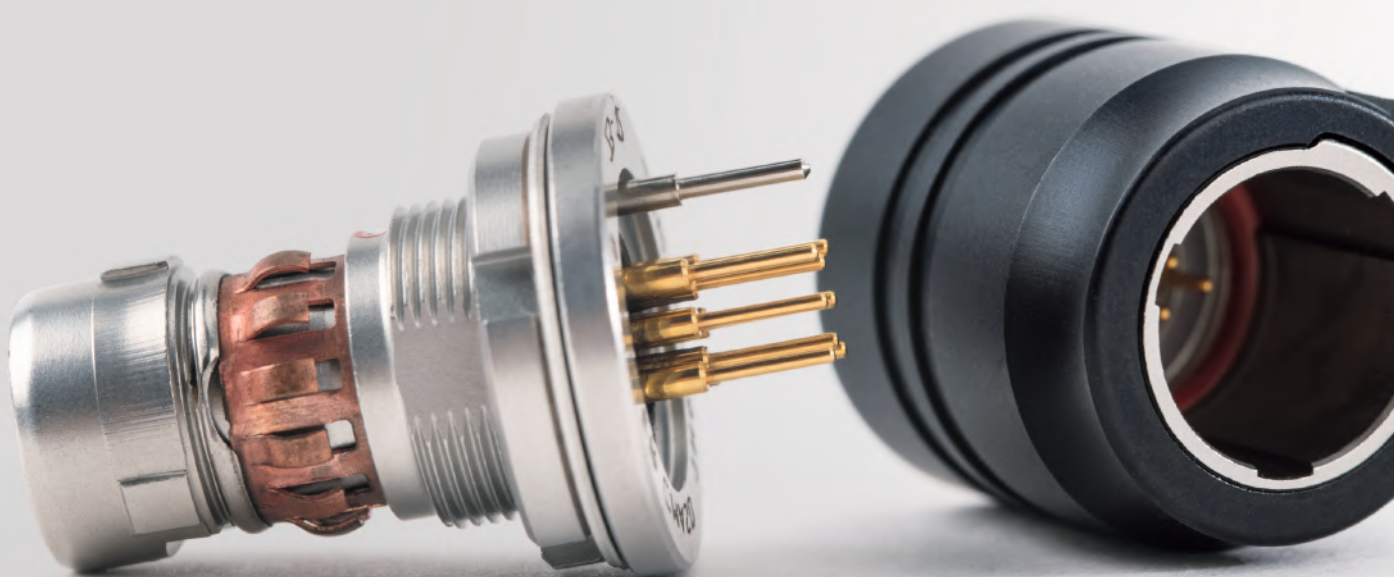


CMASD

**PUSH-PULL
CONNECTORS**

08 AND 19 CONTACTS



ERGONOMICS | STAINLESS STEEL | EMI RFI PROTECTION | MULTI-CONTACTS | WATERTIGHT



BERNIER

TECHNICAL DATA / CMASD

■ CLIMATIC AND MECHANICAL CHARACTERISTICS

	CMASD
Unlocking system	Push-Pull
Operating temperature Range	-55°C à +125°C
Endurance (matted / unmatted)	5 000 operations
Sealing performance	IP68 (connected & disconnected)
Corrosion resistance "Salt fog"	Stainless steel: 96 hours Navy steel: 250 hours Navy Bronze: 500 hours
Fluids resistance	Oils and hydrocarbons

■ ELECTRICAL CHARACTERISTICS

	08 contacts*	19 contacts
Working voltage	60 V _{max}	28 V _{max}
Current rating per contact	2 A _{max}	1 A
Gauge (AWG)	26	28
Contacts type	Solder cup / For PCB	
Contact resistance	≤ 10 mOhms	≤ 20 mOhms
Insulation resistance	>1000 MOhms under 500 V _{DC}	>1000 MOhms at 100 V _{DC}
Dielectric	500 V _{eff} à 50 Hz	
EMI RFI	Yes	

* CMASD 8 contacts compatible with 10G Ethernet. BERNIER CONNECT has tested 10G Ethernet high-speed protocols. Latest-generation USB4 and HDMI2.1 protocols can also be tested on request.

■ MATERIAL AND PLATING



	Material	Plating
Connector shell	Standard: Stainless steel Options: Navy steel / Navy bronze	Sandblasting or Black Chrome
Insulator	PBT	-
Contacts	Copper alloy	Gold over nickel
Ground ring	Beryllium Copper	-
Backshell shell	Aluminum alloy	Black chrome or black anodizing

CONNECTORS

TYPE OF BOXES	Weight (Max)	
	08 contacts	19 contacts
Plug Push-Pull (CMASD 5)	10 g	11 g
Extension (CMASD 1)	6 g	-
Receptacle (CMASD 7)	8 g	9 g

Stainless steel Version

BACKSHELL

TYPE OF BACKSHELLS	Weight (Max)
Straight backshell (CMASD RA89)	2,5 g
Straight backshell with knurling (CMASD RA88-xx)	6 g
Straight backshell raccourci with knurling (CMASD RA88-64 SP1)	6 g
elbow backshell à 90° with knurling (CMASD RA91-35)	16 g

CAPS

CONNECTORS TYPE	TYPE OF CAPS	Weight (Max)
For plug (type 5)	Thermo-plastic (CMASD BS06MC)	3 g
For receptacle (type 7) and extension (type 1)	Elastomer (CMASD BS94MC)	3 g

For other types of caps contact us

KEYWAYS / CMASD



FRONT VIEW



Receptacle

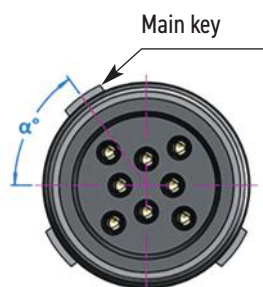
Plug

The keyways depends on the main key position. Positions of the 2 small keys, contacts and flats of the receptacle remain the same.

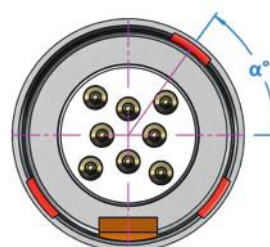
		Keyways				
		N	W	X	Y	Z
Angle α	08 contacts	90°	124°	54°	144°	36°
	19 contacts	118°	152°	82°	172°	64°

■ RECEPTACLE - EXTENSION

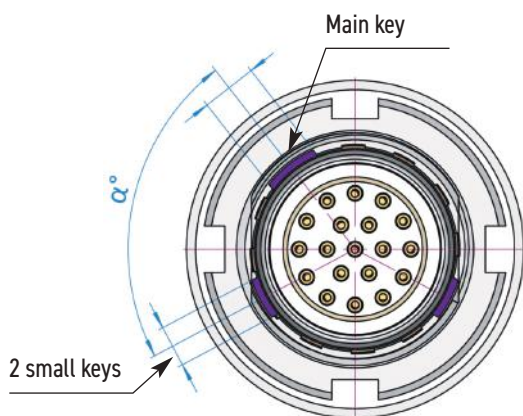
■ PLUG



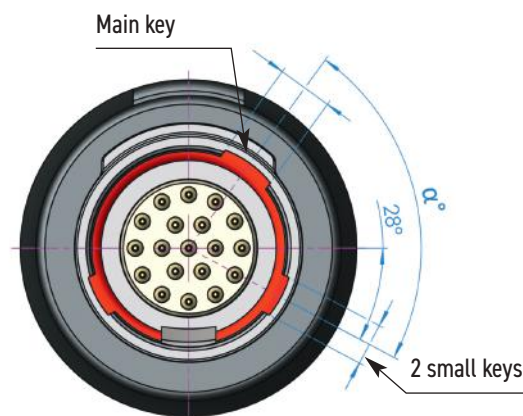
08 contacts



08 contacts



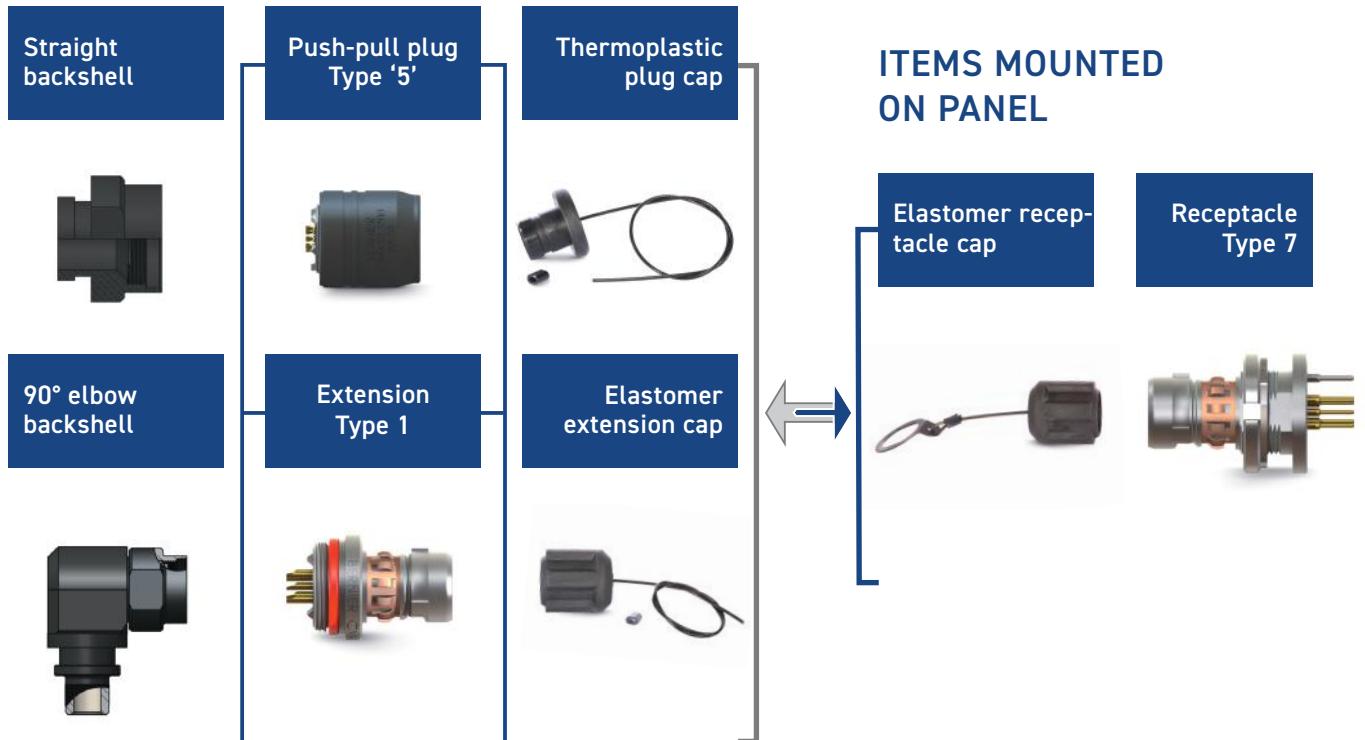
19 contacts



19 contacts

SYNOPTIC / CMASD

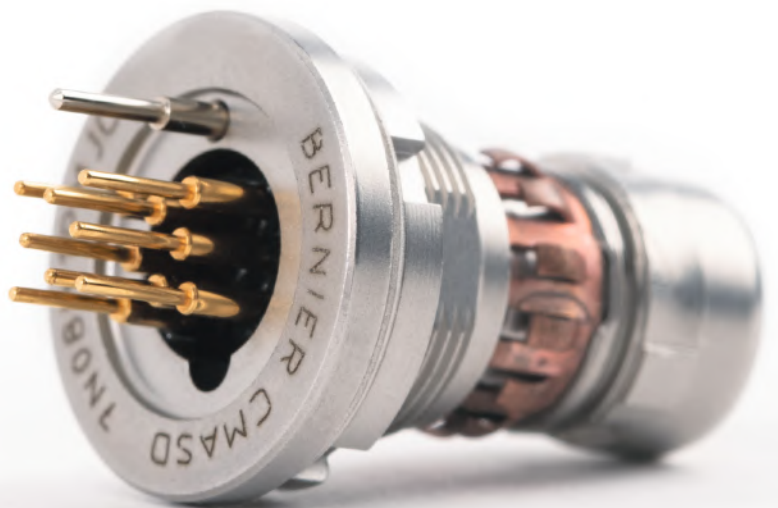
■ ITEMS MOUNTED ON CABLE



Attention: a backshell (necessary for cable assembling) must be ordered at the same time than a connector.

COMPATIBILITY / CMASD

Attention: compatible connectors must have the same number of contacts and the same keyway to be able to connect to each other.



PLUGS (TYPE 5) / CMASD

CMASD

PART NUMBERS: **CMASD 5 X XX XX**

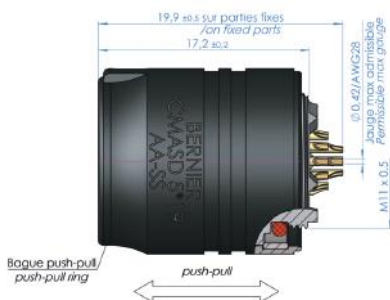
Description	Code
Series	CMASD
Aspect: 'Nothing mentioned': sandblasted Black version (by default for type 5)	
Locking: 'Nothing mentioned': Push-pull version	
Type of connector: Plug	
Keyway	5
Number of contacts	N, W, X, Y, Z
Contact:	08, 19
Material: 'Nothing mentioned': stainless steel Marine stainless steel (250 hours salt fog) SM Marine bronze (500 hours salt fog) BM	

■ PLUG WITH SOLDER CUP CONTACTS



CMASD 5 x 08 xx

Push-pull version CMASD 5 x xx xx		
Part numbers	Number of contacts	Taille
CMASD 5 x 08 xx	08	AWG 26
CMASD 5 x 19 xx	19	AWG 28



CMASD 5 x 19 xx



EXTENSIONS (TYPE 1) / CMASD

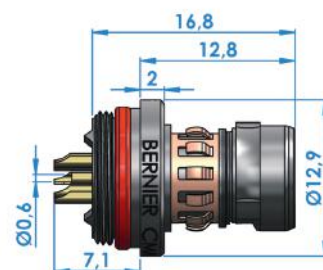
PART NUMBERS: **CMASD X 1 X XX XX**

CMASD

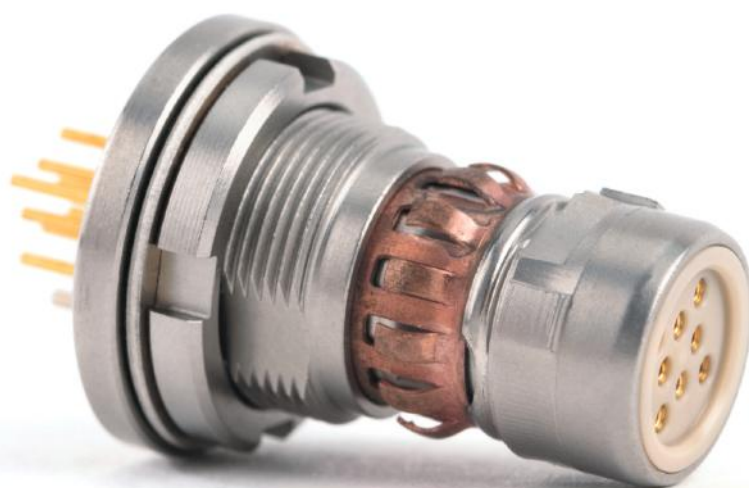
Description	Code
Series	CMASD
Aspect : 'Nothing mentioned': sandblasted Black version	B
Type of connector: Extension	1
Keyway	N, W, X, Y, Z
Number of contacts	08, 19
Contact: 'Nothing mentioned': Solder cup	
Material: 'Nothing mentioned': stainless steel Marine stainless steel (250 hours salt fog) Marine bronze (500 hours salt fog)	SM BM

■ EXTENSION WITH SOLDER CUP CONTACTS

CMASD x 1 x xx xx		
Part numbers	Number of contacts	Size
CMASD x 1 x 08 xx	08	AWG 26
CMASD x 1 x 19 xx	19	AWG 28



CMASD x 1 x 08 xx

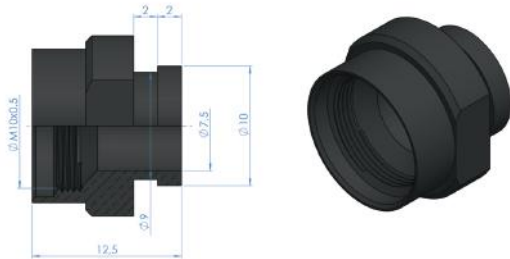


BACKSHELLS / CMASD

STRAIGHT BACKSHELL

Requiring assembly with rear overmolding and with/without heat shrink sleeve (not supplied). It can mate on all plugs, cable extensions and panel trough BERNIER CMASD line.

CMASD RA89

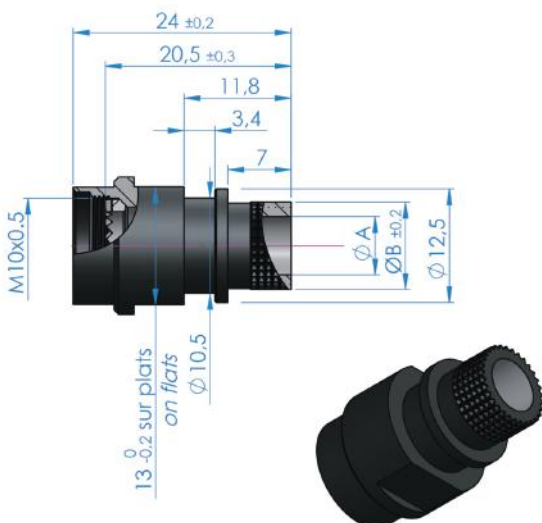


More size available, contact us.

■ SHORT STRAIGHT BACKSHELL

1 for rear overmolding or heat shrink sleeve (not supplied). It can mate on all plugs, cable extensions and panel troughs BERNIER CMASD line.

CMASD RA88-64 SP1



STRAIGHT BACKSHELL ON KNURLING

Requiring assembly with metallic band and heat shrink sleeve (not supplied). It can mate on all plugs, cable extensions and panel troughs BERNIER CMASD line.



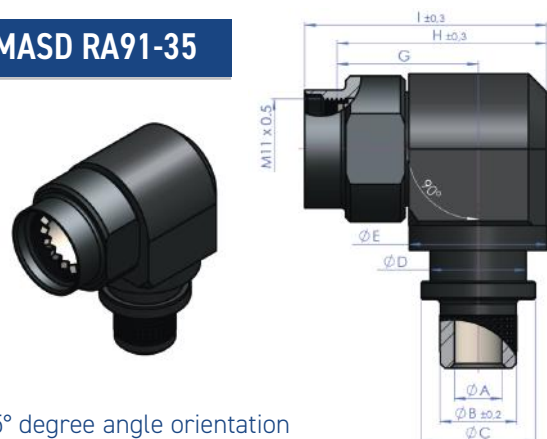
CMASD RA88-xx

Part numbers	ØA	ØB
CMASD RA88-52	5,2	8,5
CMASD RA88-64	6,4	9,6

■ ELBOW BACKSHELL 90° ON KNURLING

Requiring assembly with metallic band and heat shrink sleeve or overmolding (not supplied). It can mate all type 5 plugs and cable extensions type 1&3 BERNIER CMASD line.

CMASD RA91-35



22,5° degree angle orientation
when tightening on connector

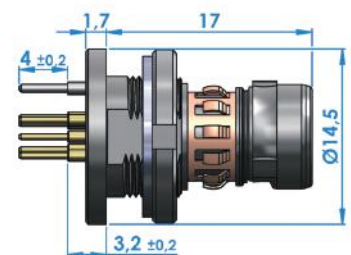
RECEPTACLES (TYPE 7) / CMASD

PART NUMBERS: **CMASD X 7 X XX H1 XXXX XX XX**

Description	Code
Series	CMASD
Aspect: 'Nothing mentioned': sandblasted Black version	B
Type of connector: Receptacle	7
Keyway	N, W, X, Y, Z
Number of contacts	08, 19
Contact: no indication : solder cup For PCB	H1
Ground pin: 1 ground pin 4 ground pin	PM PM4S
Panel oring: 'Nothing mentioned': Fluorosilicon Oring Fluorosilicon charged with Ni/Graph Oring Fluorosilicon charged Silver/Al Oring	JC JC1
Material: 'Nothing mentioned': stainless steel Marine stainless steel (250 hours salt fog) Marine bronze (500 hours salt fog)	SM BM

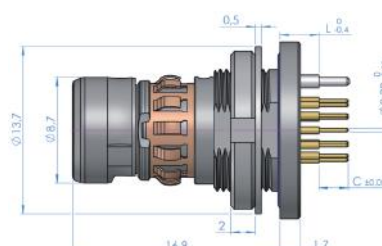
■ RECEPTACLE WITH CONTACTS FOR PCB

Receptacle (type 7) CMASD x 7 x xx H1 xxxx xx xx			
Part numbers	Types of contacts	L	C
CMASD x 7 x 08 H1 xxxx xx xx	H1	3,2	4
CMASD x 7 x 19 H1 xxxx xx xx	H1	16,9	2,4



CMASD x 7 x 08 H1 xxxx xx xx

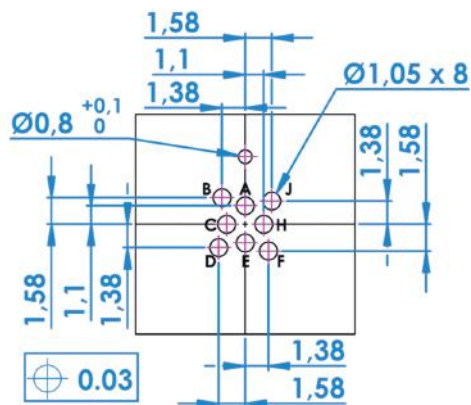
CMASD x 7 x 19 H1 xxxx xx xx



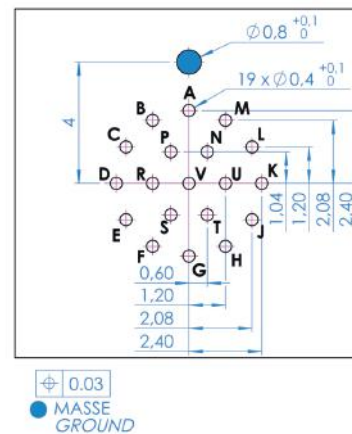
RECEPTACLES (TYPE 7) / CMASD

■ PCB HOLING

Welding side, through pins



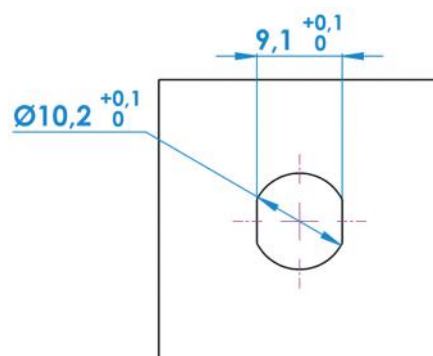
08 contacts



19 contacts

■ PANEL CUT

Front view side — Maximum panel thickness for CMASD receptacles: 3.5mm



CAPS WITH MICROCABLE / CMASD

■ FOR PLUGS CMASD TYPE 5

Cap for CMA plug type 5 with ferule. It is designed with system of locking and mates on all males connectors of the BERNIER CMASD line for version N,W, X, Y, Z and T.

	Thermoplastic
With ferule*	CMASD BS06MC-200ST

* With ferule and no plastic clamp



CMASD BS06MC-200ST

■ FOR RECEPTACLES CMASD TYPE 7

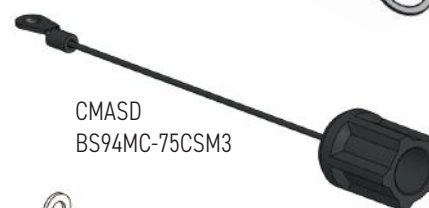
for all keyways and all numbers of contacts version.

	Elastomer
With metallic ring	CMASD BS94MC-50B
With ferule*	CMASD BS94MC-200ST
With terminal for screw m3	CMASD BS94MC-75CSM3
With terminal 90° elbow for screw m3	CMASD BS94MC-75CSM390

* With ferule and no plastic clamp



CMASD BS94MC-50B



CMASD
BS94MC-75CSM3



CMASD
BS94MC-75CSM390

■ FOR EXTENSION CMASD TYPE 1

for all keyways and all numbers of contacts version.

	Elastomer
Avec ferule*	CMASD BS94MC-200ST

* With ferule and no plastic clamp

MATERIALS AND FINISH

Shell	- Plugs caps : Thermo-plastic - Receptacle and extension caps : elastomer
Microcable	Stainless steel with black jacket
Ferule	Aluminum alloy with black plating
Ring terminal	CMASD BS94MC-50B: stainless steel CMASD BS94MC-75CSM3: copper alloy with black plating CMASD BS94MC-75CSM390: tinned copper alloy

CLIMATIC AND MECHANICAL SPECIFICATIONS

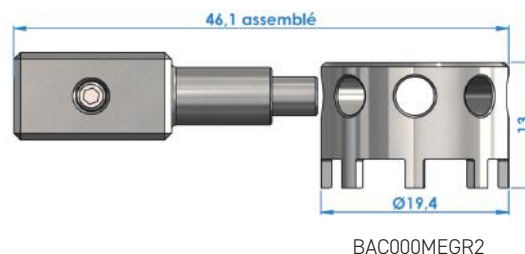
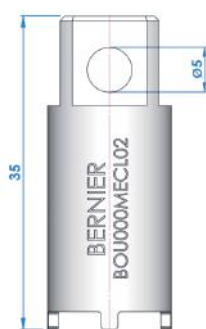
Temperature range	-55°C +125°C
Tear off limit force for	> 120N
Protection rating	IP68



TOOLS

■ TIGHTENING TOOLS

Tightening tools for:		Part numbers
CMA	for receptacles type 7	B703
CMA	for receptacle type 2	97003
CMA	for panel plugs types 11, 17 and 19	90006
CMA	for panel plugs type 18	BAC000MEGR2
CMASD	for receptacle type 3, 7 et R7	BOU000MECL02
CMALD	for receptacle type 7	10063



■ TIGHTENING TORQUE

Connector material	Torque For receptacle types 3, 7 and R7	Torque for backshells
Stainless steel	9 N.m	6 N.m
Navy bronze	11 N.m	6,1 N.m
Navy stainless steel	9 N.m	6 N.m

TOOLS

■ MECHANICAL COUNTER PART

Description	Part numbers
Antirotation plug to tighten the backshell on extension with xx contacts	BOUExxMENA01 (xx: number of contacts)
Antirotation receptacle to tighten the backshell on plug with xx contacts	BOUFxxMENA01 (xx: number of contacts)



BOUE14MENA01



BOUF14MENA01

■ ELECTRICAL COUNTER PART

Description	Part numbers
Panel plug to test all keyways receptacle and extension	CMA 12TxxYA (xx: number of contacts)
Receptacle to test all keyways plug	CMA 7TxxY1 (xx: number of contacts)



CMA12T14YA



CMA 7T14Y1

Available with solder cup contacts

TOOLS

■ TOOLS FOR CAP INSTALLATION

Description	Part numbers
Tool to crimp the ferule on microcable	BOU000MESE01
Tool to crimp the ferule on the nylon cord	B705



BOU000MESE01



B705

TOOLS

■ TOOLS FOR THE BACKSHELL TIGHTENING

Description	Part numbers
Tool to crimp the metallic clamp width 6.10mm	BOU000MESE02
Tool to crimp the metallic clamp width 3.17mm	BOU000MESE03
Crimping jaws for CMA RAI-XX backshell	B458
Pneumatic tool for the crimping jaws B458	RH50
Tightening tool for CMA RA02-XX backshell	B704



BOU000MESE02



B458



RH50



B704



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