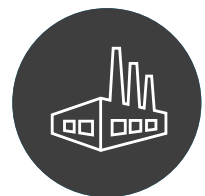




# VF2

## GROUND CONTACTS CONNECTED TO METAL SHELL

For controller, resolver, encoder  
and brushless motor connection



## About Us



### Radiall

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

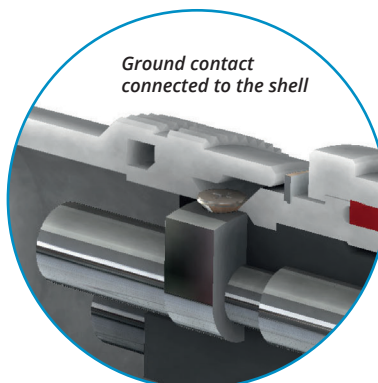
Besides connectors with screw or bayonet coupling complying with the Mil-DTL-5015 standard, VanSystem designs and manufactures non-standard products for special applications. One of VanSystem's strong points is an agile and dynamic organizational structure which enables direct and constant interaction with customers in order to meet all their requirements and build solid, long-term partnerships. The VanSystem team's professionalism, skill and commitment are at your service to help you achieve the solution you are looking for.

VanSystem's Quality System is qualified according to ISO 9001:2015 and ISO/TS 22163:2017 IRIS Certification™ rules:2017 (International Railway Industry Standard).



## VF2 - Introduction

### Circular Connector for Industrial Application



This series has been designed to meet the requirements of accident-prevention safety in use. VF2 connectors are fully compatible and intermateable with all connectors complying MIL-DTL-5015 specs. The materials and the electrical characteristics are the same used for the standard thread coupling series (CVS).

#### Features:

- Ground contacts connected to the external metal shell
- Touch proof protected live contacts
- Pre-mating ground contact

#### Benefits:

- Reliable long-term electrical contacts
- Robust shells with threaded coupling nut

**Application:** For controller, resolver, encoder and brushless motor connection.



|                             |  |
|-----------------------------|--|
| <b>Contacts type</b>        | This series can be supplied with both solder or crimp contacts.<br>The standard termination for crimp contacts is:<br>Contacts AWG 16 – 1 ÷ 1,5 mm <sup>2</sup><br>Contacts AWG 12 – 2,5 mm <sup>2</sup><br>Contacts AWG 8 – 4 mm <sup>2</sup><br>Terminations for other section can be supplied on request. |
| <b>IP protection degree</b> | IP67 when mated.<br>The gaskets for protection are included in the connector. In order to make the connector water resistant a suitable cable gland or hose adapter of the same IP grade must be used.   |
| <b>Rated temperature</b>    | -55°C ÷ +125 °C  |
| <b>Materials / finishes</b> | Contacts: Copper alloy / Silver plating / Gold plating<br>Insulating insert: Chloroprene rubber<br>Shells: Aluminium alloy / electroless Nickel (others finishes on request)   |



## VF2 - Characteristics

| VF2          | 8G   | DA                                    | 18-10   | S | W | M20 | CR | CD5 | F5 | G | N |
|--------------|--|---------------------------------------|---|---|---|-----|----|-----|----|---|---|
| <b>VF2</b>   | <b>Series Code</b>                                     | VF2                                   | Threaded Connector - Chloroprene rubber   |   |   |     |    |     |    |   |   |
| <b>8G</b>    | <b>Shell Type</b>                                      | 6 (size 10)                           | Plug connectors – straight backshell  |   |   |     |    |     |    |   |   |
|              |  | 6G (size 18, 22)                      | Plug connectors – straight backshell<br><i>with grounding terminal connected to shell</i>   |   |   |     |    |     |    |   |   |
|              |  | 8 (size 10)                           | Plug connectors – 90° Elbow   |   |   |     |    |     |    |   |   |
|              |  | 8G (size 18, 22)                      | Plug connectors – 90° Elbow<br><i>with grounding terminal connected to shell</i>            |   |   |     |    |     |    |   |   |
|              |  | 2 (size 18, 22)                       | Receptacle connectors – front mounting  |   |   |     |    |     |    |   |   |
|              |  | 2G (size 10)                          | Receptacle connectors – front mounting<br><i>with grounding terminal connected to shell</i> |   |   |     |    |     |    |   |   |
| <b>DA</b>    | <b>Connector Class</b>                                 | -                                     | Without backshell   |   |   |     |    |     |    |   |   |
|              |  | DA                                    | Backshell having an Unef external thread, or internal (M - PG)                              |   |   |     |    |     |    |   |   |
| <b>18-10</b> | <b>Insert Arrangement</b>                              | 10SL-3                                | 2+PE, 13A, 500V   |   |   |     |    |     |    |   |   |
|              |  | 18-10                                 | 3+PE, 23A, 500V   |   |   |     |    |     |    |   |   |
|              |  | 22-22                                 | 3+PE, 46A, 500V   |   |   |     |    |     |    |   |   |
| <b>S</b>     | <b>Contact Gender</b>                                  | S                                     | Socket contacts   |   |   |     |    |     |    |   |   |
|              |  | P                                     | Pin contacts  |   |   |     |    |     |    |   |   |
| <b>X</b>     | <b>Polarization Code**</b>                             | -                                     | No rotation   |   |   |     |    |     |    |   |   |
|              |  | X,Y,Q                                 | Rotation  |   |   |     |    |     |    |   |   |
| <b>M20</b>   | <b>Backshell Class or internal thread</b>              | -                                     | With Unef external thread   |   |   |     |    |     |    |   |   |
|              |  | M... ( <i>internal thread size</i> )  | Metric internal threaded  |   |   |     |    |     |    |   |   |
|              |  | PG... ( <i>internal thread size</i> ) | Pg internal threaded  |   |   |     |    |     |    |   |   |
|              |  | MH...                                 | Supplied with Metric cable gland  |   |   |     |    |     |    |   |   |
|              |  | PH...                                 | Supplied with Pg cable gland (on request)   |   |   |     |    |     |    |   |   |
| <b>CR</b>    | <b>Contact Termination</b>                             | -                                     | Solder termination  |   |   |     |    |     |    |   |   |
|              |  | CR                                    | Crimp termination   |   |   |     |    |     |    |   |   |
|              |  | LC                                    | Loose contacts  |   |   |     |    |     |    |   |   |
| <b>CD5</b>   | <b>Contact Plating</b>                                 | -                                     | Silver plating  |   |   |     |    |     |    |   |   |
|              |  | CD5                                   | Gold plating  |   |   |     |    |     |    |   |   |
| <b>F5</b>    | <b>Shell finish</b>                                    | F5*                                   | Electroless nickel ( <i>RoHS compliance</i> )   |   |   |     |    |     |    |   |   |
|              |  | F4                                    | CCF - Green passivation - conductive  |   |   |     |    |     |    |   |   |
|              |  | F7                                    | Black epoxy varnish ( <i>RoHS compliance</i> )  |   |   |     |    |     |    |   |   |
|              |  | F16                                   | CCF - Black passivation ( <i>RoHS compliance</i> ) - conductive                             |   |   |     |    |     |    |   |   |
| <b>G</b>     | <b>Panel Gasket</b>                                    | -                                     | Supplied without panel gasket   |   |   |     |    |     |    |   |   |
|              |  | G                                     | Supplied with panel gasket  |   |   |     |    |     |    |   |   |
|              |  | G2                                    | Supplied with shielded panel gasket   |   |   |     |    |     |    |   |   |
| <b>N</b>     | <b>Modification Code</b><br>(consult our sales office) | N                                     | Contacts and hole plugs   |   |   |     |    |     |    |   |   |
|              |  | S                                     | Customization   |   |   |     |    |     |    |   |   |

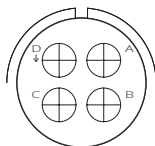
\*\* If required

\* Standard version

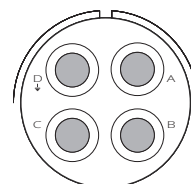
## VF2 - Inserts Arrangement



Front view Pin contacts insert



Front view Pin contacts insert



Front view Pin contacts insert

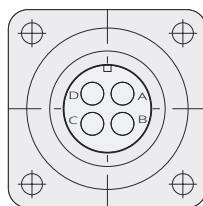
| Connectors Type  | 10SL-3                    | 18-10                     | 22-22                     |
|--|---------------------------|---------------------------|---------------------------|
| Contacts q.ty  | 2<br>+ ground contact (C) | 3<br>+ ground contact (D) | 3<br>+ ground contact (D) |
| Contacts AWG size  | 16                        | 12                        | 8                         |
| Rated current<br>at 20°C   | 13A                       | 23A                       | 46A                       |
| Maximum current<br>at 20°C   | 22A                       | 41A                       | 73A                       |
| Voltage drop<br>Test according to SAE-AS39029<br>with silver plated wire | 49mV                      | 42mV                      | 26mV                      |
| Rated voltage<br>(Service rating A)                                      | 500 Vac<br>700 Vdc        | 500 Vac<br>700 Vdc        | 500 Vac<br>700 Vdc        |
| Insulating resistance<br>at 500Vdc                                       | 5.000 Ω                   | 5.000 Ω                   | 5.000 Ω                   |
| Pollution degree<br>according to VDE 0110                                | 2                         | 2                         | 2                         |

### Alternate insert positions

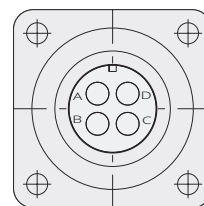
When more than one connector with the same arrangement is mounted on the same panel, it is advisable to orientate the connector. This means to rotate the insert with respect to the polarization key so that the connector can only be mated with the correct mating half.

|        | X    | Y    | Q    |
|--------|------|------|------|
| 10SL-3 | -    | -    | 180° |
| 18-10  | 120° | 240° | -    |
| 22-22  | 110° | 250° | -    |

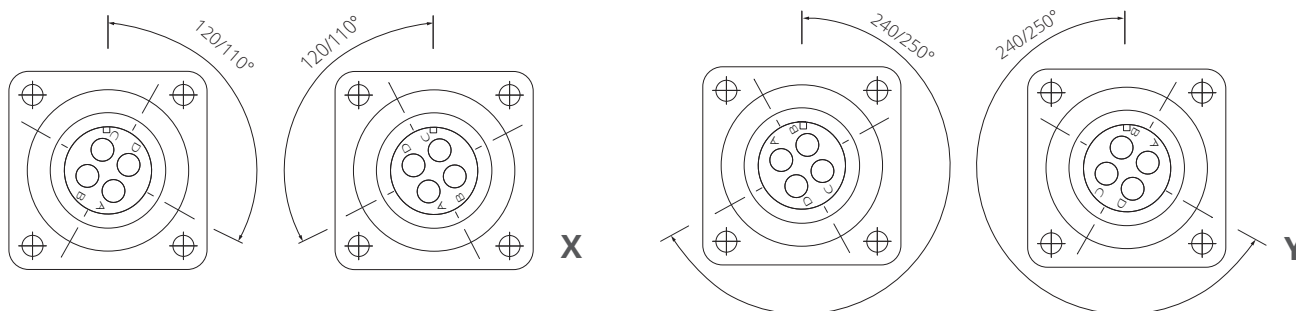
### Example: arrangement



Front view mating side  
Pin insert  
Insert rotation



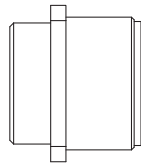
Front view mating side  
Socket insert  
Insert rotation



# VF2 - Product Range

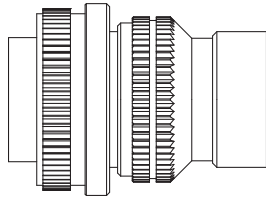
Receptacle connectors

Shell Type 2

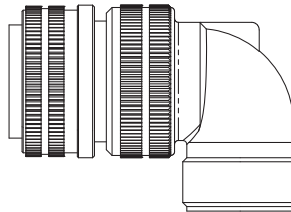


Plug Connectors

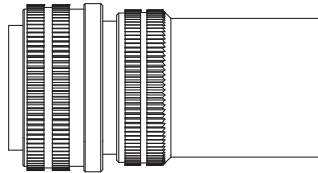
Shell Type 6  
Class DA



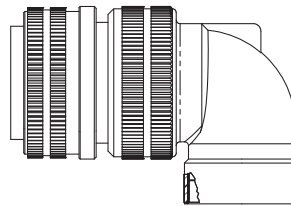
Shell Type 8  
Class DA



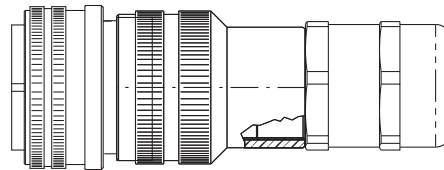
Shell Type 6  
Class DA...M  
Class DA...PG



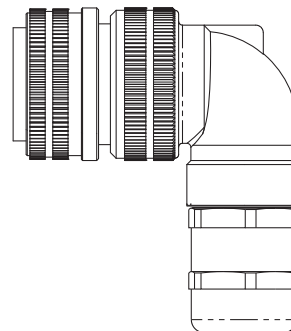
Shell Type 8  
Class DA...M  
Class DA...PG



Shell Type 6  
Class DA...MH...



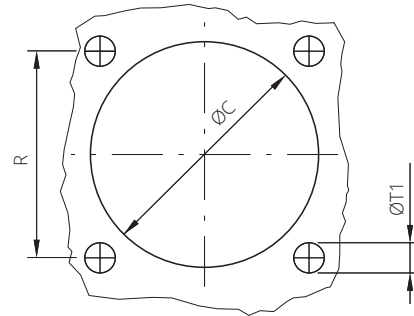
Shell Type 8  
Class DA...MH...



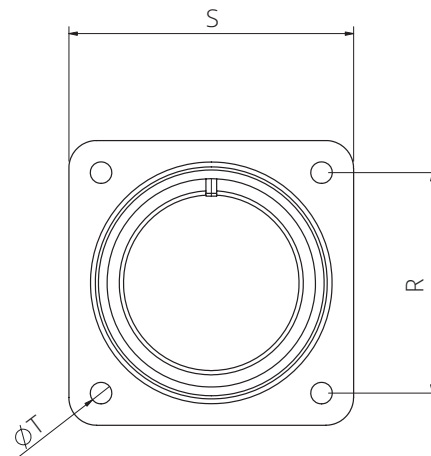
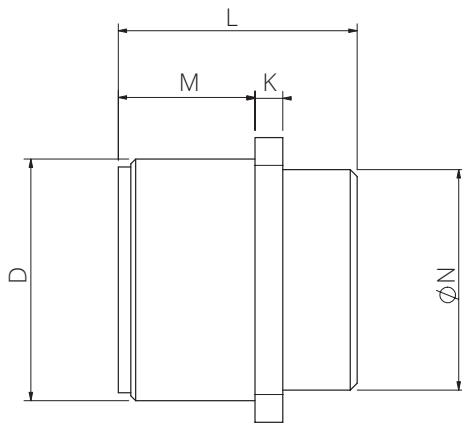
## VF2 - Shell Type 2

### Receptacle connectors - front mounting - Derived from Mil - DTL - 5015

Supplied with panel gasket



Panel cut out



| Shell size | D Connectors Thread in inches | ØN Max | L    | K ±0.2 | M ±0.2 | R ±0.1 | S ±0.3 | ØT ±0.2 | ØT1 Through holes | ØC ±0.2 |
|------------|-------------------------------|--------|------|--------|--------|--------|--------|---------|-------------------|---------|
| 10SL       | 5/8"-24 UNEF                  | 15.9   | 24.6 | 2.8    | 9.9    | 18.2   | 25.4   | 3.1     | 3.4               | 17      |
| 18         | 1"1/8-18 UNEF                 | 25.6   | 34.1 | 4      | 15.9   | 27     | 34.9   | 3.1     | 3.4               | 26.5    |
| 22         | 1"3/8-18 UNEF                 | 32.2   | 34.3 | 4      | 15.9   | 31.8   | 41     | 3.1     | 3.4               | 33      |

Dimensions in mm

#### RECEPTACLE CONNECTORS

Front mounting - Electroless nickel shell finishes (F5)

| Order Number | Short Description            | N° Poles | Rated Current | Rated Voltage | Contact Gender | Wire section mm <sup>2</sup> | AWG     | Contact Type (size) | Contact plated |
|--------------|------------------------------|----------|---------------|---------------|----------------|------------------------------|---------|---------------------|----------------|
| VS370101     | VF2 2G 10SL-3P CR F5 G       | 3        | 13A           | 500V          | Pin            | 1 ÷ 1,5                      | 18 ÷ 16 | crimp (16)          | silver         |
| VS370102     | VF2 2G 10SL-3P LC F5 G       | 3        | 13A           | 500V          | Pin            | -                            | -       | **                  | -              |
| VS370103     | VF2 2 18-10P CR F5 G N844    | 4        | 23A           | 500V          | Pin            | 2,5                          | -       | crimp (12)          | silver         |
| VS370104     | VF2 2 18-10P CR F5 G N845    | 4        | 23A           | 500V          | Pin            | 1÷2                          | 18÷14   | crimp (12)          | silver         |
| VS370105     | VF2 2 18-10P LC F5 G         | 4        | 23A           | 500V          | Pin            | -                            | -       | **                  | -              |
| VS370106     | VF2 2 22-22P CR F5 G N846    | 4        | 46A           | 500V          | Pin            | -                            | 8       | crimp (8)           | silver         |
| VS370107     | VF2 2 22-22P CR F5 G N847*** | 4        | 46A           | 500V          | Pin            | 6                            | 10      | crimp (8)           | silver         |
| VS370108     | VF2 2 22-22P CR F5 G N848    | 4        | 46A           | 500V          | Pin            | 4                            | -       | crimp (8)           | silver         |
| VS370109     | VF2 2 22-22P CR F5 G N849*** | 4        | 46A           | 500V          | Pin            | 2,5                          | -       | crimp (8)           | silver         |
| VS370110     | VF2 2 22-22P LC F5 G         | 4        | 46A           | 500V          | Pin            | -                            | -       | **                  | -              |

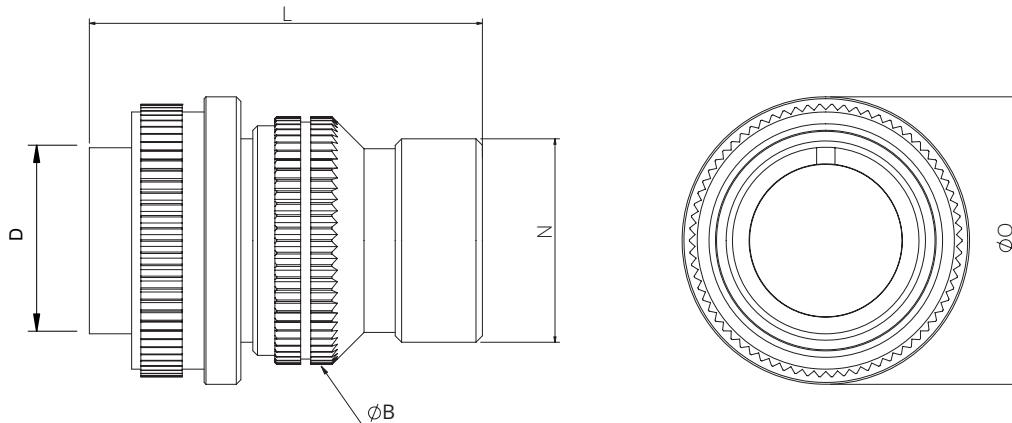
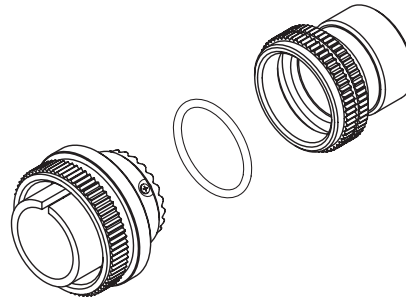
\*\*\* Grounding contact with crimp adaptor

\*\* to be purchased separately

## VF2 - Shell Type 6 Class DA

### Plug Connectors with Straight Backshell - suitable for MS3057...A or C type cable-clamps

Must be used with cable gland; provided with sealing O-Ring



| Shell size | D<br>Connectors<br>Thread in inches | ØQ<br>±0.2 | ØB<br>±0.2 | L<br>max | N<br>Backshell<br>Thread in inches |
|------------|-------------------------------------|------------|------------|----------|------------------------------------|
| 10SL       | 5/8"-24 UNEF                        | 22.8       | 20         | 36       | 5/8"-24 UNEF                       |
| 18         | 1"1/8-18 UNEF                       | 34.1       | 30         | 52       | 1"-20 UNEF                         |
| 22         | 1"3/8-18 UNEF                       | 40.5       | 37         | 67.4     | 1" 3/16-18 UNEF                    |

*Dimensions in mm*

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

#### PLUG CONNECTORS - FEMALE CONTACTS

With Straight Backshell - UNEF external thread - Electroless nickel shell finishes (F5)

| Order Number | Short Description     | N° Poles | Rated Current | Rated Voltage | Contact Gender | Wire section mm <sup>2</sup> | AWG     | Contact Type (size) | Contact plated |
|--------------|-----------------------|----------|---------------|---------------|----------------|------------------------------|---------|---------------------|----------------|
| VS370111     | VF2 6DA 10SL-3S CR F5 | 3        | 13A           | 500V          | Socket         | 1 ÷ 1,5                      | 18 ÷ 16 | crimp (16)          | silver         |
| VS370112*    | VF2 6GDA 18-10S CR F5 | 4        | 23A           | 500V          | Socket         | 2,5                          | -       | crimp (12)          | silver         |
| VS370113*    | VF2 6GDA 22-22S CR F5 | 4        | 46A           | 500V          | Socket         | 8                            | -       | crimp (8)           | silver         |

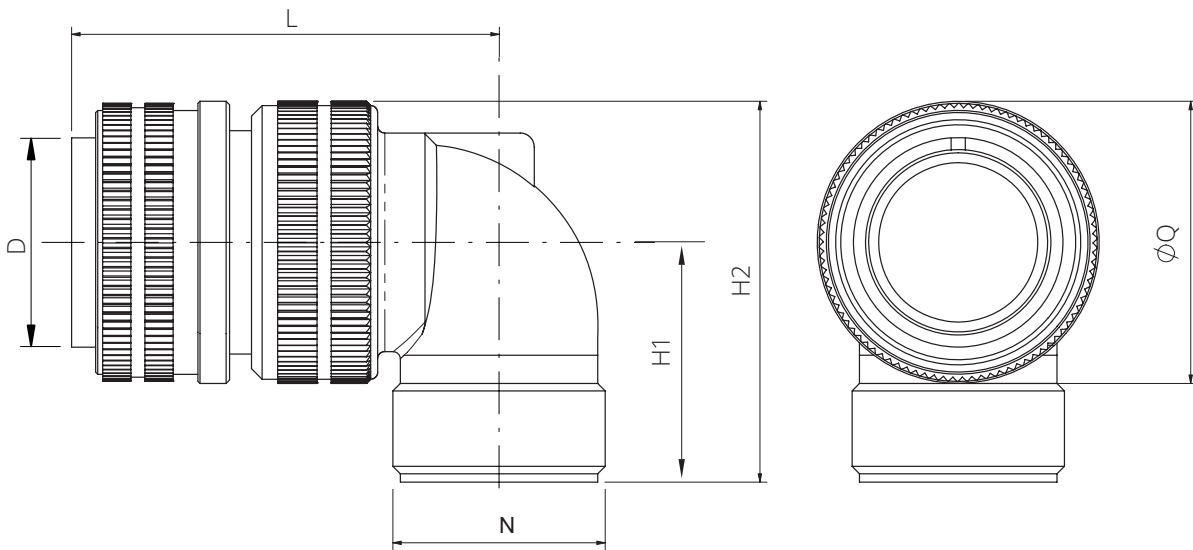
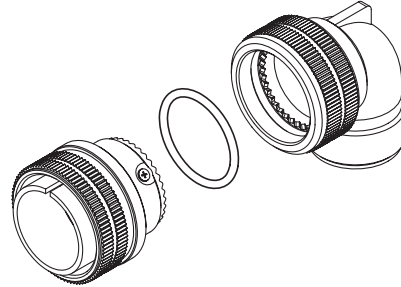
\* G = Grounding contact connected to the shell



## VF2 - Shell Type 8 Class DA

### Plug Connectors with 90° Elbow - suitable for MS3057...A or C type cable-clamps

Must be used with cable gland; provided with sealing O-Ring



| Shell size | D Connectors Thread in inches | ØQ ±0.2 | L max | H1 max | H2 max | N Backshell Thread in inches |
|------------|-------------------------------|---------|-------|--------|--------|------------------------------|
| 10SL       | 5/8"-24 UNEF                  | 22.8    | 45.5  | 27     | 38.4   | 3/4"-20 UNEF                 |
| 18         | 1"1/8-18 UNEF                 | 34.1    | 57.5  | 31     | 48.1   | 1"-20 UNEF                   |
| 22         | 1"3/8-18 UNEF                 | 40.5    | 74.9  | 35     | 55.3   | 1" 3/16-18 UNEF              |

Dimensions in mm

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

### PLUG CONNECTORS - FEMALE CONTACTS

With 90° Elbow - UNEF external thread - Electroless nickel shell finishes (F5)

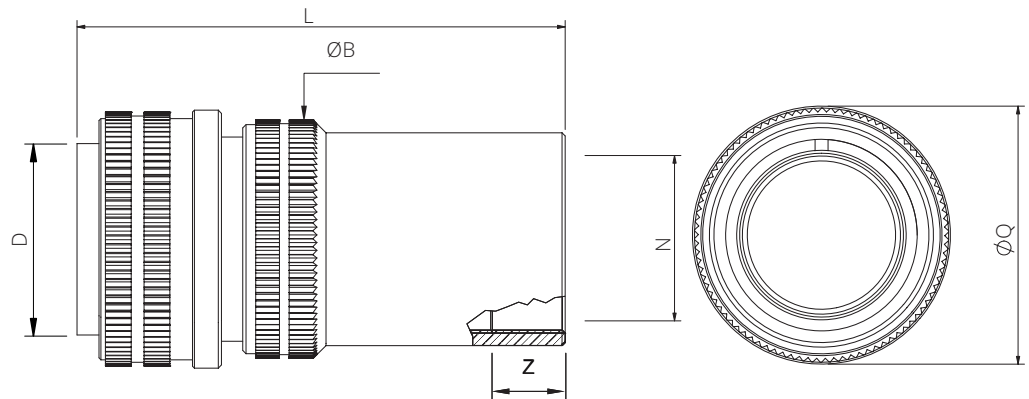
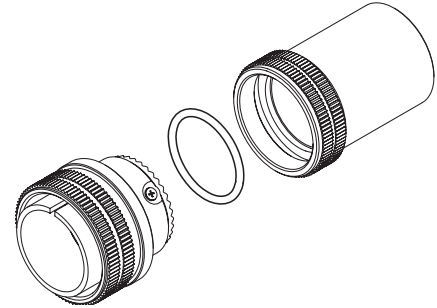
| Order Number | Short Description     | N° Poles | Rated Current | Rated Voltage | Contact Gender | Wire Section mm <sup>2</sup> | AWG     | Contact Type (size) | Contact plated |
|--------------|-----------------------|----------|---------------|---------------|----------------|------------------------------|---------|---------------------|----------------|
| VS370114     | VF2 8DA 10SL-3S CR F5 | 3        | 13A           | 500V          | Socket         | 1 ÷ 1,5                      | 18 ÷ 16 | crimp (16)          | silver         |
| VS370115*    | VF2 8GDA 18-10S CR F5 | 4        | 23A           | 500V          | Socket         | 2,5                          | -       | crimp (12)          | silver         |
| VS370116*    | VF2 8GDA 22-22S CR F5 | 4        | 46A           | 500V          | Socket         | 8                            | -       | crimp (8)           | silver         |

\* G = Grounding contact connected to the shell

## VF2 - Shell Type 6 Class DA...M

### Plug Connectors with Straight Backshell - Metric internal threaded

Must be used with cable gland; provided with sealing O-Ring



| Shell size | D<br>Connectors<br>Thread in inches | ØQ<br>±0.2 | L<br>max | ØB<br>±0.2 | N<br>Backshell<br>Thread | Z<br>min |
|------------|-------------------------------------|------------|----------|------------|--------------------------|----------|
| 10SL       | 5/8"-24 UNEF                        | 22.8       | 68       | 20         | M12                      | 8        |
| 18         | 1"1/8-18 UNEF                       | 34.1       | 76       | 30         | M20                      | 12       |
| 22         | 1"3/8-18 UNEF                       | 40.5       | 88.4     | 37         | M25                      | 16       |

Dimensions in mm

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

### PLUG CONNECTORS

With Straight Backshell - Metric internal thread - Electroless nickel shell finishes (F5)

| Order Number | Short Description                 | N° Poles | Rated Current | Rated Voltage | Contact Gender | Wire section mm <sup>2</sup> | AWG     | Contact Type (size) | Contact plated |
|--------------|-----------------------------------|----------|---------------|---------------|----------------|------------------------------|---------|---------------------|----------------|
| VS370117     | VF2 6DA 10SL-3S M12 CR F5         | 3        | 13A           | 500V          | Socket         | 1 ÷ 1,5                      | 18 ÷ 16 | crimp (16)          | silver         |
| VS370118     | VF2 6DA 10SL-3S M12 LC F5         | 3        | 13A           | 500V          | Socket         | -                            | -       | **                  | -              |
| VS370119*    | VF2 6GDA 18-10S M20 CR F5 N844    | 4        | 23A           | 500V          | Socket         | 2,5                          | -       | crimp (12)          | silver         |
| VS370120*    | VF2 6GDA 18-10S M20 CR F5 N845    | 4        | 23A           | 500V          | Socket         | 1 ÷ 2                        | 18 ÷ 14 | crimp (12)          | silver         |
| VS370121*    | VF2 6GDA 18-10S M20 LC F5         | 4        | 23A           | 500V          | Socket         | -                            | -       | **                  | -              |
| VS370122*    | VF2 6GDA 22-22S M25 CR F5 N846    | 4        | 46A           | 500V          | Socket         | -                            | 8       | crimp (8)           | silver         |
| VS370123*    | VF2 6GDA 22-22S M25 CR F5 N847*** | 4        | 46A           | 500V          | Socket         | 6                            | 10      | crimp (8)           | silver         |
| VS370124*    | VF2 6GDA 22-22S M25 CR F5 N848    | 4        | 46A           | 500V          | Socket         | 4                            | -       | crimp (8)           | silver         |
| VS370125*    | VF2 6GDA 22-22S M25 CR F5 N849*** | 4        | 46A           | 500V          | Socket         | 2,5                          | -       | crimp (8)           | silver         |
| VS370126*    | VF2 6GDA 22-22S M25 LC F5         | 4        | 46A           | 500V          | Socket         | -                            | -       | **                  | -              |

\* G = Grounding contact connected to the shell

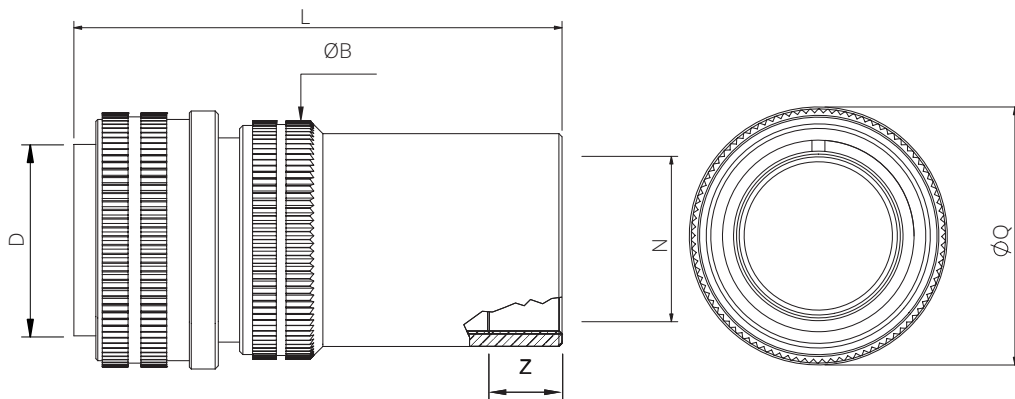
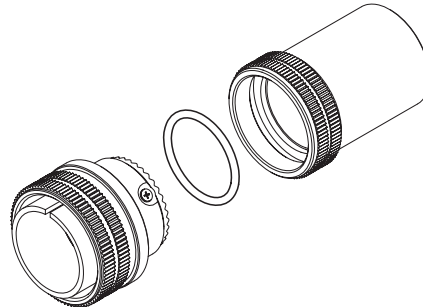
\*\*\* Grounding contact with crimp adaptor

\*\* to be purchased separately

## VF2 - Shell Type 6 Class DA...PG

### Plug Connectors with Straight Backshell - PG internal threaded

Must be used with cable gland; provided with sealing O-Ring



| Shell size | D Connectors Thread in inches | ØQ ±0.2 | L max | ØB ±0.2 | N Backshell Thread | Z min |
|------------|-------------------------------|---------|-------|---------|--------------------|-------|
| 10SL       | 5/8"-24 UNEF                  | 22.8    | 68    | 20      | PG9                | 8     |
| 18         | 1"1/8-18 UNEF                 | 34.1    | 76    | 30      | PG16               | 12    |
| 22         | 1"3/8-18 UNEF                 | 40.5    | 88.4  | 37      | PG21               | 12    |

Dimensions in mm

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

### PLUG CONNECTORS

With Straight Backshell - PG internal thread - Electroless nickel shell finishes (F5)

| Order Number | Short Description                  | N° Poles | Rated Current | Rated Voltage | Contact Gender | Wire section mm <sup>2</sup> | AWG     | Contact Type (size) | Contact plated |
|--------------|------------------------------------|----------|---------------|---------------|----------------|------------------------------|---------|---------------------|----------------|
| VS370127     | VF2 6DA 10SL-3S PG9 CR F5          | 3        | 13A           | 500V          | Socket         | 1 ÷ 1,5                      | 18 ÷ 16 | crimp (16)          | silver         |
| VS370128     | VF2 6DA 10SL-3S PG9 LC F5          | 3        | 13A           | 500V          | Socket         | -                            | -       | **                  | -              |
| VS370129*    | VF2 6GDA 18-10S PG16 CR F5 N844    | 4        | 23A           | 500V          | Socket         | 2,5                          | -       | crimp (12)          | silver         |
| VS370130*    | VF2 6GDA 18-10S PG16 CR F5 N845    | 4        | 23A           | 500V          | Socket         | 1 ÷ 2                        | 18 ÷ 14 | crimp (12)          | silver         |
| VS370131*    | VF2 6GDA 18-10S PG16 LC F5         | 4        | 23A           | 500V          | Socket         | -                            | -       | **                  | -              |
| VS370132*    | VF2 6GDA 22-22S PG21 CR F5 N846    | 4        | 46A           | 500V          | Socket         | -                            | 8       | crimp (8)           | silver         |
| VS370133*    | VF2 6GDA 22-22S PG21 CR F5 N847*** | 4        | 46A           | 500V          | Socket         | 6                            | 10      | crimp (8)           | silver         |
| VS370134*    | VF2 6GDA 22-22S PG21 CR F5 N848    | 4        | 46A           | 500V          | Socket         | 4                            | -       | crimp (8)           | silver         |
| VS370135*    | VF2 6GDA 22-22S PG21 CR F5 N849*** | 4        | 46A           | 500V          | Socket         | 2,5                          | -       | crimp (8)           | silver         |
| VS370136*    | VF2 6GDA 22-22S PG21 LC F5         | 4        | 46A           | 500V          | Socket         | -                            | -       | **                  | -              |

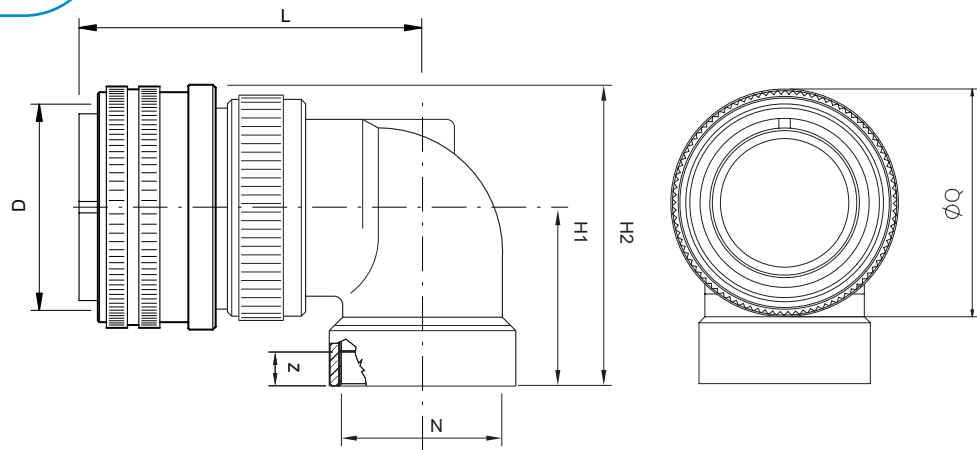
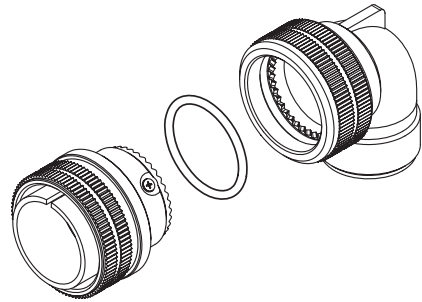
\* G = Grounding contact connected to the shell

\*\*\* Grounding contact with crimp adaptor

\*\* to be purchased separately

## VF2 - Shell Type 8 Class DA...M

### Plug Connectors with 90° Elbow - Metric internal threaded



| Shell size | D<br>Connectors<br>Thread in inches | ØQ<br>±0.2 | L<br>max | H1<br>max | H2<br>max | Z<br>min | N<br>Backshell<br>Thread |
|------------|-------------------------------------|------------|----------|-----------|-----------|----------|--------------------------|
| 18         | 1"1/8-18 UNEF                       | 34.1       | 57.5     | 31        | 48.1      | 10       | M20                      |
| 22         | 1"3/8-18 UNEF                       | 40.5       | 74.9     | 35        | 55.3      | 12       | M25                      |

Dimensions in mm

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

#### PLUG CONNECTORS - FEMALE CONTACTS

With 90° Elbow - Metric internal threaded - Electroless nickel shell finishes (F5)

| Order Number | Short Description                 | N° Poles | Rated Current | Rated Voltage | Contact Gender | Wire section mm <sup>2</sup> | AWG | Contact Type (size) | Contact plated |
|--------------|-----------------------------------|----------|---------------|---------------|----------------|------------------------------|-----|---------------------|----------------|
| VS370139*    | VF2 8GDA 18-10S M20 CR F5 N844    | 4        | 23A           | 500V          | Socket         | 2,5                          | -   | crimp (12)          | silver         |
| VS370140*    | VF2 8GDA 18-10S M20 CR F5 N845    | 4        | 23A           | 500V          | Socket         | 1,5                          | -   | crimp (12)          | silver         |
| VS370141*    | VF2 8GDA 18-10S M20 LC F5         | 4        | 23A           | 500V          | Socket         | -                            | -   | **                  | -              |
| VS370142*    | VF2 8GDA 22-22S M25 CR F5 N846    | 4        | 46A           | 500V          | Socket         | -                            | 8   | crimp (8)           | silver         |
| VS370143*    | VF2 8GDA 22-22S M25 CR F5 N847*** | 4        | 46A           | 500V          | Socket         | 6                            | 10  | crimp (8)           | silver         |
| VS370144*    | VF2 8GDA 22-22S M25 CR F5 N848    | 4        | 46A           | 500V          | Socket         | 4                            | -   | crimp (8)           | silver         |
| VS370145*    | VF2 8GDA 22-22S M25 CR F5 N849*** | 4        | 46A           | 500V          | Socket         | 2,5                          | -   | crimp (8)           | silver         |
| VS370146*    | VF2 8GDA 22-22S M25 LC F5         | 4        | 46A           | 500V          | Socket         | -                            | -   | **                  | -              |

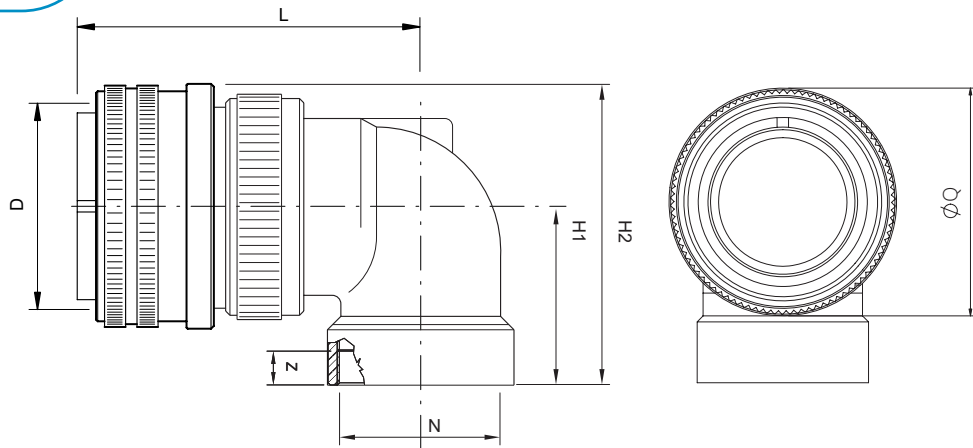
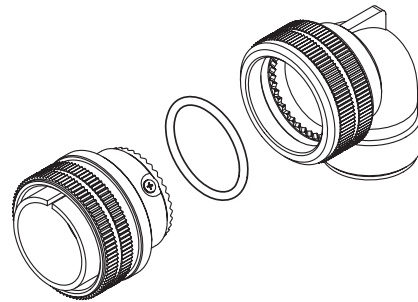
\* G = Grounding contact connected to the shell

\*\*\* Grounding contact with crimp adaptor

\*\* to be purchased separately

# VF2 - Shell Type 8 Class DA...PG

## Plug Connectors with 90° Elbow - PG internal threaded



| Shell size | D<br>Connectors<br>Thread in inches | ØQ<br>±0.2 | L<br>max | H1<br>max | H2<br>max | Z<br>min | N<br>Backshell<br>Thread |
|------------|-------------------------------------|------------|----------|-----------|-----------|----------|--------------------------|
| 18         | 1"1/8-18 UNEF                       | 34.1       | 57.5     | 31        | 48.1      | 9        | PG16                     |
| 22         | 1"3/8-18 UNEF                       | 40.5       | 74.9     | 35        | 55.3      | 9        | PG21                     |

Dimensions in mm

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

### PLUG CONNECTORS – FEMALE CONTACTS

With 90° Elbow – PG internal threaded – Electroless nickel shell finishes (F5)

| Order Number | Short Description                  | N° Poles | Rated Current | Rated Voltage | Contact Gender | Wire section mm <sup>2</sup> | AWG | Contact Type (size) | Contact plated |
|--------------|------------------------------------|----------|---------------|---------------|----------------|------------------------------|-----|---------------------|----------------|
| VS370149*    | VF2 8GDA 18-10S PG16 CR F5 N844    | 4        | 23A           | 500V          | Socket         | 2,5                          | -   | crimp (12)          | silver         |
| VS370150*    | VF2 8GDA 18-10S PG16 CR F5 N845    | 4        | 23A           | 500V          | Socket         | 1,5                          | -   | crimp (12)          | silver         |
| VS370151*    | VF2 8GDA 18-10S PG16 LC F5         | 4        | 23A           | 500V          | Socket         | -                            | -   | **                  | -              |
| VS370152*    | VF2 8GDA 22-22S PG21 CR F5 N846    | 4        | 46A           | 500V          | Socket         | -                            | 8   | crimp (8)           | silver         |
| VS370153*    | VF2 8GDA 22-22S PG21 CR F5 N847*** | 4        | 46A           | 500V          | Socket         | 6                            | 10  | crimp (8)           | silver         |
| VS370154*    | VF2 8GDA 22-22S PG21 CR F5 N848    | 4        | 46A           | 500V          | Socket         | 4                            | -   | crimp (8)           | silver         |
| VS370155*    | VF2 8GDA 22-22S PG21 CR F5 N849*** | 4        | 46A           | 500V          | Socket         | 2,5                          | -   | crimp (8)           | silver         |
| VS370156*    | VF2 8GDA 22-22S PG21 LC F5         | 4        | 46A           | 500V          | Socket         | -                            | -   | **                  | -              |

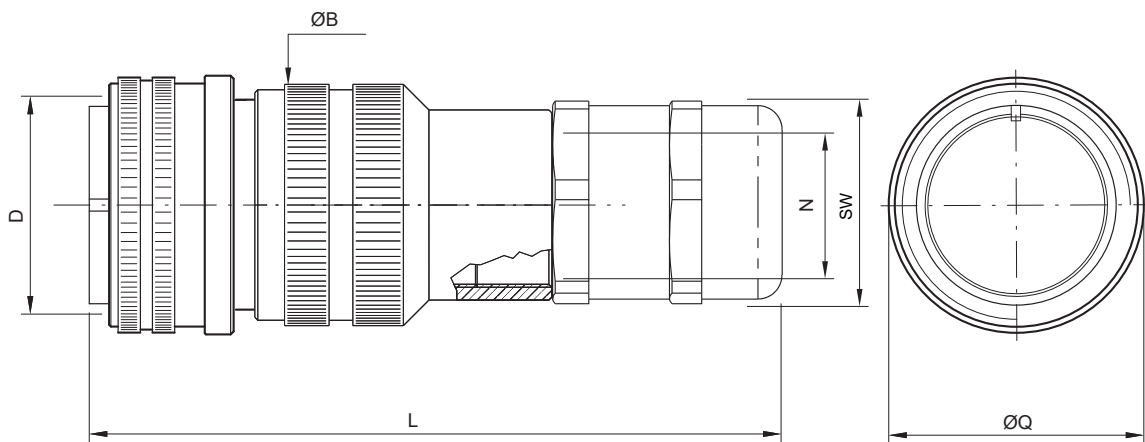
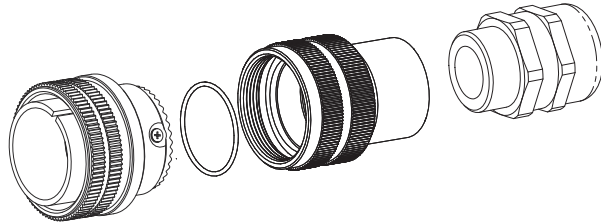
\* G = Grounding contact connected to the shell

\*\*\* Grounding contact with crimp adaptor

\*\* to be purchased separately

## VF2 - Shell Type 6 Class DA...MH...

### Plug Connectors with Straight Backshell - Supplied with Metric cable gland



| Shell size | D<br>Connectors<br>Thread in inches | ØQ<br>±0.2 | L<br>max | ØB<br>±0.2 | Metric<br>Thread | ØN<br>Clamping<br>range mm | SW |
|------------|-------------------------------------|------------|----------|------------|------------------|----------------------------|----|
| 10SL       | 5/8"-24 UNEF                        | 22.8       | 88       | 20         | M12              | 3.5-7                      | 16 |
| 18         | 1"1/8-18 UNEF                       | 34.1       | 104.5    | 30         | M20              | 7-13                       | 24 |
| 22         | 1"3/8-18 UNEF                       | 40.5       | 118.9    | 37         | M25              | 9-17                       | 29 |

Dimensions in mm

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

#### PLUG CONNECTORS

With Straight Backshell - Supplied with Metric cable gland - Electroless nickel shell finishes (F5)

| Order Number | Short Description                  | N° Poles | Rated Current | Rated Voltage | Contact Gender | Wire section mm <sup>2</sup> | AWG     | Contact Type (size) | Contact plated |
|--------------|------------------------------------|----------|---------------|---------------|----------------|------------------------------|---------|---------------------|----------------|
| VS370157     | VF2 6DA 10SL-3S MH12 CR F5         | 3        | 13A           | 500V          | Socket         | 1 ÷ 1,5                      | 18 ÷ 16 | crimp (16)          | silver         |
| VS370158     | VF2 6DA 10SL-3S MH12 LC F5         | 3        | 13A           | 500V          | Socket         | -                            | -       | **                  | -              |
| VS370159*    | VF2 6GDA 18-10S MH20 CR F5 N844    | 4        | 23A           | 500V          | Socket         | 2,5                          | -       | crimp (12)          | silver         |
| VS370160*    | VF2 6GDA 18-10S MH20 CR F5 N845    | 4        | 23A           | 500V          | Socket         | 1,5                          | -       | crimp (12)          | silver         |
| VS370161*    | VF2 6GDA 18-10S MH20 LC F5         | 4        | 23A           | 500V          | Socket         | -                            | -       | **                  | -              |
| VS370162*    | VF2 6GDA 22-22S MH25 CR F5 N846    | 4        | 46A           | 500V          | Socket         | -                            | 8       | crimp (8)           | silver         |
| VS370163*    | VF2 6GDA 22-22S MH25 CR F5 N847*** | 4        | 46A           | 500V          | Socket         | 6                            | 10      | crimp (8)           | silver         |
| VS370164*    | VF2 6GDA 22-22S MH25 CR F5 N848    | 4        | 46A           | 500V          | Socket         | 4                            | -       | crimp (8)           | silver         |
| VS370165*    | VF2 6GDA 22-22S MH25 CR F5 N849*** | 4        | 46A           | 500V          | Socket         | 2,5                          | -       | crimp (8)           | silver         |
| VS370166*    | VF2 6GDA 22-22S MH25 LC F5         | 4        | 46A           | 500V          | Socket         | -                            | -       | **                  | -              |

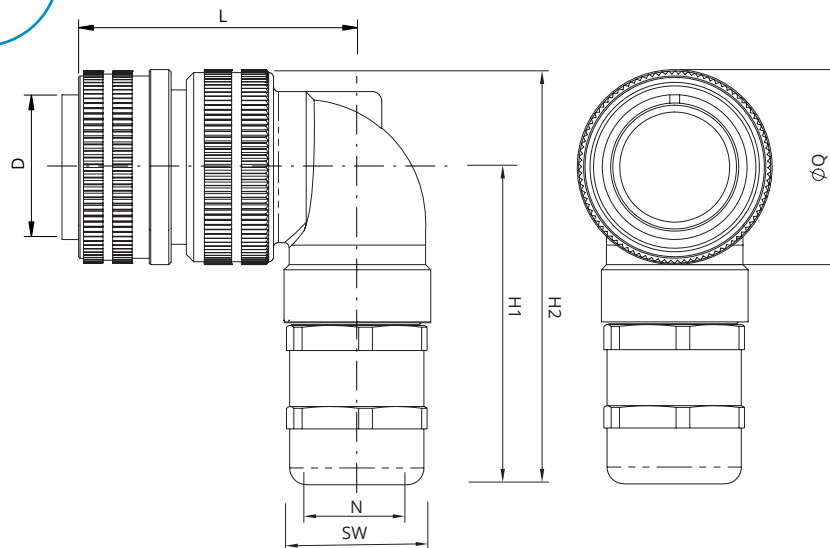
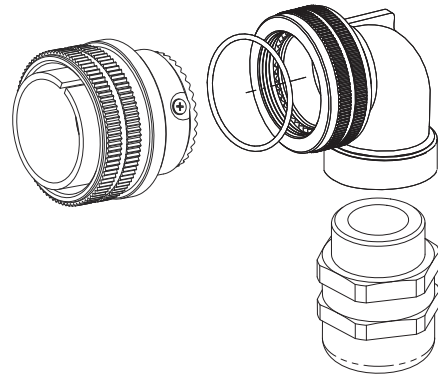
\* G = Grounding contact connected to the shell

\*\*\* Grounding contact with crimp adaptor

\*\* to be purchased separately

## VF2 - Shell Type 8 Class DA...MH...

### Plug Connectors with 90° Elbow - Supplied with Metric cable gland



| Shell size | D<br>Connectors<br>Thread in inches | ØQ<br>±0.2 | L<br>max | H1<br>max | H2<br>max | Metric<br>Thread | ØN<br>Clamping<br>range mm | SW |
|------------|-------------------------------------|------------|----------|-----------|-----------|------------------|----------------------------|----|
| 18         | 1"1/8-18 UNEF                       | 34.1       | 57.5     | 59.5      | 76.6      | M20              | 7-13                       | 24 |
| 22         | 1"3/8-18 UNEF                       | 40.5       | 74.9     | 65.5      | 85.8      | M25              | 9-17                       | 29 |

Dimensions in mm

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

#### PLUG CONNECTORS

With 90° Elbow – Supplied with Metric cable gland – Electroless nickel shell finishes (F5)

| Order Number | Short Description                  | N° Poles | Rated Current | Rated Voltage | Contact Gender | Wire section mm <sup>2</sup> | AWG | Contact Type (size) | Contact plated |
|--------------|------------------------------------|----------|---------------|---------------|----------------|------------------------------|-----|---------------------|----------------|
| VS370169*    | VF2 8GDA 18-10S MH20 CR F5 N844    | 4        | 23A           | 500V          | Socket         | 2,5                          | -   | crimp (12)          | silver         |
| VS370170*    | VF2 8GDA 18-10S MH20 CR F5 N845    | 4        | 23A           | 500V          | Socket         | 1,5                          | -   | crimp (12)          | silver         |
| VS370171*    | VF2 8GDA 18-10S MH20 LC F5         | 4        | 23A           | 500V          | Socket         | -                            | -   | **                  | -              |
| VS370172*    | VF2 8GDA 22-22S MH25 CR F5 N846    | 4        | 46A           | 500V          | Socket         | -                            | 8   | crimp (8)           | silver         |
| VS370173*    | VF2 8GDA 22-22S MH25 CR F5 N847*** | 4        | 46A           | 500V          | Socket         | 6                            | 10  | crimp (8)           | silver         |
| VS370174*    | VF2 8GDA 22-22S MH25 CR F5 N848    | 4        | 46A           | 500V          | Socket         | 4                            | -   | crimp (8)           | silver         |
| VS370175*    | VF2 8GDA 22-22S MH25 CR F5 N849*** | 4        | 46A           | 500V          | Socket         | 2,5                          | -   | crimp (8)           | silver         |
| VS370176*    | VF2 8GDA 22-22S MH25 LC F5         | 4        | 46A           | 500V          | Socket         | -                            | -   | **                  | -              |

\* G = Grounding contact connected to the shell

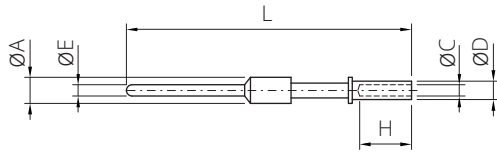
\*\*\* Grounding contact with crimp adaptor

\*\* to be purchased separately



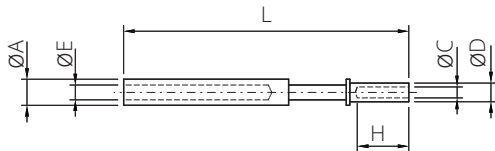
## VF2 - ST Contacts

### Pin CONTACTS - Crimp - Silver Plated (Gold plated contacts on request , add CD5 on the description)



| Contact Size | Order Number | Short Description | Wire section (mm <sup>2</sup> ) | AWG cable size | ØA  | ØC   | ØD   | ØE   | H    | L    |
|--------------|--------------|-------------------|---------------------------------|----------------|-----|------|------|------|------|------|
| 16S          | VS701604     | ST485 16SP        | 1÷1.5                           | 18÷16          | 3.2 | 1.7  | 2.6  | 1.58 | 6.5  | 26.6 |
| 16S          | VS701655     | ST485 16S-11P     | 0.25÷0.5                        | 22-20          | 3.2 | 1.1  | 2.15 | 1.58 | 6.5  | 26.6 |
| 16S          | VS701605     | ST485 16S-12P     | 0.6                             | 20             | 3.2 | 1.2  | 2.6  | 1.58 | 6.5  | 26.6 |
| 16S          | VS701607     | ST485 16S-15P     | 1                               | 18             | 3.2 | 1.5  | 2.6  | 1.58 | 6.5  | 26.6 |
| 16S          | VS701656     | ST485 16S-17P     | 0.75÷1.5                        | 16             | 3.2 | 1.75 | 2.62 | 1.58 | 6.5  | 26.6 |
| 16S          | VS701608     | ST485 16S-20P     | 2                               | 14             | 3.2 | 2    | 2.9  | 1.58 | 6.5  | 26.6 |
| 16S          | VS701609     | ST485 16S-26P     | 3                               | 12             | 3.2 | 2.5  | 3.8  | 1.58 | 7    | 27   |
| 12           | VS701657     | ST485 12-11P      | 0.5                             | 22-20          | 4.8 | 1.1  | 3    | 2.38 | 8.5  | 37.5 |
| 12           | VS701617     | ST485 12-12P      | 0.6                             | 20             | 4.8 | 1.2  | 2.6  | 2.38 | 8.5  | 37.5 |
| 12           | VS701618     | ST485 12-15P      | 0.75÷1                          | 18             | 4.8 | 1.5  | 3.4  | 2.38 | 8.5  | 37.5 |
| 12           | VS701619     | ST485 12-20P      | 1÷2                             | 18÷14          | 4.8 | 2    | 3.8  | 2.38 | 6.5  | 37.5 |
| 12           | VS701620     | ST485 12-22P      | 2.5                             | -              | 4.8 | 2.2  | 3.8  | 2.38 | 8.5  | 37.5 |
| 12           | VS701621     | ST485 12P         | 3                               | 12             | 4.8 | 2.5  | 3.8  | 2.38 | 8.5  | 37.5 |
| 12           | VS701622     | ST485 12-30P      | 4                               | -              | 4.8 | 3    | 4.8  | 2.38 | 8.5  | 37.5 |
| 12           | VS701623     | ST485 12-38P      | 6                               | -              | 4.8 | 3.6  | 4.8  | 2.38 | 8    | 37.5 |
| 8            | VS701624     | ST485 8P          | -                               | 8              | 7.8 | 4.55 | 6.8  | 3.6  | 12.2 | 40.7 |
| 8            | VS701625     | ST485 8-15P**     | 1                               | 18             | 7.8 | 1.5  | 3.4  | 3.6  | 8.5  | 40.7 |
| 8            | VS701626     | ST485 8-18P**     | 1÷2                             | 18÷14          | 7.8 | 1.8  | 3.8  | 3.6  | 8.5  | 40.7 |
| 8            | VS701646     | ST485 8-22P       | 2.5                             | -              | 7.8 | 2.2  | 3.8  | 3.6  | 12.2 | 40.7 |
| 8            | VS701647     | ST485 8-26P       | 3                               | 12             | 7.8 | 2.5  | 3.8  | 3.6  | 12.2 | 40.7 |
| 8            | VS701627     | ST485 8-30P       | 4                               | -              | 7.8 | 3    | 4.8  | 3.6  | 8.3  | 40.7 |
| 8            | VS701628     | ST485 8-38P       | 6                               | 10             | 7.8 | 3.6  | 6.8  | 3.6  | 12.2 | 40.6 |
| 8            | VS701629     | ST485 8-50P       | 10                              | -              | 7.8 | 5    | 6.8  | 3.6  | 12.2 | 40.7 |

### Socket CONTACTS - Crimp - Silver Plated



| Contact Size | Order Number | Short Description | Wire section (mm <sup>2</sup> ) | AWG cable size | ØA  | ØC   | ØD   | ØE   | H    | L    |
|--------------|--------------|-------------------|---------------------------------|----------------|-----|------|------|------|------|------|
| 16S          | VS701504     | ST485 16SS        | 1÷1.5                           | 18÷16          | 3.2 | 1.7  | 2.6  | 1.68 | 6.35 | 27   |
| 16S          | VS701555     | ST485 16S-11S     | 0.25÷0.5                        | 22-20          | 3.2 | 1.1  | 2.15 | 1.68 | 6.5  | 26.6 |
| 16S          | VS701505     | ST485 16S-12S     | 0.6                             | 20             | 3.2 | 1.2  | 2.6  | 1.68 | 6.5  | 26.6 |
| 16S          | VS701507     | ST485 16S-15S     | 1                               | 18             | 3.2 | 1.5  | 2.6  | 1.68 | 6.5  | 26.6 |
| 16S          | VS701556     | ST485 16S-17S     | 0.75÷1.5                        | 16             | 3.2 | 1.75 | 2.62 | 1.68 | 6.5  | 26.6 |
| 16S          | VS701508     | ST485 16S-20S     | 2                               | 14             | 3.2 | 2    | 2.9  | 1.68 | 6.5  | 27   |
| 16S          | VS701509     | ST485 16S-26S     | 3                               | 12             | 3.2 | 2.5  | 3.8  | 1.68 | 7    | 27   |
| 12           | VS701557     | ST485 12-11S      | 0.5                             | 22-20          | 4.8 | 1.1  | 3    | 2.48 | 8.5  | 37.5 |
| 12           | VS701517     | ST485 12-12S      | 0.6                             | 20             | 4.8 | 1.2  | 2.6  | 2.48 | 8.5  | 37.5 |
| 12           | VS701518     | ST485 12-15S      | 0.75÷1                          | 18             | 4.8 | 1.5  | 3.4  | 2.48 | 8.5  | 37.5 |
| 12           | VS701519     | ST485 12-20S      | 1÷2                             | 18÷14          | 4.8 | 2    | 3.8  | 2.48 | 6.5  | 37.5 |
| 12           | VS701520     | ST485 12-22S      | 2.5                             | -              | 4.8 | 2.2  | 3.8  | 2.48 | 8.5  | 37.5 |
| 12           | VS701521     | ST485 12S         | 3                               | 12             | 4.8 | 2.5  | 3.8  | 2.48 | 8.5  | 37.5 |
| 12           | VS701522     | ST485 12-30S      | 4                               | -              | 4.8 | 3    | 4.8  | 2.48 | 8.5  | 37.5 |
| 12           | VS701523     | ST485 12-38S      | 6                               | -              | 4.8 | 3.6  | 4.8  | 2.48 | 8.5  | 37.5 |
| 8            | VS701524     | ST485 8S          | -                               | 8              | 7.8 | 4.55 | 6.8  | 3.7  | 12.2 | 40.7 |
| 8            | VS701525     | ST485 8-15S**     | 1                               | 18             | 7.8 | 1.5  | 3.4  | 3.7  | 8.5  | 40.7 |
| 8            | VS701526     | ST485 8-18S**     | 1÷2                             | 18÷14          | 7.8 | 1.8  | 3.8  | 3.7  | 8.5  | 40.7 |
| 8            | VS701546     | ST485 8-22S       | 2.5                             | -              | 7.8 | 2.2  | 3.8  | 3.7  | 12.2 | 40.7 |
| 8            | VS701547     | ST485 8-26S       | 3                               | 12             | 7.8 | 2.5  | 3.8  | 3.7  | 12.2 | 40.7 |
| 8            | VS701527     | ST485 8-30S       | 4                               | -              | 7.8 | 3    | 4.8  | 3.7  | 8.3  | 40.7 |
| 8            | VS701528     | ST485 8-38S       | 6                               | 10             | 7.8 | 3.6  | 6.8  | 3.7  | 12.2 | 40.7 |
| 8            | VS701529     | ST485 8-50S       | 10                              | -              | 7.8 | 5    | 7    | 3.7  | 11.5 | 40.7 |

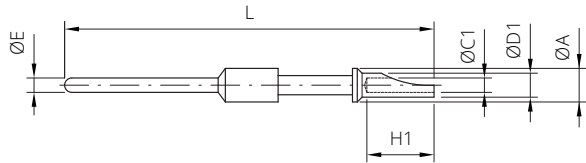
\*\* On request (please consult our Sales Office)

Dimensions in mm



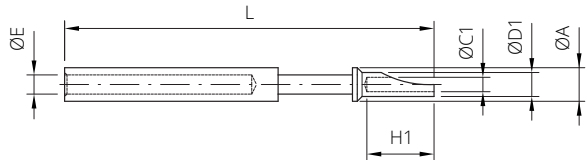
## VF2 - ST Contacts

### Pin CONTACTS - Solder - Silver Plated (Gold plated contacts on request , add CD5 on the description)



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

### Socket CONTACTS - Solder - Silver Plated



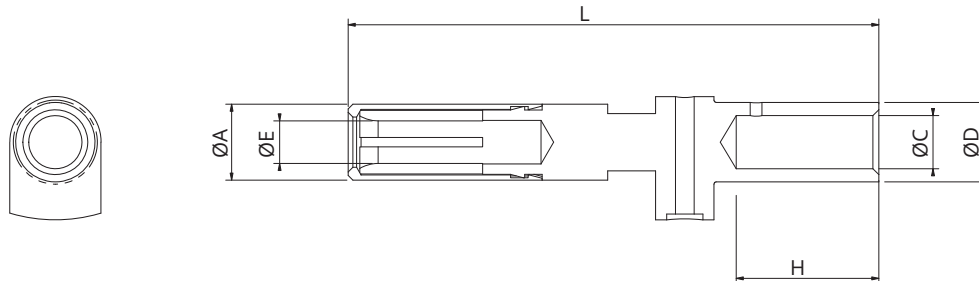
| Contact size | Order Number | Short Description | AWG Cable size | ØA  | ØC1 | ØC2  | ØD1 | ØD2  | ØE   | H1  | H2   | L    |
|--------------|--------------|-------------------|----------------|-----|-----|------|-----|------|------|-----|------|------|
| 16S          | VS702011     | ST385 16SS  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

*Dimensions in mm*

## VF2 - ST Contacts

### Socket CONTACTS - Crimp - Silver Plated - For grounding contact connected to the shell

(Gold plated contacts on request , add CD5 on the description)

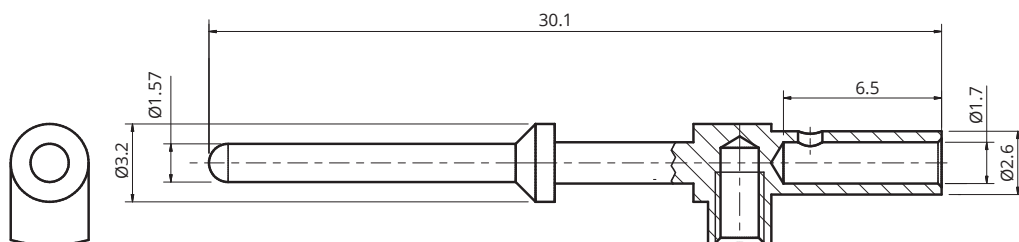


| Contact Size | Order Number | Short Description  | Wire section (mm <sup>2</sup> ) | AWG cable size | ØA  | ØC   | ØD  | ØE   | H    | L    |
|--------------|--------------|--------------------|---------------------------------|----------------|-----|------|-----|------|------|------|
| 12           | VS702101     | VF485 18-10S N844  | 2,5                             | -              | 4.8 | 2.2  | 3.8 | 2.48 | 8.5  | 39.9 |
| 12           | VS702102     | VF485 18-10S N845  | 1÷2                             | 18÷14          | 4.8 | 2    | 3.8 | 2.48 | 8.5  | 39.9 |
| 8            | VS702103     | VF485 22-22S N846  | -                               | 8              | 7.8 | 4.55 | 6.8 | 3.7  | 12.2 | 45.4 |
| 8            | VS702104     | VF485 22-22S N847* | 6                               | 10             | 7.8 | 3.6  | 6.8 | 3.7  | 12.2 | 43   |
| 8            | VS702105     | VF485 22-22S N848  | 4                               | -              | 7.8 | 3    | 4.8 | 3.7  | 8.5  | 43   |
| 8            | VS702106     | VF485 22-22S N849* | 2,5                             | -              | 7.8 | 2.2  | 3.8 | 3.7  | 8.5  | 43   |

\* Contacts supplied with crimp adapters

### Pin CONTACTS - Crimp - Silver Plated - For grounding contact connected to the shell

(Gold plated contacts on request , add CD5 on the description)



| Contact Size | Order Number | Short Description | Wire section (mm <sup>2</sup> ) | AWG cable size |
|--------------|--------------|-------------------|---------------------------------|----------------|
| 16S          | VS702107     | VF485 10SL-3P     | 1÷1.5                           | 18÷16          |

Dimensions in mm

## VF2 - Accessories For Connectors

### CONTACT CRIMP TOOLS



| Contact size | Short Description | mm <sup>2</sup> section | AWG section | Manual crimp tool | Locator /Die | Insertion tool | Removal tool | Guide pin | Stripping length mm |
|--------------|-------------------|-------------------------|-------------|-------------------|--------------|----------------|--------------|-----------|---------------------|
| 16S          | ST485 16SP/S      | 1÷1.5                   | 18÷16       | CRT-784/1         | LOC-784      | CTIN-784-16    | CTES-784-16  | GP-784-16 | 6.3                 |
| 16S          | ST485 16S-11P/S   | 0.25÷0.5                | 22-20       | CRT-784/1         | LOC-784      | CTIN-784-18    | CTES-784-16  | GP-784-16 | 6.3                 |
| 16S          | ST485 16S-12P/S   | 0.6                     | 20          | CRT-784/1         | LOC-784      | CTIN-784-16    | CTES-784-16  | GP-784-16 | 6.3                 |
| 16S          | ST485 16S-15P/S   | 1                       | 18          | CRT-784/1         | LOC-784      | CTIN-784-16    | CTES-784-16  | GP-784-16 | 6.3                 |
| 16S          | ST485 16S-17P/S   | 0.75÷1.5                | 16          | **                | **           | **             | **           | **        | 6.3                 |
| 16S          | ST485 16S-20P/S   | 2                       | 14          | CRT-784/1         | LOC-784      | CTIN-784-16    | CTES-784-16  | GP-784-16 | 6.3                 |
| 16S          | ST485 16S-26P/S   | 3                       | 12          | CRT-784/1         | LOC-784      | CTIN-784-16    | CTES-784-16  | GP-784-16 | 6.8                 |
| 12           | ST485 12-11P/S    | 0.5                     | 22-20       | **                | **           | **             | **           | **        | 8.3                 |
| 12           | ST485 12-12P/S    | 0.6                     | 20          | CRT-784/1         | LOC-784      | CTIN-784-16    | CTES-784-12  | GP-784-12 | 8.3                 |
| 12           | ST485 12-15P/S    | 0.75÷1                  | 18          | CRT-784/1         | LOC-784      | CTIN-784-16    | CTES-784-12  | GP-784-12 | 8.3                 |
| 12           | ST485 12-20P/S    | 1÷2                     | 18÷14       | CRT-784/1         | LOC-784      | CTIN-784-12    | CTES-784-12  | GP-784-12 | 6.5                 |
| 12           | ST485 12-22P/S    | 2.5                     | -           | CRT-784/1         | LOC-784      | CTIN-784-12    | CTES-784-12  | GP-784-12 | 8.3                 |
| 12           | ST485 12P/S       | 3                       | 12          | CRT-784/1         | LOC-784      | CTIN-784-12    | CTES-784-12  | GP-784-12 | 8.3                 |
| 12           | ST485 12-30P/S    | 4                       | -           | CRT-784/1         | LOC-784      | CTIN-784-12/1  | CTES-784-12  | GP-784-12 | 8.3                 |
| 12           | ST485 12-38P/S    | 6                       | -           | CRT-784/1         | LOC-784      | CTIN-784-12/1  | CTES-784-12  | GP-784-12 | 8                   |
| 8            | ST485 8P/S        | -                       | 8           | CRT-HT45          | CDI-ME2      | CTIN-784-8     | CTES-784-8   | -         | 12                  |
| 8            | ST485 8-15P/S     | 1                       | 18          | **                | **           | **             | **           | -         | **                  |
| 8            | ST485 8-18P/S     | 1÷2                     | 18÷14       | **                | **           | **             | **           | -         | **                  |
| 8            | ST485 8-22P/S     | 2.5                     | -           | CRT-HT45          | VS61137      | CTIN-784-12    | CTES-784-8   | -         | 12                  |
| 8            | ST485 8-26P/S     | 3                       | 12          | **                | -            | -              | -            | -         | **                  |
| 8            | ST485 8-30P/S     | 4                       | -           | CRT-HT45          | CDI-ME1      | CTIN-784-12/1  | CTES-784-8   | -         | 8                   |
| 8            | ST485 8-38P/S     | 6                       | 10          | CRT-HT45          | CDI-ME2      | CTIN-784-12/1  | CTES-784-8   | -         | 12                  |
| 8            | ST485 8-50P/S     | 10                      | -           | CRT-HT45          | CDI-ME2      | CTIN-784-8     | CTES-784-8   | -         | 12                  |

#### For grounding contact

| Contact size | Short Description  | mm <sup>2</sup> section | AWG section | Manual crimp tool | Locator /Die | Insertion tool | Removal tool | Guide pin | Stripping length mm |
|--------------|--------------------|-------------------------|-------------|-------------------|--------------|----------------|--------------|-----------|---------------------|
| 16S          | VF485 10SL-3P      | 1÷1.5                   | 18÷16       | **                | **           | **             | **           | **        | 6.3                 |
| 12           | VF485 18-10S N844  | 2,5                     | -           | CRT-HT45          | VS61138      | CTIN-784-12    | CTES-784-12  | GP-784-12 | 8.3                 |
| 12           | VF485 18-10S N845  | 1÷2                     | 18÷14       | CRT-784/1         | LOC-784      | CTIN-784-12    | CTES-784-12  | GP-784-12 | 8.3                 |
| 8            | VF485 22-22S N846  | -                       | 8           | CRT-HT45          | CDI-ME2      | CTIN-784-8     | CTES-784-8   | -         | 12                  |
| 8            | VF485 22-22S N847* | 6                       | 10          | CRT-HT45          | CDI-ME2      | CTIN-784-12/1  | CTES-784-8   | -         | 12                  |
| 8            | VF485 22-22S N848  | 4                       | -           | CRT-HT45          | VS61138      | CTIN-784-12/1  | CTES-784-8   | -         | 8.3                 |
| 8            | VF485 22-22S N849* | 2,5                     | -           | CRT-HT45          | VS61137      | CTIN-784-12    | CTES-784-8   | -         | 8.3                 |

\* With adapters

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

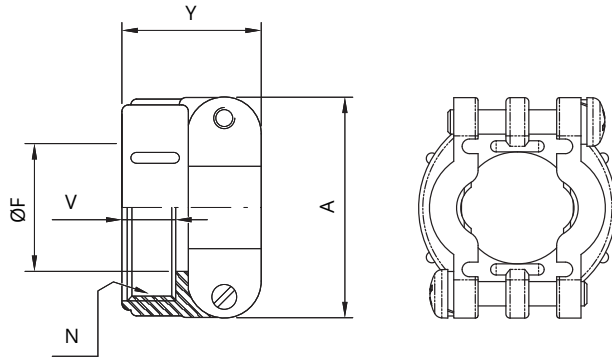
## VF2 - Accessories

### Cable glande A type

#### MS 3057 - ...A Cable gland

These cable-clamps keep the cable in the connector axial position and guarantee an excellent mechanical strain relief. They are not waterproof and are generally supplied separately except for class F connectors.

*To be used with Backshell Class DA (pages 8 and 9).*



**Finishes : F5** Electroless nickel (*RoHS compliance*)

| Shell size           | Order Number | Short Description | Y max | V ±0.2 | A max | ØF max cable Ø | N Thread in inches |
|----------------------|--------------|-------------------|-------|--------|-------|----------------|--------------------|
| 10SL (Shell Type: 6) | VS705231     | MS 3057-4A F5     | 20.6  | 10.5   | 22.5  | 8              | 5/8"-24 UNEF       |
| 10SL (Shell Type: 8) | VS705232     | MS 3057-6A F5     | 22.2  | 10.5   | 28    | 11             | 3/4"-20 UNEF       |
| 18                   | VS705234     | MS 3057-10A F5    | 25    | 10.5   | 32    | 15.8           | 1"-20 UNEF         |
| 22                   | VS705235     | MS 3057-12A F5    | 25    | 10.5   | 37.5  | 19             | 1" 3/16-18 UNEF    |

*Dimensions in mm*

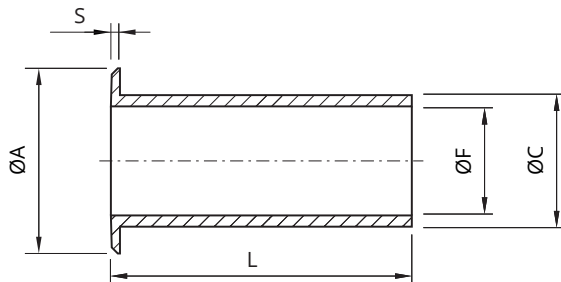
### Bushing for Cable glande A type

#### MS 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 chloroprene rubber.



| Shell size           | Order Number<br>chloroprene rubber | Short Description<br>chloroprene rubber | For Cable gland | ØA ±0.2 | ØF max cable Ø | ØC ±0.2 | S ±0.2 | L ±0.2 |
|----------------------|------------------------------------|---|-----------------|---------|----------------|---------|--------|--------|
| 10SL (Shell Type: 6) | VS705401                           | MS 3420-4                               | MS 3057-4A      | 12.8    | 5.6            | 7.6     | 1.6    | 69.8   |
| 10SL (Shell Type: 8) | VS705402                           | MS 3420-6                               | MS 3057-6A      | 15.7    | 7.9            | 10.8    | 1.6    | 66.8   |
| 18                   | VS705404                           | MS 3420-10                              | MS 3057-10A     | 22      | 14.2           | 15.6    | 1.6    | 60.3   |
| 22                   | VS705405                           | MS 3420-12                              | MS 3057-12A     | 27      | 15.8           | 18.8    | 1.6    | 57.1   |

*On request: V = Fluoride Rubber S = Silicone Rubber*

*Dimensions in mm*

## VF2 - Accessories

### Cable glande C type

#### MS 3057 - ...C Cable gland

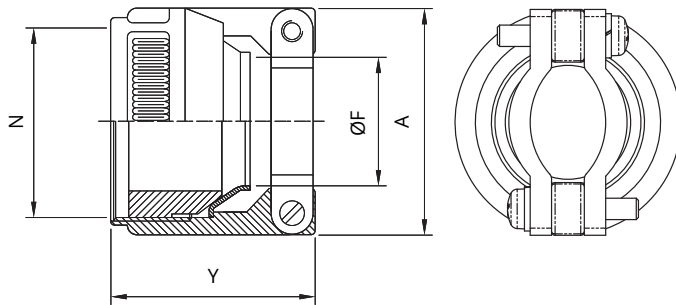
IP67

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 with gasket in chloroprene rubber.

To be used with Backshell Class DA (pages 8 and 9).



Finishes : F5 Electroless nickel (RoHS compliance)

| Shell size           | Order Number<br>chloroprene rubber | Short Description<br>chloroprene rubber | Y<br>max | A<br>max | ØF cable<br>min max | N Thread<br>in inches |
|----------------------|------------------------------------|---|----------|----------|---------------------|-----------------------|
| 10SL (Shell Type: 6) | VS705281                           | MS 3057-4C F5                           | 33.4     | 23       | 7.9 2.4             | 5/8"-24 UNEF          |
| 10SL (Shell Type: 8) | VS705282                           | MS 3057-6C F5                           | 32.3     | 26       | 11.2 5.8            | 3/4"-20 UNEF          |
| 18                   | VS705284                           | MS 3057-10C F5                          | 35       | 32       | 15.9 9.6            | 1"-20 UNEF            |
| 22                   | VS705285                           | MS 3057-12C F5                          | 35.7     | 37.5     | 19 11.3             | 1" 3/16-18 UNEF       |

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

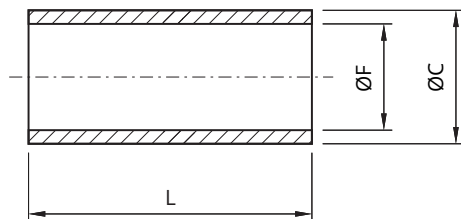
Dimensions in mm

### Bushing for Cable glande C type

#### MS 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 chloroprene rubber.



| Shell size           | Order Number<br>chloroprene rubber | Short Description<br>chloroprene rubber | For Cable gland | ØF<br>max cable Ø | ØC<br>±0.2 | L<br>±0.2 |
|----------------------|------------------------------------|---|-----------------|-------------------|------------|-----------|
| 10SL (Shell Type: 6) | VS705421                           | MS 3420-4A                              | MS 3057-4C      | 5.6               | 7.8        | 50.8      |
| 10SL (Shell Type: 8) | VS705422                           | MS 3420-6A                              | MS 3057-6C      | 7.9               | 11         | 50.8      |
| 18                   | VS705424                           | MS 3420-10A                             | MS 3057-10C     | 11.1              | 15.8       | 50.8      |
| 22                   | VS705425                           | MS 3420-12A                             | MS 3057-12C     | 13.7              | 18.9       | 50.8      |

On request: V = Fluoride Rubber S = Silicone Rubber

Dimensions in mm

## VF2 - Accessories

### Cable glande - PG (DIN40430) or metric threaded



PG or metric threaded cable glands



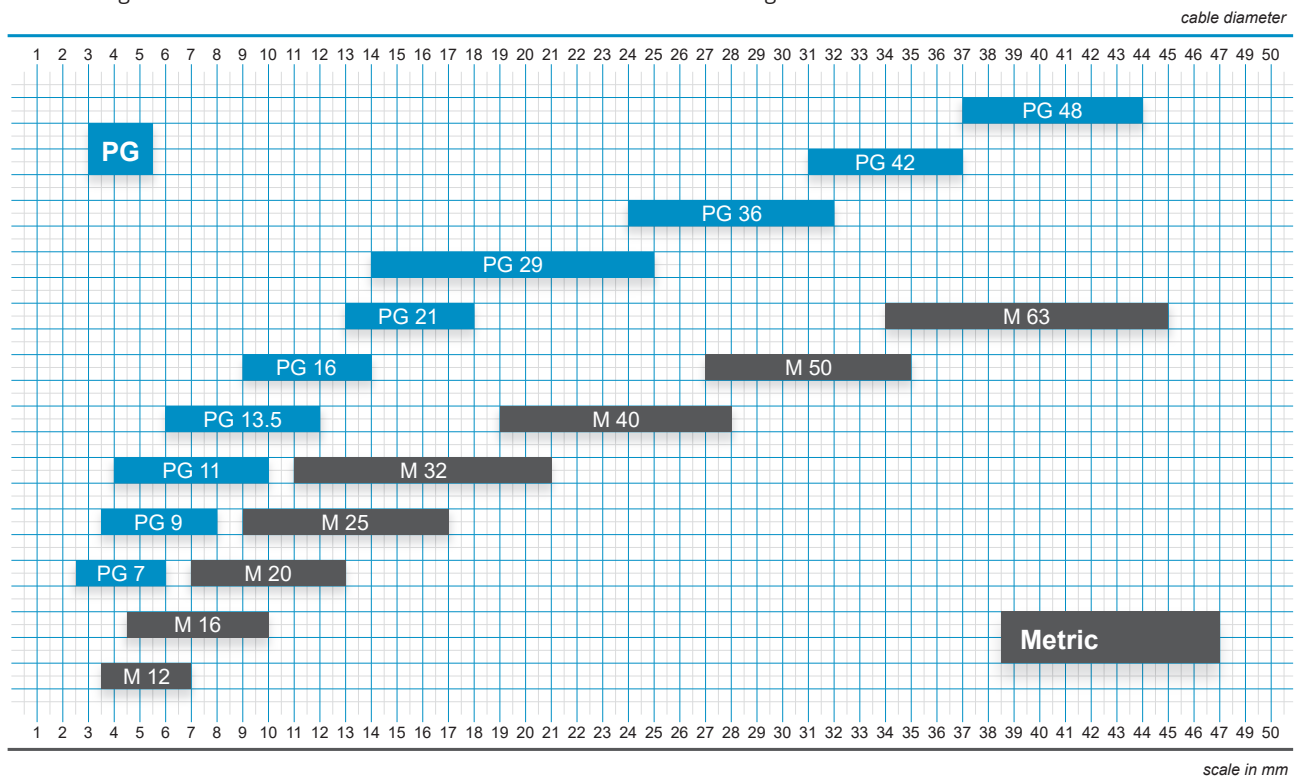
Cable glands with protection for spiral-shaped cables

These glands guarantee an excellent strain relief resistance with waterproof protection (IP67). The body is in plastic material (Polyamide or black coloured Nylon – Operating temperature -20 °C to + 80 °C) or metallic material (Brass with nickel finish – operating temperature -30 °C to +100 °C).

They both prevent the cable from twisting when coupling the connectors. The plastic version is provided with an anti-vibration system to prevent the gland from becoming loose. Compared to other cable retention systems this solution is more economical.

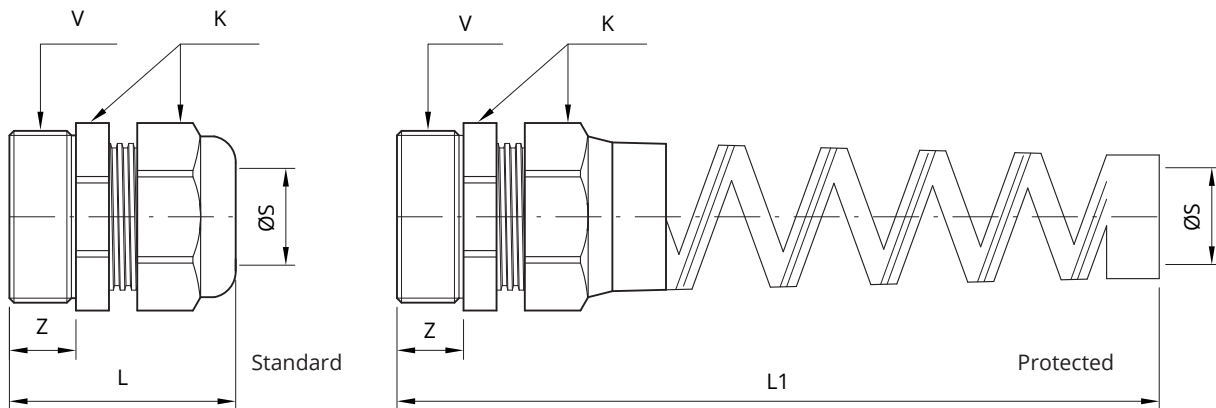
These adapters are available with PG or metric thread and can be used with connector classes DA...PG and DA...M. Glands with protection for spiral-shaped cables are available on request. They eliminate possible damage caused by the cable bending on the cable-connector interface. Therefore these are often used with cables where a small conductor can be easily damaged.

Comparison of clamping ranges PG / Metric glands  
The following table shows the cable dimensions to be used with PG or Metric glands.



## VF2 - Accessories

### Cable gland - PG (DIN40430) or metric threaded



#### Metallic cable glands

| Order Number | Short Description | V       | ØS<br>Clamping range | K  | Z  | L  |
|--------------|-------------------|---------|----------------------|----|----|----|
| VS705002     | AL PG9 M          | PG 9    | 3-8                  | 19 | 8  | 36 |
| VS705005     | AL PG16 M         | PG 16   | 8-14                 | 27 | 10 | 44 |
| VS705006     | AL PG21 M         | PG 21   | 11-18                | 33 | 11 | 49 |
| VS705011     | AL M12 M          | M12x1.5 | 3.5-7                | 15 | 8  | 30 |
| VS705013     | AL M20 M          | M20x1.5 | 7-13                 | 25 | 9  | 37 |
| VS705014     | AL M25 M          | M25x1.5 | 9-17                 | 30 | 10 | 40 |

#### Plastic cable glands

| Order Number | Short Description | V       | ØS<br>Clamping range | K  | Z  | L  |
|--------------|-------------------|---------|----------------------|----|----|----|
| VS705022     | AL PG9 P          | PG 9    | 3.5-8                | 19 | 8  | 36 |
| VS705025     | AL PG16 P         | PG 16   | 9-14                 | 27 | 10 | 44 |
| VS705026     | AL PG21 P         | PG 21   | 13-18                | 33 | 11 | 49 |
| VS705031     | AL M12 P          | M12x1.5 | 3.5-7                | 15 | 8  | 30 |
| VS705033     | AL M20 P          | M20x1.5 | 7-13                 | 25 | 9  | 37 |
| VS705034     | AL M25 P          | M25x1.5 | 9-17                 | 30 | 10 | 40 |

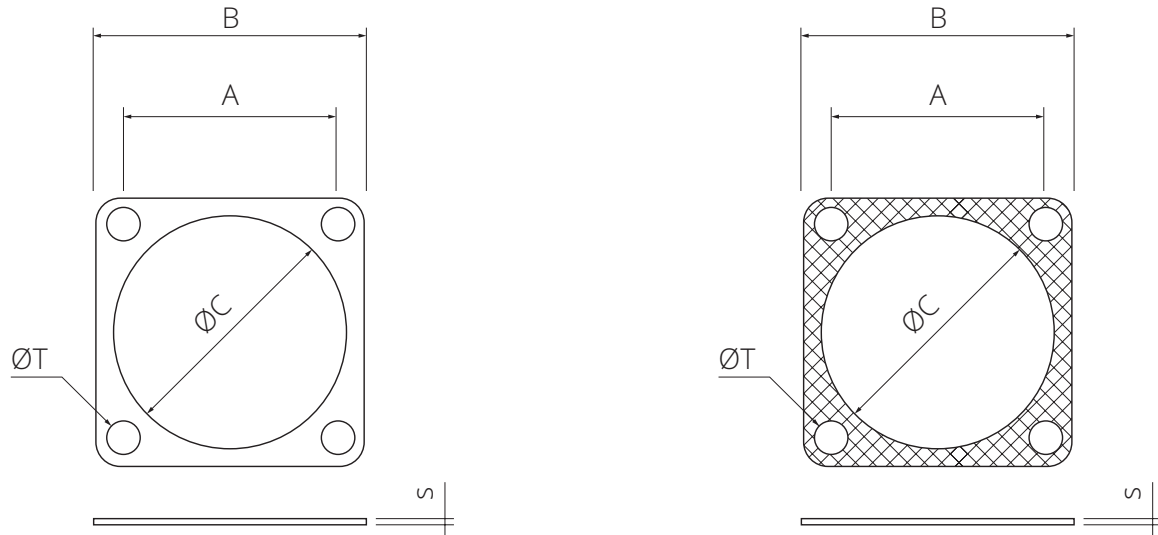
#### Plastic Protected cable glands

| Order Number | Short Description | V       | ØS<br>Clamping range | K  | Z  | L1    |
|--------------|-------------------|---------|----------------------|----|----|-------|
| VS705042     | AL PG9 PP         | PG 9    | 3.5-8                | 19 | 8  | 73.5  |
| VS705045     | AL PG16 PP        | PG 16   | 9-14                 | 27 | 10 | 111.5 |
| VS705046     | AL PG21 PP        | PG 21   | 13-18                | 33 | 11 | 129   |
| VS705051     | AL M12 PP         | M12x1.5 | 3.5-7                | 15 | 8  | 64    |
| VS705053     | AL M20 PP         | M20x1.5 | 7-13                 | 25 | 9  | 101   |
| VS705054     | AL M25 PP         | M25x1.5 | 9-17                 | 30 | 10 | 125   |

Dimensions in mm

## VF2 - Accessories

### Panel Gasket



These gaskets are used to make front mounting panel connectors water resistant.

Available in two versions:

- gasket C215 – non conductive chloroprene rubber gasket (IP67 protection).
- gasket C215R – conductive chloroprene rubber gasket with embedded metal screen (IP65 protection).  
These gaskets guarantee watertightness and RFI shielding

| Order Number          | Short Description | Shell size | A    | B    | ØC   | S       | ØT  |
|-----------------------|-------------------|------------|------|------|------|---------|-----|
| <b>Non conductive</b> |                   |            |      |      |      |         |     |
| VS412400              | C215-10           | 10SL       | 18.2 | 25.4 | 16.3 | 1±0.3   | 4.3 |
| VS412403              | C215-18           | 18         | 27   | 35   | 28.6 | 1±0.3   | 5.1 |
| VS412405              | C215-22           | 22         | 31.8 | 41.2 | 34.9 | 1±0.3   | 5.1 |
| <b>Conductive</b>     |                   |            |      |      |      |         |     |
| VS412412              | C215R-10          | 10SL       | 18.2 | 25.4 | 16.3 | 0.5±0.2 | 4.3 |
| VS412415              | C215R-18          | 18         | 27   | 35   | 28.6 | 0.5±0.2 | 5.1 |
| VS412417              | C215R-22          | 22         | 31.8 | 41.2 | 34.9 | 0.5±0.2 | 5.1 |

*Dimensions in mm*

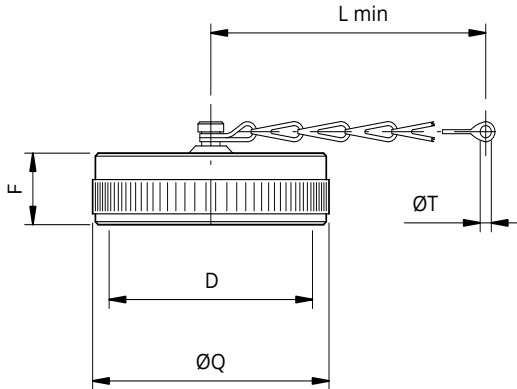


## VF2 - Accessories

### Caps

#### Caps with chain for Shell Type 2 Connectors

Provided with sealing gasket. Chain and lugs are in stainless steel.



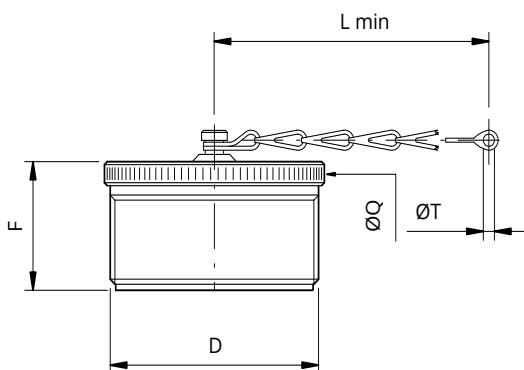
**Finishes : F5** Electroless nickel (*RoHS compliance*)

| Shell size | Order Number | Short Description | D<br>Thread in<br>inches | ØQ | F    | L min | ØT  |
|------------|--------------|-------------------|--------------------------|----|------|-------|-----|
| 10SL       | VS101007     | CVS 043-10SL F5   | 5/8"-24 UNEF             | 24 | 13.1 | 102   | 4.2 |
| 18         | VS101036     | CVS 043-18 F5     | 1"1/8-18 UNEF            | 34 | 13.1 | 115   | 4.2 |
| 22         | VS103799     | CVS 043-22 F5     | 1"3/8-18 UNEF            | 41 | 13.1 | 127   | 4.2 |

*Dimensions in mm*

#### Caps with chain for Shell Type 6/8 Connectors

These caps have no sealing gasket because mated with connectors generally provided with front gasket. Chain and lugs are in stainless steel.



**Finishes : F5** Electroless nickel (*RoHS compliance*)

| Shell size | Order Number | Short Description | D<br>Thread in<br>inches | ØQ | F    | L min | ØT  |
|------------|--------------|-------------------|--------------------------|----|------|-------|-----|
| 10SL       | VS103800     | CVS 042-10SL F5   | 5/8"-24 UNEF             | 18 | 16.5 | 102   | 4.2 |
| 18         | VS103801     | CVS 042-18 F5     | 1"1/8-18 UNEF            | 30 | 21.4 | 115   | 4.2 |
| 22         | VS103802     | CVS 042-22 F5     | 1"3/8-18 UNEF            | 37 | 21.4 | 127   | 4.2 |

*Dimensions in mm*



### 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 VanSystem Srl if in doubt
- the user must take final responsibility for electrical safety Radiall VanSystem 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 VanSystem'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 VanSystem 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.*



[www.radiall.com](http://www.radiall.com)

**FRANCE**

RADIALL S.A.  
Tel +33149353535  
[info@radiall.com](mailto:info@radiall.com)



[www.vansystem.eu](http://www.vansystem.eu)

**ITALY**

Radiall VanSystem S.r.l.  
Tel. +39023569931  
[info.vansystem@radiall.com](mailto:info.vansystem@radiall.com)