

# SPECIFICATION

For

## CVV-S-SWA

600V PVC Insulated PVC Inner Sheathed

Steel Wire Armored PVC Outer Sheathed

Shielded Control Cable

(600V, Cu/PVC/CTS/PVC/SWA/PVC)

BY



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CUSTOMER

Rev.	Date	Description
0	13/09/2019	Issued specification
1	9/6/2025	Update specification

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) inner sheathed steel wire armored polyvinyl chloride (PVC) outer sheathed shielded control cable.

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

Flame retardant 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 0.1mm.

## 4. Cabling

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

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

A suitable binder tapes 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 : blue, brown

3-cores : brown, black, grey

4-cores : blue, brown, black, grey

For 5-cores to 30-cores :

The cores shall be identified by the arabic numerals printed longitudinally and continuously on the surface of black insulation

## 6. Metallic Shield

The metallic shield shall be an annealed uncoated copper tape and applied helically with a lap over the binder tape.

The thickness of the tape shall be approximate 0.1 mm.

A suitable separator tape shall be applied helically over the metallic shield.

## 7. Inner Sheath

The inner sheath shall be polyvinyl chloride (PVC) compound applied over the separator tape.

The average thickness given in Table 1.

The color of the inner sheath shall be black.

## 8. Steel Wire Armor

The armor shall be galvanized round steel wire applied with a minimum gap between adjacent wires over the inner sheathed.

A suitable tape shall be applied helically over the armored core.

## 9. Outer 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.

## 10. Marking on Cable

The marking items shall be marked by printed at intervals not exceeding 1 meter 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 conductor "CU"

5. Type of insulation and sheath "PVC/PVC"

6. Type of cable "SHIELD CONTROL CABLE"

7. Number of cores and size of conductor

8. The continuous reel length marking (in figure) shall be made on the outer sheath at every 1 meter

## 11. Test and Properties

The cable shall 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.

## 12. Packing

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

The reel shall be covered with suitable covering to provide the cable with physically protection during transportation and during ordinary storage and handling operations.

Each reel shall be clearly marked as follows.

1. Designation "CVV-S-SWA"
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. Insulation resistance at 70 °C .....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 4 refer TIS 11-2531

Test item 5 refer IEC 60332-1

### **Definition concerning the tests**

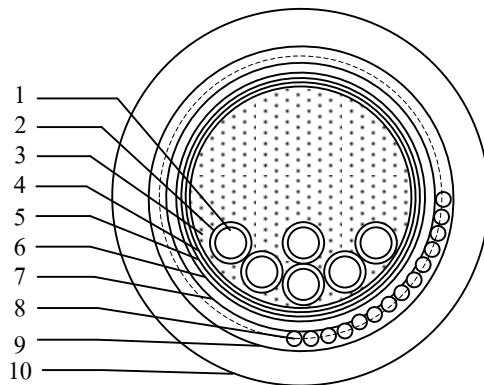
**Routine tests:** Tests made by the manufacturer on each manufactured length of cable to check that each length meets the specified requirements.

**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) compound
3	Filler	Non-hygroscopic
4	Binder tape	Spun bond tape or suitable tape
5	Metallic shield	Copper tape
6	Separator tape	Spun bond tape or suitable tape
7	Inner sheath	Polyvinyl chloride (PVC) compound
8	Aarmor	Galvanized steel wire
9	Separator tape	PS tape or suitable tape
10	Outer sheath	Polyvinyl chloride (PVC/ST5) compound

**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	Size  (mm <sup>2</sup> )	Conductor type	Conductor diameter approx.  (mm)	Insulation thickness nominal  (mm)	Inner sheath thickness nominal  (mm)	Dia. of inner sheath approx.  (mm)	Armor wire dia. nominal  (mm)	Outer 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	0.75	Flexible	1.15	0.6	1.2	9.5	0.80	1.8	15.0	26.0	0.0114	342	300
2	1	Flexible	1.30	0.6	1.2	9.5	0.80	1.8	15.5	19.5	0.0104	365	300
2	1.5	Flexible	1.55	0.6	1.2	10.0	0.80	1.8	16.0	13.3	0.0089	385	300
2	2.5	Flexible	2.00	0.7	1.2	11.5	1.25	1.8	18.0	7.98	0.0081	581	300
2	4	Flexible	2.60	0.8	1.2	13.0	1.25	1.8	19.5	4.95	0.0076	693	300
3	0.75	Flexible	1.15	0.6	1.2	9.5	0.80	1.8	15.5	26.0	0.0114	362	300
3	1	Flexible	1.30	0.6	1.2	10.0	0.80	1.8	15.5	19.5	0.0104	387	300
3	1.5	Flexible	1.55	0.6	1.2	10.5	0.80	1.8	16.5	13.3	0.0089	417	300
3	2.5	Flexible	2.00	0.7	1.2	11.5	1.25	1.8	18.5	7.98	0.0081	625	300
3	4	Flexible	2.60	0.8	1.2	13.5	1.25	1.8	20.5	4.95	0.0076	758	300
4	0.75	Flexible	1.15	0.6	1.2	10.5	0.80	1.8	16.0	26.0	0.0114	394	300
4	1	Flexible	1.30	0.6	1.2	10.5	0.80	1.8	16.5	19.5	0.0104	428	300
4	1.5	Flexible	1.55	0.6	1.2	11.0	1.25	1.8	18.0	13.3	0.0089	574	300
4	2.5	Flexible	2.00	0.7	1.2	12.5	1.25	1.8	19.5	7.98	0.0081	692	300
4	4	Flexible	2.60	0.8	1.2	15.0	1.25	1.8	21.5	4.95	0.0076	856	300
4	6	Flexible	3.40	0.8	1.2	16.5	1.60	1.8	24.0	3.30	0.0061	1176	300
5	0.75	Flexible	1.15	0.6	1.2	11.0	1.25	1.8	18.0	26.0	0.0114	550	300
5	1	Flexible	1.30	0.6	1.2	11.5	1.25	1.8	18.0	19.5	0.0104	585	300
5	1.5	Flexible	1.55	0.6	1.2	12.0	1.25	1.8	19.0	13.3	0.0089	631	300
5	2.5	Flexible	2.00	0.7	1.2	14.0	1.25	1.8	20.5	7.98	0.0081	776	300
5	4	Flexible	2.60	0.8	1.2	16.0	1.60	1.8	23.5	4.95	0.0076	1095	300

**Table 1(continued)**

No. of cores	Size  (mm <sup>2</sup> )	Conductor type	Conductor diameter approx.  (mm)	Insulation thickness nominal  (mm)	Inner sheath thickness nominal  (mm)	Dia. of inner sheath approx.  (mm)	Armor wire dia. nominal  (mm)	Outer 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)
6	0.75	Flexible	1.15	0.6	1.2	12.0	1.25	1.8	18.5	26.0	0.0114	596	300
6	1	Flexible	1.30	0.6	1.2	12.0	1.25	1.8	19.0	19.5	0.0104	636	300
6	1.5	Flexible	1.55	0.6	1.2	13.0	1.25	1.8	19.5	13.3	0.0089	683	300
6	2.5	Flexible	2.00	0.7	1.2	15.0	1.25	1.8	21.5	7.98	0.0081	849	300
7	0.75	Flexible	1.15	0.6	1.2	12.0	1.25	1.8	18.5	26.0	0.0114	606	300
7	1	Flexible	1.30	0.6	1.2	12.0	1.25	1.8	19.0	19.5	0.0104	649	300
7	1.5	Flexible	1.55	0.6	1.2	13.0	1.25	1.8	19.5	13.3	0.0089	699	300
7	2.5	Flexible	2.00	0.7	1.2	15.0	1.25	1.8	21.5	7.98	0.0081	875	300
7	4	Flexible	2.60	0.8	1.2	17.5	1.60	1.8	25.0	4.95	0.0076	1249	300
8	0.75	Flexible	1.15	0.6	1.2	12.5	1.25	1.8	19.5	26.0	0.0114	647	300
8	1	Flexible	1.30	0.6	1.2	13.0	1.25	1.8	19.5	19.5	0.0104	705	300
8	1.5	Flexible	1.55	0.6	1.2	14.0	1.25	1.8	20.5	13.3	0.0089	760	300
8	2.5	Flexible	2.00	0.7	1.2	16.0	1.60	1.8	23.5	7.98	0.0081	1099	300
8	4	Flexible	2.60	0.8	1.2	19.0	1.60	1.8	26.5	4.95	0.0076	1391	300
9	0.75	Flexible	1.15	0.6	1.2	13.5	1.25	1.8	20.0	26.0	0.0114	694	300
9	1	Flexible	1.30	0.6	1.2	14.0	1.25	1.8	20.5	19.5	0.0104	757	300
9	1.5	Flexible	1.55	0.6	1.2	15.0	1.25	1.8	21.5	13.3	0.0089	829	300
9	2.5	Flexible	2.00	0.7	1.2	17.0	1.60	1.8	24.5	7.98	0.0081	1223	300



**Table 1 (continued)**

No. of cores	Size  (mm <sup>2</sup> )	Conductor type	Conductor diameter approx.  (mm)	Insulation thickness nominal  (mm)	Inner sheath thickness nominal  (mm)	Dia. of inner sheath approx.  (mm)	Aarmor wire dia. nominal  (mm)	Outer 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)
10	0.75	Flexible	1.15	0.6	1.2	14.5	1.25	1.8	21.0	26.0	0.0114	745	300
10	1	Flexible	1.30	0.6	1.2	14.5	1.25	1.8	21.5	19.5	0.0104	810	300
10	1.5	Flexible	1.55	0.6	1.2	16.0	1.25	1.8	22.5	13.3	0.0089	889	300
10	2.5	Flexible	2.00	0.7	1.2	18.5	1.60	1.8	25.5	7.98	0.0081	1277	300
10	4	Flexible	2.60	0.8	1.2	22.0	1.60	1.8	29.0	4.95	0.0076	1632	300
11	0.75	Flexible	1.15	0.6	1.2	14.5	1.25	1.8	21.0	26.0	0.0114	749	300
11	1	Flexible	1.30	0.6	1.2	14.5	1.25	1.8	21.5	19.5	0.0104	818	300
11	1.5	Flexible	1.55	0.6	1.2	16.0	1.25	1.8	22.5	13.3	0.0089	900	300
11	2.5	Flexible	2.00	0.7	1.2	18.5	1.60	1.8	25.5	7.98	0.0081	1302	300
12	0.75	Flexible	1.15	0.6	1.2	15.0	1.25	1.8	21.5	26.0	0.0114	780	300
12	1	Flexible	1.30	0.6	1.2	15.0	1.25	1.8	22.0	19.5	0.0104	860	300
12	1.5	Flexible	1.55	0.6	1.2	16.5	1.60	1.8	24.0	13.3	0.0089	1075	300
12	2.5	Flexible	2.00	0.7	1.2	19.0	1.60	1.8	26.5	7.98	0.0081	1366	300
12	4	Flexible	2.60	0.8	1.2	22.5	1.60	1.9	30.5	4.95	0.0076	1800	300
13	0.75	Flexible	1.15	0.6	1.2	15.5	1.25	1.8	22.0	26.0	0.0114	829	300
13	1	Flexible	1.30	0.6	1.2	16.0	1.60	1.8	23.5	19.5	0.0104	1035	300
13	1.5	Flexible	1.55	0.6	1.2	17.0	1.60	1.8	24.5	13.3	0.0089	1120	300
13	2.5	Flexible	2.00	0.7	1.2	20.0	1.60	1.8	27.0	7.98	0.0081	1441	300

**Table 1 (continued)**

No. of cores	Size  (mm <sup>2</sup> )	Conductor type	Conductor diameter approx.  (mm)	Insulation thickness nominal  (mm)	Inner sheath thickness nominal  (mm)	Dia. of inner sheath approx.  (mm)	Aarmor wire dia. nominal  (mm)	Outer 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	0.75	Flexible	1.15	0.6	1.2	15.5	1.25	1.8	22.0	26.0	0.0114	832	300
14	1	Flexible	1.30	0.6	1.2	16.0	1.60	1.8	23.0	19.5	0.0104	1041	300
14	1.5	Flexible	1.55	0.6	1.2	17.0	1.60	1.8	24.5	13.3	0.0089	1131	300
14	2.5	Flexible	2.00	0.7	1.2	20.0	1.60	1.8	27.0	7.98	0.0081	1464	300
14	4	Flexible	2.60	0.8	1.2	23.5	1.60	1.9	31.5	4.95	0.0076	1926	300
14	6	Flexible	3.40	0.8	1.2	27.0	2.00	2.1	36.5	3.30	0.0061	2016	300
15	0.75	Flexible	1.15	0.6	1.2	16.0	1.25	1.8	22.5	26.0	0.0114	865	300
15	1	Flexible	1.30	0.6	1.2	16.5	1.60	1.8	24.0	19.5	0.0104	1068	300
15	1.5	Flexible	1.55	0.6	1.2	17.5	1.60	1.8	25.0	13.3	0.0089	1180	300
15	2.5	Flexible	2.00	0.7	1.2	20.5	1.60	1.8	28.0	7.98	0.0081	1532	300
15	4	Flexible	2.60	0.8	1.2	24.5	1.60	1.9	32.0	4.95	0.0076	2019	300
16	0.75	Flexible	1.15	0.6	1.2	16.0	1.25	1.8	23.0	26.0	0.0114	880	300
16	1	Flexible	1.30	0.6	1.2	16.5	1.60	1.8	24.0	19.5	0.0104	1102	300
16	1.5	Flexible	1.55	0.6	1.2	18.0	1.60	1.8	25.5	13.3	0.0089	1219	300
16	2.5	Flexible	2.00	0.7	1.2	21.0	1.60	1.8	28.0	7.98	0.0081	1581	300
16	4	Flexible	2.60	0.8	1.2	25.0	1.60	1.9	32.5	4.95	0.0076	2086	300
17	0.75	Flexible	1.15	0.6	1.2	17.0	1.60	1.8	24.5	26.0	0.0114	1075	300
17	1	Flexible	1.30	0.6	1.2	17.5	1.60	1.8	25.0	19.5	0.0104	1178	300
17	1.5	Flexible	1.55	0.6	1.2	19.0	1.60	1.8	26.5	13.3	0.0089	1283	300
17	2.5	Flexible	2.00	0.7	1.2	22.0	1.60	1.9	29.5	7.98	0.0081	1696	300

**Table 1 (continued)**

No. of cores	Size  (mm <sup>2</sup> )	Conductor type	Conductor diameter approx.  (mm)	Insulation thickness nominal  (mm)	Inner sheath thickness nominal  (mm)	Dia. of inner sheath approx.  (mm)	Aarmor wire dia. nominal  (mm)	Outer 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)
18	0.75	Flexible	1.15	0.6	1.2	17.0	1.60	1.8	24.5	26.0	0.0114	1076	300
18	1	Flexible	1.30	0.6	1.2	17.5	1.60	1.8	25.0	19.5	0.0104	1182	300
18	1.5	Flexible	1.55	0.6	1.2	19.0	1.60	1.8	26.5	13.3	0.0089	1291	300
18	2.5	Flexible	2.00	0.7	1.2	22.0	1.60	1.9	29.5	7.98	0.0081	1705	300
19	0.75	Flexible	1.15	0.6	1.2	17.0	1.60	1.8	24.5	26.0	0.0114	1085	300
19	1	Flexible	1.30	0.6	1.2	17.5	1.60	1.8	25.0	19.5	0.0104	1194	300
19	1.5	Flexible	1.55	0.6	1.2	19.0	1.60	1.8	26.5	13.3	0.0089	1306	300
19	2.5	Flexible	2.00	0.7	1.2	22.0	1.60	1.9	29.5	7.98	0.0081	1730	300
20	0.75	Flexible	1.15	0.6	1.2	17.5	1.60	1.8	24.5	26.0	0.0114	1102	300
20	1	Flexible	1.30	0.6	1.2	18.0	1.60	1.8	25.0	19.5	0.0104	1214	300
20	1.5	Flexible	1.55	0.6	1.2	19.5	1.60	1.8	27.0	13.3	0.0089	1351	300
20	2.5	Flexible	2.00	0.7	1.2	22.5	1.60	1.9	30.0	7.98	0.0081	1787	300
20	4	Flexible	2.60	0.8	1.2	27.0	2.00	2.0	36.0	4.95	0.0076	2626	300
21	0.75	Flexible	1.15	0.6	1.2	17.5	1.60	1.8	25.0	26.0	0.0114	1140	300
21	1	Flexible	1.30	0.6	1.2	18.5	1.60	1.8	25.5	19.5	0.0104	1255	300
21	1.5	Flexible	1.55	0.6	1.2	20.0	1.60	1.8	27.0	13.3	0.0089	1396	300
21	2.5	Flexible	2.00	0.7	1.2	23.0	1.60	1.9	30.5	7.98	0.0081	1850	300
22	0.75	Flexible	1.15	0.6	1.2	18.5	1.60	1.8	26.0	26.0	0.0114	1204	300
22	1	Flexible	1.30	0.6	1.2	19.0	1.60	1.8	26.5	19.5	0.0104	1326	300
22	1.5	Flexible	1.55	0.6	1.2	21.0	1.60	1.8	28.0	13.3	0.0089	1472	300
22	2.5	Flexible	2.00	0.7	1.2	24.0	1.60	1.9	32.0	7.98	0.0081	1947	300

**Table 1 (continued)**

No. of cores	Size  (mm <sup>2</sup> )	Conductor type	Conductor diameter approx.  (mm)	Insulation thickness nominal  (mm)	Inner sheath thickness nominal  (mm)	Dia. of inner sheath approx.  (mm)	Aarmor wire dia. nominal  (mm)	Outer 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	0.75	Flexible	1.15	0.6	1.2	18.5	1.60	1.8	26.0	26.0	0.0114	1213	300
23	1	Flexible	1.30	0.6	1.2	19.0	1.60	1.8	26.5	19.5	0.0104	1337	300
23	1.5	Flexible	1.55	0.6	1.2	21.0	1.60	1.8	28.0	13.3	0.0089	1487	300
23	2.5	Flexible	2.00	0.7	1.2	24.0	1.60	1.9	32.0	7.98	0.0081	1974	300
24	0.75	Flexible	1.15	0.6	1.2	19.5	1.60	1.8	27.0	26.0	0.0114	1258	300
24	1	Flexible	1.30	0.6	1.2	20.0	1.60	1.8	27.5	19.5	0.0104	1384	300
24	1.5	Flexible	1.55	0.6	1.2	22.0	1.60	1.8	29.0	13.3	0.0089	1541	300
24	2.5	Flexible	2.00	0.7	1.2	25.5	1.60	2.0	33.5	7.98	0.0081	2074	300
25	0.75	Flexible	1.15	0.6	1.2	19.5	1.60	1.8	27.0	26.0	0.0114	1269	300
25	1	Flexible	1.30	0.6	1.2	20.0	1.60	1.8	27.5	19.5	0.0104	1399	300
25	1.5	Flexible	1.55	0.6	1.2	22.0	1.60	1.8	29.0	13.3	0.0089	1560	300
25	2.5	Flexible	2.00	0.7	1.2	25.5	1.60	2.0	33.5	7.98	0.0081	2105	300
26	0.75	Flexible	1.15	0.6	1.2	19.5	1.60	1.8	27.0	26.0	0.0114	1282	300
26	1	Flexible	1.30	0.6	1.2	20.0	1.60	1.8	27.5	19.5	0.0104	1414	300
26	1.5	Flexible	1.55	0.6	1.2	22.0	1.60	1.8	29.0	13.3	0.0089	1579	300
26	2.5	Flexible	2.00	0.7	1.2	25.5	1.60	2.0	33.5	7.98	0.0081	2136	300
27	0.75	Flexible	1.15	0.6	1.2	20.0	1.60	1.8	27.5	26.0	0.0114	1313	300
27	1	Flexible	1.30	0.6	1.2	20.5	1.60	1.8	28.0	19.5	0.0104	1451	300
27	1.5	Flexible	1.55	0.6	1.2	22.5	1.60	1.8	29.5	13.3	0.0089	1618	300
27	2.5	Flexible	2.00	0.7	1.2	26.0	1.60	2.0	34.0	7.98	0.0081	2185	300

**Table 1 (continued)**

No. of cores	Size (mm <sup>2</sup> )	Conductor type	Conductor diameter approx. (mm)	Insulation thickness nominal (mm)	Inner sheath thickness nominal (mm)	Dia. of inner sheath approx. (mm)	Armor wire dia. nominal (mm)	Outer 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)
28	0.75	Flexible	1.15	0.6	1.2	20.5	1.60	1.8	28.0	26.0	0.0114	1367	300
28	1	Flexible	1.30	0.6	1.2	21.0	1.60	1.8	28.5	19.5	0.0104	1509	300
28	1.5	Flexible	1.55	0.6	1.2	23.0	1.60	1.9	31.0	13.3	0.0089	1721	300
28	2.5	Flexible	2.00	0.7	1.2	27.0	2.00	2.1	36.0	7.98	0.0081	2552	300
29	0.75	Flexible	1.15	0.6	1.2	19.5	1.60	1.8	27.0	26.0	0.0114	1314	300
29	1	Flexible	1.30	0.6	1.2	20.0	1.60	1.8	27.5	19.5	0.0104	1456	300
29	1.5	Flexible	1.55	0.6	1.2	22.0	1.60	1.8	29.0	13.3	0.0089	1633	300
29	2.5	Flexible	2.00	0.7	1.2	25.5	1.60	2.0	33.5	7.98	0.0081	2221	300
30	0.75	Flexible	1.15	0.6	1.2	19.5	1.60	1.8	27.0	26.0	0.0114	1326	300
30	1	Flexible	1.30	0.6	1.2	20.0	1.60	1.8	27.5	19.5	0.0104	1471	300
30	1.5	Flexible	1.55	0.6	1.2	22.0	1.60	1.8	29.0	13.3	0.0089	1652	300
30	2.5	Flexible	2.00	0.7	1.2	25.5	1.60	2.0	33.4	7.98	0.0081	2252	300