

400 A Deadbreak Elbow Connector



Cooper Power Systems

DE400 – 24 kV Applications
DE436 – 36 kV Applications

Electrical Apparatus

1550-20



Figure 1.
400 A Deadbreak Elbow Connector.

RELATED PRODUCTS

- DRC400 Receptacle Cap
- DPE400 Earthing Plug
- DPS400 Standoff Plug

INSTALLATION

- No special tools, heating, taping, or potting are required.
- Connector may be energised immediately after installation on its mating part.
- Mates with bushings, plugs, and junction devices complying with the listed standards.

APPLICATION

- For connection of polymeric cable to transformers, switchgear, motors and other equipment with a premoulded separable connector.
- For indoor and outdoor installations.
- System voltage up to 36 kV.
- Continuous current 400 A (600 A overload for 8 hours).
- Cable particulars:
 - Polymeric cable (XLPE, EPR, etc.)
 - Copper or aluminum conductors
 - Semiconducting or metallic screens
- Conductor size: 12 kV 70-400 mm²
24 kV 25-400 mm²
36 kV 25-240 mm²
- An optional adapter kit is available for use with PILC cables.

FEATURES

- Provides a fully screened and fully submersible separable connection when mated with the proper bushing or plug.
- Built-in capacitive test point allows for an easy check of the circuit status or installation of a fault indicator.
- No minimum phase clearance requirements.
- Mounting can be vertical, horizontal, or any angle in between.
- 100% factory tested.

STANDARDS

- Will meet the requirements of VDE 0278, IEC 502-4, EDF HN 52-S-61, BS 7215 and others.

QUALITY ASSURANCE

- Our manufacturing facility is registered to ISO 9001-1994 by third party audit.
- Required Production Tests
- Periodic X-Ray Analysis

PACKAGING

- Supplied in a kit with all necessary parts, approximate weight 2 kg.

TABLE A
Electrical Ratings

	DE400	DE436
Maximum System Voltage (U_m)	24 kV	36 kV
Impulse	125 kV	170 kV
AC Withstand (5 min.)	54 kV	81 kV
Continuous Current	400 A	400 A
Overload (8 hrs Max.)	600 A	600 A
Short Circuit Withstand, 1 sec. (rms sym.)	18 kA	18 kA

Note: Ratings are based on IEC Standards and do not reflect maximum capability.

Features and Detailed Description

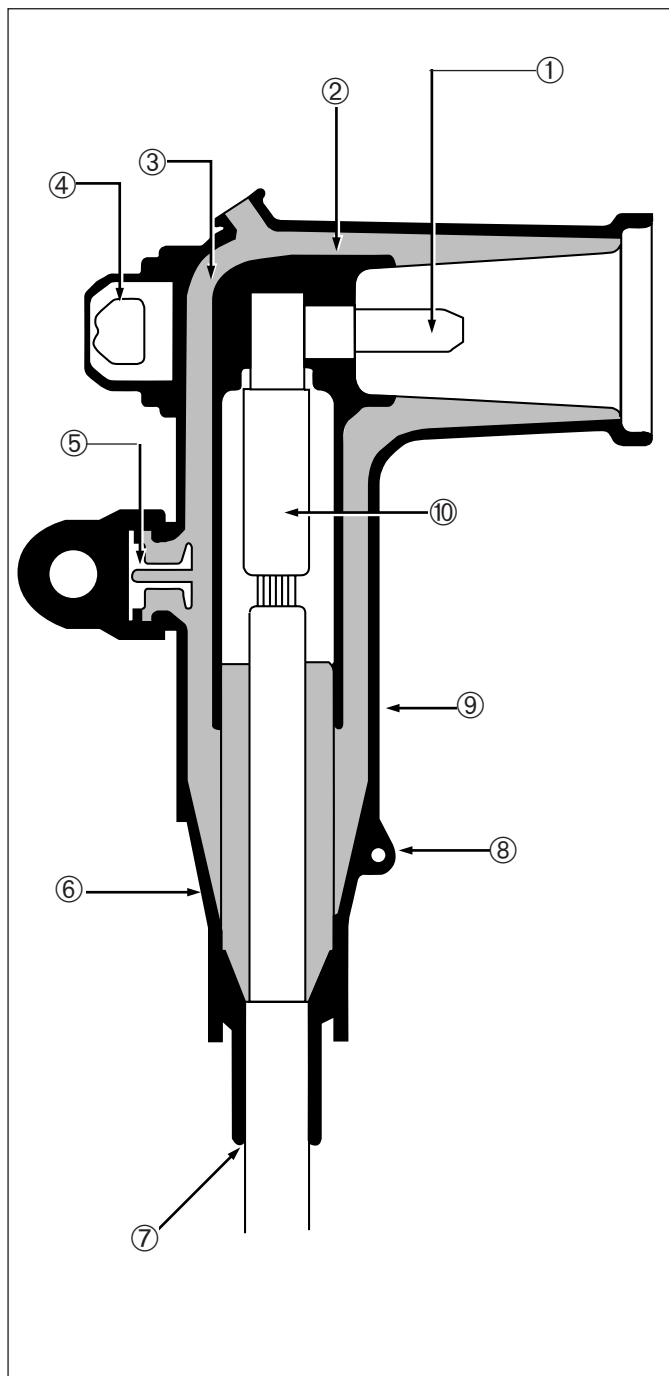


Figure 2.
400 A, 36 kV Class DE400 Deadbreak Elbow Connector.

1. Pin Contact

Tin-plated copper pin screws into the conductor contact with the supplied hex key.

2. Internal Screen

Moulded EPDM conducting rubber screen controls electrical stress.

3. Insulation

Moulded EPDM insulating rubber is formulated and mixed in-house to ensure high quality.

4. Pulling Eye

Encapsulated stainless steel pulling eye with a detent to position the bail.

5. Capacitive Test Point

Capacitive test point provides means to check circuit status. A moulded EPDM conducting rubber cap provides a watertight seal.

6. Stress Relief

The configuration of the outer screen and the cable adapter provide cable stress relief.

7. Cable Adapter

The sized opening provides an interference fit to maintain a watertight seal.

8. Earthing Eye

Moulded into the external screen for connection of an earthing wire.

9. External Screen

Moulded EPDM conducting rubber mates with the cable screen to maintain screen continuity and ensure that the assembly is at earth potential.

10. Conductor Contact

Inertia welded bimetallic compression connector accepts copper or aluminum conductors.

11. Stainless Steel Bail (Not Shown)

Secures the connector to its mating bushing or accessory.

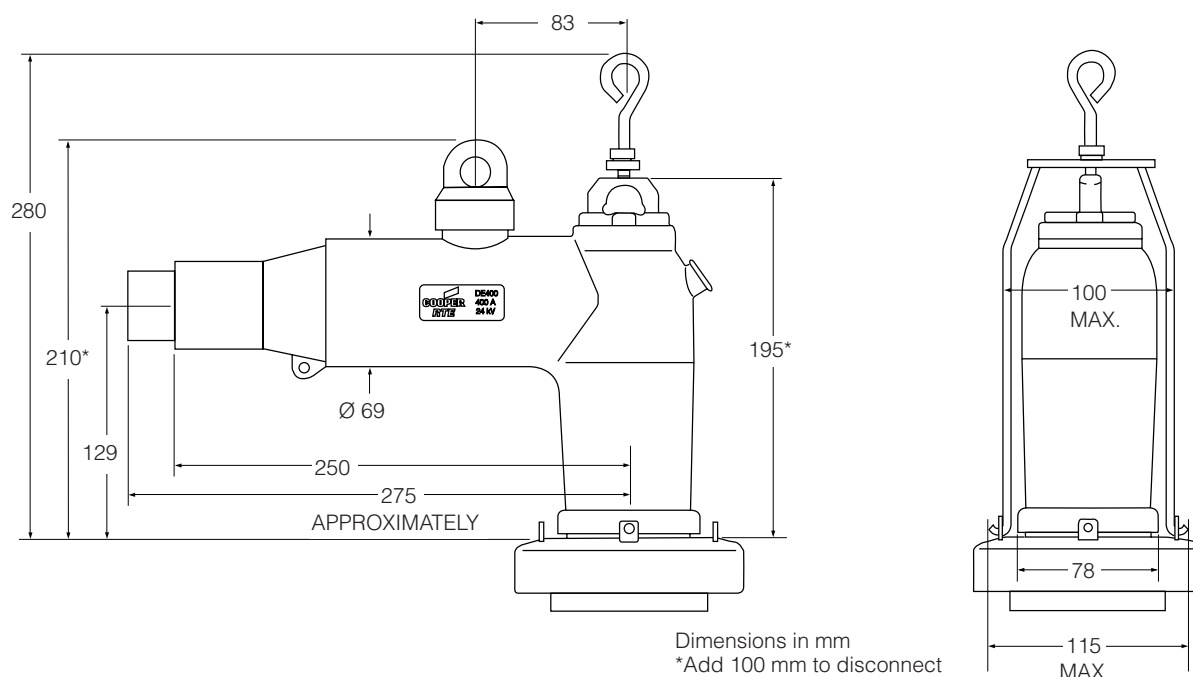


Figure 3.
DE400 Deadbreak Connector dimensional information.

ORDERING INFORMATION

For 12 kV and 24 kV applications, the ordering formula is **DE400-R-C**. For 36 kV applications, the ordering formula is **DE436-R-C**. Substitute for R and C as described below. Select the range from Table R that best fits the diameter of the core insulation. Select the code from Table C for the conductor size and type of connector required.

TABLE R
Cable Insulation Range

Insulation Range Designation	Cable Insulation Range Ø (mm)	
	Min.	Max.
A	16.3	19.3
B	18.3	21.0
C	20.0	24.1
D	23.1	27.0
E	24.9	28.9
F	27.7	32.6
G	30.9	36.2
H	34.0	39.5

Ordering Example: For 20 kV cable, 150 mm² aluminum conductor, 27.0 mm core insulation diameter DIN-type connector, specify **DE400-E-150**.

NOTE: Bimetallic connectors can be used with aluminum or copper conductors.

Cable seal adapters are ordered separately.

TABLE C
Conductor Code

Stranded Conductor Size (mm ²)	DIN Type	EDF Type	DIN All Copper
25	25	E25	C25
35	35	E35	C35
50	50	E50	C50
70	70	E70	C70
95	95	E95	C95
120	120	E120	C120
150	150	E150	C150
185	185	E185	C185
240	240	E240	C240
300	300	—	C300
400	400	—	C400



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