



Co-flex

copper flexible bar

**PROBABLY THE BEST FLEXIBLE BAR
IN THE WORLD**



TEKNOMEGA[®]

COFLEX - Insulated copper flexible bars

COFLEX



COFLEX, THE 4.0 FLEXIBLE BAR

From a Teknomega new and advanced manufacturing plant, COFLEX, the only "bi-color" flexible bar (patented), distinguishes itself for the high flexibility and excellent look.

COFLEX is the perfect conductor to connect:

- main power supply and electrical equipment (switches, disconnectors, etc.)
- busbar and cabinet / panel board
- transformer and busbar

COFLEX is designed with electrolytic copper laminates, covered with a highly resistant and self extinguishing insulation which guarantees an excellent electrical insulation, even with humid or aggressive environment, or high temperature.

Electrical connections using COFLEX are much easier than using standard methods such as cable or plain busbar. Connections with COFLEX, making holes straight on the laminates, are safe and reliable and they make a panel board installation easier and faster.

ADVANTAGES COMPARED TO PLAIN BAR

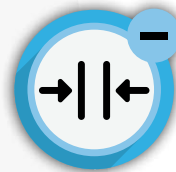
- With same cross section, higher ampacity and safety
- Reduction of material used and dimensions
- Easy shaping also for big sizes
- Cost and time saving compared to the usage of busbar supports or insulators for plain bars, as COFLEX is already insulated

ADVANTAGES COMPARED TO CABLE

- Higher electrical ampacity with same cross section
- Reduction of dimensions for your installation
- Reduction of length and number of conductors
- Cost and time saving compared to the usage of cable terminals
- Zero electrical resistance without cable terminals



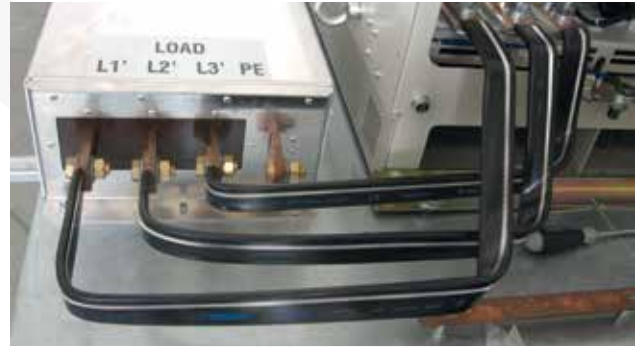
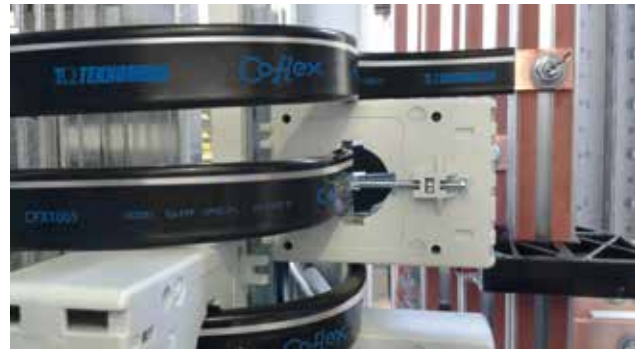
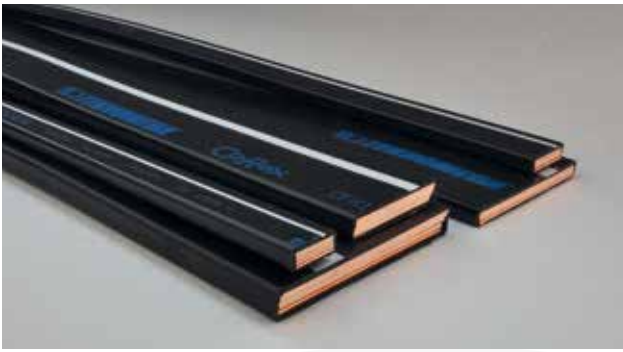
TIME
SAVING



DIMENSIONS
SAVING



COPPER
SAVING



RANGE

Versions: COFLEX - COFLEX PLUS

Standard length: 2 - 3 m

Laminates width: 9 - 13 - 15,5 - 20 - 24 - 32 - 40 - 50 - 63 - 80 - 100 mm

Number of laminates: from 2 to 12, according to the bar's width

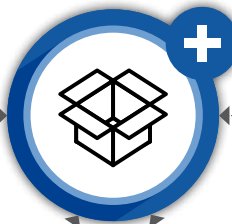
Cross section: from 20 to 1200 mm²

COFLEX ADDED VALUE

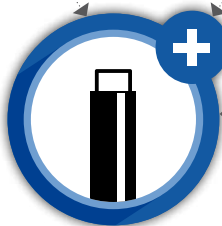
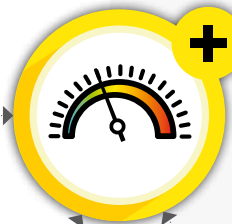
Major flexibility



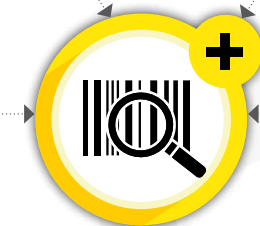
Innovative packaging



Dielectric test on all manufacturing process



Identification lines



Traceability and identification codes



RoHS compliant

COFLEX - Insulated copper flexible bars

COFLEX



UL® US CERTIFICATION PENDING

TECHNICAL FEATURES

Conductor

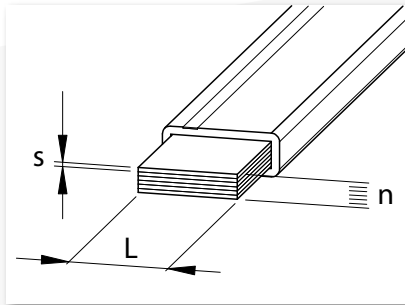
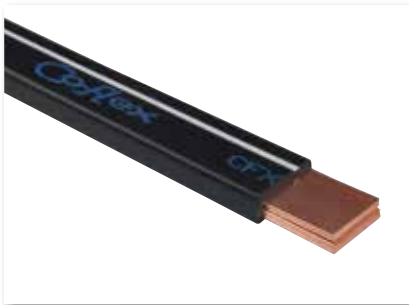
Electrolytic copper:
Cu-ETP - EN 13599
Laminate thickness:
0,5 - 0,8 - 1 mm

Insulation

"Self-extinguishing PVC UL 94-V0
black color with two not colored lines"
Thickness: 2 mm ± 0,2
Max. elongation: 365%
Hardness: 80 Shore A
Tensile strength: 19 MPa
Dielectric strength: 20 kV/mm

Finished product

Rated voltage:
1000 V AC / 1500V DC
Working temperature:
-40°C + +105°C



In VS. ΔT

In = Rated current A
ΔT = Temperature rise °C
ΔT = Tf - Ta
Tf = Working temperature °C
Ta = Room temperature °C

REFERENCE EXAMPLE

CFX 4X20X1
Laminate number: **n** = 4
Laminate width: **L** = 20 mm
Laminate thickness: **s** = 1 mm

I_{cc} - EFFECTIVE SHORT-CIRCUIT CURRENT FOR 1 s

I_{cc} parametres calculation

Initial temperature:

105°C - maximum working temperature of the conductor

Final temperature:

160°C - limit of temperature for PVC insulation compliant with IEC 60724 for cross-sections < 300 mm²

140°C - limit of temperature for PVC insulation compliant with IEC 60724 for cross-sections > 300 mm²

DERATING COEFFICIENT FOR THE USE OF BARS IN PARALLEL


Number of bars in parallel	2 bars	3 bars
Coefficient to use	1,8	2,5

UPON REQUEST: Tinned copper laminates; Insulation for temperatures up to 125°C.



2 METERS LENGTH

Table of ampacities (A) based on temperature rise ΔT as per IEC 61439-1
Reference room temperature 40°C

L	Code	Reference		Weight (Kg)	Sect. (mm ²)	Icc (kA)	Temperature rise ΔT				
							65 °C	50 °C	40 °C	30 °C	20 °C
							Rated Intensity In (A)				
9	CFX1005	CFX 3X9X0,8	6	0,5	21,6	1,9	160	140	125	108	89
	CFX1020	CFX 6X9X0,8	4	0,9	43,2	3,8	285	250	224	194	158
	CFX1021	CFX 9X9X0,8	4	1,3	64,8	5,6	319	280	250	217	177
13	CFX1022	CFX 3X13X0,5	6	0,45	19,5	1,7	194	170	152	132	108
	CFX1023	CFX 6X13X0,5	6	0,92	39	3,4	285	250	224	194	158
	CFX1024	CFX 10X13X0,5	4	1,41	65	5,7	376	330	295	256	209
15,5	CFX1025	CFX 2X15,5X0,8	6	0,68	24,8	2,1	234	205	183	159	130
	CFX1035	CFX 4X15,5X0,8	6	1,14	49,6	4,3	365	320	286	248	202
	CFX1045	CFX 6X15,5X0,8	4	1,6	74,4	6,5	456	400	358	310	253
20	CFX1050	CFX 10X15,5X0,8	4	2,52	124	10,8	502	440	394	341	278
	CFX1055	CFX 2X20X1	6	1	40	3,5	319	280	250	217	177
	CFX1060	CFX 3X20X1	6	1,37	60	5,2	399	350	313	271	221
	CFX1065	CFX 4X20X1	4	1,74	80	6,9	467	410	367	318	259
	CFX1070	CFX 5X20X1	4	2,11	100	8,7	490	430	385	333	272
	CFX1075	CFX 6X20X1	4	2,47	120	10,4	547	480	429	372	304
	CFX1076	CFX 8X20X1	4	3,21	160	13,9	638	560	501	434	354
24	CFX1080	CFX 10X20X1	4	3,94	200	17,4	730	640	572	496	405
	CFX1085	CFX 2X24X1	3	1,19	48	4,2	399	350	313	271	221
	CFX1090	CFX 3X24X1	3	1,63	72	6,3	456	400	358	310	253
	CFX1095	CFX 4X24X1	3	2,07	96	8,3	536	470	420	364	297
	CFX1100	CFX 5X24X1	2	2,51	120	10,4	581	510	456	395	323
	CFX1105	CFX 6X24X1	2	2,94	144	12,5	650	570	510	442	360
	CFX1110	CFX 8X24X1	2	3,82	192	16,7	781	685	613	531	433
32	CFX1115	CFX 10X24X1	1	4,7	240	20,9	912	800	716	620	506
	CFX1120	CFX 2X32X1	3	1,56	64	5,6	467	410	367	318	259
	CFX1125	CFX 3X32X1	3	2,14	96	8,3	559	490	438	380	310
	CFX1130	CFX 4X32X1	3	2,72	128	11,1	627	550	492	426	348
	CFX1135	CFX 5X32X1	2	3,3	160	13,9	741	650	581	503	411
	CFX1140	CFX 6X32X1	2	3,89	192	16,7	821	720	644	558	455
	CFX1145	CFX 8X32X1	2	5,05	256	22,3	992	870	778	674	550
40	CFX1150	CFX 10X32X1	2	6,21	320	22,5	1163	1020	912	790	645
	CFX1155	CFX 2X40X1	3	1,93	80	6,9	524	460	411	356	291
	CFX1160	CFX 3X40X1	3	2,66	120	10,4	650	570	510	442	360
	CFX1165	CFX 4X40X1	3	3,38	160	13,9	741	650	581	503	411
	CFX1170	CFX 5X40X1	2	4,1	200	17,4	884	775	693	600	490
	CFX1175	CFX 6X40X1	2	4,83	240	20,9	986	865	774	670	547
	CFX1180	CFX 8X40X1	2	6,27	320	22,5	1180	1035	926	802	655
50	CFX1185	CFX 10X40X1	2	7,72	400	28,1	1343	1178	1054	912	745
	CFX1190	CFX 3X50X1	3	3,3	150	13	672	589	527	456	373
	CFX1195	CFX 4X50X1	2	4,2	200	17,4	886	777	695	602	491
	CFX1200	CFX 5X50X1	2	5,1	250	21,7	1055	925	827	717	585
	CFX1205	CFX 6X50X1	2	6	300	22,1	1186	1040	930	806	658
	CFX1210	CFX 8X50X1	2	7,8	400	28,1	1357	1190	1064	922	753
	CFX1215	CFX 10X50X1	2	9,61	500	35,1	1573	1380	1234	1069	873
63	CFX1220	CFX 3X63X1	1	4,13	189	16,4	941	825	738	639	522
	CFX1225	CFX 4X63X1	1	5,27	252	21,9	1083	950	850	736	601
	CFX1230	CFX 5X63X1	1	6,4	315	22,1	1209	1060	948	821	670
	CFX1235	CFX 6X63X1	1	7,53	378	26,6	1391	1220	1091	945	772
	CFX1240	CFX 8X63X1	1	9,8	504	35,4	1596	1400	1252	1084	885
	CFX1245	CFX 10X63X1	1	12	630	44,3	1841	1615	1444	1251	1021
	CFX1250	CFX 3X80X1	1	5,22	240	20,9	1138	998	893	773	631
80	CFX1255	CFX 4X80X1	1	6,66	320	22,5	1311	1150	1029	891	727
	CFX1260	CFX 5X80X1	1	8,09	400	28,1	1429	1280	1145	991	810
	CFX1265	CFX 6X80X1	1	9,53	480	33,7	1602	1405	1257	1088	889
	CFX1270	CFX 8X80X1	1	12,4	640	45	1833	1608	1438	1246	1017
	CFX1275	CFX 10X80X1	1	15,3	800	56,2	2028	1779	1591	1378	1125
	CFX1280	CFX 4X100X1	1	8,3	400	28,1	1420	1245	1114	964	787
	CFX1285	CFX 5X100X1	1	10,1	500	35,1	1750	1535	1373	1189	871
100	CFX1290	CFX 6X100X1	1	11,9	600	42,2	1915	1680	1503	1301	1063
	CFX1295	CFX 8X100X1	1	15,5	800	56,2	2172	1905	1704	1476	1205
	CFX1300	CFX 10X100X1	1	19,1	1000	70,3	2394	2100	1878	1627	1328
	CFX1305	CFX 12X100X1	1	22,6	1200	84,3	2600	2280	2039	1766	1442

COFLEX - Insulated copper flexible bars

COFLEX

Co-flex Plus

UL US CERTIFICATION PENDING



COFLEX is designed to be manufactured as well in a high performance version, COFLEX PLUS. COFLEX PLUS is manufactured using tinned electrolytic copper laminates, insulated with a brand new high performance polymer and keeps the same electrical conduction and flexibility of COFLEX. COFLEX PLUS is halogen free, flame resistant and grants low smoke emission. A unique solution to increase the reliability of your electrical connection, and the safety of electrical equipments at the same time.

TECHNICAL FEATURES

Conductor

Tinned electrolytic copper:
Cu-ETP - EN 13599
Laminate thickness:
0,5 - 0,8 - 1 mm

Insulation

TPE compound
Halogen free
Low smoke
Self-extinguishing UL 94-V0
black color with two not colored lines
Thickness: > 1,6 mm
Typical elongation: 550%
Hardness: 80 Shore A
Tensile strength: 6 MPa
Recycable

Finished product

Rated voltage:
1000 V AC/1500V DC
Working temperature:
-40°C ÷ +105°C

REFERENCE EXAMPLE

Size	COFLEX part number	COFLEX PLUS part number
Insulated flexible bar 5x20x1 - length 2 m	CFX1070	CFX5070
Insulated flexible bar 5x20x1 - length 3 m	CFX3070	CFX6070

UPON REQUEST: Red copper laminates.

Co-flex Color

The exclusive bi-color insulation finish (patented) improves connections aesthetics, making their identification easier.

The coloured lines (standard white for CoFlex and light blue for CoFlex Plus) on request might be realized with different colors in order to identify phases, or following the company color, or simply matching a desired aesthetic.

The lines can be customized in color as per customer request.



Co-flex Packing

A bespoke packaging that overcomes the fragility of traditional packaging with elegance and care (patented).

Made in pressed carton with high rigidity, prevents the bars from their typical flexing and supports them in any leaning position, making easier any handling to the working table.

It can be stored both horizontally and vertically even in a small space, thanks to its rectangular shape.





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