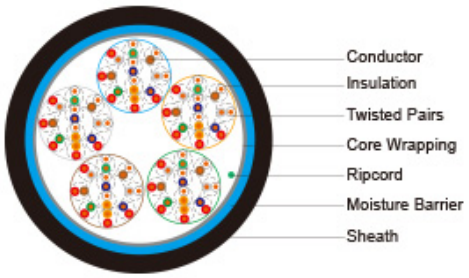
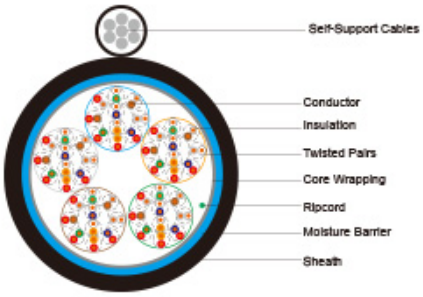
Solid PE Insulated & LAP Sheathed Air Core Cables to IEC 60708





Application	The cables are designed for use in access or trunk networks, from telephone exchange to subscriber area. The cables are suitable for installation in ducts, direct burial in the ground and also for aerial installation with integral suspension strand. An armoured option is offered for direct burial installations. A figure-8 self support option is offered for aerial installation
Standards	IEC 60708
Conductors:	Solid annealed bare copper, 0.4/0.5/0.6/0.8mm as per BS 6360/IEC 60228 Class 1
Insulation:	Solid polyethylene as per IEC 60708/BS EN 50290-2-23/BS 6234/ASTM D 1248/NFC 32-060/VDE 0207
Twisted Pairs:	Insulated conductors are twisted into pairs with varying lay length to minimize crosstalk
Cabling Element:	Pairs or Quads
Cable Core Assembly:	Cables with 100 pairs or less are composed of 10-pair sub-units; cables with over 100 pairs are composed of 50 or 100-pair units. Any extra pairs form a separate unit. Units are identified by colour coded binders. Standard construction is per IEC 60708 in Cable Make Up Diagram
Core Wrapping:	One or more non-hygroscopic polyester tapes are helically or longitudinally laid with an overlap. These tapes furnish thermal, mechanical as well as high dielectric protection between shielding and individual conductors
Moisture Barrier:	A layer of aluminium tape (0.15mm) coated with PE-copolymer on one or both sides is applied longitudinally with overlap over the cable core to provide electrical shielding coverage and ensure a barrier against water vapor. In cables with more than 200 pairs, the aluminum tape may be corrugated for improved cable flexibility
Sheath:	Black low density polyethylene as per BS 6234/IEC 60708/ASTM D 1248, being able to withstand exposure to sunlight, temperature variations, ground chemicals and other environmental contaminants
Ripcord:	Ripcord may be provided for slitting the sheath longitudinally to facilitate its removal
Spare Pairs (optional):	Spare pairs may be incorporated in large pair cables
Continuity Wire (optional):	Tinned copper drain wire may be longitudinally laid to ensure electrical continuity of the screen
Optional Construction	

Armoured Cable:	Steel wire armour or corrugated steel tape armour is applied over an optional inner polyethylene sheath.For steel tape version, the steel tape is 0.2/0.5mm thick, being coated with a PE copolymer and applied with an overlap. An outer polyethylene sheath is applied over the armour
Self-Support Cables	Per CW 1252. A 7-strand galvanized steel strand is used as support wire. Black polyethylene sheath covers both core and support wire in a figure-8 construction

Electrical Properties

Nominal Conductor Diameter	mm	0.4	0.5	0.6	0.8
Conductor Gauge Size	AWG	26	24	-	20
Conductor Size	mm2	0.126	0.196	0.283	0.5
Maximum Average Conductor Resistance @20°C	Ω/km	143	91	63	34.6
Minimum Insulation Resistance @500V DC	MΩ.km	5000	5000	5000	5000
Maximum Average Mutual Capacitance @800Hz	nF/km	53	53	56	59
Maximum Individual Mutual Capacitance @800Hz (for 99% cases)	nF/km	60	60	60	64
Maximum Individual Capacitance Unbalance @800Hz pair-to-pair	pF/500m	250	250	250	160
Maximum Individual Capacitance Unbalance @800Hz pair-to-pair (for 95% cases)	pF/500m	150	150	150	100
Maximum Individual Capacitance Unbalance @800Hz pair-to-ground	pF/500m	1700	1700	1700	1700
Maximum Individual Capacitance Unbalance @800Hz pair-to-ground (for 95% cases)	pF/500m	1000	1000	1000	1000
Maximum Conductor Loop Resistance @20°C	Ω/km	300	192	130	73
Impedance @1KHz	Ω	994	796	665	500
Impedance @100KHz	Ω	147	134	127	124
Impedance @512KHz	Ω	120	118	117.5	116.5
Impedance @1MHz	Ω	117	115	114.5	113.5
Maximum Average Attenuation @0.8KHz	dB/km	1.64	1.3	1.1	0.9
Maximum Average Attenuation @1KHz	dB/km	1.68	1.35	1.14	0.93
Maximum Average Attenuation @3KHz	dB/km	3.18	2.52	2.3	1.74

Maximum Average Attenuation @150KH	dB/km	11.4	8.3	7.2	5.7
Maximum Average Attenuation @772KHz	dB/km	24.3	19.4	17.4	13.1
Maximum AverageAttenuation @1000KHz	dB/km	27.1	21.4	18.5	13.7
Dielectric Strength					
Conductor to Conductor (1min)	V DC	500	500	500	500
Conductor to Screen (1min)	V DC	1000	1000	1000	1000
Nominal Insulation Thickness	mm	0.175	0.2	0.25	0.3
Nominal Insulated Conductor Diameter	mm	0.75	0.9	1.1	1.4

Mechanical and Thermal Properties

Temperature range during operation (fixed state): -30°C – +70°C

Temperature range during installation (mobile state): -20°C – +50°C

Minimum bending radius: 10 x Overall Diameter (unarmoured cables);15 x Overall Diameter (armoured cables)

Colour Code

Standard colour code is per IEC 60708 given in Colour Code Chart

Dimensions And Weight

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Cable Code	Number of Pairs	Nominal Sheath Thickness mm	Nominal Overall Diameter mm	Nominal Weight kg/km
0.4mm Conductor, 0.75mm Insulated Wire				
TP708-2Y(L)2Y-10P04	10	1.5	9	71
TP708-2Y(L)2Y-20P04	20	1.5	10	107
TP708-2Y(L)2Y-30P04	30	1.5	11	143
TP708-2Y(L)2Y-50P04	50	1.5	13	211
TP708-2Y(L)2Y-70P04	70	1.5	15	278
TP708-2Y(L)2Y-100P04	100	1.5	17	380
TP708-2Y(L)2Y-150P04	150	1.5	21	548
TP708-2Y(L)2Y-200P04	200	1.8	23	708
TP708-2Y(L)2Y-300P04	300	1.8	28	1034
TP708-2Y(L)2Y-400P04	400	1.8	31	1358
TP708-2Y(L)2Y-500P04	500	2	35	1703
TP708-2Y(L)2Y-600P04	600	2	38	2016
TP708-2Y(L)2Y-800P04	800	2.5	43	2639
TP708-2Y(L)2Y-900P04	900	2.5	46	2961

TP708-2Y(L)2Y-1000P04	1000	2.5	48	3264
TP708-2Y(L)2Y-1200P04	1200	2.8	52	3873
TP708-2Y(L)2Y-1500P04	1500	2.8	58	4819
TP708-2Y(L)2Y-1800P04	1800	3.2	63	5777
TP708-2Y(L)2Y-2100P04	2100	3.2	68	6731
TP708-2Y(L)2Y-2400P04	2400	3.5	72	7645
TP708-2Y(L)2Y-2700P04	2700	3.5	76	8556
TP708-2Y(L)2Y-3000P04	3000	3.5	80	9466