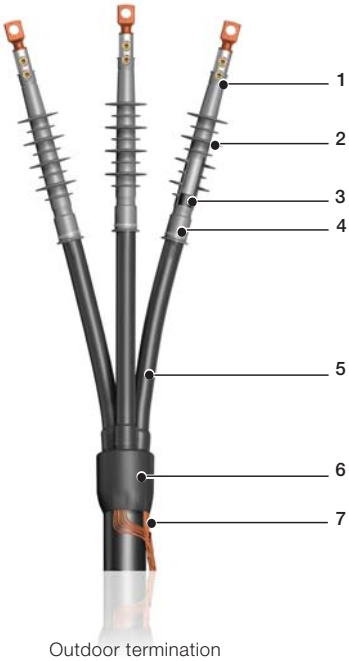
Product note
Kabeldon premolded cable terminations type SOT 12-36 kV

Premolded cable termination for XLPE-insulated 1- or 3-core cables with aluminium or copper conductors for 12-36 kV.

The termination is available for both indoor and outdoor applications.

The indoor termination can also be installed in a humid indoor environment.

Type tested according to CENELEC HD 629.1 S1



Outdoor termination


Indoor termination

1. Integrated top sealing
Seals towards the cable lug,and fits most types of cable lugs, overhead line clamps etc.

2. Sheds
Integrated in the outdoor terminations ≤ 24 kV as well as for the indoor and outdoor types for 36 kV. Alternate long-short type for optimal creepage distance. The sheds are flat to enable installing also upside down.

3. Insulation layer
Made of silicone rubber with proven outdoor performance. Ozone, UV-radiation and tracking resistant. UV-resistance tested for 5000 h in a Xenon radiator.

4. Field grading layer
The electric field is controlled by an integrated layer of a well proven high-ε material with a non-linear resistivity.a combination of refractive and resistive field control.

5. Expanded lower part
Seals around the cable with flexible mastic in between. The mastic embeds the screen wires for a reliable sealing, as well when installed upside-down.

6. Crutch seal
Used on 3-core cables to achieve a sealing over the cable crutch.

7. Designed for polymeric insulated cables
SOT premoulded termination can be installed on cables insulated with XLPE as well as EPR.

Main technical data

Rated voltage IEC U_0/U (U_m)	12/20 (24) kV	18/30 (36) kV
Lightning impulse withstand	125 kV	170 kV
Cable conductor size	10 – 1000 mm²	95 – 1000 mm²
Cable insulation diameter	11 – 54 mm	26 – 54 mm
Length indoor termination	235 mm	390 mm*
Length outdoor termination	330 mm	390 mm*
Creepage distance outdoor termination	520 mm	725 mm

* The same termination is used indoor and outdoor on 36 kV.

Power and productivity
for a better world™

Outdoor termination - Type test according to CENELEC HD 629.1 S1 test sequence A1, A2 and A3

Test sequence A1	Requirements
1. DC voltage withstand test at 6 U_0 negative polarity for 15 minutes	No breakdown or flashover
2. AC voltage dry withstand test at 4.5 U_0 for 5 minutes	No breakdown or flashover
3. AC voltage wet withstand test at 4 U_0 for 1 minute	No breakdown or flashover
4. Pd measurement at ambient temperature at 1.73 U_0	Discharge level <10 pC
5. Lightning impulse voltage test at 95° C with peak values	No breakdown or flashover
6. Load cycling in air 3 x 8 h at 2.5 U_0	No breakdown or flashover
7. Pd measurement at elevated and ambient temperature at 1.73 U_0	Discharge level <10 pC
8. Load cycling in air 113 x 8 h at 2.5 U_0	No breakdown or flashover
9. Load cycling immersed in water 10 x 8 h without voltage	No breakdown or flashover
10. Pd measurement at elevated and ambient temperature at 1.73 U_0	Discharge level <10 pC
11. Lightning impulse voltage test at ambient temperature with peak values. 10 positive and 10 negative impulses	No breakdown or flashover
12.AC voltage withstand test at 2.5 U_0 for 15 minutes	No breakdown or flashover
Test sequence A2	**Requirements**
13. Thermal short circuit test for 1 sec to reach a conductor temperature of 250 °C	No visible signs of damage
14. Lightning impulse voltage test at ambient temperature with peak values. 10 positive and 10 negative impulses	No breakdown or flashover
15. AC voltage withstand test at 2.5 U_0 for 15 minutes	No breakdown or flashover
16. Examination	For information only
Test sequence A3. Test carried out on separate test objects	**Requirements**
17. Salt fog chamber test for 1000 h at 1.25 U_0	Max. three overcurrent (1 A) trip-outs No erosion through insulation of term
18. Examination	For information only

Indoor termination - Type test according to CENELEC HD 629.1 S1 test sequence A1, A2 and A3

Test sequence A1	Requirements
1. DC voltage withstand test at 6 U_0 negative polarity for 15 min.	No breakdown or flashover
2. AC voltage withstand test at 4.5 U_0 for 5 minutes	No breakdown or flashover
3. Pd measurement at ambient temperature at 1.73 U_0	Discharge level <10 pC
4. Lightning impulse voltage test at 95 °C with peak values 10 positive and 10 negative impulses	No breakdown or flashover
5. Load cycling in air 3 x 8 h at 2.5 U_0	No breakdown or flashover
6. Pd measurement at elevated and ambient temperature at 1.73 U_0	Discharge level <10 pC
7. Load cycling in air 123 x 8 h at 2.5 U_0	No breakdown or flashover
8. Pd measurement at elevated and ambient temperature at 1.73 U_0	Discharge level <10 pC
9. Lightning impulse voltage test at ambient temperature with peak values. 10 positive and 10 negative impulses	No breakdown or flashover
10. AC voltage withstand test at 2.5 U_0 for 15 minutes	No breakdown or flashover
Test sequence A2	**Requirements**
11. Thermal short circuit test for 1 sec to reach a conductor temperature at 250 °C	No visible signs of damage
12. Lightning impulse voltage test at ambient temperature with peak values. 10 positive and 10 negative impulses	No breakdown or flashover
13. AC voltage withstand test at 2.5 U_0 for 15 minutes	No breakdown or flashover
14. Examination	For information only
Test sequence A3. Test carried out on separate test objects	**Requirements**
15. Humidity test for 300 h at 1.25 U_0 through insulation of term.	Max. three over current (1 A) trip-outs. No erosion through insulation of term.
16. Examination	For information only

For more information please contact:
www.abb.com

© Copyright 2010 ABB. All rights reserved.

Power and productivity
for a better world™

Document ID: 7ABA102083