

**SPECIFICATION****For****CVV**

600V Copper Conductor PVC Insulated PVC Sheathed  
with Protection Earthed Control Cable  
(600V, Cu/PVC/PVC)

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Rev.	Date	Description
0	4/03/2021	Issued specification
1	22/04/2021	Add length mark

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CUSTOMER

Customer Document	Rev.

**Remark:**

This document is based on the Customer Document for the structure and properties of electric wire and cable only. If there are different points, will be shown in deviation table.

## **1. Scope**

This specification covers 600V copper conductor polyvinyl chloride (PVC) insulated polyvinyl chloride (PVC) sheathed with protection earthed control cable.

The cables shall be according to applicable specification of THAI YAZAKI Standard based on JIS C 3401 and TIS 11 Part 5-2553.

The finished cables shall meet the flame test requirements per IEC 60332-1.

## **2. Conductor**

The conductor shall be flexible stranded uncoated annealed copper conductor in accordance with IEC 60228 : 2004, Class 5.

For size 0.5 to 4 mm<sup>2</sup> : The direction of lay shall be left-hand (S) lay.

For size 6 mm<sup>2</sup> : The direction of lay shall be right-hand (Z) lay.

## **3. Insulation**

The insulation shall be polyvinyl chloride (PVC/D) compound meet the requirements of TIS 11 Part 5-2553.

The average insulation thickness shall be based on Table 3 of TIS 11-2531 and not less than the value in Table 1.

The minimum thickness shall not fall below the value in Table 1 by more than 10% plus 0.1 mm.

## **4. Cabling**

The individual insulated cores shall be cabled together with suitable non-hygroscopic filler to give the completed cable a substantially circular cross section.

The direction of lay shall be left-hand (S) lay.

A suitable binder tape shall be applied helically over the cabled core.

## **5. Core Identification**

The cores shall be identified by colors or by number printed on the insulation, as follows :

2-cores + PE : blue, brown + green/yellow

3-cores + PE : brown, black, grey + green/yellow

4-cores + PE : blue, brown, black, grey + green/yellow

For 5-cores+PE to 30-cores+PE :

The cores shall be identified by the arabic numerals printed longitudinally and continuously on the surface of black insulation and plus one protection earthed core shall be green/yellow.

## 6. Sheath


The sheath shall be sunlight resistant polyvinyl chloride (PVC/ST5) compound meet the requirements of TIS 11 Part 5-2553.

The average thickness shall be not less than the value in Table 1.

The minimum thickness shall be not fall below the value in Table 1 by more than 15% plus 0.1 mm.  
The color of the sheath shall be black.

## 7. Marking on Cable

The marking items shall be marked with suitable means throughout the length of cable.

1. Manufacturer's name and/or trade mark "  YAZAKI..... : TYE"
2. Year of manufacture
3. Rated circuit voltage "600V"
4. Type of insulation "PVC"
5. Type of cable "CONTROL CABLE"
6. Number of cores and size of conductor
7. The continuous reel length marking (in figure) shall be made on the sheath at every 1 meter

## 8. Test and Properties

The cable shall be meet the requirements in Test and Inspection and Table 1, when tested in accordance with JIS C 3401, TIS 11 Part 2-2553, TIS 11 Part 5-2553, IEC 60228 : 2004 and IEC 60332-1.


Remark: Sunlight resistant test meet the requirement of TIS 293-2541.

## 9. Packing

The cable shall be placed on the non-returnable wooden reels.

The reel shall be lagged to provide the cable with physical protection during transportation and during ordinary storage and handling operations.

Each reel shall be clearly marked as follows.

1. Designation "CVV"
2. Number of cores and size of conductor
3. Cable length
4. Net and gross weight
5. Manufacturer's name and/or trade mark "  YAZAKI "
6. Rolling direction of reel

## Test and Inspection

### **Routine Tests**

1. Maximum conductor resistance, Ohm/km ..... specified in Table 1
2. AC test voltage for 1 minutes, V .....2000

### **Sample Tests**

3. Construction.....specified in Table 1

### **Type Tests**

4. Minimum insulation resistance at 70 °C, MOhm-km ..... specified in Table 1
5. Flame retardant tested according to IEC 60332-1

### Remark

Reference standard

Test item 1 refer IEC 60228:2004, Class 5

Test item 2 refer JIS C 3401

Test item 3, 4 refer TIS 11-2531

Test item 5 refer IEC 60332-1

### **Definition concerning the tests**

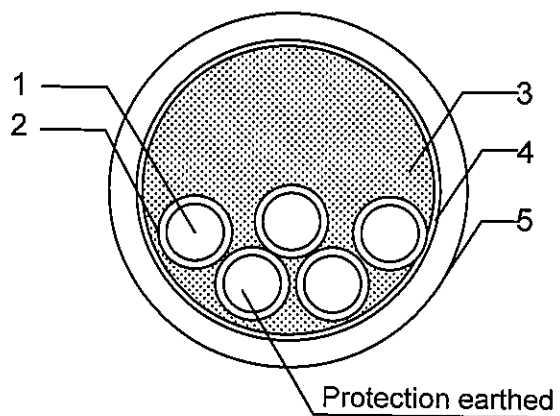
**Routine tests:** Tests made by the manufacturer on each manufactured length of cable to check that each length meets the specified requirements.

**Sample tests:** Tests made by the manufacturer on samples of completed cable or components taken from a completed cable, at a specified frequency, so as to verify that the finished product meets the specified requirements.

**Type tests:** Tests made before supplying, on a general commercial basis, a type of cable covered by this standard, in order to demonstrate satisfactory performance characteristics to meet the intended application.

### Cable structure

Cross-sectional (Not scale)



No.	Structure	Material
1	Conductor	Flexible stranded annealed copper
2	Insulation	Polyvinyl chloride (PVC/D)
3	Filler	PP Calcium Yarn (Non-hygroscopic)
4	Binder Tape	Spund bond tape or suitable tape
5	Sheath	Polyvinyl chloride (PVC/ST5)

**Application:** For supervisory electrical equipment, station control circuits, outdoor, suitable installation in the dry or wet cable trenches. Maximum conductor temperature of 70°C for normal operation and 160°C for short circuit conditions.

**Table 1**

No. of cores and size (core x mm <sup>2</sup> )	Conductor type	Conductor diameter approx. (mm)	Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20 °C maximum (Ohm/km)	Insulation resistance at 70 °C minimum (MOhm-km)	Weight of cable approx. (kg/km)	Standard packing length (m)
2+PE x 0.5/0.5	Flexible	0.95	0.6	1.2	8.5	39.0	0.0130	70	300
2+PE x 0.75/0.75	Flexible	1.15	0.6	1.2	9.0	26.0	0.0114	80	300
2+PE x 1/1	Flexible	1.30	0.6	1.2	9.0	19.5	0.0104	90	300
2+PE x 1.5/1.5	Flexible	1.60	0.6	1.2	9.5	13.3	0.0089	110	300
2+PE x 2.5/2.5	Flexible	2.10	0.7	1.2	11.0	7.98	0.0081	160	300
2+PE x 4/4	Flexible	2.60	0.8	1.2	13.0	4.95	0.0076	230	300
2+PE x 6/6	Flexible	3.40	0.8	1.4	15.0	3.30	0.0061	330	300
3+PE x 0.5/0.5	Flexible	0.95	0.6	1.2	9.0	39.0	0.0130	85	300
3+PE x 0.75/0.75	Flexible	1.15	0.6	1.2	9.5	26.0	0.0114	100	300
3+PE x 1/1	Flexible	1.30	0.6	1.2	9.5	19.5	0.0104	110	300
3+PE x 1.5/1.5	Flexible	1.60	0.6	1.2	10.5	13.3	0.0089	140	300
3+PE x 2.5/2.5	Flexible	2.10	0.7	1.2	12.0	7.98	0.0081	200	300
3+PE x 4/4	Flexible	2.60	0.8	1.4	14.5	4.95	0.0076	300	300
3+PE x 6/6	Flexible	3.40	0.8	1.4	16.5	3.30	0.0061	420	300
4+PE x 0.5/0.5	Flexible	0.95	0.6	1.2	10.0	39.0	0.0130	95	300
4+PE x 0.75/0.75	Flexible	1.15	0.6	1.2	10.5	26.0	0.0114	110	300
4+PE x 1/1	Flexible	1.30	0.6	1.2	10.5	19.5	0.0104	130	300
4+PE x 1.5/1.5	Flexible	1.60	0.6	1.2	11.5	13.3	0.0089	170	300
4+PE x 2.5/2.5	Flexible	2.10	0.7	1.4	13.5	7.98	0.0081	250	300
4+PE x 4/4	Flexible	2.60	0.8	1.4	16.0	4.95	0.0076	360	300
4+PE x 6/6	Flexible	3.40	0.8	1.4	18.0	3.30	0.0061	500	300

**Table 1 (continued)**

No. of cores and size (core x mm <sup>2</sup> )	Conductor type	Conductor diameter approx. (mm)	Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20 °C maximum (Ohm/km)	Insulation resistance at 70 °C minimum (MOhm-km)	Weight of cable approx. (kg/km)	Standard packing length (m)
5+PE x 0.5/0.5	Flexible	0.95	0.6	1.2	10.5	39.0	0.0130	110	300
5+PE x 0.75/0.75	Flexible	1.15	0.6	1.2	11.0	26.0	0.0114	130	300
5+PE x 1/1	Flexible	1.30	0.6	1.2	11.5	19.5	0.0104	150	300
5+PE x 1.5/1.5	Flexible	1.60	0.6	1.2	12.0	13.3	0.0089	190	300
5+PE x 2.5/2.5	Flexible	2.10	0.7	1.4	14.5	7.98	0.0081	300	300
5+PE x 4/4	Flexible	2.60	0.8	1.4	17.0	4.95	0.0076	420	300
5+PE x 6/6	Flexible	3.40	0.8	1.4	19.5	3.30	0.0061	600	300
6+PE x 0.5/0.5	Flexible	0.95	0.6	1.2	10.5	39.0	0.0130	120	300
6+PE x 0.75/0.75	Flexible	1.15	0.6	1.2	11.0	26.0	0.0114	140	300
6+PE x 1/1	Flexible	1.30	0.6	1.2	11.5	19.5	0.0104	160	300
6+PE x 1.5/1.5	Flexible	1.60	0.6	1.2	12.0	13.3	0.0089	210	300
6+PE x 2.5/2.5	Flexible	2.10	0.7	1.4	14.5	7.98	0.0081	320	300
6+PE x 4/4	Flexible	2.60	0.8	1.4	17.0	4.95	0.0076	470	300
6+PE x 6/6	Flexible	3.40	0.8	1.4	19.5	3.30	0.0061	650	300
7+PE x 0.5/0.5	Flexible	0.95	0.6	1.2	11.0	39.0	0.0130	130	300
7+PE x 0.75/0.75	Flexible	1.15	0.6	1.2	12.0	26.0	0.0114	160	300
7+PE x 1/1	Flexible	1.30	0.6	1.2	12.0	19.5	0.0104	190	300
7+PE x 1.5/1.5	Flexible	1.60	0.6	1.2	13.0	13.3	0.0089	230	300
7+PE x 2.5/2.5	Flexible	2.10	0.7	1.4	16.0	7.98	0.0081	370	300
7+PE x 4/4	Flexible	2.60	0.8	1.4	18.5	4.95	0.0076	550	300
7+PE x 6/6	Flexible	3.40	0.8	1.4	21.0	3.30	0.0061	750	300

**Table 1 (continued)**

No. of cores and size (core x mm <sup>2</sup> )	Conductor type	Conductor diameter approx. (mm)	Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20 °C maximum (Ohm/km)	Insulation resistance at 70 °C minimum (MOhm·km)	Weight of cable approx. (kg/km)	Standard packing length (m)
8+PE x 0.5/0.5	Flexible	0.95	0.6	1.2	12.0	39.0	0.0130	140	300
8+PE x 0.75/0.75	Flexible	1.15	0.6	1.2	12.5	26.0	0.0114	180	300
8+PE x 1/1	Flexible	1.30	0.6	1.2	13.0	19.5	0.0104	210	300
8+PE x 1.5/1.5	Flexible	1.60	0.6	1.4	14.5	13.3	0.0089	280	300
8+PE x 2.5/2.5	Flexible	2.10	0.7	1.4	17.0	7.98	0.0081	420	300
8+PE x 4/4	Flexible	2.60	0.8	1.4	20.0	4.95	0.0076	600	300
8+PE x 6/6	Flexible	3.40	0.8	1.4	23.0	3.30	0.0061	850	300
9+PE x 0.5/0.5	Flexible	0.95	0.6	1.2	12.5	39.0	0.0130	160	300
9+PE x 0.75/0.75	Flexible	1.15	0.6	1.2	13.5	26.0	0.0114	200	300
9+PE x 1/1	Flexible	1.30	0.6	1.4	14.5	19.5	0.0104	250	300
9+PE x 1.5/1.5	Flexible	1.60	0.6	1.4	15.5	13.3	0.0089	310	300
9+PE x 2.5/2.5	Flexible	2.10	0.7	1.4	18.0	7.98	0.0081	470	300
9+PE x 4/4	Flexible	2.60	0.8	1.4	21.5	4.95	0.0076	650	300
9+PE x 6/6	Flexible	3.40	0.8	1.8	25.5	3.30	0.0061	1000	300
10+PE x 0.5/0.5	Flexible	0.95	0.6	1.2	12.5	39.0	0.0130	170	300
10+PE x 0.75/0.75	Flexible	1.15	0.6	1.2	13.5	26.0	0.0114	210	300
10+PE x 1/1	Flexible	1.30	0.6	1.4	14.5	19.5	0.0104	260	300
10+PE x 1.5/1.5	Flexible	1.60	0.6	1.4	15.5	13.3	0.0089	320	300
10+PE x 2.5/2.5	Flexible	2.10	0.7	1.4	18.0	7.98	0.0081	490	300
10+PE x 4/4	Flexible	2.60	0.8	1.4	21.5	4.95	0.0076	700	300
10+PE x 6/6	Flexible	3.40	0.8	1.8	25.5	3.30	0.0061	1100	300



**Table 1 (continued)**

No. of cores and size (core x mm <sup>2</sup> )	Conductor type	Conductor diameter approx. (mm)	Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20 °C maximum (Ohm/km)	Insulation resistance at 70 °C minimum (MOhm-km)	Weight of cable approx. (kg/km)	Standard packing length (m)
11+PE x 0.5/0.5	Flexible	0.95	0.6	1.2	13.0	39.0	0.0130	180	300
11+PE x 0.75/0.75	Flexible	1.15	0.6	1.4	14.5	26.0	0.0114	230	300
11+PE x 1/1	Flexible	1.30	0.6	1.4	15.0	19.5	0.0104	280	300
11+PE x 1.5/1.5	Flexible	1.60	0.6	1.4	16.0	13.3	0.0089	350	300
11+PE x 2.5/2.5	Flexible	2.10	0.7	1.4	19.0	7.98	0.0081	550	300
11+PE x 4/4	Flexible	2.60	0.8	1.4	22.0	4.95	0.0076	800	300
11+PE x 6/6	Flexible	3.40	0.8	1.8	26.5	3.30	0.0061	1200	300
12+PE x 0.5/0.5	Flexible	0.95	0.6	1.2	14.0	39.0	0.0130	200	300
12+PE x 0.75/0.75	Flexible	1.15	0.6	1.4	15.0	26.0	0.0114	250	300
12+PE x 1/1	Flexible	1.30	0.6	1.4	15.5	19.5	0.0104	300	300
12+PE x 1.5/1.5	Flexible	1.60	0.6	1.4	17.0	13.3	0.0089	380	300
12+PE x 2.5/2.5	Flexible	2.10	0.7	1.4	20.0	7.98	0.0081	550	300
12+PE x 4/4	Flexible	2.60	0.8	1.4	23.5	4.95	0.0076	850	300
12+PE x 6/6	Flexible	3.40	0.8	1.8	28.0	3.30	0.0061	1300	300
13+PE x 0.5/0.5	Flexible	0.95	0.6	1.2	14.0	39.0	0.0130	200	300
13+PE x 0.75/0.75	Flexible	1.15	0.6	1.4	15.0	26.0	0.0114	260	300
13+PE x 1/1	Flexible	1.30	0.6	1.4	15.5	19.5	0.0104	310	300
13+PE x 1.5/1.5	Flexible	1.60	0.6	1.4	17.0	13.3	0.0089	390	300
13+PE x 2.5/2.5	Flexible	2.10	0.7	1.4	20.0	7.98	0.0081	600	300
13+PE x 4/4	Flexible	2.60	0.8	1.4	23.5	4.95	0.0076	850	300
13+PE x 6/6	Flexible	3.40	0.8	1.8	28.0	3.30	0.0061	1300	300

**Table 1 (continued)**

No. of cores and size (core x mm <sup>2</sup> )	Conductor type	Conductor diameter approx. (mm)	Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20 °C maximum (Ohm/km)	Insulation resistance at 70 °C minimum (MOhm-km)	Weight of cable approx. (kg/km)	Standard packing length (m)
14+PE x 0.5/0.5	Flexible	0.95	0.6	1.4	14.5	39.0	0.0130	220	300
14+PE x 0.75/0.75	Flexible	1.15	0.6	1.4	15.5	26.0	0.0114	280	300
14+PE x 1/1	Flexible	1.30	0.6	1.4	16.0	19.5	0.0104	330	300
14+PE x 1.5/1.5	Flexible	1.60	0.6	1.4	17.5	13.3	0.0089	420	300
14+PE x 2.5/2.5	Flexible	2.10	0.7	1.4	20.5	7.98	0.0081	650	300
14+PE x 4/4	Flexible	2.60	0.8	1.4	24.0	4.95	0.0076	950	300
14+PE x 6/6	Flexible	3.40	0.8	1.8	28.5	3.30	0.0061	1400	300
15+PE x 0.5/0.5	Flexible	0.95	0.6	1.4	15.0	39.0	0.0130	230	300
15+PE x 0.75/0.75	Flexible	1.15	0.6	1.4	16.0	26.0	0.0114	290	300
15+PE x 1/1	Flexible	1.30	0.6	1.4	16.5	19.5	0.0104	340	300
15+PE x 1.5/1.5	Flexible	1.60	0.6	1.4	17.5	13.3	0.0089	440	300
15+PE x 2.5/2.5	Flexible	2.10	0.7	1.4	21.0	7.98	0.0081	650	300
15+PE x 4/4	Flexible	2.60	0.8	1.8	25.5	4.95	0.0076	1000	300
15+PE x 6/6	Flexible	3.40	0.8	1.8	29.5	3.30	0.0061	1500	300
16+PE x 0.5/0.5	Flexible	0.95	0.6	1.4	15.5	39.0	0.0130	250	300
16+PE x 0.75/0.75	Flexible	1.15	0.6	1.4	16.5	26.0	0.0114	320	300
16+PE x 1/1	Flexible	1.30	0.6	1.4	17.0	19.5	0.0104	380	300
16+PE x 1.5/1.5	Flexible	1.60	0.6	1.4	18.5	13.3	0.0089	480	300
16+PE x 2.5/2.5	Flexible	2.10	0.7	1.4	22.0	7.98	0.0081	700	300
16+PE x 4/4	Flexible	2.60	0.8	1.8	27.0	4.95	0.0076	1100	300
16+PE x 6/6	Flexible	3.40	0.8	1.8	31.0	3.30	0.0061	1600	300

**Table 1 (continued)**

No. of cores and size (core x mm <sup>2</sup> )	Conductor type	Conductor diameter approx. (mm)	Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20 °C maximum (Ohm/km)	Insulation resistance at 70 °C minimum (MOhm-km)	Weight of cable approx. (kg/km)	Standard packing length (m)
17+PE x 0.5/0.5	Flexible	0.95	0.6	1.4	15.5	39.0	0.0130	260	300
17+PE x 0.75/0.75	Flexible	1.15	0.6	1.4	16.5	26.0	0.0114	320	300
17+PE x 1/1	Flexible	1.30	0.6	1.4	17.0	19.5	0.0104	380	300
17+PE x 1.5/1.5	Flexible	1.60	0.6	1.4	18.5	13.3	0.0089	480	300
17+PE x 2.5/2.5	Flexible	2.10	0.7	1.4	22.0	7.98	0.0081	750	300
17+PE x 4/4	Flexible	2.60	0.8	1.8	27.0	4.95	0.0076	1100	300
17+PE x 6/6	Flexible	3.40	0.8	1.8	31.0	3.30	0.0061	1600	300
18+PE x 0.5/0.5	Flexible	0.95	0.6	1.4	15.5	39.0	0.0130	270	300
18+PE x 0.75/0.75	Flexible	1.15	0.6	1.4	16.5	26.0	0.0114	330	300
18+PE x 1/1	Flexible	1.30	0.6	1.4	17.0	19.5	0.0104	390	300
18+PE x 1.5/1.5	Flexible	1.60	0.6	1.4	18.5	13.3	0.0089	500	300
18+PE x 2.5/2.5	Flexible	2.10	0.7	1.4	22.0	7.98	0.0081	750	300
18+PE x 4/4	Flexible	2.60	0.8	1.8	27.0	4.95	0.0076	1200	300
18+PE x 6/6	Flexible	3.40	0.8	1.8	31.0	3.30	0.0061	1700	300
19+PE x 0.5/0.5	Flexible	0.95	0.6	1.4	16.0	39.0	0.0130	280	300
19+PE x 0.75/0.75	Flexible	1.15	0.6	1.4	17.0	26.0	0.0114	350	300
19+PE x 1/1	Flexible	1.30	0.6	1.4	17.5	19.5	0.0104	420	300
19+PE x 1.5/1.5	Flexible	1.60	0.6	1.4	19.0	13.3	0.0089	550	300
19+PE x 2.5/2.5	Flexible	2.10	0.7	1.4	22.5	7.98	0.0081	800	300
19+PE x 4/4	Flexible	2.60	0.8	1.8	27.5	4.95	0.0076	1200	300
19+PE x 6/6	Flexible	3.40	0.8	1.8	31.5	3.30	0.0061	1800	300

**Table 1 (continued)**

No. of cores and size (core x mm <sup>2</sup> )	Conductor type	Conductor diameter approx. (mm)	Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20 °C maximum (Ohm/km)	Insulation resistance at 70 °C minimum (MOhm-km)	Weight of cable approx. (kg/km)	Standard packing length (m)
20+PE x 0.5/0.5	Flexible	0.95	0.6	1.4	16.5	39.0	0.0130	290	300
20+PE x 0.75/0.75	Flexible	1.15	0.6	1.4	17.5	26.0	0.0114	360	300
20+PE x 1/1	Flexible	1.30	0.6	1.4	18.0	19.5	0.0104	430	300
20+PE x 1.5/1.5	Flexible	1.60	0.6	1.4	19.5	13.3	0.0089	550	300
20+PE x 2.5/2.5	Flexible	2.10	0.7	1.4	23.0	7.98	0.0081	850	300
20+PE x 4/4	Flexible	2.60	0.8	1.8	28.5	4.95	0.0076	1300	300
20+PE x 6/6	Flexible	3.40	0.8	1.8	32.5	3.30	0.0061	1900	300
21+PE x 0.5/0.5	Flexible	0.95	0.6	1.4	17.0	39.0	0.0130	310	300
21+PE x 0.75/0.75	Flexible	1.15	0.6	1.4	18.0	26.0	0.0114	380	300
21+PE x 1/1	Flexible	1.30	0.6	1.4	18.5	19.5	0.0104	460	300
21+PE x 1.5/1.5	Flexible	1.60	0.6	1.4	20.5	13.3	0.0089	600	300
21+PE x 2.5/2.5	Flexible	2.10	0.7	1.8	25.5	7.98	0.0081	950	300
21+PE x 4/4	Flexible	2.60	0.8	1.8	29.5	4.95	0.0076	1400	300
21+PE x 6/6	Flexible	3.40	0.8	1.8	34.0	3.30	0.0061	2000	300
22+PE x 0.5/0.5	Flexible	0.95	0.6	1.4	17.0	39.0	0.0130	320	300
22+PE x 0.75/0.75	Flexible	1.15	0.6	1.4	18.0	26.0	0.0114	390	300
22+PE x 1/1	Flexible	1.30	0.6	1.4	18.5	19.5	0.0104	470	300
22+PE x 1.5/1.5	Flexible	1.60	0.6	1.4	20.5	13.3	0.0089	600	300
22+PE x 2.5/2.5	Flexible	2.10	0.7	1.8	25.5	7.98	0.0081	950	300
22+PE x 4/4	Flexible	2.60	0.8	1.8	29.5	4.95	0.0076	1400	300
22+PE x 6/6	Flexible	3.40	0.8	1.8	34.0	3.30	0.0061	2000	300

**Table 1 (continued)**

No. of cores and size (core x mm <sup>2</sup> )	Conductor type	Conductor diameter approx. (mm)	Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20 °C maximum (Ohm/km)	Insulation resistance at 70 °C minimum (MOhm-km)	Weight of cable approx. (kg/km)	Standard packing length (m)
23+PE x 0.5/0.5	Flexible	0.95	0.6	1.4	18.0	39.0	0.0130	330	300
23+PE x 0.75/0.75	Flexible	1.15	0.6	1.4	19.0	26.0	0.0114	410	300
23+PE x 1/1	Flexible	1.30	0.6	1.4	19.5	19.5	0.0104	490	300
23+PE x 1.5/1.5	Flexible	1.60	0.6	1.4	21.5	13.3	0.0089	650	300
23+PE x 2.5/2.5	Flexible	2.10	0.7	1.8	26.5	7.98	0.0081	1000	300
23+PE x 4/4	Flexible	2.60	0.8	1.8	31.0	4.95	0.0076	1500	300
23+PE x 6/6	Flexible	3.40	0.8	2.2	37.0	3.30	0.0061	2200	300
24+PE x 0.5/0.5	Flexible	0.95	0.6	1.4	18.0	39.0	0.0130	340	300
24+PE x 0.75/0.75	Flexible	1.15	0.6	1.4	19.0	26.0	0.0114	420	300
24+PE x 1/1	Flexible	1.30	0.6	1.4	19.5	19.5	0.0104	500	300
24+PE x 1.5/1.5	Flexible	1.60	0.6	1.4	21.5	13.3	0.0089	650	300
24+PE x 2.5/2.5	Flexible	2.10	0.7	1.8	26.5	7.98	0.0081	1000	300
24+PE x 4/4	Flexible	2.60	0.8	1.8	31.0	4.95	0.0076	1500	300
24+PE x 6/6	Flexible	3.40	0.8	2.2	37.0	3.30	0.0061	2300	300
25+PE x 0.5/0.5	Flexible	0.95	0.6	1.4	18.0	39.0	0.0130	350	300
25+PE x 0.75/0.75	Flexible	1.15	0.6	1.4	19.0	26.0	0.0114	430	300
25+PE x 1/1	Flexible	1.30	0.6	1.4	19.5	19.5	0.0104	500	300
25+PE x 1.5/1.5	Flexible	1.60	0.6	1.4	21.5	13.3	0.0089	650	300
25+PE x 2.5/2.5	Flexible	2.10	0.7	1.8	26.5	7.98	0.0081	1100	300
25+PE x 4/4	Flexible	2.60	0.8	1.8	31.0	4.95	0.0076	1600	300
25+PE x 6/6	Flexible	3.40	0.8	2.2	37.0	3.30	0.0061	2300	300

**Table 1 (continued)**

No. of cores and size (core x mm <sup>2</sup> )	Conductor type	Conductor diameter approx. (mm)	Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20 °C maximum (Ohm/km)	Insulation resistance at 70 °C minimum (MOhm-km)	Weight of cable approx. (kg/km)	Standard packing length (m)
26+PE x 0.5/0.5	Flexible	0.95	0.6	1.4	18.5	39.0	0.0130	360	300
26+PE x 0.75/0.75	Flexible	1.15	0.6	1.4	19.5	26.0	0.0114	450	300
26+PE x 1/1	Flexible	1.30	0.6	1.4	20.0	19.5	0.0104	550	300
26+PE x 1.5/1.5	Flexible	1.60	0.6	1.4	22.0	13.3	0.0089	700	300
26+PE x 2.5/2.5	Flexible	2.10	0.7	1.8	27.0	7.98	0.0081	1100	300
26+PE x 4/4	Flexible	2.60	0.8	1.8	32.0	4.95	0.0076	1600	300
26+PE x 6/6	Flexible	3.40	0.8	2.2	37.5	3.30	0.0061	2400	300
27+PE x 0.5/0.5	Flexible	0.95	0.6	1.4	19.0	39.0	0.0130	380	300
27+PE x 0.75/0.75	Flexible	1.15	0.6	1.4	20.0	26.0	0.0114	470	300
27+PE x 1/1	Flexible	1.30	0.6	1.4	21.0	19.5	0.0104	550	300
27+PE x 1.5/1.5	Flexible	1.60	0.6	1.4	22.5	13.3	0.0089	750	300
27+PE x 2.5/2.5	Flexible	2.10	0.7	1.8	28.0	7.98	0.0081	1200	300
27+PE x 4/4	Flexible	2.60	0.8	1.8	33.0	4.95	0.0076	1700	300
27+PE x 6/6	Flexible	3.40	0.8	2.2	39.0	3.30	0.0061	2600	300
28+PE x 0.5/0.5	Flexible	0.95	0.6	1.4	19.0	39.0	0.0130	380	300
28+PE x 0.75/0.75	Flexible	1.15	0.6	1.4	20.0	26.0	0.0114	470	300
28+PE x 1/1	Flexible	1.30	0.6	1.4	21.0	19.5	0.0104	550	300
28+PE x 1.5/1.5	Flexible	1.60	0.6	1.4	22.5	13.3	0.0089	750	300
28+PE x 2.5/2.5	Flexible	2.10	0.7	1.8	28.0	7.98	0.0081	1200	300
28+PE x 4/4	Flexible	2.60	0.8	1.8	33.0	4.95	0.0076	1700	300
28+PE x 6/6	Flexible	3.40	0.8	2.2	39.0	3.30	0.0061	2600	300

**Table 1 (continued)**

No. of cores and size (core x mm <sup>2</sup> )	Conductor type	Conductor diameter approx. (mm)	Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20 °C maximum (Ohm/km)	Insulation resistance at 70 °C minimum (MOhm-km)	Weight of cable approx. (kg/km)	Standard packing length (m)
29+PE x 0.5/0.5	Flexible	0.95	0.6	1.4	19.0	39.0	0.0130	390	300
29+PE x 0.75/0.75	Flexible	1.15	0.6	1.4	20.0	26.0	0.0114	490	300
29+PE x 1/1	Flexible	1.30	0.6	1.4	21.0	19.5	0.0104	600	300
29+PE x 1.5/1.5	Flexible	1.60	0.6	1.4	22.5	13.3	0.0089	750	300
29+PE x 2.5/2.5	Flexible	2.10	0.7	1.8	28.0	7.98	0.0081	1200	300
29+PE x 4/4	Flexible	2.60	0.8	1.8	33.0	4.95	0.0076	1800	300
29+PE x 6/6	Flexible	3.40	0.8	2.2	39.0	3.30	0.0061	2700	300
30+PE x 0.5/0.5	Flexible	0.95	0.6	1.4	19.5	39.0	0.0130	410	300
30+PE x 0.75/0.75	Flexible	1.15	0.6	1.4	21.0	26.0	0.0114	500	300
30+PE x 1/1	Flexible	1.30	0.6	1.4	21.5	19.5	0.0104	600	300
30+PE x 1.5/1.5	Flexible	1.60	0.6	1.4	23.5	13.3	0.0089	800	300
30+PE x 2.5/2.5	Flexible	2.10	0.7	1.8	29.0	7.98	0.0081	1300	300
30+PE x 4/4	Flexible	2.60	0.8	1.8	34.5	4.95	0.0076	1900	300
30+PE x 6/6	Flexible	3.40	0.8	2.2	40.5	3.30	0.0061	2800	300

**Table 1 (continued)**

**FOR PROTECTION EARTHED CONDUCTOR**

No. of core	Size (mm <sup>2</sup> )	Conductor type	Conductor diameter approx. (mm)	Insulation thickness nominal (mm)	Conductor resistance at 20 °C maximum (Ohm/km)	Insulation resistance at 70 °C minimum (MOhm-km)
1	0.5	Flexible	0.95	0.6	39.0	0.0130
1	0.75	Flexible	1.15	0.6	26.0	0.0114
1	1	Flexible	1.30	0.6	19.5	0.0104
1	1.5	Flexible	1.60	0.6	13.3	0.0089
1	2.5	Flexible	2.10	0.7	7.98	0.0081
1	4	Flexible	2.60	0.8	4.95	0.0076
1	6	Flexible	3.40	0.8	3.30	0.0061