NEXANS CABLE

XLPE/LSHF Prefabricated

BRANCH CABLE SYSTEM

Nexans

XLPE/LSHF BRANCH CABLING SYSTEM

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PREFABRICATED BRANCH CABLE

Application: The Prefabricated Branch Cables is designed to answer to new challenges of today's urbanization. Meeting the demand for new buildings with increased building complexity and tighter timeline with a cost-effective solution.

Feature:

- The Prefabricated Branch Cable is designed to be a 'Plug and Play' solution.
- Skilled labour cost saving.
- Material wastage will be avoided.
- Costly trunking will be eliminated.
- Airtight and waterproof Design. Eliminating moisture ingression issue on-site.
- Reduces the points of failure.

Voltage Rating: 600/1000V

Contruction: Plain Annealed Copper, Xlpe Insulated, LSHF Sheathed Cable.

Sheath Colour: Black

Specification: IEC 60502-1 CU/XLPE/LSHF

Operation Temp. 90°C

Technical Specification

Main Cable: 1/C XLPE/LSHF Copper Cable
(TUV IEC 60502-1 Certificate)

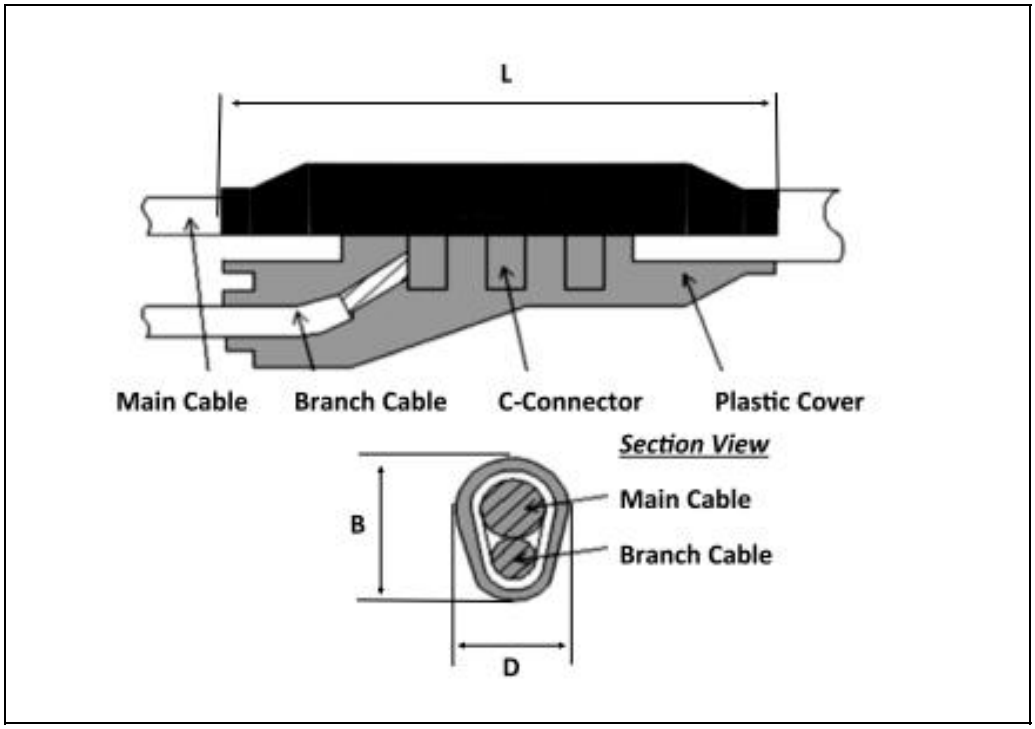
Branch Cable: 1/C XLPE/LSHF Copper Cable
(TUV IEC 60502-1 Certificate)

Tee-Off Joint To Standard JB/T 10636-2006, JIS C 2810

IEC 60502-1 CU/XLPE/LSHF Power Cable - Single Core

Conductor Dimension	Isulation Thickness	Sheath Thickness	Outer Diameter	Cable Weight	Current Rating A	Voltage Drop
mm^2	mm^2	mm	mm	Kg/Km	In Air	(mV/A/m)
6	0.7	1.09	7.2	100	54	6.800
10	0.7	1.09	7.8	140	74	4.000
16	0.7	1.09	8.8	200	99	2.500
25	0.9	1.09	10.3	300	135	1.600
35	0.9	1.09	11.3	400	169	1.150
50	1.0	1.09	12.7	500	207	0.870
70	1.1	1.09	14.5	700	268	0.620
95	1.1	1.18	16.2	950	328	0.460
120	1.2	1.18	18	1200	383	0.380
150	1.4	1.26	19.8	1500	444	0.320
185	1.6	1.26	21.8	1800	510	0.280
240	1.7	1.35	24.7	2500	607	0.240
300	1.8	1.43	27.2	3000	703	0.210
400	2	1.52	30.6	3750	823	0.195
500	2.2	1.6	34.4	4750	946	0.180
630	2.4	1.77	39.1	6250	1088	0.170
800	2.6	1.86	46.4	8250	1214	0.165

Cable Joint - Size Reference



Main Cable Nominal Area	Branch Cable - Nominal Area															D	B	L
mm^2	mm^2															mm	mm	mm
50	6	10	16	25	35											50	80	160
70	6	10	16	25	35	50										50	80	160
95	6	10	16	25	35	50	70									50	80	160
120	6	10	16	25	35	50	70	95								50	80	160
150	6	10	16	25	35	50	70	95	120							50	80	160
185	6	10	16	25	35	50	70	95	120	150						50	80	160
240	6	10	16	25	35	50	70	95	120	150	185					50	80	160
300	6	10	16	25	35	50	70	95	120	150	185					50	80	160
400	6	10	16	25	35	50	70	95	120	150	185					73	105	205
500	6	10	16	25	35	50	70	95	120	150	185					73	105	205
630	6	10	16	25	35	50	70	95	120	150	185					73	105	205
800	6	10	16	25	35	50	70	95								73	105	205
1000																		

Maximum Pulling Tension (T)

Maximum permissible tensile strength during installation/pulling. During cable installation, the cable will experience tensile forces. The main tensile element in a cable is the conductor. The following number may be used as maximum permissible tensile strength in the conductors:

Aluminum conductor : 30 N/mm^2

Copper conductor : 50 N/mm^2

To calculate the total permissible tensile strength in a cable during installation/pulling, the total crossectional area of all the conductors are to be summarized and multiplied with one of the above numbers. As an example, a three-core cable, where each conductor has the cross sectional area of 150 mm^2, aluminum, the total permissible tensile strength is:

3 x 150 mm^2 x 30 N/mm^2 = 13500 N

Minimum Bending Radius

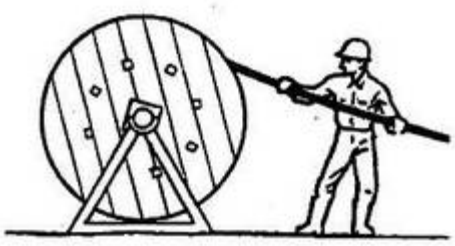
The minimum bending radius for a cable is normally described as a factor multiplied with the outer diameter (OD) of the cable:

	during installation	after placed in position
- 0.6/1kV XLPE cable	15D	12D

Sealing of the cable during storage

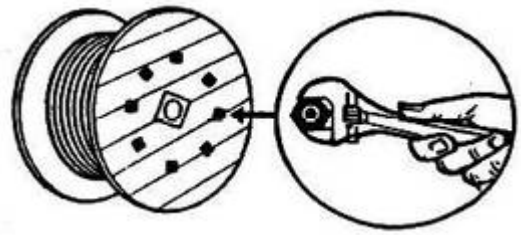
To prevent the ingress of water during storage of the cable in open air, the cable ends should be sealed by means of a shrinkable cap etc.

PREFABRICATED BRANCH CABLE
Installation Guidelines - General

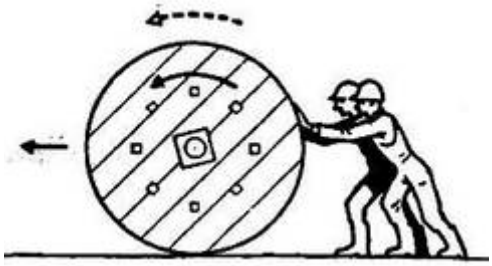


Although generally tough, cables can be damaged by impact, squeezing or scratching.

Pay off spooling shall be an easy operation. Through faulty handling cables may slide or "crawl". This can result in squeezing or locking and cause damages.



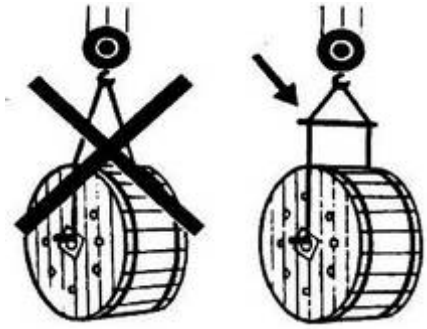
Due to changing weather conditions or transport, wooden drums may slightly shrink or loosen which necessitates retightening of the flange nuts.



Rolling of drums

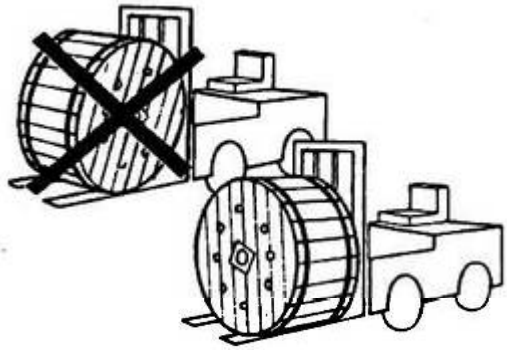
To prevent cable "crawl" drums must be rolled in the direction indicated by the arrows on both flanges.

Care must be taken when drums are rolled against each other, especially when cardboard protection is used, or if ordinary plank protection.



Lifting

When using wires or ropes for lifting, these have to be parallel to the flanges to prevent inward pressure (use spreader).



Lifting

When using a fork lift truck, the forks must be applied across the flanges and have sufficient reach. Drums must be lowered gently, not dropped

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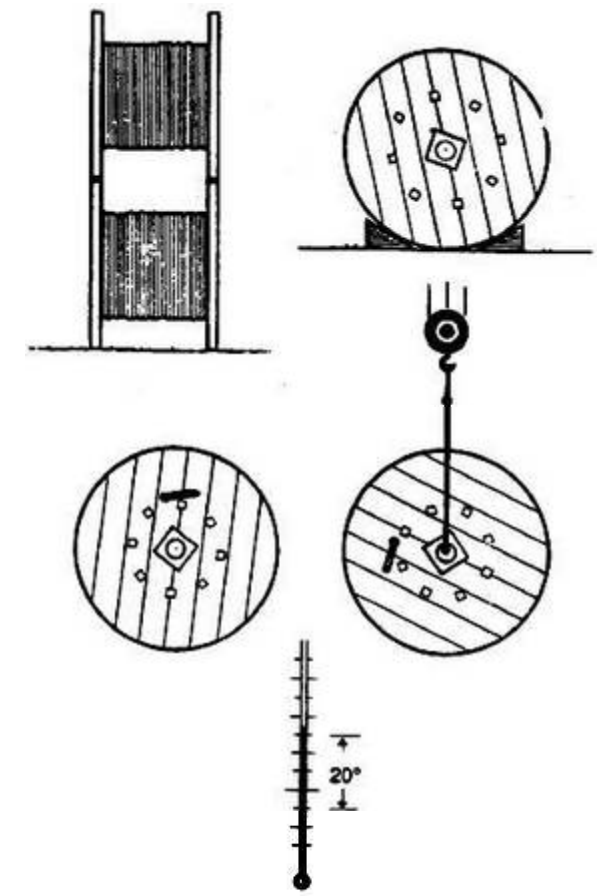
Installation Guidelines - General



Stacking

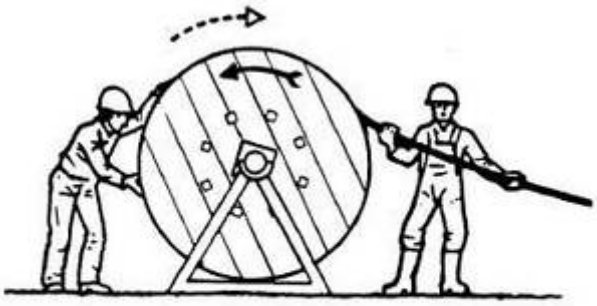
Drums MUST be stacked or stored STANDING on the flanges, not laying flat. Chucks of wood should be placed under the flanges to prevent accidental rolling. When stacking it is mandatory to have the flanges meet, particularly with heavy drums. When cardboard protection is used, stacking should be avoided. Drums must be stored on an even surface preventing them to stay in water.

Inner cable end

Normally the inner en protrudes through one of the flanges. It is well protected when leaving the factory, but may protrude somewhat because of its stiffness. Special care must be taken to prevent damages by lifting tackle, other drums or what ever, and to prevent the protruding end from

Temperature

Handling and spooling of cables must only take place within the specified temperature range. At changing temperatures the cables needs time to adjust. It is estimated that a full cable drum needs about 24 hours to adjust for a temperature change of 20°C.

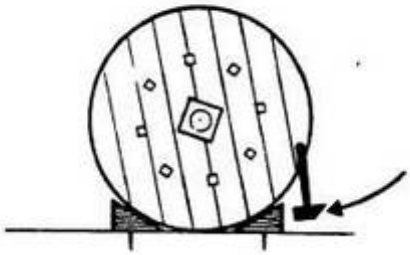


Direction of spooling

The cable must be drawn off the drum AGAINST the arrows of the flanges.

Cutting

When cutting the exposed cable ends must be taped or otherwise sealed off to keep out moisture.



Transport – truck/train

Suitable wooden wedges pressed under the flanges and nailed to the floor must secure the drums.

Recommended installation procedure for the Prefabricated Branch Cable.

From Ground Floor

1. Place the Cable Reel on the supply rack.
2. Fix the pulling rope to the Prefabricated Branch Cable via the coiling machine.
3. Start the machine and monitor the pulling process to prevent damages.
4. Hang the metal braid to the prepared hook upon reaching the top.
5. Secure the middle section with cable clamps.
6. Connect the branch cable to Ammeter.
7. Connect the main cable to the Distribution Box.