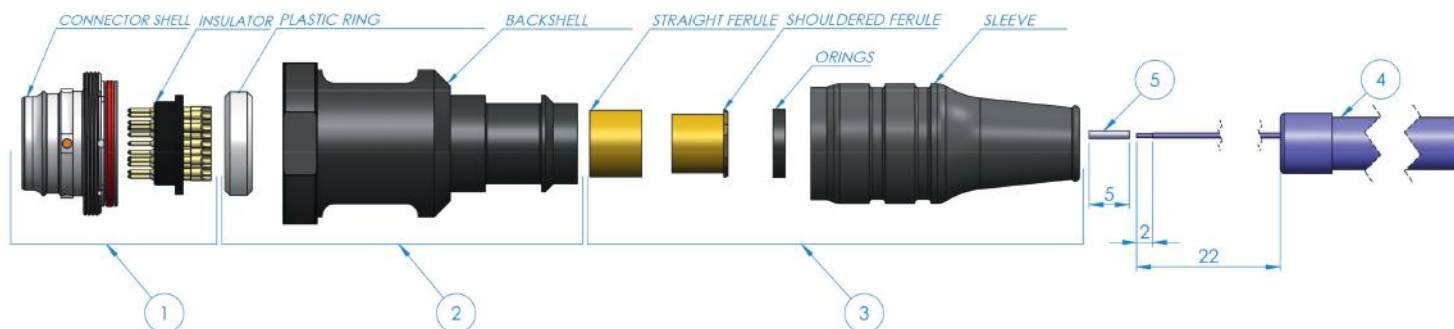


N°	QTY	DESIGNATION	PART NUMBERS
1	1	PLUG 24 CTS KEYWAY K PLUG 24 CTS KEYWAY N PLUG 24 CTS KEYWAY W PLUG 24 CTS KEYWAY X PLUG 24 CTS KEYWAY Y PLUG 24 CTS KEYWAY Z	MMC 5K24FSA MMC 5N24FSA MMC 5W24FSA MMC 5X24FSA MMC 5Y24FSA MMC 5Z24FSA
2	1	STRAIGHT BACKSHELL	MMC RDBC-35 MMC RDBC-45 MMC RDBC-55
3	1	CABLE	NOT INCLUDE
4	24	Transparent heat-shrink tubing PVDF	NOT INCLUDE
5	1	CLAMP	NOT INCLUDE

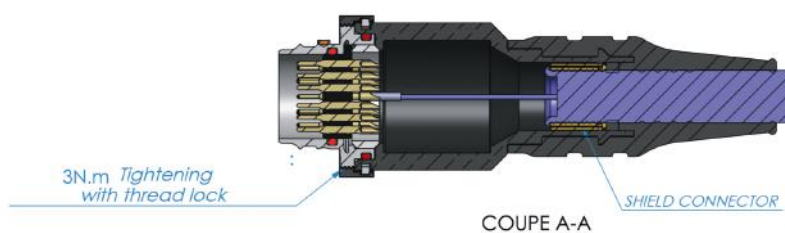


CABLING PLUGS MMC

■ MMC RDBI + MMC MAI-XX

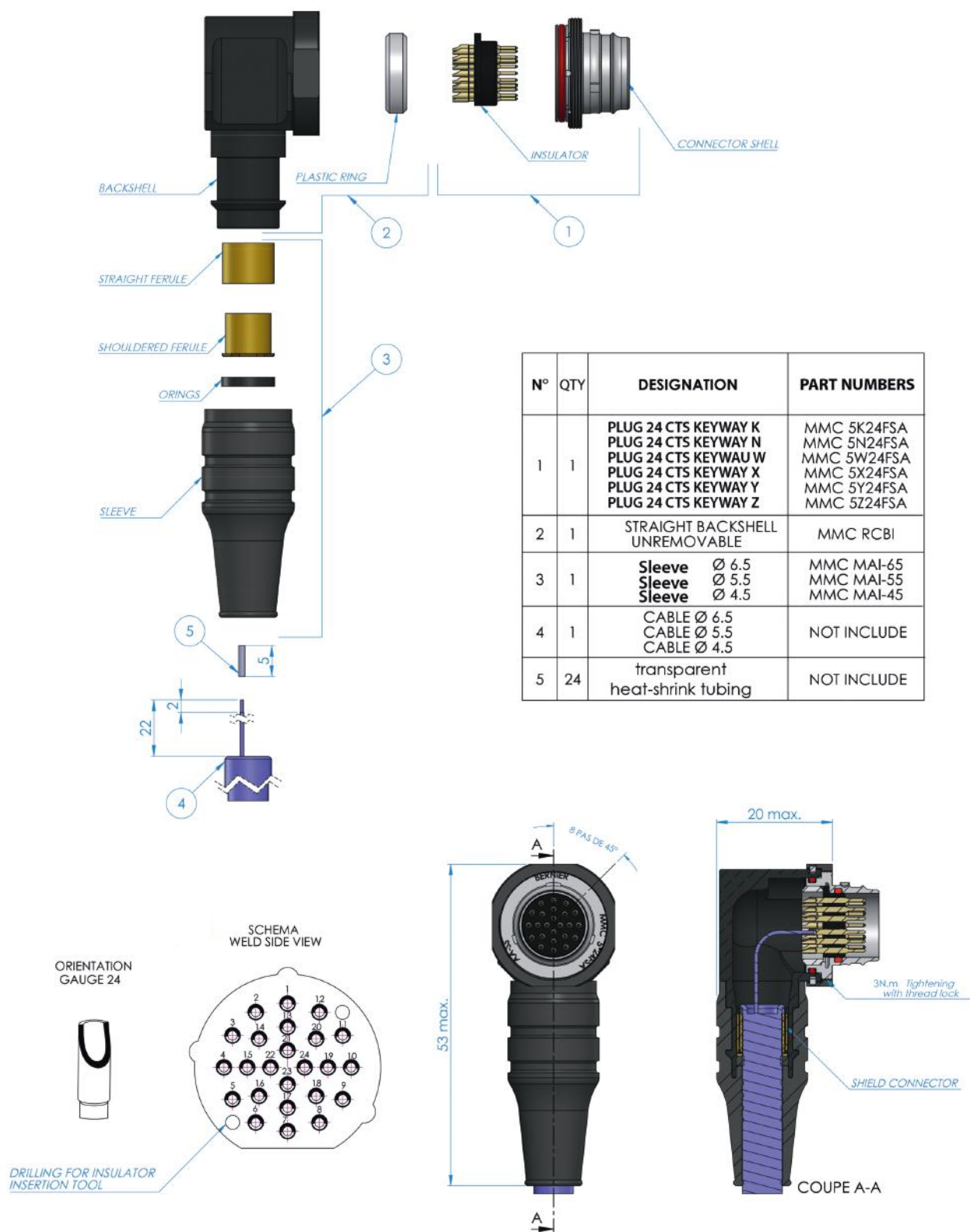


N°	QTY	DESIGNATION	PART NUMBERS
1	1	PLUG 24 CTS KEYWAY K PLUG 24 CTS KEYWAY N PLUG 24 CTS KEYWAY W PLUG 24 CTS KEYWAY X PLUG 24 CTS KEYWAY Y PLUG 24 CTS KEYWAY Z	MMC 5K24FSA MMC 5N24FSA MMC 5W24FSA MMC 5X24FSA MMC 5Y24FSA MMC 5Z24FSA
2	1	STRAIGHT BACKSHELL UNREMOVABLE	MMC RDBI
3	1	SLEEVE Ø 6.5 SLEEVE Ø 5.5 SLEEVE Ø 4.5	MMC MAI-65 MMC MAI-55 MMC MAI-45
4	1	CABLE Ø 6.5 CABLE Ø 5.5 CABLE Ø 4.5	NOT INCLUDE
5	24	transparent heat-shrink tubing PVDF	NOT INCLUDE



CABLING PLUGS MMC

■ MMC RCBI + MMC MAI-XX

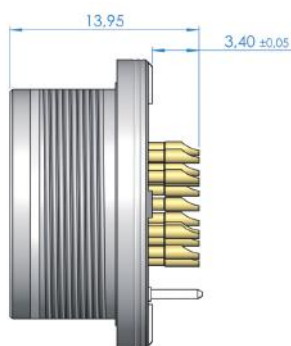


RECEPTACLES (TYPE 7) / MMC

PART NUMBERS: MMC L X X 24 XX PM A

Description	Code
Series	MMC
Locking (types 7) Break-away	L
Type of connecteur :	
Embase	7
Keyways	K, N, W, X, Y, Z, T
Number of contacts	24
Contact types:	
Solder cup	FS
Contact for PCB	P1
Ground pin (type 7 only)	PM
Material:	
Stainless steel	A

■ RECEPTACLES WITH SOLDER CUP CONTACTS /REAR MOUNTING

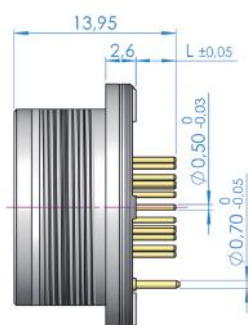


Ex : MMC L7N24FSPMA

Receptacle (type 7) MMC L 7 x 24 FS xx x

Part numbers	Keyway	Angle α	Color coding	Number of contacts
MMC L 7K24FS xx x	K	70°	Orange	24
MMC L 7N24FS xx x	N	62°	Red	24
MMC L 7W24FS xx x	W	54°	White	24
MMC L 7X24FS xx x	X	46°	Green	24
MMC L 7Y24FS xx x	Y	38°	Yellow	24
MMC L 7Z24FS xx x	Z	30°	Blue	24

■ RECEPTACLES WITH CONTACTS FOR PCB / REAR MOUNTING



Ex : MMC L7W24P1PMA

Receptacle (type 7) MMC L 7 x 24 P1 xx x

Part numbers	Keyway	Angle α	Color coding	Number of contacts
MMC L 7K24P1 xx x	K	70°	Orange	24
MMC L 7N24P1 xx x	N	62°	Red	24
MMC L 7W24P1 xx x	W	54°	White	24
MMC L 7X24P1 xx x	X	46°	Green	24
MMC L 7Y24P1 xx x	Y	38°	Yellow	24
MMC L 7Z24P1 xx x	Z	30°	Blue	24

■ ORING - WASHER NUT FOR RECEPTACLE TYPE 7

Type	Part numbers	Descriptif
Panel Oring	MMC JBFS01	Fluorosilicone Blue
Washer	MMC RMA01	Stainless steel
	MMC RNAL01	Aluminum Black plating
Nut	MMC EMA01	Stainless steel
	MMC ENAL01	Aluminum Black plating



The Oring, washer and nut are to be ordered separately



MMC JBFS01



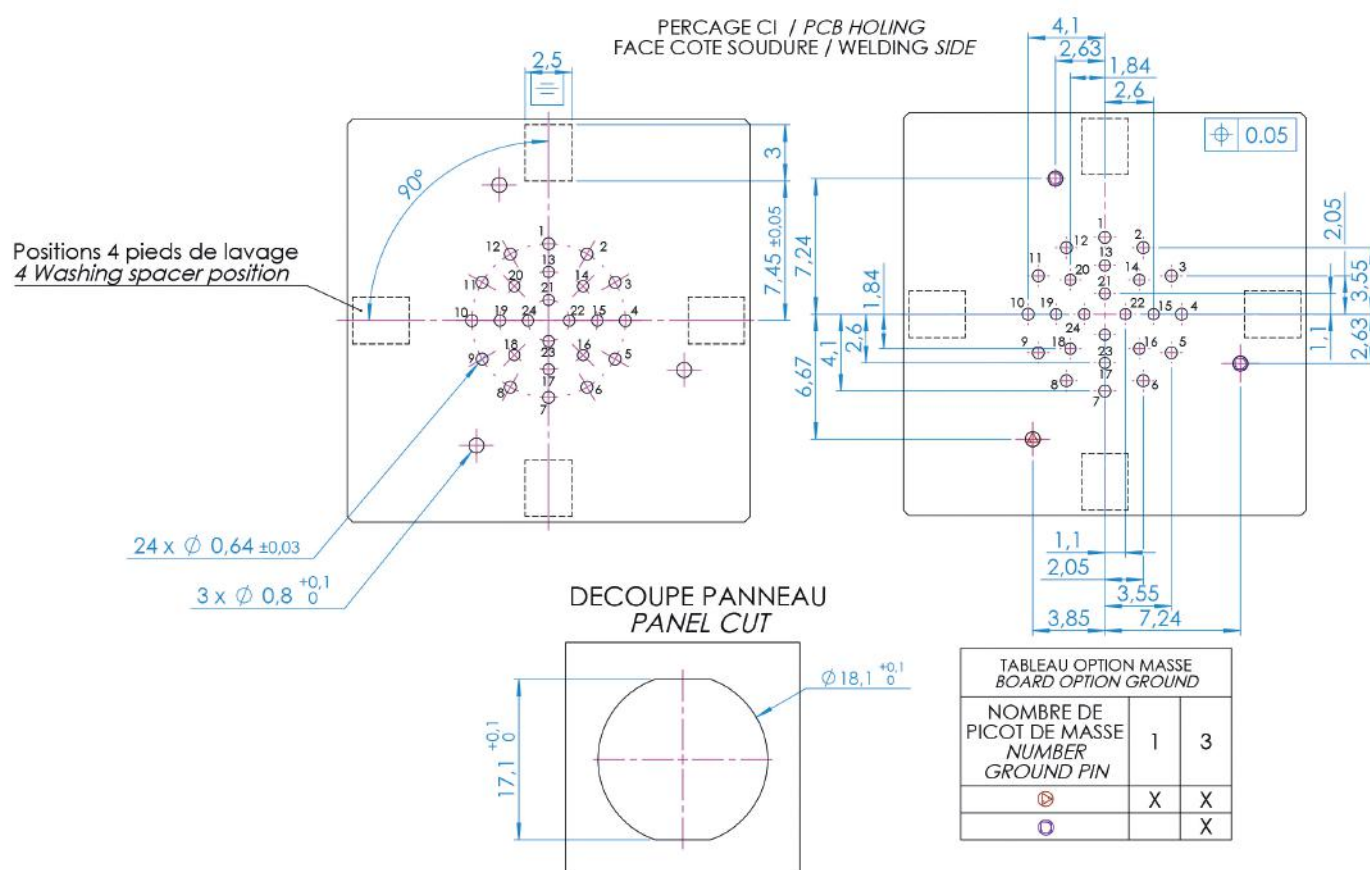
MMC RMA01



MMC EMA01

PANEL CUT & PCB HOLING / MMC

■ PANEL CUT FOR RECEPTACLES TYPES 7 AND PCB HOLING (WELDING SIDE)



CAPS / MMC

■ FOR PLUGS MMC TYPE 5

Elastomer caps with microcable and crimping ferule for MMC plugs

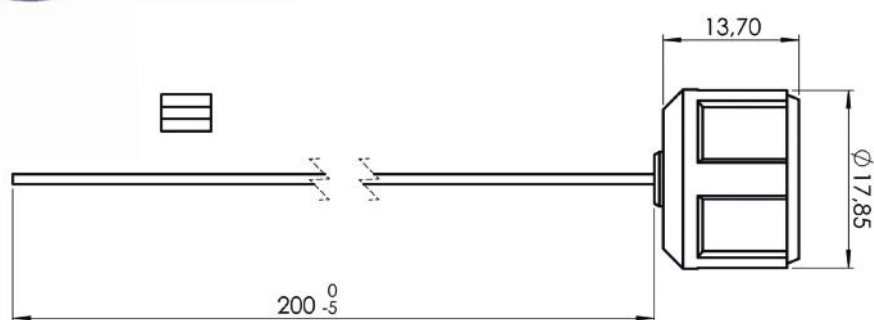
Part number: **MMC 1AEMC-200FER**

This cap is mating all plugs from the MMC BERNIER line.



CARACTERISTICS	
Body	Black Elastomer
Microcable	Stainless steel with black cover
Ferule	Aluminum alloy black plated
Weight	3 g

Body	Black Elastomer
Microcable	Stainless steel with black cover
Ferule	Aluminum alloy black plated
Weight	3 g

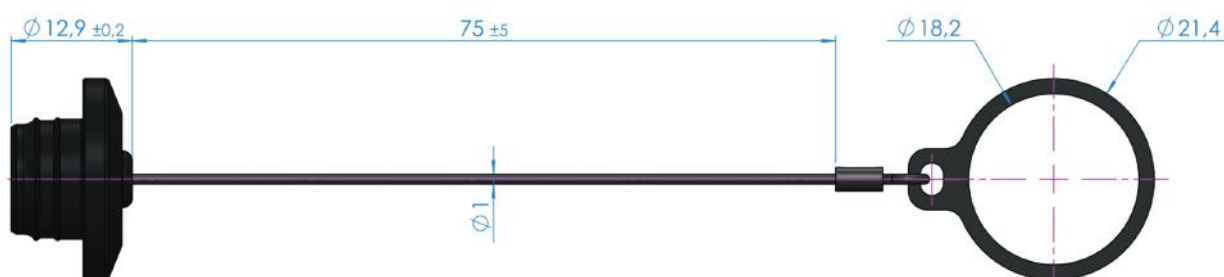


■ FOR RECEPTACLES MMC TYPE 7

Thermoplastic caps with microcable and metallic ring for receptacle MMC

Part number: **MMC 1BTMC-75EM**

This cap is mating all receptacle from the MMC BERNIER line. It is held with the help of the receptacle spring



CARACTERISTICS	
Body	Black thermoplastic
Microcable	Stainless steel with a black cover
Ferule and ring	Aluminum alloy black plated

Body	Black thermoplastic
Microcable	Stainless steel with a black cover
Ferule and ring	Aluminum alloy black plated

CLIMATIC AND MECHANICAL SPECIFICATIONS	
Temperature range	-40°C +85°C
Tear off limit force for	120N
Protection rating	IP68
Weight	4 g max

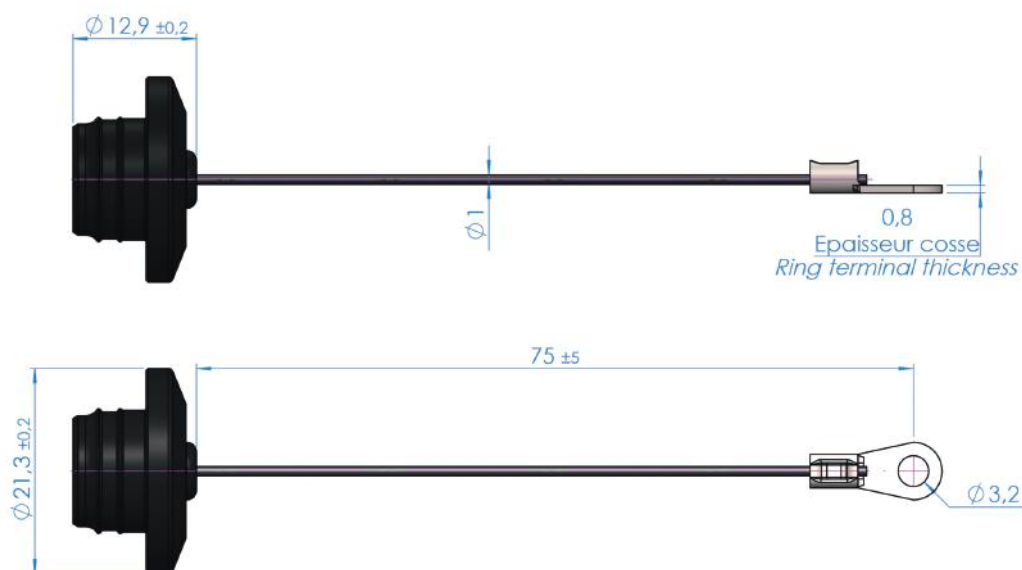
Temperature range	-40°C +85°C
Tear off limit force for	120N
Protection rating	IP68
Weight	4 g max

■ FOR RECEPTACLES MMC TYPE 7

Thermoplastic caps with microcable and eyelet for M3 screw for receptacles MMC

Part number: **MMC 1BTMC-75M3**

This cap is mating all receptacle from the MMC BERNIER line.



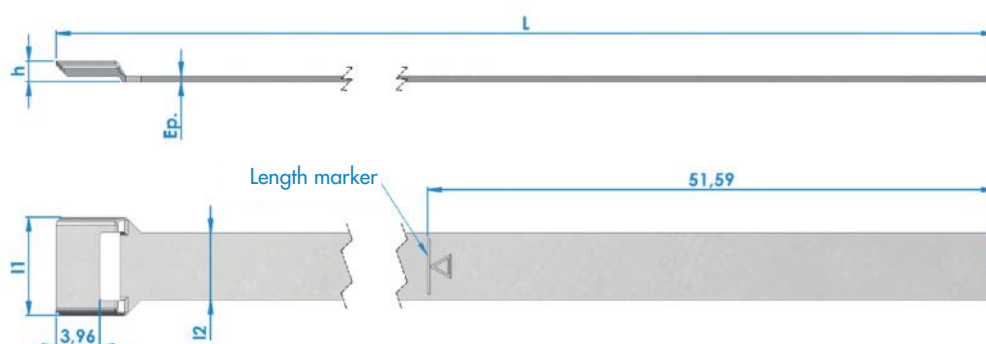
CARACTERISTICS	
Body	Black thermoplastic
Microcable	Stainless steel with a black cover
Microcable	Copper alloy tin-plated

CLIMATIC AND MECHANICAL SPECIFICATIONS	
Copper alloy tin-plated	-40°C +85°C
Tear off limit force for	120N
Protection rating	IP68
Weight	4 g max

ACCESSORIES AND TOOLS

■ METALLIC CLAMP FOR BACKSHELL

Description	Part numbers	L (mm)	h (mm)	l1 (mm)	L2 (mm)	Ep (mm)
Metallic clamp width 6.1mm	B593	362,1	1,88	8,9	6,1	0,51
Metallic clamp width 3.17mm	B452	206,4	1,35	5	3,1	0,4



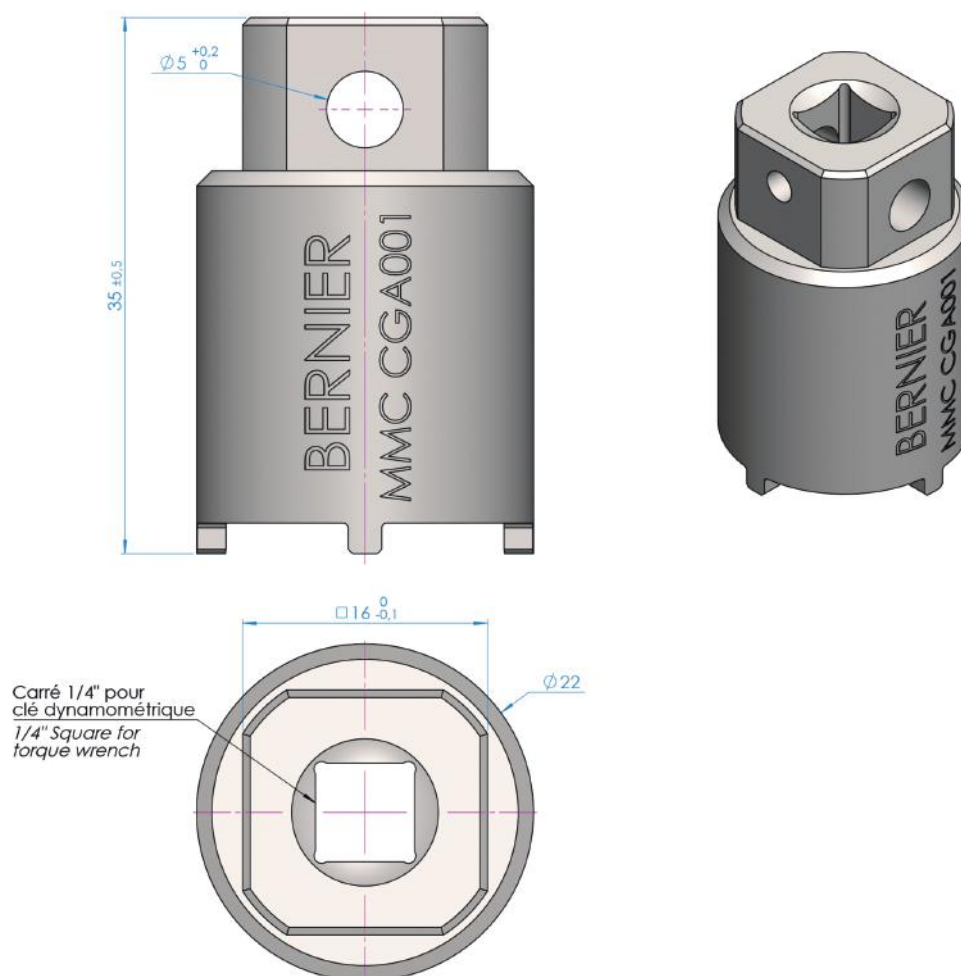
TOOLING

■ TIGHTENING KEY FOR MMC NUT

Part number: MMC CGA001

Material : Nickel plated hardened steel

Tightening torque with stainless steel nut : 9 N.m max



■ KEY FOR THE TIGHTENING OF THE BACKSHELL RING

Part number: RMMC CGA02





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Dimensions in mm.