



CMALD

PUSH-PULL
CONNECTORS

36 CONTACTS

CMALD

Toughness and Ergonomics
combined with a
high contact density
configuration!

ERGONOMICS | STAINLESS STEEL | EMI RFI PROTECTION | MULTICONTACTS | WATERTIGHT



BERNIER

TECHNICAL DATA / CMALD

■ CLIMATIC AND MECHANICAL CHARACTERISTICS

	CMALD
Unlocking system	Push-Pull
Operating temperature Range	-55°C à +125°C
Endurance (connect disconnect)	5 000 operations
Sealing performance	IP68 (connected and disconnected)
Corrosion resistance Salt fog :	Stainless steel: 96 hours Navy stainless steel: 250 hours Navy bronze: 500 hours
Fluids resistance	Oils and hydrocarbons

■ ELECTRICAL CHARACTERISTICS

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

■ MATERIAL AND PLATING

	Material	Plating
Connector shell	Stainless steel	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



WEIGHTS / CMALD

CONNECTORS

TYPE OF SHELL	Weight (Max)
Plug Push-Pull (CMALD 5)	24,5 g
Extension (CMALD 1)	24,5 g
Receptacle (CMALD 7)	23,5 g

Stainless steel version.

BACKSHELL

TYPE OF BACKSHELLS	Weight (Max)
Straight backshell with knurling (CMALD R86-xx)	16 g

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KEYWAYS / CMALD



Receptacle

FRONT VIEW



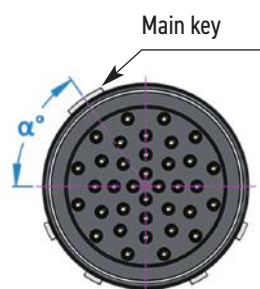
Plug

The keyways depend on the main key position. Positions of the 4 small keys, contacts and flats of the receptacle remain the same.

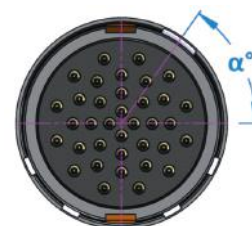
		Keyways				
		N	W	X	Y	Z
Angle α	36 contacts	55°	40°	25°	135°	155°

RECEPTACLE - EXTENSION

PLUG



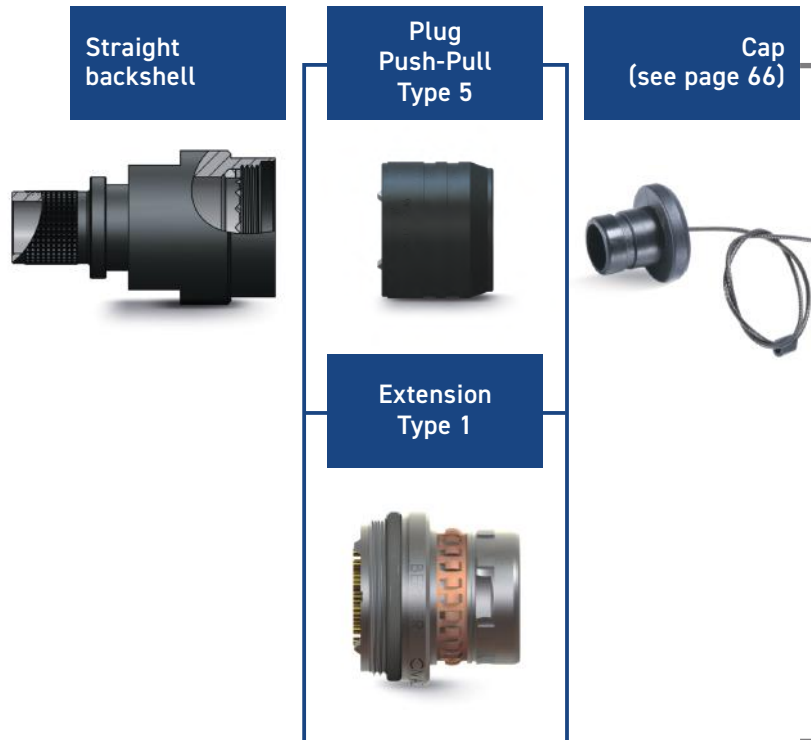
36 contacts



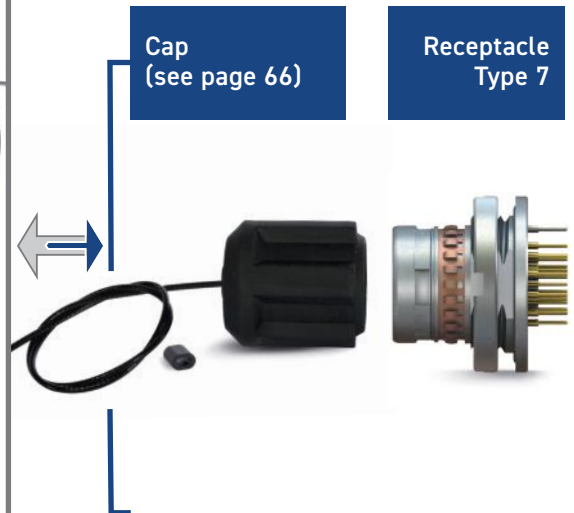
36 contacts

SYNOPTIC / CMALD

■ ITEMS MOUNTED ON CABLE



■ ITEMS MOUNTED ON PANEL



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

COMPATIBILITY / CMALD

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



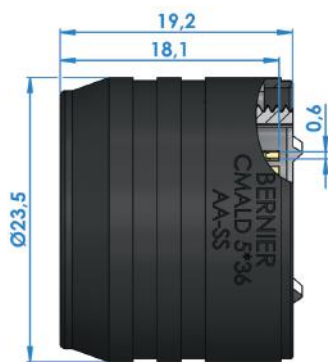
PLUGS (TYPE 5) / CMALD

PART NUMBERS: CMALD 5 X 36 XX

CMALD

Description	Code
Series	CMALD
Aspect : 'Nothing mentioned': sandblasted Black version (by default for type 5)	
Locking: Nothing mentioned': Push-Pull	
Connector type: Plug	5
Keyway	N, W, X, Y, Z
Number of contacts	36
Contact: 'Nothing mentioned': solder cup	
Material: 'Nothing mentioned': stainless steel Marine stainless steel (250 hours salt fog) SM Marine bronze (500 hours salt fog) BM	

■ PLUG WITH SOLDER CUP



Push-pull version CMALD 5 x 36 xx		
Part numbers	Number of contacts	AWG
CMALD 5 x 36 xx	36	AWG 26

EXTENSION (TYPE 1) / CMALD

CMALD

PART NUMBERS: **CMALD X 1 X 36 XX**

Description	Code
Series	CMALD
Aspect: 'Nothing mentioned': sandblasted Black version	B
Connecteur type: Extension	1
Keyways	N, W, X, Y, Z
Contact number	36
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

CMALD x 1 x 36 xx		
Part numbers	Number of contacts	AWG
CMALD x 1 x 36 xx	36	AWG 26



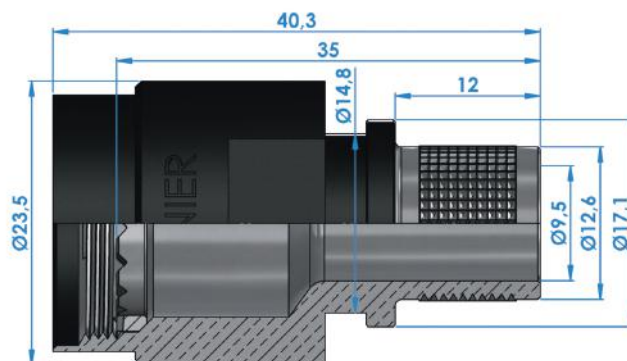
BACKSHELL / CMALD

■ STRAIGHT BACKSHELL WITH KNURLING

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

CMALD RA86-xx

For other size, contact us.



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RECEPTACLES (TYPE 7) / CMALD

PART NUMBERS: **CMALD X 7 X 36 H1 XXXX XX XX**

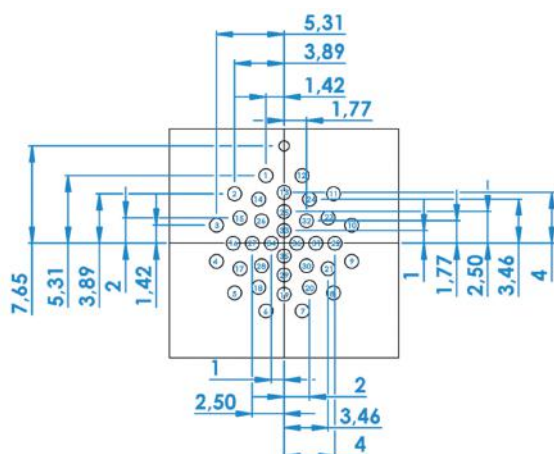
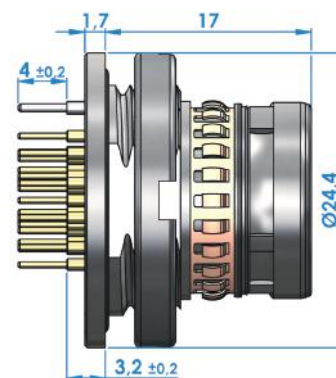
Description	Code
Series	CMALD
Aspect : 'Nothing mentioned': sandblasted Black version	B
Connector type: Receptacle	7
Keyways	N, W, X, Y, Z
Contact number	36
Contact: Nothing mentioned: Solder cup for PCB	H1
Ground pin: 1 ground pin 4 ground pins	PM PM4S
Panel oring: 'Nothing mentioned': fluorosilicon oring Fluorosilicon charged Ni/Graph Oring Fluorosilicon charged Ag/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 FOR PCB

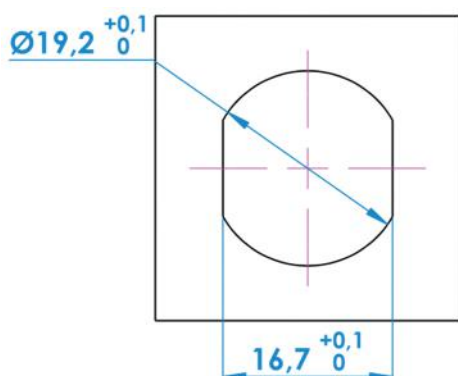
Receptacle (type 7) CMALD x 7 x 36 H1 xxxx xx xx

Part numbers	Types of contacts	L	C
CMALD x 7 x 36 H1 xxxx xx xx	H1	3,2	4



■ PCB HOLING

welding side, through pins



■ PANEL CUT

CMALD TYPE 7

Front view side
Maximum panel thickness
for CMALD receptacles: 2.8mm

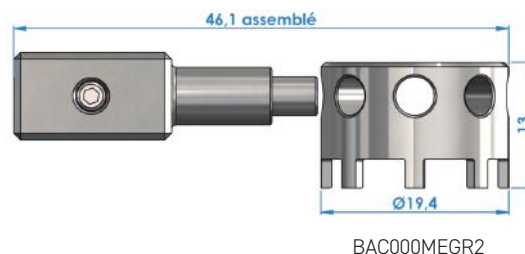
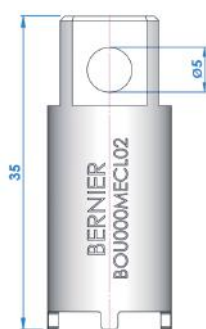
PART NUMBERS: CMALD BL XXX MC XXX XXX

Description	Code
Series	CMALD
Product designation	BL
Type of cap:	
For plugs type 5	
Thermoplastic	6
Black metal	65
For receptacles types 3,6 et 7	
Elastomer and metallic ring by default	86
Elastomer Crimped eyelet for M3 screw	98
Elastomer with 90° crimped eyelet for M3 screw	81
Elastomer with eyelet for M3 screw	91
Elastomer with specific eyelet for 3 caps	84
Metallic caps	100
Type of cord:	
Stainless steel with black jacket	MC
Length of cord:	
For plugs type 5	
200 mm	200
For receptacles types 3,6 et 7	
35 mm	35
50 mm *	50
Terminations :	
For plugs type 5	
Plastic clamp "Tyrap" by default	
Ferule	ST
For receptacles types 3,6 et 7	
Nothing	
30° flat metal flange	30
45° flat metal flange	45
* With microcable length of 50 mm, 315° flat metal flange	315

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



BERNIER

4, avenue Concordet
91240 Saint-Michel-sur-Orge
France
Tél. +33 1 60 84 21 40