



55116

55116 Serie

Bayonet Connector



... The Crypto and
Audio communication standard !

Catalog



◆ Description

55116 serie is a standard in Tactical and Radiocommunication systems. Circular, the connectors are equipped with 5 and 6 contacts and bayonet mate. These connectors are designed for low rating signals. They are also appreciated on crypto, sensors and measurement devices.

The 55116 connectors are following the MIL-C-55116 norm.

◆ Applications

55116



Radios



Accessories



Intercoms



Crypted data

Bayonet

Ergonomics

Self cleaning contacts

StainlessSteel

Standard

Watertight



Optronic devices



Weapon systems



Rugged computers



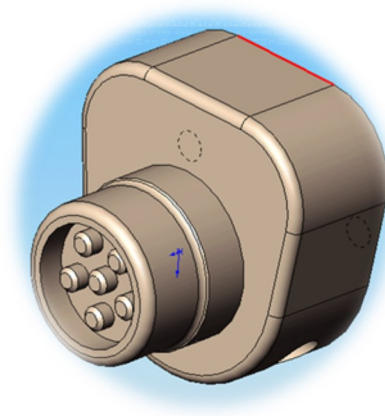
Tactical equipments

◆ The Right solution for your projects

55116 connectors are appreciated for their flexibility to fit customer specifications.

Our Design team is able to propose versions answering to your needs. Reinforcements can be applied in case of use in harder climatic, ergonomic and electromagnetic conditions.

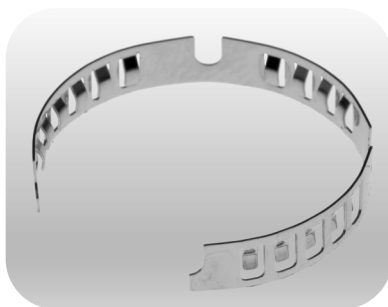
Caps and backshells can also be improved to bring a better ergonomics on your configuration.



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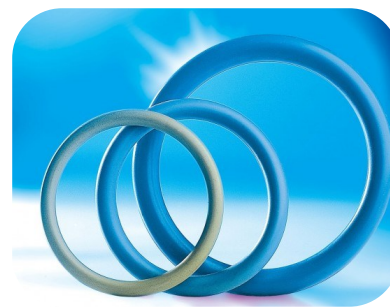
◆ EMC reinforcements

Options are available in order to reinforce the EMC specifications.



Ground ring « 360° »

55116 plug can be equipped with a ground ring giving a high EMC level. This function developed by Bernier brings a better continuity between the connectors shells and a protection on 360°



Conductive O Rings

The receptacle nitrile O-ring can be switched to a conductive version to establish a better conductivity between the connector and the panel.

◆ Climatic and mechanical characteristics

	55116 Serie
Unlocking system	Bayonet
Operating temperature range	-55°C to +85°C
Endurance	3 000 Operations
Sealing performance	IP68 (connected and disconnected)
Corrosion resistance	Salt fog : 96 hours (stainless steel)
Air pressure	0.17 bar
Fluids resistance	Oils and hydrocarbones

◆ Electrical characteristics

	55116 serie (05 and 06 contacts)
Working voltage	60 V _{max}
Current rating per contact	0.5 A _{max}
Gauge (AWG)	20
Contact type	Solder cup / For PCB
Contact resistance	≤ 50 mOhms at 25°C
Insulation resistance	≥ 5000 MOhms
Dielectric	500 V _{ac} RMS
Insulation of insulator	5000 Mohms under 500 V _{cc}

◆ Material and plating

	Material	Plating
Connector shell	Stainless steel	Sandblasting or Black Chrome
Insulator	Thermosetting	-
Contacts	Copper alloy	Gold over nickel
Backshell shell	Aluminium	Sandblasting or Black Chrome or Olive green cadmium (non ROHS-REACH)



◆ Connectors

Shell type	Connector 5 contacts (Max)	Connector 6 cts (Max)
Receptacle	32 g	33 g
Plug with backshell	58 g	59 g
Extension with backshell	49 g	50 g

Standard material

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◆ Metallic caps

Type	Weight (Max)
Aluminium	10 g
Stainless steel	17 g

◆ Contact quality

Unique BERNIER contact technology allows excellent contact resistance

Maximal contact reliability

Quality of contact in time

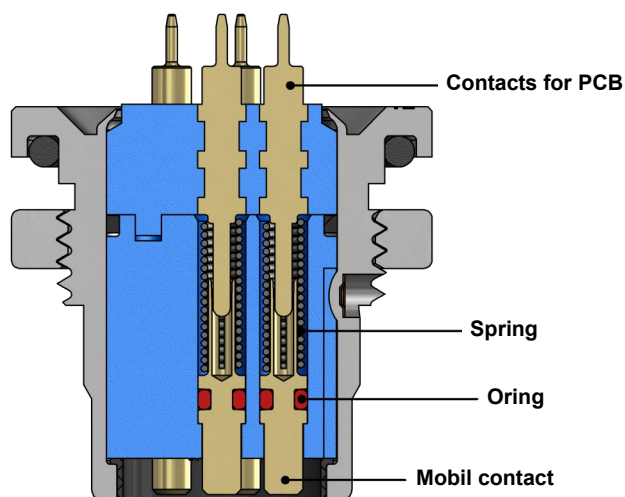
Resistance to harsh environments

Self cleaning contact technology

Good behavior in vibration and shock

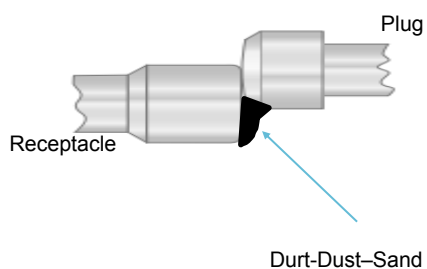
High frequencies signals endurance

U-183/FT-X

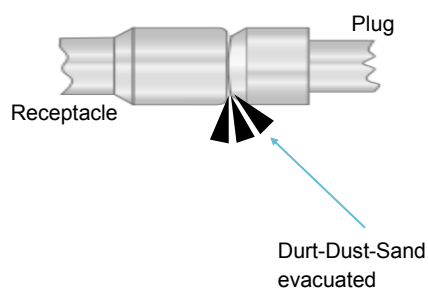


◆ Efficiency of the self cleaning contact function

Before locking



After locking



◆ Compatibility

	Extension 05 cts	Extension 06 cts	Receptacle 05 cts	Receptacle 06 cts
Plug 05 cts	•	•	•	•
Plug 06 cts	•	•	•	•
Metallic cap for receptacle and extension	•	•	•	•

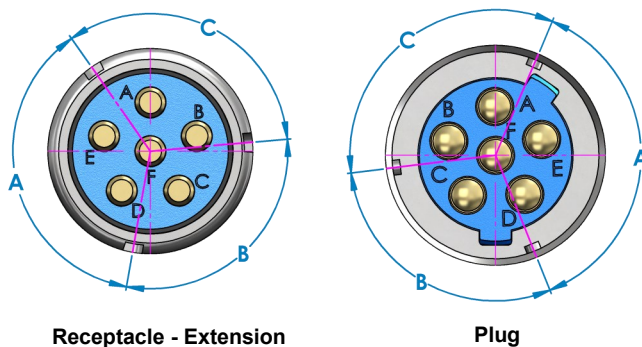
⚠ **Note : 06 contacts shell and 05 contacts shell can mate**

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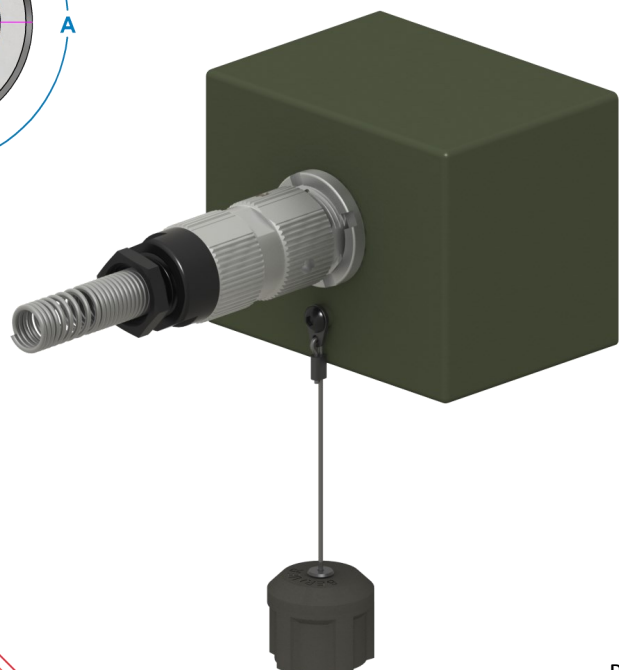
◆ Keyway



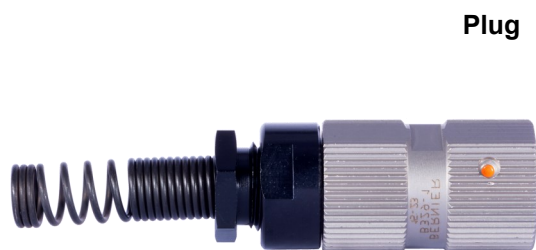
05 and 06 contacts Version Front view



Part number	A °	B °	C °
55116	135	105	120

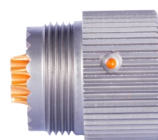


◆ **Items mounted on cable**



Plug

Plug for MIL-DTL-38999 backshell



Extension for MIL-DTL-38999 backshell



Extension



Thermoplastic plug cap



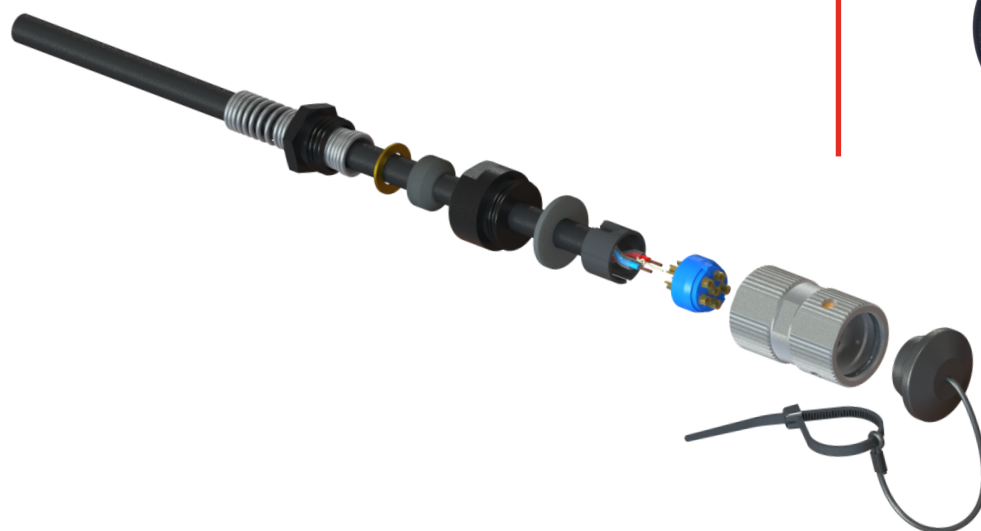
Bayonet metallic plug cap



Elastomer extension cap



Bayonet metallic extension cap



◆ Items mounted on panel

Elastomer receptacle cap



Bayonet metallic receptacle cap



Rear mounting

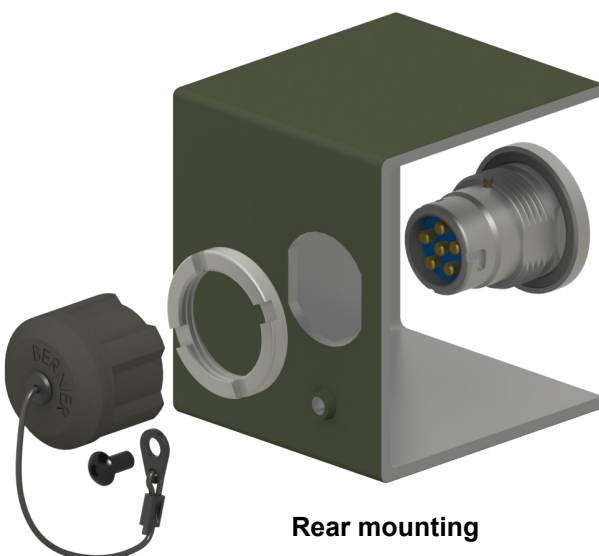
Receptacle



Panel through for MIL-DTL-38999 backshell



Front mounting



Rear mounting

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◆ Connectors

Description	Code	U	-	183/U	-	4
Connector U B	5 contacts 6 contacts	↑		↑		↑
Connector type : Extension Plug Receptacle Panel through	(See page Extension) (See page Plug) (See page Receptacle) (See page Panel through)			↑		
Plating : sandblasting Black chrome Olive green cadmium	1 4 7					↑

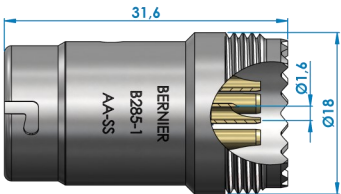
◆ Caps

Description	Code	B8	00	A	CD	7
Serie	B8	↑	↑	↑	↑	↑
Receptacle cap : Watertight with fixing ring Watertight with eyelet Watertight with duckle Without fixing	00 01 05 10		↑			
Plug cap : Watertight for plug	04					
Cap material : Aluminium alloy Stainless steel (Nothing mentioned)	A			↑		
Termination : Cutting small chain Black nylon cord Microcable	CD CN MC				↑	
Plating (Metal cap) : Sandblasting Black Chrome Olive green cadmium Colorless anodised on aluminium	1 4 7 8					↑

◆ Extension with thread for MIL-DTL-38999



Connector type	5 cts	6 cts
Sandblasting	U-185/U-1	B285-1
Black chrome	U-185/U-4	B285-4
Olive green cadmium	U-185/U-7	B285-7



Ex: B285-1

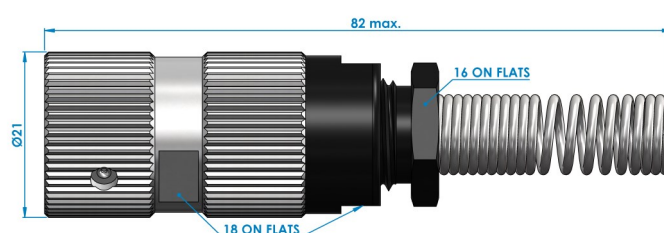
Mates with MIL-DTL-38999 serie 3 and 4 size 13 backshell

◆ Plug with straight backshell



Connector type	5 cts	6 cts
Sandblasting	U-229/U-1	B329-1
Black Chrome	U-229/U-4	B329-4
Olive green cadmium	U-229/U-7	B329-7

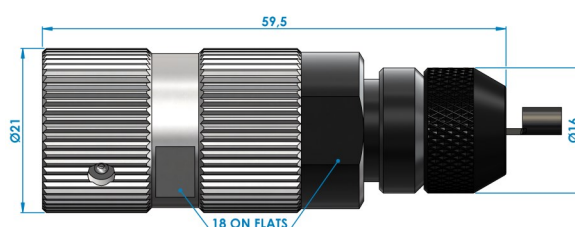
Ex: B329-1



◆ Plug with backshell for cable shield continuity and heat-shrink boot



Connector type	5 cts	6 cts
Sandblasting	B829-1	B817-1
Black chrome	B829-4	B817-4
Olive green cadmium	B829-7	B817-7

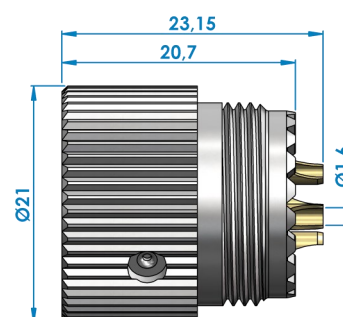


Ex: B817-1

◆ Plug with ground ring and thread for MIL-DTL-38999 backshell



Connector type	5 cts	6 cts
Sandblasting	-	B929-1
Black chrome	-	B929-4
Olive green cadmium	-	B929-7



Ex: B929-1

Mates with MIL-DTL-38999 serie 3 and 4 size 13 backshell

Panel plug and panel through

◆ Panel plug



Connector type	5 cts	6 cts
Sandblasting	U-629/U-1	U-729/U-1
Black chrome	U-629/U-4	U-729/U-4
Olive green cadmium	U-629/U-7	U-729/U-7

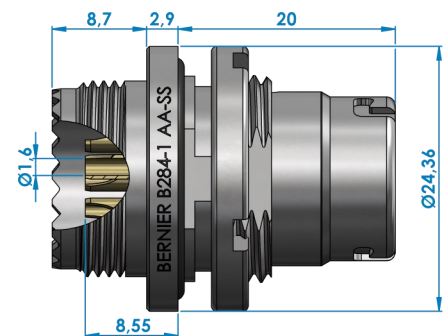
Ex: U-729/U-1

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◆ Panel through with thread for MIL-DTL-38999 backshell



Connector type	5 cts	6 cts
Sandblasting	U-184/U-1	B284-1
Black chrome	U-184/U-4	B284-4
Olive green cadmium	U-184/U-7	B284-7



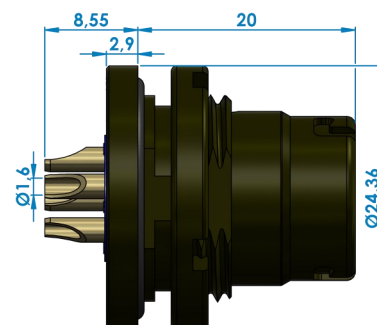
Ex: B284-1

Mates with MIL-DTL-38999 serie 3 and 4 size 13 backshell

◆ Receptacle with solder cup contacts (rear mounting)



Connector type	5 cts	6 cts
Sandblasting	U-183/U-1	B283-1
Black chrome	U-183/U-4	B283-4
Olive green cadmium	U-183/U-7	B283-7



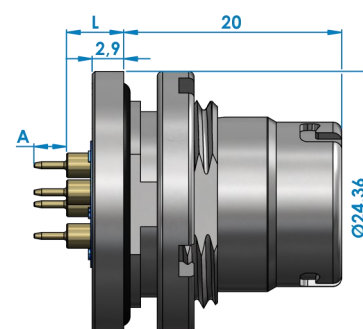
Ex: B283-7

◆ Receptacle with contacts for PCB (rear mounting)



Connector type	5 cts	6 cts
Sandblasting	U-183/FT-1	B283/FT-1
Black chrome	U-183/FT-4	B283/FT-4
Olive green cadmium	U-183/FT-7	B283/FT-7

Contact	L	A
FT	5.1	3
FTA	5.1	3.5
FTB	10	5

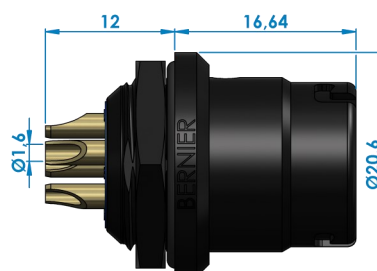


Ex: B283/FT-1

◆ Receptacle with solder cup contacts (front mounting)



Connector type	5 cts	6 cts
Sandblasting	U-183S-1	B683S-1
Black chrome	U-183S-4	B683S-4
Olive green cadmium	U-183S-7	B683S-4

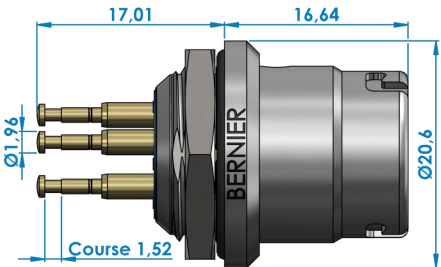


Ex: B683S-4

◆ Receptacle with spring contacts for PCB, contact by pressure (Front mounting)



Connector type	5 cts	6 cts
Sandblasting	B183PPC-1	B283PPC-1
Black chrome	B183PPC-4	B283PPC-4
Olive green cadmium	B183PPC-7	B283PPC-7

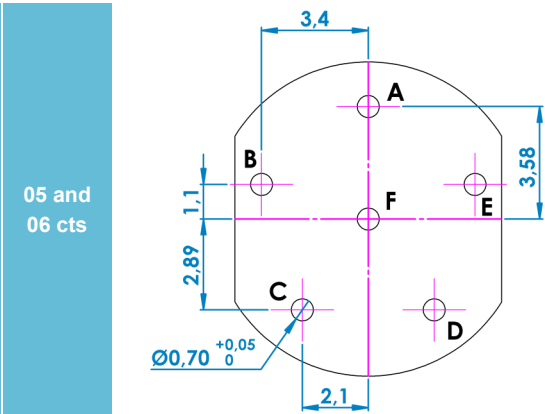


Ex: B183PPC-1

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◆ PCB holing

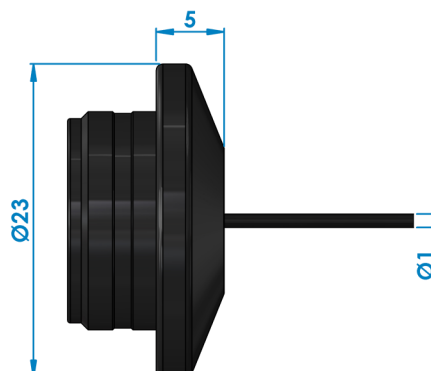
Welding side, through pins



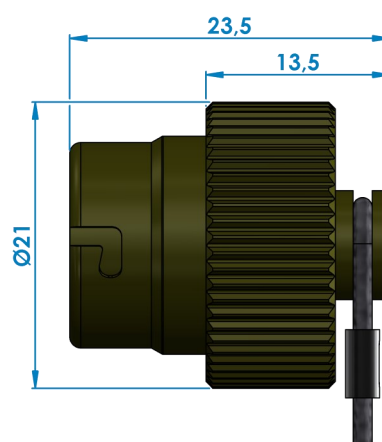
♦ Plug caps

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Thermo-
plastic plug
cap

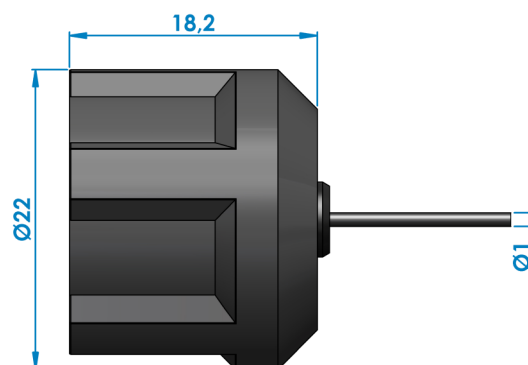


Bayonet
metallic plug
cap



♦ Receptacle and extension caps

Elastomer
receptacle
and
extension
cap



Bayonet
metallic re-
ceptacle and
extension
cap



♦ Fixing terminal

Some rings can receive several caps

Plastic clamp



Ferule



Metallic ring



Eyelet for M3 screw



Crimped eyelet for M3 screw



90° crimped eyelet for M3 screw



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Nylon cord is nearing obsolescence ! (Microcable is recommended for new projects)

◆ **Special connectors**

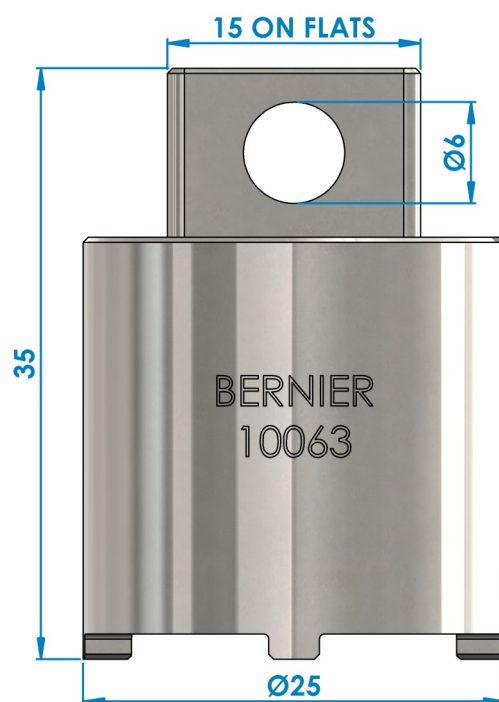
90° angled adaptor plug/extension



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◆ Tools

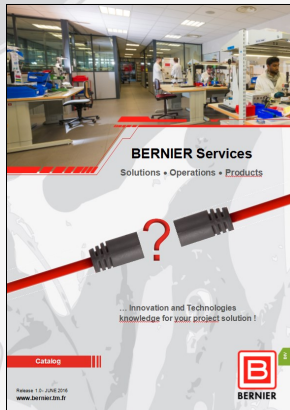
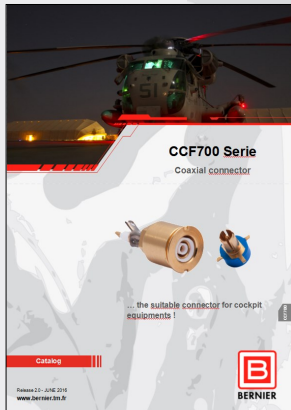
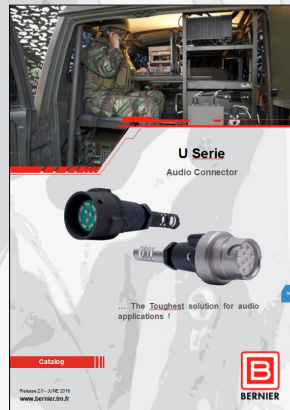
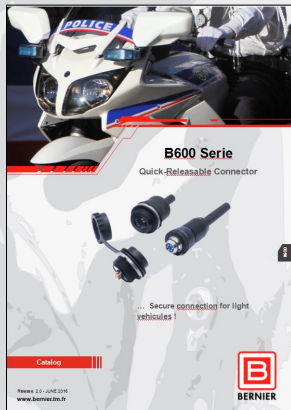
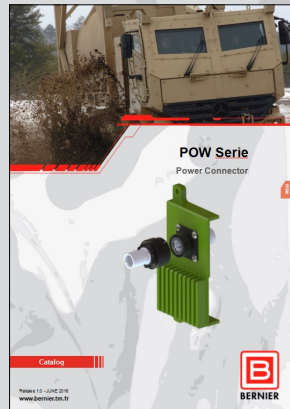
Tools	Part number
Tightening key for receptacle nut	10063



55116

◆ Tightening torque

Material	Torque for type A receptacle nut	Torque for type B receptacle nut	Tightening torque for backshell
Stainless steel	14N.m	12 N.m	(Aluminium alloy) 6N.m



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Dimensions in mm

BERNIER Relais et Connecteurs 2 rue du Languedoc 91220 BRETIGNY SUR ORGE FRANCE
Tel : 33 (0)1 60 84 21 40 Fax : 33 (0)1 60 84 43 81 info@bernier.tm.fr

