

CELLPLUX Plug-in Cable Connectors



- simple, secure, quick to assemble
 - solution for entire cross-section range
 - only standard tool required
 - unlimited shelf life
 - type tested to CENELEC HD 629.1

Systems For Professionals

CELLPACK

Electrical Products



Perfect connection

Profit from innovation

Cable accessories are indispensable for a high quality cable network. They must guarantee the same operational security as the cable itself. Due to the high costs incurred by energy suppliers for their medium voltage networks, outages are to be avoided wherever possible. Therefore it is of utmost importance to energy suppliers that cable accessories are **secure, quick** to implement and as **simple** as possible. Innovative solutions are in demand, particularly for medium-voltage networks where assembly defects, resulting in high costs, can be reduced drastically.

Cellplux plug-in cable connectors are the result of over five years of intensive development work at Cellpack and they represent the perfect connector system for the medium voltage field.

They have been especially developed for connecting polymeric-insulated medium-voltage cables. The system components are harmoniously matched to one another so that assembly is very **simple, secure** and done **quickly**. The innovative **integration concept** for this type of connector permits the majority of assembly steps (formerly performed at the construction site) to be accomplished in advance, under controlled conditions, at the Cellpack factory where they can be tested electrically. **Only a few remaining assembly steps** are performed on-site by the joiner himself.

Your advantages

- great operational security
- simple, secure and quick to assemble
- only standard tool required
- applicable to tight spaces
- solution for entire cross-section range
- mechanically robust
- unlimited shelf life
- each unit tested electrically

Your profit

- reduced costs for assembly, inventory and transport
- reduced operational costs for the cable network
- security



Proven system

Insulation materials

The insulating materials used in Cellplux cable connectors have outstanding electrical and mechanical characteristics. They are manufactured from high voltage resistant EPDM in a controlled injection moulding process. The individual material components have been subjected to years of electrical and mechanical testing and have proven themselves in actual applications for decades.

Stress control

Our refractive stress control system, proven millions of times around the world, is already integrated in Cellplux. Faulty cable preparation and faulty stress-control body positioning are eliminated, thus drastically reducing the number of potential mounting mistakes.



Shear bolt cable lug and shear bolt contact bolt

Cellplux plug-in cable connectors have a proven shear bolt connection system.

The diameter of the cable lug is designed to ensure a reliable connection for copper conductors as well as aluminium conductors over the entire range of cross-sections. Its contact screws have been optimised so that only a single conventional tool is necessary for assembly throughout the entire cross-section range. This proven system is already integrated into the CTS plug-in contact bolts, thus eliminating incorrect assembly of cable plug-in components.

Contact security

Cellplux plug-in cable connectors have a 3 mm thick shield made of semi-conductive EPDM rubber. All models have successfully passed the «detectable current error» test at 6 kV.



CWS 250 A 24 kV | CGS 250 A 24 kV**Plug-in cable connectors for plastic-insulated single-core cables****Application**

Cellplux straight and elbow plug-in cable connectors are advantageous for connecting all polymeric insulated single-conductor cables (PVC, PE, XLPE, EPR) with various types of semi-conductor layers (graphitized, pull-off or peel-off) as well as shield designs (wire or tape shield) to switching equipment and transformers having plug-in connections for Type A outer cone system terminals (per EN 50180, EN 50181 and DIN 47636) up to a maximum network voltage of 24 kV.

Voltage level

- E0/E (Em) 6/10 (12) 12.7/22 (24) kV

Attributes

- simple, secure, quick to assemble
- solution for entire cross-section range
- few components
- touch proof outer sheath
- outer sheath fault test possible in connected state
- applicable for enclosed or exposed installation
- submersible
- each piece pre-tested

Testing

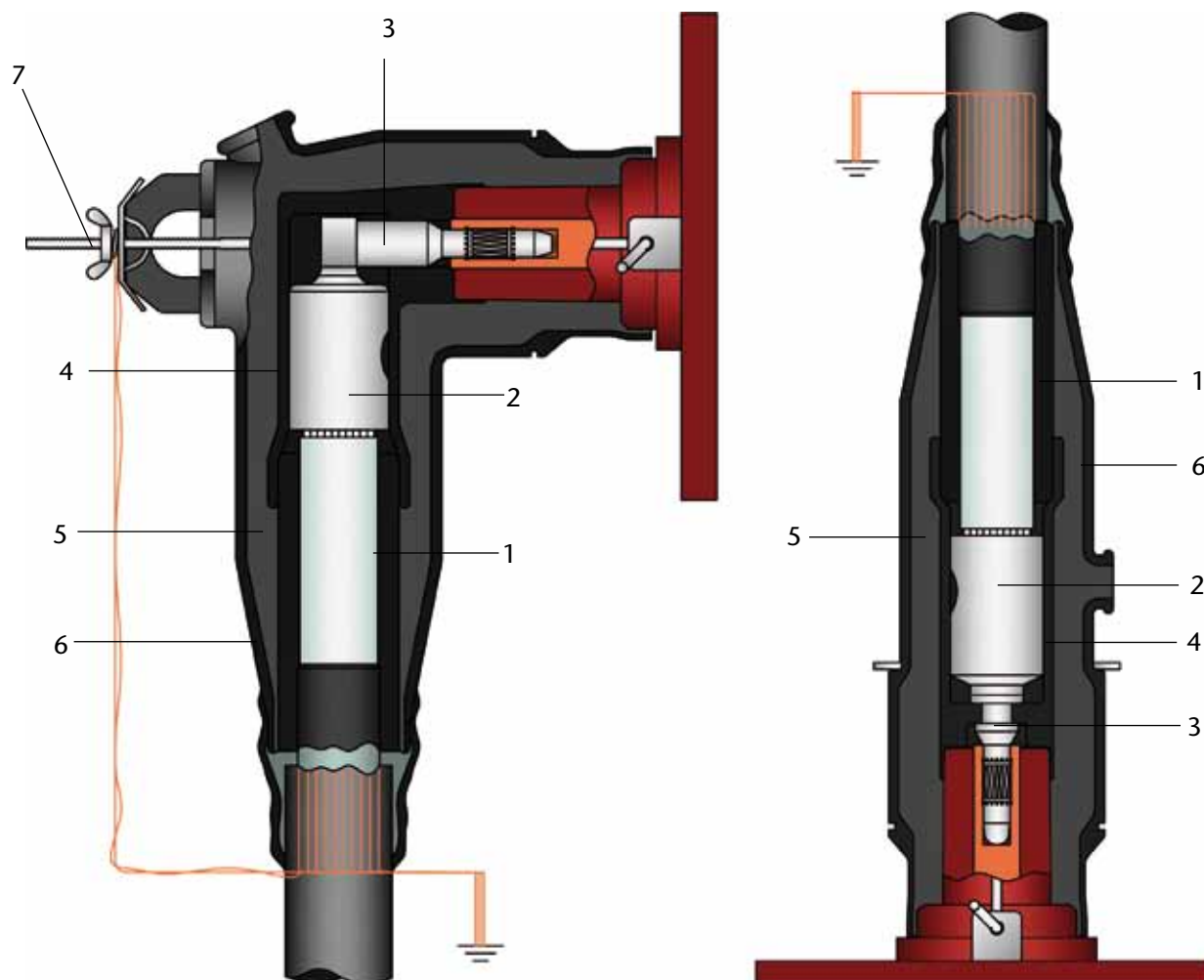
- plug-in connection type-tested per CENELEC HD 629. 1
- shear bolt cable lug type-tested per EN/IEC 61238-1

Items included in delivery:

- set of 3 plug-in cable parts, electrically tested
- ancillary components and assembly materials
- illustrated assembly instructions

Primary elements

1. silicone stress control element
2. shear bolt cable lug
3. contact pin (PIN)
4. inner electrode
5. primary insulation
6. shield
7. fastener

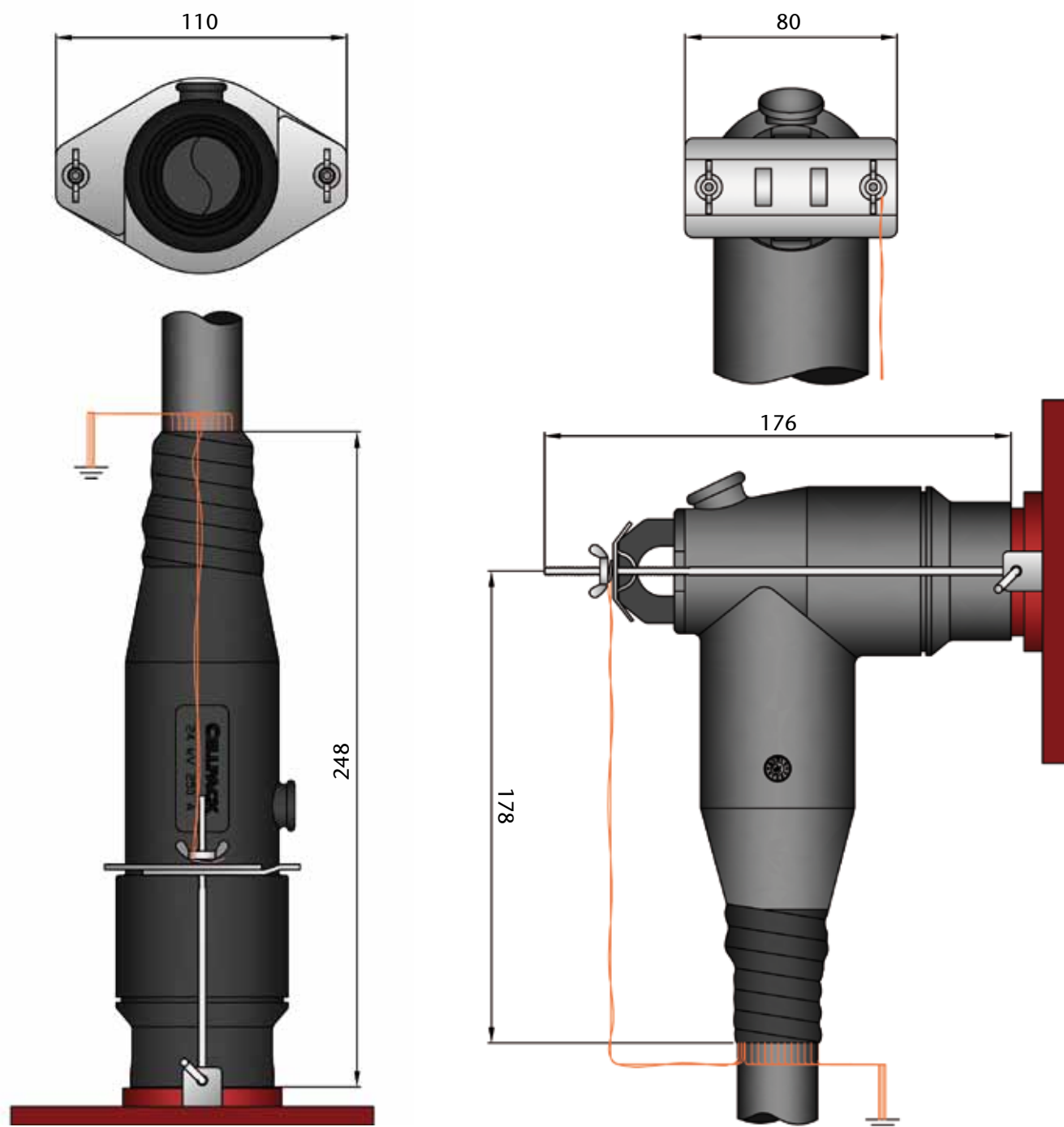


Order data

Type	12 kV Q mm ²	17,5 kV Q mm ²	24 kV Q mm ²	Ø1 mm	Art.- No.
CWS 250A 24kV 16-95	50 - 95	25 - 95	16 - 95	14.7	205806
CWS 250A 24kV 70-150	120 - 150	95 - 150	70 - 150	19.9	245677
CWS 250A 24kV 16-95/EGA	50 - 95	25 - 95	16 - 95	14.7	220776
CWS 250A 24kV 70-150/EGA	120 - 150	95 - 150	70 - 150	19.9	245936
CGS 250A 24kV 25-95	50 - 95	25 - 95	25 - 95	14.7	224743
CGS 250A 24kV 70-150	120 - 150	95 - 150	70 - 150	19.9	245706
CGS 250A 24kV 25-95/EGA	50 - 95	25 - 95	25 - 95	14.7	224818
CGS 250A 24kV 70-150/EGA	120 - 150	95 - 150	70 - 150	19.9	245935

Q = nom. cross-section – for specific correlation see insulated diameter

Ø1 = minimum insulated diameter after removal of the outer conducting layer



CVS 250 A 24 kV

Plug-in connector piece

Application

The CVS plug-in connector piece is advantageous for connecting two elbow and/or straight plug-in CWS or CGS connectors. Its dimensions correspond to Type A outer cone systems per EN 50180, EN 50181 and DIN 47636.

Voltage level

- E0/E (Em) 6/10 (12) 12.7/22 (24) kV

Attributes

- simple, secure, quick to assemble
- few components
- applicable for enclosed or exposed installation
- submersible
- each piece pre-tested

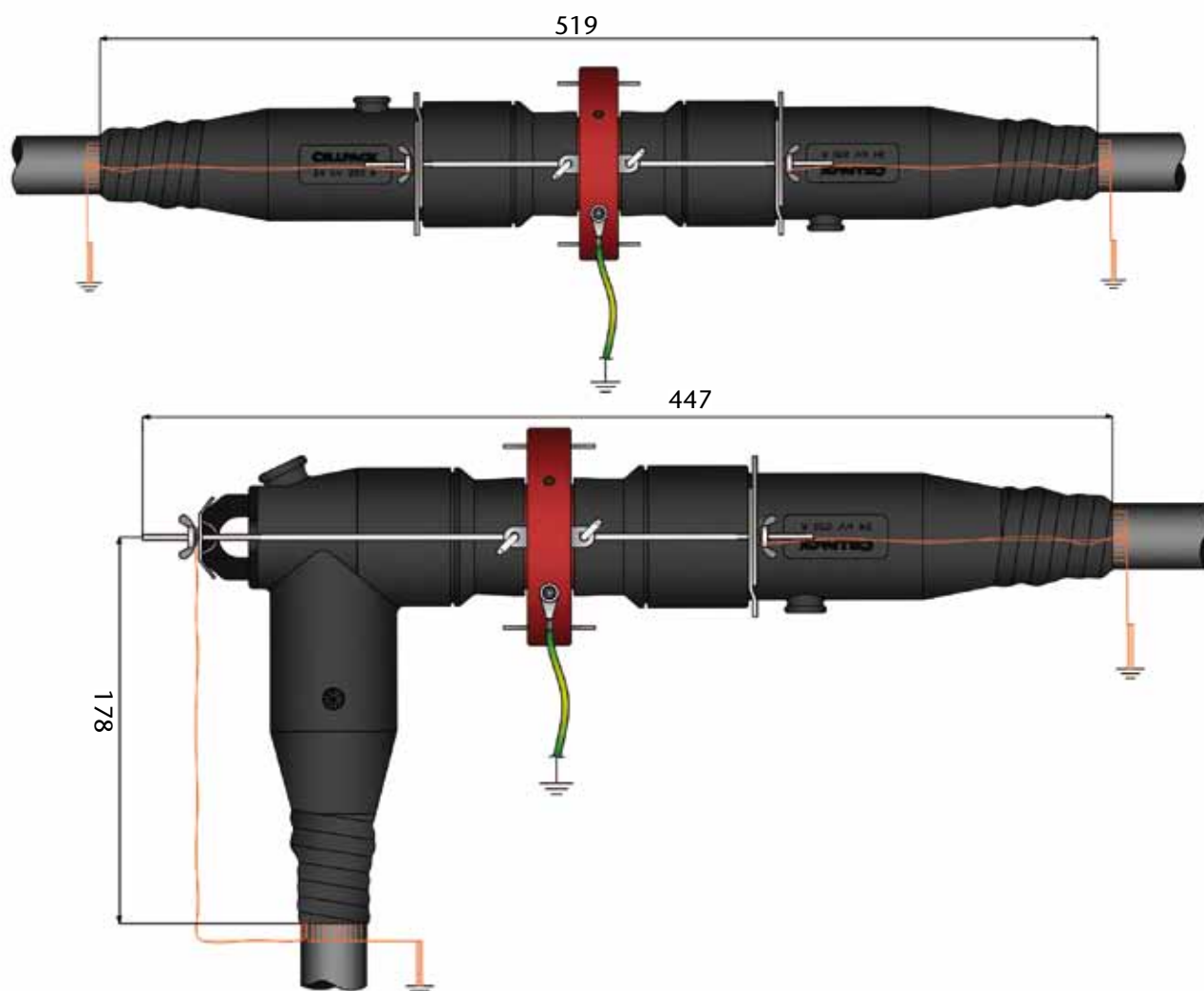
Items included in delivery:

- set of 3 connector pieces, electrically tested
- ancillary components and assembly materials
- illustrated assembly instructions



Order data

Type	Art.- No.
CVS 250 A 24kV	225844



CWS 400A 24kV | CWS 400A 36kV

Plug-in cable connectors for plastic-insulated single-core cables

Application

Cellplux elbow plug-in cable connectors are suitable for connecting all plastic-insulated single-core cables (PVC, PE, XLPE, EPR), with different semi-conducting layers (graphited, pull-off or peelable) and shield designs (wire or strap shield), onto switching devices and transformers up to a maximum mains voltage of 36 kV, with female connectors for type B bushings according to the standards EN 50180, EN 50181 and DIN 47636.

Voltage level

- U0/U (Um) 6/10 (12) 18/30 (36) kV

Attributes

- Simple, safe, fast installation
- One solution for many cross sections
- Few components
- Shockproof
- Sheath fault test possible while connected
- For indoor and outdoor use
- Floodable
- Subjected to routine testing

Testing

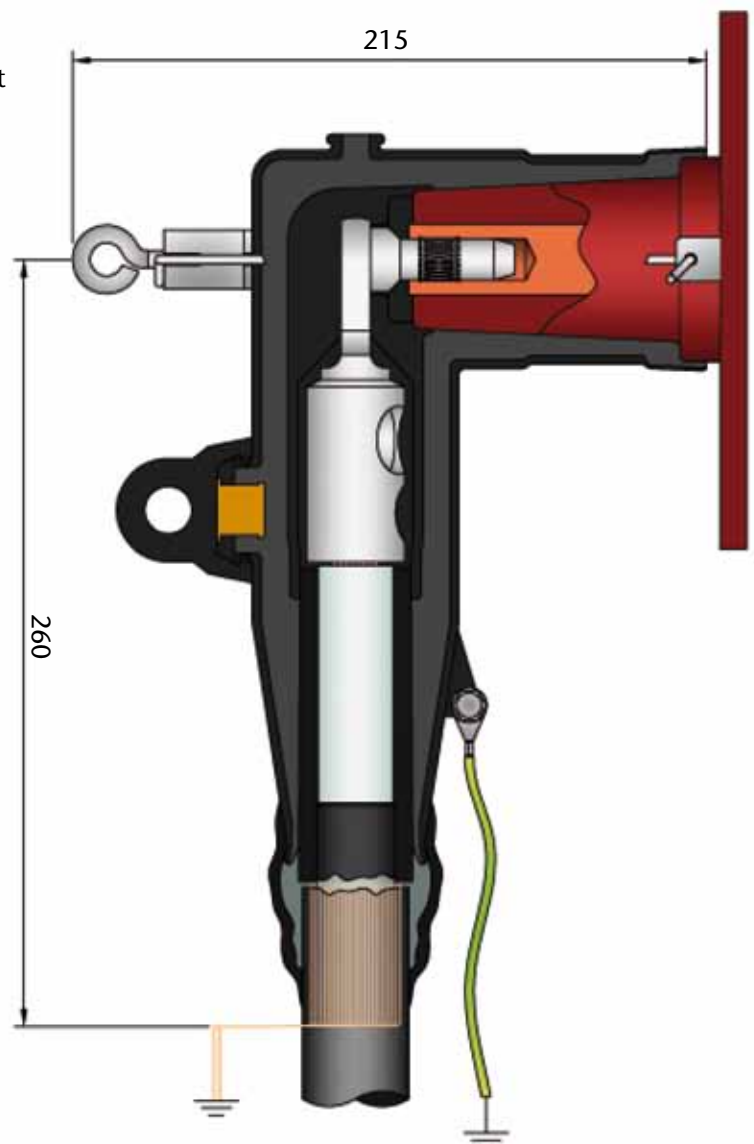
- Plug-in connections, type-tested in accordance with CENELEC HD 629. 1

Delivery scope

- Set of 3 female plug-in connectors, individually electrically tested
- Ancillary components and small installation materials
- Illustrated installation instructions

Primary elements

1. silicone stress control element
2. shear bolt cable lug with integrated bracket
3. Contact pin (PIN)
4. Inner semiconducting layer
5. Main insulation body
6. Shielding
7. Fastening device

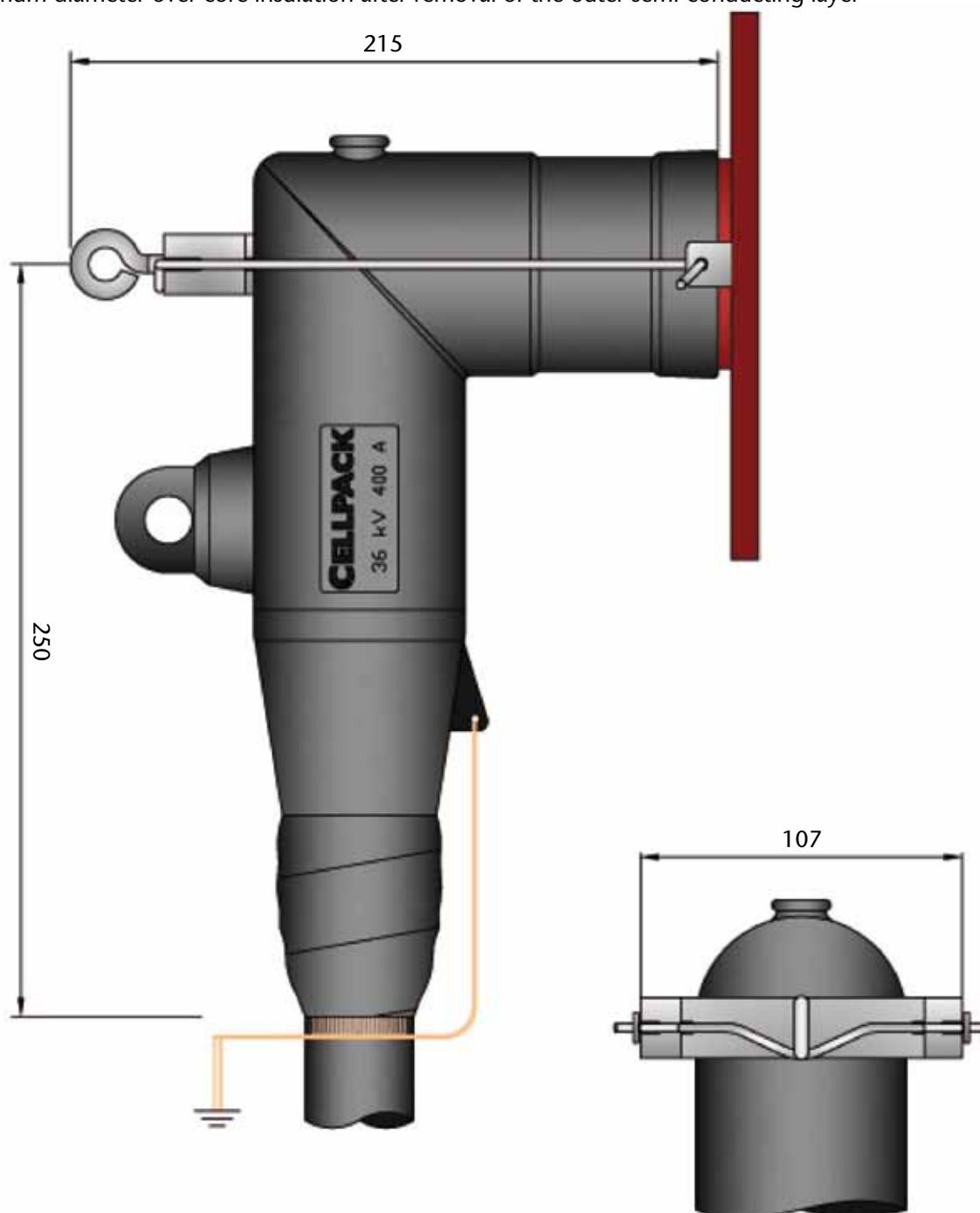


Order data

Type	12 kV Q mm ²	17,5 kV Q mm ²	24 kV Q mm ²	36 kV Q mm ²	Ø1 mm	Art.- No.
CWS 400A 24kV 25-70	---	25 - 95	25 - 70	---	14.7	250716
CWS 400A 24kV 95-240	---	120 - 240	95 - 240	---	22	245709
CWS 400A 24kV 25-70/EGA	50 - 95	25 - 95	25 - 70	---	14.7	250720
CWS 400A 24kV 95-240/EGA	150 - 240	120 - 240	95 - 240	---	22	246176
CWS 400A 36kV 50-95	---	---	95	50 - 95	22	250722
CWS 400A 36kV 150-240	---	---	240	150 - 240	30.8	245730
CWS 400A 36kV 50-95/EGA	---	---	95	50 - 95	22	250726
CWS 400A 36kV 150-240/EGA	---	---	240	150 - 240	30.8	247102

Q = nominal cross section – for clear assignment, see diameter over core insulation

Ø1 = minimum diameter over core insulation after removal of the outer semi-conducting layer



CTS 630 A 24 kV and CTS 630 A 36 kV

Shear bolt plug-in cable connectors for polymeric insulated single-conductor cables

Application

CTS shear bolt Cellplux plug-in cable connectors are advantageous for connecting all polymeric insulated single-conductor cables (PVC, PE, XLPE, EPR) with various types of semi-conducting layers (graphitized, fully bonded or peel-off) as well as shield designs (wire or tape shield) to switching equipment and transformers having plug-in connections for Type C outer cone system terminals (per EN 50180, EN 50181) up to a maximum network voltage of 36 kV.

Voltage level

- E0/E (Em) 6/10 (12) – 18/30 (36) kV

Attributes

- simple, secure, quick to assemble
- solution for entire cross-section range
- few components
- touch-proof outer sheath
- outer sheath fault test possible in connected state
- applicable for enclosed or exposed installation
- submersible

Testing

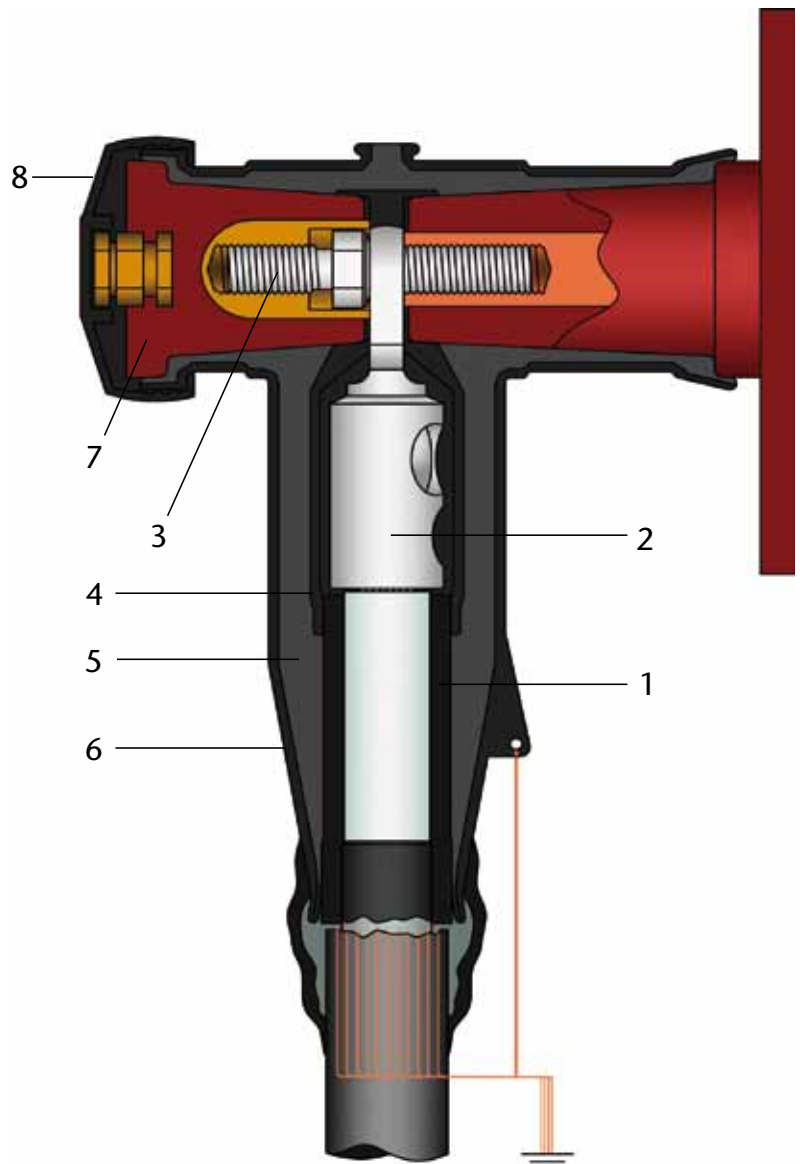
- Plug-in connection type-tested per CENELEC HD 629. 1
- shear bolt cable lug type-tested per EN/IEC 61238-1

Items included in delivery:

- set of 3 plug-in cable parts, electrically tested
- ancillary components and assembly materials
- illustrated assembly instructions

Primary elements

- 1 silicone stress control element
- 2 shear bolt cable lug with shear-off screw and integrated holder
- 3 contact bolt with shear-off screw
- 4 inner electrode
- 5 primary insulation
- 6 shield
- 7 screw isolating plug with capacitive test point
- 8 protective cap

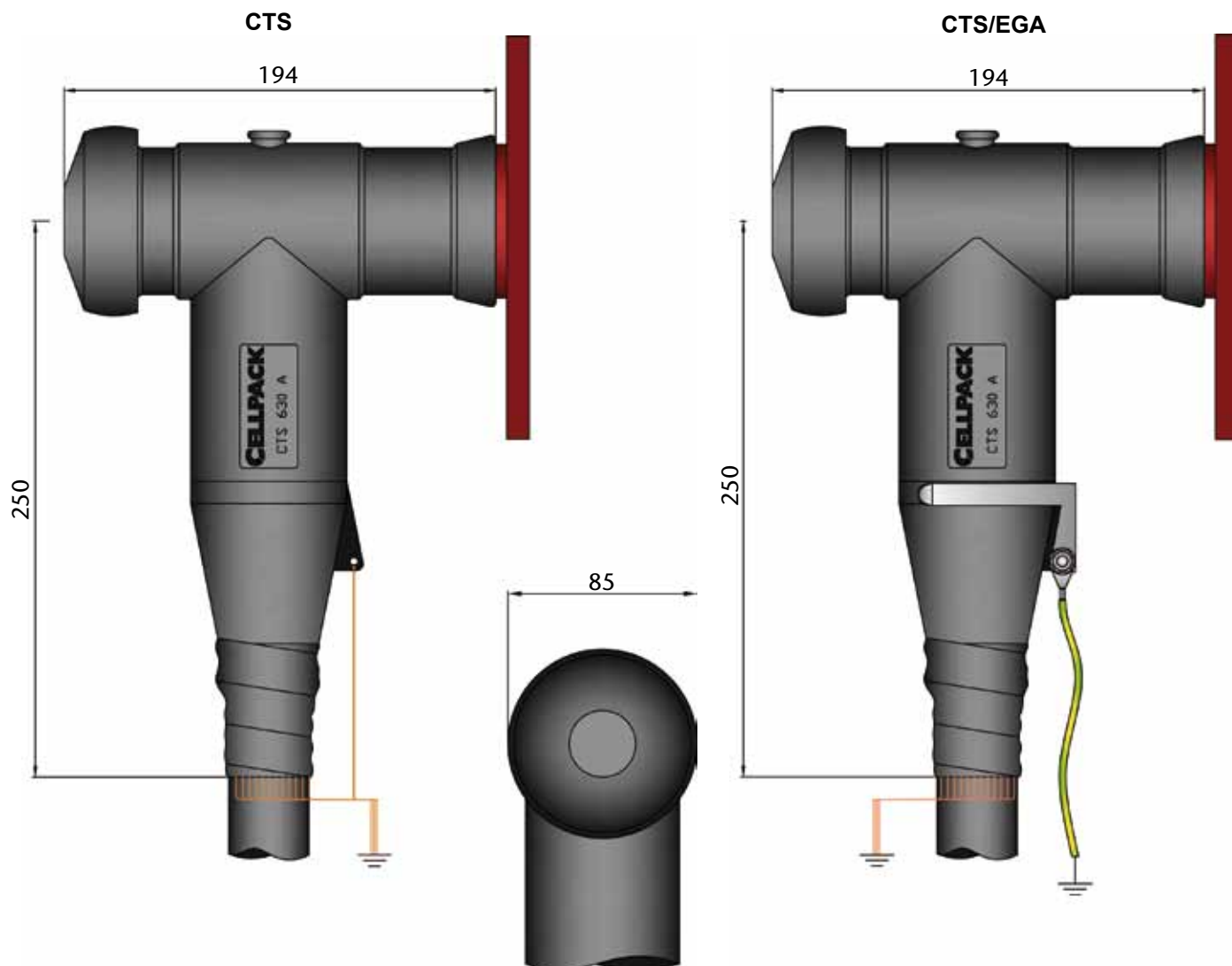


Order data

Type	12 kV Q mm ²	17,5 kV Q mm ²	24 kV Q mm ²	36 kV Q mm ²	Ø1 mm	Art.- No.
CTS 630A 24kV 25-70	---	25 - 95	25 - 70	---	14.7	250710
CTS 630A 24kV 95-240	---	120 - 240	95 - 240	---	22	206748
CTS 630A 24kV 25-70/EGA	50 - 95	25 - 95	25 - 70	---	14.7	250711
CTS 630A 24kV 95-240/EGA	150 - 240	120 - 240	95 - 240	---	22	220775
CTS 630A 36kV 50-95	---	---	95	50 - 95	22	250713
CTS 630A 36kV 150-240	---	---	240	150 - 240	30.8	224825
CTS 630A 36kV 240-400	---	---	300 - 400	240 - 400	31.5	252236
CTS 630A 36kV 50-95/EGA	---	---	95	50 - 95	22	250715
CTS 630A 36kV 95-150/EGA	---	---	95 - 240	95 - 150	22	256010
CTS 630A 36kV 150-240/EGA	---	---	240	150 - 240	30.8	224826
CTS 630A 36kV 240-400/EGA	---	---	300 - 400	240 - 400	31.5	256328

Q = nom. cross-section – for specific correlation see insulated diameter

Ø1 = minimum insulated diameter over insulation after removal of the outer semi-conducting layer



CKS 630 A up to 24 kV

Shear bolt coupling piece

Application

The CKS shear bolt coupling piece is intended for the connection of two CTS plug-in cable connectors up to 24 kV at up to a rated current of 630 A. The dimensions of the longer outer cone corresponds to Type C outer cone systems per EN 50180, EN 50181.



Voltage level

- E0/E (Em) 6/10 (12) 12.7/22 (24) kV

Attributes

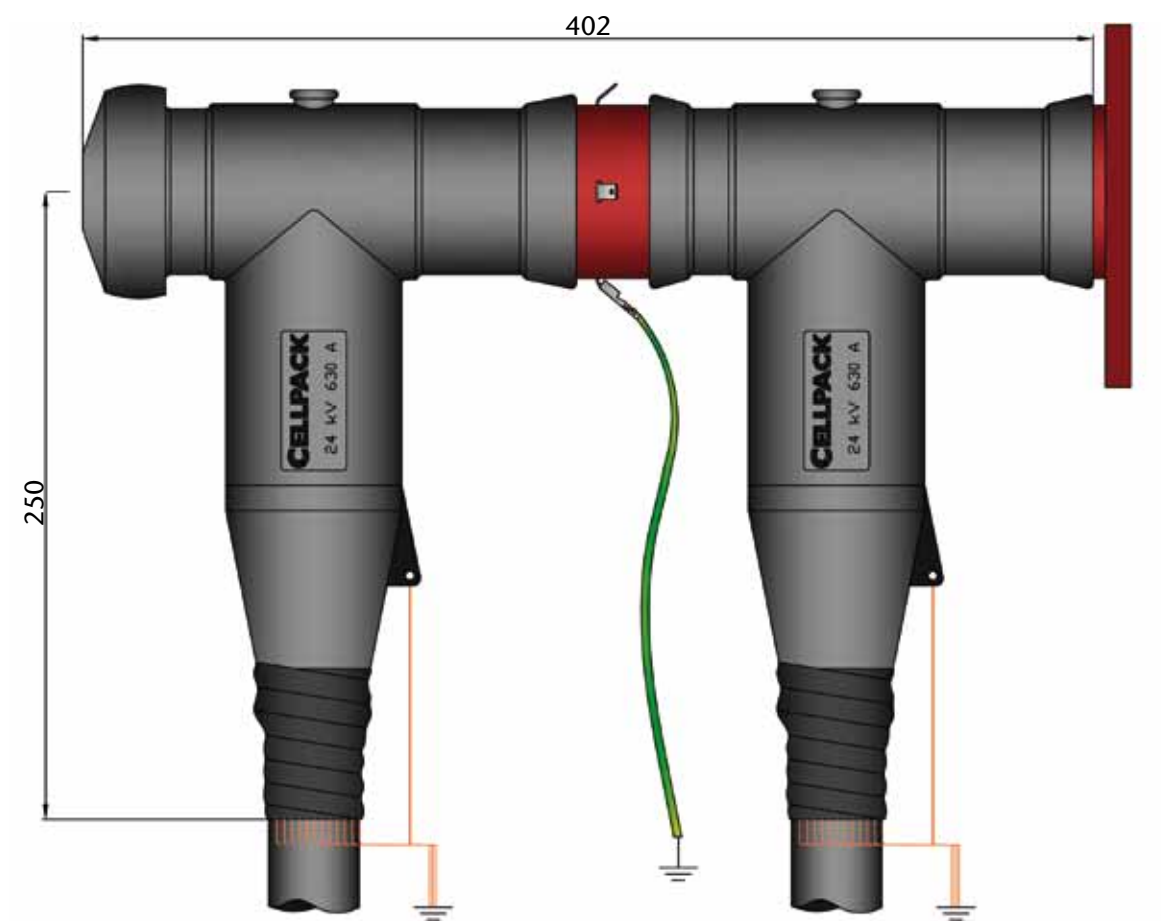
- simple, secure, quick to assemble
- few components
- applicable for enclosed or exposed installation
- submersible
- each piece pre-tested

Items included in delivery:

- set of 3 coupling pieces, electrically tested
- ancillary components and assembly materials
- illustrated assembly instructions

Order data

Type	Art.- No.
CKS 630 A 24 kV	224853



CTKS 630A 24kV | CTKS 630A 36kV

Coupling connector

Application

The CTKS coupling connectors are suitable for connecting all plastic-insulated single-core cables (PVC, PE, XLPE, EPR), with different semi-conducting layers (graphited, pull-off or peelable) and shield designs (wire or strap shield), to the back of Cellplux plug-in cable connectors, model CTS 630 A 24 kV and 36 kV.

Voltage level

- U0/U (Um) 6/10 (12) – 18/30 (36) kV

Attributes

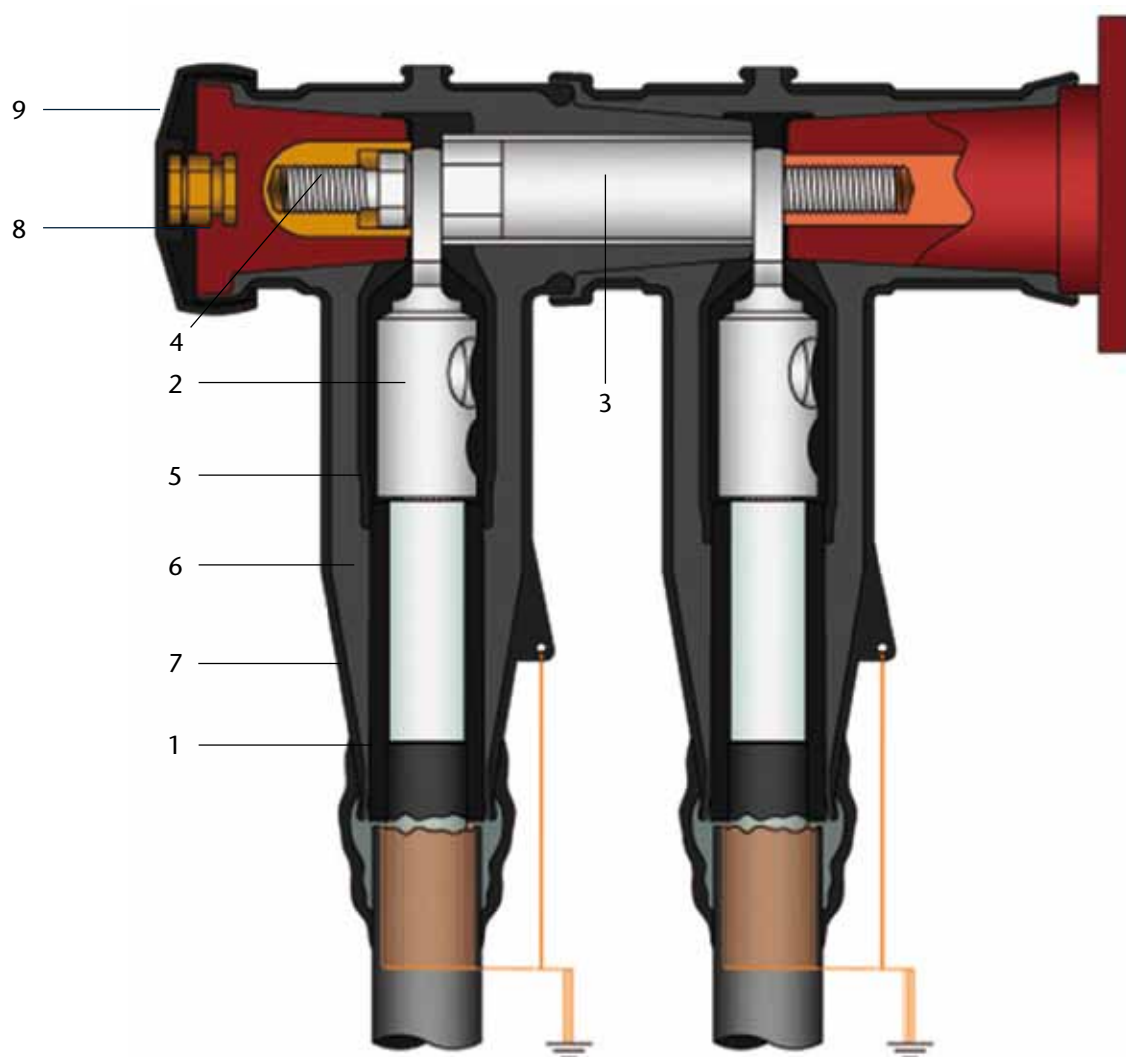
- Simple, safe, fast installation
- One solution for many cross sections
- Shallow installation depth
- Shockproof
- Sheath fault test possible while connected
- Floodable
- Subjected to routine testing

Delivery scope

- Set of 3 male cable connectors, electrically tested
- Ancillary components and small installation materials
- Illustrated installation instructions

Primary elements

1. silicone stress control element
2. shear bolt cable lug
3. Contact threaded pin
4. Shear bolt Contact pin
5. Internal semi-conductor layer
6. Main insulation
7. Integrated capacitive measuring point
8. Shielding
9. Screw insulation plug with capacitive measuring point

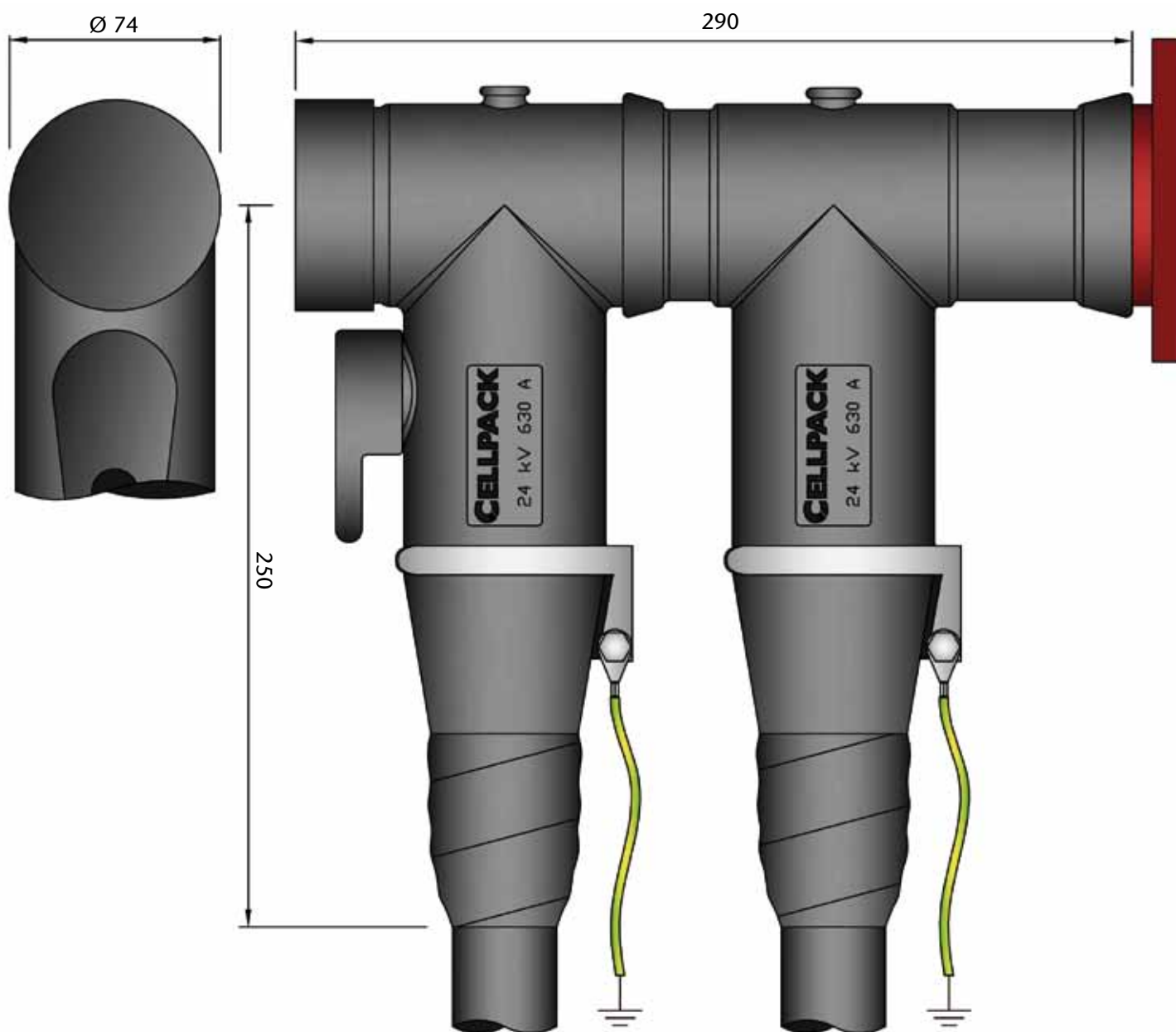


Order data

Type	12 kV Q mm ²	17,5 kV Q mm ²	24 kV Q mm ²	36 kV Q mm ²	Ø1 mm	Art.- No.
CTKS 630A 24kV 25-70/EGA	50 - 95	25 - 95	25 - 70	---	14.7	256838
CTKS 630A 24kV 95-240/EGA	150 - 240	120 - 240	95 - 240	---	22	256839
CTKS 630A 36kV 50-95	---	---	95	50 - 95	22	257581
CTKS 630A 36kV 150-240	---	---	240	150 - 240	30.8	257582

Q = nominal cross section – for clear assignment, see diameter over core insulation

Ø1 = minimum diameter over core insulation after removal of the outer semi-conducting layer



CTKSA

Plug- In Surge Arrester

Application

The CTKSA Surge Arrester is designed for the protection of encapsulated medium voltage installations with a maximum operating voltage of 24 kV. Its compact design allows direct connection to double-row CTS 630A screw plugs and complies with International Standard IEC 60099-4.

Voltage Level

- $U_o/U (U_m)$ 6/10 (12) - 12,7/22 (24) kV

Characteristics

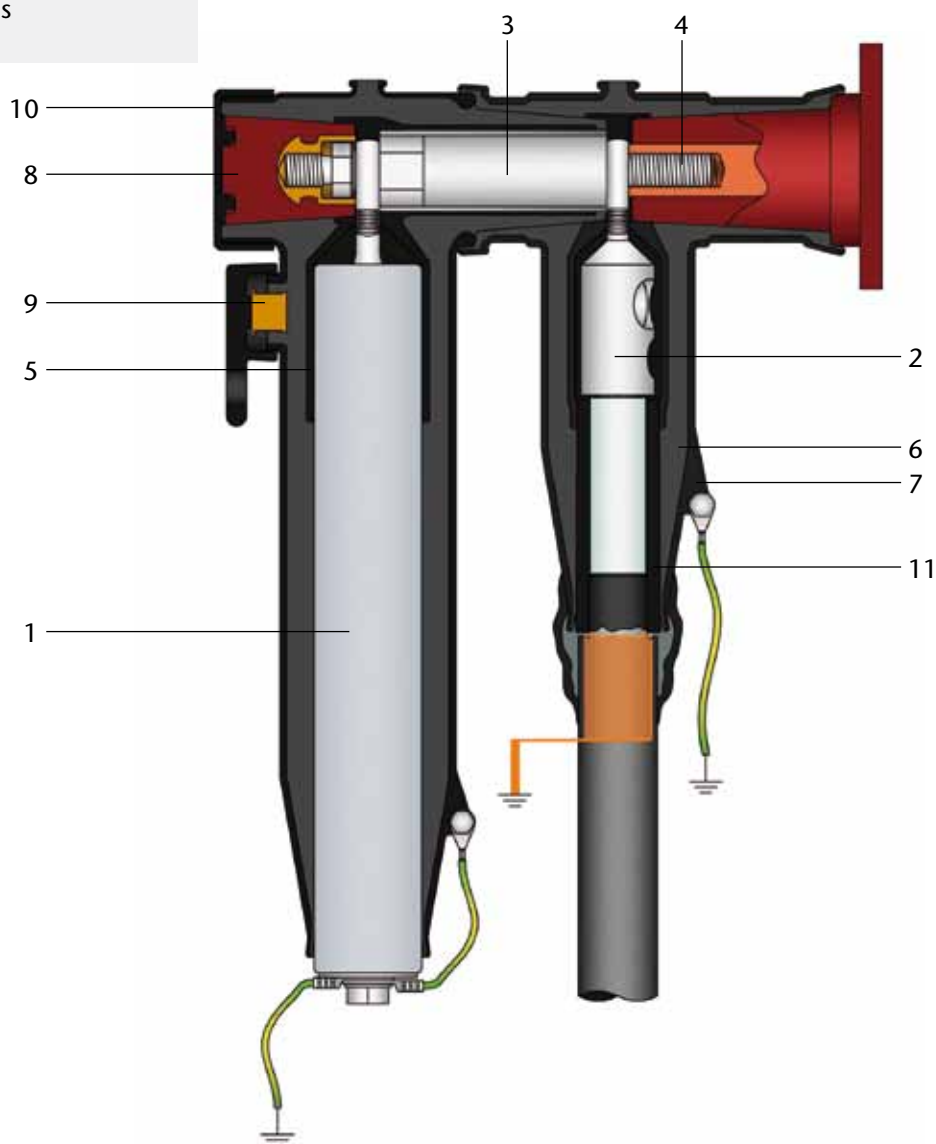
- Safe, quick and easy assembly
- Minimal installation depth
- Protection from exposed electrical parts
- Capacitive test point
- Suitable for indoor and outdoor applications
- Individually tested

Scope of Delivery

- Set of three surge arresters, electrically tested
- Secondary components and assembly accessories
- Assembly instructions with illustrations

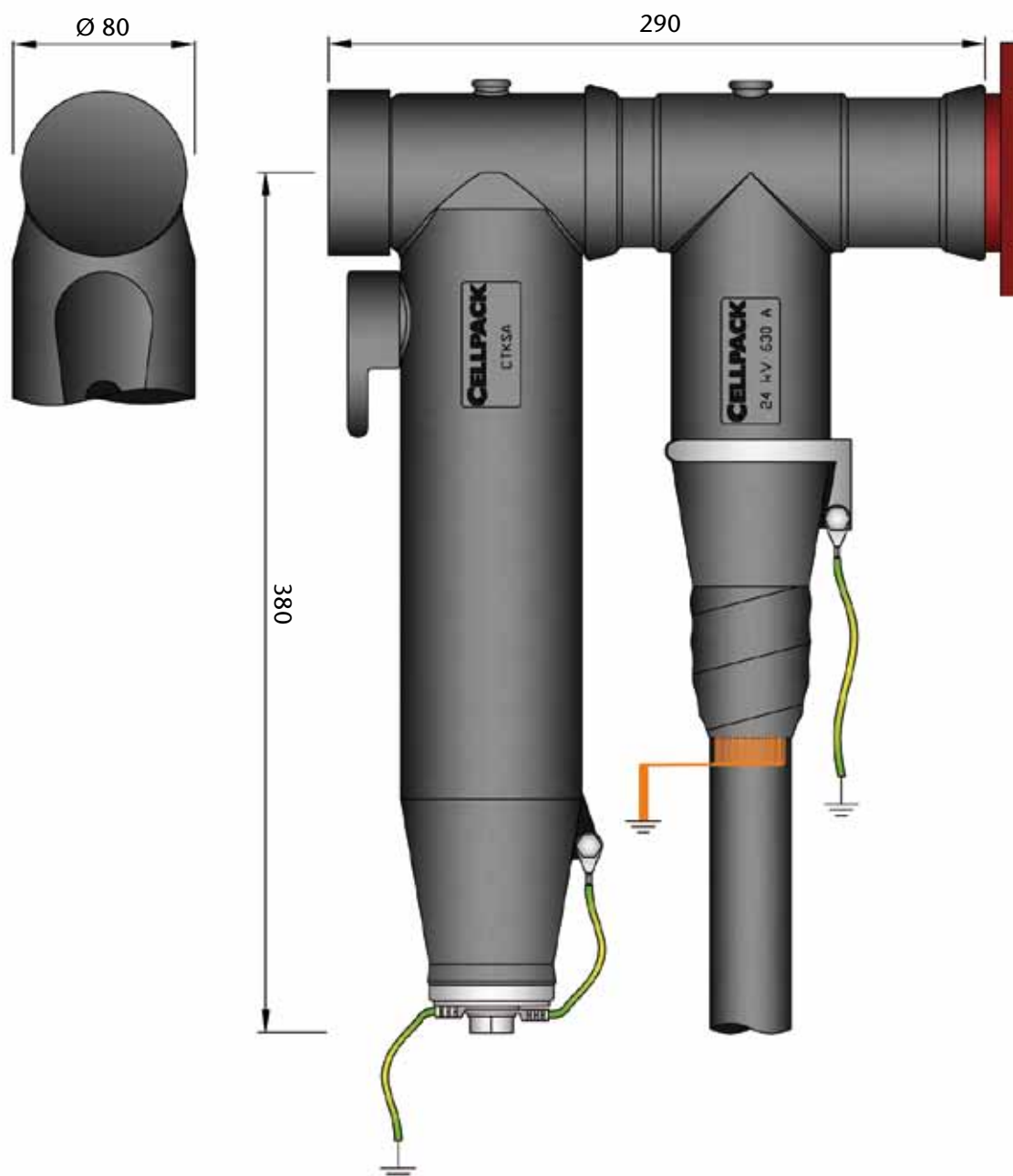
Primary Components

1. Surge arester
2. Screw cable lug with shear bolt
3. Connector element
4. Contact pins with shear bolt
5. Inner semi-conducting layer
6. Main insulation
7. Shielding
8. Screw-in dummy plug
9. Capacitive test point
10. Protective cap
11. Silicon stress control element



Order data

	CTKSA 12kV 10kA	CTKSA 17kV 10kA	CTKSA 19,5kV 10kA	CTKSA 24kV 10kA
Art.- No.	262054	262055	262816	262056
Nominal leakage current I [kA]	10	10	10	10
Rated voltage Ur [kV]	15	21	24	30
Maximum Operating Voltage Uc [kV]	12,7	17	19,5	24
Partial discharge Uc [pC]	< 5	< 5	< 5	< 5
Residual voltage [kV] at:				
Steep current impulse 1/20 μ s	53	74,2	84,8	105,9
Switching impulse current 125 A	35,8	50,1	57,3	71,7
Switching impulse current 500A	38,2	53,5	61,2	76,5
Lightning impulse current 8/20 μ s	49,5	69,3	79,2	99



CPES

Test and Earthing Kit

Application

The Test and Earthing Kit is designed for the establishment of galvanic connections between cable conductors and is compatible with all Type CTS and CTKS Cellplux T-plugs.

Voltage Level

- $U_0/U (U_m)$ 6/10 (12) - 18/30 (36) kV

Areas of Application

- Earthing for work
- Cable fault location
- Cable testing
- Phase compensation

Scope of Delivery

- 1x Test adapter
- 3x Earthing adapter
- 1x Case
- Assembly instructions with illustrations



Order data

Type	Art.- No.
CPES	259101

CIK

Voltage-proof Insulating Cap

Application

The CIK Voltage-proof Insulation Cap provides electrical insulation for Types A 250A and C 630A bushings in encapsulated substations and transformers up to 36kV, in compliance with EN 50180 and EN 50181.

Voltage Level

- $U_0/U (U_m)$ 6/10 (12) - 18/30 (36) kV

Characteristics

- Easy assembly
- Protection from exposed electrical parts
- Water-resistant

Scope of Delivery

- 3x Voltage-proof Insulating Caps
- Assembly accessories
- Assembly instructions with illustrations



Order data

Type	Art.- No.
CIK 250A 24kV	265023
CIK 630A 36kV	265024

ZS - CTS

Accessory Kit for Type CTS 630A Cellplux Plug-In Cable Connectors

Application

The ZS-CTS Accessory Kit is designed for the reinstallation of plug-in cable connectors in substations and transformers with bushings for Type C outer cone systems complying with EN 50180, EN 50181. The inclusion of the tried and tested contact pin with shear bolt in this kit eliminates the possibility of faulty assembly of cable systems.

Area of Application

- Reinstallation of Type CTS Plug-In Cable Connector

Scope of Delivery

- Set of 3 contact pins with shear bolt
- Assembly accessories
- Assembly instructions with illustrations

Order data

Type	Art.- No.
ZS - CTS	257622



Mounting Ring

Application

The Mounting Ring is designed to secure CWS 250A and CGS 250A Cellplux Plug-In Cable Connectors to a special bushing for Type A outer cone systems. The Mounting Ring is simply placed in the prefabricated groove in the cable connector. The two components may then be mounted on the bushing together.

Characteristics

- Easy assembly
- Secure connection to special Type A bushing

Scope of Delivery

- 1 x Mounting Ring

Order data

Type	Art.- No.
Mounting Ring	264366



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