



Bare Litz Wire



LITZ WIRE IS USED WHEREVER A REDUCTION IN AC LOSSES IS REQUIRED AND CAN BE FOUND IN MANY MAJOR INDUSTRY SEGMENTS. Its greater flexibility makes it superior to other wires in the same cross section. Litz wire is made of several strands of enameled magnet wire that are bunched or stranded together.

COMMON APPLICATIONS:

- Electric Vehicles and Charging Stations
- Wireless Charging
- Switch Mode Power Supplies
- Induction Heating
- Solar Inverters
- Renewable Energy
- Linear Motors & Motion Control
- Medical Power Supplies

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***PLEASE NOTE:** LITZ CONDUCTOR DIAMETERS CAN VARY BY SUPPLIER, PLEASE REQUEST A SPECIFICATION SHEET TO ENSURE THE DIAMETER WILL MEET YOUR APPLICATION REQUIREMENT(S). Litz constructions listed in this catalog are a small sample of the products offered. Contact the Sales Department for additional constructions.*



Rubadue BARE ROUND LITZ WIRES

PRODUCT CONSTRUCTION:

INDIVIDUAL WIRE SIZE RANGE:

50AWG (0,02mm) to 12 AWG (2,05mm)

TOTAL NUMBER OF WIRES:

From 2 wires to over 10,000 wires

TOTAL CONDUCTOR DIAMETER:

Overall twisted diameter up to .350" (8,9mm)

TEMPERATURE CLASS:

From 155°C up to 240°C

OPTIONAL COATINGS:

Nylon Serve in Single or Double Layer

Extruded Insulations Such As: ETFE, FEP, PFA

Other options available. Contact factory for more details.

AGENCY APPROVALS:

UL recognized component
per OBMW2 File #: E190291

RoHS Compliant

Rubadue Litz Wires are approved for use with many Electrical Insulation Systems. Contact factory for more details.

RECOMMENDED OPERATING FREQUENCY: 60 Hz to 1 kHz

Equivalent AWG	Nominal Circular Mil Area	Number of Wires	Magnet Wire Size (AWG)	Litz Wire Type	Nominal OD (in.)	Nominal OD (mm)	Maximum DC Resistance (ohms/ft at 20°C)	Nominal Lbs/ 1,000 Ft.	Litz Wire Construction
24	477	3	28	1	0.030	0.752	0.02257	1.50	3/28
22	795	5	28	1	0.037	0.940	0.01354	2.50	5/28
20	1113	7	28	1	0.041	1.044	0.00967	3.50	7/28
18	1590	10	28	1	0.055	1.392	0.00677	5.00	10/28
16	2703	17	28	1	0.065	1.657	0.00398	8.50	17/28
14	4134	26	28	1	0.081	2.049	0.00268	13.0	26/28
12	6678	42	28	2	0.110	2.787	0.00169	21.4	3X14/28
10	10335	65	28	2	0.137	3.468	0.00109	33.1	5X13/28
8	16695	105	28	2	0.174	4.407	0.00068	53.5	5X21/28
6	26235	165	28	2	0.218	5.525	0.00044	84.1	5X3/11/28
4	42930	270	28	2	0.278	7.067	0.00027	138	5X3/18/28
2	66780	420	28	2	0.347	8.814	0.00017	214	5X4/21/28

RECOMMENDED OPERATING FREQUENCY: 1 kHz to 10 kHz

Equivalent AWG	Nominal Circular Mil Area	Number of Wires	Magnet Wire Size (AWG)	Litz Wire Type	Nominal OD (in.)	Nominal OD (mm)	Maximum DC Resistance (ohms/ft at 20°C)	Nominal Lbs/ 1,000 Ft.	Litz Wire Construction
26	300	3	30	1	0.024	0.598	0.03598	0.945	3/30
24	500	5	30	1	0.029	0.748	0.02159	1.58	5/30
22	700	7	30	1	0.033	0.831	0.01542	2.21	7/30
20	1000	10	30	1	0.044	1.107	0.01079	3.15	10/30
18	1600	16	30	1	0.050	1.279	0.00675	5.04	16/30
16	2600	26	30	1	0.064	1.631	0.00428	8.19	26/30
14	4100	41	30	1	0.081	2.048	0.00271	12.9	41/30
12	6500	65	30	2	0.109	2.759	0.00174	20.5	5X13/30
10	10500	105	30	2	0.138	3.506	0.00108	33.1	5X21/30
8	16500	165	30	2	0.173	4.396	0.00069	52.0	5X33/30
6	27000	270	30	2	0.221	5.623	0.00043	85.1	5X3/18/30
4	42000	420	30	2	0.276	7.013	0.00028	132	5X3/28/30
2	66000	660	30	2	0.346	8.791	0.00018	208	5X4/33/30

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Rubadue **BARE ROUND LITZ WIRES**

RECOMMENDED OPERATING FREQUENCY: 10 kHz to 20 kHz

Equivalent AWG	Nominal Circular Mil Area	Number of Wires	Magnet Wire Size (AWG)	Litz Wire Type	Nominal OD (in.)	Nominal OD (mm)	Maximum DC Resistance (ohms/ft at 20°C)	Nominal Lbs/1,000 Ft.	Litz Wire Construction
26	252	5	33	1	0.021	0.535	0.04318	0.793	5/33
24	403	8	33	1	0.025	0.647	0.02699	1.27	8/33
22	655	13	33	1	0.032	0.825	0.01661	2.06	13/33
20	1059	21	33	1	0.041	1.049	0.01028	3.33	21/33
18	1613	32	33	1	0.051	1.294	0.00695	5.07	32/33
16	2571	51	33	1	0.064	1.634	0.00436	8.09	51/33
14	4285	85	33	2	0.089	2.258	0.00267	13.7	5X17/33
12	6553	130	33	2	0.110	2.792	0.00174	21.0	5X26/33
10	10586	210	33	2	0.140	3.549	0.00108	34.0	5X42/33
8	16635	330	33	2	0.175	4.448	0.00069	53.4	5X66/33
6	26465	525	33	2	0.221	5.611	0.00044	84.9	5X5/21/33
4	41588	825	33	2	0.277	7.034	0.00028	133	5X5/33/33
2	66541	1320	33	2	0.350	8.897	0.00018	213	5X4/66/33

RECOMMENDED OPERATING FREQUENCY: 20 kHz to 50 kHz

Equivalent AWG	Nominal Circular Mil Area	Number of Wires	Magnet Wire Size (AWG)	Litz Wire Type	Nominal OD (in.)	Nominal OD (mm)	Maximum DC Resistance (ohms/ft at 20°C)	Nominal Lbs/1,000 Ft.	Litz Wire Construction
30	100	4	36	1	0.013	0.341	0.11015	0.318	4/36
28	175	7	36	1	0.017	0.427	0.06294	0.557	7/36
26	250	10	36	1	0.022	0.569	0.04406	0.796	10/36
24	400	16	36	1	0.026	0.657	0.02754	1.27	16/36
22	650	26	36	1	0.033	0.838	0.01746	2.07	26/36
20	1025	41	36	1	0.041	1.052	0.01107	3.26	41/36
18	1625	65	36	1	0.052	1.325	0.00698	5.17	65/36
16	2625	105	36	2	0.071	1.802	0.00441	8.52	5X21/36
14	4125	165	36	2	0.089	2.258	0.00280	13.4	5X33/36
12	6625	265	36	2	0.113	2.862	0.00175	21.5	5X53/36
10	10500	420	36	2	0.142	3.603	0.00112	34.1	5X3/28/36
8	16500	660	36	2	0.178	4.517	0.00071	53.6	5X3/44/36
6	26250	1050	36	2	0.224	5.697	0.00045	85.2	5X5/42/36
4	41250	1650	36	2	0.281	7.141	0.00029	134	5X5/66/36

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Rubadue **BARE ROUND LITZ WIRES****RECOMMENDED OPERATING FREQUENCY: 50 kHz to 100 kHz**

Equivalent AWG	Nominal Circular Mil Area	Number of Wires	Magnet Wire Size (AWG)	Litz Wire Type	Nominal OD (in.)	Nominal OD (mm)	Maximum DC Resistance (ohms/ft at 20°C)	Nominal Lbs/ 1,000 Ft.	Litz Wire Construction
32	64	4	38	1	0.011	0.274	0.17390	0.200	4/38
30	112	7	38	1	0.014	0.343	0.09936	0.349	7/38
28	160	10	38	1	0.018	0.457	0.06955	0.499	10/38
26	256	16	38	1	0.021	0.528	0.04347	0.798	16/38
24	416	26	38	1	0.027	0.673	0.02756	1.30	26/38
22	640	40	38	1	0.033	0.835	0.01792	2.00	40/38
20	1024	64	38	1	0.042	1.056	0.01120	3.19	64/38
18	1680	105	38	2	0.057	1.448	0.00695	5.34	5X21/38
16	2640	165	38	2	0.071	1.815	0.00443	8.40	5X33/38
14	4240	265	38	2	0.091	2.300	0.00276	13.5	5X53/38
12	6720	420	38	2	0.114	2.895	0.00177	21.4	5X3/28/38
10	10560	660	38	2	0.143	3.629	0.00113	33.6	5X3/44/38
8	16800	1050	38	2	0.180	4.578	0.00071	53.4	5X5/42/38
6	26400	1650	38	2	0.226	5.739	0.00045	84.0	5X5/66/38
5	33600	2100	38	2	0.281	7.139	0.00035	109	5X5X3/28/38
4	42000	2625	38	2	0.314	7.982	0.00028	136	5X5X5/21/38

RECOMMENDED OPERATING FREQUENCY: 100 kHz to 200 kHz

Equivalent AWG	Nominal Circular Mil Area	Number of Wires	Magnet Wire Size (AWG)	Litz Wire Type	Nominal OD (in.)	Nominal OD (mm)	Maximum DC Resistance (ohms/ft at 20°C)	Nominal Lbs/ 1,000 Ft.	Litz Wire Construction
36	29	3	40	1	0.008	0.192	0.39179	0.095	3/40
34	48	5	40	1	0.009	0.240	0.23508	0.158	5/40
32	67	7	40	1	0.011	0.267	0.16791	0.221	7/40
30	106	11	40	1	0.013	0.341	0.10685	0.348	11/40
28	163	17	40	1	0.017	0.423	0.06914	0.537	17/40
26	259	27	40	1	0.021	0.534	0.04486	0.854	27/40
24	404	42	40	1	0.026	0.665	0.02884	1.33	42/40
22	634	66	40	1	0.033	0.834	0.01835	2.09	66/40
20	1057	110	40	2	0.045	1.152	0.01122	3.55	5X22/40
18	1634	170	40	2	0.056	1.433	0.00726	5.48	5X34/40
16	2595	270	40	2	0.071	1.806	0.00457	8.70	5X54/40
14	4084	425	40	2	0.089	2.265	0.00296	13.7	5X5/17/40
12	6535	680	40	2	0.113	2.865	0.00185	21.9	5X4/34/40
10	10331	1075	40	2	0.142	3.603	0.00117	34.7	5X5/43/40
8	16577	1725	40	2	0.198	5.033	0.00073	56.7	5X5X3/23/40
6	26428	2750	40	2	0.250	6.354	0.00046	90.5	5X5X5/22/40
4	41804	4350	40	2	0.315	7.992	0.00029	143	5X5X3/58/40

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Rubadue **BARE ROUND LITZ WIRES**

RECOMMENDED OPERATING FREQUENCY: 200 kHz to 350 kHz

Equivalent AWG	Nominal Circular Mil Area	Number of Wires	Magnet Wire Size (AWG)	Litz Wire Type	Nominal OD (in.)	Nominal OD (mm)	Maximum DC Resistance (ohms/ft at 20°C)	Nominal Lbs/ 1,000 Ft.	Litz Wire Construction
38	19	3	42	1	0.006	0.154	0.61218	0.059	3/42
36	25	4	42	1	0.007	0.172	0.45913	0.079	4/42
34	44	7	42	1	0.008	0.213	0.26236	0.14	7/42
32	69	11	42	1	0.011	0.272	0.16696	0.22	11/42
30	100	16	42	1	0.013	0.329	0.11478	0.32	16/42
28	163	26	42	1	0.016	0.419	0.07278	0.51	26/42
26	256	41	42	1	0.021	0.526	0.04615	0.81	41/42
24	406	65	42	1	0.026	0.662	0.02911	1.3	65/42
22	656	105	42	2	0.035	0.901	0.01837	2.1	5X21/42
20	1031	165	42	2	0.044	1.129	0.01169	3.3	5X33/42
18	1625	260	42	2	0.056	1.417	0.00742	5.2	5X52/42
16	2625	420	42	2	0.071	1.802	0.00468	8.4	5X3/28/42
14	4125	660	42	2	0.089	2.258	0.00298	13.3	5X3/44/42
12	6563	1050	42	2	0.112	2.848	0.00187	21.1	5X5/42/42
10	10313	1650	42	2	0.141	3.571	0.00119	33.1	5X5/66/42
8	16875	2700	42	2	0.198	5.037	0.00073	55.3	5X5X3/36/42
6	26563	4250	42	2	0.249	6.319	0.00046	87.1	5X5X5/34/42
4	42188	6750	42	2	0.314	7.964	0.00029	138.3	5X5X5/54/42

RECOMMENDED OPERATING FREQUENCY: 350 kHz to 850 kHz

Equivalent AWG	Nominal Circular Mil Area	Number of Wires	Magnet Wire Size (AWG)	Litz Wire Type	Nominal OD (in.)	Nominal OD (mm)	Maximum DC Resistance (ohms/ft at 20°C)	Nominal Lbs/ 1,000 Ft.	Litz Wire Construction
38	16	4	44	1	0.005	0.135	0.73258	0.050	4/44
36	28	7	44	1	0.007	0.168	0.41862	0.087	7/44
34	40	10	44	1	0.009	0.224	0.29303	0.12	10/44
32	64	16	44	1	0.010	0.258	0.18314	0.20	16/44
30	100	25	44	1	0.013	0.323	0.12077	0.31	25/44
28	160	40	44	1	0.016	0.408	0.07548	0.50	40/44
26	256	64	44	1	0.020	0.516	0.04718	0.80	64/44
24	420	105	44	2	0.028	0.708	0.02930	1.3	5X21/44
22	640	160	44	2	0.034	0.874	0.01923	2.0	5X32/44
20	1020	255	44	2	0.043	1.103	0.01207	3.2	5X51/44
18	1620	405	44	2	0.055	1.390	0.00775	5.1	5X3/27/44
16	2580	645	44	2	0.069	1.754	0.00486	8.2	5X3/43/44
14	4100	1025	44	2	0.087	2.211	0.00306	13.0	5X5/41/44
12	6500	1625	44	2	0.110	2.784	0.00193	20.6	5X5/65/44
10	10400	2600	44	2	0.143	3.622	0.00121	33.6	5X5X4/26/44
8	16500	4125	44	2	0.180	4.562	0.00076	53.3	5X5X5/33/44
6	26500	6625	44	2	0.228	5.781	0.00047	85.6	5X5X5/53/44
4	42000	10500	44	2	0.287	7.290	0.00030	136	5X5X5/3/28/44

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Rubadue **BARE ROUND LITZ WIRES**

RECOMMENDED OPERATING FREQUENCY: 850 kHz to 1.4 MHz

Equivalent AWG	Nominal Circular Mil Area	Number of Wires	Magnet Wire Size (AWG)	Litz Wire Type	Nominal OD (in.)	Nominal OD (mm)	Maximum DC Resistance (ohms/ft at 20°C)	Nominal Lbs/ 1,000 Ft.	Litz Wire Construction
40	9.8	4	46	1	0.004	0.106	1.15872	0.050	4/46
38	17.2	7	46	1	0.005	0.132	0.66213	0.087	7/46
36	24.6	10	46	1	0.007	0.176	0.46349	0.12	10/46
34	39.4	16	46	1	0.008	0.203	0.28968	0.20	16/46
32	64.0	26	46	1	0.010	0.259	0.18368	0.32	26/46
30	100.9	41	46	1	0.013	0.325	0.11648	0.51	41/46
28	160	65	46	1	0.016	0.409	0.07347	0.81	65/46
26	258	105	46	2	0.022	0.557	0.04635	1.3	5X21/46
24	406	165	46	2	0.027	0.698	0.02949	2.1	5X33/46
22	640	260	46	2	0.034	0.876	0.01872	3.3	5X52/46
20	1033	420	46	2	0.044	1.113	0.01181	5.3	5X3/28/46
18	1624	660	46	2	0.055	1.395	0.00752	8.4	5X3/44/46
16	2583	1050	46	2	0.069	1.760	0.00473	13.3	5X5/42/46
14	4182	1700	46	2	0.091	2.303	0.00292	22.0	5X5X4/17/46
12	6642	2700	46	2	0.114	2.902	0.00184	34.9	5X5X3/36/46
10	10455	4250	46	2	0.143	3.641	0.00117	54.9	5X5X5/34/46
8	16605	6750	46	2	0.181	4.589	0.00074	87.3	5X5X5/54/46
6	26138	10625	46	2	0.243	6.174	0.00047	137	5X5X5/5/17/46

RECOMMENDED OPERATING FREQUENCY: 1.4 MHz to 3.0 Mhz

Equivalent AWG	Nominal Circular Mil Area	Number of Wires	Magnet Wire Size (AWG)	Litz Wire Type	Nominal OD (in.)	Nominal OD (mm)	Maximum DC Resistance (ohms/ft at 20°C)	Nominal Lbs/ 1,000 Ft.	Litz Wire Construction
40	10.8	7	48	1	0.004	0.107	1.06153	0.034	7/48
38	15.4	10	48	1	0.006	0.142	0.74307	0.049	10/48
36	24.6	16	48	1	0.007	0.165	0.46442	0.079	16/48
34	41.6	27	48	1	0.008	0.213	0.28897	0.13	3/9/48
32	64.7	42	48	1	0.010	0.266	0.18577	0.21	3/14/48
30	100	65	48	1	0.013	0.331	0.12003	0.32	5/13/48
28	162	105	48	2	0.018	0.450	0.07576	0.53	5X3/7/48
26	254	165	48	2	0.022	0.565	0.04821	0.83	5X3/11/48
24	400	260	48	2	0.028	0.709	0.03060	1.30	5X4/13/48
22	647	420	48	2	0.036	0.926	0.01894	2.15	5X3X4/7/48
20	1016	660	48	2	0.046	1.161	0.01205	3.38	5X3X4/11/48
18	1617	1050	48	2	0.058	1.465	0.00758	5.37	5X5X3/14/48
16	2618	1700	48	2	0.073	1.864	0.00468	8.70	5X5X4/17/48
14	4158	2700	48	2	0.099	2.518	0.00295	14.2	5X5X3X3/12/48
12	6738	4375	48	2	0.126	3.206	0.00182	23.1	5X5X5X5/7/48
10	10395	6750	48	2	0.157	3.982	0.00118	35.6	5X5X5X3/18/48
8	16363	10625	48	2	0.197	4.996	0.00075	56.0	5X5X5X5/17/48

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Rubadue **BARE ROUND LITZ WIRES**

RECOMMENDED OPERATING FREQUENCY: 1.4 MHz to 3.0 Mhz

Equivalent AWG	Nominal Circular Mil Area	Number of Wires	Magnet Wire Size (AWG)	Litz Wire Type	Nominal OD (in.)	Nominal OD (mm)	Maximum DC Resistance (ohms/ft at 20°C)	Nominal Lbs/ 1,000 Ft.	Litz Wire Construction
40	9.8	10	50	1	0.004	0.105	1.16586	0.031	10/50
38	16	16	50	1	0.005	0.133	0.72866	0.050	16/50
36	29	30	50	1	0.007	0.182	0.40805	0.094	3/10/50
34	41	42	50	1	0.008	0.215	0.29147	0.132	3/16/50
32	64	65	50	1	0.011	0.267	0.18833	0.204	5/13/50
30	106	108	50	2	0.015	0.369	0.11557	0.345	3X3/12/50
28	162	165	50	2	0.018	0.456	0.07565	0.527	5X3/11/50
26	255	260	50	2	0.023	0.572	0.04801	0.830	5X4/13/50
24	417	425	50	2	0.029	0.731	0.02937	1.36	5X5/17/50
22	647	660	50	2	0.037	0.937	0.01891	2.15	5X3X4/11/50
20	1029	1050	50	2	0.047	1.182	0.01189	3.42	5X5X3/14/50
18	1666	1700	50	2	0.059	1.504	0.00734	5.54	5X5X4/17/50
16	2573	2625	50	2	0.079	2.004	0.00475	8.80	5X5X3X3/12/50
14	4190	4275	50	2	0.101	2.558	0.00292	14.3	5X5X3X3/19/50
12	6615	6750	50	2	0.127	3.214	0.00185	22.6	5X5X5X3/18/50
10	10413	10625	50	2	0.159	4.032	0.00117	35.6	5X5X5X5/17/50

PLEASE NOTE: LITZ CONDUCTOR DIAMETERS CAN VARY BY SUPPLIER, PLEASE REQUEST A SPECIFICATION SHEET TO ENSURE THE DIAMETER WILL MEET YOUR APPLICATION REQUIREMENT(S). Due to fluctuations inherent in litz wire construction, all sizes are approximate. Please advise our Sales Department of any special requirements or tolerances.