BiTflex®(N)TMCGCW11Y

RoHS 2015/863/EU

CPR

CPR 305/2011

Crane cables

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

mining applications | industral application | EN 60332-1-2 | high flexibility | UV resistance | oil resistant EN 60811-404 | drag chains | mechanical resistance | low operating temperature

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, flame retardant acc. to EN 60332-1-2, oil resistance acc. to EN 60811-404, unrestricted use indoors, outdoors, resistance to moisture, 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 slow moving Offshore-Power-Systems: energy chains or reeling operation or power supply for large electrical applications and drives via cable carrier systems and Shore Power System for container vessels / energy chains on e.g. port / intermodal cranes

Approvals:

UL. Certificate no.: UL-US-2322575-0 / E524140-20230602

Chemical parameters:

Resistance to oil:	DIN EN / IEC 60811-404
Behaviour in case of fire:	DIN EN / IEC 60332-1-2
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_0/U [kV]	3.6/6	6/10	8.7/15	12/20	14/25	18/30
Maximum permissible operating voltage $U_{b\,max}$ 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 $U_{b\,max}$ 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 or number of cores can be produced

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BiTflex®(N)TMCGCW11Y 3,6/6 kV

Nr kat.	n x mm²	Maximum conductor resistance	Nominal diameter over insulation	Outer diameter min.-max. [mm]	Approximate cable weight [kg/km]	Current carrying capacity[1]
BM1595	1x25/16	0.795	13,0	21-23	715	135
BM1596	1x35/16	0.565	14,0	22-24	830	169

BiTflex®(N)TMCGCW11Y 6/10 kV

Nr kat.	n x mm²	Maximum conductor resistance	Nominal diameter over insulation	Outer diameter min.-max. [mm]	Approximate cable weight [kg/km]	Current carrying capacity[1]
BM1600	1x25/16	0.795	13,0	21-23	730	135
BM1601	1x35/16	0.565	14,5	22-24	860	169
BM1602	1x50/16	0.393	16,0	24-26	1050	207
BM1603	1x70/16	0.277	18,0	26-28	1290	268
BM1604	1x95/16	0.210	19,0	27-29	1550	328
BM1605	1x120/16	0.164	21,0	29-31	1820	383
BM1606	1x150/25	0.132	23,0	31-33	2170	444
BM1607	1x185/25	0.108	25,0	33-35	2510	510
BM1608	1x240/25	0.0817	27,0	36-38	3080	607

BiTflex®(N)TMCGCW11Y 12/20 kV

Nr kat.	n x mm²	Maximum conductor resistance	Nominal diameter over insulation	Outer diameter min.-max. [mm]	Approximate cable weight [kg/km]	Current carrying capacity[1]
BM1615	1x25/16	0.795	17,0	25-27	930	135
BM1616	1x35/16	0.565	18,0	26-28	1070	169
BM1617	1x50/16	0.393	19,0	27-29	1260	207
BM1618	1x70/16	0.277	21,0	29-31	1520	268
BM1619	1x95/16	0.210	23,0	31-33	1790	328
BM1620	1x120/16	0.164	24,0	33-35	2070	383
BM1621	1x150/25	0.132	26,0	35-37	2450	444
BM1622	1x185/25	0.108	28,0	37-39	2810	510
BM1623	1x240/25	0.0817	30,0	39-41	3350	607

BiTflex®(N)TMCGCW11Y 18/30 kV

Nr kat.	n x mm²	Maximum conductor resistance	Nominal diameter over insulation	Outer diameter min.-max. [mm]	Approximate cable weight [kg/km]	Current carrying capacity[1]
BM1630	1x25/16	0.795	20,0	28-30	1130	135
BM1631	1x35/16	0.565	21,5	30-32	1300	169
BM1632	1x50/16	0.393	23,0	31-33	1500	207
BM1633	1x70/16	0.277	24,5	33-35	1750	268
BM1634	1x95/16	0.210	26,0	35-37	2080	328
BM1635	1x120/16	0.164	28,0	37-39	2360	383
BM1636	1x150/25	0.132	30,0	39-41	2720	444
BM1637	1x185/25	0.108	32,0	41-43	3100	510
BM1638	1x240/25	0.0817	34,0	43-45	3640	607

[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

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