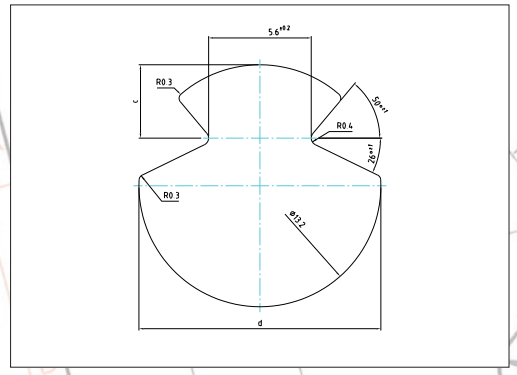
Contact wire according to **DIN 43140-43141**

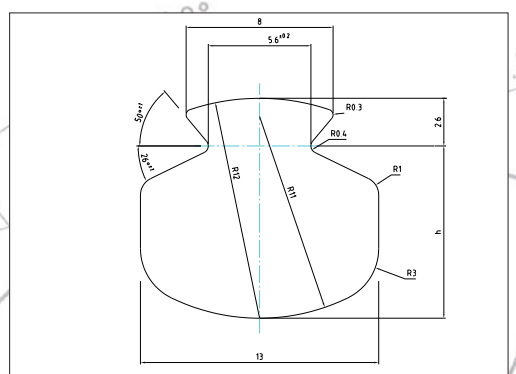
Material	Designation		Nominal cross section	Minimum tensile strenght	Wire diameter Construction							Maximum resistance	Current with wind velocity (2)		Mass (1)	Percentage elongation
					Ri		Bri	RiK		RiS						
				Mi.n	c	d	h	c	d	c	d	at 20°C	0,6 m/s	1 m/s	Min.	
			mm²	N/mm²	mm	mm	mm	mm	mm	mm	mm	Ω*mm²/m	A	A	kg/km	%
Copper	Cu-E	Ru	25	370								0,01786				2,5
		Ru	35	370								0,01786				2,5
		Ru	50	365								0,01786				2,5
		Ri - Ru	65	360	3,5	9,4						0,01786	310	340	580	2,5
		Ri - Bri - Ru	80	355	3,8	10,6	6,4					0,01786	370	410	710	3,5
		Ri - Bri - Ru	100	350	4	12	7,9					0,01786	455	505	890	3,5
		Ri - Bri	120	330	4	13,2	9,4					0,01786	490	560	1070	3,5
		Ri - Bri	150	310	4	14,8	11,4					0,01786	540	590	1335	3,5
Copper-silver alloy	CuAg 0,1	RiS	80	365						3,8	10,6	0,01786	620	690	710	3,5
		RiS	100	360						4	12	0,01786	705	785	890	3,5
		RiS	120	350						4	13,2	0,01786	750	830	1070	3,5
Copper-cadmium alloy	CuCd 0,7	RiK	80	410				3,8	10,6			0,02000	310	350	710	3,5
		RiK	100	405				4	12			0,02000	380	430	890	3,5
	CuCd 1,0	RiK	80	430				3,8	10,6			0,02151	310	350	710	3,5
		RiK	100	425				4	12			0,02151	380	430	890	3,5

(1) Calculated with a density of 8,9 kg/dm³ (2) Conditions: frequency = 60 Hz; ambient temperature = 40 °C; conductor temperature = 80 °C

Contact wire profiles according to DIN 43141



Ri



Bri

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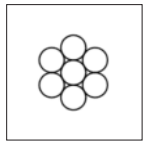
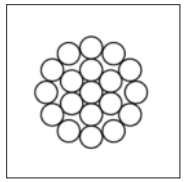
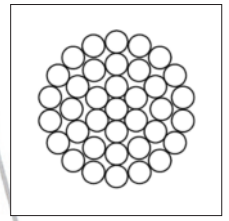
Conductor according to **DIN 48201 - T1**

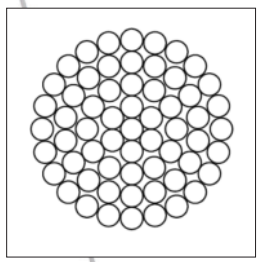
Material	Designation	Cross section		Number of wire	Diameter		Weight	Breaking load	Current (1)
		Nominal	Calculated		wire	conductor	Calculated		
		mm²	mm²	#	mm	mm	kg/km	kN	A
Copper	Cu-E	10	10,02	7	1,35	4,1	90	4,02	90
		16	15,89	7	1,70	5,1	143	6,37	125
		25	24,25	7	2,10	6,3	218	9,72	160
		35	34,36	7	2,50	7,5	310	13,77	200
		50	49,48	7	3,00	9,0	446	19,84	250
		50	48,35	19	1,80	9,0	437	19,38	250
		70	65,81	19	2,10	10,5	596	26,38	310
		95	93,27	19	2,50	12,5	845	37,39	380
		120	116,99	19	2,80	14,0	1060	46,90	440
		150	147,11	37	2,25	15,8	1337	58,98	510
		185	181,62	37	2,50	17,5	1649	72,81	585
		240	242,54	61	2,25	20,3	2209	97,23	700
		300	299,43	61	2,50	22,5	2725	120,04	800
		400	400,14	61	2,89	26,0	3640	160,42	960
		500	499,83	61	3,23	29,1	4545	200,38	1110

(1) Conditions: frequency = 60 Hz; wind velocity = 0,6 m/s; ambient temperature = 35 °C; conductor temperature = 70 °C









Conductor according to **DIN 48201 - T2**

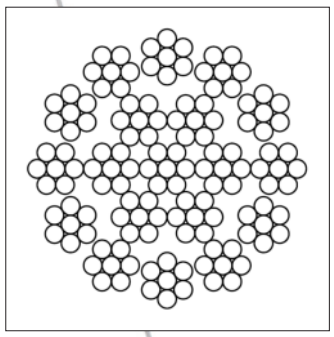
Material	Cross section		Number of wire	Diameter		Weight	Breaking load			Current (1)		
	Nominal	Calculated		wire	conductor		Bz I	Bz II	Bz III	Bz I	Bz II	Bz III
	mm²	mm²	#	mm	mm	kg/km	kN	kN	kN	A	A	A
Copper alloy (2)	10	10,02	7	1,35	4,1	90	4,95	5,88	6,72	85	75	50
	16	15,89	7	1,70	5,1	143	7,85	9,33	10,66	115	100	70
	25	24,25	7	2,10	6,3	218	11,98	14,24	16,26	150	130	90
	35	34,36	7	2,50	7,5	310	16,97	20,17	23,05	185	160	115
	50	49,48	7	3,00	9,0	446	23,97	28,58	32,76	235	200	145
	50	48,35	19	1,80	9,0	437	23,88	28,39	32,43	235	200	145
	70	65,81	19	2,10	10,5	596	32,51	38,64	44,14	285	245	175
	95	93,27	19	2,50	12,5	845	46,08	54,76	62,56	355	305	215
	120	116,99	19	2,80	14,0	1060	56,68	67,57	77,46	410	350	250
	150	147,11	37	2,25	15,8	1337	72,67	86,37	98,67	470	410	290
	185	181,62	37	2,50	17,5	1649	89,72	106,63	121,81	540	465	330
	240	242,54	61	2,25	20,3	2209	119,81	142,40	162,67	645	560	395
	300	299,43	61	2,50	22,5	2725	147,92	175,80	200,83	735	635	450
	400	400,14	61	2,89	26,0	3640	193,87	231,12	264,95	890	765	540
	500	499,83	61	3,23	29,1	4545	242,17	288,70	330,96	1020	880	625

(1) Conditions: frequency = 60 Hz; wind velocity = 0,6 m/s; ambient temperature = 35 °C; conductor temperature = 70 °C (2) Bz I only with CuCd; Bz II & Bz III with CuCd and CuMg

Conductor according to **DIN 43138**

Material	Designation	Cross section		Number of wire	Diameter		Weight	Wire after stranding			Current with wind velocity (1)	
		Nominal	Calculated		wire	conductor	conductor	Tensile strenght	Percentage elongation after fracture (l = 100)	Test load	0,6 m/s	1 m/s
		mm²	mm²	#	mm ± 0,03	mm ± 5%	kg/km ± 8%	N/mm²	min %	N	A	A
Copper Alloy	Bz II	10	9,6	49	0,50	4,5	89	589	-	116	-	-
		16	16,3	49	0,65	5,9	152	589	-	195	-	-
		16	16,3	84	0,50	6,2	152	589	-	116	-	-
		25	26,1	133	0,50	7,5	246	589	-	116	-	-
		35	37,6	133	0,60	9,0	353	589	-	167	-	-
Copper	E-Cu 58 DIN 1787 DIN 40 500 Teil 4	16	16,3	49	0,65	5,9	152	< 300	25	-	135	155
		25	26,1	133	0,50	7,5	246	< 300	25	-	180	205
		35	37,6	133	0,60	9,0	353	< 300	25	-	225	255
		50	51,2	133	0,70	10,5	482	< 300	25	-	280	310
		70	72,7	189	0,70	13,0	685	< 300	25	-	340	370
		95	99,7	259	0,70	14,7	935	< 300	25	-	420	460
		120	118,5	336	0,67	16,4	1120	< 300	25	-	485	535
		150	150,9	392	0,70	18,3	1420	< 300	25	-	570	625
		185	185,1	525	0,67	20,4	1745	< 300	25	-	660	720
		210	209,8	595	0,67	21,5	1980	< 300	25	-	720	780
		240	245,2	637	0,70	23,1	2320	< 300	25	-	785	850
		300	296,6	637	0,77	25,4	2800	< 300	25	-	895	970

(1) Conditions: frequency = 60 Hz; ambient temperature = 40 °C; conductor temperature = 80 °C



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