TRANSMO™

TIW(TRIPLE INSULATED WIRE)

Product description:

Triple Insulated Wires "TIW" save insulation tape or barrier tape between the primary and secondary coils and contribute to realize size and cost reduction or high efficiency of transformers.

Product applications:

Applied Commercial Devices & Instruments
SMPS for units of Printer
Facsimile
Memory
Computer
Monitor
Inverter
Game Machine
Battery Charger for assemblies of Digital Camera
Portable Telephone
8mm VCR AC Adapter
Personal Computer

TECHNICAL DATA FOR LITZ TIW WIRE

Nominal Diameter	No of strands	Cross section of conductor	Resistance at 20 °C			Outer diameter for litz wire				Outer diameter for TIW wire			
						Grade1		Grade2		Grade1		Grade2	
			nom	min	max	min	max	min	max	min	max	min	max
[mm]	#	[mm²]	[Ohm/m]	[Ohm/m]	[Ohm/m]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
0.04	4	0.005	3.4688	3.1322	3.8051	0.11	0.123	0.125	0.135	0.31	0.34	0.325	0.352
0.04	8	0.0101	1.7344	1.5661	1.9026	0.156	0.173	0.177	0.191	0.356	0.39	0.377	0.408
0.04	10	0.0126	1.3875	1.2529	1.522	0.174	0.194	0.198	0.213	0.374	0.411	0.398	0.43
0.04	15	0.0188	0.925	0.8352	1.0147	0.215	0.239	0.244	0.264	0.415	0.456	0.444	0.481
0.04	20	0.0251	0.6938	0.6264	0.761	0.25	0.279	0.284	0.307	0.45	0.496	0.484	0.524
0.04	25	0.0314	0.555	0.5011	0.6088	0.282	0.314	0.32	0.346	0.482	0.531	0.52	0.563
0.04	30	0.0377	0.4625	0.4176	0.5073	0.308	0.344	0.351	0.379	0.508	0.561	0.551	0.596
0.04	35	0.044	0.3964	0.358	0.4349	0.333	0.371	0.379	0.409	0.533	0.588	0.579	0.626
0.04	45	0.0565	0.3083	0.2784	0.3382	0.378	0.421	0.429	0.464	0.578	0.638	0.629	0.681
0.04	60	0.0754	0.2358	0.2129	0.2586	0.436	0.486	0.496	0.535	0.636	0.703	0.696	0.752
0.04	75	0.0942	0.1886	0.1703	0.2069	0.488	0.543	0.554	0.599	0.688	0.76	0.754	0.816
0.04	90	0.1131	0.1572	0.1419	0.1724	0.534	0.595	0.607	0.656	0.734	0.812	0.807	0.873
0.04	105	0.1319	0.1347	0.1217	0.1478	0.577	0.643	0.656	0.708	0.777	0.86	0.856	0.925
0.04	180	0.2262	0.0801	0.0723	0.0879	0.756	0.841	0.859	0.927	0.956	1.058	1.059	1.144
0.04	225	0.2827	0.0641	0.0579	0.0703	0.845	0.941	0.96	1.037	1.045	1.158	1.16	1.254
0.04	270	0.3393	0.0534	0.0482	0.0586	0.925	1.031	1.052	1.136	1.125	1.248	1.252	1.353
0.04	600	0.754	0.024	0.0217	0.0264	1.38	1.536	1.568	1.693	1.58	1.753	1.768	1.91
0.04	800	1.0053	0.018	0.0163	0.0198	1.593	1.774	1.81	1.955	1.793	1.991	2.01	2.172
0.04	1000	1.2566	0.0144	0.013	0.0158	1.781	1.983	2.024	2.186	1.981	2.2	2.224	2.403
0.05	4	0.0079	2.22	2.0202	2.4198	0.138	0.15	0.153	0.165	0.338	0.367	0.353	0.382
0.05	8	0.0157	1.11	1.0101	1.2099	0.194	0.212	0.216	0.233	0.394	0.429	0.416	0.45
0.05	10	0.0196	0.888	0.8081	0.9679	0.217	0.237	0.241	0.261	0.417	0.454	0.441	0.478
0.05	15	0.0295	0.592	0.5387	0.6453	0.268	0.293	0.298	0.322	0.468	0.51	0.498	0.539
0.05	20	0.0393	0.444	0.404	0.484	0.312	0.341	0.346	0.375	0.512	0.558	0.546	0.592
0.05	25	0.0491	0.3552	0.3232	0.3872	0.352	0.384	0.39	0.422	0.552	0.601	0.59	0.639
0.05	30	0.0589	0.296	0.2694	0.3226	0.386	0.421	0.428	0.463	0.586	0.638	0.628	0.68
0.05	35	0.0687	0.2537	0.2309	0.2765	0.416	0.454	0.462	0.5	0.616	0.671	0.662	0.717
0.05	45	0.0884	0.1973	0.1796	0.2151	0.472	0.515	0.524	0.567	0.672	0.732	0.724	0.784
0.05	60	0.1178	0.1509	0.1373	0.1645	0.545	0.595	0.605	0.654	0.745	0.812	0.805	0.871
0.05	75	0.1473	0.1207	0.1099	0.1316	0.61	0.665	0.676	0.732	0.81	0.882	0.876	0.949
0.05	90	0.1767	0.1006	0.0915	0.1097	0.668	0.729	0.741	0.801	0.868	0.946	0.941	1.018
0.05	105	0.2062	0.0862	0.0785	0.094	0.721	0.787	0.8	0.866	0.921	1.004	1	1.083
0.05	180	0.3534	0.0513	0.0467	0.0559	0.945	1.03	1.048	1.133	1.145	1.247	1.248	1.35
0.05	225	0.4418	0.041	0.0373	0.0447	1.056	1.152	1.171	1.267	1.256	1.369	1.371	1.484
0.05	270	0.5301	0.0342	0.0311	0.0373	1.157	1.262	1.283	1.388	1.357	1.479	1.483	1.605
0.05	600	1.1781	0.0154	0.014	0.0168	1.724	1.881	1.913	2.069	1.924	2.098	2.113	2.286

0.05	800	1.5708	0.0115	0.0105	0.0126	1.991	2.172	2.208	2.389	2.191	2.389	2.408	2.606
0.05	1000	1.9635	0.0092	0.0084	0.0101	2.226	2.429	2.469	2.671	2.426	2.646	2.669	2.888
0.071	4	0.0158	1.101	1.0049	1.2106	0.195	0.21	0.213	0.228	0.395	0.427	0.413	0.445
0.071	8	0.0317	0.5505	0.5025	0.6053	0.276	0.297	0.301	0.322	0.476	0.514	0.501	0.539
0.071	10	0.0396	0.4404	0.402	0.4842	0.308	0.332	0.336	0.36	0.508	0.549	0.536	0.577
0.071	15	0.0594	0.2936	0.268	0.3228	0.381	0.41	0.415	0.444	0.581	0.627	0.615	0.661
0.071	20	0.0792	0.2202	0.201	0.2421	0.443	0.477	0.483	0.517	0.643	0.694	0.683	0.734
0.071	25	0.099	0.1762	0.1608	0.1937	0.499	0.538	0.544	0.582	0.699	0.755	0.744	0.799
0.071	30	0.1188	0.1468	0.134	0.1614	0.547	0.589	0.596	0.638	0.747	0.806	0.796	0.855
0.071	35	0.1386	0.1258	0.1148	0.1384	0.591	0.636	0.644	0.689	0.791	0.853	0.844	0.906
0.071	45	0.1782	0.0979	0.0893	0.1076	0.67	0.721	0.73	0.781	0.87	0.938	0.93	0.998
0.071	60	0.2376	0.0748	0.0683	0.0823	0.773	0.833	0.843	0.902	0.973	1.05	1.043	1.119
0.071	75	0.2969	0.0699	0.0546	0.0658	0.865	0.931	0.942	1.009	1.065	1.148	1.142	1.226
0.071	90	0.3563	0.0499	0.0455	0.0549	0.947	1.02	1.032	1.105	1.147	1.237	1.232	1.322
0.071	105	0.4157	0.0428	0.039	0.047	1.023	1.102	1.115	1.194	1.223	1.319	1.315	1.411
0.071	135	0.5345	0.0333	0.0304	0.0366	1.16	1.249	1.264	1.353	1.36	1.466	1.464	1.57
0.071	180	0.7127	0.0254	0.0232	0.028	1.339	1.443	1.46	1.563	1.539	1.66	1.66	1.78
0.071	225	0.8908	0.0203	0.0186	0.0224	1.498	1.613	1.632	1.747	1.698	1.83	1.832	1.964
0.071	270	1.069	0.017	0.0155	0.0186	1.641	1.767	1.788	1.914	1.841	1.984	1.988	2.131
0.071	600	2.3755	0.0076	0.007	0.0084	2.446	2.634	2.665	2.853	2.646	2.851	2.865	3.07
0.071	800	3.1674	0.0057	0.0052	0.0063	2.824	3.041	3.077	3.295	3.024	3.258	3.277	3.512
0.071	1000	3.9592	0.0046	0.0042	0.005	3.157	3.4	3.441	3.683	3.357	3.617	3.641	3.9
0.08	4	0.0201	0.8672	0.7988	0.9441	0.218	0.235	0.238	0.253	0.418	0.452	0.438	0.47
0.08	8	0.0402	0.4336	0.3994	0.4721	0.308	0.332	0.336	0.357	0.508	0.549	0.536	0.574
0.08	10	0.0503	0.3469	0.3195	0.3777	0.344	0.372	0.376	0.399	0.544	0.589	0.576	0.616
0.08	15	0.0754	0.2312	0.213	0.2518	0.425	0.459	0.464	0.493	0.625	0.676	0.664	0.71
0.08	20	0.1005	0.1734	0.1598	0.1888	0.494	0.534	0.54	0.574	0.694	0.751	0.74	0.791
0.08	25	0.1257	0.1387	0.1278	0.1511	0.557	0.602	0.608	0.646	0.757	0.819	0.808	0.863
0.08	30	0.1508	0.1156	0.1065	0.1259	0.61	0.659	0.666	0.708	0.81	0.876	0.866	0.925
0.08	35	0.1759	0.0991	0.0913	0.1079	0.659	0.712	0.719	0.765	0.859	0.929	0.919	0.982
0.08	45	0.2262	0.0771	0.071	0.0839	0.747	0.807	0.816	0.867	0.947	1.024	1.016	1.084
0.08	60	0.3016	0.0589	0.0543	0.0642	0.863	0.932	0.942	1.001	1.063	1.149	1.142	1.218
0.08	75	0.377	0.0472	0.0434	0.0513	0.964	1.042	1.053	1.12	1.164	1.259	1.253	1.337
0.08	90	0.4524	0.0393	0.0362	0.0428	1.056	1.141	1.154	1.226	1.256	1.358	1.354	1.443
0.08	105	0.5278	0.0337	0.031	0.0367	1.141	1.233	1.246	1.325	1.341	1.45	1.446	1.542
0.08	180	0.9048	0.02	0.0184	0.0218	1.494	1.614	1.631	1.734	1.694	1.831	1.831	1.951
0.08	225	1.131	0.016	0.0148	0.0174	1.67	1.805	1.824	1.939	1.87	2.022	2.024	2.156
0.08	270	1.3572	0.0134	0.0123	0.0145	1.83	1.977	1.998	2.124	2.03	2.194	2.198	2.341
0.08	600	3.0159	0.006	0.0055	0.0065	2.728	2.947	2.979	3.167	2.928	3.164	3.179	3.384
0.08	800	4.0212	0.0045	0.0042	0.0049	3.15	3.403	3.439	3.657	3.35	3.62	3.639	3.874
0.08	1000	5.0265	0.0036	0.0033	0.0039	3.522	3.805	3.845	4.088	3.722	4.022	4.045	4.305
0.1	4	0.0314	0.555	0.5187	0.5949	0.27	0.293	0.295	0.313	0.47	0.51	0.495	0.53
0.1	8	0.0628	0.2775	0.2594	0.2975	0.382	0.414	0.417	0.442	0.582	0.631	0.617	0.659
0.1	10	0.0785	0.222	0.2075	0.238	0.427	0.462	0.466	0.494	0.627	0.679	0.666	0.711
0.1	15	0.1178	0.148	0.1383	0.1587	0.527	0.571	0.576	0.61	0.727	0.788	0.776	0.827
0.1	20	0.1571	0.111	0.1037	0.119	0.613	0.665	0.67	0.71	0.813	0.882	0.87	0.927
0.1	25	0.1963	0.0888	0.083	0.0952	0.691	0.749	0.755	0.8	0.891	0.966	0.955	1.017
0.1	30	0.2356	0.074	0.0692	0.0793	0.757	0.82	0.827	0.876	0.957	1.037	1.027	1.093
0.1	35	0.2749	0.0634	0.0593	0.068	0.818	0.886	0.894	0.947	1.018	1.103	1.094	1.164
0.1	40	0.3142	0.0555	0.0519	0.0595	0.874	0.947	0.955	1.012	1.074	1.164	1.155	1.229
0.1	45	0.3534	0.0493	0.0461	0.0529	0.927	1.005	1.013	1.073	1.127	1.222	1.213	1.29
0.1	60	0.4712	0.0377	0.0353	0.0404	1.071	1.16	1.17	1.239	1.271	1.377	1.37	1.456
0.1	75	0.589	0.0302	0.0282	0.0324	1.197	1.297	1.308	1.386	1.397	1.514	1.508	1.603
0.1	90	0.7069	0.0252	0.0235	0.027	1.311	1.421	1.433	1.518	1.511	1.638	1.633	1.735
0.1	105	0.8247	0.0216	0.0201	0.0231	1.417	1.535	1.548	1.64	1.617	1.752	1.748	1.857

0.1	120	0.9425	0.0189	0.0176	0.0202	1.514	1.641	1.655	1.753	1.714	1.858	1.855	1.97
0.1	160	1.2566	0.0141	0.0132	0.0152	1.749	1.894	1.911	2.024	1.949	2.111	2.111	2.241
0.1	180	1.4137	0.0126	0.0118	0.0135	1.855	2.009	2.026	2.147	2.055	2.226	2.226	2.364
0.1	200	1.5708	0.0113	0.0106	0.0121	1.955	2.118	2.136	2.263	2.155	2.335	2.336	2.48
0.1	225	1.7671	0.0103	0.0096	0.011	2.074	2.246	2.266	2.4	2.274	2.463	2.466	2.617
0.1	270	2.1206	0.0085	0.008	0.0092	2.272	2.461	2.482	2.629	2.472	2.678	2.682	2.846
0.1	600	4.7124	0.0038	0.0036	0.0041	3.386	3.668	3.7	3.919	3.586	3.885	3.9	4.136
0.1	800	6.2832	0.0029	0.0027	0.0031	3.91	4.236	4.272	4.525	4.11	4.453	4.472	4.742

TECHNICAL DATA FOR TIW WIRE

Nominal conductor diameter (mm)	**Tolerance** (mm)	**Typical** overall diameter (mm)	**Maximum** overall diameter (mm)	**Maximum** conductor resistance (Ω/km)	**Unit Weight** (kg/km)
0.2	±0.008	0.4	0.417	607.6	0.398
0.21	±0.008	0.41	0.427	549	0.431
0.22	±0.008	0.42	0.437	498.4	0.465
0.23	±0.008	0.43	0.447	454.5	0.5
0.24	±0.008	0.44	0.457	416.2	0.537
0.25	±0.008	0.45	0.467	382.5	0.575
0.26	±0.010	0.46	0.477	358.4	0.616
0.27	±0.010	0.47	0.487	331.4	0.656
0.28	±0.010	0.48	0.497	307.3	0.697
0.29	±0.010	0.49	0.507	285.7	0.742
0.3	±0.010	0.5	0.52	262.9	0.786
0.32	±0.010	0.52	0.54	230.3	0.882
0.35	±0.010	0.55	0.57	191.2	1.033
0.37	±0.010	0.57	0.59	170.6	1.143
0.4	±0.010	0.6	0.625	145.3	1.316
0.45	±0.010	0.65	0.675	114.2	1.633
0.5	±0.010	0.7	0.725	91.43	1.985
0.55	±0.020	0.75	0.775	78.15	2.371
0.6	±0.020	0.8	0.825	65.26	2.793
0.65	±0.020	0.85	0.875	55.31	3.249
0.7	±0.020	0.9	0.925	47.47	3.741
0.75	±0.020	0.95	0.975	41.19	4.267
0.8	±0.020	1	1.03	36.08	4.829
0.85	±0.020	1.05	1.08	31.87	5.425
0.9	±0.020	1.1	1.13	28.35	6.056
0.95	±0.020	1.15	1.18	25.38	6.721
1	±0.030	1.2	1.23	23.33	7.422