

Insulated copper flexibars Moflex

Insulated copper flexibars Moflex are manufactured out of highly flexible copper strips either in bare or tinned version. They are insulated with high quality mechanical, electrical and self-extinguishing PVC.

Technical details

Electrolytic copper Cu-ETP 99,90%
Available in plain or tin plated copper

Insulation

Self extinguishing UL 94 V-0 black PVC insulation
Elongation: > 200 %
Tensile strength: > 15 N/mm²

Electrical characteristics

Nominal voltage 1000 V AC – 1500 V DC
Dielectric strength of the insulation: > 20 KV/mm
Operating temperature: -40 °C* up to 105 °C*
** not during dynamic pressure*



5 year
warranty



Due to skin effect,
on average

45 %

smaller cross-section
compared to regular
copper cable

Copper cable

150 mm²

1 x Moflex

24 x 1 x 2
48 mm²



320 A

68 %
smaller

Copper cables

2 x 150 mm²
300 mm²

1 x Moflex

32 x 1 x 5
160 mm²



630 A

47 %
smaller

Copper cables

3 x 240 mm²
720 mm²

1 x Moflex

80 x 1 x 6
480 mm²



1250 A

33 %
smaller

In all examples above, intensities of Moflex and regular cable are calculated using the temperature rise value of 50° C.

Remarks about the tables

Description of the order code

E.g., MMC0801001

MM – Moflex

C – red copper

(T - in case of tinned copper)

080 – width

10 – number of sheets

* Products with the length of 3 meters can be ordered separately

** Reduction factor for the use of flexibars in parallel (see table on page 62)

When you use the Moflex flexibars parallel for the same phase, you need to use the reduction factoras shown in the following example.

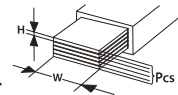
MMC0500401 Moflex 50x1x4, 200 mm², 732A at $\Delta T=50$

2 flexibars in parallel: $732 \times 1,72 = 1259A$

3 flexibars in parallel: $732 \times 2,25 = 1647A$

The table on the page 62 indicates the temperature rise produced by chosen current in the given cross section. This calculation does not take into account the heat dissipation from the switchboard.

Technical specification (based on width)



W (mm)	Red copper Order code	Tinned copper Order code	W x H x Pcs	Length*	Package (pcs)	Copper weight per meter (kg)
9	MMC0090201	MMT0090201	9 x 0,8 x 2	2 m	10	0,128
	MMC0090301	MMT0090301	9 x 0,8 x 3	2 m	10	0,193
	MMC0090401	MMT0090401	9 x 0,8 x 4	2 m	10	0,256
	MMC0090501	MMT0090501	9 x 0,8 x 5	2 m	10	0,321
	MMC0090601	MMT0090601	9 x 0,8 x 6	2 m	10	0,385
15,5	MMC0160201	MMT0160201	15,5 x 0,8 x 2	2 m	10	0,214
	MMC0160401	MMT0160401	15,5 x 0,8 x 4	2 m	10	0,428
	MMC0160601	MMT0160601	15,5 x 0,8 x 6	2 m	10	0,642
	MMC0161001	MMT0161001	15,5 x 0,8 x 10	2 m	10	1,071
20	MMC0200201	MMT0200201	20 x 1 x 2	2 m	5	0,357
	MMC0200301	MMT0200301	20 x 1 x 3	2 m	5	0,535
	MMC0200401	MMT0200401	20 x 1 x 4	2 m	5	0,714
	MMC0200501	MMT0200501	20 x 1 x 5	2 m	5	0,892
	MMC0200601	MMT0200601	20 x 1 x 6	2 m	5	1,071
	MMC0201001	MMT0201001	20 x 1 x 10	2 m	5	1,784
24	MMC0240201	MMT0240201	24 x 1 x 2	2 m	5	0,428
	MMC0240301	MMT0240301	24 x 1 x 3	2 m	5	0,642
	MMC0240401	MMT0240401	24 x 1 x 4	2 m	5	0,857
	MMC0240501	MMT0240501	24 x 1 x 5	2 m	5	1,071
	MMC0240601	MMT0240601	24 x 1 x 6	2 m	5	1,285
	MMC0240801	MMT0240801	24 x 1 x 8	2 m	5	1,713
	MMC0241001	MMT0241001	24 x 1 x 10	2 m	5	2,142
32	MMC0320201	MMT0320201	32 x 1 x 2	2 m	5	0,571
	MMC0320301	MMT0320301	32 x 1 x 3	2 m	5	0,857
	MMC0320401	MMT0320401	32 x 1 x 4	2 m	5	1,142
	MMC0320501	MMT0320501	32 x 1 x 5	2 m	5	1,428
	MMC0320601	MMT0320601	32 x 1 x 6	2 m	5	1,713
	MMC0320801	MMT0320801	32 x 1 x 8	2 m	5	2,284
	MMC0321001	MMT0321001	32 x 1 x 10	2 m	5	2,851
40	MMC0400201	MMT0400201	40 x 1 x 2	2 m	5	0,714
	MMC0400301	MMT0400301	40 x 1 x 3	2 m	5	1,071
	MMC0400401	MMT0400401	40 x 1 x 4	2 m	5	1,428
	MMC0400501	MMT0400501	40 x 1 x 5	2 m	5	1,784
	MMC0400601	MMT0400601	40 x 1 x 6	2 m	5	2,141
	MMC0400801	MMT0400801	40 x 1 x 8	2 m	5	2,855
	MMC0401001	MMT0401001	40 x 1 x 10	2 m	5	3,569
50	MMC0500301	MMT0500301	50 x 1 x 3	2 m	2	1,338
	MMC0500401	MMT0500401	50 x 1 x 4	2 m	2	1,784
	MMC0500501	MMT0500501	50 x 1 x 5	2 m	2	2,231
	MMC0500601	MMT0500601	50 x 1 x 6	2 m	2	2,677
	MMC0500801	MMT0500801	50 x 1 x 8	2 m	2	3,569
	MMC0501001	MMT0501001	50 x 1 x 10	2 m	2	4,461
63	MMC0630301	MMT0630301	63 x 1 x 3	2 m	2	1,686
	MMC0630401	MMT0630401	63 x 1 x 4	2 m	2	2,248
	MMC0630501	MMT0630501	63 x 1 x 5	2 m	2	2,811
	MMC0630601	MMT0630601	63 x 1 x 6	2 m	2	3,373
	MMC0630801	MMT0630801	63 x 1 x 8	2 m	2	4,497
	MMC0631001	MMT0631001	63 x 1 x 10	2 m	2	5,621
80	MMC0800301	MMT0800301	80 x 1 x 3	2 m	2	2,141
	MMC0800401	MMT0800401	80 x 1 x 4	2 m	2	2,851
	MMC0800501	MMT0800501	80 x 1 x 5	2 m	2	3,569
	MMC0800601	MMT0800601	80 x 1 x 6	2 m	2	4,283
	MMC0800801	MMT0800801	80 x 1 x 8	2 m	2	5,710
	MMC0801001	MMT0801001	80 x 1 x 10	2 m	2	7,138
100	MMC1000401	MMT1000401	100 x 1 x 4	2 m	2	3,569
	MMC1000501	MMT1000501	100 x 1 x 5	2 m	2	4,461
	MMC1000601	MMT1000601	100 x 1 x 6	2 m	2	5,353
	MMC1000801	MMT1000801	100 x 1 x 8	2 m	2	7,138
	MMC1001001	MMT1001001	100 x 1 x 10	2 m	2	8,922

Technical specification (based on amperage)

Amperage (A)	Red copper Part no.	Tinned copper Part no.				Copper weight per meter (kg)	Cu cross section (mm ²)	Ampacity at rise of temperature from 35° C to:					Reduction factor**			
								105 °C	95 °C	85 °C	75 °C	65 °C				
								ΔT=70	ΔT=60	ΔT=50	ΔT=40	ΔT=30				
> 80	MMC0090201	MMT0090201	9	x	0,8	x	2	0,128	14	113	105	96	86	74	1,72	2,25
> 125	MMC0090301	MMT0090301	9	x	0,8	x	3	0,193	21,6	160	149	136	121	104	1,72	2,25
> 160	MMC0090401	MMT0090401	9	x	0,8	x	4	0,256	29	204	189	173	155	133	1,72	2,25
	MMC0090501	MMT0090501	9	x	0,8	x	5	0,321	36	272	253	231	206	177	1,72	2,25
> 250	MMC0160201	MMT0160201	15,5	x	0,8	x	2	0,214	24,8	197	183	167	149	128	1,72	2,25
	MMC0090601	MMT0090601	9	x	0,8	x	6	0,385	43,2	340	316	289	258	221	1,72	2,25
> 320	MMC0200201	MMT0200201	20	x	1	x	2	0,357	40	329	306	280	250	215	1,72	2,25
	MMC0160401	MMT0160401	15,5	x	0,8	x	4	0,428	49,6	379	353	322	288	247	1,72	2,25
	MMC0200301	MMT0200301	20	x	1	x	3	0,535	60	427	397	363	324	278	1,72	2,25
> 400	MMC0240201	MMT0240201	24	x	1	x	2	0,428	48	451	419	384	342	294	1,72	2,25
	MMC0160601	MMT0160601	15,5	x	0,8	x	6	0,642	74,4	489	455	416	371	319	1,72	2,25
	MMC0161001	MMT0161001	15,5	x	0,8	x	10	1,071	124	539	501	458	409	351	1,72	2,25
	MMC0200401	MMT0200401	20	x	1	x	4	0,714	80	478	444	406	363	311	1,72	2,25
	MMC0200501	MMT0200501	20	x	1	x	5	0,892	100	497	463	423	378	324	1,72	2,25
	MMC0200601	MMT0200601	20	x	1	x	6	1,071	120	547	509	465	415	356	1,72	2,25
	MMC0240301	MMT0240301	24	x	1	x	3	0,642	72	491	457	418	373	320	1,72	2,25
	MMC0240401	MMT0240401	24	x	1	x	4	0,857	96	553	514	470	420	360	1,72	2,25
	MMC0320201	MMT0320201	32	x	1	x	2	0,571	64	483	450	411	367	315	1,72	2,25
	MMC0320301	MMT0320301	32	x	1	x	3	0,857	96	569	529	484	432	371	1,72	2,25
> 500	MMC0400201	MMT0400201	40	x	1	x	2	0,714	80	535	498	455	406	349	1,72	2,25
	MMC0240501	MMT0240501	24	x	1	x	5	1,071	120	610	568	519	463	398	1,72	2,25
	MMC0240601	MMT0240601	24	x	1	x	6	1,285	144	674	626	573	511	439	1,72	2,25
	MMC0320401	MMT0320401	32	x	1	x	4	1,142	128	652	606	554	495	425	1,72	2,25
	MMC0400301	MMT0400301	40	x	1	x	3	1,071	120	618	575	525	469	403	1,72	2,25
	MMC0400401	MMT0400401	40	x	1	x	4	1,428	160	727	676	618	552	474	1,72	2,25
> 630	MMC0500301	MMT0500301	50	x	1	x	3	1,338	150	701	652	597	532	457	1,72	2,25
	MMC0201001	MMT0201001	20	x	1	x	10	1,784	200	763	709	649	579	497	1,72	2,25
	MMC0240801	MMT0240801	24	x	1	x	8	1,713	192	800	744	681	607	522	1,72	2,25
	MMC0241001	MMT0241001	24	x	1	x	10	2,142	240	875	814	744	664	570	1,72	2,25
	MMC0320501	MMT0320501	32	x	1	x	5	1,428	160	762	708	648	578	496	1,72	2,25
	MMC0320601	MMT0320601	32	x	1	x	6	1,713	192	850	790	723	645	554	1,72	2,25
	MMC0400501	MMT0400501	40	x	1	x	5	1,784	200	903	840	768	686	589	1,72	2,25
	MMC0500401	MMT0500401	50	x	1	x	4	1,784	200	861	801	732	654	561	1,72	2,25
> 800	MMC0630301	MMT0630301	63	x	1	x	3	1,686	189	802	746	683	609	523	1,65	2,12
	MMC0320801	MMT0320801	32	x	1	x	8	2,284	256	1023	951	870	777	667	1,72	2,25
	MMC0400601	MMT0400601	40	x	1	x	6	2,141	240	1018	947	866	773	663	1,72	2,25
	MMC0500501	MMT0500501	50	x	1	x	5	2,231	250	1098	1021	934	834	716	1,72	2,25
	MMC0630401	MMT0630401	63	x	1	x	4	2,248	252	1013	942	861	769	660	1,65	2,12
> 1000	MMC0800301	MMT0800301	80	x	1	x	3	2,141	240	977	909	831	742	637	1,65	2,12
	MMC0321001	MMT0321001	32	x	1	x	10	2,851	320	1233	1147	1049	936	804	1,72	2,25
	MMC0400801	MMT0400801	40	x	1	x	8	2,855	320	1233	1146	1048	936	803	1,72	2,25
	MMC0401001	MMT0401001	40	x	1	x	10	3,569	400	1397	1300	1189	1061	911	1,65	2,12
	MMC0500601	MMT0500601	50	x	1	x	6	2,677	300	1226	1140	1043	931	799	1,65	2,12
	MMC0500801	MMT0500801	50	x	1	x	8	3,569	400	1392	1295	1184	1057	907	1,65	2,12
	MMC0630501	MMT0630501	63	x	1	x	5	2,811	315	1223	1137	1040	928	797	1,65	2,12
	MMC0630601	MMT0630601	63	x	1	x	6	3,373	378	1442	1341	1226	1095	940	1,65	2,12
	MMC0800401	MMT0800401	80	x	1	x	4	2,851	320	1202	1118	1022	912	783	1,65	2,12
	MMC0800501	MMT0800501	80	x	1	x	5	3,569	400	1395	1298	1187	1059	909	1,65	2,12
> 1250	MMC1000401	MMT1000401	100	x	1	x	4	3,569	400	1449	1348	1233	1100	945	1,6	2,02
	MMC0501001	MMT0501001	50	x	1	x	10	4,461	500	1651	1535	1404	1253	1076	1,65	2,12
	MMC0630801	MMT0630801	63	x	1	x	8	4,497	504	1656	1540	1409	1257	1079	1,65	2,12
	MMC0800601	MMT0800601	80	x	1	x	6	4,283	480	1630	1516	1387	1238	1063	1,65	2,12
	MMC1000501	MMT1000501	100	x	1	x	5	4,461	500	1638	1523	1393	1243	1067	1,6	2,02
> 1600	MMC1000601	MMT1000601	100	x	1	x	6	5,353	600	1845	1715	1569	1400	1202	1,6	2,02
	MMC0631001	MMT0631001	63	x	1	x	10	5,621	630	1901	1768	1617	1443	1239	1,65	2,12
	MMC0800801	MMT0800801	80	x	1	x	8	5,71	640	1902	1769	1618	1444	1240	1,65	2,12
	MMC0801001	MMT0801001	80	x	1	x	10	7,138	800	2106	1958	1791	1599	1372	1,65	2,12
> 2000	MMC1000801	MMT1000801	100	x	1	x	8	7,138	800	2152	2001	1830	1634	1402	1,6	2,02
> 2000	MMC1001001	MMT1001001	100	x	1	x	10	8,922	1000	2353	2188	2001	1786	1533	1,6	2,02

Selection of Moflex

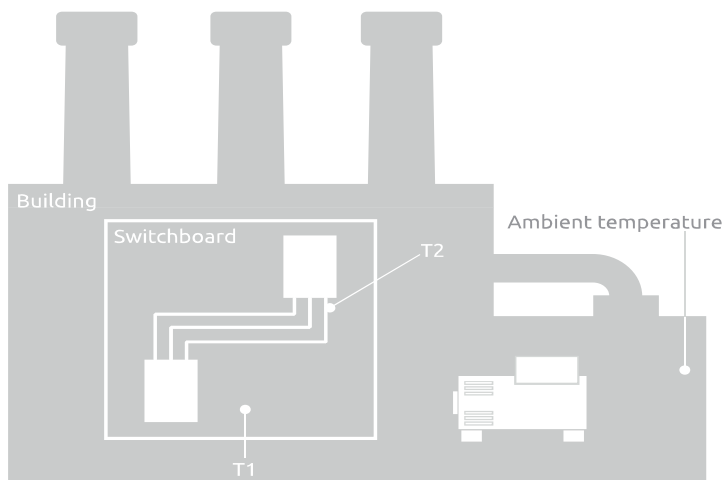
ΔT = temperature rise of the Moflex conductor ($^{\circ}C$)
 T1 = internal temperature of the switchboard ($^{\circ}C$)
 T2 = temperature of the Moflex conductor ($^{\circ}C$)

For example $I_n = 1000A$ connection

Step 1: T1 = 35 $^{\circ}C$ and T2 = 85 $^{\circ}C$
 $\Delta T = T2 - T1$
 $\Delta T = 85 \text{ }^{\circ}C - 35 \text{ }^{\circ}C$
 $\Delta T = 50 \text{ }^{\circ}C$

Step 2: Please find from the page 62 table on the column $\Delta T = 50$ the closest value of the 1000A.
 MMC0321001 Moflex 32x1x10, 320 mm², 1049A
 or
 MMC0630501 Moflex 63x1x5, 315 mm², 1040A.

Step 3: Select the Moflex flexibar according to the equipment terminal width.



Moflex saves you time and money



Does not require additional connection parts and saves the time of installation



Makes direct connection without additional connectors, enables you to save space in the panel



Gives additional flexibility comparing to standard rigid bar and it is easily adapted to unexpected project change