

## **SUPERVISORY COMMUNICATION PILOT CABLE P (S) QXWQX 250V GRADE PILOT CABLE**

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### **CONDUCTOR**

Tinned Annealed Copper Wire

### **INSULATION**

Polyethylene Type 03 complying with BS 6234

### **TWINNING**

Two insulated conductors are twisted together to form a pair

### **LAID-UP**

Pairs are laid-up into a compact and symmetrical cable core

### **CORE WRAPPING**

The cable core is wrapped with a layer of non-hygroscopic tape

### **SCREEN**

A layer of 0.08 mm thick aluminium tape with 30% overlap

### **BEDDING**

Extruded Black PVC Type TM1 and containing anti-termite repellent additives

### **ARMOUR**

A layer of galvanised steel wire

### **OUTER SHEATH**

Extruded Black PVC Type TM1 and containing anti-termite repellent additives

## **COLOUR SCHEME FOR PAIRS ARRANGEMENT**

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### **1) 7, 19 & 37-PAIR CABLES**

Layer	Pairs Arrangement
Centre ( 1 Pr )	Black/Red
1st layer ( 6 Pr )	Black/Blue, Black/White, Black/Green, Black/Yellow, Black/Brown, Black/Grey
2nd layer ( 12 Pr )	Black/Orange, Black/Violet, Red/Blue, Red/White, Red/Green, Red/Yellow, Red/Brown, Red/Grey, Red/Orange, Red/Violet, Blue/White, Blue/Green
3rd layer ( 18 Pr )	Blue/Yellow, Blue/Brown, Blue/Grey, Blue/Orange, Blue/Violet, White/Green, White/Yellow, White/Brown, White/Grey, White/Orange, White/Violet, Green/Yellow, Green/Brown, Green/Grey, Green/Orange, Green/Violet, Yellow/Brown, Yellow/Grey

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### 2) 12-PAIR CABLE

Layer	Pairs Arrangement
Centre ( 3 Pr )	Black/Red, Black/Blue, Black/White
1st layer ( 9 Pr )	Black/Green, Black/Yellow, Black/Brown, Black/Grey, Black/Orange, Black/Violet, Red/Blue, Red/White, Red/Green

### CONSTRUCTION DATA

#### 1) BREAKDOWN TEST VOLTAGE FOR 1 MINUTE : 5 kV dc

No. of pairs	Insulation thickness	Bedding thickness	Diameter of armour wire	Outersheath thickness	Overall diameter	Cable weight	Breakdown test voltage for 1 minute
	Min.	Ave.	Nom.	Ave.	Approx.	Approx.	
	mm	mm	mm	mm	mm	kg/km	kV dc
7	0.508	1.2	1.6	1.6	20.7	880	5
12		1.2	1.6	1.6	24.7	1,160	
19		1.2	1.6	1.6	27.5	1,420	
37		1.2	1.6	1.6	34.4	2,060	

#### 2) BREAKDOWN TEST VOLTAGE FOR 1 MINUTE : 10 kV dc

No. of pairs	Insulation thickness	Bedding thickness	Diameter of armour wire	Outersheath thickness	Overall diameter	Cable weight	Breakdown test voltage for 1 minute
	Min.	Ave.	Nom.	Ave.	Approx.	Approx.	
	mm	mm	mm	mm	mm	kg/km	kV dc
12	0.80	1.4	1.6	1.7	29.6	1,470	10
19		1.4	2.0	2.0	34.8	2,090	
37		1.4	2.0	2.2	44.1	3,050	

#### 3) BREAKDOWN TEST VOLTAGE FOR 1 MINUTE : 25 kV dc

No. of pairs	Insulation thickness	Bedding thickness	Diameter of armour wire	Outersheath thickness	Overall diameter	Cable weight	Breakdown test voltage for 1 minute
	Min.	Ave.	Nom.	Ave.	Approx.	Approx.	
	mm	mm	mm	mm	mm	kg/km	kV dc
12	0.80	1.4	2.0	2.0	32.4	1,830	25
19		1.5	2.0	2.2	37.1	2,290	
37		1.5	2.0	2.2	46.7	3,300	

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## ELECTRICAL CHARACTERISTICS

Size mm	Conductor Resistance at 20°C	Mutual Capacitance	Capacitance Unbalance	Insulation Resistance
	Max. ohm/km	Max. nF/km	* Pair-to-Pair Max. pF/161m	Min. Mohm. km
0.914	27.04	60	200	10,000

## CABLE STRUCTURAL DRAWINGS

