WORLD STANDARD PERFORMANCE

SCC's metallic telecommunication cables are designed for optimum performance in some of the world's toughest environmental conditions. All cables outlined in this brochure are manufactured with high grade materials to international standards such as IEC, ASTM, REA, BS, SA-MOPTT MAT, etc., and are all fully compliant with the stringent electrical, mechanical, physical and performance requirements demanded of them.

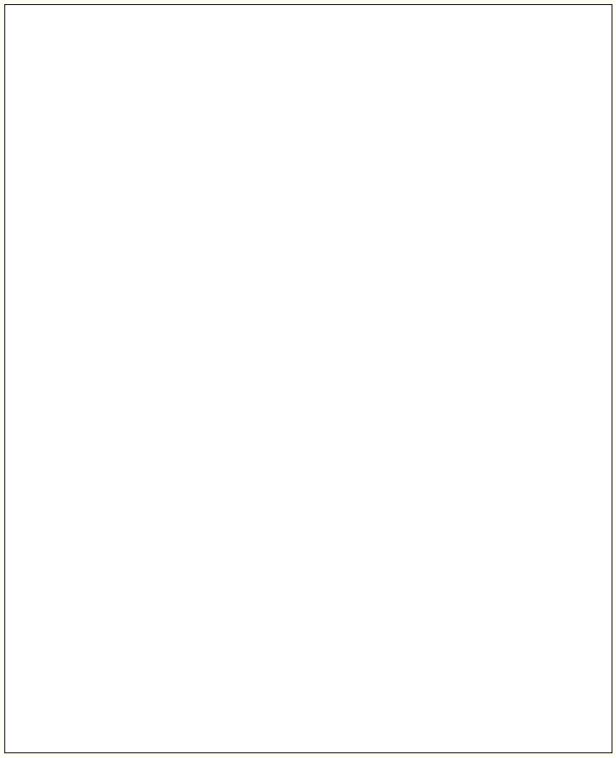
SCC is continually evolving new processes and techniques to enhance cable performance. This policy has resulted in a number of specific features to maximise cable reliability and durability across the product range.

WATERPROOF JELLY FORMULATION

SCC has adopted a special jelly compound for filled telephone cables, specifically formulated for the high temperature environment of the Middle East.

MOISTURE BARRIER SHEATHS

SCC underground filled cables and buried service wires both feature special moisture resistant sheaths. Aluminium polymer laminated tape, coated on both sides with polyolefine, is applied longitudinally with an overlap in order to provide a 'moisture barrier' under the sheath. The special adhesive polyolefine coating is fused to and strongly bonded to the overlaying weather-resistant polyethylene sheath.



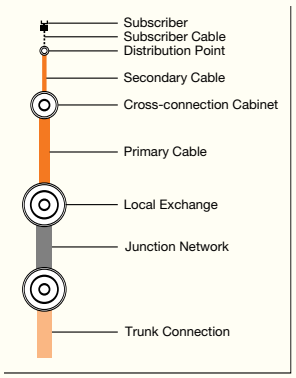
BURIED CABLES - ADDED PROTECTION

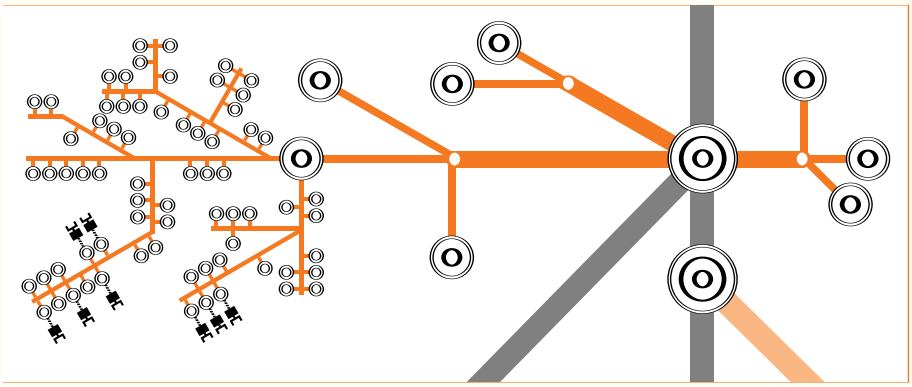
Buried cables are particularly vulnerable to water entry after installation. Water penetration typically occurs through non-watertight splices, or following attacks by burrowing animals or damage by excavation machinery.

Even small amounts of water in a telephone cable can adversely affect cable performance. Water in a telephone cable increases the mutual capacitance which in turn increases the transmission losses.

Depending on the application, SCC can offer extra protection from moisture. In such cases, SCC utilises a special water blocking (swellable) tape to provide extra protection against longitudinal water penetration for all polyethylene insulated cables. This tape is then reinforced with a tough, weather-resistant, polyethylene sheath making SCC PE insulated cables perfectly suitable for direct burial applications.

SCC PE or PVC insulated cables can also be provided with additional steel armour for added protection against physical attack.





CONTENTS

METALLIC CABLE PRODUCT CODE STRUCTURE

ALPHABETICAL PART OF PRODUCT CODE STRUCTURE

1	2	3	4	5	6	7	8	9	-	-	n x p x d
1ST PART Fixed				2ND PART Interchangeable Unlimited							3RD PART Cable Size
CABLE DESIGN				MATERIAL APPLICATION							No. X PAIR X DIA.

1 CONDUCTOR

- **P** Plain Ann. Cu Solid Cond.
- **T** Tinned Ann. Cu Solid Cond.
- **D** Hard Drawn Cu Solid Cond.
- **C** Copper Clad Steel Wire

2 INSULATION

Jelly filled	Unfilled
A	**U** PE Solid
K	**Y** PE Foam
E	**I** PE Foam + Skin
V	**O** PVC
X	**X** Non-Standard

3 CAPACITANCE

- **B** 40 nF/KM
- **F** 42 nF/KM
- **N** 44 nF/KM
- **S** 52 nF/KM
- **T** 55 nF/KM
- **M** 75 nF/KM
- **X** Non-Standard

4 STRANDING

- **C** Conventional Stranding (Group)
- **R** Cross Stranding (Group)
- **J** Individual Pairs Concentric Layer
- **Z** S-Z Stranding (Group)
- **Q** Quad Stranding
- **O** Others (Parallel) (Twisted Pair)

5 SCREEN MATERIALS

- **A** Polymer Coated Aluminium Tape
- **C** Fully Annealed Copper Tape
- **S** Fully Annealed Copper Clad Stainless Steel Tape
- **X** Non-Standard

6 SHEATHING MATERIALS

- **L** Low Density Polyethylene (LDPE)
- **M** Medium Density Polyethylene (MDPE)
- **H** High Density Polyethylene (HDPE)
- **V** Polyvinyl Chloride (PVC)
- **F** Low Smoke Halogen-Free (LSHF)
- **N** Nylon Jacket

7 ARMOURING MATERIALS

- **G** Galvanised Steel Tape
- **Z** Polymer Coated Steel Tape
- **W** Galvanised Steel Wire
- **N** Non-Standard

8 OTHER MATERIALS

- **O** Stranded Steel Wires Core Messenger (SS Cable)
- **I** Insulated Copper Wires
- **P** Insulated Copper Pairs

EXAMPLE

PENRALGL

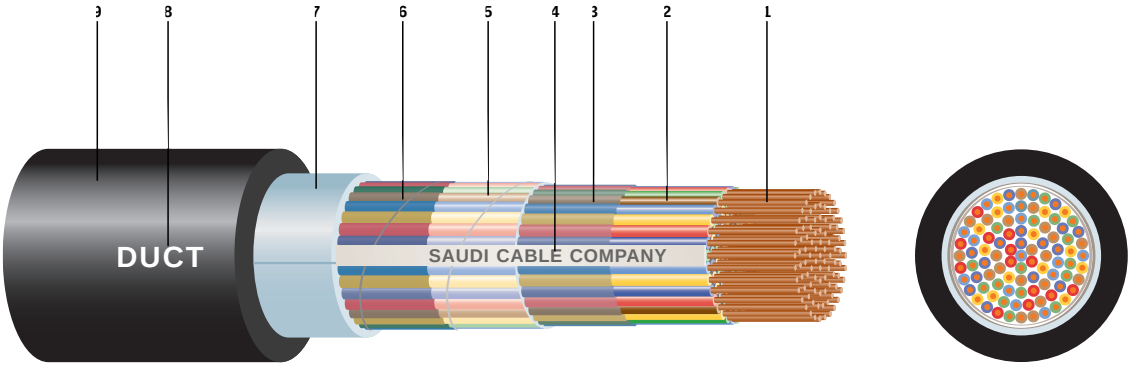
Plain annealed Copper conductor, Foam-skin, Jelly filled, Cross-stranded, Polymer coated aluminium tape screen, LDPE Jacket, Galvanised double steel tape armour, LDPE outer jacket, 44 nF/KM average mutual capacitance.

UNDERGROUND (DUCT) FILLED LOCAL TELEPHONE CABLE

PRODUCT CODE PENRAL/PENZAL

TECH. SPEC. NO. TS - 18000

1. Copper Conductor
2. Polyethylene (Foam Skin) Insulation
3. Filling Compound
4. Identification Tape
5. Wrapping Tape
6. Flooding Compound
7. Aluminium Moisture Barrier
8. Polyethylene Sheath, Black
9. Sheath Marking



APPLICATION

Polyethylene insulated water proof (jelly filled) cables are generally used for primary and secondary underground distribution networks. The cables are generally hauled in ducts.

DESCRIPTION

Plain annealed copper solid conductor, high density cellular (foam-skin) polyethylene insulated, paired, unit type, jelly filled, screened and polyethylene sheathed, duct local telephone cable (CEF) Complying with MOPTT MAT-1101 specification.

DIMENSIONAL DATA & PACKING

SCC-T Product No.	Pair Count x Size (No. x mm)	Approx. Outer Dia. (mm)	Approx. Gross Wt. (kgs)	Shipping Length (+5/-0m)	Reel Size (Flange Dia.) (mm)
100047	10 x 2 x 0.40	9.5	118	1,000	800
100048	20 x 2 x 0.40	11.5	162	1,000	800
101607	30 x 2 x 0.40	13.0	224	1,000	900
100049	50 x 2 x 0.40	15.0	318	1,000	1,000
100050	100 x 2 x 0.40	19.5	550	1,000	1,100
100130	150 x 2 x 0.40	23.5	790	1,000	1,300
100051	200 x 2 x 0.40	26.5	1,018	1,000	1,500
101608	250 x 2 x 0.40	29.0	1,214	1,000	1,500
100052	300 x 2 x 0.40	31.0	1,450	1,000	1,600
100053	600 x 2 x 0.40	42.0	1,698	600	1,700
100054	900 x 2 x 0.40	51.0	2,502	600	2,000
100055	1,200 x 2 x 0.40	58.0	1,650	300	1,800
100056	1,500 x 2 x 0.40	64.5	2,095	300	2,000
100057	1,800 x 2 x 0.40	70.0	2,478	300	2,100
101796	2,400 x 2 x 0.40	80.5	3,214	300	2,300
100058	10 x 2 x 0.50	11.0	150	1,000	800
100059	20 x 2 x 0.50	13.0	232	1,000	900
100131	30 x 2 x 0.50	15.0	302	1,000	1,000
100060	50 x 2 x 0.50	18.0	460	1,000	1,100
100132	70 x 2 x 0.50	20.0	590	1,000	1,200
100061	100 x 2 x 0.50	24.0	814	1,000	1,300
100133	150 x 2 x 0.50	28.0	1,150	1,000	1,500
100062	200 x 2 x 0.50	32.0	1,562	1,000	1,700
100063	300 x 2 x 0.50	38.0	1,328	600	1,600
100134	400 x 2 x 0.50	43.0	1,756	600	1,800

Continued.....

PRODUCT CODE PENRAL/PENZAL

TECH. SPEC. NO. TS - 18000

SCC-T Product No.	Pair Count x Size (No. x mm)	Approx. Outer Dia. (mm)	Approx. Gross Wt. (kgs)	Shipping Length (+5/-0m)	Reel Size (Flange Dia.) (mm)
100064	600 x 2 x 0.50	52.0	2,638	600	2,100
101443	800 x 2 x 0.50	59.5	1,774	300	1,900
100065	900 x 2 x 0.50	63.0	1,956	300	1,900
100066	1,200 x 2 x 0.50	72.5	2,580	300	2,100
101792	1,500 x 2 x 0.50	80.0	3,150	300	2,300
103387	1,800 x 2 x 0.50	87.0	3,744	300	2,400
101325	10 x 2 x 0.65	13.0	220	1,000	900
101326	20 x 2 x 0.65	16.0	364	1,000	1,100
101327	30 x 2 x 0.65	18.5	480	1,000	1,100
101328	50 x 2 x 0.65	23.5	740	1,000	1,300
101329	100 x 2 x 0.65	31.0	810	600	1,300
101393	150 x 2 x 0.65	37.0	1,220	600	1,600
101330	200 x 2 x 0.65	42.5	1,612	600	1,800
101331	300 x 2 x 0.65	51.0	2,366	600	2,000
101988	400 x 2 x 0.65	58.0	3,096	600	2,300
101332	600 x 2 x 0.65	70.0	2,344	300	2,100
101333	900 x 2 x 0.65	85.0	3,420	300	2,400
101334	1,200 x 2 x 0.65	96.0	4,565	300	2,500
101301	10 x 2 x 0.90	16.0	360	1,000	1,100
101302	20 x 2 x 0.90	20.5	375	600	1,100
101842	30 x 2 x 0.90	25.0	524	600	1,200
101303	50 x 2 x 0.90	31.0	786	600	1,300
101304	100 x 2 x 0.90	42.0	1,554	600	1,700
101305	150 x 2 x 0.90	51.0	2,304	600	2,000
101306	200 x 2 x 0.90	58.0	1,518	300	1,800
101307	300 x 2 x 0.90	70.5	2,298	300	2,100

Other sizes and specifications are available upon request.

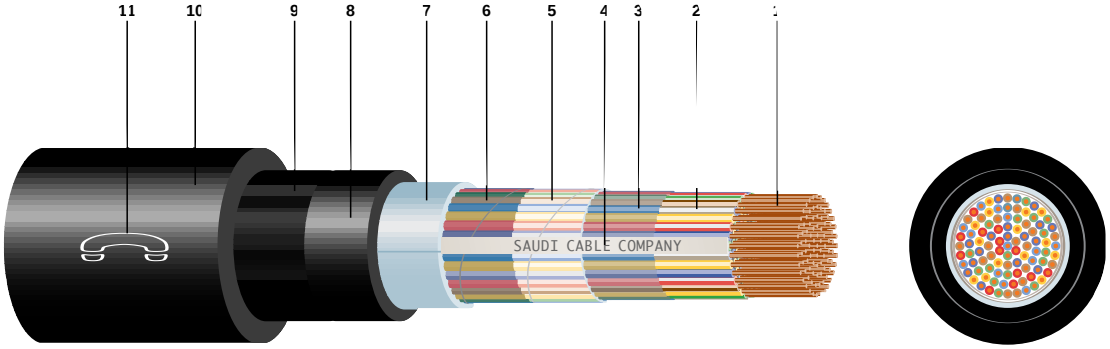
*The information given in this leaflet is correct to the best of our knowledge and given in good faith, however the right is reserved to make alterations without prior notice.

UNDERGROUND (DIRECT BURIED) FILLED LOCAL TELEPHONE CABLE

PRODUCT CODE PENRALL/PENZALL

TECH. SPEC. NO. TS - 18000

1. Copper Conductor
2. Polyethylene (Foam Skin) Insulation
3. Filling Compound
4. Identification Tape
5. Wrapping Tape
6. Flooding Compound
7. Aluminium Moisture Barrier
8. Inner Polyethylene Sheath, Black
9. Flooding Compound
10. Outer Polyethylene Sheath, Black
11. Sheath Marking



APPLICATION

Polyethylene insulated water proof (jelly filled) cables are generally used for primary and secondary underground distribution networks. The cables are for direct burial applications.

DESCRIPTION

Plain annealed copper solid conductor, high density cellular (foam-skin) polyethylene insulated, paired, unit type, jelly filled, screened and polyethylene (inner & outer) sheathed direct buried local telephone cable (CEFE) Complying with MOPTT MAT-1101 specification.

DIMENSIONAL DATA & PACKING

SCC-T Product No.	Pair Count x Size (No. x mm)	Approx. Outer Dia. (mm)	Approx. Gross Wt. (kgs)	Shipping Length (+5/-0m)	Reel Size (Flange Dia.) (mm)
100081	10 x 2 x 0.40	13.0	190	1,000	900
100082	20 x 2 x 0.40	14.5	246	1,000	1,000
100138	30 x 2 x 0.40	16.0	324	1,000	1,100
100083	50 x 2 x 0.40	18.5	424	1,000	1,100
100084	100 x 2 x 0.40	23.0	674	1,000	1,300
100085	200 x 2 x 0.40	30.0	1,200	1,000	1,600
100086	300 x 2 x 0.40	34.5	1,682	1,000	1,800
100139	400 x 2 x 0.40	38.5	2,198	1,000	2,000
100087	600 x 2 x 0.40	45.5	1,830	600	1,800
100088	900 x 2 x 0.40	54.5	2,730	600	2,200
100089	1,200 x 2 x 0.40	61.5	1,804	300	1,900
100090	1,500 x 2 x 0.40	68.0	2,192	300	2,000
100091	1,800 x 2 x 0.40	73.5	2,585	300	2,100
103109	2,400 x 2 x 0.40	83.5	3,335	300	2,300
100092	10 x 2 x 0.50	14.5	232	1,000	1,000
100093	20 x 2 x 0.50	16.5	332	1,000	1,100
100140	30 x 2 x 0.50	18.5	410	1,000	1,100
100094	50 x 2 x 0.50	21.0	564	1,000	1,200
100095	100 x 2 x 0.50	27.5	968	1,000	1,500
100096	200 x 2 x 0.50	35.0	1,732	1,000	1,800
100097	300 x 2 x 0.50	41.5	1,510	600	1,700
100098	600 x 2 x 0.50	55.5	2,818	600	2,200
100099	900 x 2 x 0.50	66.5	2,088	300	2,000
100100	1,200 x 2 x 0.50	76.0	2,690	300	2,100
100902	1,500 x 2 x 0.50	83.5	3,274	300	2,300

Continued.....

PRODUCT CODE PENRALL/PENZALL

TECH. SPEC. NO. TS - 18000

SCC-T Product No.	Pair Count x Size (No. x mm)	Approx. Outer Dia. (mm)	Approx. Gross Wt. (kgs)	Shipping Length (+5/-0m)	Reel Size (Flange Dia.) (mm)
101335	10 x 2 x 0.65	16.0	318	1,000	1,100
101336	20 x 2 x 0.65	19.5	460	1,000	1,200
101337	30 x 2 x 0.65	22.0	598	1,000	1,300
101338	50 x 2 x 0.65	26.5	890	1,000	1,500
101339	100 x 2 x 0.65	34.5	935	600	1,500
101340	150 x 2 x 0.65	40.5	1,398	600	1,700
101341	200 x 2 x 0.65	45.5	1,806	600	1,900
101342	300 x 2 x 0.65	54.5	2,575	600	2,100
101343	400 x 2 x 0.65	61.5	3,352	600	2,400
101344	600 x 2 x 0.65	73.5	2,450	300	2,100
101345	900 x 2 x 0.65	88.0	3,350	300	2,400
101308	10 x 2 x 0.90	19.5	454	1,000	1,200
101309	20 x 2 x 0.90	24.0	442	600	1,100
101310	30 x 2 x 0.90	28.5	615	600	1,300
101311	50 x 2 x 0.90	34.0	910	600	1,500
101312	100 x 2 x 0.90	45.0	1,688	600	1,800
101313	150 x 2 x 0.90	54.0	2,514	600	2,100
101314	200 x 2 x 0.90	61.0	1,672	300	1,900
101082	300 x 2 x 0.90	73.5	2,404	300	2,100

Other sizes and specifications are available upon request.

*The information given in this leaflet is correct to the best of our knowledge and given in good faith, however the right is reserved to make alterations without prior notice.

1 Conductor Resistance - at 20°C (Ohms/Km)

Conductor size (mm)	Maximum DC Resistance Average	Individual
0.40	144	150
0.50	92	96
0.65	54	57
0.90	28	30

1.1 Resistance Unbalance

Conductor size (mm)	Maximum Resistance Unbalance (%) Average	Individual
0.40	1.00	2.5
0.50	0.75	2.5
0.65	0.75	2.0
0.90	0.75	2.0

Percent unbalance shall be calculated by means of the following formula.

$$R\% = \frac{Rmax. - Rmin.}{Rmax. + Rmin.} \times 100$$

2 Insulation Resistance - at 20°C

The I.R. shall be not less than 2,500 mega-ohms km.

3 Mutual Capacitance - at 1,000 ± 200 Hz (nF/Km)

Nominal Average : 44 ± 2
Maximum Individual : 50

4 Capacitance Unbalance - at 1,000 ± 200 Hz

4.1 Pair to Pair - Within a Sub-unit (pF/500M)

Maximum Average : 25
Maximum Individual : 150

4.2 Pair to Pair - Between Adjacent Sub-Units or Units (pF/500 M)

Maximum Average : 17
Maximum Individual : 55

4.3 Pair to Earth (pF/Km)

Maximum Average : 500
Maximum Individual : 2,500

5 Dielectric strength - DC Volts (for 3 sec. min.)

Conductor size (mm)	Between Conductor	Conductor to Shield
0.40	2,400	5,000
0.50	2,400	5,000
0.65	3,000	10,000
0.90	3,600	10,000

6 Near End Crosstalk (NEXT) Limits

The pair-to-pair Near-End (NEXT) coupling loss of 99% of pair combinations shall exceed the values given below:

Frequency (KHz)	NEXT (dB/Km)
1	85
12	80
80	67
1,000	48

6.1 Near End (NEXT) & Equal Level Far End (ELFEXT) Limits

The NEXT and ELFEXT individual power sums shall exceed the values given below:

Frequency (KHz)	NEXT (dB/Km)	ELFEXT (dB/Km)
1	70	74
12	67	71
80	55	58
1,000	37	36

7 Attenuation

The maximum average attenuation at two spot frequencies shall not exceed the values given below:

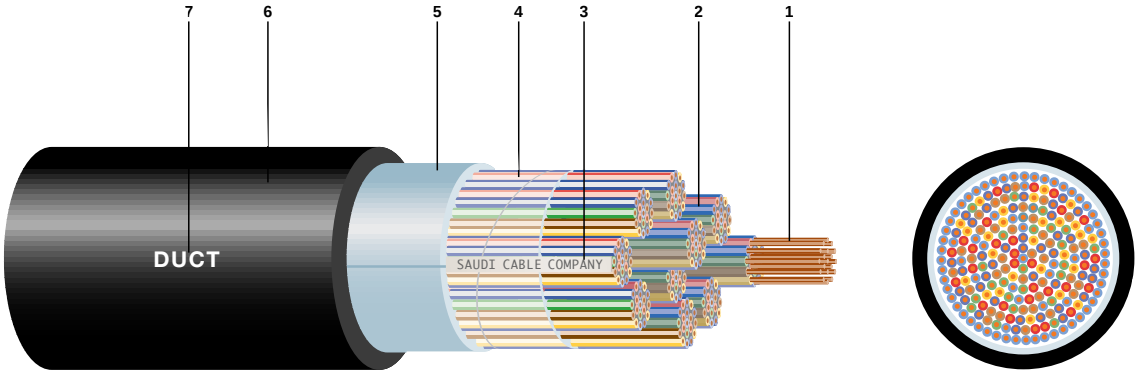
Conductor size (mm)	Maximum Average Attenuation (dB/Km) 1 KHz	1 MHz
0.40	1.81	25.7
0.50	1.45	21.0
0.65	1.10	16.3
0.90	0.80	13.6

UNDERGROUND (DUCT) PRESSURIZED LOCAL TELEPHONE CABLE

PRODUCT CODE PINRAL/PINZAL

TECH. SPEC. NO. TS - 19000

1. Copper Conductor
2. Polyethylene (Foam Skin) Insulation
3. Identification Tape
4. Wrapping Tape
5. Aluminium Moisture Barrier
6. Polyethylene Sheath, Black
7. Sheath Marking



APPLICATION

Polyethylene insulated Air Core (unfilled) cables are generally used for primary underground distribution network. The cables are generally hauled into ducts.

DESCRIPTION

Plain annealed copper solid conductor, high density cellular (foam-skin) polyethylene insulated, paired, unit type, unfilled, screened and polyethylene sheathed, local air core telephone cable (CES) complying with MOPTT MAT - 1011 specification.

DIMENSIONAL DATA & PACKING

SCC-T Product No.	Pair Count x Size (No. x mm)	Approx. Outer Dia. (mm)	Approx. Gross Wt. (kgs)	Shipping Length (+5/-0m)	Reel Size (Flange Dia.) (mm)
101461	200 x 2 x 0.40	23.5	802	1,000	1,300
100001	300 x 2 x 0.40	27.5	1,136	1,000	1,500
100002	600 x 2 x 0.40	37.5	2,216	1,000	1,900
100003	900 x 2 x 0.40	45.0	1,910	600	1,800
100004	1,200 x 2 x 0.40	52.0	1,280	300	1,600
100005	1,500 x 2 x 0.40	57.5	1,610	300	1,800
100006	1,800 x 2 x 0.40	62.5	1,944	300	1,900
100007	2,100 x 2 x 0.40	67.0	2,236	300	2,000
100008	2,400 x 2 x 0.40	72.0	2,564	300	2,100
102659	200 x 2 x 0.50	28.0	1,166	1,000	1,500
100009	300 x 2 x 0.50	33.5	1,750	1,000	1,700
100010	600 x 2 x 0.50	46.0	1,978	600	1,800
100011	900 x 2 x 0.50	55.5	1,514	300	1,700
100012	1,200 x 2 x 0.50	63.5	2,032	300	2,000
100013	1,500 x 2 x 0.50	71.0	2,502	300	2,100
100014	1,800 x 2 x 0.50	77.0	2,920	300	2,200
101794	100 x 2 x 0.65	27.5	1,022	1,000	1,500
102720	200 x 2 x 0.65	37.0	1,998	1,000	1,900
101316	300 x 2 x 0.65	44.5	1,716	600	1,800
101317	600 x 2 x 0.65	62.0	1,750	300	1,900
101318	900 x 2 x 0.65	75.0	2,525	300	2,100
101319	1,200 x 2 x 0.65	85.5	3,330	300	2,400
101294	100 x 2 x 0.90	36.5	1,146	600	1,600
101795	150 x 2 x 0.90	44.0	1,662	600	1,800
102721	200 x 2 x 0.90	51.5	2,230	600	2,000
101295	300 x 2 x 0.90	62.0	1,688	300	1,900
101296	600 x 2 x 0.90	85.0	3,212	300	2,400

Other sizes and specifications are available upon request.

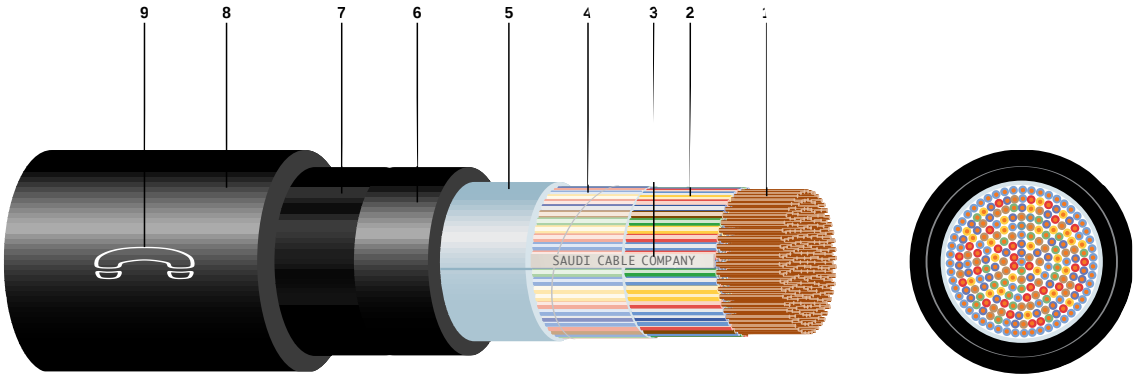
*The information given in this leaflet is correct to the best of our knowledge and given in good faith, however the right is reserved to make alterations without prior notice.

UNDERGROUND (DIRECT BURIED)
PRESSURIZED LOCAL TELEPHONE CABLE

PRODUCT CODE PINRALL/PINZALL

TECH. SPEC. NO. TS - 19000

1. Copper Conductor
2. Polyethylene (Foam Skin) Insulation
3. Identification Tape
4. Wrapping Tape
5. Aluminium Moisture Barrier
6. Inner Polyethylene Sheath, Black
7. Flooding Compound
8. Outer Poylethylene Sheath, Black
9. Sheath Marking



APPLICATION

Polyethylene insulated Air Core (unfilled) cables are generally used for primary underground distribution network. The cables are for direct burial applications.

DESCRIPTION

Plain annealed copper solid conductor, high density cellular (foam-skin) polyethylene insulated, paired, unit type, unfilled, screened and polyethylene (inner & outer) sheathed, local air core telephone cable (CESE) complying with MOPTT MAT-1011 specification.

DIMENSIONAL DATA & PACKING

SCC-T Product No.	Pair Count x Size (No. x mm)	Approx. Outer Dia. (mm)	Approx Gross Wt. (kgs)	Shipping Length (+5/-0m)	Reel Size (Flange Dia.) (mm)
100021	300 x 2 x 0.40	31.0	1,390	1,000	1,700
100022	600 x 2 x 0.40	40.5	2,444	1,000	2,000
100023	900 x 2 x 0.40	48.0	2,150	600	2,000
100024	1,200 x 2 x 0.40	55.5	1,424	300	1,700
100025	1,500 x 2 x 0.40	60.5	1,762	300	1,900
100026	1,800 x 2 x 0.40	66.0	2,074	300	2,000
100027	2,100 x 2 x 0.40	70.5	2,390	300	2,100
100028	2,400 x 2 x 0.40	75.0	2,672	300	2,100
100029	300 x 2 x 0.50	37.0	1,996	1,000	1,900
100030	600 x 2 x 0.50	49.5	2,220	600	2,000
100031	900 x 2 x 0.50	59.0	1,670	300	1,900
100032	1,200 x 2 x 0.50	67.0	2,130	300	2,000
100033	1,500 x 2 x 0.50	74.5	2,610	300	2,100
100034	1,800 x 2 x 0.50	80.5	3,072	300	2,300
101320	300 x 2 x 0.65	48.0	1,954	600	2,000
101321	400 x 2 x 0.65	55.0	2,516	600	2,100
101322	600 x 2 x 0.65	65.5	1,878	300	2,000
101323	900 x 2 x 0.65	78.5	2,660	300	2,200
101324	1,200 x 2 x 0.65	89.0	3,460	300	2,400
101297	100 x 2 x 0.90	40.0	1,260	600	1,600
101298	300 x 2 x 0.90	65.0	1,816	300	2,000
101299	400 x 2 x 0.90	74.5	2,328	300	2,100
101300	600 x 2 x 0.90	88.5	3,342	300	2,400

Other sizes and specifications are available upon request.

*The information given in this leaflet is correct to the best of our knowledge and given in good faith, however the right is reserved to make alterations without prior notice.

1 Conductor Resistance - at 20°C (Ohms/Km)

Conductor size (mm)	Maximum DC Resistance Average	Individual
0.40	144	150
0.50	92	96
0.65	54	57
0.90	28	30

1.1 Resistance Unbalance

Conductor size (mm)	Maximum Resistance Unbalance (%) Average	Individual
0.40	1.00	2.5
0.50	0.75	2.5
0.65	0.75	2.0
0.90	0.75	2.0

Percent unbalance shall be calculated by means of the following formula.

$$R\% = \frac{Rmax. - Rmin.}{Rmax. + Rmin.} \times 100$$

2 Insulation Resistance - at 20°C

The I.R. shall be not less than 5,000 mega-ohms km.

3 Mutual Capacitance - at 1,000 ± 200 Hz. (nF/Km)

Nominal Average : 44 ± 2
Maximum Individual : 50

4 Capacitance Unbalance - at 1,000 ± 200 Hz

4.1 Pair to Pair - Within a Sub-unit (pF/500M)

Maximum Average : 25
Maximum Individual : 150

4.2 Pair to Pair - Between Adjacent Sub-units or Units (pF/500 M)

Maximum Average : 17
Maximum Individual : 55

4.3 Pair to Earth (pF/Km)

Maximum Average : 500
Maximum Individual : 2500

5 Dielectric strength - DC Volts (for 3 sec. min.)

Conductor size (mm)	Between Conductor	Conductor to Shield
0.40	1,700	5,000
0.50	2,000	5,000
0.65	2,500	10,000
0.90	3,500	10,000

6 Near End Crosstalk (NEXT) Limits

The pair-to-pair Near-End (NEXT) coupling loss of 99% of pair combinations, shall exceed the values given below:

Frequency (KHz)	NEXT (dB/Km)
1	85
12	80
80	67
1,000	48

6.1 Near End (NEXT) & Equal Level Far End (ELFEXT) Limits

The NEXT and ELFEXT individual power sums shall exceed the values given below:

Frequency (KHz)	NEXT (dB/Km)	ELFEXT (dB/Km)
1	70	74
12	67	71
80	55	58
1,000	37	36

7 Attenuation

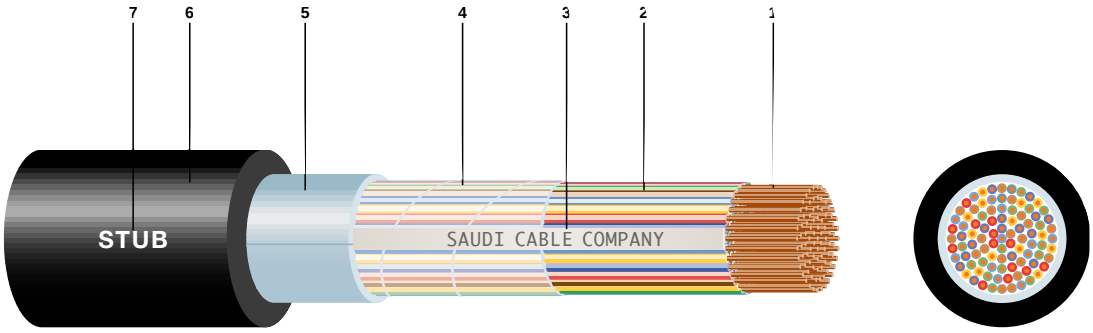
The maximum average attenuation at two spot frequencies shall not exceed the values given below:

Conductor size (mm)	Maximum Average Attenuation (dB/Km) 1 KHz	1 MHz
0.40	1.81	26.5
0.50	1.45	22.6
0.65	1.10	18.5
0.90	0.80	13.3

STUB TELEPHONE CABLE

PRODUCT CODE	PUNRAL
TECH. SPEC. NO.	TS - 20000

1. Copper Conductor
2. Polyethylene (Solid) Insulation
3. Identification Tape
4. Wrapping Tape
5. Aluminium Moisture Barrier
6. Polyethylene Sheath, Black
7. Sheath Marking



APPLICATION

Polyethylene insulated, air core (unfilled), stub telephone cables are generally used between manholes and cabinets or the cable connected to cabinet or distribution pillar terminal blocks in the telecommunication network.

DESCRIPTION

Plain annealed copper solid conductor, high density solid polyethylene insulated, paired, unit type, unfilled, screened and polyethylene sheathed, stub telephone cable (EES) complying with MOPTT MAT - 1011 specification.

DIMENSIONAL DATA & PACKING

SCC-T Product No.	Pair Count x Size (No. x mm)	Approx. Outer Dia. (mm)	Approx. Gross Wt. (kgs)	Shipping Length (+5/-0m)	Reel Size (Flange Dia.) (mm)
102925	100 x 2 x 0.50	24.5	784	1,000	1,400
100044	200 x 2 x 0.50	33.0	1,482	1,000	1,700
100045	300 x 2 x 0.50	39.5	2,142	1,000	2,000
100046	400 x 2 x 0.50	45.0	2,766	1,000	2,200

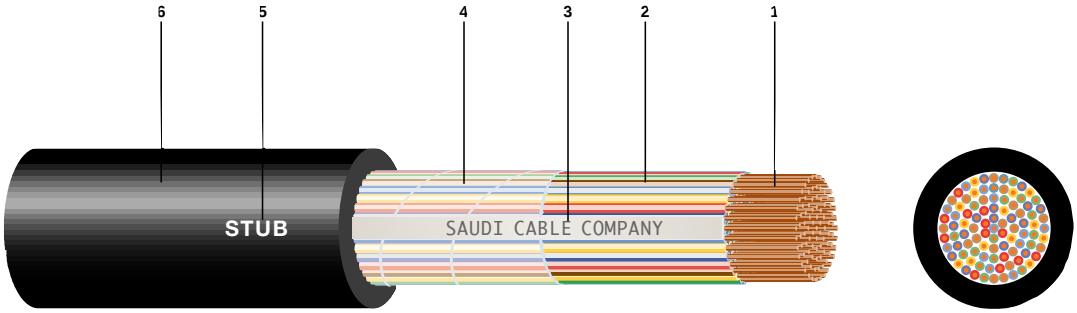
Other sizes and specifications are available upon request.

*The information given in this leaflet is correct to the best of our knowledge and given in good faith, however the right is reserved to make alterations without prior notice.

STUB TELEPHONE CABLE

PRODUCT CODE	PUNRL
TECH. SPEC. NO.	TS - 20000

1. Copper Conductor
2. Polyethylene (Solid) Insulation
3. Identification Tape
4. Wrapping Tape
5. Polyethylene Sheath, Black
6. Sheath Marking



APPLICATION

Polyethylene insulated, air core (unfilled), stub cable generally used between cabinet or distribution pillar terminal blocks in the telecommunication network.

DESCRIPTION

Plain annealed copper solid conductor, high density solid polyethylene insulated, paired, unit type, unfilled, unscreened and polyethylene sheathed, stub telephone cable (EES) complying with MOPTT MAT - 1011 specification.

DIMENSIONAL DATA & PACKING

SCC-T Product No.	Pair Count x Size (No. x mm)	Approx. Outer Dia. (mm)	Approx. Gross Wt. (kgs)	Shipping Length (+5/-0m)	Reel Size (Flange Dia.) (mm)
100041	10 x 2 x 0.50	10.0	110	1,000	800
100717	20 x 2 x 0.50	12.0	185	1,000	900
100042	50 x 2 x 0.50	16.5	382	1,000	1,100
100043	100 x 2 x 0.50	23.0	698	1,000	1,300

Other sizes and specifications are available upon request.

*The information given in this leaflet is correct to the best of our knowledge and given in good faith, however the right is reserved to make alterations without prior notice.

1 Conductor Resistance - at 20°C (Ohms/Km)

Maximum Average : 92
Maximum Individual : 96

1.1 Resistance Unbalance (%)

Maximum Average : 0.75
Maximum Individual : 2.50

Percent unbalance shall be calculated by means of the following formula.

$$R\% = \frac{Rmax. - Rmin.}{Rmax. + Rmin.} \times 100$$

2 Insulation Resistance - at 20°C

The I.R. shall be not less than 10,000 mega-ohms km.

3 Mutual Capacitance - at 1,000 ± 200 Hz (nF/Km)

Nominal Average : 44 ± 2
Maximum Individual : 50

4 Capacitance Unbalance - at 1,000 ± 200 Hz

4.1 Pair to Pair - Within a Sub-unit (pF/500 M)

Maximum Average : 22
Maximum Individual : 150

4.2 Pair to Pair Between Adjacent Sub-units or Units (pF/500 M)

Maximum Average : 20
Maximum Individual : 50

4.3 Pair to Earth (pF/Km)

Maximum Average : 500
Maximum Individual : 2,500

5 Dielectric Strength - DC Volts (for 3 sec. Min.)

Between Conductor	Conductor to Shield
2,000	5,000

6 Near End Crosstalk (NEXT) Limits

The pair-to-pair Near-End (NEXT) coupling loss of 99% of pair combinations shall not exceed the values given below:

Frequency (KHz)	NEXT (dB/Km)
1	85
12	80
80	67
1,000	48

6.1 Near End (NEXT) & Equal Level Far End (ELFEXT) Limits.

The NEXT & ELFEXT individual power sums shall exceed the values given below:

Frequency (KHz)	NEXT (dB/Km)	ELFEXT (dB/Km)
1	70	74
12	67	71
80	55	58
1,000	37	36

7 Attenuation

The maximum average attenuation at two spot frequencies shall not exceed the values given below:

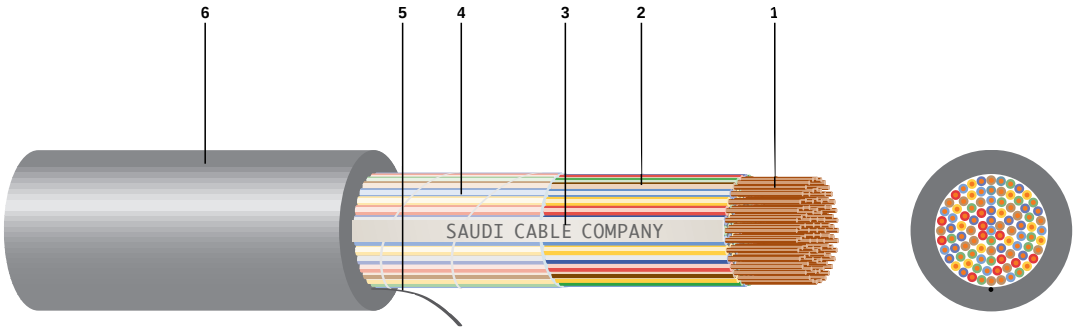
Maximum Average Attenuation (dB/Km)	
1KHz	1MHz
1.45	22.6

NOTES

FLAME RETARDANT INDOOR TELEPHONE CABLE

PRODUCT CODE	POMRF
TECH. SPEC. NO.	TS - 21000

1. Copper Conductor
2. PVC Insulation
3. Identification Tape
4. Wrapping Tape
5. Sheath Rip Cord
6. Halogen-Free Low Smoke Sheath, Light Grey



APPLICATION

Polyvinyl chloride (PVC) insulated Air core (unfilled), cables are generally used for indoor installation in the telecommunication network.

DESCRIPTION

Plain annealed copper solid conductor, PVC insulated, paired, unit type, unfilled and halogen free flame retardant sheathed indoor telephone cable (VRB) complying with MOPTT MAT - 1401 specification.

DIMENSIONAL DATA & PACKING

SCC-T Product No.	Pair Count x Size (No. x mm)	Approx. Outer Dia. (mm)	Approx Gross Wt. (kgs)	Shipping Length (+5/-0m)	Reel Size (Flange Dia.) (mm)
100117	10 x 2 x 0.50	8.5	116	1,000	800
100118	20 x 2 x 0.50	11.0	186	1,000	800
100119	30 x 2 x 0.50	13.0	275	1,000	900
100120	50 x 2 x 0.50	16.5	438	1,000	1,100
100121	100 x 2 x 0.50	22.0	790	1,000	1,300
100122	150 x 2 x 0.50	27.0	1,140	1,000	1,500
100123	200 x 2 x 0.50	30.5	1,502	1,000	1,600
100124	300 x 2 x 0.50	37.0	2,262	1,000	1,900

Other sizes and specifications are available upon request.

*The information given in this leaflet is correct to the best of our knowledge and given in good faith, however the right is reserved to make alterations without prior notice.

1 Conductor Resistance - at 20˚C (Ohms/Km)

Maximum Average : 92
Maximum Individual : 96

1.1 Resistance Unbalance (%)

Maximum Average : 0.75
Maximum Individual : 2.50

Percent unbalance shall be calculated by means of the following formula.

$$R\% = \frac{Rmax. - Rmin.}{Rmax. + Rmin.} \times 100$$

2 Insulation Resistance - at 20˚C

The I.R. shall be not less than 500 mega-ohms km.

3 Mutual Capacitance - at 1,000 ± 200 Hz (nF/Km)

Nominal Average : 75 ± 2
Maximum Individual : 90

4 Capacitance Unbalance - at 1,000 ± 200 Hz

4.1 Pair to Pair - Within a Sub-unit (pF/500 M)

Maximum Average : 22
Maximum Individual : 150

4.2 Pair to Pair - Between Adjacent Sub-units or Units (pF/500 M)

Maximum Average : 20
Maximum Individual : 50

5 Dielectric Strength - DC Volts (for 60 sec. Min.)

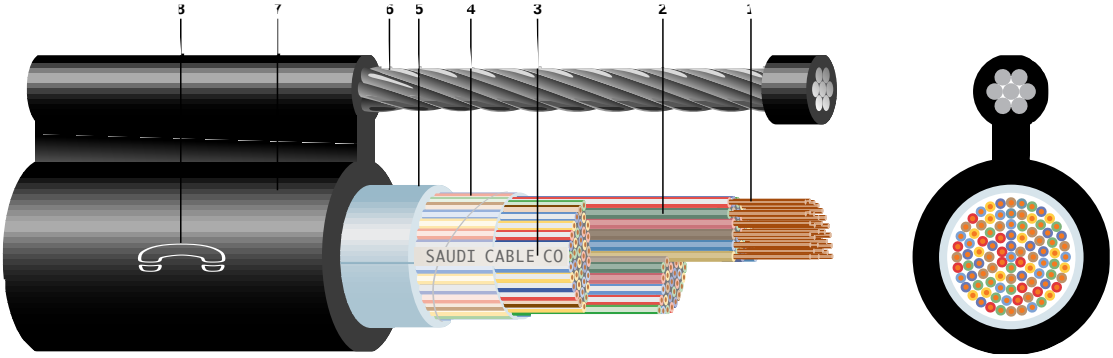
Conductor to Conductor : 1,500

SELF SUPPORTING AERIAL CABLE

PRODUCT CODE PUNRAOL/PUNZAOL

TECH. SPEC. NO. TS - 24000

1. Copper Conductor
2. Polyethylene (Solid) Insulation
3. Identification Tape
4. Wrapping Tape
5. Aluminium Moisture Barrier
6. Stranded Support Messenger (Galvanised Steel Wires)
7. Polyethylene Sheath, Black
8. Sheath Marking



APPLICATION

Polyethylene insulated Air Core (unfilled) aerial telephone cables are generally used in the local telecommunication network on poles and walls.

DESCRIPTION

Plain annealed copper solid conductor, high density solid polyethylene insulated, paired, unit type, unfilled, screened, galvanized steel wires core messenger and polyethylene sheathed self-supported aerial telephone cable (EEMS) complying with MOPTT MAT-1201 specification.

DIMENSIONAL DATA & PACKING

SCC-T Product No.	Pair Count x Size (No. x mm)	Approx. Nom. Dia. (mm) D1 x D2 x H	No. & Dia. of Steel Wire (mm)	Approx. Gross Wt. (kgs)	Shipping Length (+5/-0m)	Reel Size (Flange Dia.) (mm)
100615	50 x 2 x 0.40	15.5 x 6.6 x 25.0	7 x 1.2	432	1,000	1,200
100616	100 x 2 x 0.40	20.0 x 6.6 x 30.0	7 x 1.2	660	1,000	1,500
100617	150 x 2 x 0.40	24.5 x 7.2 x 34.5	7 x 1.2	927	1,000	1,600
100618	200 x 2 x 0.40	27.5 x 8.4 x 39.0	7 x 1.6	1,238	1,000	1,800
100619	50 x 2 x 0.50	18.5 x 6.6 x 28.0	7 x 1.2	549	1,000	1,300
100620	100 x 2 x 0.50	24.5 x 8.4 x 36.0	7 x 1.6	994	1,000	1,600
100621	150 x 2 x 0.50	29.0 x 8.4 x 40.5	7 x 1.6	1,426	1,000	1,900
100622	200 x 2 x 0.50	33.0 x 8.6 x 44.5	7 x 1.6	1,750	1,000	2,000
102007	10 x 2 x 0.65	13.0 x 6.6 x 23.0	7 x 1.2	331	1,000	1,100
102008	20 x 2 x 0.65	16.5 x 6.6 x 26.0	7 x 1.2	460	1,000	1,300
102009	50 x 2 x 0.65	24.2 x 7.2 x 34.5	7 x 1.2	862	1,000	1,600
102016	100 x 2 x 0.65	32.5 x 8.4 x 44.0	7 x 1.6	1,584	1,000	2,000
102010	150 x 2 x 0.65	39.5 x 8.6 x 50.5	7 x 1.6	2,191	1,000	2,300
102011	200 x 2 x 0.65	44.5 x 8.8 x 56.5	7 x 1.6	2,751	1,000	2,400
102012	10 x 2 x 0.90	16.5 x 6.6 x 26.0	7 x 1.2	450	1,000	1,300
102017	20 x 2 x 0.90	21.5 x 6.6 x 31.0	7 x 1.2	674	1,000	1,500
102013	50 x 2 x 0.90	32.0 x 8.4 x 43.5	7 x 1.6	1,541	1,000	2,000
102014	100 x 2 x 0.90	43.0 x 8.8 x 55.0	7 x 1.6	2,640	1,000	2,400
102015	150 x 2 x 0.90	53.0 x 10.6 x 67.0	7 x 2.0	2,426	600	2,400

Other sizes and specifications are available upon request.

*The information given in this leaflet is correct to the best of our knowledge and given in good faith, however the right is reserved to make alterations without prior notice.

1 Conductor Resistance - at 20°C (Ohms/Km)

Conductor size (mm)	Maximum DC Resistance Average	Individual
0.40	144	150
0.50	92	96
0.65	54	57
0.90	28	30

1.1 Resistance Unbalance

Conductor size (mm)	Maximum Resistance Unbalance (%) Average	Individual
0.40	1.00	2.5
0.50	0.75	2.5
0.65	0.75	2.0
0.90	0.75	2.0

Percent unbalance shall be calculated by means of the following formula.

$$R\% = \frac{Rmax. - Rmin.}{Rmax. + Rmin.} \times 100$$

2 Insulation Resistance - at 20°C

The I.R. shall be not less than 10,000 mega-ohms km.

3 Mutual Capacitance - at 1,000 ± 200 Hz. (nF/Km).

Nominal Average : 44 ± 2
Maximum Individual : 50

4 Capacitance Unbalance - at 1,000 ± 200 Hz.

4.1 Pair to Pair - Within a Sub-unit (pF/500M).

Maximum Average : 22
Maximum Individual : 150

4.2 Pair to Pair - Between Adjacent Sub-units or Units (pF/500 M)

Maximum Average : 20
Maximum Individual : 50

4.3 Pair to Earth (pF/Km)

Maximum Average : 500
Maximum Individual : 2500

5 Dielectric strength - DC Volts (for 3 sec. Min.)

Conductor size (mm)	Between Conductor	Conductor to Shield
0.40	1,700	5,000
0.50	2,000	5,000
0.65	2,500	10,000
0.90	3,500	10,000

6 Near End Crosstalk (NEXT) Limits.

The pair-to-pair Near-End (NEXT) coupling loss of 99% of pair combinations shall exceed the values given below:

Frequency (KHz)	NEXT (dB/Km)
1	85
12	80
80	67
1,000	48

6.1 Near End (NEXT) & Equal Level Far End (ELFEXT) Limits.

The NEXT and ELFEXT individual power sums shall exceed the values given below:

Frequency (KHz)	NEXT (dB/Km)	ELFEXT (dB/Km)
1	70	74
12	67	71
80	55	58
1,000	37	36

7 Attenuation

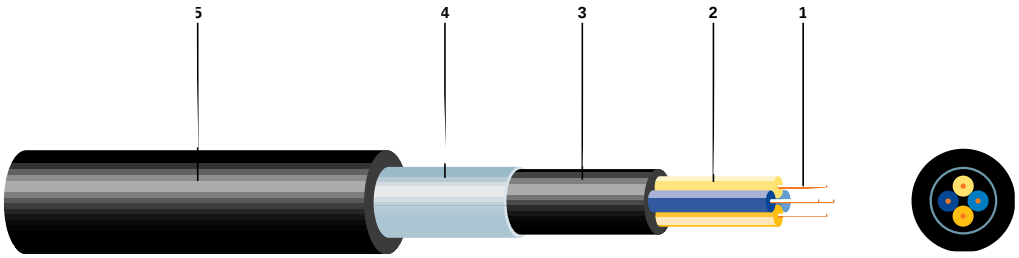
The maximum average attenuation at two spot frequencies shall not exceed the values given below:

Conductor size (mm)	Maximum Average Attenuation (dB/Km) 1 KHz	1 MHz
0.40	1.89	28.6
0.50	1.51	24.2
0.65	1.16	19.8
0.90	0.84	14.3

BURIED SERVICE WIRE

PRODUCT CODE	PUNQVAL
TECH. SPEC. NO.	TS - 22000

1. Copper Conductor
2. Polyethylene (Solid) Insulation
3. Inner PVC Sheath
4. Aluminium Moisture Barrier
5. Outer Polyethylene Sheath, Black



APPLICATION

Polyethylene insulated air-core (unfilled) two pairs service wire used for direct buried installation in the outside plant network between external distribution points and subscriber's external wire (customer terminals).

DESCRIPTION

Plain annealed copper solid conductor, high density solid polyethylene insulated, unfilled, 2 pair (single quad), PVC inner sheathed, screened and LDPE outer sheathed buried service telephone wire (BSW) complying with MOPTT MAT-1301 specification.

DIMENSIONAL DATA & PACKING

SCC-T Product No.	Pair Count x Size (No. x mm)	Approx. Outer Dia. (mm)	Approx. Gross Wt. (kgs)	Shipping Length (+5/-0m)	Reel Size (Flange Dia.) (mm)
100636	1 x 4 x 0.50	8.60	201	2,000	900

Other sizes and specifications are available upon request.

*The information given in this leaflet is correct to the best of our knowledge and given in good faith, however the right is reserved to make alterations without prior notice.

1 Conductor Resistance - at 20°C (Ohms/Km)

Maximum Average : 92
Maximum Individual : 96

1.1 Resistance Unbalance (%)

Maximum Average : 0.75
Maximum Individual : 2.50

Percent unbalance shall be calculated by means of the following formula.

$$R\% = \frac{Rmax. - Rmin.}{Rmax. + Rmin.} \times 100$$

2 Insulation Resistance - at 20°C

The I.R. shall be not less than 10,000 mega-ohms km.

3 Mutual Capacitance - at 1,000 ± 200 Hz (nF/Km)

Nominal Average : 44 ± 2
Maximum Individual : 50

4 Capacitance Unbalance - at 1,000 ± 200 Hz

4.1 Pair to Pair (pF/500 M)

Maximum Individual : 300

4.2 Pair to Earth (pF/Km)

Maximum Average : 500
Maximum Individual : 2,500

5 Dielectric Strength - DC Volts (for 3 sec. Min.)

Conductor to Conductor : 3,000
Conductor to Screen : 10,000

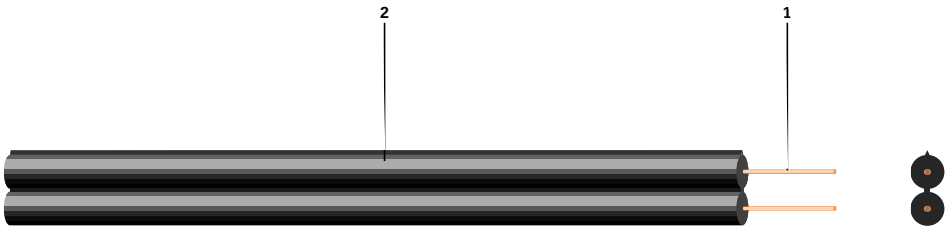
6 Attenuation

The maximum average attenuation at two spot frequencies shall not exceed the values given below:

Maximum Average Attenuation (dB/Km)	
1 KHz	1 MHz
1.45	22.6

PRODUCT CODE	CUBO
TECH. SPEC. NO.	TS - 23000

1. Hard Drawn Copper Clad Steel Conductor
2. Polyethylene Insulation, Black



APPLICATION

Telephone drop wire is used for outdoors connection between distribution box and the subscriber's premises in the telecommunications network.

DESCRIPTION

Two parallel laid (hard drawn copper clad steel) conductors, high density solid polyethylene insulated telephone drop wire complying with MOPTT MAT-1311, specification.

DIMENSIONAL DATA & PACKING

SCC-T Product No.	No. of Cond. x Size (No. x mm)	Approx. Outer Dia. (mm)	Approx. Gross Wt. (kgs/coil)	Shipping Length (±5% m)	Approx. Coil Size OD/ID/Width (mm)
100635	2 x 0.80	6.0 x 3.0	5	250	320 x 150 x 90

Other sizes and specifications are available upon request.

*The information given in this leaflet is correct to the best of our knowledge and given in good faith, however the right is reserved to make alterations without prior notice.

1 Conductor Resistance - at 20°C (Ohms/Km)

Maximum Average : 88
Maximum Individual : 92

1.1 Resistance Unbalance (%)

Maximum Average : 1.0
Maximum Individual : 3.6

Percent unbalance shall be calculated by means of the following formula.

$$R\% = \frac{Rmax. - Rmin.}{Rmax. + Rmin.} \times 100$$

2 Insulation Resistance - at 20°C

The I.R. shall be not less than 500 mega-ohms km.

3 Insulation Integrity between each Cond. to Water

To withstand 15Kv for five (5) minutes

4 Mutual Capacitance - at 1,000 ± 200 Hz (nF/Km)

Maximum Average : 40

5 Dielectric Strength - DC Volts (for 60 sec. Min.)

Conductor to Conductor : 1,500

JUMPER WIRE

PRODUCT CODE	POXON
TECH. SPEC. NO.	TS - 25000

1. Copper Conductor
2. PVC Insulation
3. Nylon Sheath, Transparent

APPLICATION

The polyvinyl chloride (PVC) insulated and nylon sheathed jumper wire is generally used in main distribution frame (MDF) in exchange buildings.

DESCRIPTION

Plain annealed copper solid conductor, polyvinyl chloride (PVC) insulated, nylon sheathed, twisted into single pair jumper telephone wire (type CO-AX2) complying with MOPTT MAT 1501 specification.

DIMENSIONAL DATA & PACKING

SCC-T Product No.	Pair Count x Size (No. x mm)	Approx. Outer Dia. (mm)	Approx. Gross Wt. (kgs/coil)	Shipping Length (±5% m)	Approx. Coil Size ODxIDxWidth (mm)
100943	1 x 2 x 0.60	2.24	3.60	500	225 x 120 x 85

Other sizes and specifications are available upon request.

*The information given in this leaflet is correct to the best of our knowledge and given in good faith, however the right is reserved to make alterations without prior notice.

1 Conductor Resistance - at 20°C (Ohms/Km)

Maximum d.c. resistance : 63

2 Insulation Resistance - at 20°C

The I.R. shall be not less than 5,000 mega-ohms km.

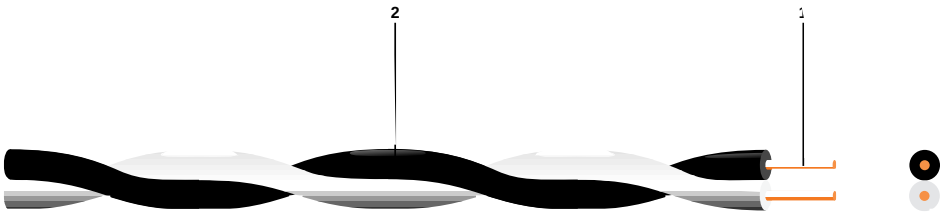
3 Dielectric Strength - DC Volts (for 60 sec. Min.)

Conductor to Conductor : 1,500

JUMPER WIRE

PRODUCT CODE	PUXO
TECH. SPEC. NO.	TS-30000

1. Copper Conductor
2. Polyethylene (solid) insulation



APPLICATION

The polyethylene insulated jumper wire is generally used in cross connection cabinets between the primary and secondary terminal blocks.

DESCRIPTION

Plain annealed copper solid conductor, high density solid polyethylene insulated, twisted into single pair telephone (OP-CAB) jumper wire complying with MOPTT MAT 1501 specification.

DIMENSIONAL DATA & PACKING

SCC-T Product No.	Pair Count x Size (No. x mm)	Approx. Outer Dia. (mm)	Approx. Gross Wt. (kgs/coil)	Shipping Length (±5% m)	Coil Size ODxIDxWidth (mm)
100637	1 x 2 x 0.50	2.20	1.30	250	178 x 120 x 85

Other sizes and specifications are available upon request.

*The information given in this leaflet is correct to the best of our knowledge and given in good faith, however the right is reserved to make alterations without prior notice.

1 Conductor Resistance - at 20˚C (Ohms/km)

Maximum Average : 92
Maximum Individual : 96

1.1 Resistance Unbalance (%)

Maximum Average : 0.75
Maximum Individual : 2.5

Percent unbalance shall be calculated by means of the following formula.

$$R\% = \frac{Rmax. - Rmin.}{Rmax. + Rmin.} \times 100$$

2 Insulation Resistance - at 20˚C

The I.R. shall be not less than 10,000 mega-ohms km.

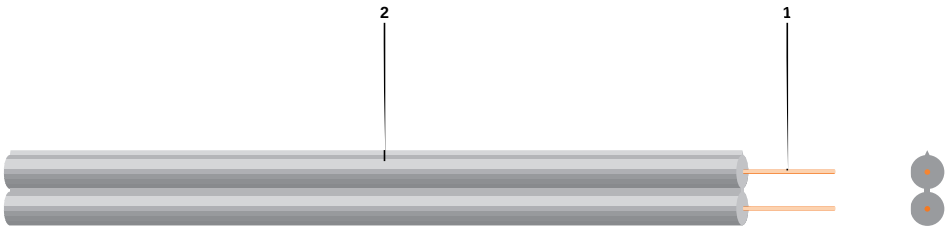
3 Dielectric Strength - DC Volts (for 60 Sec. Min.)

Conductor to Conductor : 1,500

INDOOR WIRE (TYPE-A)

PRODUCT CODE	POXO
TECH.SPEC.NO.	TS-28000

1. Copper Conductor
2. PVC Insulation, Light Grey



APPLICATION

Telephone indoor wire (type-A) is generally used between internal distribution points or subscriber termination blocks to wall mounted telephone sockets in the telecommunication network.

DESCRIPTION

Two parallel laid (plain annealed copper solid) conductors, flame retardant polyvinyl chloride (PVC) insulated indoor telephone wire (type-A) complying with MOPTT MAT-1411 Specification.

DIMENSIONAL DATA & PACKING

SCC-T Product No.	Pair Count x Size (No. x mm)	Approx. Outer Dia. (mm)	Approx. Gross Wt. (kgs/coil)	Shipping Length (±5% m)	Coil Size ODxIDxWidth (mm)
100944	2 x 0.65	3.0 x 1.3	2.4	250	200 x 150 x 90

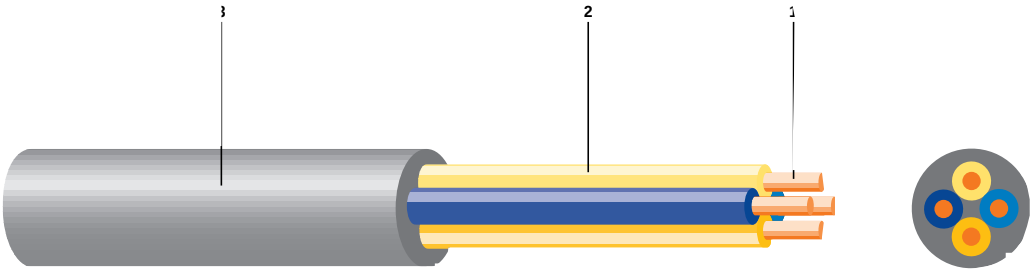
Other sizes and specifications are available upon request.

*The information given in this leaflet is correct to the best of our knowledge and given in good faith, however the right is reserved to make alterations without prior notice.

INDOOR WIRE (TYPE-B)

PRODUCT CODE	POMQV
TECH.SPEC.NO.	TS-29000

1 Copper Conductor
2 PVC Insulation
3 PVC Sheath, Light Grey



APPLICATION

Telephone indoor wire (type-B) is generally used between internal distribution points or subscriber termination blocks to wall mounted telephone sockets in the telecommunication network.

DESCRIPTION

Plain annealed copper solid conductor, high density polyvinyl chloride (PVC) insulated, 2 pair (single quad), unfilled, flame retardant PVC sheathed indoor telephone wire (type-B) complying with MOPTT MAT - 1411 specification.

DIMENSIONAL DATA & PACKING

SCC-T Product No.	Pair Count x Size (No. x mm)	Approx. Outer Dia. (mm)	Approx. Gross Wt. (kgs/coil)	Shipping Length (±5% m)	Coil Size ODxIDxWidth (mm)
100942	1 x 4 x 0.65	6.20	12.5	250	375 x 150 x 90

Other sizes and specifications are available upon request.

*The information given in this leaflet is correct to the best of our knowledge and given in good faith, however the right is reserved to make alterations without prior notice.

1 Conductor Resistance - at 20˚C (Ohms/Km)

Maximum Average : 54
Maximum Individual : 57

1.1 Resistance Unbalance (%)

Maximum Average : 1.3
Maximum Individual : 3.6

Percent unbalance shall be calculated by means of the following formula.

$$R\% = \frac{Rmax. - Rmin.}{Rmax. + Rmin.} \times 100$$

2 Insulation Resistance - at 20˚C

The I.R. shall be not less than 500 mega-ohms km.

3 Mutual Capacitance - at 1,000 ± 200 Hz (nF/Km)

Nominal Average:
Type-A : 100 ± 5
Type-B : 75 ± 5

4 Dielectric Strength - DC Volts (for 3 sec. Min.)

Conductor to Conductor : 1,500

NOTES

NOTES