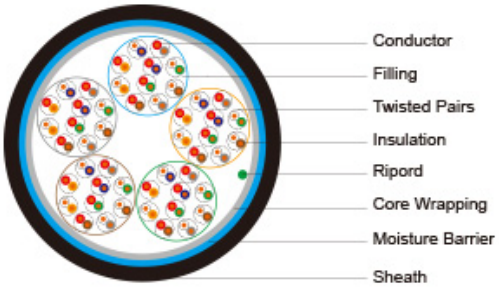
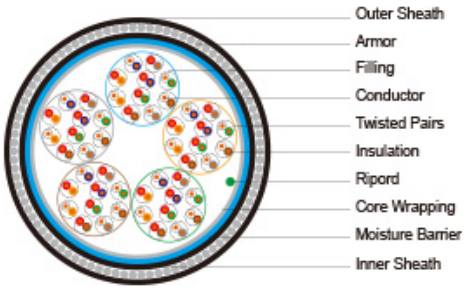
Cellular PE Insulated & PE Sheathed Jelly Filled Cables to CW1128 & CW 1128/1179





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. Jelly filled construction is for subscriber's cables installed underground or along the edge of pavement. An armoured option is offered for direct burial installations. A figure-8 self support option is offered for aerial installation.
Standards	CW 1128 (Unscreened jelly filled cables) CW 1128/1179 (Screened jelly filled cables) CW 1128/1252 (Self supporting jelly filled cables) CW 1128/1198 (Steel wire armoured jelly filled cables) CW 1128/1179/1198 (Steel wire armoured screened jelly filled cables)
Construction	
Conductors:	Solid annealed bare copper 0.4/0.5/0.6/0.63/0.9 mm as per class 1 of BS 6360/IEC 60228
Insulation:	Cellular polyethylene as per BS 6234/BS EN 50290-2-23/IEC 60708
Twisted Pairs:	Insulated conductors are twisted into pairs with varying lay length to minimize crosstalk
Cabling Element:	Twisted Pairs
Cable Core Assembly:	Cables are composed of 10-pair units. Any extra pairs form a separate unit. Units are identified by colour coded binders. Standard construction is per CW 1128 given in Cable Make Up Chart below
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:	Laminated sheath made of an aluminium tape (0.15mm) coated with PE-copolymer on one or both sides is applied longitudinally with overlap over the cable core to provide 100% electrical shielding coverage and ensures a barrier against water vapor
Inner Bedding (for armoured cables):	Black polyethylene compound
Armour (for armoured cables):	Galvanized steel wire armour is applied over an inner polyethylene sheath

Filling:	The cable core interstices are filled with petroleum jelly to avoid longitudinal water penetration within the cable. The water resistant filling compound is applied to the air space between non-hygroscopic tape and shield, shield and sheath within the cable core
Sheath:	Black low density polyethylene as per BS 6234/IEC 60708/ASTM D 1248 which is compounded 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 for 200 and larger pair cables
Continuity Wire (optional):	One tinned copper drain wire may be longitudinally laid to ensure electrical continuity of the screen

Electrical Properties

Nominal Conductor Diameter	mm	0.4	0.5	0.6	0.63	0.9
Conductor Gauge Size	AWG	26	24	-	22	19
Conductor Size	mm2	0.126	0.196	0.283	0.312	0.636
Maximum Average Conductor Resistance @20°C	Ω/km	143	91	63	58	28
Minimum Insulation Resistance @500V DC	MΩ.km	1500	1500	1500	1500	1500
Maximum Average Mutual Capacitance @800Hz*	nF/km	56	56	42	56	59
Maximum Individual Mutual Capacitance @800Hz (for 99% cases)	nF/km	64	64	46	64	65
Maximum Individual Capacitance Unbalance @800Hz pair-to-pair	pF/500m	275	275	275	275	275
Maximum Conductor Loop Resistance @20°C	Ω/km	300	192	130	114	60
Impedance @1KHz	Ω	994	796	665	660	445
Impedance @100KHz	Ω	147	134	127	125	122
Impedance @512KHz	Ω	120	118	117.5	117	116
Impedance @1MHz	Ω	117	115	114.5	114	113
Maximum Average Attenuation @0.8KHz	dB/km	1.64	1.3	1.1	1.04	0.74
Maximum Average Attenuation @1KHz	dB/km	1.68	1.35	1.14	1.08	0.76

Maximum Average Attenuation @3KHz	dB/km	3.18	2.52	2.3	2.01	1.42
Maximum Average Attenuation @150KHz	dB/km	11.4	8.3	7.2	6.2	4.4
Maximum Average Attenuation @772KHz	dB/km	24.3	19.4	17.4	15.4	10.8
Maximum Average Attenuation @1000KHz	dB/km	27.1	21.4	18.5	17.5	12.8
Dielectric Strength Conductor to Conductor (3secs)	V DC	500	500	500	500	500
Nominal Insulation Thickness	mm	0.175	0.2	0.375	0.26	0.3
Nominal Insulated Conductor Diameter	mm	0.75	0.9	1.35	1.15	1.5

Remarks: For screened cables of 20 pairs or less the maximum average mutual capacitance values shall not apply and the
maximum for 99% shall be increased by 3nF.

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 CW 1128 given in Colour Code Chart

Cabling Element No.	a-wire	b-wire
1	WHITE	BLUE
2	WHITE	ORANGE
3	WHITE	GREEN
4	WHITE	BROWN
5	WHITE	GREY
6	RED	BLUE
7	RED	ORANGE
8	RED	GREEN
9	RED	BROWN
10	RED	GREY

Unit Number	Binder Colour
1	BLUE
2	ORANGE
3	GREEN
4	BROWN
5	GREY

6	WHITE
7	RED
8	BLACK
9	YELLOW
10	VIOLET

Cable Size	No. and Pair Size of Units in Centre and 1st Layer	
	Centre	1st Layer
2 pairs	1 X 2	
5 pairs	1 X 5	
10 pairs	1 X 10	
20 pairs	4 X 5	
	2 X 10	
50 pairs	5 X 10	
	1 X 10	4 X 10
100 pairs	2 X 10	8 X 10
	3 X 10	7 X 10
	4 X 5	8 X 10

Note:
The two pair cable is manufactured as a quad, coloured Orange, Green, White, and Black in order of rotation