BiTflex®(N)TMCGCW11Y

RoHS 2015/863/EU

CPR

CPR 305/2011

High flexible, medium voltage, screened single core cable based on DIN VDE 0250-813

Technical data:

Thermal parameters:

Ambient temperature:
fixed installation: -50 °C to 90 °C
flexible operation: -40 °C to 90 °C
Max. permissible conductor temp.: 90 °C
Max. short-circuit temp. at conductor: 200 °C

Mechanical parameters:

Max. tensile load per conductor: 15 N/mm²
Bending radius:
- fixed installation: ≥ 6 x outer-Ø
- free moving: ≥ 8 x outer-Ø

Movement speed (typical values):
- Shore-power systems: 6 m/min
- Energy chains on cranes: 70 – 240 m/min

Design:

Conductor:	tinned copper wires, finely stranded, class 5 acc. to DIN EN / IEC 60228
Insulation:	- inner semi-conductive stress control layer - EPR compound with improved electrical and mechanical characteristics based on DIN VDE 0207-20 - outer semi-conductive insulation shield layer
Protective conductor:	concentric ground conductor: spinning with tinned copper wire strands based on DIN VDE 0250-1, covering approx. 85 %
Outer sheath:	thermoplastic polyether based polyurethane acc. to EN 50363-10-2 with improved mechanical characteristics, halogen-free, flame retardant acc. to EN 60332-1-2, oil resistance acc. to EN 60811-404, unrestricted use indoors, outdoors, ozone, UV and moisture resistant, colour: red, inkjet marking

Application:

Flexible voltage cable used in short lengths, e.g. as a connection in switch-gear or transformer houses where small bending radius is requested. Cable are also used in Onshore-Power-Supply: energy chains, reeling operation or power supply for large electrical applications and drives via cable carrier systems. They are also used in Shore Power System and installed on e.g. port / intermodal cranes.

Approvals:

BiTflex®-TPU UL. Certificate no.: UL-US-2322575-2 / E524140-2023060

Chemical parameters:

Resistance to oil:	DIN EN / IEC 60811-404
Behaviour in case of fire:	DIN EN / IEC 60332-1-2
Halogen acid gas content:	DIN EN / IEC 60754-1
Weather resistance:	unrestricted use indoors, outdoors, resistance to ozone, UV and moisture
Water resistance:	BiTflex®(N)TMCGCW11Y can be use at locations where the cables are completely covered with water and permanently subjected to a pressure ≤10 bar – covers protection class AD8

Electrical parameters:

Rated voltage U_o/U [kV]	3.6/6	6/10	8.7/15	12/20	14/25	18/30
Maximum permissible operating voltage $U_{o\,max}$ in AC systems [kV]:	4.2/7.2	6.9/12	10.4/18	13.9/24	17.3/30	20.8/36
Maximum permissible operating voltage $U_{o\,max}$ in DC systems [kV]:	5.4/10.8	9/18	13.5/27	18/36	22.5/45	27/54
AC. test voltage acc. to DIN VDE 0250-813 [kV]:	11	17	24	29	36	43
De-rating factors:	acc. to DIN VDE 0298-4					

Cable Factory BITNER reserves the right to modify specifications without prior notification.
Note: on customer's request other cross sections can be produced

BiTflex®(N)TMCGCW11Y

High flexible, medium voltage, screened single core cable based on DIN VDE 0250-813

BiTflex®(N)TMCGCW11Y 3,6/6 kV

Cat. no.	n x mm²	Maximum conductor resistance [Ω/km]	Nominal diameter over insulation [mm]	Outer diameter min.-max. [mm]	Calculated cable weight [kg/km]	Current carrying capacity[1] [A]
BM1595	1x25/16	0.795	13.0	20-23	730	135
BM1596	1x35/16	0.565	14.5	22-25	845	169

BiTflex®(N)TMCGCW11Y 6/10 kV

Cat. no.	n x mm²	Maximum conductor resistance [Ω/km]	Nominal diameter over insulation [mm]	Outer diameter min.-max. [mm]	Calculated cable weight [kg/km]	Current carrying capacity[1] [A]
BM1600	1x25/16	0.795	13.0	20-23	730	135
BM1601	1x35/16	0.565	14.5	21-24	860	169
BM1602	1x50/16	0.393	16.0	23-26	1045	207
BM1603	1x70/16	0.277	18.0	25-28	1285	268
BM1604	1x95/16	0.210	19.0	26-29	1540	328
BM1605	1x120/16	0.164	21.0	28-31	1805	383
BM1606	1x150/25	0.132	23.0	30-33	2160	444
BM1607	1x185/25	0.108	25.0	32-35	2505	510
BM1608	1x240/25	0.0817	27.0	35-38	3080	607
BM1609	1x300/25*	0.0654	29.0	37-40	3705	703

BiTflex®(N)TMCGCW11Y 12/20 kV

Cat. no.	n x mm²	Maximum conductor resistance [Ω/km]	Nominal diameter over insulation [mm]	Outer diameter min.-max. [mm]	Calculated cable weight [kg/km]	Current carrying capacity[1] [A]
BM1615	1x25/16	0.795	17.0	24-27	925	135
BM1616	1x35/16	0.565	18.0	25-28	1060	169
BM1617	1x50/16	0.393	19.0	26-29	1250	207
BM1618	1x70/16	0.277	21.0	28-31	1515	268
BM1619	1x95/16	0.210	23.0	30-33	1785	328
BM1620	1x120/16	0.164	24.0	32-35	2060	383
BM1621	1x150/25	0.132	26.0	35-38	2450	444
BM1622	1x185/25	0.108	28.0	36-39	2808	510
BM1623	1x240/25	0.0817	30.0	38-41	3340	607

BiTflex®(N)TMCGCW11Y 18/30 kV

Cat. no.	n x mm²	Maximum conductor resistance [Ω/km]	Nominal diameter over insulation [mm]	Outer diameter min.-max. [mm]	Calculated cable weight [kg/km]	Current carrying capacity[1] [A]
BM1630	1x25/16	0.795	20.0	27-30	1130	135
BM1631	1x35/16	0.565	21.5	29-32	1300	169
BM1632	1x50/16	0.393	23.0	30-33	1500	207
BM1633	1x70/16	0.277	25.0	32-35	1750	268
BM1634	1x95/16	0.210	26.0	34-37	2075	328
BM1635	1x120/16	0.164	28.0	36-39	2350	383
BM1636	1x150/25	0.132	30.0	38-41	2725	444
BM1637	1x185/25	0.108	32.0	40-43	3100	510
BM1638	1x240/25	0.0817	34.0	42-45	3640	607

*cross-section not covered by UL certificate

[1] acc. to IEC 60364-5-52, conductor temperature: 90 °C/Reference ambient temperature: 30 °C, free in air, based on installation method F, three loaded conductors trefoil, values for further installation methods on request

Cable Factory BITNER reserves the right to modify specifications without prior notification.
Note: on customer's request other cross sections can be produced