



# BAYONET CONNECTORS FOR RAILWAY APPLICATIONS

# **Bayonet Connectors** with insert in Thermoplastic Resin









### **About Us**





Since 1952, Radiall Sa have been enabling the future through collaboration with our customers. The results are a range of innovative and award-winning products that customers trust for unrivaled repeatability and performance.

Radiall Sa are a global company with facilities around the world that specializes in manufacturing the highest quality interconnect components to support the most demanding applications.

At Radiall, you can rely on us to be the industry's global market leader.



VanSystem was a company founded in Lombardy - Italy, which has been operating since 1985 in the industrial market. Since 2015 VanSystem is a Radiall company.

Besides connectors with screw or bayonet coupling complying with the Mil-DTL-5015 standard, we designs and manufactures non-standard products for special applications.

One of our's strong points is an agile and dynamic organizational structure which enables direct and constant interaction with customers in order to meet all their requirements and build solid, long-term partnerships.

Our team's professionalism, skill and commitment are at your service to help you achieve the solution you are looking for.

Radiall Italia S.r.l. Quality System is qualified according to ISO 9001:2015 and ISO/TS 22163:2017







### **KVBS Connectors - Introduction**

### **Bayonet Connectors with insert in Thermoplastic Resin**



KVBS connector series derives from the RF CVBS one and it is based on Mil-DTL-5015 and VG95234 specs.

The most important advantage is the simpler and faster cable assembly.

Components materials have been chosen in order match railways vehicles requirements.

#### **Key characteristics**

- 3 ramps reverse bayonet
- Thermoplastic contact holder and insulator
- Contacts retained by a high elasticity clip
- Front grommet
- Rear side grommet supplied with holes closed by a flash of rubber and equipped with side gasket

#### **Advantages**

- Reliable mating even under vibrations, shock and sealing requirements
- Simpler and faster cable assembly
- More reliable contact retention inside the insulator
- When mated guarantee a better sealing and creepage distance between the contacts
- The connector can resist to axial pressure shock, the characteristics are mantained even when it is not fileld with all the contacts
- The size 16 contact cavity has a wider internal diameter able to accept flame retardant cableup to 2.5mm<sup>2</sup>

#### Material and plating \*

Shells	Alluminium alloy - can be protected against corrosion with the following plating process: Black epoxy varnish (not conductive) (RoHS compliance) CCF - Black passivation - conductive (RoHS compliance)
Insulators	Thermoplastic resin according to UL 94 V0, flame retardant according to EN 45545-2 HL3 R22/23 (Meets NF F 16-101/NF F 16-102 standards)
Grommet and Interfacial Seal	Flame retardant rubber
Contacts	Copper alloy - silver or gold plated

<sup>\*</sup> Different materials and platings can be used on application request.

#### **General characteristics**

Working temperature	-40°C ÷ +125°C (+ 100°C according NF F 61-030)
Insulation resistance	$>$ 5.000 M $\Omega$
IP protection degree	up to IP68 (waterproof to 10 meters - 12 hours)

#### Insulation according to NFF 61030 \*\*\*

Operating voltage Operating voltage		Test voltage	Creepage distance = Min insulation distance in air ***
500 Vdc	380 Vac RMS	3.250 Vac RMS	8 ÷ 12 mm. Min

<sup>\*\*\*</sup> Values are related to mated connectors





# Part number explanation P/N Sample: KVBS 303 030DAT 24-10SX M32 LC F7 G N101

ل	KVBS 303 030	DA T	24-10 S X M32 LC - F7 G N10
- Insulating material -			Thermoplastic resin
		KVBS	Bayonet Connector
KVBS	Series Code	KVBSG	Bayonet Connector with external insulated coating
		-	Aluminum
303	Shell Material	303	Stainless Steel 303
		316	Stainless Steel 316L
030	Shell Type	xx	With ramp/threaded or with nut
DA	Connector Class	xx	With backshell
		Т	With plastic caps
Т	Connector	FF	Receptacle connector with threaded holes (to specify for 00/02/05 shell only)
	Modification**	FP	Receptacle connector with through holes (to specify for 03 shell only)
		GG	Rubber covered nut (bayonet version only)
24-10	Insert Arrangement	хх-хх	Size - Arrangement
S	Contact Gender	S	Socket contacts
	Contact Gender	P	Pin contacts
		-	No rotation
X	Polarization Code**	W,X,Y,Z,Q	Rotation
	Backshell Conduits	-	Without internal thread
M32	size or internal thread	xx	Conduits size or internal thread
16	Contact Termination	-	Crimp contacts (pages 100/101)
LC	Contact Termination	LC	Less contacts
		-	Silver plating
ل -	Contact Plating	CD5	Gold plating
		F7	Black epoxy varnish (RoHS compliance)
		F12	Black Hard Deep Anodization (not conductive) high treatment thickness (RoHS compliance)
F7	Shell finishes	F16	CCF - Black passivation - conductive (RoHS compliance)
		F26	Black Hard Anodization (RoHS compliance)
		F30	colorless passivation for stainless steel (RoHS compliance)
		-	Without gasket
G	Panel Gasket	G	With waterproof panel gasket
		G3	With waterproof shielded panel gasket
N101	Modification Code**	Nxx	Contacts and hole plugs (Consult our sales office)
	Janneacion coac	Sxx	Customization (Consult our sales office)

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\*\* If required

# Part number explanation

# 030 Shell type

出	표	FS	Shell Type with ramp				
	•	• Shell 030 Rear mounting receptacle connector with thread to accept backshells					
-	-	- Shell 01	In-line receptacle able to accept rear accessories.				
	St	andard version	<ul> <li>On request</li> <li>FF = threaded holes</li> <li>FP = through holes</li> <li>FS = countersunk holes</li> </ul>				
6	_		Shell Type with coupling nut				
		Shell 06	Plug connector, for straight backshell				
	•	Shell 61	Plug connector, for straight backshell, coupling nut rubber covered (short version)				
		Shell 06GG	Plug connector, for straight backshell with rubber covered coupling nut				
•		Shell 96	Plug connector, provided with grounding finger - with straight backshell				
		Shell 96GG	Plug connector, provided with grounding finger - with straight backshell - with rubber covered coupling nut				
		Shell 08	Plug connector, with 90° elbow				
	•	Shell 81	Plug connector, with 90° elbow, coupling nut rubber covered (short version)				
		Shell 08GG	Plug connector, with 90° elbow with rubber covered coupling nut				
		Shell 98	Plug connector, with 90° elbow, with grounding finger				
		Shell 98GG	Plug connector, with 90° elbow, with grounding finger with rubber covered coupling nut				
	•	Shell 961	Plug connector, provided with grounding finger - with straight backshell, coupling nut rubber covered (short version)				

Plug connector, provided with grounding finger - with 90° elbow, coupling nut rubber covered (short version)

# DA

Avalaible

Shell 981

### **Connector Class - backshell**

1 Without O-ring and Grommet (non-watertight)

9 = with grounding finger 1 = rubber covered coupling nut, short version

- With waterproof O-ring
- **3** With waterproof O-ring and Grommet

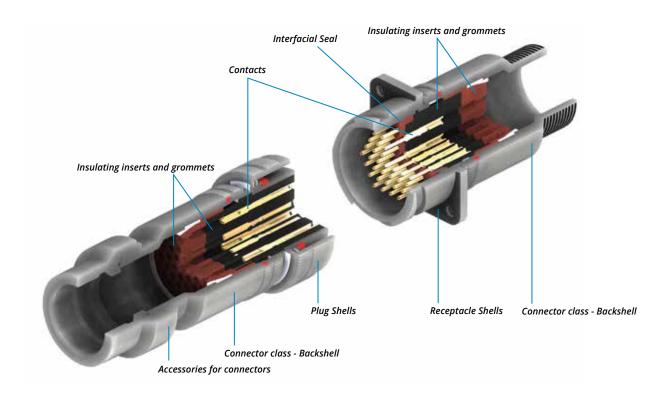
KVBS	KVBSG	0	2	3	Connector Class - backshell
	-	Α	DA	RA	Backshell having an external thread suitable for MS3057A or C type cable-clamps
	-	SA	SDA	SRA	Short Backshell having an external thread suitable for MS3057A or C type cable-clamps
			DAM	RAM	Provided with an internal Metric thread
•	-			R	Suitable to connect single wires (when strain relief is not necessary)
•	-		AST	ST	Backshell with internal cable retention system (on request ST1/ST2 with clamps for cable diameter reduction) with an external unef thread
•	-		ASTM	STM	Backshell with internal cable retention system (on request ST1/ST2 with clamps for cable diameter reduction) with an internal Metric thread
•	-		ASTFS	STFS	Backshell with internal cable retention system (on request ST1/ST2 with clamps for cable diameter reduction) with a special adapter for UNI4883 rubber conduits
•	-		DAFS	RAFS	Provided with a special adapter for UNI4883 rubber conduits

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### **General Characteristics**



#### **INSERTS**

VanSystem is able to offer connectors with 11 Arrangements manufactured in Thermoplastic material.

The connectors is supplied with inferfacial seal to guarantee fhe sealing of mating over the entire area of the Interface and around each contact.

#### **SHELLS**

Available in several versions suitable for all applications and manufactured in different materials and finishes:

- Aluminum alloy with different types of protection finishes according to RoHS directives.
- Stainless steel, brass nickel plated and other materials to be chosen according to the application
- Coupling nut in bayonet version

The bayonet connectors provide faster coupling and anti-vibration resistance.

In the KVBS serie the coupling system is composed of 3 bayonet ramps machined on the external side of the receptacle connector and 3 stainless steel studs mounted inside the plug connector's coupling nut.

#### **CONTACTS**

Available in crimp, machined copper alloys and finished with gold or silver platings.

All contacts are manufactured in order to guarantee optimum connection properties and to provide resistance to vibration and continuous mating and unmating cycles.



#### **KVBS** - General Characteristics





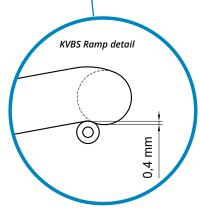
#### **BAYONET CONNECTORS PROTECTED BY A STAINLESS STEEL STUD**

This series, deriving from Mil-DTL-5015 and VG95234 specs, has become a popular standard among railway connection applications.

The coupling point at the end of the ramp is protected by a stainless steel roller able to increase the number of mating cycles.







#### Main characteristics:

- Fast and reliable coupling (coupling-nut rotation of 120° only and mating is audible, visible and tactile)
- Vibration and impact resistance
- Manufactured in several shell versions as panel connectors (with front or rear mounting) or plug connectors (with straight backshell or 90°)
- Accessories for all types of cables and shielding protection hoses are also available
- Crimp contacts are suitable for wires of many sections

#### **Advantages:**

- Faster coupling, continuous and reliable service in the harshest use conditions
- Wave washer installed under the plug connector coupling nut
- IP68 waterproof protection (when connectors are mated and harnessed by using the correct accessories)







### **Circular Connectors**

#### **International Standard Document Compliance**

- MIL-DTL-5015: Connectors, Electrical, Circular threaded, an type, general specification for
- SAE AS 39029: Contacts, Electrical Connectors, general specification for
- VG 95234: Electrical connectors with bayonet coupling pressure-water tight, up to 245A
- EN 50124-1: Railway applications Insulation coordination
- IEC 60077-1: Railway applications Electric equipment for rolling stock
- EN 45545-2: Railway applications Fire protection on railway vehicles
- NFPA 130 (ASTM E 162, ASTM E 662): Standard for Fixed Guideway Transit and Passenger Rail Systems
- UNI CEI 11170-3: Guidelines for railway vehicle protection for tramways and with guided rail
- NFF 16-102: Railway Rolling Stock Fire Behavior
- EN 50467: Railway applications Rolling stock Electrical connectors, requirements and test methods
- IEC 61373: Railway applications. Rolling stock equipment. Shock and vibration tests
- IEC 60529: Degrees of protection provided by enclosures (IP Code)
- European Directive 2011/65: RoHS complying

#### **Features and Benefits**

#### **Robust Connection**

- Fully protected connectors: no risk to damage the contacts thanks the robust shell
- Supplied with grounding finger, conductive plating and the proper rear accessory
- Suitable for polarizations to prevent un-correct coupling

#### Easy installation

- Fast and reliable coupling
- Backshell and accessories for fastening cable/conduit fixation

#### Suitable for harsh environments (adapted for outdoor use)

- Waterproof connection
- Dust proof
- Corrosion resistant

#### High level of performance

- Working temperature -40°C ÷ 125°C (according to the inserts material)
- EMI protection with grounding finger
- Power connection up to 73A

#### **APPLICATIONS**

- Railway
- Energy
- Naval
- Industrial







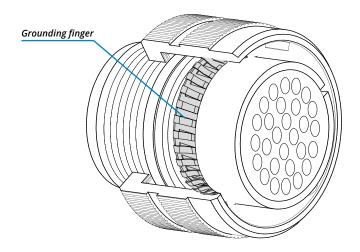




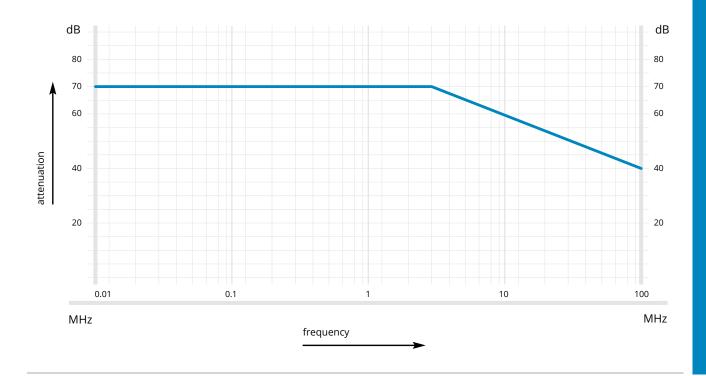
# **General Characteristics - Shells - Shielding characteristics**

Plug connectors with grounding finger (type 96 - 98 - 96GG - 98GG) when mated with receptacle connectors (type 030) and provided with rear accessories for shielded cables have shielding characteristics according to VG95234 specs.

F16 Shell Finishes is recommended for electrical conductivity from receptacle to plug.



#### VG95234 specs: Shielding effectiveness data over frequency range (with conductive shells)







### **General Characteristics - Shells - Material and Finish**



#### **Shells**

They are manufactured in aluminum alloy or stainless steel and can be protected against corrosion by the following finishes (Halogen-free):

- F7: Black epoxy varnish (not conductive) complies RoHS directives(\*)
- F12: Black Hard Deep Anodization (not conductive) complies RoHS directives(\*)
- F16: CCF-Black passivation (conductive) complies RoHS directives(\*)
- F26: Hard anodization (RoHS compliance)
- F30: Colorless passivation for stainless steel (for AISI 303 and AISI 304. Without passivation for AISI 316L)

(\*) Restriction of Hazardous Substances Directives of the European Parliamentn°2002/95/ECissued on 27 January 2003 Alternative materials and finishes are available to suit specific requirements.

Surface Treatment Code	F7	F12	F16	F26	F30
Shell-material		Alumir	nium alloy		Stainless Steel
Surface finish	epoxy- polyurethan	Hard Deep anodization	CCF cadmiun free	Hard anodization	Colorless
Type of surface	varnished	passivated	passivated	passivated	passivated
Surface colour	black	black	black	black	-
Rohs conformity	yes	yes	yes	yes	yes
Corrosion resistance	500 h	2000 h	500*** h	1000 h **	> 2000 h
Operat. Temperature			-40°C ÷ + 12	.5°C **	
Electrical conductivity	non-conductive	non-conductive	good	non-conductive	good
Shock and vibrations tests according EN 61373	Cat. 1 body mounted	Cat. 2 bogie mounted	Cat. 2 bogie mounted	Cat. 2 bogie mounted	Cat. 2 bogie mounted
IP protection degree (EN 60529)	IP54, IP67, IP68 (	waterproof to 10	meters - 12 hours)	when used with p	proper backshell or accessories

<sup>\*\*</sup> Consult our sales office

#### **Mechanical Characteristics**

Coupling mechanism	Reverse Bayonet Connector
Mating endurance (IEC 61300-2-2)	500 mating cycles minimum (for use up to 2000 mating cycles, consult our commercial office)
Shock and vibrations tests	Category 1 body mounted
(EN 61373)	Category 2 bogie mounted



<sup>\*\*\* 200</sup>h in case of components, panel and screws in stainless steel (galvanic corrosion)

### **General Characteristics - Rated Current and Rated Voltage**





The values mentioned below are valid for usage at 20°C ambient temperature. Let us remind you that:

- when temperatures rise, the conductivity of the contacts and therefore the value of the applicable current decreases
- at the operating current and 20°C ambient temperature the connection temperature increases anyway
- in consequence to all of the above, the current applicable to a given temperature and a determined contact size must be carefully considered

The material of the insert must be chosen to comply with both room temperature and the one produced by the electrical connection.

If in doubt we suggest you consult our Sales Office.

Contact size	Maximum current*	Rated current***	Maximum voltage drop**	Test current
16	22A	13A	49mV	13A
12	41A	23A	42mV	23A
8	73A	46A	26mV	46A

Rated current with one contact loaded in a contact arrangement.

#### INSULATING CHARACTERISTICS AND RATED VOLTAGE

The values of the following table:

- are valid for usage at sea level
- refer to a clean environment of application. The pollution due to metallic or other impurities has to be taken into consideration.
- concern contacts with standard termination, solder or crimping, with size suitable for AWG section wires matching the relevant contact size. It is therefore necessary to pay attention when using contacts with crimp termination bigger than the nominal AWG size.

Service code	Operating Voltage Vdc	Operating Voltage Vac RMS****	Test Voltage Vac RMS****
I (instruments)	250	200	1000
Α	700	500	2000
D	1250	900	2800
Е	1750	1250	3500
В	2450	1750	4500
С	4200	3000	7000

<sup>\*</sup> The connectors do not show any sign of breakdown when the voltage indicated in the table is applied for one minute between the two closest contacts and between the shell and the contact closest to the shell.

Caution : When nominal operating voltage exceeds 50V towards earth, the appropriate safety measures have to be adopted as described by CEI 23, IEC 309-1, BS 2618, VDE 0100 specs. The data shown on the above table are applicable only when the above mentioned safety rules are fulfilled.



Valid for ambient temperature at 20°C.

<sup>\*\*</sup> Test according to SAE AS39029 with silver plated wire.

\*\*\* Valid for ambient temperature at 80°C.

<sup>\*\*\*\*</sup> according MIL-DTL-5015 spec



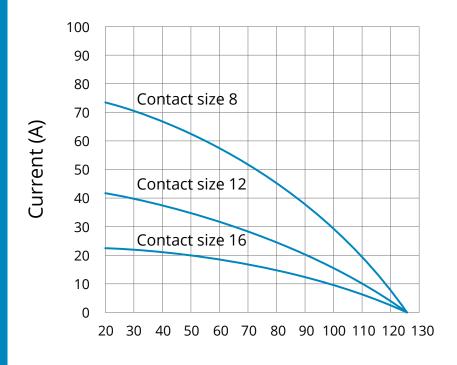
### **General Characteristics - Contacts - Electrical characteristics**

#### **RATED CURRENT**

Recommended current according to the temperature.

Rated current with one contact loaded in a contact arrangement.

Electrical design and production parameters of threaded or bayonet coupling connectors are derived from Mil-DTL-5015 and VG 95234 standards. All circular connectors are produced and tested in accordance of VG 95234 standards.



Temperature (°C)

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### **General Characteristics - Crimp Contacts**

They are machined in high conductivity copper alloy in order to guarantee optimum connection properties and to provide resistance to vibration and continuous mating and unmating cycles.

They are protected by a silver (standard production) or gold finish with varying plating thickness on request.

As for connector codes to be supplied with specific finish contacts please consult the section referring to the P/N explanations on page 4.

Contacts for particular applications, alternative termination types and with special finishes are available to suit specific requirements.

#### **Engagement and disengagement force between contacts**

Contact size	Engagement * in N. Max	Disengagement * in N. Max
16	5	0.56
12	7.5	0.83
8	15	1.39

<sup>\*</sup> Test according to SAE AS39029

**Contact Retention** 

16 contact size = 70 N minimum 12 contact size = 90 N minimum 8 contact size = 110 N minimum

#### **Crimp Rating**

Inserts Arrangement	Contact Resistance $m\Omega$ max.	Contact size	N° of Contacts	Rated Current* A	
J				Single Contact	<b>Grouped Contacts</b>
18-19	2.5	16	10	15	12
20-15	1.3	12	7	23	20
22-14	2.5	16	19	15	11.5
24-10	0.9	8	7	46	33
28-21	2.5	16	37	15	12
36-10	2.5	16	48	15	7.5
36A22	1.3	12	22	23	19
40A35	1.3	12	35	23	15.5
40A60	2.5	16	60	15	9
40A70	2.5	16	70	15	7.5

<sup>\*</sup> Acc. To NF F 61-030. Max heating allowed: 50°C Single Contact: loaded into insulator. - Grouped Contacts: fully populated insulator, all contacts loaded.





# **Insulating Inserts and Grommets - List by Shell size / Alternate Positions**

#### **KVBS - Inserts Arrangement**

The following table lists the possible available positions for each arrangement.

Grommet	Inserts Arrangement	N° of Contacts				Service Rating (Mil-DTL-5015)	_		or alternate itions	
			8 46A	12 23A	16 13A		W	X	Y	Z
•	18-19	10			10	A (700 Vdc - 500 Vac) *	-	120	240	-
•	20-15	7		7		A (700 Vdc - 500 Vac) *	80	-	-	280
•	22-14	19			19	A (700 Vdc - 500 Vac) *	80	110	250	280
•	24-10	7	7			A (700 Vdc - 500 Vac) *	80	-	-	280
•	28-21	37			37	A (700 Vdc - 500 Vac) *	80	110	250	280
•	36-10	48			48	A (700 Vdc - 500 Vac) *	80	125	235	280
•	36A22	22		22		D (1250 Vdc - 900 Vac) *	80	110	250	280
•	40A35	35		35		D (1250 Vdc - 900 Vac) *	70	130	230	290
•	40A60	60			60	A (700 Vdc - 500 Vac) *	80	110	250	280
•	40A70	70			70	A (700 Vdc - 500 Vac) *	80	110	250	280

Grommet Available

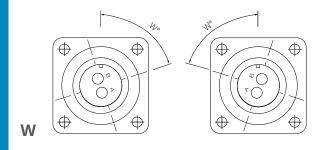
When more than one connector with the same arrangement is mounted on the same panel, it is advisable to orientate the connector. This means to rotate the insert with respect to the polarization key so that the connector can only be mated with the correct mating half.

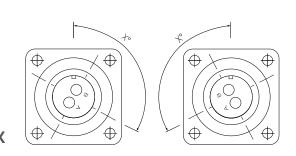


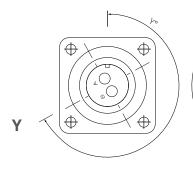
Front view mating side Pin insert Insert rotation

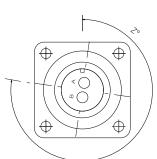


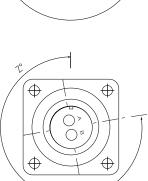
Front view mating side Socket insert Insert rotation









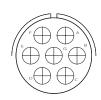


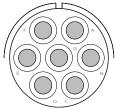
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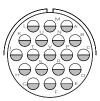
<sup>\*</sup> Rated voltage 380Vac / 500Vac - Test Voltage 3.250Vac RMS (according NF F 61-030)

# **Insulating Inserts and Grommets - List by contacts total quantity**

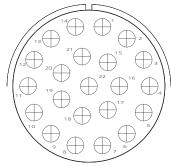


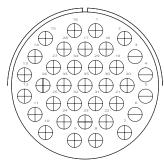


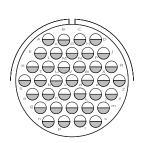




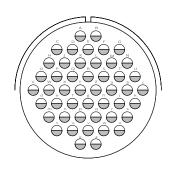
Insert Arrangement	20-15	24-10	18-19	22-14
N° of Contacts	7	7	10	19
Contact Size/ Current rating	12 <i>(23A)</i>	8 (46A)	16 <i>(13A)</i>	16 <i>(13A)</i>
Service Rating	A 700 Vdc 500 Vac	A 700 Vdc 500 Vac	A 700 Vdc 500 Vac	A 700 Vdc 500 Vac
Grommet	•	•	•	•

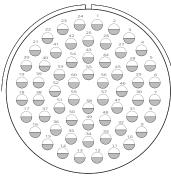


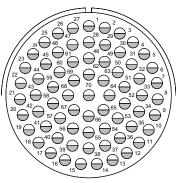




Insert Arrangement	36A22	40A35	28-21
N° of Contacts	22	35	37
Contact Size/ Current rating	12 <i>(23A)</i>	12 <i>(23A)</i>	16 <i>(13A</i> )
Service Rating	D 1250 Vdc 900 Vac	D 1250 Vdc 900 Vac	A 700 Vdc 500 Vac
Grommet	•	•	•







Insert Arrangement	36-10	40A60	40A70
N° of Contacts	48	60	70
Contact Size/ Current rating	16 <i>(13A</i> )	16 <i>(13A</i> )	16 <i>(13A)</i>
Service Rating	A 700 Vdc 500 Vac	A 700 Vdc 500 Vac	A 700 Vdc 500 Vac
Grommet	•	•	•

Grommet Available Front view Pin contacts insert

ST Contacts size legend

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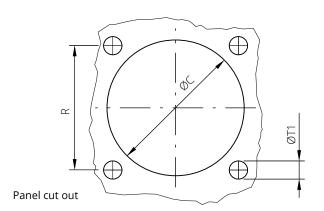
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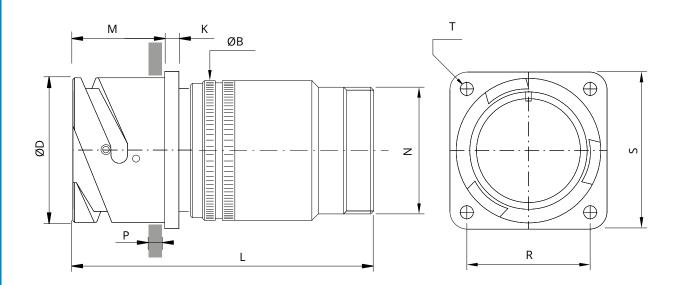


### Rear Mounting Receptacle (030) with Backshell Class (A - DA - RA)

Connector with backshell provided with an external thread suitable for MS3057...A or C type cable-clamps (to be ordered separately).





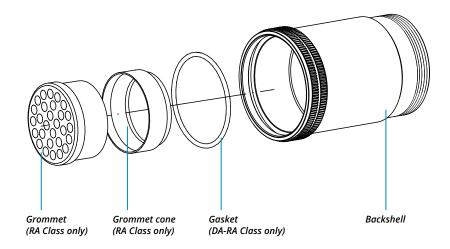


Shell size	ØD +0 -0.15	ØB ±0.2	L	M ±0.2	K ±0.2	N Backshell Thread in inches	R ±0.1	S ±0.3	ØΤ	ØT1	ØC ±0.2	P Panel Thickness Max
18	30.8	30	100	23.4	4	1"-20 UNEF	27	34.9	M4	4.5	31.7	7.25
20	34.2	32	100	23.4	4	1" 3/16-18 UNEF	29.4	38.1	M4	4.5	35	7.3
22	37.4	37	100	23.4	4	1" 3/16-18 UNEF	31.8	41	M4	4.5	38.3	7.3
24	40.9	40	105	23.4	4	1" 7/16-18 UNEF	34.9	44.5	M4	4.5	41.8	6.85
28	46.7	45	105	24.4	4	1" 7/16-18 UNEF	39.7	50.8	M5	5.5	47.6	7.8
36	59.6	58	125	24.4	4	2"-18 UNS	49.2	63.5	M5	5.5	60.5	7.5
40	65.5	63.8	125	24.4	4	2"1/4-16 UN	55.6	69.8	M5	5.5	66.4	7.5

Dimensions in mm







Insulating	_	Thermoplastic resin	S	Contact	S	Socket contacts
material		·		Gender	P	Pin contacts
KVBS Series Code	KVBS	Bayonet Connector with protected mating ramps	x	Polarization Code**		Page 14
Shell Material	-	Aluminum	LC Contact Termination		LC	Less contacts
030 Shell Type	030	Rear mounting		Contact	-	Silver plating
Silen Type	050	Receptacle		Plating	CD5	Gold plating
	Α	non watertight			F7	Black epoxy varnish (*)
Connector Class	DA	with waterproof O-ring (IP67***)	F7	Shell finish	F16	CCF - Black passivation (*) - conductive
	RA	with waterproof O-ring and grommet (IP67***)			F26	hard anodization (*)
	Т	With plastic caps			-	Without gasket
Connector	-	Receptacle connector with threaded holes	G	Panel Gasket	G	With waterproof panel gasket
' Modification**	FP	Receptacle connector with through holes			G3	With waterproof shielded panel gasket
Insert				Modification	N	
24-10 Arrangement		Page 14	N	Code**	S	Consult our sales office

\*\*\* Protection degree: IP 67 (only in the mating area with mated connectors) according to EN 60529 (\*) RoHS compliance (\*\*) If required

P/N Sample: KVBS 030DAT 24-10SX LC F7 G N

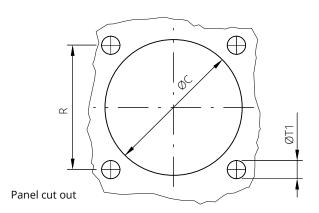


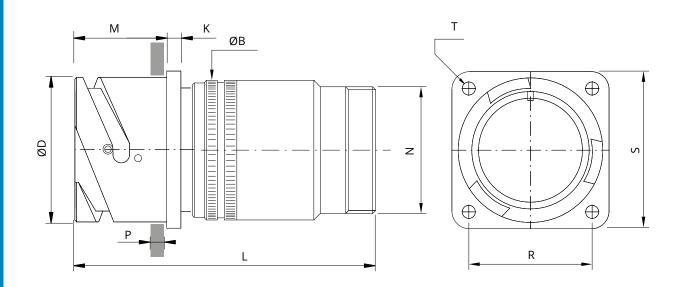


### Rear Mounting Receptacle (030) with Backshell Class (SA - SDA - SRA)

Connector with short backshell provided with an external thread suitable for MS3057...A or C type cable-clamps (to be ordered separately).







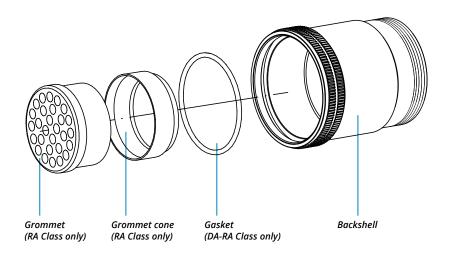
Shell size	ØD +0 -0.15	ØB ±0.2	L	M ±0.2	K ±0.2	N Backshell Thread in inches	R ±0.1	S ±0.3	ØT	ØT1	ØC ±0.2	P Panel Thickness Max
18	30.8	30	**	23.4	4	1"-20 UNEF	27	34.9	M4	4.5	31.7	7.25
20	34.2	32	**	23.4	4	1" 3/16-18 UNEF	29.4	38.1	M4	4.5	35	7.3
22	37.4	37	**	23.4	4	1" 3/16-18 UNEF	31.8	41	M4	4.5	38.3	7.3
24	40.9	40	**	23.4	4	1" 7/16-18 UNEF	34.9	44.5	M4	4.5	41.8	6.85
28	46.7	45	**	24.4	4	1" 7/16-18 UNEF	39.7	50.8	M5	5.5	47.6	7.8
36	59.6	58	**	24.4	4	2"-18 UNS	49.2	63.5	M5	5.5	60.5	7.5
40	65.5	63.8	**	24.4	4	2"1/4-16 UN	55.6	69.8	M5	5.5	66.4	7.5

\*\* Consult our sales office

Dimensions in mm







	Insulating material	-	Thermoplastic resin	S	Contact Gender	S	Socket contacts
	materiai				Gender	P	Pin contacts
KVBS	Series Code	KVBS	Bayonet Connector with protected mating ramps	x	X Polarization Code**		Page 14
	Shell Material	-	Aluminum	LC	LC Contact Termination		Less contacts
030	Shell Tyne	hell Type 030 Rear mounting Contact		Contact	-	Silver plating	
030	энен турс		Receptacle		Plating	CD5	Gold plating
		SA	non watertight			F7	Black epoxy varnish (*)
SDA	Connector Class	SDA	with waterproof O-ring (IP67***)	F7	Shell finish	F16	CCF - Black passivation (*) - conductive
		SRA	with waterproof O-ring and grommet (IP67***)				hard anodization (*)
		Т	With plastic caps			-	Without gasket
T	Connector	-	Receptacle connector with threaded holes	G	Panel Gasket	G	With waterproof panel gasket
	Modification**	FP Receptacle connector with through holes				G3	With waterproof shielded panel gasket
	Insert		<u> </u>		Modification	N	
24-10	24-10 Arrangement		Page 14	N	Code**	S	Consult our sales office

\*\*\* Protection degree: IP 67 (only in the mating area with mated connectors) according to EN 60529 (\*) RoHS compliance

(\*\*) If required

P/N Sample: KVBS 030SDAT 24-10SX LC F7 G N

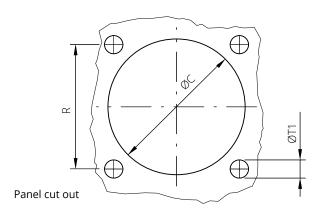


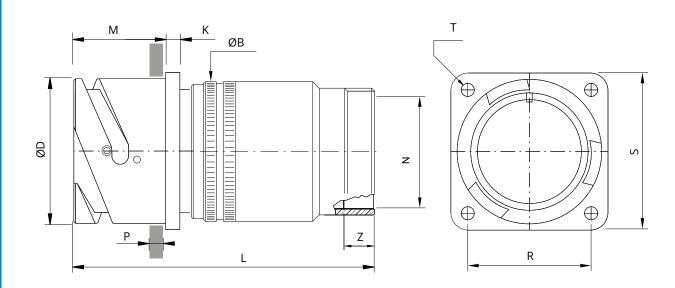


### Rear Mounting Receptacle (030) with Backshell Class (DA..M - RA..M)

Connector with backshell provided with an internal Metric thread suitable for cable glands or conduit adapters.







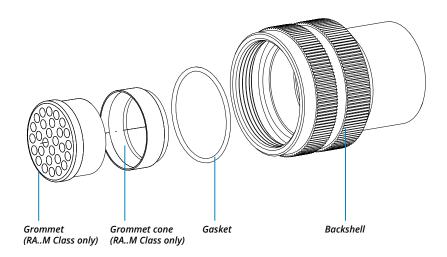
Shell size	ØD +0 -0.15	ØB ±0.2	L	M ±0.2	K ±0.2	Z min	N Backshell Metric Thread	R ±0.1	S ±0.3	ØT	ØT1	ØC ±0.2	P Panel Thickness Max
18	30.8	30	100	23.4	4	*	M20	27	34.9	M4	4.5	31.7	7.25
20	34.2	32	100	23.4	4	16	M25	29.4	38.1	M4	4.5	35	7.3
22	37.4	37	100	23.4	4	*	M25	31.8	41	M4	4.5	38.3	7.3
24	40.9	40	105	23.4	4	*	M32	34.9	44.5	M4	4.5	41.8	6.85
28	46.7	45	105	24.4	4	15	M32 - M40	39.7	50.8	M5	5.5	47.6	7.8
36	59.6	58	125	24.4	4	*	M40	49.2	63.5	M5	5.5	60.5	7.5
40	65.5	63.8	125	24.4	4	*	M50	55.6	69.8	M5	5.5	66.4	7.5

Dimensions in mm

\* On Request







Insulating material	-	Thermoplastic resin	X Polariza Code**	tion		Page 14
KVBS Series Code	KVBS	Bayonet Connector with protected mating ramps	M20 Backshe internal thread		Мхх	Provided with an internal Metric thread
Shell Material	-	Aluminum	LC Contact Termina	tion	LC	Less contacts
030 Shell Type	030	Rear mounting	Contact		-	Silver plating
July 1, year		Receptacle	- Plating		CD5	Gold plating
Connector	DA	with waterproof O-ring (IP67***)			F7	Black epoxy varnish (*)
Class	RA	with waterproof O-ring and grommet (IP67***)	F7 Shell fin	ish	F16	CCF - Black passivation (*) - conductive
	T	With plastic caps			F26	hard anodization (*)
Connector		Receptacle connector			-	Without gasket
Modification**	-	with threaded holes	G Panel Ga	skat	G	With waterproof panel gasket
	FP	Receptacle connector with through holes	Tallel de	isket	G3	With waterproof shielded panel gasket
24-10 Insert Arrangement		Page 14	Modifica	ition	N	. 5
S Contact Gender	S	Socket contacts	N Code**		S	Consult our sales office
	P	Pin contacts				

\*\*\* Protection degree: IP 67 (only in the mating area with mated connectors) according to EN 60529 (\*) RoHS compliance

(\*\*) If required

P/N Sample: KVBS 030DAT 24-10SX M20 LC F7 G N

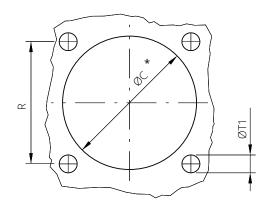




### Rear Mounting Receptacle (030) with Backshell Class (DA...FS - RA...FS)

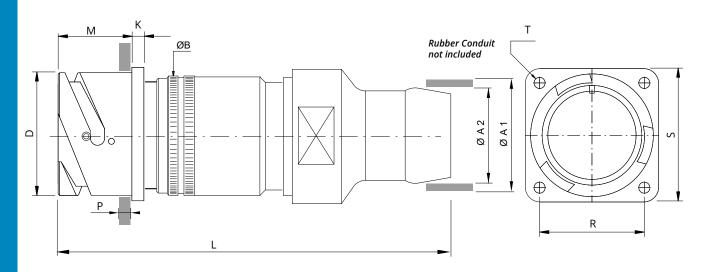
Connector with special adapter for UNI4883 rubber conduits. Conduit's size must be specified adding the diameter dimensions in the P/N (i.e.: KVBS 030DA...FS5040...).





Panel cut out

\* For installation with backshell mounted, consult our sales office.



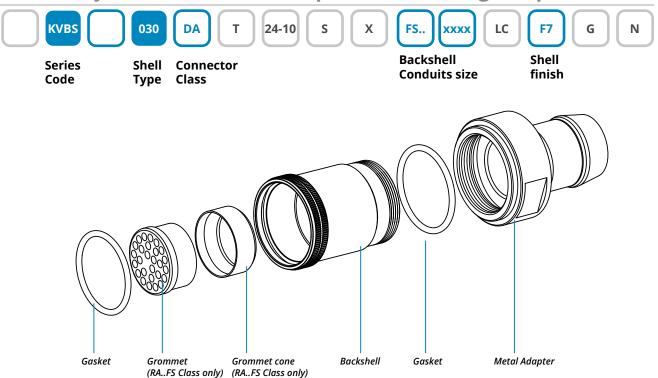
Shell size		ØB ±0.2	L	M ±0.2	K ±0.2	R ±0.1	S ±0.3	ØΤ	ØT1		P Panel Thickness Max
18	30.8	30	**	23.4	4	27	34.9	M4	4.5	31.7	7.25
20	34.2	32	**	23.4	4	29.4	38.1	M4	4.5	35	7.3
22	37.4	37	**	23.4	4	31.8	41	M4	4.5	38.3	7.3
24	40.9	40	**	23.4	4	34.9	44.5	M4	4.5	41.8	6.85
28	46.7	45	**	24.4	4	39.7	50.8	M5	5.5	47.6	7.8
36	59.6	58	**	24.4	4	49.2	63.5	M5	5.5	60.5	7.5
40	65.5	63.8	**	24.4	4	55.6	69.8	M5	5.5	66.4	7.5

Shell size	Backshell Conduit Size	ØA1	ØA2
16-18-20	FS2015	20	15
20-22-24-28	FS2520	25	20
18-20-22-24	FS2722	27	22
20-22-24-28	FS3328	33	28
24-28	FS3530	35	30
28-36	FS4035	40	35
28-40	FS4540	45	40
40	FS5040	50	40
36-40	FS5045	50	45
40	FS5550	55	50
40	FS5945	59	45

Dimensions in mm



<sup>\*\*</sup> Consult our sales office



The accessories for this class are not always available in stock for all sizes; we suggest you consult our Sales Office for availability

Insulating material	-	Thermoplastic resin	x	Polarization Code**		Page 14
KVBS Series Code	KVBS	Bayonet Connector with protected mating ramps	FS	Backshell Conduits size	FS	Provided with a special adapter for UNI4883 rubber conduits
Shell Material	-	Aluminum	xxxx	Conduit Size	хххх	ØA1ØA2
030 Shell Type	030	Rear mounting Receptacle	LC	Contact Termination	LC	Less contacts
Connector	DA	with waterproof O-ring (IP67***)		Contact	-	Silver plating
Class	RA	with waterproof O-ring and grommet (IP67***)		Plating	CD5	Gold plating
	Т	With plastic caps			F7	Black epoxy varnish (*)
Connector	-	Receptacle connector with threaded holes	F7	Shell finish	F16	CCF - Black passivation (*) - conductive
Modification**		Receptacle connector			F26	hard anodization (*)
	FP	with through holes			-	Without gasket
24-10 Insert		Page 14	G	Panel Gasket	G	With waterproof panel gasket
Arrangement		ŭ		1	G3	With waterproof shielded panel gasket
S Contact	S	Socket contacts			N	. 0
Gender	P	Pin contacts	N	Modification	-	Consult our sales office
			Code**		S	

<sup>\*\*\*</sup> Protection degree: IP 67 (only in the mating area with mated connectors) according to EN 60529 (\*) RoHS compliance

P/N Sample: KVBS 030DAT 24-10SX FS2015 LC F7 G N



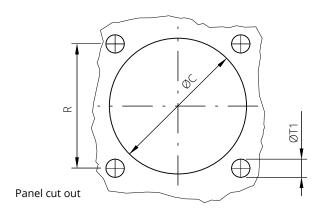
<sup>(\*\*)</sup> If required

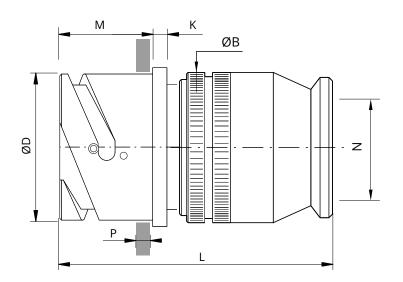


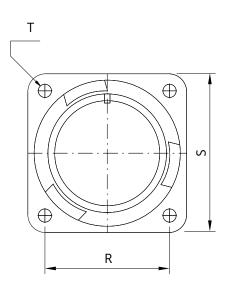
### Rear Mounting Receptacle (030) with Backshell Class (R)

This class is suitable to connect single wires when strain relief is not necessary and small longitudinal overall dimensions are needed. As watertightness is guaranteed by the grommet only, it is necessary to make sure the wire diameter matches the grommet sealing range.







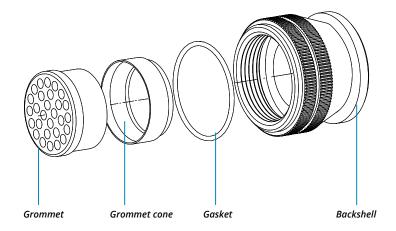


Shell size	ØD +0 -0.15	ØB ±0.2	L	K ±0.2	M ±0.2	N max cable dimension	R ±0.1	S ±0.3	ØΤ	ØT1	ØC ±0.2	P Panel Thickness Max
18	30.8	29.4	70	4	23.4	19	27	34.9	M4	4.5	31.7	7.25
20	34.2	32	70	4	23.4	22.2	29.4	38.1	M4	4.5	35	7.3
22	37.4	37	73	4	23.4	24.5	31.8	41	M4	4.5	38.3	7.3
24	40.9	40	73	4	23.4	28	34.9	44.5	M4	4.5	41.8	6.85
28	46.7	45	74	4	24.4	32.6	39.7	50.8	M5	5.5	47.6	7.8
36	59.6	58	75	4	24.4	45	49.2	63.5	M5	5.5	60.5	7.5
40	65.5	63.2	75	4	24.4	51.3	55.6	69.8	M5	5.5	66.4	7.5

Dimensions in mm







The accessories for this class are not always available in stock for all sizes; we suggest you consult our Sales Office for availability

Insulating	_	Thermoplastic resin	S Contact	S	Socket contacts
material			Gender	P	Pin contacts
KVBS Series Code	KVBS	Bayonet Connector with protected mating ramps	X Polarization Code**		Page 14
Shell Material	-	Aluminum	LC Contact Termination	LC	Less contacts
030 Shell Type	030	Rear mounting	Contact	-	Silver plating
Silen Type		Receptacle	Plating	CD5	Gold plating
Connector		With O-ring and		F7	Black epoxy varnish (*)
Class	R	grommet	F7 Shell finish	F16	CCF - Black passivation (*) - conductive
	T	With plastic caps		F26	hard anodization (*)
Connector	-	Receptacle connector with threaded holes		-	Without gasket
' Modification**	FP	Receptacle connector with through holes	G Panel Gasket	G	With waterproof panel gasket
24-10 Insert				G3	With waterproof shielded panel gasket
Arrangement		Page 14	Modification	N	
			Code**	s	Consult our sales office

P/N Sample: KVBS 030RT 24-10SX LC F7 G N

(\*) RoHS compliance

(\*\*) If required

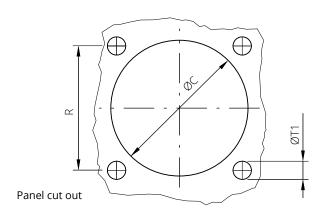


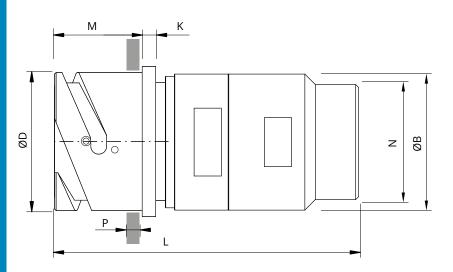


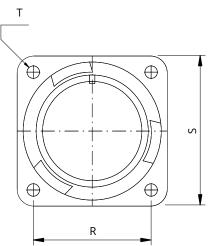
### Rear Mounting Receptacle (030) with Backshell Class (AST - ST)

Connector with backshell with internal cable retention system (on request ST1/ST2 with clamps for cable diameter reduction) with an external unef thread







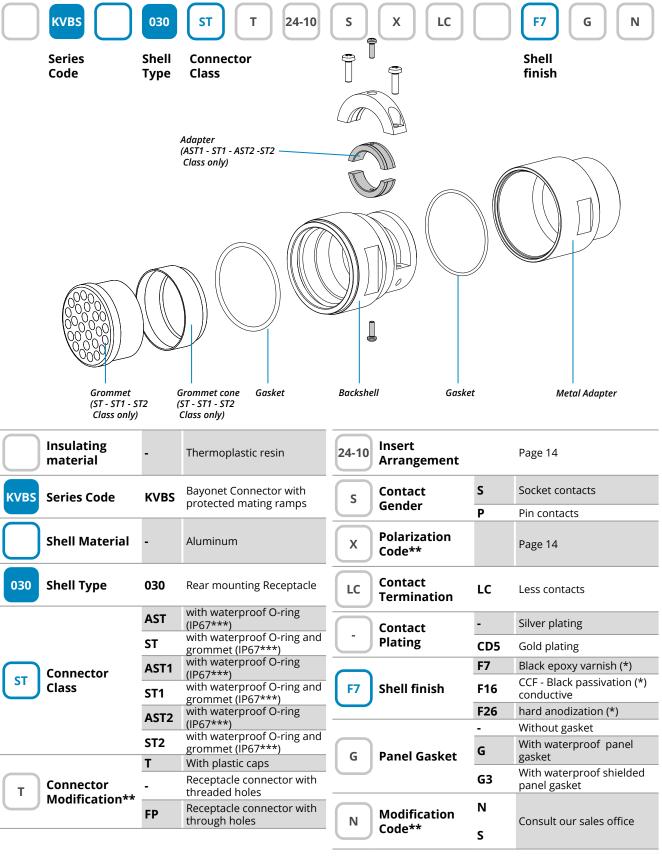


Shell size	ØD +0	ØB ±0.2	L	M ±0.2	K ±0.2	N Backshell	R ±0.1	S ±0.3	ØΤ	ØT1		P Panel Thickness	Cable	Range	)
	-0.15					Thread in inches						Max	ST	ST1	ST2
18	30.8	30	110	23.4	4	1"-20 UNEF	27	34.9	M4	4.5	31.7	7.25	14-9	9-4	*
20	34.2	32	121	23.4	4	1" 3/16-18 UNEF	29.4	38.1	M4	4.5	35	7.3	19-14	14-9	*
22	37.4	38	122,2	23.4	4	1" 3/16-18 UNEF	31.8	41	M4	4.5	38.3	7.3	19-14	14-9	*
24	40.9	45	115	23.4	4	1" 7/16-18 UNEF	34.9	44.5	M4	4.5	41.8	6.85	23-18	18-13	*
28	46.7	48	115	24.4	4	1" 7/16-18 UNEF	39.7	50.8	M5	5.5	47.6	7.8	23-18	18-13	*
36	59.6	58	135	24.4	4	2"-18 UNS	49.2	63.5	M5	5.5	60.5	7.5	33-25	25-18	*
40	65.5	65	135	24.4	4	2"1/4-16 UN	55.6	69.8	M5	5.5	66.4	7.5	39-31	31-24	24-16

Dimensions in mm



<sup>\*</sup> On request (please consult our Sales Office)



<sup>\*\*\*</sup> Protection degree: IP 67 (only in the mating area with mated connectors) according to EN 60529

P/N Sample: KVBS 030STT 24-10SX LC F7 G N



<sup>(\*)</sup> RoHS compliance

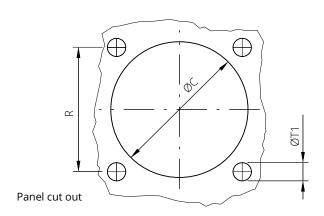
<sup>(\*\*)</sup> If required

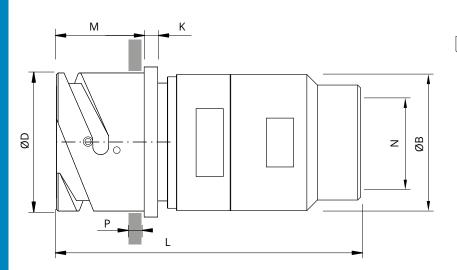


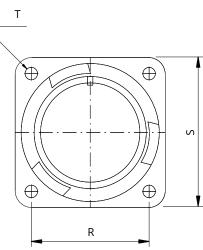
### Rear Mounting Receptacle (030) with Backshell Class (AST..M - ST..M)

Connector with backshell with internal cable retention system (on request ST1/ST2 with clamps for cable diameter reduction) with an internal Metric thread







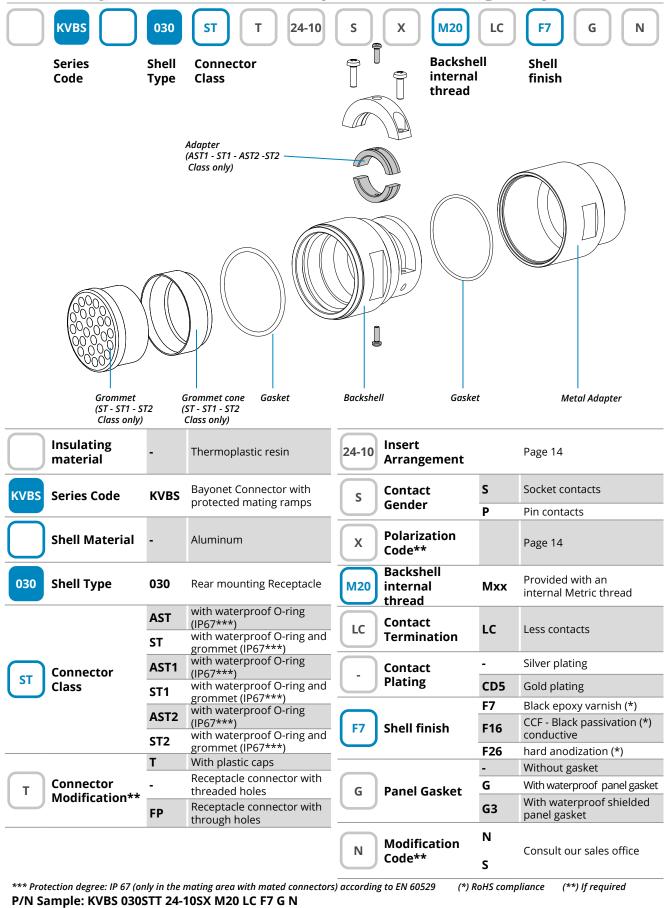


Shell size	ØD +0	ØB ±0.2	L	M ±0.2	K ±0.2	N Backshell	R ±0.1	S ØT ØT1 ±0.3		ØC +0.2	P Panel Thickness	Cable Range			
3126	-0.15	10.2		10.2	10.2	Thread Metric	10.1	10.5			10.2	Max	ST	ST1	ST2
18	30.8	30	110	23.4	4	M16 - M20	27	34.9	M4	4.5	31.7	7.25	14-9	9-4	*
20	34.2	32	121	23.4	4	M20	29.4	38.1	M4	4.5	35	7.3	19-14	14-9	*
22	37.4	38	122,2	23.4	4	M25	31.8	41	M4	4.5	38.3	7.3	19-14	14-9	*
24	40.9	45	115	23.4	4	M25	34.9	44.5	M4	4.5	41.8	6.85	23-18	18-13	*
28	46.7	48	115	24.4	4	M32	39.7	50.8	M5	5.5	47.6	7.8	23-18	18-13	*
36	59.6	58	135	24.4	4	M32 - M40	49.2	63.5	M5	5.5	60.5	7.5	33-25	25-18	*
40	65.5	65	135	24.4	4	M40 - M50	55.6	69.8	M5	5.5	66.4	7.5	39-31	31-24	24-16

Dimensions in mm



<sup>\*</sup> On request (please consult our Sales Office)

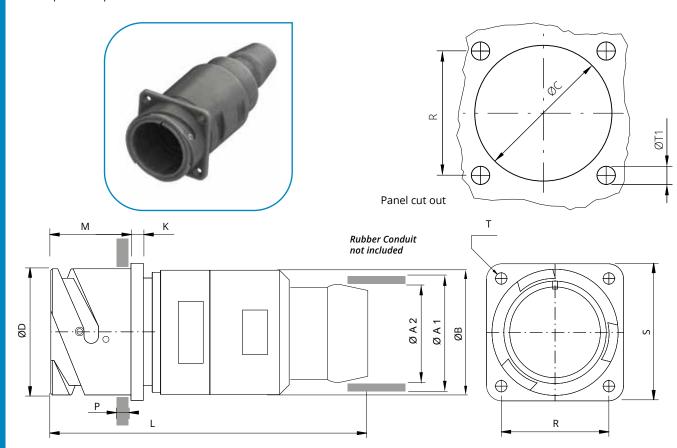






### Rear Mounting Receptacle (030) with Backshell Class (AST..FS - ST..FS)

Connector with backshell with internal cable retention system (on request ST1/ST2 with clamps for cable diameter reduction) with a special adapter for UNI4883 rubber conduits



Shell size	<b>Backshell Conduit Size</b>	ØA1	ØA2
24-28	FS3328	33	28
24-28	FS3833	38	33
36	FS4035	40	35
40	FS5040	50	40
36	FS5045	50	45
40	FS5550	55	50

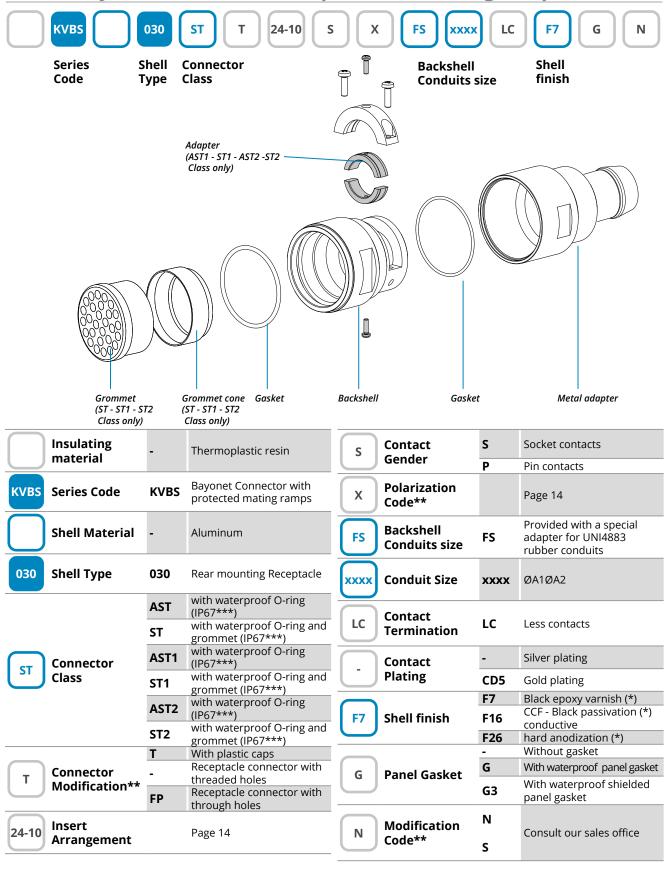
Please consult our Sales Office for further details about this dimension and according to conduit size.

Shell size	ØD +0	ØB ±0.2	L	M ±0.2	K ±0.2	R ±0.1	S ±0.3	ØΤ	ØT1	ØC ±0.2	P Panel Thickness	Cable ST	Range ST1	ST2
	-0.15										Max	31	311	312
18	30.8	30	110	23.4	4	27	34.9	M4	4.5	31.7	7.25	14-9	9-4	*
20	34.2	32	121	23.4	4	29.4	38.1	M4	4.5	35	7.3	19-14	14-9	*
22	37.4	38	122,2	23.4	4	31.8	41	M4	4.5	38.3	7.3	19-14	14-9	*
24	40.9	45	115	23.4	4	34.9	44.5	M4	4.5	41.8	6.85	23-18	18-13	*
28	46.7	48	115	24.4	4	39.7	50.8	M5	5.5	47.6	7.8	23-18	18-13	*
36	59.6	58	135	24.4	4	49.2	63.5	M5	5.5	60.5	7.5	33-25	25-18	*
40	65.5	65	135	24.4	4	55.6	69.8	M5	5.5	66.4	7.5	39-31	31-24	24-16

Dimensions in mm

\* On request (please consult our Sales Office)





\*\*\* Protection degree: IP 67 (only in the mating area with mated connectors) according to EN 60529

(\*) RoHS compliance

(\*\*) If required

P/N Sample: KVBS 030STT 24-10SX FS2015 LC F7 G N

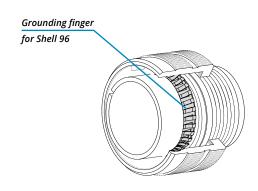


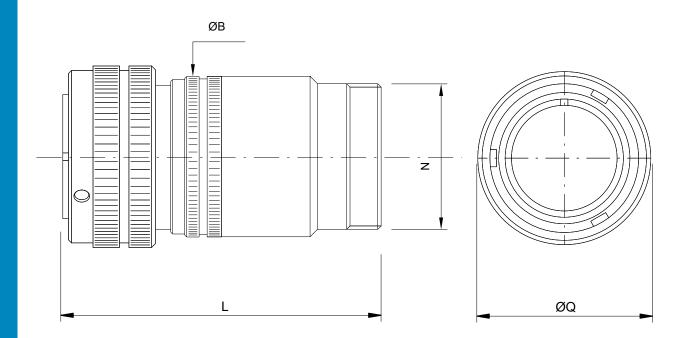


### Plug Connector (06/96) with Backshell Class (A - DA - RA)

Connector with backshell provided with an external thread suitable for MS3057...A or C type cable-clamps (to be ordered separately).





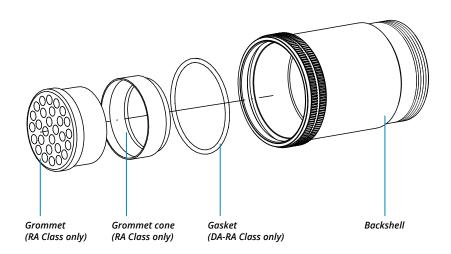


Shell size	ØQ ±0.2	ØB ±0.2	L max	N Backshell Thread in inches
18	37	30	100	1"-20 UNEF
20	41	32	100	1" 3/16-18 UNEF
22	43	37	100	1" 3/16-18 UNEF
24	48	40	105	1" 7/16-18 UNEF
28	53	45	105	1" 7/16-18 UNEF
36	66.2	58	125	2"-18 UNS
40	72.4	63.8	125	2"1/4-16 UN

Dimensions in mm







Insulating material	-	Thermoplastic resin	24-10 Insert Arrangemen	t	Page 14
KVBS Series Code	KVBS	Bayonet Connector with protected mating ramps	S Contact	S	Socket contacts
		protected mating ramps	Gender	P	Pin contacts
Shell Material	-	Aluminum	X Polarization Code**		Page 14
06 Shell Type	06	Plug Connector without grounding finger	LC Contact Termination	LC	Less contacts
Silen Type	96	Plug Connector with grounding finger		_	Silver plating
	Α	non watertight	Contact		1 3
Connector	D.4	with waterproof O-ring	Plating	CD5	Gold plating
DA Class	DA	(IP67***)		F7	Black epoxy varnish (*)
Ciuss	RA	with waterproof O-ring and grommet (IP67***)	F7 Shell finish	F16	CCF - Black passivation (*) - conductive
Connector				F26	hard anodization (*)
Modification**	Т	With plastic caps	Modification	N	c li c
			N Code**	S	Consult our sales office

\*\*\* Protection degree: IP 67 (only in the mating area with mated connectors) according to EN 60529 (\*) RoHS compliance

(\*\*) If required

P/N Sample: KVBS 06DAT 24-10SX LC F7 N

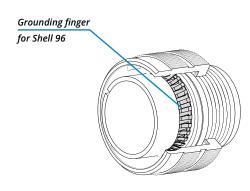


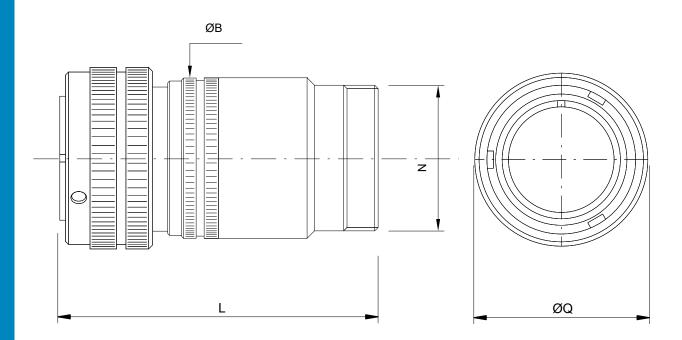


### Plug Connector (06/96) with Backshell Class (SA - SDA - SRA)

Connector with short backshell provided with an external thread suitable for MS3057...A or C type cable-clamps (to be ordered separately).







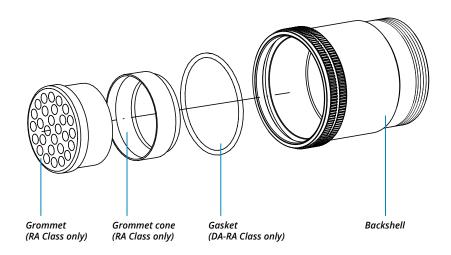
Shell size	ØQ ±0.2	ØB ±0.2	L max	N Backshell Thread in inches
18	37	30	*	1"-20 UNEF
20	41	32	*	1" 3/16-18 UNEF
22	43	37	*	1" 3/16-18 UNEF
24	48	40	*	1" 7/16-18 UNEF
28	53	45	*	1" 7/16-18 UNEF
36	66.2	58	*	2"-18 UNS
40	72.4	63.8	*	2"1/4-16 UN

Dimensions in mm



<sup>\*</sup> On request (please consult our Sales Office)





Insulating material	-	Thermoplastic resin	24-10	nsert Arrangement		Page 14
KVBS Series Code	KVBS	Bayonet Connector with protected mating ramps		Contact Gender	S	Socket contacts
		protected mating ramps		Jenuer	P	Pin contacts
Shell Material	-	Aluminum	X Polarization Code**			Page 14
06 Shell Type	06	Plug Connector without grounding finger	16.	LC Contact LC		Less contacts
Silen Type	96	Plug Connector with grounding finger			_	Silver plating
	SA	non watertight		Contact		1 0
Connector	CD A	with waterproof O-ring		Plating C		Gold plating
SDA Class	SDA	(IP67***)			F7	Black epoxy varnish (*)
Ciuss	SRA	with waterproof O-ring and grommet (IP67***)	<b>F7</b> S	Shell finish	F16	CCF - Black passivation (*) - conductive
Connector					F26	hard anodization (*)
Modification**	Т	With plastic caps		Modification	N	Carroult averagles office
			N	Code**	S	Consult our sales office

\*\*\* Protection degree: IP 67 (only in the mating area with mated connectors) according to EN 60529 (\*) RoHS compliance

(\*\*) If required

P/N Sample: KVBS 06SDAT 24-10SX LC F7 N



Code

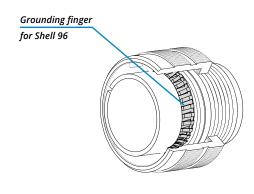
**Material Type** 

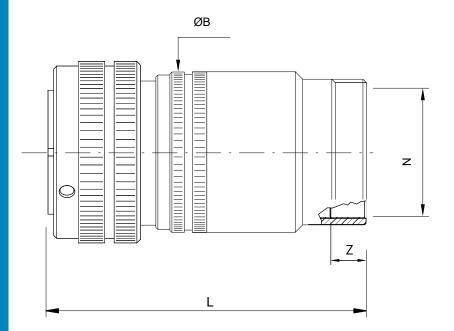


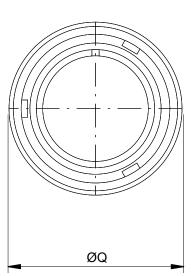
### Plug Connector (06/96) with Backshell Class (DA..M - RA..M)

Connector with backshell provided with an internal Metric thread suitable for cable glands or conduit adapters.









Shell size	ØQ ±0.2	L max	ØB ±0.2	N Backshell Thread	Z min
				Metric	
18	37	100	30	M20	15
20	41	100	32	M25	15
22	43	100	37	M25	15
24	48	105	40	M32	15
28	53	105	45	M32 - M40	15
36	66.2	125	58	M40	15
40	72.4	125	63.8	M50	15

Dimensions in mm



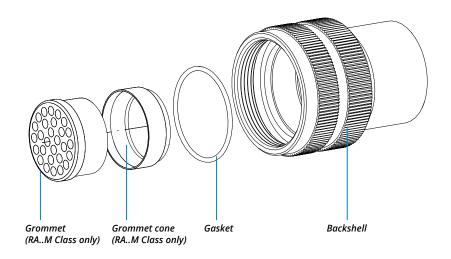


Series Code

**Shell Connector** Туре Class

**Backshell** internal thread

Shell finish



Insulating	_	Thermoplastic resin	S	S Contact Gender		Socket contacts
material		·		Gender	P	Pin contacts
KVBS Series Code	KVBS	Bayonet Connector with protected mating ramps	x	Polarization Code**		Page 14
Shell Material	-	Aluminum	M20	Backshell internal thread	Mxx	Provided with an internal Metric thread
06 Shell Type	06	Plug Connector without grounding finger	LC	Contact Termination	LC	Less contacts
Silen Type	96	Plug Connector with grounding finger	Termination			
		with waterproof O-ring		Contact	-	Silver plating
Connector	DA	(IP67***)		Plating	CD5	Gold plating
Class	RA	with waterproof O-ring			F7	Black epoxy varnish (*)
Connector		and grommet (IP67***)	<b>F7</b>	Shell finish	F16	CCF - Black passivation (*) - conductive
Modification**	Т	With plastic caps		·	F26	hard anodization (*)
				Modification	N	
24-10 Insert				_	Consult our sales office	
Arrangement				S		

\*\*\* Protection degree: IP 67 (only in the mating area with mated connectors) according to EN 60529 (\*) RoHS compliance

(\*\*) If required

P/N Sample: KVBS 06DAT 24-10SX M20 LC F7 N

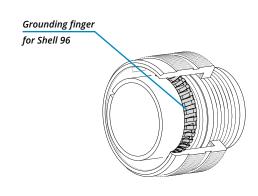


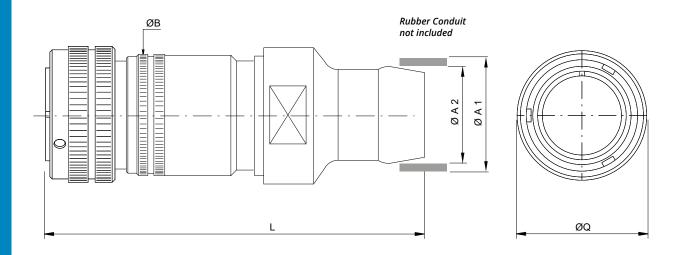


#### Plug Connector (06/96) with Backshell Class (DA..FS - RA..FS)

Connector with special adapter for UNI4883 rubber conduits. Conduit's size must be specified adding the diameter dimensions in the P/N (i.e.: KVBS 06DA...FS5040...).







Please consult our Sales Office for further details about this dimension and according to conduit size.

Shell size	ØQ ±0.2	L max	ØB max
18	37	*	30
20	41	*	32
22	43	*	37
24	48	*	40
28	53	*	45
36	66.2	*	58
40	72.4	*	63.8

<sup>\*</sup> On request (please consult our Sales Office)

Dimensions in mm

Dimension "L" can be different from the value indicated according to backshells accessories, wires size and some special insert configurations.



Shell size

16-18-20

20-22-24-28

18-20-22-24

20-22-24-28

24-28

28-36

28-40

36-40

40

40

40

Backshell ØA1 ØA2

20

25

27

33

35

40

45

50

50

55

59

15

20

22

28

30

35

40

40

45

50

45

Conduit Size

FS2015

FS2520

FS2722

FS3328

FS3530

FS4035

FS4540

FS5040

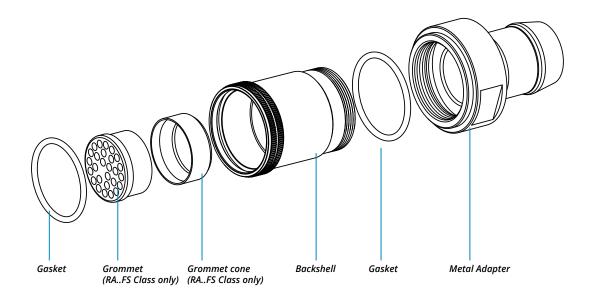
FS5045

FS5550

FS5945



**Conduits size** 



The accessories for this class are not always available in stock for all sizes; we suggest you consult our Sales Office for availability

Insulating material	-	Thermoplastic resin	S	Contact Gender	S	Socket contacts
Illaterial				Gender	P	Pin contacts
KVBS Series Code	KVBS	Bayonet Connector with protected mating ramps	x	Polarization Code**		Page 14
Shell Material	-	Aluminum	FS	Backshell Conduits size	FS	Provided with a special adapter for UNI4883 rubber conduits
06 Shell Type	06	Plug Connector without grounding finger	3328	Conduit Size	хххх	ØA1ØA2
Sileii Type	96	Plug Connector with grounding finger		Contact		
Connector	DA	with waterproof O-ring (IP67***)	LC	Termination	LC	Less contacts
Class	RA	with waterproof O-ring		Contact	-	Silver plating
	KA	and grommet (IP67***)	- ]	Plating	CD5	Gold plating
Connector	_	AACH L. C.		<u>-</u>	F7	Black epoxy varnish (*)
Modification**	I	With plastic caps	F7	Shell finish	F16	CCF - Black passivation (*) conductive
24-10 Insert		Page 14				hard anodization (*)
Arrangement		Page 14		N Modification Code**		
			N			Consult our sales office

\*\*\* Protection degree: IP 67 (only in the mating area with mated connectors) according to EN 60529

(\*) RoHS compliance

(\*\*) If required

P/N Sample: KVBS 06DAT 24-10SX FS3328 LC F7 N

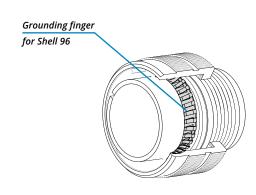


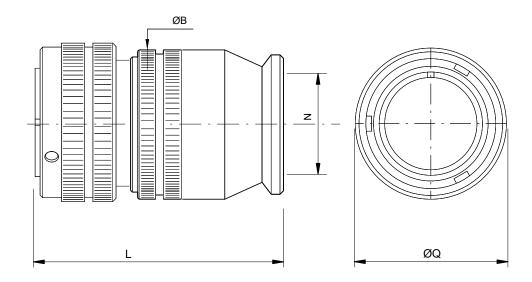


### Plug Connector (06/96) with Backshell Class (R)

This class is suitable to connect single wires when strain relief is not necessary and small longitudinal overall dimensions are needed. As watertightness is guaranteed by the grommet only, it is necessary to make sure the wire diameter matches the grommet sealing range.





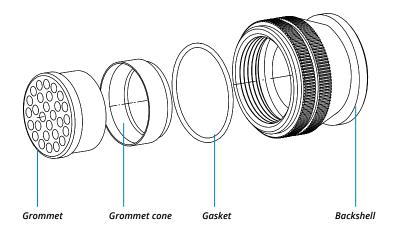


Shell size	ØQ ±0.2	ØB ±0.2	L max	N max cable dimension
18	37	30	70	19
20	41	32	70	22.2
22	43	37	73	24.5
24	48	40	73	28
28	53	45	74	32.6
36	66.2	58	75	45
40	72.4	63.8	75	51.3

Dimensions in mm







The accessories for this class are not always available in stock for all sizes; we suggest you consult our Sales Office for availability

Insulating material	-	Thermoplastic resin	S Contact Gender		S	Socket contacts
material				Gender		Pin contacts
KVBS Series Code	KVBS	Bayonet Connector with protected mating ramps	X	Polarization Code**		Page 14
Shell Material	-	Aluminum	LC	Contact Termination	LC	Less contacts
Shall Tons	06	Plug Connector without grounding finger		Contact	-	Silver plating
06 Shell Type	06	Plug Connector		Plating	CD5	Gold plating
	96	with grounding finger			F7	Black epoxy varnish (*)
R Connector	R	With O-ring and grommet	<b>F7</b>	Shell finish	F16	CCF - Black passivation (*) - conductive
Class		біоншіст			F26	hard anodization (*)
T Connector Modification**	т	With plastic caps	N	Modification	N	Consult our sales office
				Code**		consult our suits onnec
24-10 Insert Arrangement		Page 14				

P/N Sample: KVBS 06RT 24-10SX LC F7 N

(\*) RoHS compliance

(\*\*) If required

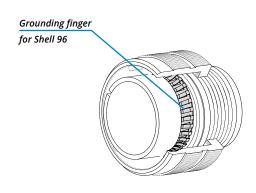


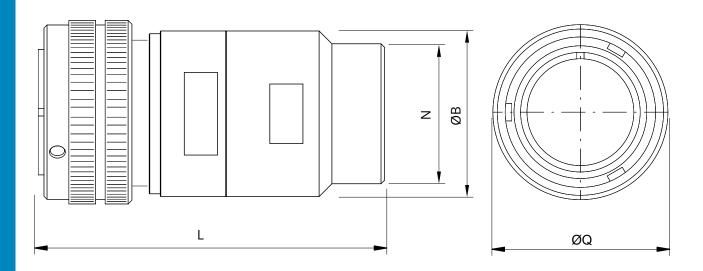


### Plug Connector (06/96) with Backshell Class (AST - ST)

Connector with backshell with internal cable retention system (on request ST1/ST2 with clamps for cable diameter reduction) with an external unef thread





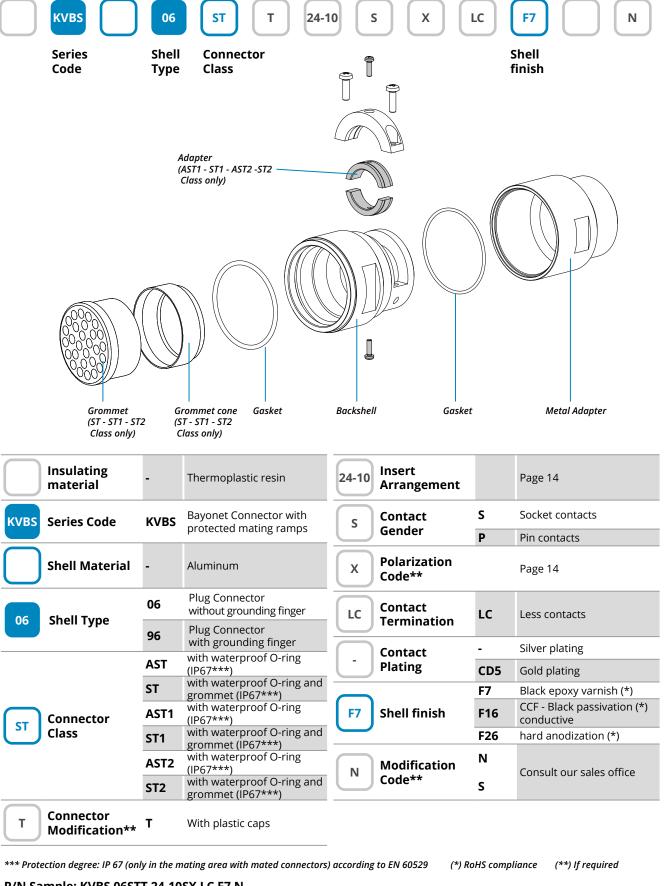


Shell size	ØQ	ØB ±0.2	L	N Backshell Thread in inches	Cable Range ST	ST1	ST2
18	37	30	110	1"-20 UNEF	14-9	9-4	*
20	41	32	121	1" 3/16-18 UNEF	19-14	14-9	*
22	43	38	122,2	1" 3/16-18 UNEF	19-14	14-9	*
24	48	45	115	1" 7/16-18 UNEF	23-18	18-13	*
28	53	48	115	1" 7/16-18 UNEF	23-18	18-13	*
36	66.2	58	135	2"-18 UNS	33-25	25-18	*
40	72.4	65	135	2"1/4-16 UN	39-31	31-24	24-16

Dimensions in mm

\* On request (please consult our Sales Office)





P/N Sample: KVBS 06STT 24-10SX LC F7 N

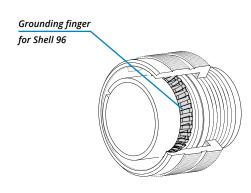


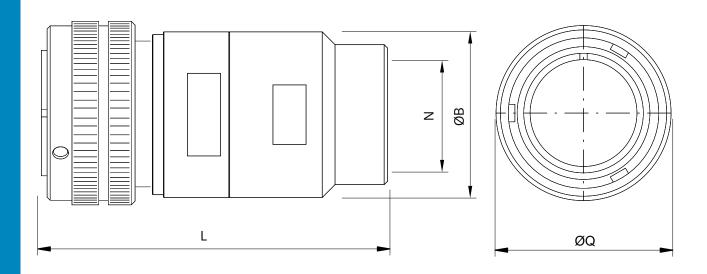


### Plug Connector (06/96) with Backshell Class (AST..M - ST..M)

Connector with backshell with internal cable retention system (on request ST1/ST2 with clamps for cable diameter reduction) with an internal Metric thread





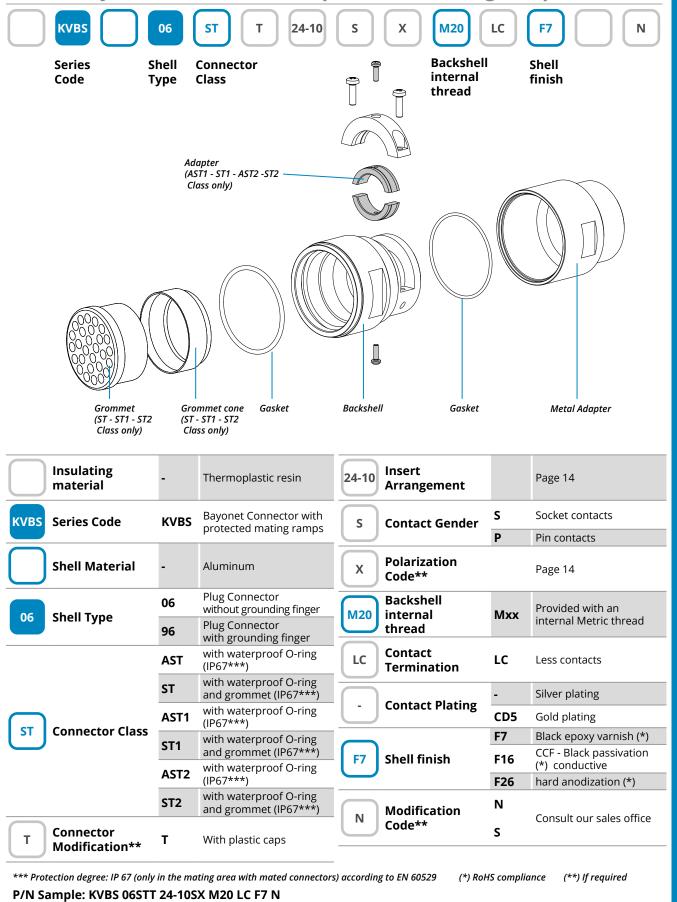


Shell size					Cable Range			
		±0.2		Backshell Thread Metric	ST	ST1	ST2	
18	37	30	110	M16 - M20	14-9	9-4	*	
20	41	32	121	M20	19-14	14-9	*	
22	43	38	122,2	M25	19-14	14-9	*	
24	48	45	115	M25	23-18	18-13	*	
28	53	48	115	M32	23-18	18-13	*	
36	66.2	58	135	M32 - M40	33-25	25-18	*	
40	72.4	65	135	M40 - M50	39-31	31-24	24-16	

Dimensions in mm

\* On request (please consult our Sales Office)





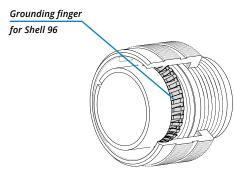
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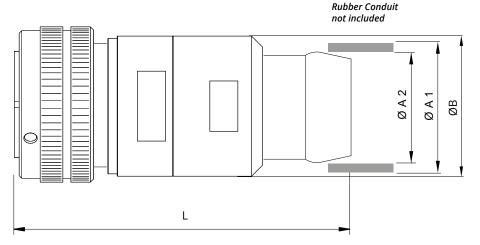


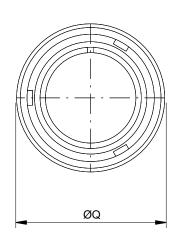
#### Plug Connector (06/96) with Backshell Class (AST..FS - ST..FS)

Connector with backshell with internal cable retention system (on request ST1/ST2 with clamps for cable diameter reduction) with a special adapter for UNI4883 rubber conduits









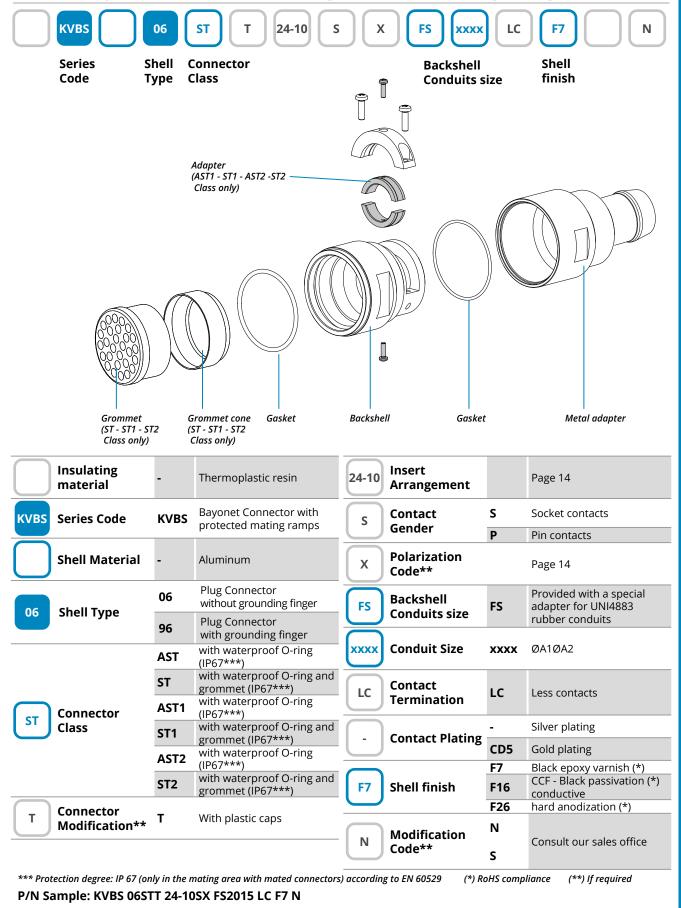
Shell size	<b>Backshell Conduit Size</b>	ØA1	ØA2
24-28	FS3328	33	28
24-28	FS3833	38	33
36	FS4035	40	35
40	FS5040	50	40
36	FS5045	50	45
40	FS5550	55	50

Please consult our Sales Office for further details about this dimension and according to conduit size.

Shell size	ØQ	ØB	L	Cable Range		
		±0.2		ST	ST1	ST2
18	37	30	110	14-9	9-4	*
20	41	32	121	19-14	14-9	*
22	43	38	122,2	19-14	14-9	*
24	48	45	115	23-18	18-13	*
28	53	48	115	23-18	18-13	*
36	66.2	58	135	33-25	25-18	*
40	72.4	65	135	39-31	31-24	24-16

\* On request (please consult our Sales Office)





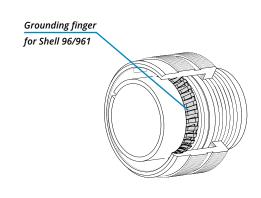


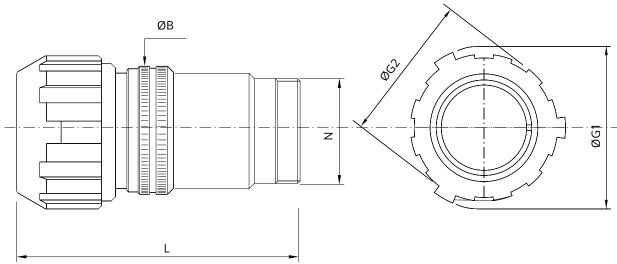


Plug Connector with rubber covered coupling nut (06..GG - 61..GG - 96..GG - 961..GG) with Backshell Class (A - DA - RA)

Connector with backshell provided with an external thread suitable for MS3057...A or C type cable-clamps (to be ordered separately). Rubber covered coupling nut able to protect against dust and impact.





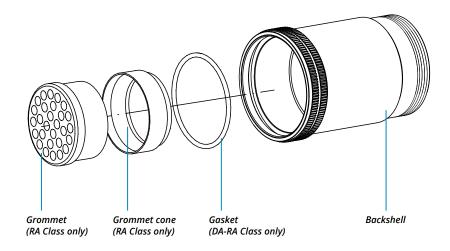


Shell size	ØG1	ØG2	ØB ±0.2	L max	N Backshell Thread in inches
18	49	43.5	30	104	1"-20 UNEF
20	51.5	46	32	104	1" 3/16-18 UNEF
22	56	50.5	37	104	1" 3/16-18 UNEF
24	60	54	40	109	1" 7/16-18 UNEF
28	67	61	45	109	1" 7/16-18 UNEF
36	82	73.5	58	129	2"-18 UNS
40	88	80	63.8	129	2"1/4-16 UN

Dimensions in mm







Insulating material	-	Thermoplastic resin	GG	Coupling Nut Type	GG	Rubber Covered
KVBS Series Code	KVBS	Bayonet Connector with protected mating ramps	Т	Connector Modification**	Т	With plastic caps
Shell Material	-	Aluminum	24-10	Insert Arrangement		Page 14
	06	Plug Connector without grounding finger	S	Contact	S	Socket contacts
	96	Plug Connector		Gender	P	Pin contacts
		with grounding finger Plug Connector	$\left( \begin{array}{c} x \end{array} \right)$	Polarization Code**		Page 14
06 Shell Type	61	without grounding finger Rubber covered coupling nut (short version)  Coutact Termination				
			LC		LC	Less contacts
	064	Plug Connector Rubber covered coupling	$\approx$	5		Cilver plating
	961	nut (short version) with grounding finger		Contact Plating	CD5	Silver plating Gold plating
	Α	non watertight			F7	Black epoxy varnish (*)
Connector	DA	with waterproof O-ring (IP67***)	F7	Shell finish	F16	CCF - Black passivation (*) -
Class		with waterproof O-ring and	<u>'''</u>	Silen iiiisii	F26	conductive
	RA	grommet (IP67***)				hard anodization (*)
				Modification	N	
			N	Code**	S	Consult our sales office

\*\*\* Protection degree: IP 67 (only in the mating area with mated connectors) according to EN 60529

(\*) RoHS compliance

(\*\*) If required

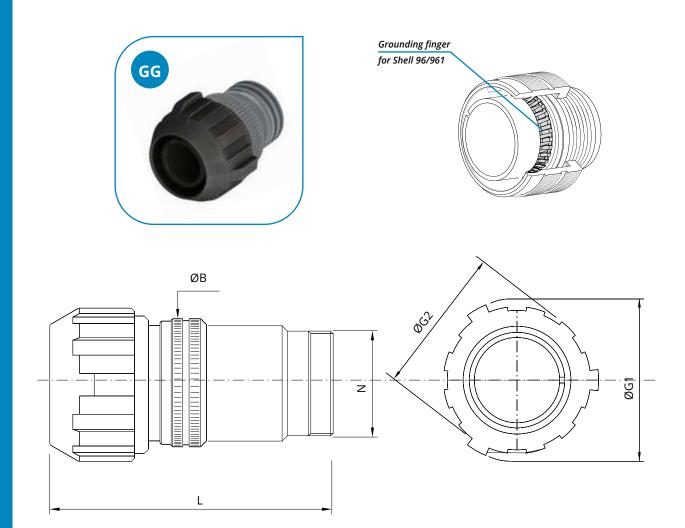
P/N Sample: KVBS 06DAGGT 24-10SX LC F7 N





Plug Connector with rubber covered coupling nut (06..GG - 61..GG - 96..GG - 961..GG) with Backshell Class (SA - SDA - SRA)

Connector with SHORT backshell provided with an external thread suitable for MS3057...A or C type cable-clamps (to be ordered separately). Rubber covered coupling nut able to protect against dust and impact.



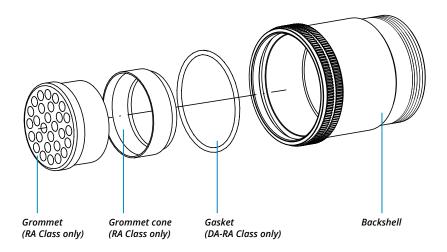
Shell size	ØG1	ØG2	ØB ±0.2	L max	N Backshell Thread in inches
18	49	43.5	30	*	1"-20 UNEF
20	51.5	46	32	*	1" 3/16-18 UNEF
22	56	50.5	37	*	1" 3/16-18 UNEF
24	60	54	40	*	1" 7/16-18 UNEF
28	67	61	45	*	1" 7/16-18 UNEF
36	82	73.5	58	*	2"-18 UNS
40	88	80	63.8	*	2"1/4-16 UN

Dimensions in mm



<sup>\*</sup> On request (please consult our Sales Office)





Insulating material	-	Thermoplastic resin	GG	Coupling Nut Type	GG	Rubber Covered
KVBS Series Code	KVBS	Bayonet Connector with protected mating ramps	Т	Connector Modification**	Т	With plastic caps
Shell Material	-	Aluminum	24-10	Insert Arrangement		Page 14
	06	Plug Connector without grounding finger	S	Contact	S	Socket contacts
	96	Plug Connector	$\underline{}$	Gender	P	Pin contacts
		with grounding finger Plug Connector	X	Polarization Code**		Page 14
06 Shell Type	61	without grounding finger	$\underline{\underline{\hspace{1cm}}}$	Contact		-
		Rubber covered coupling nut (short version)	LC		LC	Less contacts
		Plug Connector	$\underline{\underline{\hspace{1cm}}}$	Termination		
	961	Rubber covered coupling nut (short version)		Contact		Silver plating
		with grounding finger		Plating	CD5	Gold plating
	SA	non watertight			F7	Black epoxy varnish (*)
SDA Connector	SDA	with waterproof O-ring (IP67***)	F7	Shell finish	F16	CCF - Black passivation (*) - conductive
Cluss	SRA	with waterproof O-ring and grommet (IP67***)			F26	hard anodization (*)
		grommet (ii o' )		Modification	N	
			N	Code**	s	Consult our sales office

\*\*\* Protection degree: IP 67 (only in the mating area with mated connectors) according to EN 60529

(\*) RoHS compliance

(\*\*) If required

P/N Sample: KVBS 06SDAGGT 24-10SX LC F7 N

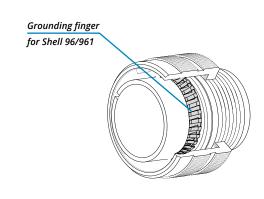


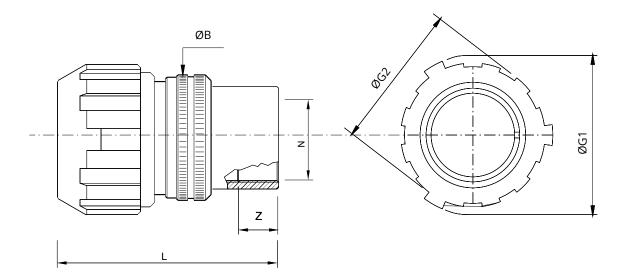


Plug Connector with rubber covered coupling nut (06..GG - 61..GG - 96..GG - 961..GG) with Backshell Class (DA..M - RA..M)

Connector with backshell provided with an internal Metric thread suitable for cable glands or conduit adapters. Rubber covered coupling nut able to protect against dust and impact.







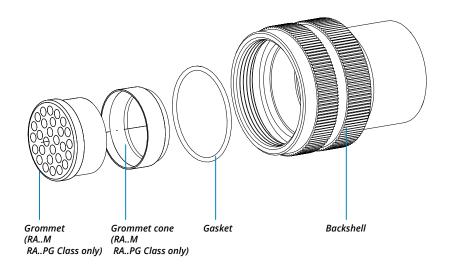
Shell size	ØG1	ØG2	ØB ±0.2	L max	Z min	N Backshell Thread Metric
18	49	43.5	30	104	*	M20
20	51.5	46	32	104	16	M25
22	56	50.5	37	104	*	M25
24	60	54	40	109	*	M32
28	67	61	45	109	15	M32 - M40
36	82	73.5	58	129	*	M40
40	88	80	63.8	129	*	M50

Dimensions in mm

\* On Request







Insulating material	-	Thermoplastic resin	Т	Connector Modification**	т	With plastic caps
KVBS Series Code	KVBS	Bayonet Connector with protected mating ramps	24-10	Insert Arrangement		Page 14
Shell Material	-	Aluminum	S	Contact Gender	S P	Socket contacts Pin contacts
	06	Plug Connector without grounding finger	X Polarization Code**		P	Page 14
	96	Plug Connector with grounding finger				Provided with an internal
06 Shell Type	61	Plug Connector without grounding finger Rubber covered coupling	M20	internal thread	Мхх	Metric thread
		nut (short version) Plug Connector	LC	Contact Termination	LC	Less contacts
	961	Rubber covered coupling nut (short version) with grounding finger		Contact Plating	-	Silver plating
	DA	with waterproof O-ring		riatilig	CD5 F7	Gold plating  Black epoxy varnish (*)
Connector Class	RA	(IP67***) with waterproof O-ring and grommet (IP67***)	<b>F7</b>	Shell finish	F16	CCF - Black passivation (*) - conductive
Caupling Next		grommet (ii o'r )			F26	hard anodization (*)
GG Coupling Nut Type	GG	Rubber Covered	N	Modification	tion N Consult our sales o	
				Code**		Constitution Saids office

\*\*\* Protection degree: IP 67 (only in the mating area with mated connectors) according to EN 60529 (\*) RoHS compliance

(\*\*) If required

P/N Sample: KVBS 06DAGGT 24-10SX M20 LC F7 N



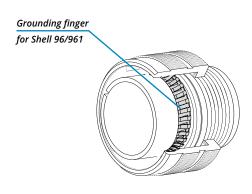


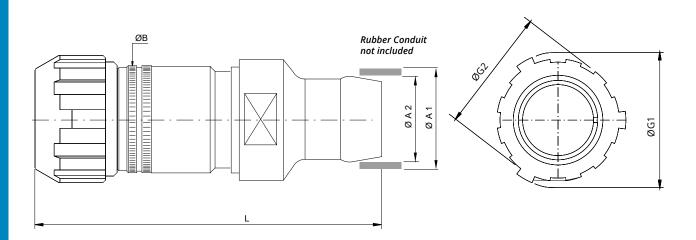
Plug Connector with rubber covered coupling nut (06..GG - 61..GG - 96..GG - 961..GG) with Backshell Class (DA..FS - RA..FS)

Connector with special adapter for UNI4883 rubber conduits.

Conduit's size must be specified adding the diameter dimensions in the P/N (i.e.: KVBS 06DA...FS5040...).







Please consult our Sales Office for further details about this dimension and according to conduit size.

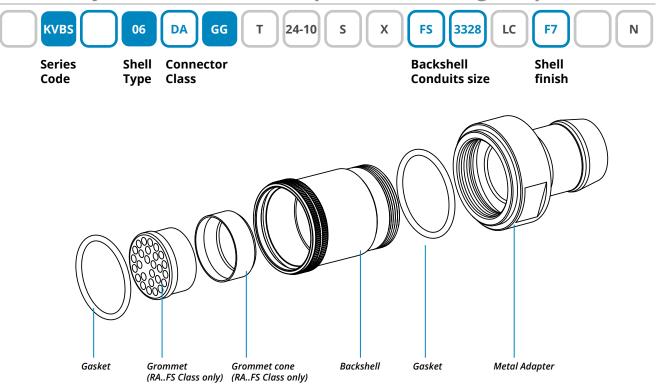
Shell size	ØG1	ØG2	L max	ØB max
18	49	43.5	*	30
20	51.5	46	*	32
22	56	50.5	*	37
24	60	54	*	40
28	67	61	*	45
36	82	73.5	*	58
40	88	80	*	63.8

Shell size	Backshell Conduit Size	ØA1	ØA2
16-18-20	FS2015	20	15
20-22-24-28	FS2520	25	20
18-20-22-24	FS2722	27	22
20-22-24-28	FS3328	33	28
24-28	FS3530	35	30
28-36	FS4035	40	35
28-40	FS4540	45	40
40	FS5040	50	40
36-40	FS5045	50	45
40	FS5550	55	50
40	FS5945	59	45

Dimensions in mm



<sup>\*</sup> On request (please consult our Sales Office)



The accessories for this class are not always available in stock for all sizes; we suggest you consult our Sales Office for availability

Insulating material	-	Thermoplastic resin	Т	Connector Modification**	Т	With plastic caps
KVBS Series Code	KVBS	Bayonet Connector with protected mating ramps	24-10	Insert Arrangement		Page 14
Shell Material		Aluminum		Contact	S	Socket contacts
3Hell Waterial	-	Aldifillidiff	S	Gender	P	Pin contacts
	06	Plug Connector without grounding finger	X	Polarization Code**		Page 14
	96	Plug Connector with grounding finger				Provided with a special
Chall Type		Plug Connector without grounding finger	FS	Backshell Conduits size	FS	adapter for UNI4883 rubber conduits
O6 Shell Type	61	Rubber covered coupling nut (short version)	3328 Conduit Size		хххх	ØA1ØA2
	961	Plug Connector Rubber covered coupling nut (short version) with grounding finger	LC Contact Termination		LC	Less contacts
	DA	with waterproof O-ring		Contact	-	Silver plating
DA Connector Class		(IP67***)		Plating	CD5	Gold plating
Class	RA	with waterproof O-ring and grommet (IP67***) #			F7	Black epoxy varnish (*)
Coupling Nut		D.I.I. G. I	F7	Shell finish	F16	CCF - Black passivation (*) conductive
Type	GG	Rubber Covered		,	F26	hard anodization (*)
			N	Modification Code**	N S	Consult our sales office

\*\*\* Protection degree: IP 67 (only in the mating area with mated connectors) according to EN 60529

(\*) RoHS compliance

(\*\*) If required

P/N Sample: KVBS 06DAGGT 24-10SX FS3328 LC F7 N

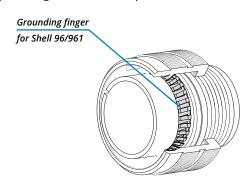


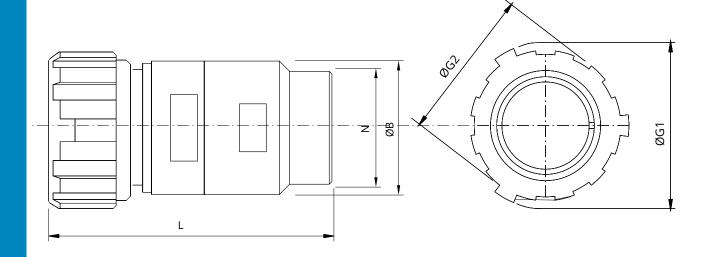


Plug Connector with rubber covered coupling nut (06..GG - 61..GG - 96..GG - 961..GG) with Backshell Class (AST - ST)

Connector with backshell with internal cable retention system (on request ST1/ST2 with clamps for cable diameter reduction) with an external unef thread. Rubber covered coupling nut able to protect against dust and impact.





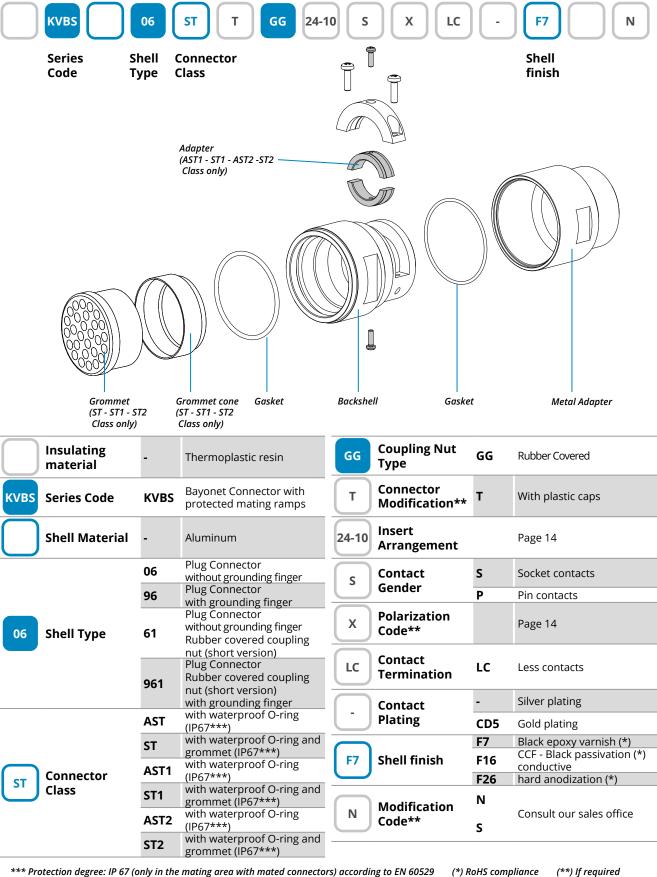


Shell			Cable Rang	Cable Range				
size			±0.2		Backshell Thread in inches	ST	ST1	ST2
18	49	43.5	30	114	1"-20 UNEF	14-9	9-4	*
20	51.5	46	32	125	1" 3/16-18 UNEF	19-14	14-9	*
22	56	50.5	38	126,2	1" 3/16-18 UNEF	19-14	14-9	*
24	60	54	45	119	1" 7/16-18 UNEF	23-18	18-13	*
28	67	61	48	119	1" 7/16-18 UNEF	23-18	18-13	*
36	82	73.5	58	139	2"-18 UNS	33-25	25-18	*
40	88	80	65	139	2"1/4-16 UN	39-31	31-24	24-16

Dimensions in mm



<sup>\*</sup> On request (please consult our Sales Office)



(\*) RoHS compliance

(\*\*) If required

P/N Sample: KVBS 06STT 24-10SX LC F7 N

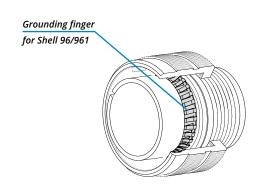


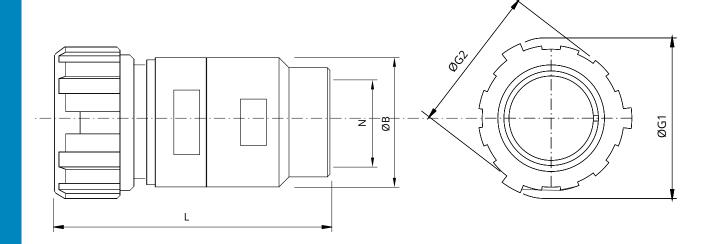


Plug Connector with rubber covered coupling nut (06..GG - 61..GG - 96..GG - 961..GG) with Backshell Class (AST..M - ST..M)

Connector with backshell with internal cable retention system (on request ST1/ST2 with clamps for cable diameter reduction) with an internal Metric thread. Rubber covered coupling nut able to protect against dust and impact.





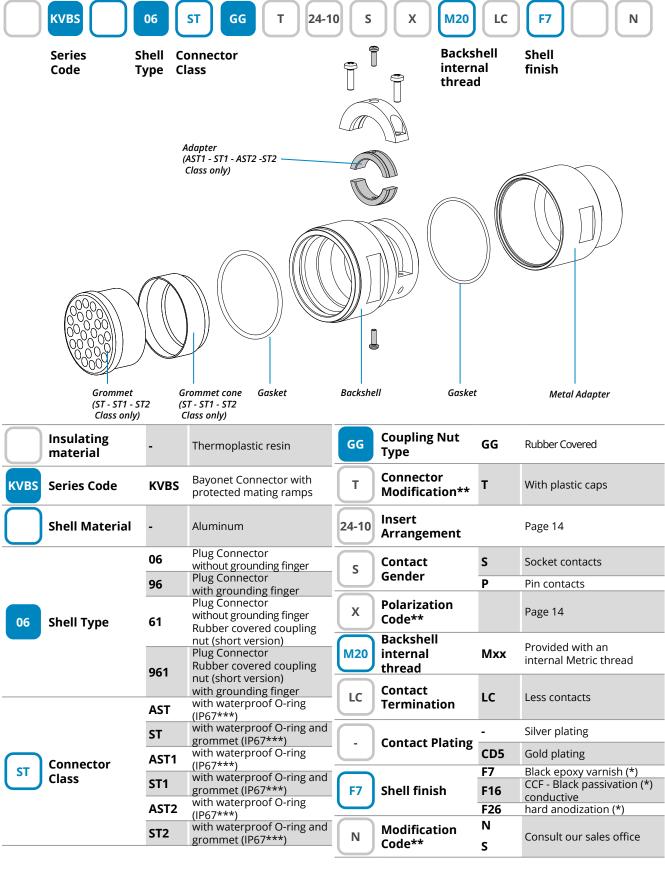


Shell size	ØG1			Cable Range	Cable Range			
			±0.2		Backshell Thread Metric	ST	ST1	ST2
18	49	43.5	30	114	M16 - M20	14-9	9-4	*
20	51.5	46	32	125	M20	19-14	14-9	*
22	56	50.5	38	126,2	M25	19-14	14-9	*
24	60	54	45	119	M25	23-18	18-13	*
28	67	61	48	119	M32	23-18	18-13	*
36	82	73.5	58	139	M32 - M40	33-25	25-18	*
40	88	80	65	139	M40 - M50	39-31	31-24	24-16

Dimensions in mm



<sup>\*</sup> On request (please consult our Sales Office)



\*\*\* Protection degree: IP 67 (only in the mating area with mated connectors) according to EN 60529

(\*) RoHS compliance

(\*\*) If required

P/N Sample: KVBS 06STGGT 24-10SX M20 LC F7 N

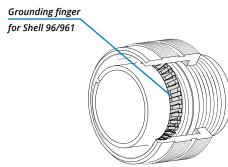


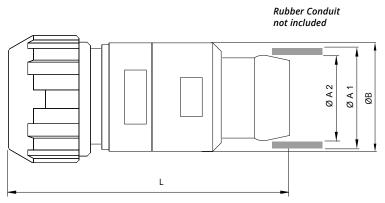


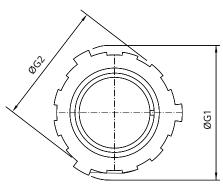
Plug Connector with rubber covered coupling nut (06..GG - 61..GG - 96..GG - 961..GG) with Backshell Class (AST..FS - ST..FS)

Connector with backshell with internal cable retention system (on request ST1/ST2 with clamps for cable diameter reduction) with a special adapter for UNI4883 rubber conduits









Shell size	<b>Backshell Conduit Size</b>	ØA1	ØA2
24-28	FS3328	33	28
24-28	FS3833	38	33
36	FS4035	40	35
40	FS5040	50	40
36	FS5045	50	45
40	FS5550	55	50

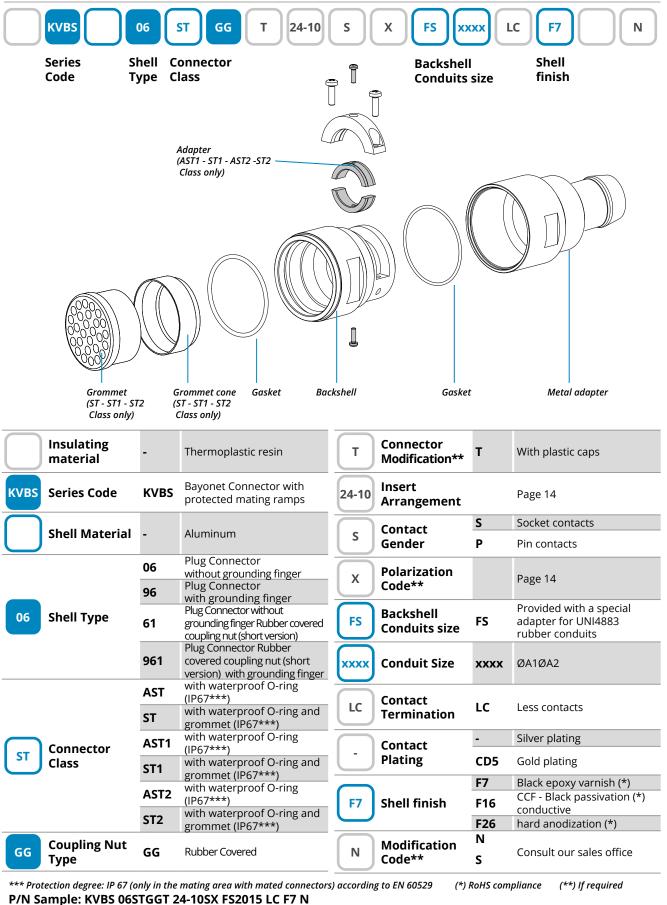
Please consult our Sales Office for further details about this dimension and according to conduit size.

Shell size			L	L Cable Range			
			±0.2		ST	ST1	ST2
18	49	43.5	30	120	14-9	9-4	*
20	51.5	46	32	*	19-14	14-9	*
22	56	50.5	38	*	19-14	14-9	*
24	60	54	45	*	23-18	18-13	*
28	67	61	48	*	23-18	18-13	*
36	82	73.5	58	*	33-25	25-18	*
40	88	80	65	*	39-31	31-24	24-16

Dimensions in mm

\* On request (please consult our Sales Office)





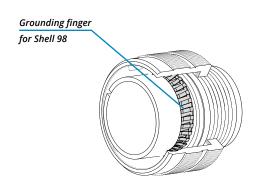
Radiall \*\*

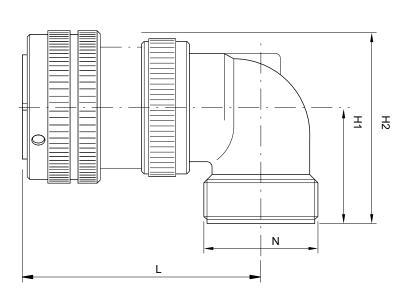


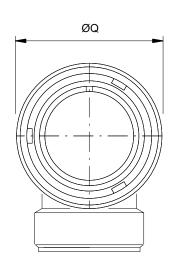
### Plug Connector (08/98) with 90° Elbow Class (A - DA - RA)

Connector with 90° elbow provided with an external thread suitable for MS3057...A or C type cable-clamps (to be ordered separately).







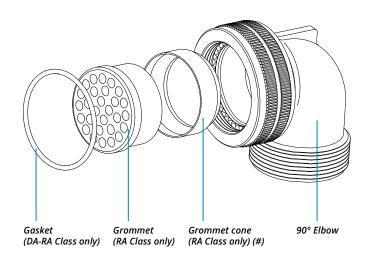


Shell size	ØQ ±0.2	L max	H1 max	H2 max	N Backshell Thread in inches
18	37	75	31	48.1	1"-20 UNEF
20	41	80	33	51.7	1" 3/16-18 UNEF
22	43	80	35	55.3	1" 3/16-18 UNEF
24	48	80	38	59.8	1" 7/16-18 UNEF
28	53	80	40	65	1" 7/16-18 UNEF
36	66.2	90	49	80.3	2"-18 UNS
40	72.4	95	53	87.6	2"1/4-16 UN

Dimensions in mm







Insulating material	-	Thermoplastic resin	24-10	Insert Arrangement		Page 14	
KVBS Series Code	KVBS	Bayonet Connector with	S	Contact	S	Socket contacts	
		protected mating ramps		Gender	P	Pin contacts	
Shell Material	-	Aluminum	x	Polarization Code**		Page 14	
Chall Tyme	08	Plug Connector with 90° elbow without grounding finger	LC	Contact Termination	LC	Less contacts	
08 Shell Type	98	Plug Connector with 90° elbow with grounding finger	-	Contact Plating	- CD5	Silver plating Gold plating	
	Α	non watertight					
<u> </u>		with waterproof O-ring			F7	Black epoxy varnish (*)	
DA Connector Class	DA	(IP67***)	F7	Shell finish	F16	CCF - Black passivation (*) - conductive	
	RA	with waterproof O-ring and grommet (IP67***)#			F26	hard anodization (*)	
Connector		2.12 8.5st (ii o/ /ii		Modification	N		
T Modification**	T With plastic caps		N Code**		S	Consult our sales office	

\*\*\* Protection degree: IP 67 (only in the mating area with mated connectors) according to EN 60529 (\*) RoHS compliance (\*\*) If required P/N Sample: KVBS 08DAT 24-10SX LC F7 N (#) In some sizes the grommet cone is not needed



finish

Code

**Material Type** 

Class

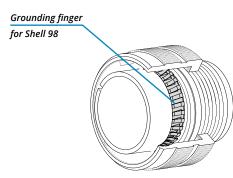


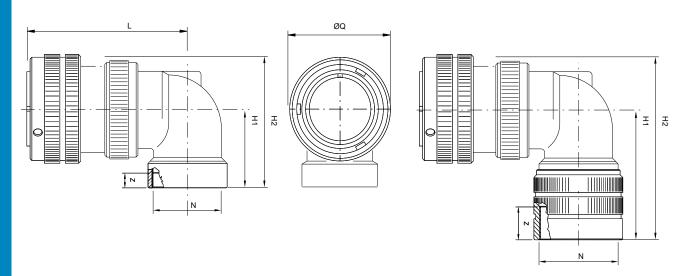
### Plug Connector (08/98) with 90° Elbow Class (DA...M - RA...M)

Connector with 90° elbow provided with an internal Metric thread suitable for cable glands or conduit adapters.







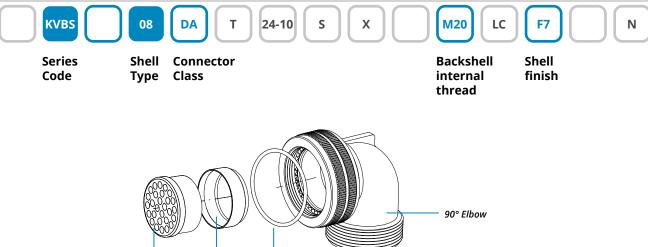


Some version can be supplied with internal threading without adaptor. Some version can be supplied with adaptor.

			Withou	t adapte	r		With adapter			
Shell size	ØQ ±0.2	L max	Z min	H1 max	H2 max	N Backshell Thread	Z min	H1 max	H2 max	N Thread
						Metric				Metric
18	37	75	7	31	48.1	M20	12	60	75.2	M25
20	41	80	7	33	51.7	M25	12	62	80.7	M16-M20-M32-M40
22	43	80	7	35	55.3	M25	12	65	85.3	M16-M20-M32-M40
24	48	80	7	38	59.8	M32	15	69	90.8	M25-M40
28	53	80	7	40	65	M32	15	72	97	M25-M40
36	66.2	90	-	-	-	-	15	81	112.3	M32-M40
40	72.4	95	-	-	-	-	15	85	119.6	M32-M40-M50

Dimensions in mm





Gasket Gasket Grommet cone Grommet (RA..M (RA..M RA..PG Class only) RA..PG Class only) (#) Adapter Some version can be supplied with internal threading without adaptor.

Insulating	-	Thermoplastic resin	S	Contact	S	Socket contacts
material			Gender		P	Pin contacts
KVBS Series Code	KVBS	Bayonet Connector with protected mating ramps	x	Polarization Code**		Page 14
Shell Materi	al -	Aluminum	M20	Backshell internal thread	Mxx	Provided with an internal Metric thread
08 Shell Type	08	Plug Connector with 90° elbow without grounding finger	LC	Contact Termination	LC	Less contacts
Silen Type	98	Plug Connector with 90° elbow with grounding finger		Contact Plating	- CD5	Silver plating  Gold plating
Connector	DA	with waterproof O-ring (IP67***)			F7	Black epoxy varnish (*)
Class	RA	with waterproof O-ring and grommet (IP67***)#	F7	Shell finish	F16	CCF - Black passivation (*) - conductive
		und grommet (ii or jii			F26	hard anodization (*)
T Connector Modification	1** T	With plastic caps	N	Modification	N	Consult our sales office
24-10 Insert Arrangemen	ıt	Page 14		Code**	S	

\*\*\* Protection degree: IP 67 (only in the mating area with mated connectors) according to EN 60529

(\*) RoHS compliance

(\*\*) If required

P/N Sample: KVBS 08DAT 24-10SX M20 LC F7 N

(#) In some sizes the grommet cone is not needed

Some version can be supplied with

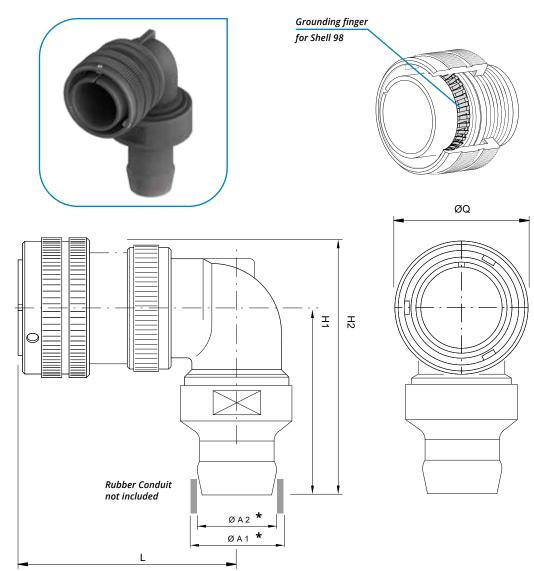
adaptor.





#### Plug Connector (08/98) with 90° Elbow Class (DA..FS - RA..FS)

Connector with special adapter for UNI4883 rubber conduits. Conduit's size must be specified adding the diameter dimensions in the P/N (i.e.: KVBS 06DA...FS5040...).



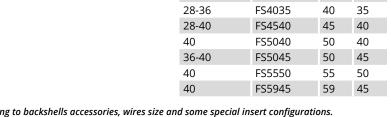
Please consult our Sales Office for further details about this dimension and according to conduit size.

Shell size	ØQ ±0.2	L max	H1 max	H2 max
18	37	75	*	*
20	41	80	*	*
22	43	80	*	*
24	48	80	*	*
28	53	80	*	*
36	66.2	90	*	*
40	72.4	95	*	*

<sup>\*</sup> On request (please consult our Sales Office)

Dimensions in mm

Dimension "L" can be different from the value indicated according to backshells accessories, wires size and some special insert configurations.



24-28

**Shell size** 

16-18-20

20-22-24-28

18-20-22-24

20-22-24-28



Backshell ØA1 ØA2

20

25

27

33

35

15

20

22

28

30

Conduit Size

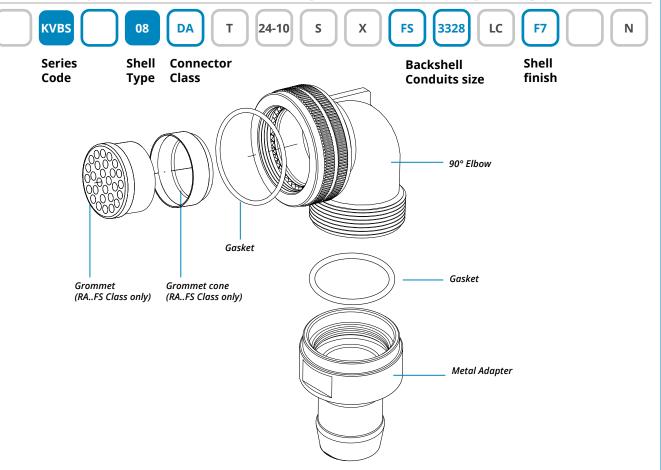
FS2015

FS2520

FS2722

FS3328

FS3530



The accessories for this class are not always available in stock for all sizes; we suggest you consult our Sales Office for availability

Insulating material	-	Thermoplastic resin	S Contact Gender		S	Socket contacts
material				Gender		Pin contacts
KVBS Series Code	KVBS	Bayonet Connector with protected mating ramps	x	Polarization Code**		Page 14
Shell Material	-	Aluminum	FS	Backshell Conduits size	FS	Provided with a special adapter for UNI4883 rubber conduits
Og Shall Tyma	08	Plug Connector with 90° elbow without grounding finger	3328	Conduit Size	хххх	ØA1ØA2
08 Shell Type	98	Plug Connector with 90° elbow with grounding finger	LC	Contact Termination	LC	Less contacts
Connector	DA	with waterproof O-ring (IP67***)	Contact		-	Silver plating
Class	DA	with waterproof O-ring		Plating	CD5	Gold plating
	RA	and grommet (IP67***) #			F7	Black epoxy varnish (*)
Connector	т	With plastic caps	F7	Shell finish	F16	CCF - Black passivation (*) conductive
Modification**	-	i p			F26	hard anodization (*)
24-10 Insert		Page 14	N	Modification	N	Canada anna la affici
Arrangement		1 460 14	N Code**		S	Consult our sales office

\*\*\* Protection degree: IP 67 (only in the mating area with mated connectors) according to EN 60529 (\*) RoHS compliance (\*\*) If required P/N Sample: KVBS 08DAT 24-10SX FS3328 LC F7 N (#) In some sizes the grommet cone is not needed

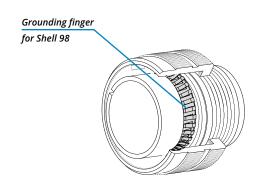


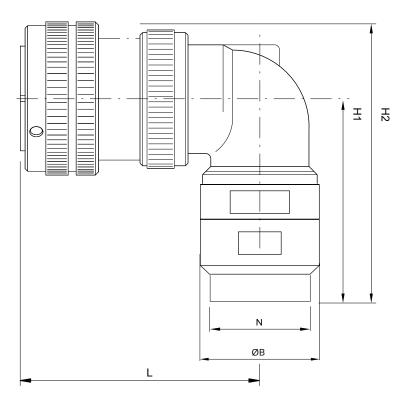


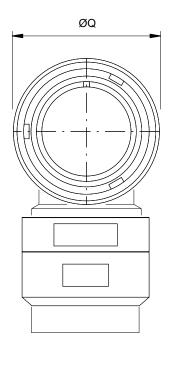
#### Plug Connector (08/98) with 90° Elbow Class (AST - ST)

Connector with backshell with internal cable retention system (on request ST1/ST2 with clamps for cable diameter reduction) with an external unef thread.







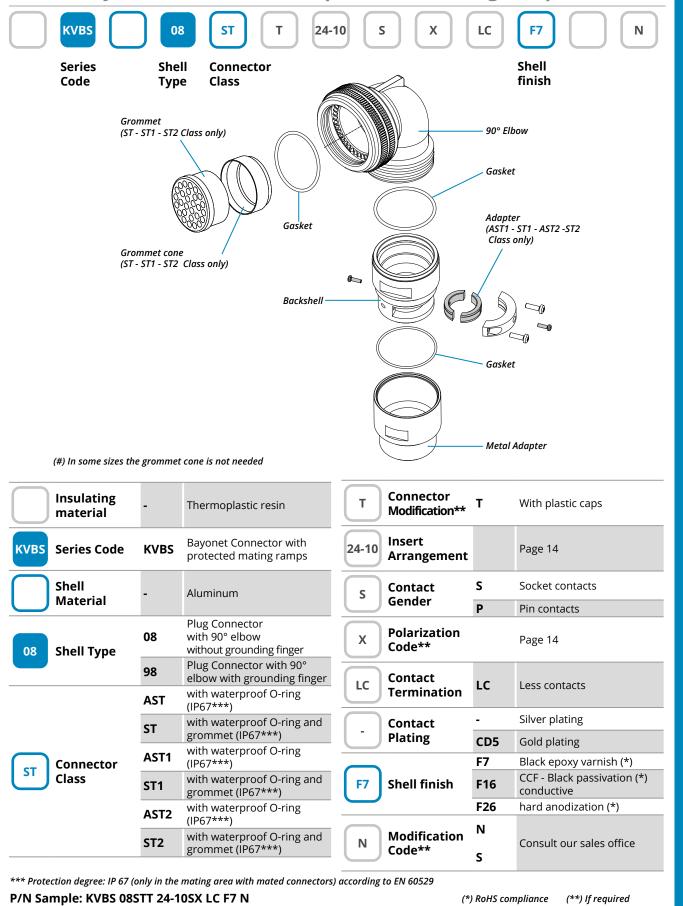


Shell size	ØQ	ØB ±0.2	L	H1	H2	N Backshell Thread in inches	Cable Ra	nge ST1	ST2
18	37	30	79	*	*	1"-20 UNEF	14-9	9-4	*
10		30	79			1 -20 OINEF	14-5	<del>3-4</del>	
20	41	32	84	*	*	1" 3/16-18 UNEF	19-14	14-9	*
22	43	38	84	*	*	1" 3/16-18 UNEF	19-14	14-9	*
24	48	45	84	*	*	1" 7/16-18 UNEF	23-18	18-13	*
28	53	48	84	*	*	1" 7/16-18 UNEF	23-18	18-13	*
36	66.2	58	94	*	*	2"-18 UNS	33-25	25-18	*
40	72.4	65	99	*	*	2"1/4-16 UN	39-31	31-24	24-16

Dimensions in mm



<sup>\*</sup> On request (please consult our Sales Office)

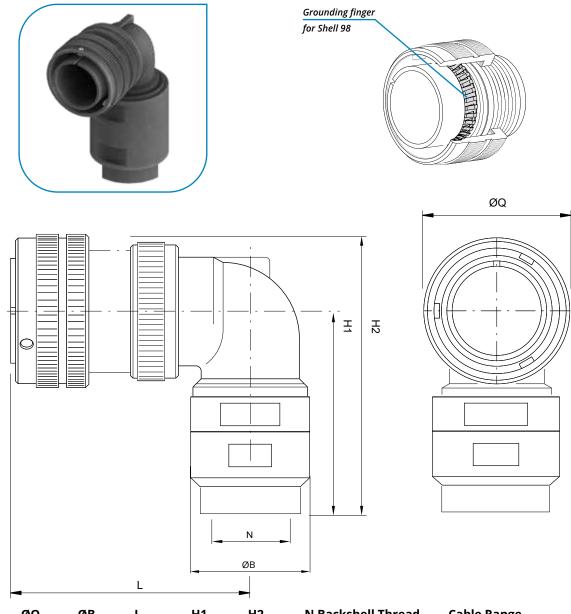






### Plug Connector (08/98) with 90° Elbow Class (AST..M - ST..M)

Connector with backshell with internal cable retention system (on request ST1/ST2 with clamps for cable diameter reduction) with an internal Metric thread

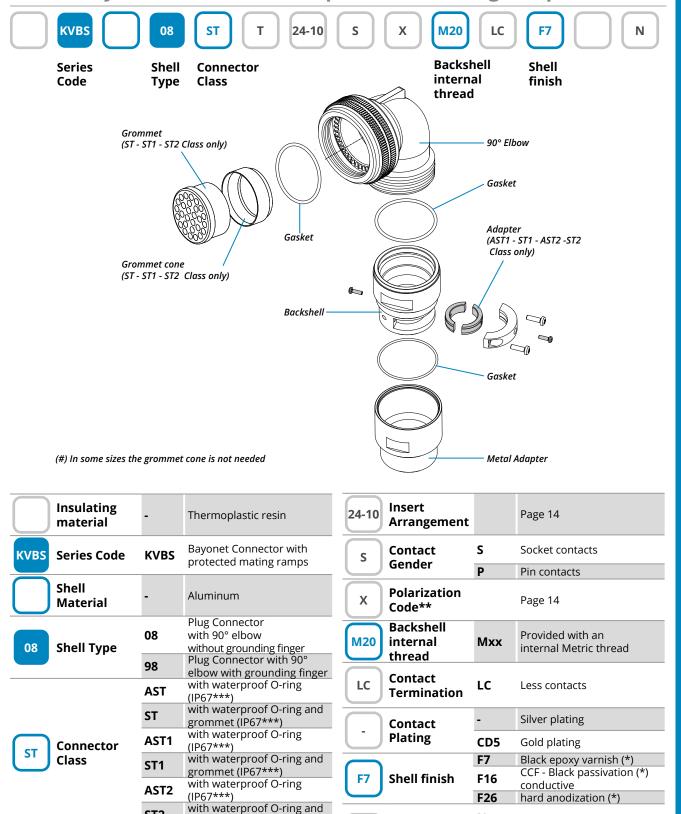


Shell	ØQ	ØB	L	H1	H2	N Backshell Thread	Cable Ra	nge	
size		±0.2				Metric	ST	ST1	ST2
18	37	30	79	*	*	M16 - M20	14-9	9-4	*
20	41	32	84	*	*	M20	19-14	14-9	*
22	43	38	84	*	*	M25	19-14	14-9	*
24	48	45	84	*	*	M25	23-18	18-13	*
28	53	48	84	*	*	M32	23-18	18-13	*
36	66.2	58	94	*	*	M32 - M40	33-25	25-18	*
40	72.4	65	99	*	*	M40 - M50	39-31	31-24	24-16

Dimensions in mm



<sup>\*</sup> On request (please consult our Sales Office)



With plastic caps

grommet (IP67\*\*\*)

P/N Sample: KVBS 08STT 24-10SX M20 LC F7 N

ST2

(\*) RoHS compliance

Ν

S

Modification

Code\*\*

(\*\*) If required

Consult our sales office



Connector

Modification\*\*

T

<sup>\*\*\*</sup> Protection degree: IP 67 (only in the mating area with mated connectors) according to EN 60529

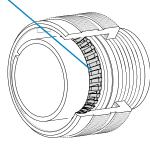


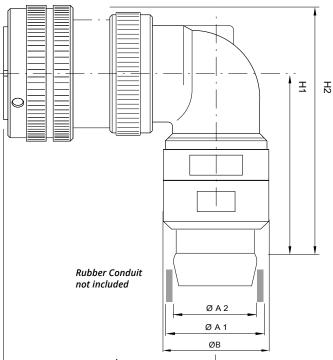
### Plug Connector (08/98) with 90° Elbow Class (AST..FS - ST..FS)

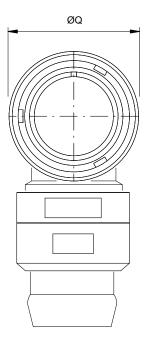
Connector with backshell with internal cable retention system (on request ST1/ST2 with clamps for cable diameter reduction) with a special adapter for UNI4883 rubber conduits











Shell size	ØQ	ØB ±0.2	L	H1	H2	Cable I	Range ST1	ST2
18	37	30	79	*	*	14-9	9-4	*
20	41	32	84	*	*	19-14	14-9	*
22	43	38	84	*	*	19-14	14-9	*
24	48	45	84	*	*	23-18	18-13	*
28	53	48	84	*	*	23-18	18-13	*
36	66.2	58	94	*	*	33-25	25-18	*
40	72.4	65	99	*	*	39-31	31-24	24-16

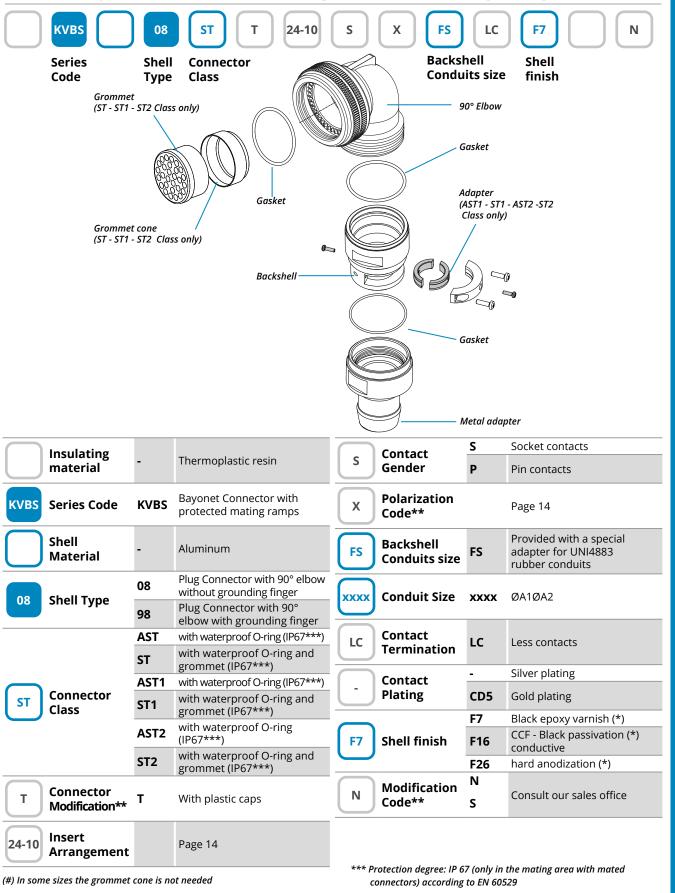
Shell size	Backshell Conduit Size	ØA1	ØA2
24-28	FS3328	33	28
24-28	FS3833	38	33
36	FS4035	40	35
40	FS5040	50	40
36	FS5045	50	45
40	FS5550	55	50

Please consult our Sales Office for further details about this dimension and according to conduit size.

Dimensions in mm

\* On request (please consult our Sales Office)







(\*\*) If required

(\*) RoHS compliance

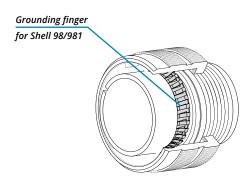
P/N Sample: KVBS 08STT 24-10SX FS5040 LC F7 N

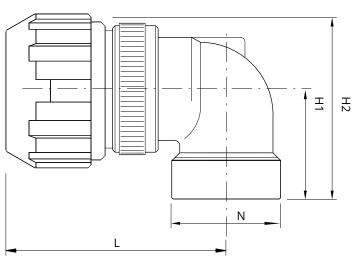


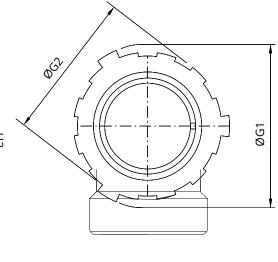
Plug Connector with rubber covered coupling nut (08..GG - 81..GG - 98..GG - 981..GG) with 90° Elbow Class (A - DA - RA)

Connector with 90° elbow provided with an external thread suitable for MS3057...A or C type cable-clamps (to be ordered separately). Rubber covered coupling nut able to protect against dust and impact.







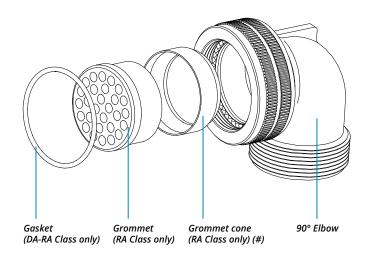


Shell size	ØG1	ØG2	L max	H1 max	H2 max	N Backshell Thread in inches
18	49	43.5	79	31	55.5	1"-20 UNEF
20	51.5	46	84	33	58.8	1" 3/16-18 UNEF
22	56	50.5	84	35	63	1" 3/16-18 UNEF
24	60	54	84	38	68	1" 7/16-18 UNEF
28	67	61	84	40	73.5	1" 7/16-18 UNEF
36	82	73.5	94	49	90	2"-18 UNS
40	88	80	99	53	97	2"1/4-16 UN

Dimensions in mm







Insulating material	-	Thermoplastic resin	GG	Coupling Nut Type	GG	Rubber Covered
KVBS Series Code	KVBS	Bayonet Connector with protected mating ramps	Т	Connector Modification**	Т	With plastic caps
Shell Material	-	Aluminum	24-10	Insert Arrangement		Page 14
	08	Plug Connector with 90° elbow	S	Contact	S	Socket contacts
		without grounding finger		Gender	P	Pin contacts
	98	Plug Connector with 90° elbow with grounding finger	x	Polarization Code**		Page 14
08 Shell Type	81	Plug Connector with 90° elbow without grounding finger Rubber covered coupling	LC	Contact Termination	LC	Less contacts
		nut (short version)		Contact	-	Silver plating
		Plug Connector with 90° elbow		Plating	CD5	Gold plating
	981	Rubber covered coupling			F7	Black epoxy varnish (*)
		nut (short version) with grounding finger	[ F7 ]	Shell finish	F16	CCF - Black passivation (*) - conductive
	Α	non watertight			F26	hard anodization (*)
Connector Class	DA	with waterproof O-ring (IP67***)	N	Modification	N	Consult our sales office
Class	RA	with waterproof O-ring and grommet (IP67***)		Code**	S	Consult our sales office

\*\*\* Protection degree: IP 67 (only in the mating area with mated connectors) according to EN 60529 (\*) RoHS compliance (\*\*) If required

P/N Sample: KVBS 08DAGGT 24-10SX LC F7 N

(#) In some sizes the grommet cone is not needed



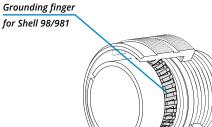


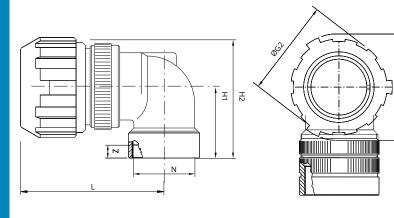
Plug Connector with rubber covered coupling nut (08..GG - 81..GG - 98..GG - 981..GG) with 90° Elbow Class (DA...M - RA...M)

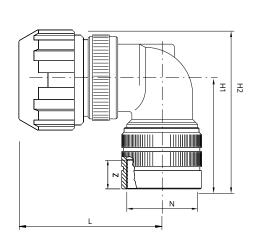
Connector with 90° elbow provided with an internal Metric thread suitable for cable glands or conduit adapters.









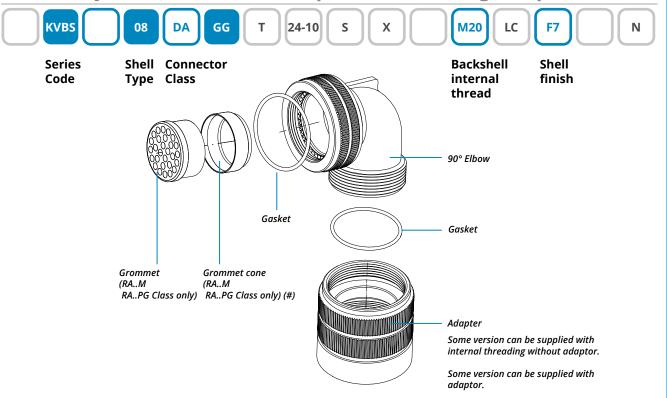


Some version can be supplied with internal threading without adaptor. Some version can be supplied with adaptor.

				Withou	ıt adapte	er		With adapter			
Shell size	ØG1	ØG2	L max	Z min	H1 max	H2 max	N Backshell Thread	Z min	H1 max	H2 max	N Thread
							Metric				Metric
18	49	43.5	61.5	7.5	31	55.5	M20	12	60	84.5	M25
20	51.5	46	63.5	9	33	58.8	M25	12	62	87.8	M16-M20
22	56	50.5	65.5	7.5	35	63	M25	12	65	93	M32-M40
24	60	54	69	11	38	68	M32	15	69	99	M25-M40
28	67	61	69	10.7	40	73.5	M32	15	72	105.5	M40
36	82	73.5	77.5	13	49	90	-	15	81	122	M32-M40
40	88	80	82.5	12.3	53	97	-	15	85	129	M32-M40-M50

Dimensions in mm





Insulating material	-	Thermoplastic resin	Т	Connector Modification**	Т	With plastic caps
KVBS Series Code	KVBS	Bayonet Connector with protected mating ramps	24-10	Insert Arrangement		Page 14
				Contact	S	Socket contacts
Shell Material	-	Aluminum	S	S Gender		Pin contacts
	08	Plug Connector with 90° elbow without grounding finger	x	Polarization Code**		Page 14
	98	98 Plug Connector with 90° elbow with grounding finger		Backshell internal	Mxx	Provided with an internal Metric thread
08 Shell Type	81	Plug Connector with 90° elbow without grounding finger Rubber covered coupling nut (short version)	LC	thread Contact Termination	LC	Less contacts
		Plug Connector	Contact		-	Silver plating
	981	with 90° elbow Rubber covered coupling		Plating	CD5	Gold plating
	<b>90 I</b>	nut (short version)			F7	Black epoxy varnish (*)
		with grounding finger with waterproof O-ring	F7	Shell finish	F16	CCF - Black passivation (*) - conductive
Connector	DA	(IP67***)			F26	hard anodization (*)
Class	RA	with waterproof O-ring and			N	,
	IVA	grommet (IP67***)#	N	Modification Code**		Consult our sales office
GG Coupling Nut Type	GG	Rubber Covered			S	

\*\*\* Protection degree: IP 67 (only in the mating area with mated connectors) according to EN 60529 (\*) RoHS compliance (\*\*) If required

P/N Sample: KVBS 08DAGGT 24-10SX M20 LC F7 N

(#) In some sizes the grommet cone is not needed

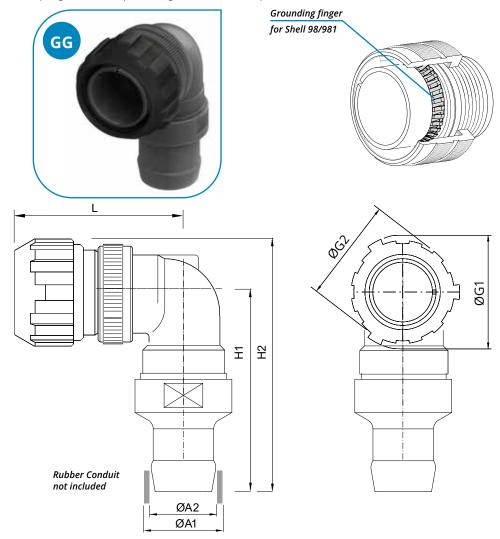




Plug Connector with rubber covered coupling nut (08..GG - 81..GG - 98..GG - 981..GG) with 90° Elbow Class (DA..FS - RA..FS)

Connector with special adapter for UNI4883 rubber conduits.

Conduit's size must be specified adding the diameter dimensions in the P/N (i.e.: KVBS 08DA...FS5040...). Rubber covered coupling nut able to protect against dust and impact.



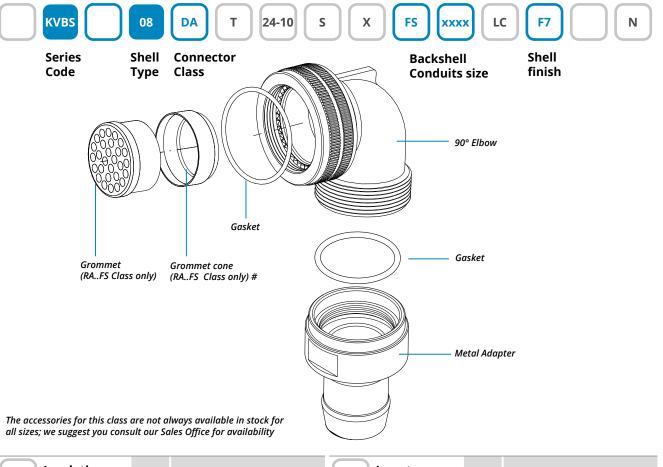
Please consult our Sales Office for further details about this dimension and according to conduit size.

Shell size	ØG1	ØG2	L max	H1	H2
18	49	43.5	68	85	109.5
20	51.5	46	71	85	110.8
22	56	50.5	71	85	113
24	60	54	76	85	115
28	67	61	76	85	118.5
36	82	73.5	84	90	131
40	88	80	88	95	139

Shell size	Backshell Conduit Size	ØA1	ØA2
16-18-20	FS2015	20	15
20-22-24-28	FS2520	25	20
18-20-22-24	FS2722	27	22
20-22-24-28	FS3328	33	28
24-28	FS3530	35	30
28-36	FS4035	40	35
28-40	FS4540	45	40
40	FS5040	50	40
36-40	FS5045	50	45
40	FS5550	55	50
40	FS5945	59	45

Dimensions in mm





	nsulating material	-	Thermoplastic resin	24-10	Insert Arrangement		Page 14
			Bayonet Connector with		Contact	S	Socket contacts
KVBS	Series Code	KVBS	protected mating ramps	S	Gender	P	Pin contacts
	Shell Material	-	Aluminum	x	Polarization Code**		Page 14
		80	Plug Connector with 90° elbow without grounding finger		Backshell		Provided with a special
	Shell Type	98	Plug Connector with 90° elbow with grounding finger	FS	Conduits size	FS	adapter for UNI4883 rubber conduits
08		81	Plug Connector with 90° elbow without grounding finger Rubber covered coupling nut	Conduit Size		xxxx	ØA1ØA2
		981	(short version) Plug Connector with 90° elbow Rubber covered coupling nut (short version)	LC	Contact Termination	LC	Less contacts
			with grounding finger		Contact	-	Silver plating
DA	Connector	DA	with waterproof O-ring (IP67***)		Plating	CD5	Gold plating
UA	Class	RA	with waterproof O-ring and			F7	Black epoxy varnish (*)
	Connector		grommet (IP67***) #	F7	Shell finish	F16	CCF - Black passivation (*) conductive
	Modification**	Т	With plastic caps			F26	hard anodization (*)
				N	Modification Code**	N S	Consult our sales office

<sup>\*\*\*</sup> Protection degree: IP 67 (only in the mating area with mated connectors) according to EN 60529

P/N Sample: KVBS 08DAT 24-10SX FS2015 LC F7 N

(#) In some sizes the grommet cone is not needed

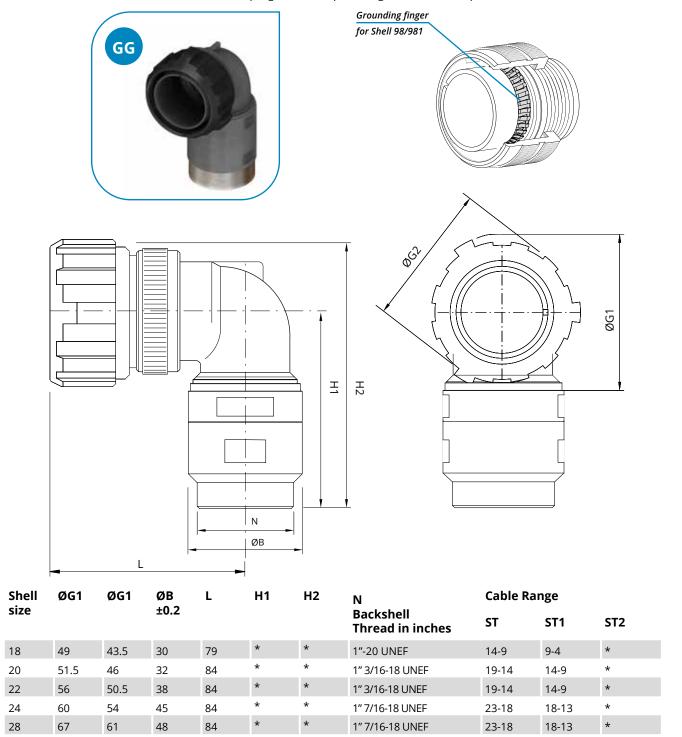
<sup>(\*)</sup> RoHS compliance

<sup>(\*\*)</sup> If required



Plug Connector with rubber covered coupling nut (08..GG - 81..GG - 98..GG - 981..GG) with 90° Elbow Class (AST - ST)

Connector with backshell with internal cable retention system (on request ST1/ST2 with clamps for cable diameter reduction) with an external unef thread. Rubber covered coupling nut able to protect against dust and impact.



Dimensions in mm

82

88

36

40

25-18

31-24

24-16

Dimension "L" can be different from the value indicated according to backshells accessories, wires size and some special insert configurations.

2"-18 UNS

2"1/4-16 UN



73.5

80

58

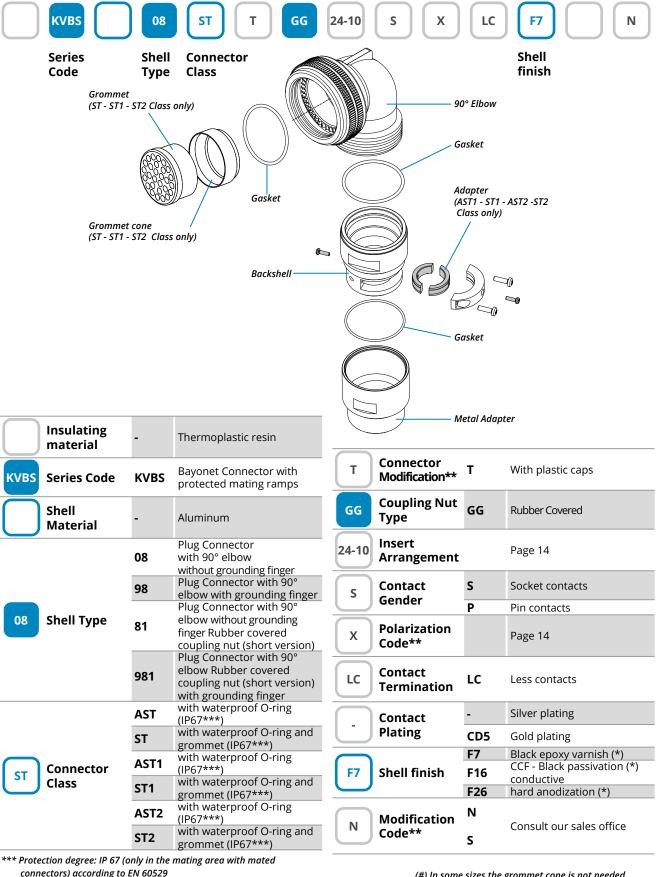
65

94

33-25

39-31

<sup>\*</sup> On request (please consult our Sales Office)



connectors) according to EN 60529

P/N Sample: KVBS 08STGGT 24-10SX LC F7 N

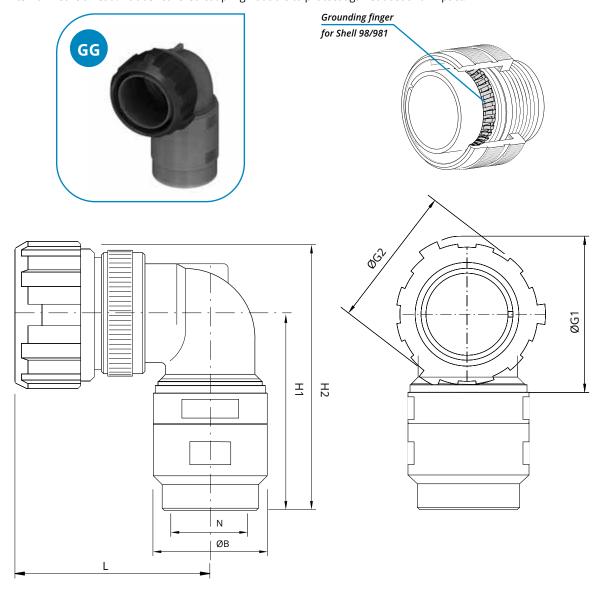
(#) In some sizes the grommet cone is not needed (\*) RoHS compliance (\*\*) If required





Plug Connector with rubber covered coupling nut (08..GG - 81..GG - 98..GG - 981..GG) with 90° Elbow Class (AST..M - ST..M)

Connector with backshell with internal cable retention system (on request ST1/ST2 with clamps for cable diameter reduction) with an internal Metric thread. Rubber covered coupling nut able to protect against dust and impact.

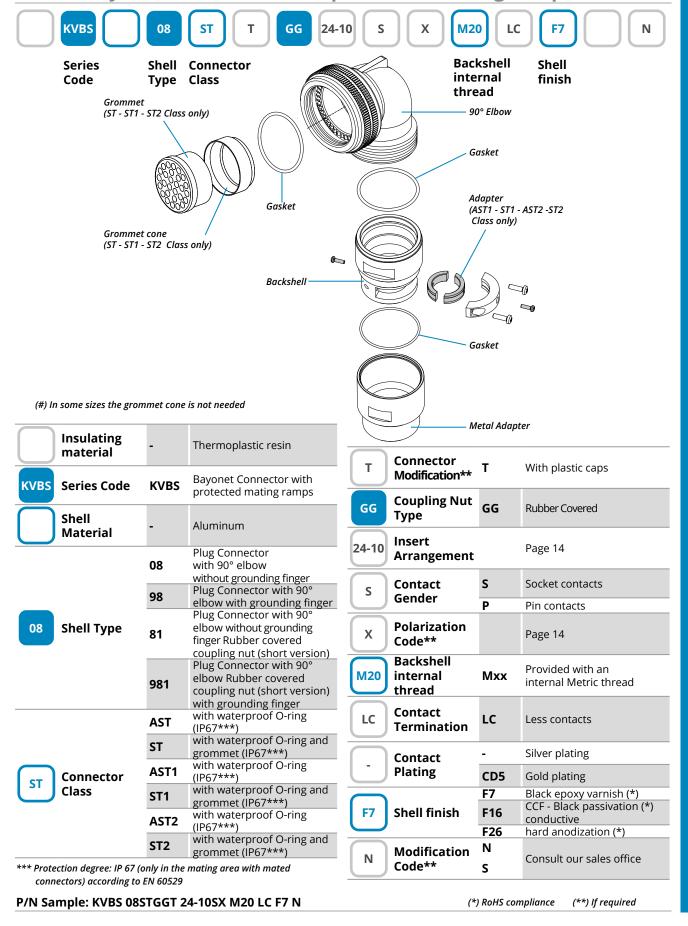


Shell	ØG1			Cable Range						
size			±0.2				Backshell Thread Metric	ST	ST1	ST2
18	49	43.5	30	79	*	*	M16 - M20	14-9	9-4	*
20	51.5	46	32	84	*	*	M20	19-14	14-9	*
22	56	50.5	38	84	*	*	M25	19-14	14-9	*
24	60	54	45	84	*	*	M25	23-18	18-13	*
28	67	61	48	84	*	*	M32	23-18	18-13	*
36	82	73.5	58	94	*	*	M32 - M40	33-25	25-18	*
40	88	80	65	99	*	*	M40 - M50	39-31	31-24	24-16

Dimensions in mm



<sup>\*</sup> On request (please consult our Sales Office)

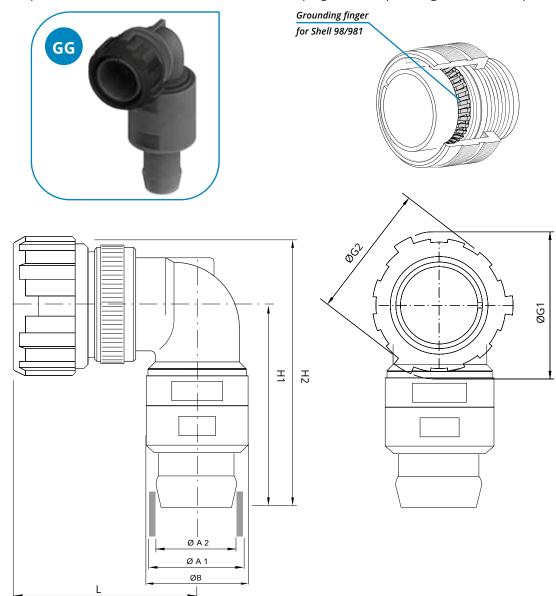






Plug Connector with rubber covered coupling nut (08..GG - 81..GG - 98..GG - 981..GG) with 90° Elbow Class (AST..FS - ST..FS)

Connector with backshell with internal cable retention system (on request ST1/ST2 with clamps for cable diameter reduction) with a special adapter for UNI4883 rubber conduits. Rubber covered coupling nut able to protect against dust and impact.



Shell	ØG1	ØG1	ØB	L	H1	H2	Cable Range		
size			±0.2				ST	ST1	ST2
18	49	43.5	30	79	*	*	14-9	9-4	*
20	51.5	46	32	84	*	*	19-14	14-9	*
22	56	50.5	38	84	*	*	19-14	14-9	*
24	60	54	45	84	*	*	23-18	18-13	*
28	67	61	48	84	*	*	23-18	18-13	*
36	82	73.5	58	94	*	*	33-25	25-18	*
40	88	80	65	99	*	*	39-31	31-24	24-16

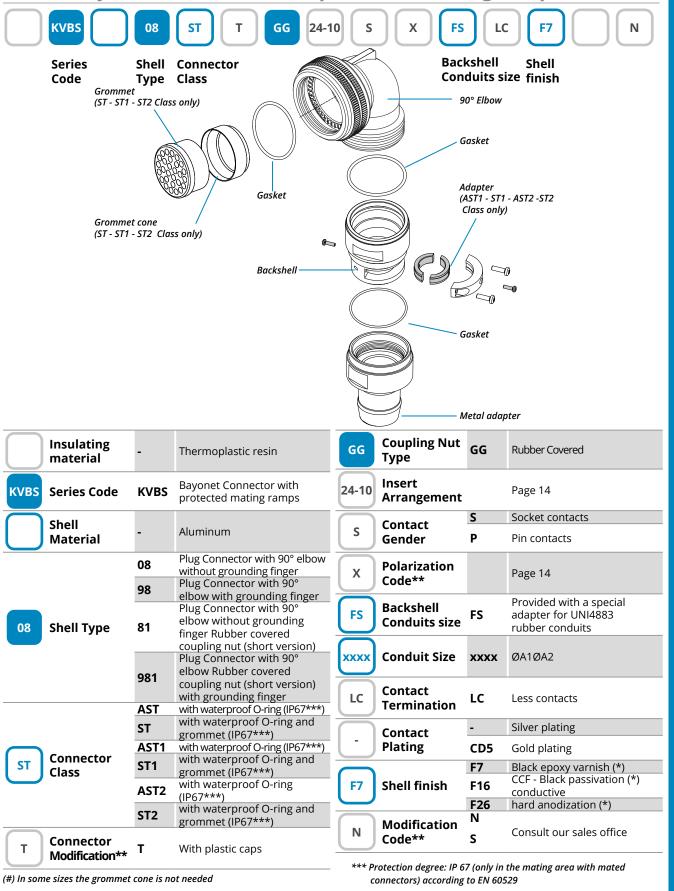
Shell size	Backshell Conduit Size	ØA1	ØA2
24-28	FS3328	33	28
24-28	FS3833	38	33
36	FS4035	40	35
40	FS5040	50	40
36	FS5045	50	45
40	FS5550	55	50

Please consult our Sales Office for further details about this dimension and according to conduit size.

\* On request (please consult our Sales Office)

Dimension "L" can be different from the value indicated according to backshells accessories, wires size and some special insert configurations.







P/N Sample: KVBS 08STGGT 24-10SX FS5040 LC F7 N

Go online for data sheets & assembly instructions.

(\*\*) If required

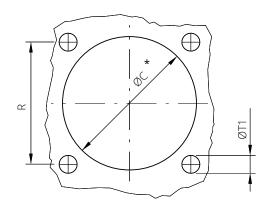
(\*) RoHS compliance



#### Rear Mounting Receptacle (030) with Backshell Class (DA...M - RA...M)

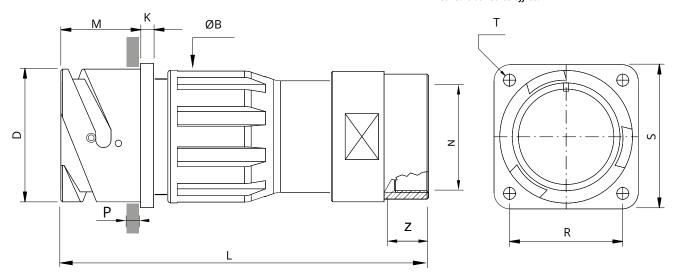
Connector with backshell provided with an internal Metric thread suitable for cable glands or conduit adapters.





#### Panel cut out

\* For installation with backshell mounted, consult our sales office.



Shell size	ØD +0 -0.15	L max	M ±0.2	К ±0.2	Z min	N Backshell Thread Metric	R ±0.1	\$ ±0.3	ØT	ØT1	P Panel Thickness Max **	ØC* ±0.2
18	30.8	103	23.4	4	12	M20	27	34.9	M4	4.5	7.25	31.7
20	34.2	120	23.4	4	15	M25	29.4	38.1	M4	4.5	7.3	35
22	37.4	120	23.4	4	15	M25	31.8	41	M4	4.5	7.3	38.3
24	40.9	139	23.4	4	16	M32	34.9	44.5	M4	4.5	6.85	41.8
28	46.7	140	24.4	4	16	M32	39.7	50.8	M5	5.5	7.8	47.6
36	59.6	151	24.4	4	***	M40	49.2	63.5	M5	5.5	7.5	60.5
40	65.5	154	24.4	4	***	M50	55.6	69.8	M5	5.5	7.5	66.4

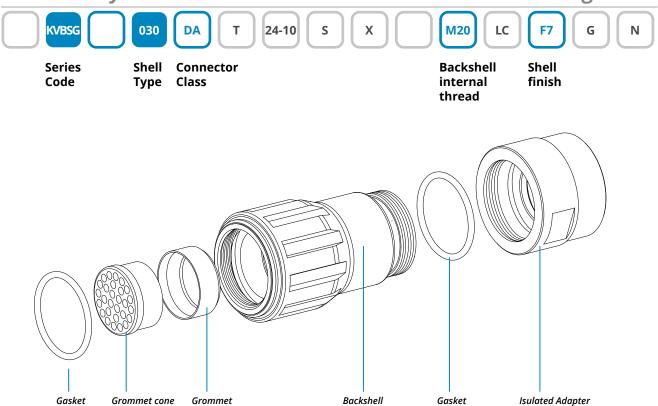
<sup>\*\*</sup> For use with no rubber covered nut

Dimensions in mm



For use with shell type GG coupling nut rubber covered (or shell type 61 or 81), please consult our sales office.

<sup>\*\*\*</sup> On request (please consult our Sales Office)



The accessories for this class are not always available in stock for all sizes; we suggest you consult our Sales Office for availability

Insulating material	-	Thermoplastic resin	x	Polarization Code**		Page 14
KVBSG Series Code	KVBSG	Bayonet Connector with external insulated coating	M20	Backshell internal thread	Мхх	Provided with an internal Metric thread
Shell Material	-	Aluminum	LC	Contact Termination	LC	Less contacts
Chall Trunc	020	Rear mounting		Contact	-	Silver plating
030 Shell Type	Shell Type 030 Receptacle -		Plating	CD5	Gold plating	
	DA	with waterproof O-ring (IP67***)			F7	Black epoxy varnish (*)
Connector Class	RA	with waterproof O-ring	F7	Shell finish	F16	CCF - Black passivation (*) - conductive
	<b>T</b>	and grommet (IP67***)			F26	hard anodization (*)
	T	With plastic caps			-	Without gasket
T Connector Modification**	-	Receptacle connector with threaded holes	G	Panel Gasket	G	With waterproof panel gasket
	FP	Receptacle connector with through holes			G3	With waterproof shielded panel gasket
24-10 Insert		Page 14	N	Modification	N	Consult our sales office
Arrangement			Code**		S	Consult our sales office
S Contact	S	Socket contacts				
Gender	Р	Pin contacts				

\*\*\* Protection degree: IP 67 (only in the mating area with mated connectors) according to EN 60529 (\*) RoHS compliance

(\*\*) If required

P/N Sample: KVBSG 030DAT 24-10SX M20 LC F7 G N

(RA Class only)

(RA Class only)

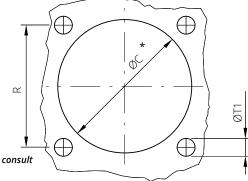




#### Rear Mounting Receptacle (030) with Backshell Class (DA...FS - RA...FS)

Connector with special adapter for UNI4883 rubber conduits. Conduit's size must be specified adding the diameter dimensions in the P/N (i.e.: KVBSG 030DA...FS5040...). Rubber covered coupling nut able to protect against dust and impact.





Panel cut out

\* For installation with backshell mounted, consult our sales office.

	M	ØB □	T
Q	P		Rubber Conduit not included  Rubber Conduit  Rubber Conduit  R  R
	-	L	<u></u>

Shell		L	М	K	R	S	ØΤ	ØT1	P **	ØC*	Shell size	<b>Backshell Conduit Size</b>	ØA1	ØA2
size	+0	max	±0.2	±0.2	±0.1	±0.3			Panel	±0.2	18-20-22	FS2015	20	15
	-0.15								Thickness Max		20-22-24-28	FS2318	23	18
18	30.8	***	23.4	4	27	34.9	M4	4.5	7.25	31.7	28	FS2520	25	20
20	34.2	***	23.4	4	29.4	38.1	M4	4.5	7.3	35	20-22	FS2722	27	22
22		***									20-22-24-28	FS3328	33	28
	37.4		23.4		31.8	41	M4	4.5	7.3	38.3	20-22	FS2924	29	24
24	40.9	***	23.4	4	34.9	44.5	M4	4.5	6.85	41.8	36	FS3530	35	30
28	46.7	***	24.4	4	39.7	50.8	M5	5.5	7.8	47.6	24-28-36	FS3833	38	33
36	59.6	***	24.4	4	49.2	63.5	M5	5.5	7.5	60.5	24-28	FS4030	40	30
40	65.5	***	24.4	4	55.6	69.8	M5	5.5	7.5	66.4	24-28-36	FS4035	40	35
											40	FS4540	45	40
											40	FS5040	50	40
											40	FS5045	50	45
											36	FS5247	52	47
											36-40	FS5550	55	50

<sup>\*\*</sup> For use with no rubber covered nut

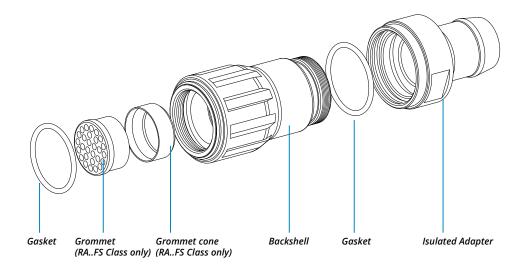
For use with shell type GG coupling nut rubber covered (or shell type 61 or 81), please consult our sales office.

\*\*\* On request (please consult our Sales Office)

Dimension "L" can be different from the value indicated according to backshells accessories, wires size and some special insert configurations.







The accessories for this class are not always available in stock for all sizes; we suggest you consult our Sales Office for availability

Insulating material	-	Thermoplastic resin	X Polarization Code**		Page 14
KVBSG Series Code	KVBSG	Bayonet Connector with external insulated coating	FS Backshell Conduits size	FS	Provided with a special adapter for UNI4883 rubber conduits
Shell Material	-	Aluminum	xxxx Conduit Size	хххх	ØA1ØA2
030 Shell Type	030	Rear mounting Receptacle	LC Contact Termination	LC	Less contacts
Connector	DA	with waterproof O-ring (IP67***)	Contact	-	Silver plating
Class	RA	with waterproof O-ring	Plating	CD5	Gold plating
	<b>T</b>	and grommet (IP67***) With plastic caps		F7	Black epoxy varnish (*)
Connector	_	Receptacle connector with threaded holes	F7 Shell finish	F16	CCF - Black passivation (*) - conductive
Modification**		THE CAUCATIONS		F26	hard anodization (*)
	FP	Receptacle connector with through holes		-	Without gasket
Insert			G Panel Gasket	G	With waterproof panel gasket
24-10 Arrangement		Page 14		G3	With waterproof shielded panel gasket
S Contact Gender	S	Socket contacts	Modification	N	Caranita a mania a m
Gender	P	Pin contacts	Code**	S	Consult our sales office
				<u> </u>	

<sup>\*\*\*</sup> Protection degree: IP 67 (only in the mating area with mated connectors) according to EN 60529 (\*) RoHS compliance

P/N Sample: KVBSG 030DAT 24-10SX FS2015 LC F7 G N

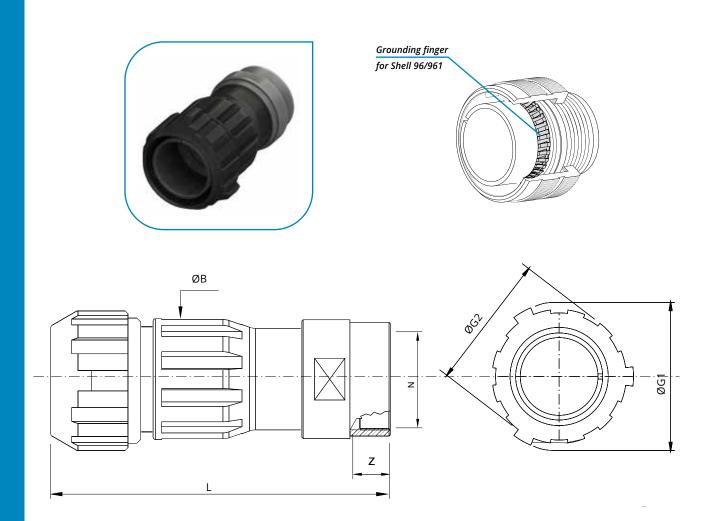


<sup>(\*\*)</sup> If required



### Plug Connector (06 - 61 - 96 - 961) with Backshell Class (DA..M - RA..M)

Connector with backshell provided with an internal Metric thread suitable for cable glands or conduit adapters. Rubber covered coupling nut able to protect against dust and impact.

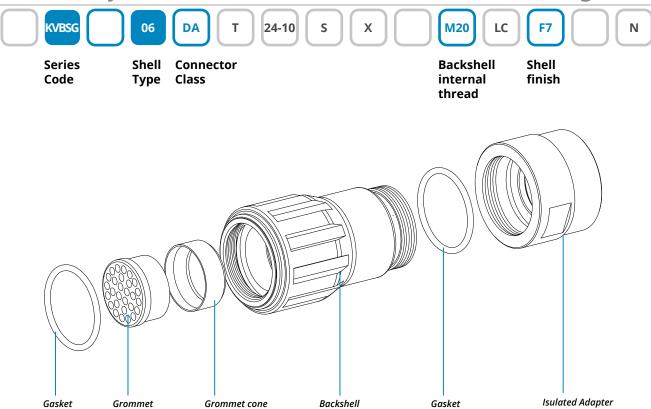


Shell size	ØG1	ØG2	L max	Z min	N Backshell Thread Metric
18	49	43.5	107	12	M20
20	51.5	46	124	15	M25
22	56	50.5	124	15	M25
24	60	54	143	16	M32
28	67	61	144	16	M32
36	82	73.5	155	*	M40
40	88	80	159	*	M50

Dimensions in mm



<sup>\*</sup> On request (please consult our Sales Office)



The accessories for this class are not always available in stock for all sizes; we suggest you consult our Sales Office for availability

(RA..M RA..PG Class only)

Insulating material	-	Thermoplastic resin	24-10	Insert Arrangement		Page 14
KVBSG Series Code	KVBSG	Bayonet Connector with external insulated	S	Contact Gender	S	Socket contacts
		coating		Gender	P	Pin contacts
Shell Material	-	Aluminum	х	Polarization Code**		Page 14
	06	Plug Connector without grounding finger Plug Connector	M20	Backshell internal	Mxx	Provided with an internal Metric thread
	96	with grounding finger		thread		internal wethe thread
06 Shell Type	61	Plug Connector without grounding finger Rubber covered coupling	LC	Contact Termination	LC	Less contacts
	961	nut (short version) Plug Connector		Contact	-	Silver plating
		Rubber covered coupling		Plating	CD5	Gold plating
		nut (short version)			F7	Black epoxy varnish (*)
	DA	with grounding finger with waterproof O-ring	F7	Shell finish	F16	CCF - Black passivation (*) - conductive
DA Connector		(IP67***)			F26	hard anodization (*)
Class	RA	with waterproof O-ring and grommet (IP67***)		Modification	N	
T Connector Modification**	т	With plastic caps	N	Code**	S	Consult our sales office

\*\*\* Protection degree: IP 67 (only in the mating area with mated connectors) according to EN 60529 (\*) RoHS compliance

(\*\*) If required

P/N Sample: KVBSG 06DAT 24-10SX M20 LC F7 N

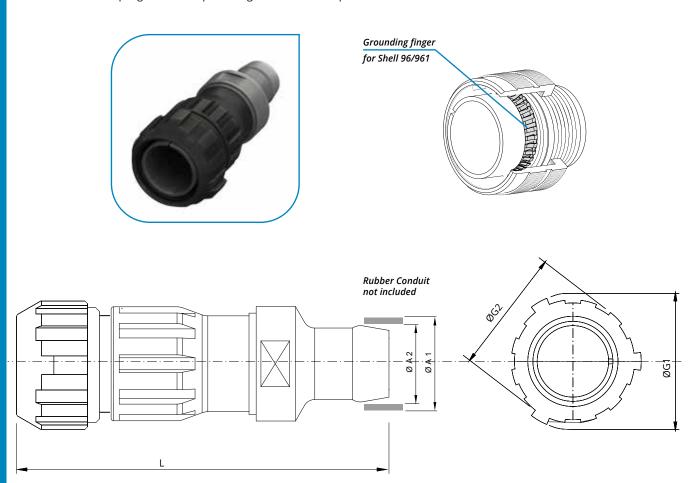
(RA..M RA..PG Class only)





#### Plug Connector (06 - 61 - 96 - 961) with Backshell Class (DA..FS - RA..FS)

Connector with special adapter for UNI4883 rubber conduits. Conduit's size must be specified adding the diameter dimensions in the P/N (i.e.: KVBSG 06DA...FS5040...). Rubber covered coupling nut able to protect against dust and impact.



Please consult our Sales Office for further details about this dimension and according to conduit size.

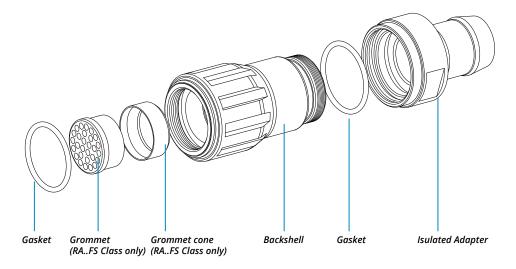
Shell size	ØG1	ØG2	L max
18	49	43.5	115
20	51.5	46	128
22	56	50.5	128
24	60	54	150
28	67	61	150
36	82	73.5	160
40	88	80	165

Shell size	<b>Backshell Conduit Size</b>	ØA1	ØA2
18-20-22	FS2015	20	15
20-22-24-28	FS2318	23	18
28	FS2520	25	20
20-22	FS2722	27	22
20-22-24-28	FS3328	33	28
20-22	FS2924	29	24
36	FS3530	35	30
24-28-36	FS3833	38	33
24-28	FS4030	40	30
24-28-36	FS4035	40	35
40	FS4540	45	40
40	FS5040	50	40
40	FS5045	50	45
36	FS5247	52	47
36-40	FS5550	55	50

Dimensions in mm







The accessories for this class are not always available in stock for all sizes; we suggest you consult our Sales Office for availability

Insulating material	-	Thermoplastic resin	24-10	Insert Arrangement		Page 14
KVBSG Series Code	SG Series Code KVBSG Bayonet Connector with external insulated coating		Contact Gender	S	Socket contacts	
		external insulated couling		Gender	P	Pin contacts
Shell Material	-	Aluminum	x	Polarization Code**		Page 14
	06	Plug Connector without grounding finger		FS Backshell		Provided with a special adapter for UNI4883
	96	Plug Connector		Conduits size		rubber conduits
06 Shell Type	61	with grounding finger Plug Connector without grounding finger Rubber covered coupling	xxxx	Conduit Size	xxxx	ØA1ØA2
	961	nut (short version) Plug Connector Rubber covered coupling nut (short version) with grounding finger	LC	Contact Termination	LC	Less contacts
			Contact		-	Silver plating
Commenter	DA	with waterproof O-ring (IP67***)		Plating	CD5	Gold plating
DA Connector		(,			F7	Black epoxy varnish (*)
Class	RA	with waterproof O-ring and grommet (IP67***) #	F7	Shell finish	F16	CCF - Black passivation (*) conductive
					F26	hard anodization (*)
T Connector Modification**	Т	With plastic caps	N	Modification	N	Consult our sales office
				Code**	S	Consult our sales office

\*\*\* Protection degree: IP 67 (only in the mating area with mated connectors) according to EN 60529

(\*) RoHS compliance

(\*\*) If required

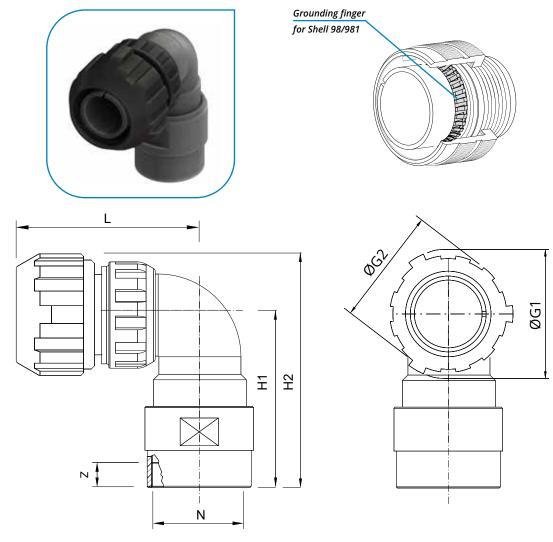
P/N Sample: KVBSG 06DAT 24-10SX FS2015 LC F7 N





## Plug Connector (08 - 81 - 98 - 981) with 90° Elbow Class (DA..M - RA..M)

Connector with backshell provided with an internal Metric thread suitable for cable glands or conduit adapters. Rubber covered coupling nut able to protect against dust and impact.

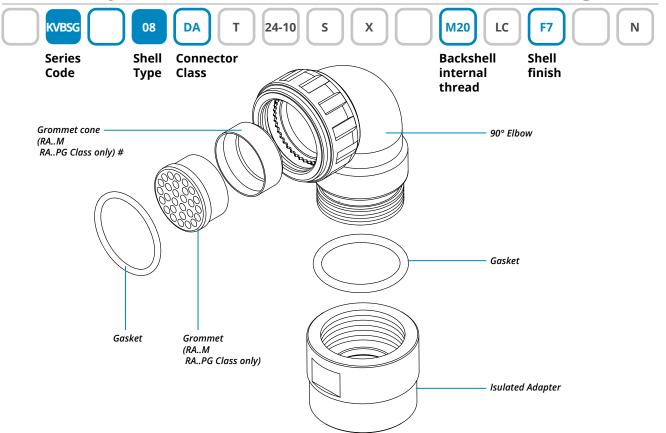


Shell size	ØG1	ØG2	L max	H1	H2	Z min	N Backshell Thread Metric
18	49	43.5	86	65	89.5	12	M20
20	51.5	46	90	67	92.8	15	M25
22	56	50.5	90	73	101	15	M25
24	60	54	91	80	110	16	M32
28	67	61	91	82	115.5	16	M32
36	82	73.5	101	92	133	*	M40
40	88	80	105	94	138	*	M50

Dimensions in mm



<sup>\*</sup> On request (please consult our Sales Office)



The accessories for this class are not always available in stock for all sizes; we suggest you consult our Sales Office for availability

Insulating material	-	Thermoplastic resin	24-10	Insert Arrangement		Page 14
KVBSG Series Code	Series Code KVBSG Bayonet Connector with external insulated coating S Contact Gender			S	Socket contacts	
		external insulated coating		Gender	P	Pin contacts
Shell Material	-	Aluminum	x	Polarization Code**		Page 14
	08	Plug Connector with 90° elbow without grounding finger	M20	Backshell internal thread	Mxx	Provided with an internal Metric thread
	98	Plug Connector with 90° elbow with grounding finger				
08 Shell Type	81	Plug Connector with 90° elbow without grounding finger Rubber covered coupling nut (short version) Plug Connector with 90° elbow Rubber covered	LC	Contact Termination	LC	Less contacts
	01			Contact	-	Silver plating
				Plating	CD5	Gold plating
	981	coupling nut (short version)			F7	Black epoxy varnish (*)
	DA	with grounding finger with waterproof O-ring	F7	Shell finish	F16	CCF - Black passivation (*) - conductive
DA Connector		(IP67***)			F26	hard anodization (*)
Class	RA	with waterproof O-ring and grommet (IP67***)		Modification	N	
T Connector Modification**	т	With plastic caps	N	Code**	S	Consult our sales office

\*\*\* Protection degree: IP 67 (only in the mating area with mated connectors) according to EN 60529

(\*) RoHS compliance

(\*\*) If required

P/N Sample: KVBSG 08DAT 24-10SX M20 LC F7 N

(#) In some sizes the grommet cone is not needed



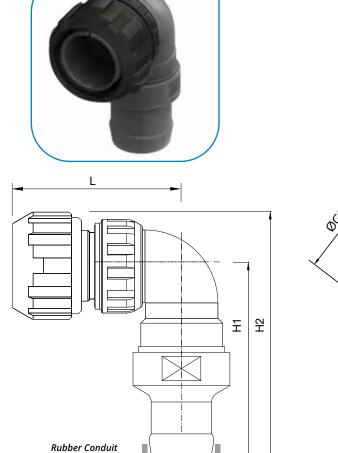


Grounding finger for Shell 98/981

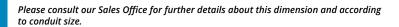
### Plug Connector (08 - 81 - 98 - 981) with 90° Elbow Class (DA..FS - RA..FS)

Connector with special adapter for UNI4883 rubber conduits.

Conduit's size must be specified adding the diameter dimensions in the P/N (i.e.: KVBSG 08DA...FS5040...). Rubber covered coupling nut able to protect against dust and impact.



ØA2 ØA1



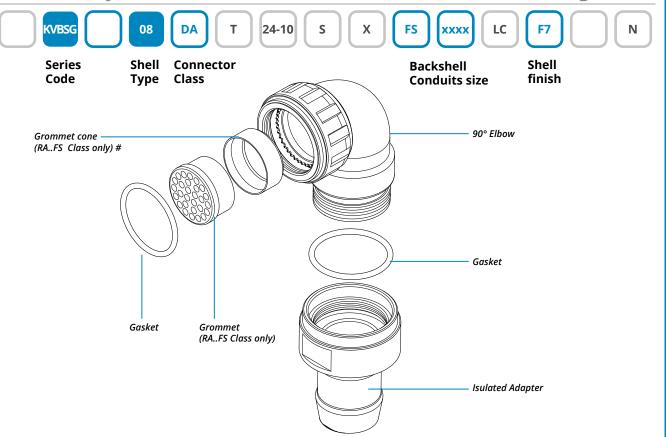
not included

Shell size	ØG1	ØG2	L max	H1	H2
18	49	43.5	68	85	109.5
20	51.5	46	71	85	110.8
22	56	50.5	71	85	113
24	60	54	76	85	115
28	67	61	76	85	118.5
36	82	73.5	84	90	131
40	88	80	88	95	139

Shell size	<b>Backshell Conduit Size</b>	ØA1	ØA2
18-20-22	FS2015	20	15
20-22-24-28	FS2318	23	18
28	FS2520	25	20
20-22	FS2722	27	22
20-22-24-28	FS3328	33	28
20-22	FS2924	29	24
36	FS3530	35	30
24-28-36	FS3833	38	33
24-28	FS4030	40	30
24-28-36	FS4035	40	35
40	FS4540	45	40
40	FS5040	50	40
40	FS5045	50	45
36	FS5247	52	47
36-40	FS5550	55	50

Dimensions in mm





The accessories for this class are not always available in stock for all sizes; we suggest you consult our Sales Office for availability

Insulating material	-	Thermoplastic resin	24-10	Insert Arrangement		Page 14
		Bayonet Connector with		Contact	S	Socket contacts
KVBSG Series Code	KVBSG	external insulated coating	S	Gender		Pin contacts
Shell Material	-	Aluminum	X	Polarization Code**		Page 14
	Plug Connector with 90° elbow without grounding finger		FS	Backshell Conduits size	FS	Provided with a special adapter for UNI4883 rubber conduits
!	98	Plug Connector with 90° elbow with grounding finger	xxxx Conduit Size			GA1GA2
08 Shell Type		Plug Connector with 90° elbow without grounding			XXXX	ØA1ØA2
Silen Type	81	finger Rubber covered coupling nut (short version)	LC	Contact Termination	LC	Less contacts
		Plug Connector with 90° elbow Rubber covered	$\approx$		_	Silver plating
	981	coupling nut (short version) with grounding finger	[ - ]	Contact Plating	CD5	Gold plating
Connector	DA	with waterproof O-ring (IP67***)			F7	Black epoxy varnish (*)
DA Class	RA	with waterproof O-ring	F7	Shell finish	F16	CCF - Black passivation (*) conductive
	-	and grommet (IP67***) #			F26	hard anodization (*)
T Connector Modification**	Т	With plastic caps	N	Modification Code**	N S	Consult our sales office

<sup>\*\*\*</sup> Protection degree: IP 67 (only in the mating area with mated connectors) according to EN 60529

(\*\*) If required

P/N Sample: KVBSG 08DAT 24-10SX FS2015 LC F7 N

(#) In some sizes the grommet cone is not needed



<sup>(\*)</sup> RoHS compliance



# **Connector Shell** - Receptacle mounting holes option

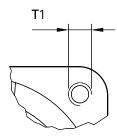
The rear mounting panel connectors can be also supplied with different mounting holes. Please refer to the dimensional tables below.

KVBS	030 DA	FF	20-15 S F7 F7	

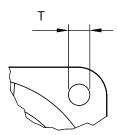
Connector	FF	Receptacle connector with threaded holes (to specify for 00/02/020/05 shell only)
Modification	FP	Receptacle connector with through holes (to specify for 03/030/038/TB shell only)



\* M5 front mounting panel, M4 Real mounting panel

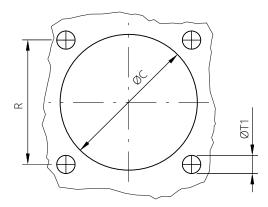


Shell size	Rear mounting panel connectors Shell version: 030				
	Through holes FP - T	Threaded holes Standard Version - T1			
18	3.2	M4			
20	3.2	M4			
22	3.2	M4			
24	3.7	M4			
28	3.7	M5			
36	4.3	M5			
40	4.3	M5			





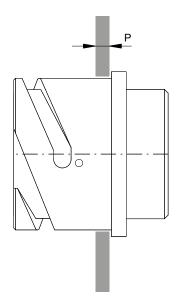
# **Connector Shell** - Panel drilling dimensions



Panel cut out

Shell size	R	Shell version: 030				
		ØC ±0.2	<b>ØT1</b> for FF Threaded holes (standard hole)	ØT1 for FP Through holes		
18	27	31.7	4.5	3.4		
20	29.4	35	4.5	3.4		
22	31.8	38.3	4.5	3.4		
24	34.9	41.8	4.5	3.9		
28	39.7	47.6	5.5	3.9		
36	49.2	60.5	5.5	4.5		
40	55.6	66.4	5.5	4.5		

# **Connector Shell** - Mounting panel characteristics



Shell size	P Panel Thickness * Shell version: 030 Rear Mounting Panel Connectors Max
18	7.25
20	7.3
22	7.3
24	6.85
28	7.8
36	7.5
40	7.5

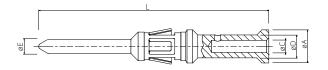
st For use with no rubber covered nut (or with shell type 61 or 81) For use with shell type GG coupling nut rubber covered please consult our sales office.

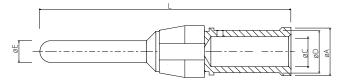




# **KVBS - KT Contacts - for thermoplastics inserts**

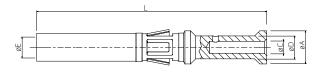
## Pin Contacts - Crimp - Silver Plated

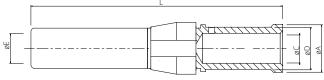




Contact Size	Part Number	Short Description	Wire section (mm²)	AWG cable size	ØA	ØE	ØС	ØD	L
16	**	KT485 16-12P	0.5÷0.75	-	3.7	1.57	1.2	2.6	33.4
16	**	KT485 16-20P *	1÷2	18÷14	3.7	1.57	2	2.9	33.4
16	**	KT485 16-26P	2.5÷3	-	3.7	1.57	2.5	3.8	33.4
12	**	KT485 12-12P	0.6	20	5.5	2.37	1.2	2.6	38.2
12	**	KT485 12-20P	1÷2	18÷14	5.5	2.37	2	3.8	38.2
12	**	KT485 12-26P *	2.5÷3	-	5.5	2.37	2.5	3.8	38.2
12	**	KT485 12-30P	4	-	5.5	2.37	3	4.8	38.2
12	**	KT485 12-38P	6	-	5.5	2.37	3.6	4.8	38.2
8	**	KT485 8-15P	1	-	8	3.59	1.5	3.4	41.7
8	**	KT485 8-22P	2.5	-	8	3.59	2.2	3.8	41.7
8	**	KT485 8-30P**	4	-	8	3.59	3	4.8	41.7
8	**	KT485 8-38P *	6	-	8	3.59	3.6	4.8	41.7
8	**	KT485 8-50P**	10	-	8	3.59	5	7	41.7

#### **Socket Contacts - Crimp - Silver Plated**





Contact Size	Part Number	Short Description	Wire section (mm²)	AWG cable size	ØA	ØE	ØC	ØD	L
16	**	KT485 16-12S	0.5÷0.75	-	3.7	1.65	1.2	2.6	38.4
16	**	KT485 16-20S *	1÷2	18÷14	3.7	1.65	2	2.9	38.4
16	**	KT485 16-26S	2.5÷3	-	3.7	1.65	2.5	3.8	38.4
12	**	KT485 12-12S	0.6	20	5.5	2.48	1.2	2.6	38.7
12	**	KT485 12-20S	1÷2	18÷14	5.5	2.48	2	3.8	38.7
12	**	KT485 12-26S *	2.5÷3	-	5.5	2.48	2.5	3.8	38.7
12	**	KT485 12-30S	4	-	5.5	2.48	3	4.8	38.7
12	**	KT485 12-38S	6	-	5.5	2.48	3.6	4.8	38.7
8	**	KT485 8-15S	1	-	8	3.7	1.5	3.4	41.7
8	**	KT485 8-22S	2.5	-	8	3.7	2.2	3.8	41.7
8	**	KT485 8-30S**	4	-	8	3.7	3	4.8	41.7
8	**	KT485 8-38S *	6	-	8	3.7	3.6	4.8	41.7
8	**	KT485 8-50S**	10	-	8	3.7	5	7	41.7

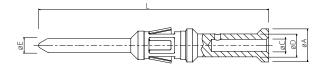


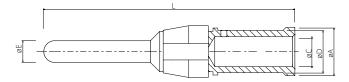
<sup>\*</sup> Contacts included in the standard connectors

<sup>\*\*</sup> On request (please consult our Sales Office)

# **KVBS - KT Contacts - for thermoplastics inserts**

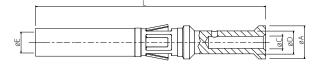
## Pin Contacts - Crimp - Gold Plated

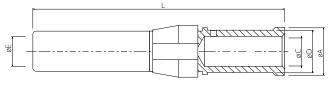




Contact Size	Part Number	Short Description	Wire section (mm²)	AWG cable size	ØA	ØE	ØС	ØD	L
16	VS701302	KT485 16-12P CD5	0.5÷0.75	-	3.7	1.57	1.2	2.6	33.4
16	VS701303	KT485 16-20P CD5 *	1÷2	18÷14	3.7	1.57	2	2.9	33.4
16	VS701304	KT485 16-26P CD5	2.5÷3	-	3.7	1.57	2.5	3.8	33.4
12	VS701305	KT485 12-12P CD5	0.6	20	5.5	2.37	1.2	2.6	38.2
12	VS701306	KT485 12-20P CD5	1÷2	18÷14	5.5	2.37	2	3.8	38.2
12	VS701307	KT485 12-26P CD5 *	2.5÷3	-	5.5	2.37	2.5	3.8	38.2
12	VS701308	KT485 12-30P CD5	4	-	5.5	2.37	3	4.8	38.2
12	VS701309	KT485 12-38P CD5	6	-	5.5	2.37	3.6	4.8	38.2
8	VS701310	KT485 8-15P CD5	1	-	8	3.59	1.5	3.4	41.7
8	VS701311	KT485 8-22P CD5	2.5	-	8	3.59	2.2	3.8	41.7
8	VS701312	KT485 8-30P CD5**	4	-	8	3.59	3	4.8	41.7
8	VS701313	KT485 8-38P CD5 *	6	-	8	3.59	3.6	4.8	41.7
8	VS701314	KT485 8-50P CD5**	10	-	8	3.59	5	7	41.7

#### **Socket Contacts - Crimp - Gold Plated**





Contact Size	Part Number	Short Description	Wire section (mm²)	AWG cable size	ØA	ØE	ØС	ØD	L
16	VS701402	KT485 16-12S CD5	0.5÷0.75	-	3.7	1.65	1.2	2.6	38.4
16	VS701403	KT485 16-20S CD5 *	1÷2	18÷14	3.7	1.65	2	2.9	38.4
16	VS701404	KT485 16-26S CD5	2.5÷3	-	3.7	1.65	2.5	3.8	38.4
12	VS701405	KT485 12-12S CD5	0.6	20	5.5	2.48	1.2	2.6	38.7
12	VS701406	KT485 12-20S CD5	1÷2	18÷14	5.5	2.48	2	3.8	38.7
12	VS701407	KT485 12-26S CD5 *	2.5÷3	-	5.5	2.48	2.5	3.8	38.7
12	VS701408	KT485 12-30S CD5	4	-	5.5	2.48	3	4.8	38.7
12	VS701409	KT485 12-38S CD5	6	-	5.5	2.48	3.6	4.8	38.7
8	VS701410	KT485 8-15S CD5	1	-	8	3.7	1.5	3.4	41.7
8	VS701411	KT485 8-22S CD5	2.5	-	8	3.7	2.2	3.8	41.7
8	VS701412	KT485 8-30S CD5**	4	-	8	3.7	3	4.8	41.7
8	VS701413	KT485 8-38S CD5 *	6	-	8	3.7	3.6	4.8	41.7
8	VS701414	KT485 8-50S CD5**	10	-	8	3.7	5	7	41.7

<sup>\*</sup> Contacts included in the standard connectors

<sup>\*\*</sup> On request (please consult our Sales Office)

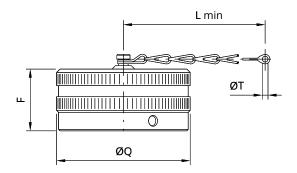


## **Caps for Bayonet Connectors**

#### **Accessories For Connectors**

#### Caps with chain for connectors version: shell type with ramp

Provided with sealing gasket. Chain and lugs are in stainless steel. Protection degree: IP 67 (mated to the connector) according to EN 60529.



Shell size	ØQ	F	L min	ØT
18	38	21.7	123	4.3
20	40.5	21.7	123	4.3
22	44	21.7	123	4.3
24	47	21.7	123	4.3
28	53	21.7	206	4.3
36	66.2	21.7	206	4.3
40	72.4	21.7	206	4.3

Finishes: F7 Black epoxy varnish (RoHS compliance)

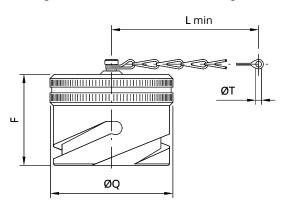
Shell size	Part Number	<b>Short Description</b>
18	VS151105	CVB 043-18 F7
20	VS151106	CVB 043-20 F7
22	VS151107	CVB 043-22 F7
24	VS151108	CVB 043-24 F7
28	VS151109	CVB 043-28 F7
36	VS151111	CVB 043-36 F7
40	VS151112	CVB 043-40 F7

Finishes: F16 CCF - Black passivation (RoHS compliance) - conductive

Shell size	Part Number	Short Description
18	VS151129	CVB 043-18 F16
20	VS151130	CVB 043-20 F16
22	VS151131	CVB 043-22 F16
24	VS151132	CVB 043-24 F16
28	VS151133	CVB 043-28 F16
36	VS151135	CVB 043-36 F16
40	VS151136	CVB 043-40 F16

#### Caps with chain for connector version: shell type with coupling nut

These caps have no sealing gasket because mated with connectors generally provided with front gasket. Chain and lugs are in stainless steel. Protection degree: IP 67 (mated to the connector) according to EN 60529.



Shell size	ØQ	F	L min	ØT
18	33	34.5	123	4.3
20	36.5	34.5	138	4.3
22	39.7	34.5	138	4.3
24	43.2	34.5	138	4.3
28	48.9	34.5	206	4.3
36	61.6	34.5	206	4.3
40	67.6	34.5	206	4.3

Finishes: F7 Black epoxy varnish (RoHS compliance)

Shell size	<b>Part Number</b>	<b>Short Description</b>
18	VS151205	CVB 042-18 F7
20	VS151206	CVB 042-20 F7
22	VS151207	CVB 042-22 F7
24	VS151208	CVB 042-24 F7
28	VS151209	CVB 042-28 F7
36	VS151211	CVB 042-36 F7
40	VS151212	CVB 042-40 F7

Finishes: F16 CCF - Black passivation (RoHS compliance) - conductive

Shell size	Part Number	<b>Short Description</b>
18	VS151229	CVB 042-18 F16
20	VS151230	CVB 042-20 F16
22	VS151231	CVB 042-22 F16
24	VS151232	CVB 042-24 F16
28	VS151233	CVB 042-28 F16
36	VS151235	CVB 042-36 F16
40	VS151236	CVB 042-40 F16

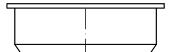


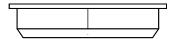
# **Protective Plastic Dust Caps**

#### **Accessories For Connectors**

These caps are used to protect connectors against dust. They are not included in the connectors and have to be ordered separately.

The drawings are indicative only and they could be change according to the size





Caps for connectors version: shell type with ramp

Caps for connector version: shell type with coupling nut

Shell size	Part Number	Short Description	Shell size	Part N
18	VS412105	PCVB 043-18	18	VS412
20	VS412106	PCVB 043-20	20	VS412
22	VS412107	PCVB 043-22	22	VS412
24	VS412108	PCVB 043-24	24	VS412
28	VS412109	PCVB 043-28	28	VS412
36	VS412141	PCVB 043-36	36	VS412
40	VS412142	PCVB 043-40	40	VS412

Shell size	Part Number	Short Description
18	VS412135	PCVB 042-18
20	VS412136	PCVB 042-20
22	VS412137	PCVB 042-22
24	VS412138	PCVB 042-24
28	VS412139	PCVB 042-28
36	VS412145	PCVB 042-36
40	VS412146	PCVB 042-40

Caps for connector version: shell type with rubber covered coupling nut

Shell size	Part Number	Short Description
18	**	PCVBSG 042-18
20	**	PCVBSG 042-20
22	**	PCVBSG 042-22
24	**	PCVBSG 042-24
28	**	PCVBSG 042-28
36	**	PCVBSG 042-36
40	**	PCVBSG 042-40

<sup>\*\*</sup> On request (please consult our Sales Office)



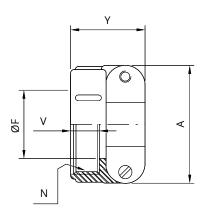


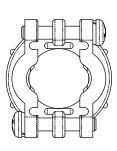
## **Cable Clamp A type**

#### **Accessories For Connectors**

#### MS 3057 - ... A Cable Clamp, general duty

These cable-clamps keep the cable in the connector axial position and guarantee an excellent mechanical strain relief. MS 3420 or RF 3420 Bushing are not waterproof and are generally supplied separately except for classes AF,F,LAF and LF connectors.





Finishes: F7 Black epoxy varnish (RoHS compliance)

Shell size	Part Number	Short Description	Y max	V ±0.2	A max	ØF max cable Ø	N Thread in inches
18	VS705204	MS 3057-10A F7	25	10.5	31.7	15.8	1"-20 UNEF
20 - 22	VS705205	MS 3057-12A F7	25	10.5	37.5	19	1" 3/16-18 UNEF
24 - 28	VS705206	MS 3057-16A F7	26	10.5	43.5	23.8	1" 7/16-18 UNEF
36	VS705208	MS 3057-24A F7	29.4	14	58.5	35	2"-18 UNS
40	VS705209	MS 3057-28A F7	42.8	14	68.5	41.2	2"1/4-16 UN

Finishes: F16 CCF - Black passivation (RoHS compliance) - conductive

Shell size	Part Number	Short Description	Y max	V ±0.2	A max	ØF max cable Ø	N Thread in inches
18	VS705224	MS 3057-10A F16	25	10.5	31.7	15.8	1"-20 UNEF
20 - 22	VS705225	MS 3057-12A F16	25	10.5	37.5	19	1" 3/16-18 UNEF
24 - 28	VS705226	MS 3057-16A F16	26	10.5	43.5	23.8	1" 7/16-18 UNEF
36	VS705228	MS 3057-24A F16	29.4	14	58.5	35	2"-18 UNS
40	VS705229	MS 3057-28A F16	42.8	14	68.5	41.2	2"1/4-16 UN



## **Bushing for Cable Clamp A type**

#### **Accessories For Connectors**

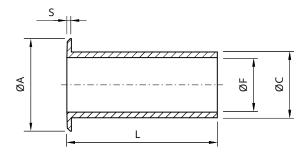
#### MS 3420 - ... - RF 3420 - ... Bushing

They are made of elastomeric rubber and used with cable Clamp MS3057 - ... A to protect the cable.

In the same cable-clamp it is possible to assemble more than one bushing (inside each other) so to achieve diameters much smaller than the nominal.

#### Available in two versions:

- MS 3420 ... in neoprene rubber.
- RF 3420 ... in flame resistant rubber.



#### Neoprene rubber

Shell size	Part Number	Short Description	For Cable gland	ØA ±0.2	ØF max cable Ø	ØC ±0.2	S ±0.2	L ±0.2
18	VS705404	MS 3420-10	MS 3057-10A	22	14.2	15.6	1.6	60.3
20 - 22	VS705405	MS 3420-12	MS 3057-12A	27	15.8	18.8	1.6	57.1
24 - 28	VS705406	MS 3420-16	MS 3057-16A	33.3	19	23.6	1.6	53.9
36	VS705408	MS 3420-24	MS 3057-24A	46.9	31.7	34.8	1.6	47.6
40	VS705409	MS 3420-28	MS 3057-28A	52.9	34.9	41	1.6	44.4

On request: V = Fluoride Rubber S = Silicone Rubber





## **Cable Clamp C type**

#### **Accessories For Connectors**

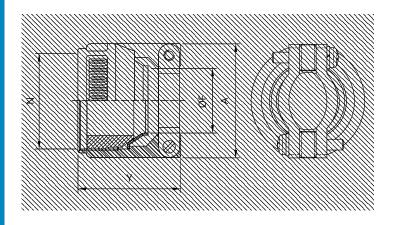
#### MS 3057 - ... C - RF 3057 - ... C water tight Cable Clamp



Besides guaranteeing an excellent mechanical strain relief keeping the cable in the centre of the connector, these cable-clamps are provided with an internal conical rubber bushing ensuring waterproof protection. The screws in stainless steel have elastic rose-cut antivibration head.

Available in two versions:

- MS 3057 ...C with gasket in neoprene rubber.
- RF 3057 ...C with gasket in flame resistant rubber.



Shell size					N Thread in inches
18	35	32	9.6	15.9	1"-20 UNEF
20 - 22	35.7	37.5	11.3	19	1" 3/16-18 UNEF
24 - 28	39	43.5	15.5	23.8	1" 7/16-18 UNEF
36	52	58	25.4	35	2"-18 UNS
40	52.3	63.5	30	41.3	2"1/4-16 UN

Finishes: F7 Black epoxy varnish (RoHS compliance)

Shell size	Part Number neoprene rubber	Short Description neoprene rubber	Part Number flame resistant rubber	<b>Short Description</b> flame resistant rubber
18	VS705254	MS 3057-10C F7	VS705304	RF 3057-10C F7
20 - 22	VS705255	MS 3057-12C F7	VS705305	RF 3057-12C F7
24 - 28	VS705256	MS 3057-16C F7	VS705306	RF 3057-16C F7
36	VS705258	MS 3057-24C F7	VS705308	RF 3057-24C F7
40	VS705259	MS 3057-28C F7	VS705309	RF 3057-28C F7

Finishes: F16 CCF - Black passivation (RoHS compliance) - conductive

Shell size	Part Number neoprene rubber	Short Description neoprene rubber	Part Number flame resistant rubber	<b>Short Description</b> flame resistant rubber
18	VS705274	MS 3057-10C F16	VS705324	RF 3057-10C F16
20 - 22	VS705275	MS 3057-12C F16	VS705325	RF 3057-12C F16
24 - 28	VS705276	MS 3057-16C F16	VS705326	RF 3057-16C F16
36	VS705278	MS 3057-24C F16	VS705328	RF 3057-24C F16
40	VS705279	MS 3057-28C F16	VS705329	RF 3057-28C F16

Gasket on request: V = Fluoride Rubber - S = Silicone Rubber



# **Bushing for Cable Clamp C type**

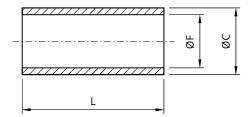
#### **Accessories For Connectors**

#### MS 3420 - ... A - RF 3420 - ... A Bushing

They are made of elastomeric rubber and used with cable clamp MS 3057 - ... C to protect the cable. They allow using cables with diameter smaller than the nominal.

Available in two versions:

- MS 3420 ...A in neoprene rubber.
- RF 3420 ... A in flame resistant rubber (on request).



#### Neoprene rubber

Shell size	Part Number	Short Description	For Cable gland	ØF max cable Ø	ØC ±0.2	L ±0.2
18	VS705424	MS 3420-10A	MS 3057-10C	11.1	15.8	50.8
20 - 22	VS705425	MS 3420-12A	MS 3057-12C	13.7	18.9	50.8
24 - 28	VS705426	MS 3420-16A	MS 3057-16C	19	23.7	50.8
36	VS705428	MS 3420-24A	MS 3057-24C	28.5	35	50.8
40	VS705429	MS 3420-28A	MS 3057-28C	31.8	41.1	50.8

#### Flame resistant rubber

Shell size	Part Number	Short Description	For Cable gland	ØF max cable Ø	ØC ±0.2	L ±0.2
18	VS705434	RF 3420-10A	RF 3057-10C	11.1	15.8	50.8
20 - 22	VS705435	RF 3420-12A	RF 3057-12C	13.7	18.9	50.8
24 - 28	VS705436	RF 3420-16A	RF 3057-16C	19	23.7	50.8
36	VS705438	RF 3420-24A	RF 3057-24C	28.5	35	50.8
40	VS705439	RF 3420-28A	RF 3057-28C	31.8	41.1	50.8

On request: V = Fluoride Rubber S = Silicone Rubber

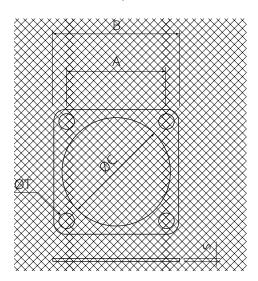




## **Connector Mounting Gaskets**

#### **Accessories For Connectors**

These gaskets are used to make panel connectors water resistant.



#### Gaskets for rear mounting panel connectors (03 - 030 - 038 connectors)

**Gasket C216**: non conductive chloroprene rubber gasket (IP67 protection)

Shell size	Part Number Non conductive	Short Description Non conductive	A ±0.2	B -0 +0.4	ØC ±0.3	S C216	ØT ±0.3
18	VS412404	C216-18	27	35	30.8	0.8±0.3	4.2
20	VS412405	C216-20	29.4	38.1	34.2	0.8±0.3	4.2
22	VS412406	C216-22	31.8	41.2	37.4	0.8±0.3	4.2
24	VS412407	C216-24	34.9	44.5	40.9	0.8±0.3	4.2
28	VS412408	C216-28	39.7	50.8	46.7	0.8±0.3	5.1
36	VS412410	C216-36	49.2	63.5	59.6	0.8±0.3	5.1
40	VS412411	C216-40	55.5	69.9	65.5	0.8±0.3	5.1

Gaskets C216G3: conductive silicone gaskets with embedded metal screen. These gaskets guarantee watertightness and RFI shielding

- Elastomer binder: Silicone
- Conductive filler: Nickel Graphite
- Color: Gray
- Operating Temperature range: -60 °C ÷ +220 °C
- Flammability Rating: UL 94-V0
- Salt spray test > 96 h ( consult our sales office for details)
- IP67 protection (EN 60529)

Shell size	Part Number Conductive	Short Description Conductive	A ±0.2	B -0 +0.4	ØC ±0.3	S C216G3	ØT ±0.3
18	VS412434	C216G3-18	27	35	30.8	0.8±0.2	4.2
20	VS412435	C216G3-20	29.4	38.1	34.2	0.8±0.2	4.2
22	VS412436	C216G3-22	31.8	41.2	37.4	0.8±0.2	4.2
24	VS412437	C216G3-24	34.9	44.5	40.9	0.8±0.2	4.2
28	VS412438	C216G3-28	39.7	50.8	46.7	0.8±0.2	5.1
32	VS412439	C216G3-32	44.5	57	53.4	0.8±0.2	5.1
36	VS412440	C216G3-36	49.2	63.5	59.6	0.8±0.2	5.1
40	VS412441	C216G3-40	55.5	69.9	65.5	0.8±0.2	5.1



## **Contact KT Crimp tools**



For the instructions concerning assembly and crimping of contacts please consult the appropriate manuals.

We recommend to respect the following general rules:

- always use the tools recommended by Van-System's catalogue or manuals
- apply the suggested norms for tool maintenance and calibration
- always use tool to close retention spring when crimping the contacts size 12

DO NOT USE ALTERNATIVE GREASES OR OILS which could damage the insert and affect the functionality of the connector.

Part Number	Short Description	Tool
VS610002	CRT-784/1	Crimping Tool
VS610003	CRT-HT45	Crimping Tool
VS610010	CDI-ME2	Crimping Die
VS610016	LOC-KVBS-784	Locator
VS610042	KTES-784-8	Removal Tool
VS610041	KTES-784-12	Removal Tool
VS610040	KTES-784-16	Removal Tool
VS610043	KTRS-784-12	Tool To Close Retention Spring
VS610056	CDI-VS61138	Locator for contacts KT 8-38

Contact size		mm² section		Manual crimp tool	Pneumatic crimp tool	Locator /Die	Removal tool	Tool To Close Retention Spring	Stripping length mm
16	KT485 16-13P/S**	0.15÷0.6	26÷20	CRT-784/1	PCT-784	LOC-KVBS-784	KTES-784-16	-	9.5
16	KT485 16-12P/S	0.5÷0.75	-	CRT-784/1	PCT-784	LOC-KVBS-784	KTES-784-16	-	9.5
16	KT485 16-20P/S	1÷2	18÷14	CRT-784/1	PCT-784	LOC-KVBS-784	KTES-784-16	-	9.5
16	KT485 16-26P/S	2.5÷3	-	CRT-784/1	PCT-784	LOC-KVBS-784	KTES-784-16	-	9.5
12	KT485 12-12P/S	0.6	20	CRT-784/1	PCT-784	LOC-KVBS-784	KTES-784-12	KTRS-784-12	9.5
12	KT485 12-20P/S	1÷2	18÷14	CRT-784/1	PCT-784	LOC-KVBS-784	KTES-784-12	KTRS-784-12	9.5
12	KT485 12-26P/S**	2.5÷3	-	CRT-784/1	PCT-784	LOC-KVBS-784	KTES-784-12	KTRS-784-12	9.5
12	KT485 12-30P/S	4	-	CRT-784/1	PCT-784	LOC-KVBS-784	KTES-784-12	KTRS-784-12	9.5
12	KT485 12-38P/S	6	-	CRT-784/1	PCT-784A	LOC-KVBS-784	KTES-784-12	KTRS-784-12	9.5
8	KT485 8-15P/S	1	-	CRT-HT45	-	**	KTES-784-8	-	12
8	KT485 8-22P/S	2.5	-	CRT-HT45	-	CDI-VS61137	**	-	13.5
8	KT485 8-30P/S**	4	-	CRT-HT45	-	**	KTES-784-8	-	13.5
8	KT485 8-38P/S	6	-	CRT-HT45	-	CDI-VS61138	KTES-784-8	-	13.5
8	KT485 8-50P/S**	10	-	CRT-HT45	-	CDI-ME2	KTES-784-8	-	13.5

\*\* On request (please consult our Sales Office)





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#### Safety

#### Information regarding the use of the product within recommended safety limits

To use the connectors described in this catalogue according to the necessary safety requirements we suggest you apply the following criteria:

- use the connectors and connected cables within their electrical and environmental limits
- · follow the characteristics of each version (shell, class and type of strain relief) and carefully choose the appropriate connector for the required use
- make sure to respect the procedures regarding the correct assembly of connectors and the crimping of contacts
- · any connector damaged during shipment, storage, assembly or use should be replaced
- never uncouple the connectors when under power
- always protect the parts against shock when the circuit is under power
- always check the circuit before putting it under power
- · consult Radiall Italia Srl if in doubt
- the user must take final responsibility for electrical safety Radiall Italia Srl reserves the right to amend the specifications of this catalogue without issuing prior notice.

For the instructions concerning assembly and crimping of contacts please consult the appropriate tools manuals.

We recommend to respect the following general rules:

- to be used always the tools recommended by Radiall Italia Srl's catalogue or manuals
- to be applied the suggested norms for tool maintenance and calibration

DO NOT USE ALTERNATIVE GREASES OR OILS which could damage the insert and affect the functionality of the connector. Radiall Italia Srl reserves the right to amend the specifications of this catalogue without issuing prior notice.

The data defined in this document are given as an indication. In the effort to improve our products, we reserve the right to make any change judged necessary.





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