



CVB ATEX

MIL-DTL-5015
reverse bayonet
ATEX Connectors

For hazardous and potentially
Explosive Environments



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



CVB ATEX Connectors - Introduction

Mil-C-5015 reverse bayonet ATEX Connectors

CVB ATEX series can be used in hazardous and potentially explosive environments. These connectors are applied in Oil and Gas sector, mining and Power plant industries.

Certification: 94/9/EC ATEX directive
According to: EN 60079-0/-1 and EN 61241-0 / -1

Protection degree: IP66/67 EN60529

Application area:

- Suitable for surface applications
- Group II Zones 1, 21, 2 and 22 (Gas and Dust)
- Gas Group IIC
- Ambient temperature -40°C/+120°C

Suitable for underground applications:

- Group I category M2

Can be installed on devices and enclosures designed with the following type of protection:

- Explosion proof Ex d - EN60079-1
- Increased safety Ex e - EN60079-7
- Intrinsic safety Ex i - EN60079-11
- Pressurization Ex p - EN60079-2

Certificate: ICEPI 08 ATEX 03C002X

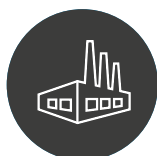
CE Ex I M2 Ex d I (IP66/IP67)

CE Ex II 2D Ex tD A21 IP66/IP67 T85°C

CE Ex II 2G Ex d IIC T6 (IP66/IP67)

CE Ex II 2GD Ex d IIC T6 tD A21 IP66/IP67 T85°C

According to : CENELEC EN 60079-0:2006 , EN 60079-1:2004 ,
EN 61241-0:2006 , EN 61241-1:2004 , EN 60529:2001
CE certificate type: ICEPI 08ATEX03C002X



CVB ATEX Connectors - Introduction

The CVB ATEX series has been composed by:

Connector:

- CVB surface use
- CVBM mining and underground use

Weatherproof cap:

- TVB for CVB-EX connector
- TVBM for CVBM-EX connector

Flameproof cap:

- TVB-EX for CVB-EX connector
- TVBM-EX for CVBM-EX connector

Flameproof end-of-line cap:

- FVB-EX for CVB-EX connector
- FVBM-EX for CVBM-EX connector

Reverse bayonet coupling system

The reverse bayonet connectors are derived from the threaded MIL-DTL-5015 series to provide faster coupling and anti-vibration resistance.

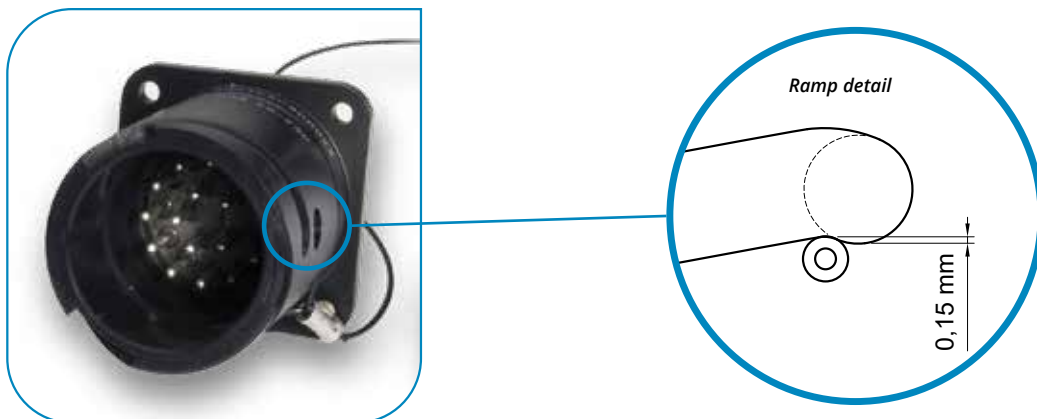
In this series the coupling system is composed by 3 bayonet ramps (see drawing below) machined on the external side of the receptacle connector and 3 stainless steel studs mounted inside the plug connector's coupling nut.

Characteristic:

- To mate connectors rotate coupling-nut 120° only
- Audible, visible and tactile mating
- The bayonet ramps are resistant to damage

Advantages against the thread coupling:

- Fast coupling and uncoupling
- Security of coupling is guaranteed and consequently improved reliability
- Higher number of mating cycles



General Characteristics

Working Temperature:	-40°C / +135°C
Protection degree:	IP66/IP67 according to EN 60529
Shell material:	Hard anodized aluminium alloy or nickel plated brass
Safety lock:	Stainless steel hexagon socket screw
Available arrangements:	Wide range according to MIL-DTL-5015
Shell sizes:	From 16S to 20
Contacts quantity:	From 2 to 19
Contacts termination:	Crimp

CVB ATEX Connectors - Introduction

Safety related marking

The following chart shows marking related to appliances safety details and respect of applicable norms.

I M2	Device for mines susceptible to firedumps and surface application related to them, with possible presence of grisou and/or combustible dust (coal).
II 2G	Device for surface installation with presence of category 2 gas or vapour, suitable for zone 1 and redundant for zone 2.
II 2D	Device for surface installation with presence of combustible dust, suitable for zone 21 and redundant for zone 22.
II 2GD	Device for surface installation, category II 2D and II 2G combination
IIC	Device suitable for group IIC gas
T6÷T4	Device temperature class (max surface temperature)
IP66/IP67	Mechanical protection according to EN60529
T85÷135 °C	Max surface temperature in presence of dust
CE nnnn	Conformity marking according to European standards when applicable and number of the Notification Agency that surveys production.
Ex	European directive 94/9/CE and related technical norms conformity.
ICEPI 08 ATEX 002X	Name of the laboratory which released the CE certificate; 08 = year of the release (2008); 03C002X certificate number

Note:

- Group IIC devices can be used in IIA and IIB ambient.
- Class temperature T6 devices can be used even with all the substances with a superior class temperature (T5÷T1).
- 85°C class temperature devices (2D category) can be used even with all the substances with superior temperature class.

Receptacle installation

CVB-EX and CVBM-EX receptacles with code 2, G, H, K, M, N and P can be installed on enclosures and devices type Ex d, Ex e, Ex i or Ex p according to safety requirements foreseen for each protection mode and are supplied complete with assembled cable and with cable contact junction area of the connector already potted.

CVB-EX and CVBM-EX receptacles type 4 and 9 can be installed only on enclosures and devices type Ex e, Ex i or Ex p according to safety requirements foreseen for each protection mode. Crimping of contacts and rear potting can be made by user with proper resin kit supplied with the product.

On enclosures and devices type Ex i can be used only connectors with "W" service code, regardless part code of connector.

Warnings

a) On connectors CVB-EX and CVBM-EX with nut:

- "Do not separate when energized" (service code "A", "D", "E", "I" e "X")
- "Do not separate when energized if an explosive atmosphere is present" (service code "L")
- "Intrinsic safety connections" (service code "W")

b) On end-of-line plugs FVB-EX e FVBM-EX with nut:

- [for connectors with service code "A", "D", "E", "I", "X": "Do not separate when energized"
- [for connectors with service code "L"]: "Do not separate when energized if an explosive atmosphere is present"
- [for connectors with service code "W"]: "Intrinsic safety connections "

c) On blanking plugs TVB-EX and TVBM-EX with nut:

- [for connectors with service code "A", "D", "E", "I", "X": "Do not separate when energized"
- [for connectors with service code "L"]: "Do not separate when energized if an explosive atmosphere is present"
- [for connectors with service code "W"]: "Intrinsic safety connections"

CVB ATEX - Part number explanation

CVBEX 6 A 1 18-20 P A **CONNECTORS P/N Sample: CVB-EX 6A1 18-20PA**

CVBEX Series Code	CVB-EX	Surface application
	CVBM-EX	Underground application
6 Shell Type	1	Inline receptacle - requires backshell
	3	Rear mounting receptacle connector - requires backshell
	4	Front mounting receptacle connector
	6	Plug connector - requires backshell
	7	Rear mounting receptacle connector - requires backshell Mounting is made by a hexagonal coupling-nut
	9	Front mounting receptacle connector. Mounting is made by a hexagonal coupling-nut.
	G	Front mounting receptacle connector - threaded G ISO 228 Thread
	H	Front mounting receptacle connector - threaded R ISO 7/1 Thread
	K	Front mounting receptacle connector - threaded Gk UNI 6125
	M	Front mounting receptacle connector - threaded M ISO 261
N	Front mounting receptacle connector - threaded NPT ASA B2.1	
A Shell Material	A	Aluminium - anodized (<i>Not for CVBM</i>)
	O	Brass - nickel plated
	S*	AISI 316
	C*	Stainless steel- nickel plated
1 Working Temperature	B*	Bronze
	1	-20 /+105°C -chloroprene insert***
	2	-20 /+135°C -silicon insert**
	3	-40 /+105°C -chloroprene insert***
18-20 Insert Arrangement	4	-40 /+135°C -silicon insert**
		See page 14
P Contact Gender	S	Socket contacts
	P	Pin contacts
A Service Rating	I	Max 200 Vdc/Vac (Service Rating I) - max current 10A
	D	Max 900 Vac-1250 Vdc (Service Rating D)
	A	Max 500 Vac – 700 Vdc (Service Rating A)
	L	Low voltage, Max 48 Vac/Vdc- max current 5A
	W	Intrinsic safety connections - max voltage ≤30 V per circuit - max current 1A Intrinsic safety connections - max voltage ≤60 V between circuits - max current 1A
	X	Mixed Service Rating (I / D / A)

* On request

*** Suitable for temperature class T6/T5 and maximum surface temperature T85/100 °C

** Suitable for temperature class T6/T5/T4 and maximum surface temperature T85/100/135 °C

CVB ATEX - Shell Type

Ex-d ENCLOSURE APPLICATION



CVB-EX*
M - N - G - H - K - P

** Supplied with cable assembly and potter*

Ex-e / Ex-i / Ex-p ENCLOSURE APPLICATION



CVB-EX 4



CVB-EX 9

RECEPTACLE CONNECTORS



CVB-EX 3



CVB-EX 7

BACKSHELL
Must be used with connectors

INLINE CONNECTORS



CVB-EX 1

PLUG CONNECTOR

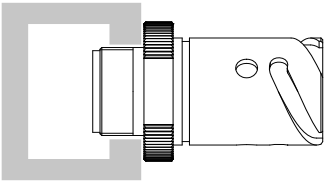


CVB-EX 6

CVB ATEX - Shell compatibility table

**Ex-d
ENCLOSURE APPLICATION**
Receptacle Connectors

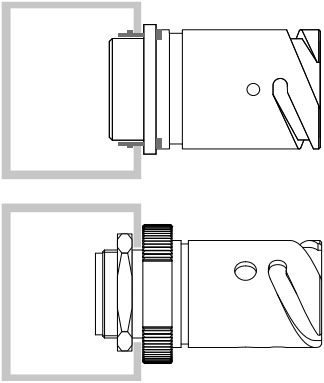
**CVB-EX
M - N - G - H - K - P**



**Ex-e / Ex-i / Ex-p
ENCLOSURE APPLICATION**
Receptacle Connectors

CVB-EX 4

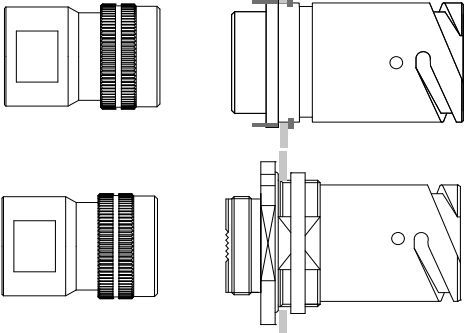
CVB-EX 9



RECEPTACLE CONNECTORS

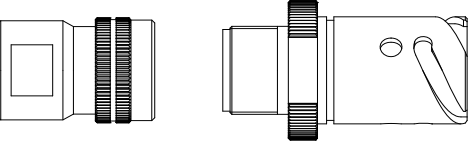
**CVB-EX 3
+ BACKSHELL**

**CVB-EX 7
+ BACKSHELL**

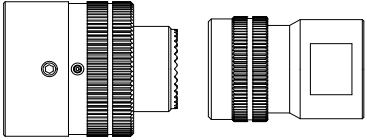


INLINE CONNECTORS

**CVB-EX 1
+ BACKSHELL**



**PLUG CONNECTOR
CVB-EX 6 + BACKSHELL**



CVB ATEX - Shell Standard Execution

Shell Type	Enclosure application				Receptacle	Inline	Supplying terms	
	Ex-d	Ex-e	Ex-i	Ex-p			With cable assembly and potted	Cable assembly and potting have to be performed by the customer
M - N	●	●	●	●	-	-	●	-
G - H - K - P	●	●	●	●	-	-	●	-
4	-	●	●	●	-	-	●	●
9	-	●	●	●	-	-	●	●
3	-	-	-	-	●	-	●	●
7	-	-	-	-	●	-	●	●
1	-	-	-	-	-	●	●	●
6	●	●	●	●	-	●	●	●

● Standard version
 ● On request execution

ATEX categories and types of protection

a) Multipole connectors series CVB-EX and CVBM-EX

- II 2G Ex d IIC T6 + T4: Multipole connector series CVB-EX for explosive gas atmospheres, classified zone 1 or 2, with substances of groups IIA, IIB or IIC, temperature class T6 + T4.
- II 2D Ex tD A21 IP66/67 T85 + 135°C: Multipole connector series CVB-EX for use in the presence of combustible dust, in zones classified 21 or 22, with maximum surface temperature 85 + 135°C.
- II 2GD Ex d IIC T6 + T4 Ex tD A21 IP66/67 T85 + 135°C: Multipole connector series CVB-EX for explosive atmospheres, classified zone 1, 2, 21 or 22, with substances of groups IIA, IIB or IIC, temperature class T6 + T4, maximum surface temperature 85 + 135°C.
- I M2 Ex d I: Multipole connector series CVBM-EX for mines or underground works, with maximum surface temperature less than 150 °C.

b) End-of-line plugs series FVB-EX and FVBM-EX

- II 2G Ex d IIC T6 + T4: End-of-line plug series FVB-EX for multipole connector series CVB-EX for explosive gas atmospheres, classified zone 1 or 2, with substances of groups IIA, IIB or IIC, temperature class T6 + T4.
- II 2D Ex tD A21 IP66/67 T85 + 135°C: End-of-line plug series FVB-EX for multipole connector series CVB-EX for use in the presence of combustible dust, in zones classified 21 or 22, with maximum surface temperature 85 + 135°C.
- II 2GD Ex d IIC T6 + T4 Ex tD A21 IP66/67 T85 + 135°C: End-of-line plug series FVB-EX for multipole connector series CVB-EX for explosive atmospheres, classified zone 1, 2, 21 or 22, with substances of groups IIA, IIB or IIC, temperature class T6 + T4, maximum surface temperature 85 + 135°C.
- I M2 Ex d I: End-of-line plug series FVBM-EX for multipole connector series CVBM-EX for mines or underground works, with maximum surface temperature less than 150°C.

c) Blanking plugs series TVB-EX and TVBM-EX

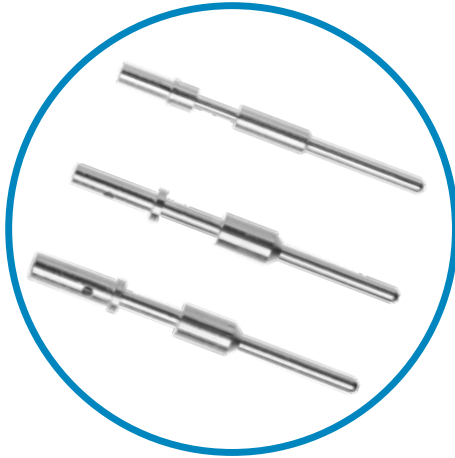
- II 2G Ex d IIC T6 + T4: Blanking plug series TVB-EX for multipole connector series CVB-EX for explosive gas atmospheres, classified zone 1 or 2, with substances of groups IIA, IIB or IIC, temperature class T6 + T4.
- II 2D Ex tD A21 IP66/67 T85 + 135°C: Blanking plug series TVB-EX for multipole connector series CVB-EX for use in the presence of combustible dust, in zones classified 21 or 22, with maximum surface temperature 85 + 135°C.
- II 2GD Ex d IIC T6 + T4 Ex tD A21 IP66/67 T85 + 135°C: Blanking plug series TVB-EX for multipole connector series CVB-EX for explosive atmospheres, classified zone 1, 2, 21 or 22, with substances of groups IIA, IIB or IIC, temperature class T6 + T4, maximum surface temperature 85 + 135°C.
- I M2 Ex d I: Blanking plug series TVBM-EX for multipole connector series CVBM-EX for mines or underground works, with maximum surface temperature less than 150°C.

d) Blanking plugs series TVB e TVBM

- IP 66/67: Blanking plug series TVB and series TVBM for multipole connector series CVB-EX and series CVBM-EX, with degree of protection IP 66/67.

CVB ATEX - Contacts

STANDARD CONTACTS



Electrical characteristics

Electrical rating for connectors with service codes "A", "D", "I", "L" e "W" are the following:

A	(supply)	max voltage 500 Vca / 700 Vdc - max current as in following table
D	(power)	max voltage 900 Vca / 1.250 Vdc - max current as in following table
I	(instrument)	max voltage 200 Vac/Vdc - max current 10A - max current as in following table
L	(low voltage)	max voltage ≤48 Vca/Vdc - max current 5A - max current as in following table
W	(Ex i circuits)	max voltage ≤30 V per circuit - max current 1A
		max voltage ≤60 V between circuits - max current 1A

Contact Size	Wire section (mm ²)	AWG cable size	Max Current Rating (A) Service code A-D	Max Current Rating (A) Service code I	Max Current Rating (A) Service code L	Max Current Rating (A) Service code W
16 - 16S	0.14÷2.5	26÷12	10A	10A	5A	1A
12	0.75÷6	20÷10	20A	10A	5A	1A
8	1÷6	18÷6	40A	-	5A	1A

Type and characteristics of wire to be used for connection of CVB ATEX connectors

In the table is indicated types of wires that can be used for connectors along with their sizes [mm²] and ratings [A]

Wire according EN60332		AWG wires according MIL-W-5088		
wire size mm ²	wire rating A	type	wire size mm ²	wire rating A
0.14	1.1	AWG 26	0.13	1.1
0.25	1.8	AWG 24	0.21	1.6
0.34	2.4	AWG 22	0.32	2.4
0.75	4.5	AWG 20	0.52	3.2
1	6	AWG 18	0.82	5
1.25	6.5	AWG 16	1.31	6.6
1.5	7	AWG 14	2.01	8
2.5	10	AWG 12	3.31	12.6
4	14	AWG 10	5.26	18.4
6	21	AWG 8	8.36	29.2
10	32	AWG 6	13.3	42.5

Dimensions in mm

CVB ATEX - Contacts

MAX CURRENT RATING

Determination of max admissible current (A) for each contact size depends on connector's ambient temperature and temperature class for mounting on Ex-e / Ex-p equipments.

Service Rating A (700 Vdc - 500 Vac) / D (1250 Vdc - 900 Vac) / X (Mixed Service Rating)

Do not separate when energized.

Max admissible current (A) for mounting on Ex-d equipments

Contact Size	Ambient Temperature							
	= 60°C		80°C		90°C		110°C	120°C
	T6	T6	T5	T5	T4	T4	T4	
16 - 16S	10A	5A	10A	5A	10A	5A	2.5A	
12	20A	10A	20A	10A	20A	10A	5A	
8	40A	20A	40A	20A	40A	20A	10A	

Max admissible current (A) for mounting on Ex-e / Ex-p equipments

Contact Temperature Class Size	Ambient Temperature									
	40°C		60°C		80°C		90°C		110°C	120°C
	T6	T5	T6	T4	T5	T4	T5	T4	T4	T4
16 - 16S	5A	10A	5A	10A	5A	10A	2.5A	5A	5A	2.5A
12	10A	20A	10A	20A	10A	20A	5A	10A	10A	5A
8	20A	40A	20A	40A	20A	40A	10A	20A	20A	10A

Inserts Arrangement	N° of Contacts	Contacts Size			Max Service Rating	Max Current Rating (ambient temperature)		
		8	12	16		T6	T5	T4
		16S-1 *	7				7	A (700 Vdc - 500 Vac)
16S-4 *	2			2	D (1250 Vdc - 900 Vac)	10A (60°C)*	10A (40°C)	10A (80°C)
16S-5 *	3			3	A (700 Vdc - 500 Vac)	10A (60°C)*	10A (40°C)	10A (80°C)
16S-8 *	5			5	A (700 Vdc - 500 Vac)	10A (60°C)*	10A (40°C)	10A (80°C)
18-3	2		2		D (1250 Vdc - 900 Vac)	20A (60°C)**	20A (40°C)	20A (80°C)
18-4	4			4	D (1250 Vdc - 900 Vac)	10A (60°C)*	10A (40°C)	10A (80°C)
18-8	8		1##	7	A (700 Vdc - 500 Vac)	20A (60°C)**##	20A (40°C)##	20A (80°C)##
18-10	4		4		A (700 Vdc - 500 Vac)	20A (60°C)**	20A (40°C)	20A (80°C)
18-11	5		5		A (700 Vdc - 500 Vac)	20A (60°C)**	20A (40°C)	20A (80°C)
18-12	6			6	A (700 Vdc - 500 Vac)	10A (60°C)*	10A (40°C)	10A (80°C)
18-19	10			10	A (700 Vdc - 500 Vac)	10A (60°C)*	10A (40°C)	10A (80°C)
18-20	5			5	A (700 Vdc - 500 Vac)	10A (60°C)*	10A (40°C)	10A (80°C)
18A5	5			5	A (700 Vdc - 500 Vac)	10A (60°C)*	10A (40°C)	10A (80°C)
20-3	3		3		D (1250 Vdc - 900 Vac)	20A (60°C)**	20A (40°C)	20A (80°C)
20-4	4		4		D (1250 Vdc - 900 Vac)	20A (60°C)**	20A (40°C)	20A (80°C)
20-7	8			8	X (A,B,H,G=D - Bal.=A)	10A (60°C)*	10A (40°C)	10A (80°C)
20-15	7		7		A (700 Vdc - 500 Vac)	20A (60°C)**	20A (40°C)	20A (80°C)
20-18	9		3##	6	A (700 Vdc - 500 Vac)	20A (60°C)**##	20A (40°C)##	20A (80°C)##
20-24	4	2#		2	A (700 Vdc - 500 Vac)	40A (60°C)**##	40A (40°C)#	40A (80°C)#
20-27	14			14	A (700 Vdc - 500 Vac)	10A (60°C)*	10A (40°C)	10A (80°C)
20-29	17			17	A (700 Vdc - 500 Vac)	10A (60°C)*	10A (40°C)	10A (80°C)
20-33	11			11	A (700 Vdc - 500 Vac)	10A (60°C)*	10A (40°C)	10A (80°C)
20B8	8		4##	4	D (1250 Vdc - 900 Vac)	20A (60°C)**##	20A (40°C)##	20A (80°C)##

For contacts size 8 only
For contacts size 12 only

* Ex-d only (5A for Ex-e/Ex-p)
** Ex-d only (10A for Ex-e/Ex-p)
*** Ex-d only (20A for Ex-e/Ex-p)

CVB ATEX - Contacts

MAX CURRENT RATING

Determination of max admissible current (A) for each contact size depends on connector's ambient temperature and temperature class for mounting on Ex-e / Ex-p equipments.

Service Rating I (200 Vdc - 200 Vac - Max Current Rating 10A)

Do not separate when energized.

Max admissible current (A) for mounting on Ex-d equipments

Contact Size	Ambient Temperature							
	= 60°C		80°C		90°C		110°C	120°C
	T6	T6	T5	T5	T4	T4	T4	
16 - 16S	10A	5A	10A	5A	10A	5A	2.5A	
12	10A	10A	10A	10A	10A	10A	5A	
8	10A	10A	10A	10A	10A	10A	10A	

Max admissible current (A) for mounting on Ex-e / Ex-p equipments

Contact Temperature Class Size	Contact Temperature Class									
	40°C		60°C		80°C		90°C		110°C	120°C
	T6	T5	T6	T4	T5	T4	T5	T4	T4	T4
16 - 16S	5A	10A	5A	10A	5A	10A	2.5A	5A	5A	2.5A
12	10A	10A	10A	10A	10A	10A	5A	10A	10A	5A
8	10A	10A	10A	10A	10A	10A	10A	10A	10A	10A

Inserts Arrangement	N° of Contacts	Contacts Size			Max Service Rating	Max Current Rating (ambient temperature)		
		8	12	16		T6	T5	T4
		18-1	10				10	X (B,C,F,G=A - Bal.=i)
18-9	7		2**	5	I (200 Vdc - 200 Vac)	10A (60°C)**	10A (80°C)**	10A (110°C)**
20-11	13			13	I (200 Vdc - 200 Vac)	10A (60°C)*	10A (40°C)	10A (80°C)
20A48	19			19	I (200 Vdc - 200 Vac)	10A (60°C)*	10A (40°C)	10A (80°C)

* Ex-d only (5A for Ex-e/Ex-p)

** For contacts size 12 only

CVB ATEX - Contacts

MAX CURRENT RATING

Determination of max admissible current (A) for each contact size depends on connector's ambient temperature and temperature class for mounting on Ex-e / Ex-p equipments.

Service Rating L (48 Vdc - 48 Vac - Max Current Rating 5A)

Do not separate when energized if an explosive atmosphere is present.

Max admissible current (A) for mounting on Ex-d equipments

Contact Size	Ambient Temperature							
	= 60°C		80°C		90°C		110°C	120°C
	T6	T6	T5	T5	T4	T4	T4	
16 - 16S	5A	5A	5A	5A	5A	5A	2.5A	
12	5A	5A	5A	5A	5A	5A	5A	
8	5A	5A	5A	5A	5A	5A	5A	

Max admissible current (A) for mounting on Ex-e / Ex-p equipments

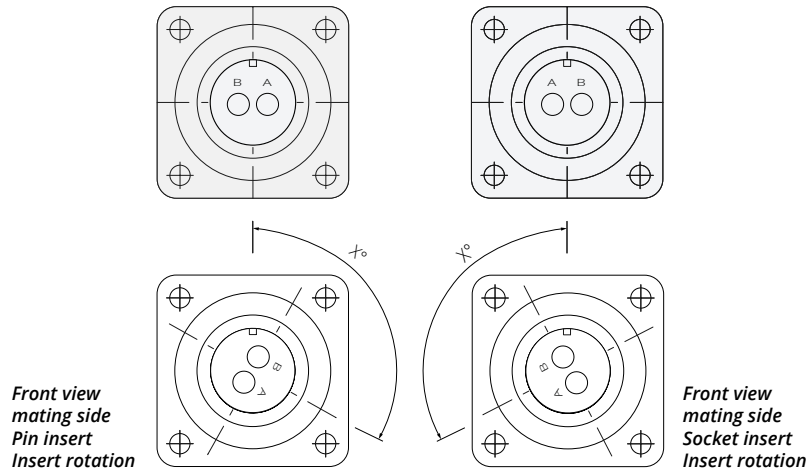
Contact Temperature Class Size	Contact Temperature Class									
	40°C		60°C		80°C		90°C		110°C	120°C
	T6	T5	T6	T4	T5	T4	T5	T4	T4	T4
16 - 16S	5A	5A	5A	5A	5A	5A	2.5A	5A	5A	2.5A
12	5A	5A	5A	5A	5A	5A	5A	5A	5A	5A
8	5A	5A	5A	5A	5A	5A	5A	5A	5A	5A

Inserts Arrangement	N° of Contacts	Contacts Size			Max Service Rating	Max Current Rating (ambient temperature)		
		8	12	16		T6	T5	T4
		16S-1 *	7				7	A (700 Vdc - 500 Vac)
16S-4 *	2			2	D (1250 Vdc - 900 Vac)	5A (60°C)	5A (80°C)	5A (110°C)
16S-5 *	3			3	A (700 Vdc - 500 Vac)	5A (60°C)	5A (80°C)	5A (110°C)
16S-8 *	5			5	A (700 Vdc - 500 Vac)	5A (60°C)	5A (80°C)	5A (110°C)
18-1	10			10	X (B,C,F,G=A - Bal.=i)	5A (60°C)	5A (80°C)	5A (110°C)
18-3	2		2		D (1250 Vdc - 900 Vac)	5A (60°C)	5A (90°C)	5A (120°C)
18-4	4			4	D (1250 Vdc - 900 Vac)	5A (60°C)	5A (80°C)	5A (110°C)
18-8	8		1	7	A (700 Vdc - 500 Vac)	5A (60°C)	5A (80°C)	5A (110°C)
18-9	7		2	5	I (200 Vdc - 200 Vac)	5A (60°C)	5A (80°C)	5A (110°C)
18-10	4		4		A (700 Vdc - 500 Vac)	5A (60°C)	5A (90°C)	5A (120°C)
18-11	5		5		A (700 Vdc - 500 Vac)	5A (60°C)	5A (90°C)	5A (120°C)
18-12	6			6	A (700 Vdc - 500 Vac)	5A (60°C)	5A (80°C)	5A (110°C)
18-19	10			10	A (700 Vdc - 500 Vac)	5A (60°C)	5A (80°C)	5A (110°C)
18-20	5			5	A (700 Vdc - 500 Vac)	5A (60°C)	5A (80°C)	5A (110°C)
18A5	5			5	A (700 Vdc - 500 Vac)	5A (60°C)	5A (80°C)	5A (110°C)
20-3	3		3		D (1250 Vdc - 900 Vac)	5A (60°C)	5A (90°C)	5A (120°C)
20-4	4		4		D (1250 Vdc - 900 Vac)	5A (60°C)	5A (90°C)	5A (120°C)
20-7	8			8	X (A,B,H,G=D - Bal.=A)	5A (60°C)	5A (80°C)	5A (110°C)
20-11	13			13	I (200 Vdc - 200 Vac)	5A (60°C)	5A (80°C)	5A (110°C)
20-15	7		7		A (700 Vdc - 500 Vac)	5A (60°C)	5A (90°C)	5A (120°C)
20-18	9		3	6	A (700 Vdc - 500 Vac)	5A (60°C)	5A (80°C)	5A (110°C)
20-24	4	2		2	A (700 Vdc - 500 Vac)	5A (60°C)	5A (80°C)	5A (110°C)
20-27	14			14	A (700 Vdc - 500 Vac)	5A (60°C)	5A (80°C)	5A (110°C)
20-29	17			17	A (700 Vdc - 500 Vac)	5A (60°C)	5A (80°C)	5A (110°C)
20-33	11			11	A (700 Vdc - 500 Vac)	5A (60°C)	5A (80°C)	5A (110°C)
20A48	19			19	I (200 Vdc - 200 Vac)	5A (60°C)	5A (80°C)	5A (110°C)
20B8	8		4	4	D (1250 Vdc - 900 Vac)	5A (60°C)	5A (80°C)	5A (110°C)

CVB ATEX - Inserts Arrangement

INSULATING INSERTS - List by shell size

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.



Inserts Arrangement	N° of Contacts	Contacts Size			Max Service Rating	Degrees for alternate positions			
		8	12	16		W**	X	Y	Z
16S-1 *	7			7	A (700 Vdc - 500 Vac)	80	-	-	280
16S-5 *	3			3	A (700 Vdc - 500 Vac)	70	145	215	290
16S-8 *	5			5	A (700 Vdc - 500 Vac)	265	170	-	-
18-1	10			10	X (B,C,F,G=A - Bal.=i)	70	145	215	290
18-8	8		1	7	A (700 Vdc - 500 Vac)	70	-	-	290
18-9	7		2	5	I (200 Vdc - 200 Vac)	80	110	250	280
18-10	4		4		A (700 Vdc - 500 Vac)	240	120	-	-
18-11	5		5		A (700 Vdc - 500 Vac)	265	170	-	-
18-12	6			6	A (700 Vdc - 500 Vac)	80	-	-	280
18-20	5			5	A (700 Vdc - 500 Vac)	90	180	270	-
20-7	8			8	X (A,B,H,G=D - Bal.=A)	80	110	250	280
20-11	13			13	I (200 Vdc - 200 Vac)	-	-	-	-
20-15	7		7		A (700 Vdc - 500 Vac)	80	-	-	280
20-18	9		3	6	A (700 Vdc - 500 Vac)	35	110	250	325
20-24	4	2		2	A (700 Vdc - 500 Vac)	35	110	250	325
20-27	14			14	A (700 Vdc - 500 Vac)	35	110	250	325
20-29	17			17	A (700 Vdc - 500 Vac)	80	-	-	280
20-33	11			11	A (700 Vdc - 500 Vac)	280	-	-	-
20A48	19			19	I (200 Vdc - 200 Vac)	30	80	280	-

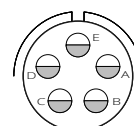
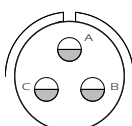
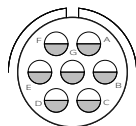
* To be used with 16S contacts size

** Intrinsic Safety

CVB ATEX - Inserts Arrangement

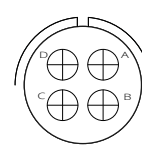
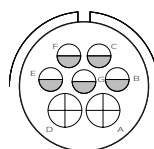
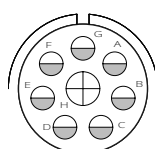
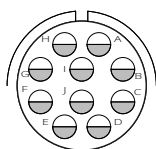
INSULATING INSERTS - List by contacts total quantity

16S SHELL SIZE



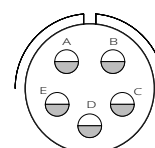
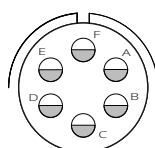
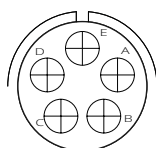
Insert Arrangement	16S-1	16S-5	16S-8
N° of Contacts	7	3	5
Contact Size/Current rating	16S (10A)	16S (10A)	16S (10A)
Service Rating	A - L - W	A - L - W	A - L - W

18 SHELL SIZE



Insert Arrangement	18-1	18-8	18-9	18-10
N° of Contacts	10	8	7	4
Contact Size/Current rating	16 (10A)	n° 1-12(20A) n° 7-16 (10A)	n° 2-12 (20A) n° 5-16 (10A)	12 (20A)
Service Rating	X B,C,F,G=A Bal.=I	A - L - W	I - L - W	A - L - W

18 SHELL SIZE



Insert Arrangement	18-11	18-12	18-20
N° of Contacts	5	6	5
Contact Size/Current rating	12 (20A)	16 (10A)	16 (10A)
Service Rating	A - L - W	A - L - W	A - L - W

Front view Pin contacts insert

** On request (please consult our Sales Office)



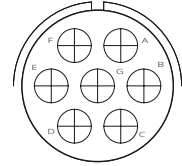
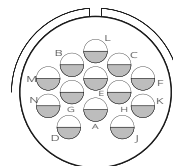
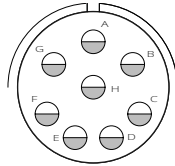
ST Contacts size legend

16 12 8

CVB ATEX - Inserts Arrangement

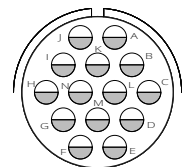
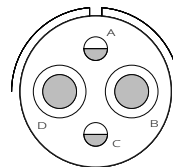
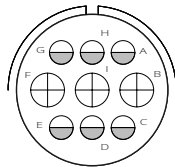
INSULATING INSERTS - List by contacts total quantity

20 SHELL SIZE



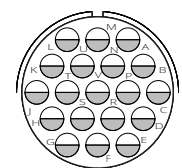
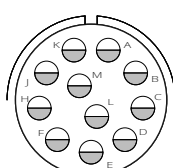
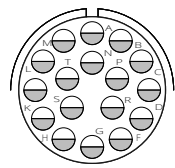
Insert Arrangement	20-7	20-11	20-15
N° of Contacts	8	13	7
Contact Size/Current rating	16 (10A)	16 (10A)	12 (20A)
Service Rating	A - L - W	I - L - W	A - L - W

20 SHELL SIZE



Insert Arrangement	20-18	20-24	20-27
N° of Contacts	9	4	14
Contact Size/Current rating	n° 3-12 (20A) n° 6-16 (10A)	n° 2-8 (40A) n° 2-16 (10A)	16 (10A)
Service Rating	A - L - W	A - L - W	A - L - W

20 SHELL SIZE



Insert Arrangement	20-29	20-33	20A48
N° of Contacts	17	11	19
Contact Size/Current rating	16 (10A)	16 (10A)	16 (10A)
Service Rating	A - L - W	A - L - W	I - L - W

Front view Pin contacts insert

** On request (please consult our Sales Office)



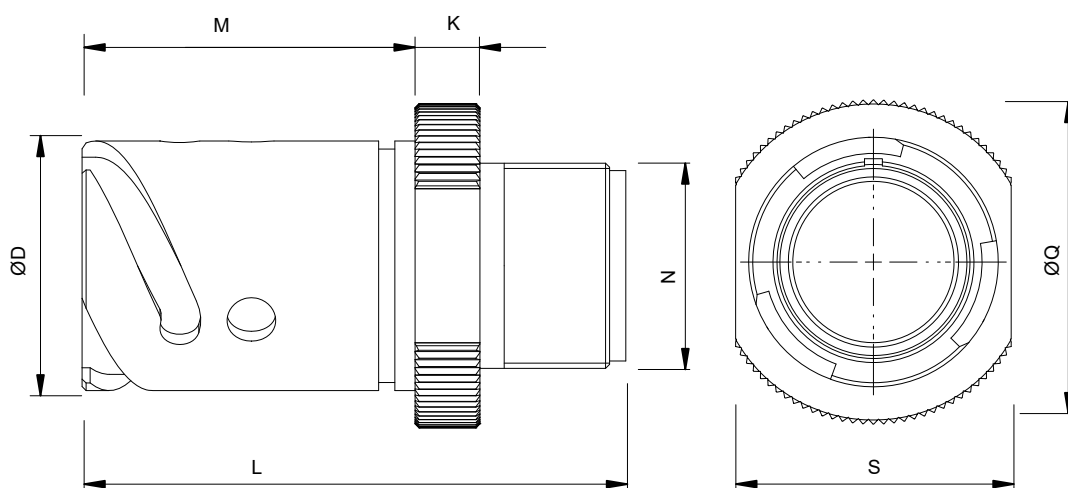
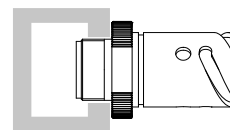
ST Contacts size legend

16 12 8

CVB ATEX - Shell Type for Ex-d Enclosure application

CVB-EX G-H-K-M-N FRONT MOUNTING RECEPTACLE CONNECTORS

Shells can be screwed directly to the equipment enclosure (Equipment enclosure can be Ex-d type)



Shell size	ØD	ØQ	S	K	M	L	N				
							Backshell Thread				
							G	H	K	M	N
16S	27.4	37	32	6.5	34.1	53.8	G ISO 228	R ISO 7/1	Gk UNI 6125	M ISO 261	NPT ASA B2.1
18	30.8	40	34	8	41.1	66.8	G ¾"	Rc ¾"	Gk ¾"	M25	¾"
20	34.2	44	40	8	41.1	66.8	G 1"	Rc 1"	Gk 1"	M32	1"

Dimensions in mm

Shell Standard Execution

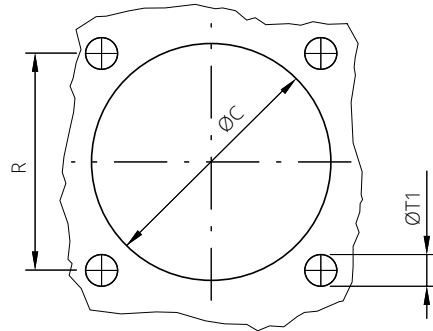
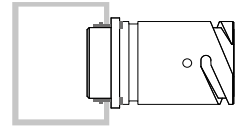
Shell Type	Enclosure application				Supplying terms	
	Ex-d	Ex-e	Ex-i	Ex-p	With cable assembly and potted	Cable assembly and potting have to be performed by the customer
M - N	●	●	●	●	●	-
G - H - K - P	●	●	●	●	●	-

● Standard version ● On request execution

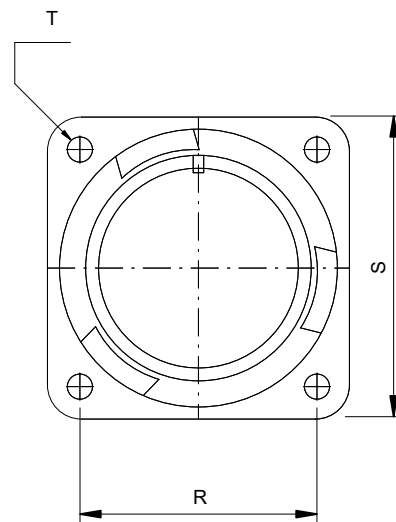
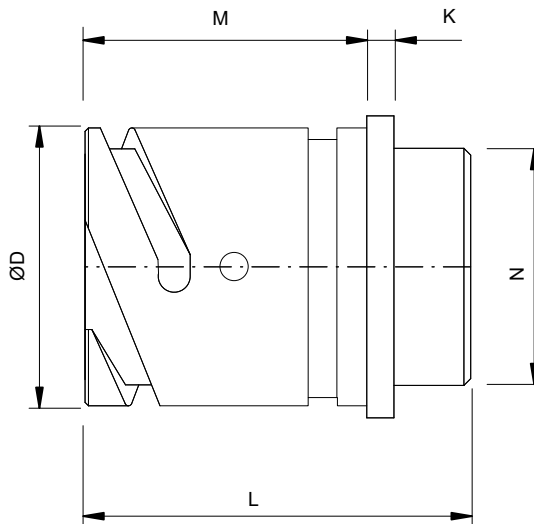
CVB ATEX - Shell Type for Ex-e / Ex-i / Ex-p Enclosure application

CVB-EX 4 FRONT MOUNTING RECEPTACLE CONNECTORS

Supplied with neoprene gasket (Equipment enclosure shell to be Ex-e, Ex-i or Ex-p type)



Panel cut out



Shell size	ØD	N	M	K	L	S	R	T	T1	ØC
16S	27.4	Ø22.4	37.6	3	58.6	32.5	24.6	3.1	3.4	23
18	30.8	Ø25.6	45.1	4	63.1	34.9	27	3.1	3.4	26.5
20	34.2	Ø28.8	45.1	4	63.1	38.1	29.4	3.1	3.4	30

Dimensions in mm

Shell Standard Execution

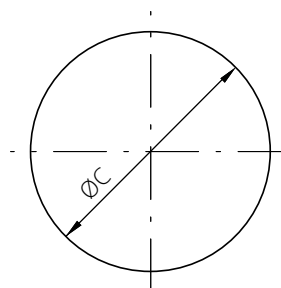
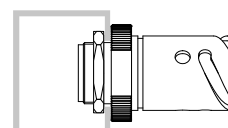
Shell Type	Enclosure application				Supplying terms	
	Ex-d	Ex-e	Ex-i	Ex-p	With cable assembly and potted	Cable assembly and potting have to be performed by the customer
4	-	●	●	●	●	●

● Standard version ● On request execution

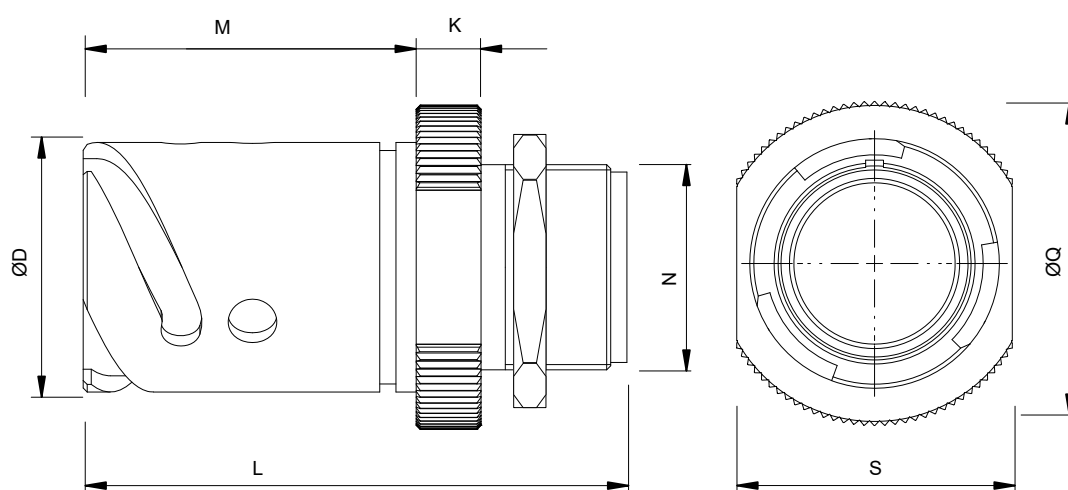
CVB ATEX - Shell Type for Ex-e / Ex-i / Ex-p Enclosure application

CVB-EX 9 FRONT MOUNTING RECEPTACLE CONNECTORS

Mounting is made by a hexagonal coupling-nut. (Equipment enclosure shell to be Ex-e, Ex-i or Ex-p type)



Panel cut out



Shell size	ØD	ØQ	S	L	K	M	N Backshell Thread	ØC
16S	27.4	37	32	53.8	6.5	34.1	M25	25.5
18	30.8	40	34	66.8	8	41.1	M28	28.5
20	34.2	44	40	66.8	8	41.1	M32	32.5

Dimensions in mm

Shell Standard Execution

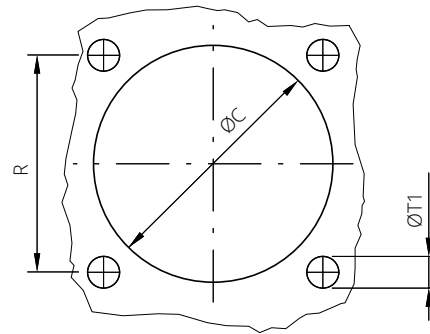
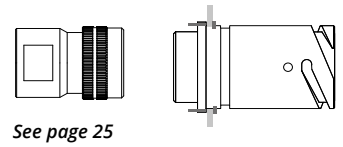
Shell Type	Enclosure application				Supplying terms	
	Ex-d	Ex-e	Ex-i	Ex-p	With cable assembly and potted	Cable assembly and potting have to be performed by the customer
9	-	●	●	●	●	●

● Standard version ● On request execution

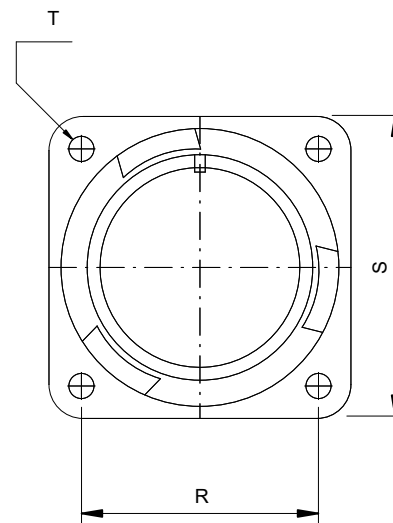
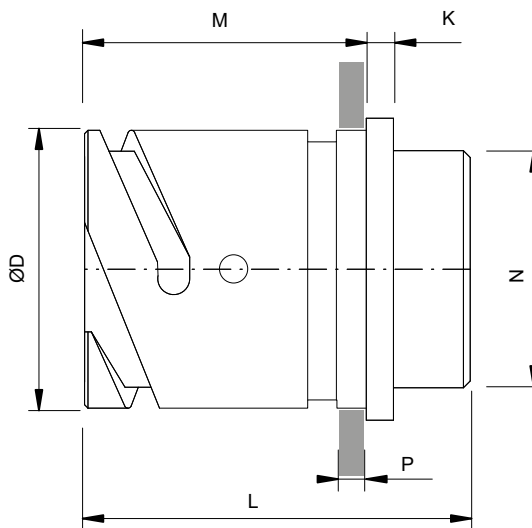
CVB ATEX - Shell Type

CVB-EX 3 REAR MOUNTING RECEPTACLE CONNECTORS

Supplied with neoprene gasket. Threaded mounting holes.
 Provided with External UNEF Threaded.
 Must be used with backshell, see page 25.



Panel cut out



Shell size	N Thread in inches	ØD	M	K	L	S	R	T	T1	ØC	P
16S	7/8"-20 UNEF	27.4	37.6	3	58.6	32.5	24.6	M4	4.5	28.3	6.5
18	1"-20 UNEF	30.8	45.1	4	63.1	34.9	27	M4	4.5	31.7	6.5
20	1" 8-18 UNEF	34.2	45.1	4	63.1	38.1	29.4	M4	4.5	35	6.5

Dimensions in mm

Shell Standard Execution

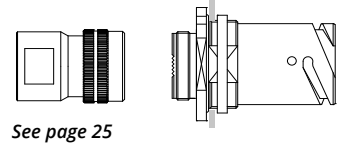
Shell Type	Receptacle	Supplying terms	
		With cable assembly and potted	Cable assembly and potting have to be performed by the customer
3	●	●	●

● Standard version ● On request execution

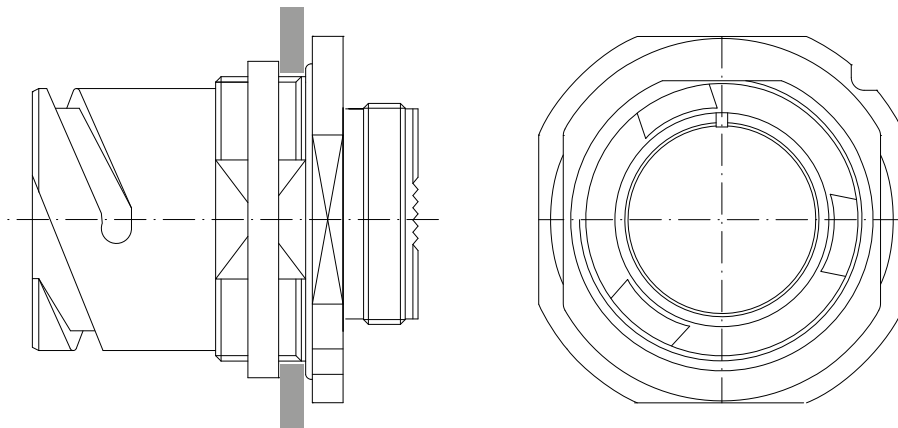
CVB ATEX - Shell Type

CVB-EX 7 REAR MOUNTING RECEPTACLE CONNECTORS

Mounting is made by a hexagonal coupling-nut.
Must be used with backshell, see page 25.



See page 25



On development

Shell Standard Execution

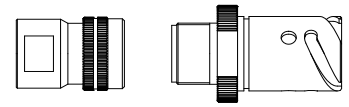
Shell Type	Receptacle	Supplying terms	
		With cable assembly and potted	Cable assembly and potting have to be performed by the customer
7	●	●	●

● Standard version ● On request execution

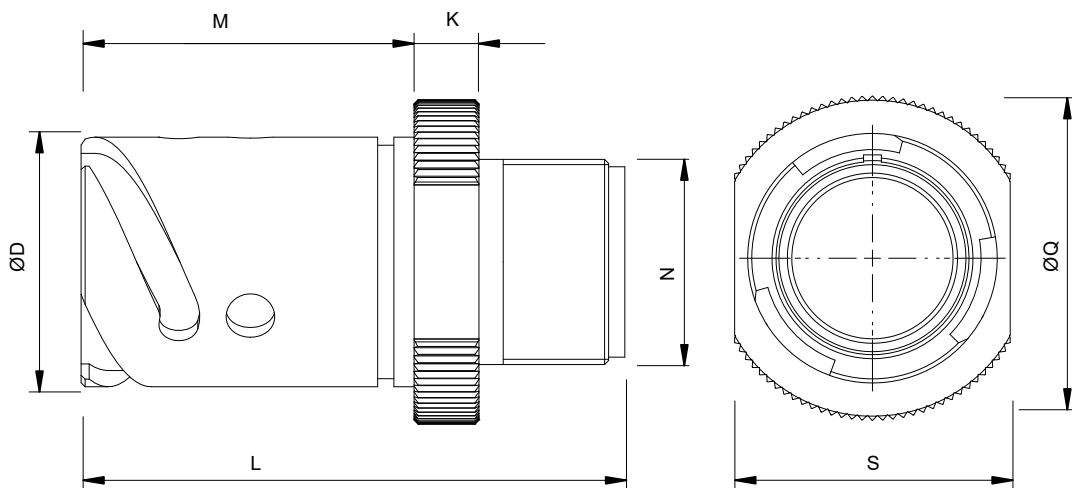
CVB ATEX - Shell Type

CVB-EX 1 IN-LINE RECEPTACLE CONNECTORS

Provided with external UNEF thread.
Must be used with backshell, see page 25.



See page 25



Shell size	ØD	ØQ	S	M	K	L	N Backshell Thread in inches
16S	27.4	37	32	34.1	6.5	53.8	7/8"-20 UNEF
18	30.8	40	34	41.1	8	66.8	1"-20 UNEF
20	34.2	44	40	41.1	8	66.8	1" 8-18 UNEF

Dimensions in mm

Shell Standard Execution

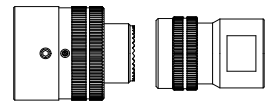
Shell Type	Inline		Supplying terms	
			With cable assembly and potted	Cable assembly and potting have to be performed by the customer
1	●	●	●	●

● Standard version ● On request execution

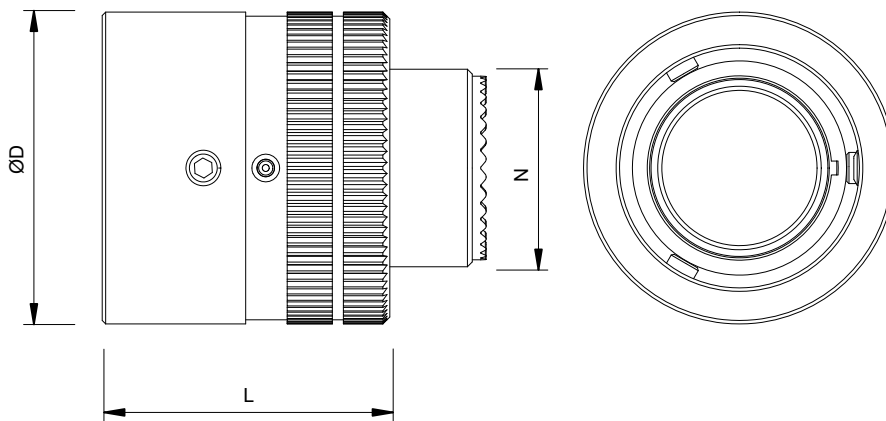
CVB ATEX - Shell Type

CVB-EX 6 PLUG CONNECTOR

Provided with external UNEF thread.
Must be used with backshell, see page 25.



See page 25



Shell size	ØD	L	N Backshell Thread in inches
16S	38	33.5	7/8"-20 UNEF
18	41.6	41.5	1"-20 UNEF
20	45	41.5	1" 8-18 UNEF

Dimensions in mm

Shell Standard Execution

Shell Type	Enclosure application				Inline	Supplying terms	
	Ex-d	Ex-e	Ex-i	Ex-p		With cable assembly and potted	Cable assembly and potting have to be performed by the customer
6	●	●	●	●	●	●	●

● Standard version ● On request execution

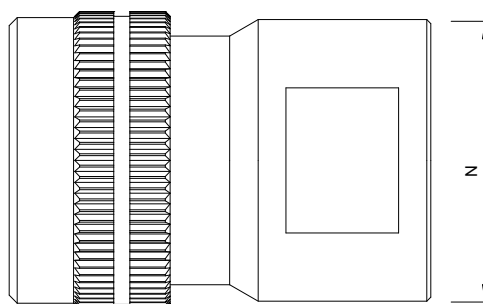
CVB ATEX - Kit Part number explanation



KIT	Kit	KIT	CVB-EX connectors supplied with backshell, contacts and wires
xxx	Serial number	xxx	Consult our sales office
xx-xx	Connector type	xx-xx	See page 6
-	Backshell Type	-	Single piece backshell
		C	With biconic device with shield
		D	With biconic device with shield but with embedded cable gland
18	Backshell Size	16S	For connector size 16S
		18	For connector size 18
		20	For connector size 20
050	Version	050	L50 type
M	Thread type	G	G ISO 228 Thread
		H	R ISO 7/1 Thread
		K	Gk UNI 6125
		L	R-Rp ISO 7/1
		M	M ISO 261
		N	NPT ASA B2.1
xx	Thread diameter	U	UNEF ASA 2A
		xx	Dimension in mm, see page 25
A	Backshell Material	A	Aluminium - anodized (<i>Not for CVBM</i>)
		O	Brass – nickel plated
		S*	AISI 316
		C*	Stainless steel– nickel plated
		B*	Bronze

* On request

CVB ATEX - Backshell



The table below reports thread conventions.

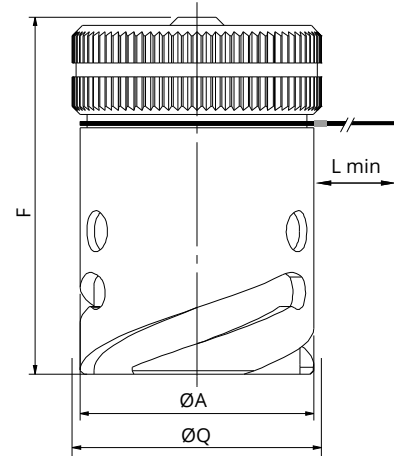
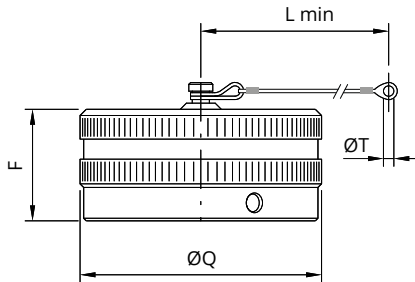
Add letter "E" after thread code for indicating external threads

Examples of thread code indication:

- **N25**: 3/4"NPT internal thread
- **M25E**: M25x1,5 external metric thread

Thread Code	N - Backshell Thread Conventions - Dimension code											
	12	16	20	25	28	32	36	40	44	50	56	63
G G ISO 228	1/4"	3/8"	1/2"	3/4"	-	1"	-	1 1/4"	-	1 1/2"	2"	2 1/2"
H R ISO 7/1	1/4"	3/8"	1/2"	3/4"	-	1"	-	1 1/4"	-	1 1/2"	2"	2 1/2"
K Gk UNI 6125	-	-	1/2"	3/4"	-	1"	-	1 1/4"	-	1 1/2"	2"	2 1/2"
L R-Rp ISO 7/1	1/4"	3/8"	1/2"	3/4"	-	1"	-	1 1/4"	-	1 1/2"	2"	2 1/2"
M M ISO 261	M12x1,5	M16x1,5	M20x1,5	M25x1,5	M28x1,5	M32x1,5	M36x1,5	M40x1,5	M44x1,5	M50x1,5	M56x1,5	M63x1,5
N NPT ASA B2.1	1/4"	3/8"	1/2"	3/4"	-	1"	-	1 1/4"	-	1 1/2"	2"	2 1/2"
U UNEF ASA 2A	-	5/8"-24	3/4"-20	1"-20	1 1/2"-18	1 3/16"-18	1 7/16"-18	-	1 3/4"-18	2"-18	2 1/16"-16	2 5/16"-16

TVB - Sealed Caps - Part number explanation



TVB-1

Shell size	ØQ	F	L min	ØT
16S	33	16	195	4.3
18	38	21.7	230	4.3
20	40.5	21.7	235	4.3

TVB-6

Shell size	ØQ	ØA	F	L min
16S	30	27.4	43	220
18	33	30.8	50.2	250
20	36.5	34.2	52.2	250

Dimensions in mm

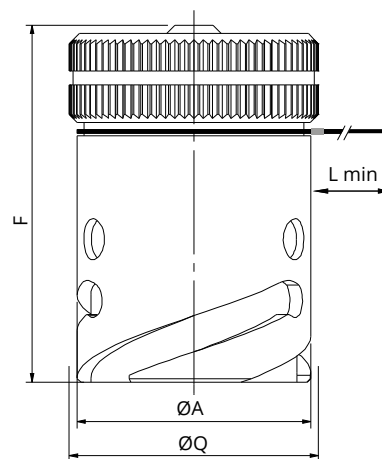
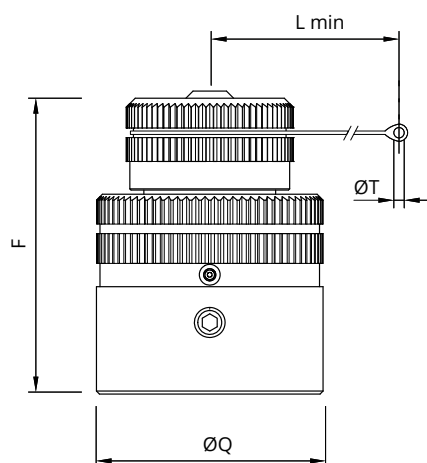


TVB	Caps Series	TVB	Surface application
		TVBM	Underground application
1	Caps Type	1	For receptacle connector
		6	For plugs connector
		A	Aluminium - anodized (<i>Not for CVBM</i>)
A	Caps Material	O	Brass – nickel plated
		S*	AISI 316
		C*	Stainless steel– nickel plated
		B*	Bronze
18	Caps Size	16S	For connector size 16S
		18	For connector size 18
		20	For connector size 20

* On request

TVB-EX - Caps - Part number explanation

Guarantee the presence of explosion proof junctions and allow restoring the power line when the cap is mounted over the connector.



TVB-EX 1

Shell size	ØQ	F	L min	ØT
16S	38	49.6	195	4.3
18	41.6	58	230	4.3
20	45	58	235	4.3

TVB-EX 6

Shell size	ØQ	ØA	F	L min
16S	30	27.4	43	220
18	33	30.8	50.2	250
20	36.5	34.2	52.2	250

Dimensions in mm



TVBEX	Caps Series	TVB-EX	Surface application
		TVBM-EX	Underground application
1	Caps Type	1	For receptacle connector
		6	For plugs connector
		A	Aluminium - anodized (Not for CVBM)
A	Caps Material	O	Brass - nickel plated
		S*	AISI 316
		C*	Stainless steel- nickel plated
		B*	Bronze
1	Working Temperature	1	-20 /+105°C - chloroprene gaskets
		0	-40 /+135°C - without gaskets
		4	-40 /+135°C - silicon gaskets
18	Caps Size	16S	For connector size 16S
		18	For connector size 18
		20	For connector size 20
L	Type of Warning	A, D, E, I, X	Do not separate when energized
		L	Do not separate when energized if an explosive atmosphere is present
		W	Intrinsic safety connections

* On request

FVB-EX - End of Line Plug for Connectors Part number explanation

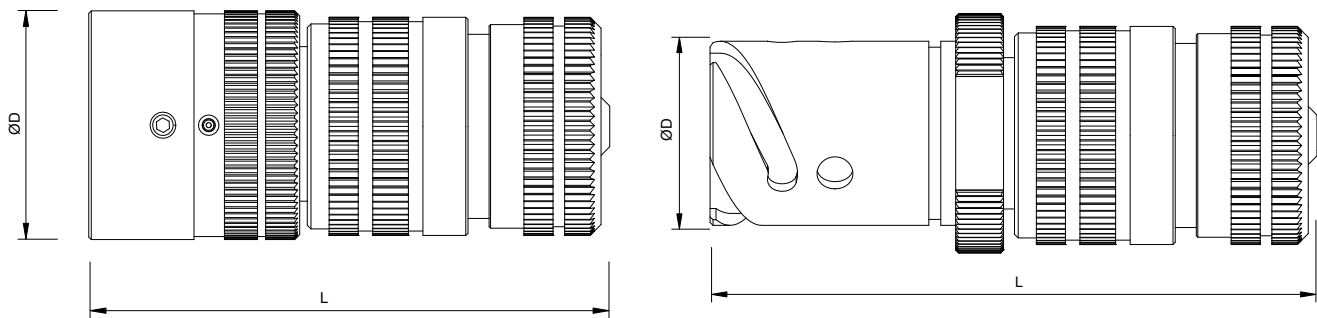
End of line caps enclosure with specific pilot circuit.
For internal wire connection, consult our sales office.



FVB-EX End of Line Caps Series	FVB-EX	Surface application
	FVBM-EX	Underground application
1 Caps Type	1	For receptacle connector
	6	For plugs connector
A Caps Material	A	Aluminium - anodized (<i>Not for CVBM</i>)
	O	Brass - nickel plated
	S*	AISI 316
	C*	Stainless steel- nickel plated
	B*	Bronze
1 Working Temperature	1	-20 /+105°C -chloroprene insert
	2	-20 /+135°C -silicon insert
	3	-40 /+105°C -chloroprene insert
	4	-40 /+135°C -silicon insert
18 Caps Size	16S	For connector size 16S
	18	For connector size 18
	20	For connector size 20
1 Insert Arrangement		See page 14
D Pilot circuit	A	Pilot circuit
	B	Pilot circuit with diode
	C	Pilot circuit with resistor
	D	Pilot circuit with resistor and diode
P Contact Gender	S	Socket contacts
	P	Pin contacts
A Service Rating	I	Max 200 Vdc/Vac (Service Rating I) - max current 10A
	D	Max 900 Vac-1250 Vdc (Service Rating D)
	A	Max 500 Vac - 700 Vdc (Service Rating A)
	L	Low voltage, Max 48 Vac/Vdc- max current 5A
	W	Intrinsic safety - 5V - 1A
	X	Mixed Service Rating (I / D / A)

* On request

FVB-EX - End of Line Plug for Connectors



FVB-EX 1 / FVBM-EX 1

Shell size	ØD	L
16S	27.4	84
18	30.8	95
20	34.2	95

Dimensions in mm

FVB-EX 6 / FVBM-EX 6

Shell size	ØD	L
16S	38	74
18	41.6	82
20	45	82

Dimensions in mm

CVB ATEX - Tool

ASSEMBLING INSTRUCTION BY CABLE RETENTION VERSION

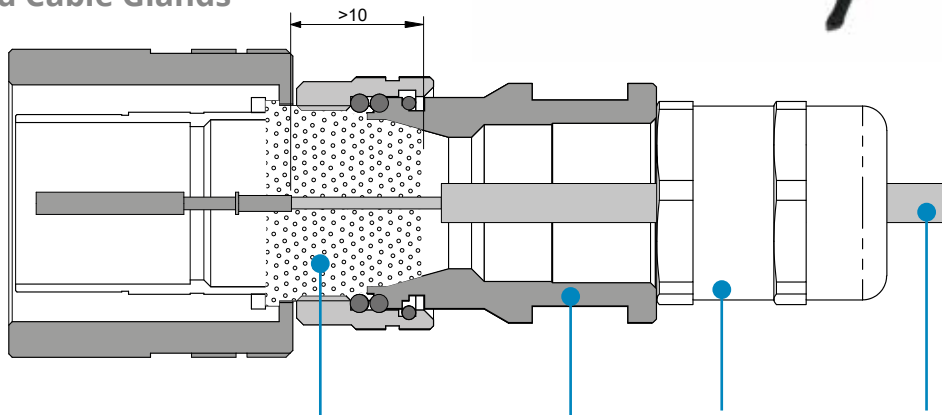
Potting

Suggested material and accessories for CVB-EX connectors potting

- Potting Compound: DY9492
- Potting injector: DMA50



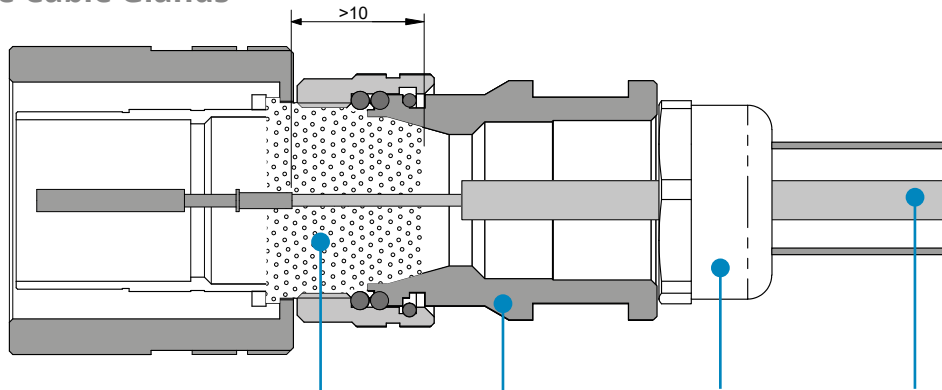
With Ex-d Cable Glands



Potting with silicon CF-4 self-levelling resin (or similar) able to guarantee connections insulating

Backshell Ex-d Cable Gland Cable

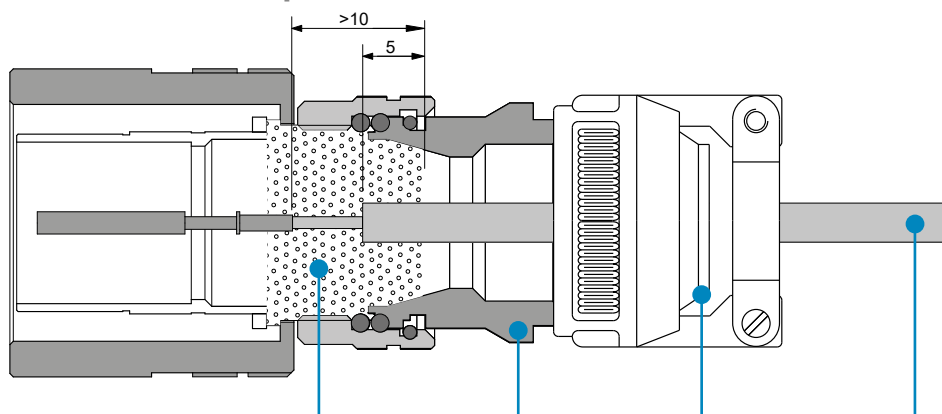
With Ex-e Cable Glands



Potting with DY94/N92 resin

Backshell Ex-e Cable Gland Cable with Bushing

With Standard Cable Clamps



Potting with DY94/N92 resin

Backshell Cable Clamp Cable

CVB ATEX - Soldering, crimping and contact assembly

SOLDERING PROCEDURE

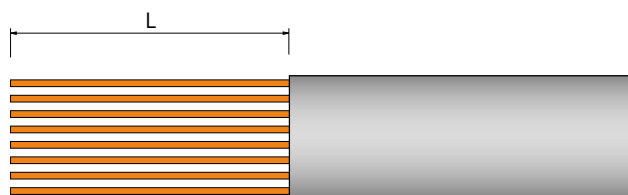
Contact selection – Wire selection

Size and type of wire that can be connected depend on contact size as per following table.

Contact Size	Pin contact code	Socket contact code	AWG wire - MIL 5088	EN 60332 wire
16S	ST385 16SP	ST385 16SS	≤ AWG 12	≤ 2,5 mm ²
16	ST385 16P	ST385 16S	≤ AWG 12	≤ 2,5 mm ²
12	ST385 12P	ST385 12S	≤ AWG 10	≤ 6 mm ²
8	ST385 8P	ST385 8S	≤ AWG 6	≤ 10 mm ²

Cable preparation

Cable insulation has to be stripped according to the following table.



Contact Size	L (mm)
16 - 16S	6,4
12	9
8	13,7

For soldering procedure please contact our sales office.

WIRE CRIMPING

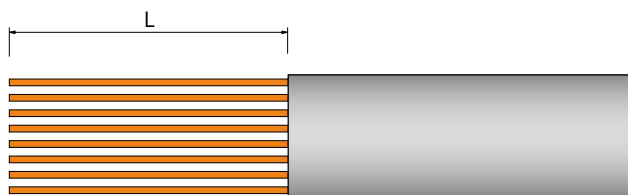
Contact selection – Wire selection

Size and type of wire that can be connected depend on contact size as per following table.

Contact Size	Pin contact code	Socket contact code	AWG wire - MIL 5088	EN 60332 wire
16S	ST485 16SP	ST485 16SS	≤ AWG 16	≤ 1,25 mm ²
16S	ST485 16S-13P	ST485 16S-13S	≤ AWG 20	≤ 0,75 mm ²
16S	ST485 16S-20P	ST485 16S-20S	AWG 14	≤ 2 mm ²
16S	ST485 16S-26P	ST485 16S-26S	AWG 12	≤ 2,5 mm ²
16	ST485 16P	ST485 16S	≤ AWG 16	≤ 1,25 mm ²
16	ST485 16-13P	ST485 16-13S	≤ AWG 20	≤ 0,75 mm ²
16	ST485 16-20P	ST485 16-20S	AWG 14	≤ 2 mm ²
16	ST485 16-26P	ST485 16-26S	AWG 12	≤ 2,5 mm ²
12	ST485 12-11P	ST485 12-11S	AWG 22-20	-
12	ST485 12-12P	ST485 12-12S	AWG 20	-
12	ST485 12-15P	ST485 12-15S	AWG 18	-
12	ST485 12-20P	ST485 12-20S	AWG 18-14	-
12	ST485 12-22P	ST485 12-22S	-	≤ 2,5 mm ²
12	ST485 12P	ST485 12S	≤ AWG 12	≤ 6 mm ²
8	ST485 8P	ST485 8S	≤ AWG 9	≤ 10 mm ²
8	ST485 8-22P	ST485 8-22S	-	≤ 2,5 mm ²
8	ST485 8-26P	ST485 8-26S	AWG 12	-
8	ST485 8-30P	ST485 8-30S	-	≤ 4 mm ²
8	ST485 8-38P	ST485 8-38S	AWG 10	-

Wire preparation

Cable insulation has to be stripped according to the following table.

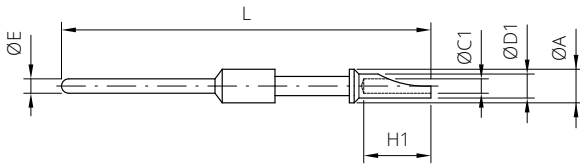


Contact Size	L (mm)
16 - 16S	6,3
12	8,3
8	8,3

Please contact our sales office for wire crimping procedure

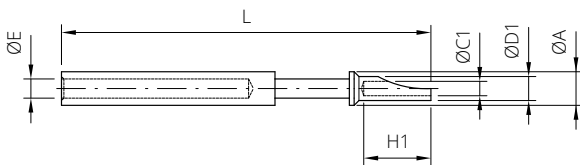
CVB ATEX - ST Contacts

Pin CONTACTS - Solder - Silver Plated



Contact size	Part Number	Short Description	AWG Cable size	ØA	ØE	ØC1	ØC2	ØD1	ØD2	H1	H2	L
16S	VS702001	ST385 16SP	18+16	3.2	1.58	1.8	-	2.6	-	5.5	-	25.7
16	VS702002	ST385 16P	18+16	3.2	1.58	1.8	-	2.6	-	7	-	32.1
12	VS702003	ST385 12P	12	4.8	2.38	2.9	-	3.7	-	8	-	36.6
8	VS702004	ST385 8P	8	7.8	3.6	-	5.3	-	6.6	-	12.6	36.6

Socket CONTACTS - Solder - Silver Plated

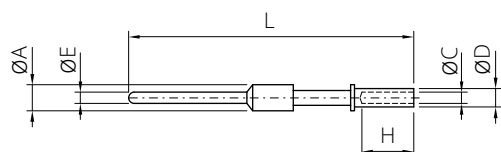


Contact size	Part Number	Short Description	AWG Cable size	ØA	ØE	ØC1	ØC2	ØD1	ØD2	H1	H2	L
16S	VS702011	ST385 16SS	18+16	3.2	1.65	1.8	-	2.6	-	5.5	-	25.4
16	VS702012	ST385 16S	18+16	3.2	1.65	1.8	-	2.6	-	7	-	36.6
12	VS702013	ST385 12S	12	4.8	2.48	2.9	-	3.7	-	8	-	36.6
8	VS702014	ST385 8S	8	7.8	3.7	-	5.25	-	6.55	-	12.7	36.6

Dimensions in mm

CVB ATEX - ST Contacts

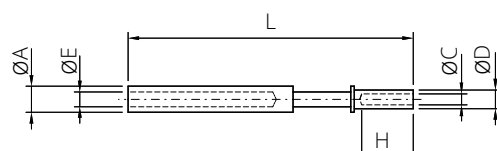
Pin CONTACTS - Crimp - Silver Plated



Contact Size	Part Number	Short Description	Wire section (mm ²)	AWG cable size	ØA	ØE	ØC	ØD	H	L
16S	VS701604	ST485 16SP	1÷1.5	18÷16	3.2	1.58	1.7	2.6	6.5	26.6
16S	VS701608	ST485 16S-20P	2	14	3.2	1.58	2	2.9	6.5	26.6
16S	VS701609	ST485 16S-26P	3	12	3.2	1.58	2.5	3.8	7	27
16	VS701610	ST485 16P	1÷1.5	18÷16	3.2	1.58	1.7	2.6	6.5	31.75
16	VS701613	ST485 16-13P	0.15÷0.6	26÷20	3.2	1.58	1.3	1.93	6.35	31.75
16	VS701615	ST485 16-20P	2	14	3.2	1.58	2	2.9	6.35	31.75
16	VS701616	ST485 16-26P	3	12	3.2	1.58	2.5	3.8	7	31.75
12	VS701657	ST485 12-11P	0.5	22-20	4.8	2.38	1.1	3	8.5	37.5
12	VS701617	ST485 12-12P	0.6	20	4.8	2.38	1.2	2.6	8.5	37.5
12	VS701618	ST485 12-15P	0.75÷1	18	4.8	2.38	1.5	3.4	8.5	37.5
12	VS701619	ST485 12-20P	1÷2	18÷14	4.8	2.38	2	3.8	6.5	37.5
12	VS701620	ST485 12-22P	2.5	-	4.8	2.38	2.2	3.8	8.5	37.5
12	VS701621	ST485 12P	3	12	4.8	2.38	2.5	3.8	8.5	37.5
12	VS701622	ST485 12-30P	4	-	4.8	2.38	3	4.8	8.5	37.5
12	VS701623	ST485 12-38P	6	-	4.8	2.38	3.6	4.8	8	37.5
8	VS701624	ST485 8P	-	8	7.8	3.6	4.55	6.8	12.2	40.7
8	VS701646	ST485 8-22P	2.5	-	7.8	3.6	2.2	3.8	12.2	40.7
8	VS701647	ST485 8-26P	3	12	7.8	3.6	2.5	3.8	12.2	40.7
8	VS701627	ST485 8-30P	4	-	7.8	3.6	3	4.8	8.3	40.7
8	VS701628	ST485 8-38P	6	10	7.8	3.6	3.6	6.8	12.2	40.6
8	VS701629	ST485 8-50P	10	-	7.8	3.6	5	6.8	12.2	40.7

Dimensions in mm

Socket CONTACTS - Crimp - Silver Plated







Contact Size	Part Number	Short Description	Wire section (mm ²)	AWG cable size	ØA	ØE	ØC	ØD	H	L
16S	VS701504	ST485 16SS	1÷1.5	18÷16	3.2	1.68	1.7	2.6	6.35	27
16S	VS701508	ST485 16S-20S	2	14	3.2	1.68	2	2.9	6.5	27
16S	VS701509	ST485 16S-26S	3	12	3.2	1.68	2.5	3.8	7	27
16	VS701510	ST485 16S	1÷1.5	18÷16	3.2	1.68	1.7	2.6	6.5	36.5
16	VS701513	ST485 16-13S	0.15÷0.6	26÷20	3.2	1.68	1.3	1.93	6.35	36.5
16	VS701515	ST485 16-20S	2	14	3.2	1.68	2	2.9	6.5	36.5
16	VS701516	ST485 16-26S	3	12	3.2	1.68	2.5	3.8	7	36.5
12	VS701557	ST485 12-11S	0.5	22-20	4.8	2.48	1.1	3	8.5	37.5
12	VS701517	ST485 12-12S	0.6	20	4.8	2.48	1.2	2.6	8.5	37.5
12	VS701518	ST485 12-15S	0.75÷1	18	4.8	2.48	1.5	3.4	8.5	37.5
12	VS701519	ST485 12-20S	1÷2	18÷14	4.8	2.48	2	3.8	6.5	37.5
12	VS701520	ST485 12-22S	2.5	-	4.8	2.48	2.2	3.8	8.5	37.5
12	VS701521	ST485 12S	3	12	3.2	2.48	2.5	3.8	8.5	37.5
12	VS701522	ST485 12-30S	4	-	4.8	2.48	3	4.8	8.5	37.5
12	VS701523	ST485 12-38S	6	-	4.8	2.48	3.6	4.8	8.5	37.5
8	VS701524	ST485 8S	-	8	7.8	3.7	4.55	6.8	12.2	40.7
8	VS701546	ST485 8-22S	2.5	-	7.8	3.7	2.2	3.8	12.2	40.7
8	VS701547	ST485 8-26S	3	12	7.8	3.7	2.5	3.8	12.2	40.7
8	VS701527	ST485 8-30S	4	-	7.8	3.7	3	4.8	8.3	40.7
8	VS701528	ST485 8-38S	6	10	7.8	3.7	3.6	6.8	12.2	40.7
8	VS701529	ST485 8-50S	10	-	7.8	3.7	5	7	11.5	40.7



Istituto Certificazione Europea Prodotti Industriali S.p.A.
organismo notificato n. 0066

CERTIFICATE

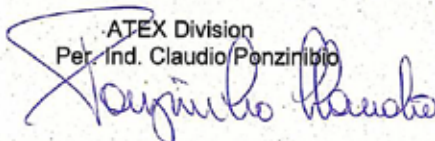
- [1] **EC-TYPE EXAMINATION CERTIFICATE**
- [2] Equipment or protective Systems intended for use in potentially explosive atmospheres
- Directive 94/9/EC**
- [3] EC-type Examination Certificate number:
- ICEPI 08 ATEX 03C002X**
- [4] Equipment: **Multipole connectors series CVB-EX and CVBM-EX**
- [5] Manufacturer: **DYNAMIN S.r.l.**
- [6] Address: **P.za Venini, 8 - 20010 Vittuone (MI) - ITALIA**
- [7] This equipment or protective system and any acceptable variation thereto is specified in the schedule of this certificate and the documents therein referred to.
- [8] ICEPI S.p.A., Notified Body number 0066 in accordance with article 9 of the Council Directive 94/9/EC of 23 march 1994, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres given in Annex II to the Directive.
- The examination and test results are recorded in confidential Report n° RP08A0401.
- [9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
- EN 60079-0:2006 EN 60079-1:2004+EC:2004 EN 61241-0:2006 EN 61241-1:2004**
- [10] If the sign "X" is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions for safe use specified in the schedule of this certificate.
- [11] This EC-type Examination Certificate relates only to the design and construction of the specified equipment or protective system. Further requirements of this directive apply to the manufacture and supply of this equipment or protective system. These are not covered by this certificate.
- [12] The marking of the equipment or protective system shall include the following (see page 3/5)

 II 2G Ex d IIC T6  II 2D Ex tD A21 IP66/67 T 85 °C
 II 2GD Ex d IIC T6 tD A21 IP66/67 T 85 °C  I M2 Ex d I

This certificate may only be reproduced in its entirety and without any change, schedule included.

Piacenza, 01.04.2008

Rev. 01, 12.11.2008 – Translation issued on 18.11.2008

ATEX Division
Per. Ind. Claudio Ponziribio


The Managing Director
Dett. Ing. Andrea Guido Esposito


via Paolo Belizzi, 29/31/33 • 29100 Piacenza • Italy
tel.: +39 0523 609585 • fax: +39 0523 591300 • e-mail: info@icepi.com • web site: www.icepi.com

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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.



DYNAMIN

www.dynamin-srl.it

ITALIA

Dynamin s.r.l.
Tel +390290111052
info@dynamin-srl.it



www.radiall.com

FRANCE

RADIALL S.A.
Tel +33149353535
info@radiall.com



www.vansystem.eu

ITALY

Radiall Italia S.r.l.
Tel. +39023569931
info.vansystem@radiall.com