

# CATÁLOGO DE PRODUTOS

GRUPO

# enercom

REDES ELÉTRICAS SUBTERRÂNEAS

**37**  
ANOS

**LINHA COMPLETA  
DE PRODUTOS  
PARA REDES ELÉTRICAS  
SUBTERRÂNEAS**



Terminações a frio

GRUPO

**enercom**

REDES ELÉTRICAS SUBTERRÂNEAS

**37**  
ANOS

EXPERIÊNCIA  
E INOVAÇÃO  
CONSTANTE.

15-CSTI/25-CSTI/35-CSTI

# *Terminação interna a frio* *CSTI - Chardon*



[enercom.com.br](http://enercom.com.br)

## APPLICATION

The Chardon Cold Shrinkable Termination is a high-quality and durable solution for terminating indoor medium voltage cables in a variety of applications. It is made of UV-resistant silicone rubber that has excellent electrical and mechanical properties. The termination consists of a stress-controlling compound housing that is preassembled on a plastic tube. The housing is designed to reduce the electrical stress at the cable end and to provide reliable performance in indoor environments. The installation process is simple and fast: just slide the termination over

the cable end and remove the plastic tube. The housing will shrink onto the cable and form a tight seal. No tools or heat sources are required for the installation, which makes it safe and convenient. The termination can handle voltages up to 35 kV and meets the IEEE standard 48 requirements. The Chardon Cold Shrinkable Termination is designed to last as long as the cable itself, without requiring any maintenance or replacement.

## VOLTAGE RATINGS: 15-CSTI

<b>Voltage Class</b>	15 kV
<b>Minimum Partial Discharge Voltage Level</b>	13 kV < 5.0pC
<b>AC Voltage 1 Min Dry Withstand</b>	50 kV
<b>AC Voltage 10s Wet Withstand</b>	45 kV
<b>Lightning Impulse (BIL) Voltage Withstand</b>	110 kV
<b>Cyclic Aging</b>	26 kV / 30day
<b>AC Voltage 5h Dry Withstand</b>	31 kV
<b>DC Voltages 15 Min Dry Withstand</b>	75 kV

## VOLTAGE RATINGS: 25-CSTI

<b>Voltage Class</b>	25 kV
<b>Minimum Partial Discharge Voltage Level</b>	22 kV < 5.0pC
<b>AC Voltage 1 Min Dry Withstand</b>	65 kV
<b>AC Voltage 10s Wet Withstand</b>	60 kV
<b>Lightning Impulse (BIL) Voltage Withstand</b>	150 kV
<b>Cyclic Aging</b>	43 kV / 30day
<b>AC Voltage 5h Dry Withstand</b>	50 kV
<b>DC Voltages 15 Min Dry Withstand</b>	105 kV

\*Revision date: 09-18-2023

## VOLTAGE RATINGS: 35-CSTI

<b>Voltage Class</b>	35 kV
<b>Minimum Partial Discharge Voltage Level</b>	30 kV < 5.0pC
<b>AC Voltage 1 Min Dry Withstand</b>	90 kV
<b>AC Voltage 10s Wet Withstand</b>	80 kV
<b>Lightning Impulse (BIL) Voltage Withstand</b>	200 kV
<b>Cyclic Aging</b>	61 kV / 30day
<b>AC Voltage 5h Dry Withstand</b>	71 kV
<b>DC Voltages 15 Min Dry Withstand</b>	140 kV

## ORDERING INFORMATION



### Single Core Cable Kit Contents:

- / Termination Body
- / Cold Shrinkable Jacket Seal
- / Sealing Tape
- / PVC Tape
- / Silicone Tape
- / Sandpaper
- / Paper Towel
- / Silicone Lubricant
- / Gloves
- / Grounding Kit (Optional)
- / Cable Lug (Optional)
- / Installation Instructions
- / Packing List

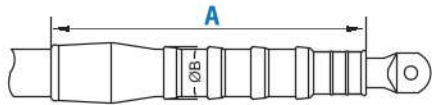


### Three Core Cable Kit Contents:

- / Termination Body
- / Cable Shrinkable Jacket Seal
- / Cold Shrinkable Breakout
- / Sealing Tape
- / Filling Tape
- / PVC Tape
- / Silicone tape
- / Sandpaper
- / Paper Towel
- / Silicone Lubricant
- / Gloves
- / Triangle Cone
- / Constant-Force Spring
- / Grounding Braid
- / Copper Tape
- / Cable Lug (Optional)
- / Installation Instructions
- / Packing List

## ORDERING INFORMATION

### Termination Selection:



15/25/35kV

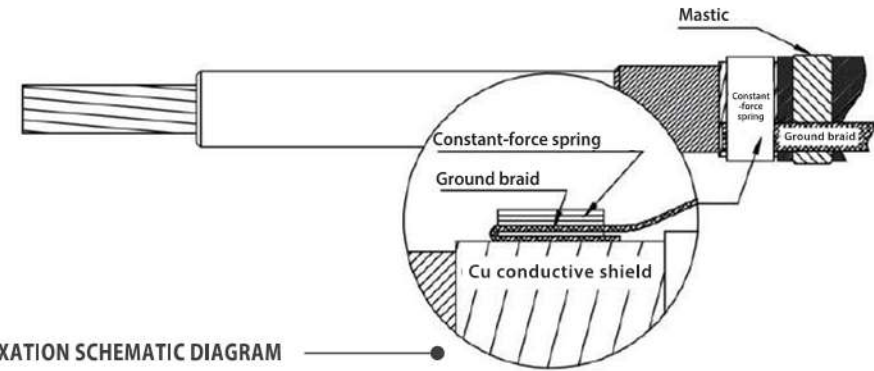
Unit: mm (milli meter)

Part Number		Creepage Distance (mm)	Shades Qty	Dimension (A)(Max.) (mm)	Dimension (ØB) (mm)	Cable Insulation O.D.Range (mm)
*Single Core Cable	Three Core Cable					
15-CSTI-A	T-15-CSTI-A	294	4	250	32	15.0-21.0
15-CSTI-B	T-15-CSTI-B	294	4	250	34	19.0-25.0
15-CSTI-C	T-15-CSTI-C	294	4	250	36	23.0-31.0
15-CSTI-D	T-15-CSTI-D	294	4	250	40	29.0-37.0
15-CSTI-E	T-15-CSTI-E	294	4	250	42	37.0-46.0
25-CSTI-A	T-25-CSTI-A	355	4	300	36	19.0-24.0
25-CSTI-B	T-25-CSTI-B	355	4	300	38	24.0-28.0
25-CSTI-C	T-25-CSTI-C	355	4	300	42	28.0-34.0
25-CSTI-D	T-25-CSTI-D	355	4	300	46	35.0-43.0
35-CSTI-A	T-35-CSTI-A	580	6	380	72	31.0-36.0
35-CSTI-B	T-35-CSTI-B	580	6	380	75	35.0-41.0
35-CSTI-C	T-35-CSTI-C	580	6	380	78	39.0-48.0
35-CSTI-D	T-35-CSTI-D	580	7	380	84	48.0-57.0

## ORDERING INFORMATION

\*Each single core termination part can be assembled with one grounding kit if needed. To order a grounding kit, add "GKT" in the end of the Chardon CSTI part number.

Example: 25 - CSTI-A-GKT



FIXATION SCHEMATIC DIAGRAM

### Each kit Contains:

- / Ground Braid
- / Constant Force Spring
- / Copper Tape

### Important:

The Cold Shrink Terminations are suitable for use with metallic screen cables made of copper tape or copper wire, and armor cables made of steel tape or steel wire.

If your cable is different from the above types, please contact your local distributor or Chardon representative.

Selection of Shear Bolt Connector, if requested:

Part Number	Conductor Range(mm <sup>2</sup> )
SBC-A-25-95-12/1-AL	25-95
SBC-A-25-95-16/1-AL	25-95
SBC-A-35-150-12/1-AL	35-150
SBC-A-35-150-16/1-AL	35-150
SBC-A-35-150-12/2-AL	35-150
SBC-A-35-150-16/2-AL	35-150
SBC-A-70-240-12/2-AL	70-240
SBC-A-70-240-16/2-AL	70-240
SBC-A-120-300-12/2-AL	120-300
SBC-A-120-300-16/2-AL	120-300
SBC-A-185-400-12/3-AL	185-400
SBC-A-185-400-16/3-AL	185-400
SBC-A-300-630-12/3-AL	300-630
SBC-A-300-630-16/3-AL	300-630
SBC-A-300-630-20/3-AL	300-630

Selection of Compression Lug, if requested\*:

Part Number	Lug Material	Conductor Size(mm <sup>2</sup> )
CTCC-16-8	Copper	16mm <sup>2</sup>
CTCC-25-8	Copper	25mm <sup>2</sup>
CTCC-35-10	Copper	35mm <sup>2</sup>
CTCC-50-10	Copper	50mm <sup>2</sup>
CTCC-70-12	Copper	70mm <sup>2</sup>
CTCC-95-12	Copper	95mm <sup>2</sup>
CTCC-120-14	Copper	120mm <sup>2</sup>
CTCC-150-14	Copper	150mm <sup>2</sup>
CTCC-185-16	Copper	185mm <sup>2</sup>
CTCC-240-16	Copper	240mm <sup>2</sup>
CTCC-300-20	Copper	300mm <sup>2</sup>
CTCC-400-20	Copper	400mm <sup>2</sup>
CTAL-16-8	Aluminum	16mm <sup>2</sup>
CTAL-16-10	Aluminum	16mm <sup>2</sup>
CTAL-25-8	Aluminum	25mm <sup>2</sup>
CTAL-25-10	Aluminum	25mm <sup>2</sup>
CTAL-35-8	Aluminum	35mm <sup>2</sup>
CTAL-35-10	Aluminum	35mm <sup>2</sup>
CTAL-50-10	Aluminum	50mm <sup>2</sup>
CTAL-50-12	Aluminum	50mm <sup>2</sup>
CTAL-70-10	Aluminum	70mm <sup>2</sup>
CTAL-70-12	Aluminum	70mm <sup>2</sup>
CTAL-95-8	Aluminum	95mm <sup>2</sup>
CTAL-95-10	Aluminum	95mm <sup>2</sup>
CTAL-95-12	Aluminum	95mm <sup>2</sup>
CTAL-120-10	Aluminum	120mm <sup>2</sup>
CTAL-120-12	Aluminum	120mm <sup>2</sup>
CTAL-120-16	Aluminum	120mm <sup>2</sup>
CTAL-150-10	Aluminum	150mm <sup>2</sup>
CTAL-150-12	Aluminum	150mm <sup>2</sup>
CTAL-150-16	Aluminum	150mm <sup>2</sup>
CTAL-185-12	Aluminum	185mm <sup>2</sup>
CTAL-240-10	Aluminum	185mm <sup>2</sup>
CTAL-240-12	Aluminum	240mm <sup>2</sup>
CTAL-240-16	Aluminum	240mm <sup>2</sup>
CTAL-300-12	Aluminum	300mm <sup>2</sup>
CTAL-300-16	Aluminum	300mm <sup>2</sup>
CTAL-400-16	Aluminum	400mm <sup>2</sup>
CTAL-500-16	Aluminum	500mm <sup>2</sup>

\*NOTE: For a more accurate size selection, please specify your cable size and type when placing an order.

GRUPO

**enercom**

REDES ELÉTRICAS SUBTERRÂNEAS

**37**  
ANOS

EXPERIÊNCIA  
E INOVAÇÃO  
CONSTANTE.

15-CSTO/25-CSTO/35-CSTO

# *Terminação externa a frio CSTO - Chardon*



## APPLICATION

The Chardon Outdoor Cold Shrinkable Terminations deliver effortless installation and consistent, trustworthy performance when terminating medium voltage cables in challenging outdoor settings. These outdoor terminations are constructed from high-quality silicone rubber, with a UV-resistant characteristic that helps them withstand harsh outdoor environmental conditions, including UV radiation and varying weather patterns.

Chardon Outdoor Cold Shrinkable Terminations include a stress-controlling compound housing,

conveniently pre-assembled on a plastic "hold-out" tube. Upon removal of the hold-out tube, the stress relief housing contracts onto the cable, securing a reliable and firm connection. The terminations are user-friendly and versatile, with no need for tools or heat sources during installation.

Chardon Cold Shrink Terminations are built to endure for the entire life of the cable, designed to withstand voltages up to 35 kV, and tested according to IEEE Standard 48.

## VOLTAGE RATINGS: 15-CSTO

<b>Voltage Class</b>	15 kV
<b>Minimum Partial Discharge Voltage Level</b>	13 kV < 5.0pC
<b>AC Voltage 1 Min Dry Withstand</b>	50 kV
<b>AC Voltage 10s Wet Withstand</b>	45 kV
<b>Lightning Impulse (BIL) Voltage Withstand</b>	110 kV
<b>Cyclic Aging</b>	26 kV / 30day
<b>AC Voltage 5h Dry Withstand</b>	31 kV
<b>DC Voltages 15 Min Dry Withstand</b>	75 kV

## VOLTAGE RATINGS: 25-CSTO

<b>Voltage Class</b>	25 kV
<b>Minimum Partial Discharge Voltage Level</b>	22 kV < 5.0pC
<b>AC Voltage 1 Min Dry Withstand</b>	65 kV
<b>AC Voltage 10s Wet Withstand</b>	60 kV
<b>Lightning Impulse (BIL) Voltage Withstand</b>	150 kV
<b>Cyclic Aging</b>	43 kV / 30day
<b>AC Voltage 5h Dry Withstand</b>	50 kV
<b>DC Voltages 15 Min Dry Withstand</b>	105 kV

\*Revision Date: 10.24.2024

## VOLTAGE RATINGS: 35-CSTO

<b>Voltage Class</b>	35 kV
<b>Minimum Partial Discharge Voltage Level</b>	30 kV < 5.0pC
<b>AC Voltage 1 Min Dry Withstand</b>	90 kV
<b>AC Voltage 10s Wet Withstand</b>	80 kV
<b>Lightning Impulse (BIL) Voltage Withstand</b>	200 kV
<b>Cyclic Aging</b>	61 kV / 30day
<b>AC Voltage 5h Dry Withstand</b>	71 kV
<b>DC Voltages 15 Min Dry Withstand</b>	140 kV

## ORDERING INFORMATION



Three-Core Kit Contents:

- / Termination body
- / Cold Shrinkable Tube
- / Cold Shrinkable Breakout
- / Sealing Tape
- / Filling Tape
- / PVC Tape
- / Silicone Tape
- / Sandpaper
- / Paper Towel
- / Silicone Lubricant
- / Gloves
- / Triangle Cone
- / Constant-Force Spring
- / Grounding Braid
- / Copper Tape
- / Cable Lug (Optional)
- / Installation Instructions
- / Packing List

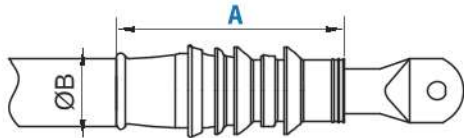


Single Core Kit Contents:

- / Termination body
- / Cold Shrinkable Jacket Seal (35-CSTO only)
- / Sealing Tape
- / PVC Tape
- / Silicone Tape
- / Sandpaper
- / Paper Towel
- / Silicone Lubricant
- / Gloves
- / Grounding Kit (Optional)
- / Cable Lug (Optional)
- / Installation Instructions
- / Packing List

## ORDERING INFORMATION

### Termination Selection:



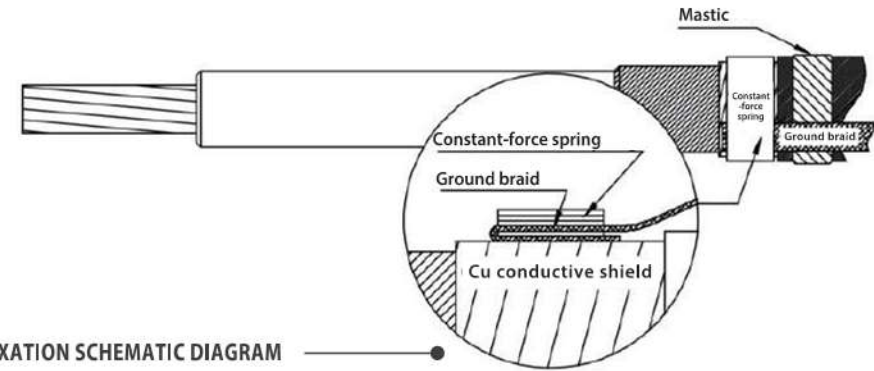
Unit: mm (milli meter)

Part Number		Creepage Distance (mm)	Shades (Qty)	Dimension (A)(Max.)(mm) Single/Three Core	Dimension (ØB)	Cable Insulation O.D.Range (mm)
Single Core*	Three Core					
15-CSTO-A	T-15-CSTO-A	510	5	300/290	67	13.2-17.0
15-CSTO-B	T-15-CSTO-B	510	5	300/290	71	16.8-27.0
15-CSTO-C	T-15-CSTO-C	510	5	300/290	79	25.3-50.0
25-CSTO-A	T-25-CSTO-A	672	6	380/370	81	15.2-22.4
25-CSTO-B	T-25-CSTO-B	672	6	380/370	85	20.4-35.4
25-CSTO-C	T-25-CSTO-C	672	6	380/370	100	34.0-60.0
35-CSTO-A	T-35-CSTO-A	930	10	470/470	87	18.7-26.0
35-CSTO-B	T-35-CSTO-B	930	10	470/470	94	24.9-41.1
35-CSTO-C	T-35-CSTO-C	930	10	470/470	105	36.6-59.0

## ORDERING INFORMATION

\*Each single core termination part can be assembled with one grounding kit if needed. To order a grounding kit, add "GKT" in the end of the Chardon CSTO part number.

Example: 25-CSTO-A-GKT



FIXATION SCHEMATIC DIAGRAM

### Each kit Contains:

- / Ground Braid
- / Constant Force Spring
- / Copper Tape

### Important:

The Cold Shrink Terminations are suitable for use with metallic screen cables made of copper tape or copper wire, and armor cables made of steel tape or steel wire.

If your cable is different from the above types, please contact your local distributor or Chardon representative.

Selection of Shear Bolt Connector, if requested:

Part Number	Conductor Range(mm <sup>2</sup> )
SBC-A-25-95-12/1-AL	25-95
SBC-A-25-95-16/1-AL	25-95
SBC-A-35-150-12/1-AL	35-150
SBC-A-35-150-16/1-AL	35-150
SBC-A-35-150-12/2-AL	35-150
SBC-A-35-150-16/2-AL	35-150
SBC-A-70-240-12/2-AL	70-240
SBC-A-70-240-16/2-AL	70-240
SBC-A-120-300-12/2-AL	120-300
SBC-A-120-300-16/2-AL	120-300
SBC-A-185-400-12/3-AL	185-400
SBC-A-185-400-16/3-AL	185-400
SBC-A-300-630-12/3-AL	300-630
SBC-A-300-630-16/3-AL	300-630
SBC-A-300-630-20/3-AL	300-630

Selection of Compression Lug, if requested\*:

Part Number	Lug Material	Conductor Size (mm <sup>2</sup> )
DTM-16-8	Copper	16
DTM-25-8	Copper	25
DTM-35-10	Copper	35
DTM-50-10	Copper	50
DTM-70-12	Copper	70
DTM-95-12	Copper	95
DTM-120-14	Copper	120
DTM-150-14	Copper	150
DTM-185-16	Copper	185
DTM-240-16	Copper	240
DTM-300-20	Copper	300
DTM-400-20	Copper	400
CTAL-16-8	Aluminum	16
CTAL-16-10	Aluminum	16
CTAL-25-8	Aluminum	25
CTAL-25-10	Aluminum	25
CTAL-35-8	Aluminum	35
CTAL-35-10	Aluminum	35
CTAL-50-10	Aluminum	50
CTAL-50-12	Aluminum	50
CTAL-70-10	Aluminum	70
CTAL-70-12	Aluminum	70
CTAL-95-8	Aluminum	95
CTAL-95-10	Aluminum	95
CTAL-95-12	Aluminum	95
CTAL-120-10	Aluminum	120
CTAL-120-12	Aluminum	120
CTAL-120-16	Aluminum	120
CTAL-185-12	Aluminum	185
CTAL-185-16	Aluminum	185
CTAL-240-12	Aluminum	240
CTAL-240-16	Aluminum	240
CTAL-300-12	Aluminum	300
CTAL-300-16	Aluminum	300
CTAL-400-16	Aluminum	400
CTAL-500-16	Aluminum	500

\*NOTE: For a more accurate size selection, please specify your cable size and type when placing an order.

# ***Dispositivo de aterramento DAT contratil a frio CJS - Chardon***



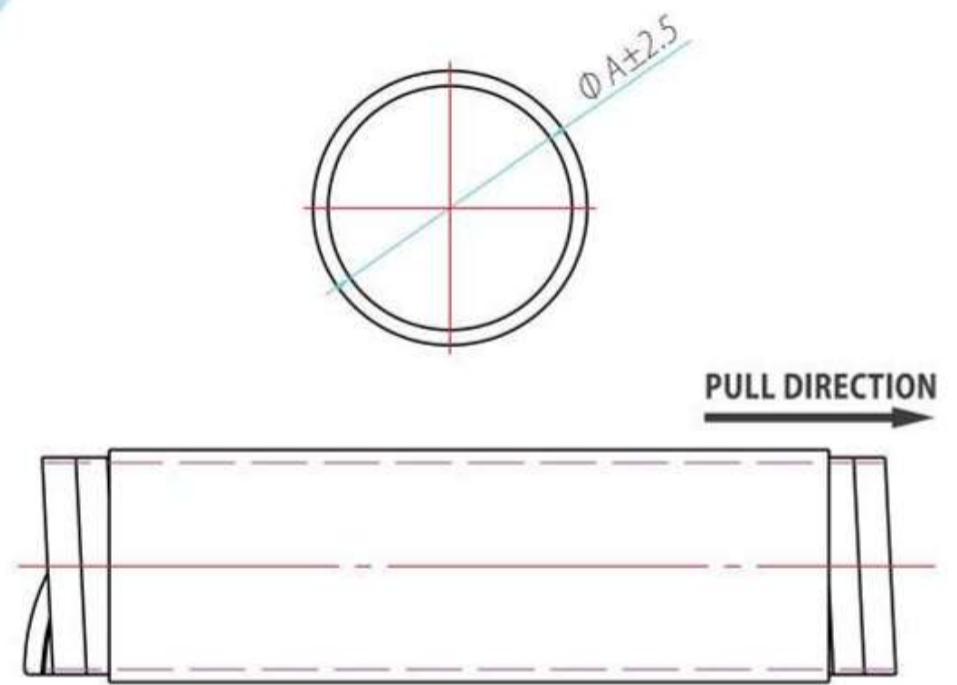
## APPLICATION

Chardon Cold Shrinkable Jacket Seals are designed to seal the end of XLP, EPR or similar solid dielectric insulated power cables. The Cold Shrinkable Jacket Seal can be used when installing elbows or other cable accessories. The product is submersible and UV resistant.

The spiral tube design allows the users to remove the inner tube easily during installation. The rubber tube provides sealing and protection on jacketed concentric neural cable. No additional tools are required for installation.

## DIMENSIONAL INFORMATION

Jacket Kit	ΦA	Cable O.D. Range (mm)
CJS-B	58	18.0 - 38.1
CJS-C	82	37.0 - 62.0
CJS-D	100	60.0 - 81.3



## ORDERING INFORMATION

### Kit Components:

- / Cold Shrinkable Jacket Tube
- / Mastic Tape & PVC Tape
- / Instruction Sheet
- / Copper Rod and Crimp Connector (For CJS-B-DW, CJS-C-DW and CJS-D-DW)

Part Description	Standard Jacket Seal Kit	Jacket Seal for Drain Wire Shielded Cable
Cold Shrinkable Jacket Seal-Size B	CJS-B	CJS-B-DW
Cold Shrinkable Jacket Seal-Size C	CJS-C	CJS-C-DW
Cold Shrinkable Jacket Seal-Size D	CJS-D	CJS-D-DW

• Revision date: 05.22.2024

GRUPO

**enercom**

REDES ELÉTRICAS SUBTERRÂNEAS

**37**  
ANOS

EXPERIÊNCIA  
E INOVAÇÃO  
CONSTANTE.

SBC

# *Conectores Torquimetricos SBC - Chardon*



[enercom.com.br](http://enercom.com.br)

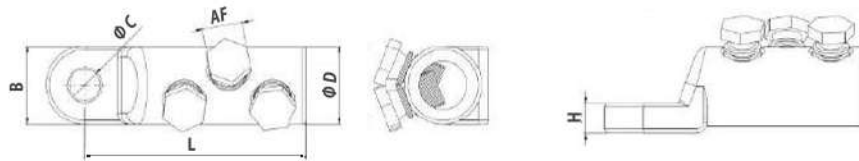
## APPLICATION

Chardon Shear Bolt Connectors are designed for use in low and medium voltage connection. The tool required is a standard ratchet wrench with a hexagonal socket; no crimping tool is needed in field operation.

The connector is manufactured from high conductivity aluminum for heavy duty utility

application. The cable entry opening is chamfered inside to provide easy insertion of cable. The shear bolts in the connector ensures the correct torque and optimal contact force and ensure a reliable current path.

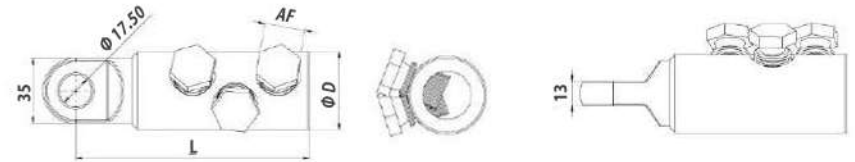
## ORDERING INFORMATION



### DIMENSION INFORMATION OF "SBC-A SERIES"

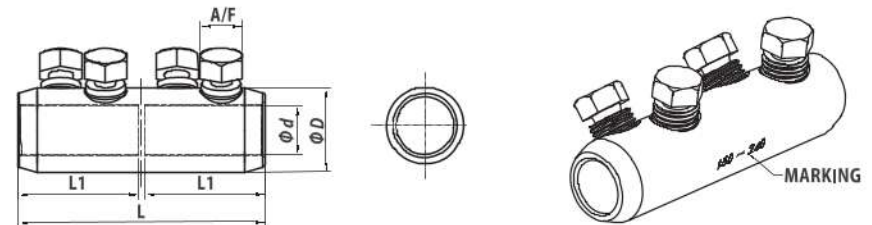
CATALOG No.	Conductor Range (mm <sup>2</sup> )	Dimensions (mm)					AF Head Size	Bolt Quantity
		φD	L	B	H	φC		
SBC-A-25-50-12/1	25 - 50	24	64.5	24	9	13	13	1
SBC-A-25-50-16/1						17		
SBC-A-70-95-12/1	70 - 95	24	64.5	24	9	13	13	1
SBC-A-70-95-16/1						17		
SBC-A-95-150-12/2	95 - 150	28	85.0	28	10	13	17	2
SBC-A-95-150-16/2						17		
SBC-A-150-240-12/2	150 - 240	33	97.5	33	13	13	19	2
SBC-A-150-240-16/2						17		
SBC-A-240-300-12/2	240 - 300	38	116.5	38	14	13	22	2
SBC-A-240-300-16/2						17		
SBC-A-300-400-12/3	300 - 400	42	120	42	16	13	22	3
SBC-A-300-400-16/3						17		

## ORDERING INFORMATION



### DIMENSION INFORMATION OF "SBC-B SERIES"

CATALOG No.	Conductor Range (mm <sup>2</sup> )	Dimensions (mm)		AF Head Size	Bolt Quantity
		φD	L		
SBC-B-25-50/1	25 - 50	24	71	13	1
SBC-B-70-95/1	70 - 95	24	71	13	1
SBC-B-70-120/2	70 - 120	33	103	19	2
SBC-B-150-240/2	150 - 240	33	103	19	2
SBC-B-300-400/3	300 - 400	42	126	22	3
SBC-B-500/3	500	48	142	24	3
SBC-B-500-630/3	500 - 630	52	142	24	3



### DIMENSION INFORMATION OF "SBSC"

CATALOG No.	Conductor Range (mm <sup>2</sup> )	Dimensions (mm)				AF Head Size	Bolt Quantity
		L	L1	D	d		
SBSC-25-50/2/C	25 - 50	70	33.5	24	9	13	2
SBSC-70-95/2/C	70 - 95	70	33.5	24	13.3	13	2
SBSC-95-150/4/C	95 - 120	106	51.5	28	16	17	4
SBSC-150-240/4/C	150 - 240	125	61	33	20	19	4
SBSC-240-300/4/C	240 - 300	140	68	38	24	22	4
SBSC-300-400/6/C	300 - 400	170	83	42	26	22	6
SBSC-500-630/6/C	500 - 630	200	97	52	33	24	6



GRUPO

**enercom**

**37**  
ANOS

EXPERIÊNCIA  
E INOVAÇÃO  
CONSTANTE.



**+55 11 2919-0911**  
[www.enercom.com.br](http://www.enercom.com.br)



Acesse nossas redes: