

SPECIFICATION**For****600V-CVV-S**

600V PVC Insulated

PVC Inner Sheathed PVC Outer Sheathed

Shielded Control Cable

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

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| Rev. | Date | Description |
|------|------------|---|
| 0 | 27/09/2019 | Issued specification |
| 1 | 17/01/2020 | Adjust approximate thickness inner sheath to minimum thickness inner sheath "ref-EGAT SPEC" |
| 2 | 21/1/2021 | - Change marking on cable - Cancel code "0010" |
| 3 | 10/6/2021 | Change color insulation |
| 4 | 24/8/2021 | Change reference standard |
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CUSTOMER

| Customer Document | Rev. |
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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 polyvinyl chloride (PVC) outer sheathed shielded control cable.

The cable shall be based on TIS 838-2531, Table 10.

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

2. Conductor

The conductor shall be non-compacted concentric stranded uncoated annealed copper conductor in accordance with TIS 2427-2552, Class 2. (Same as IEC 60228 : 2004, Class 2)

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

3. Insulation

The insulation shall be polyvinyl chloride (PVC) compound meet the requirements of TIS 838-2531.

The average thickness of the insulation shall be not less than that given in Table 1.

The minimum thickness shall be not less than 90% of the value in Table 1.

4. Cabling

The individual insulated cores shall be cabled together with suitable length of lay and/or PVC rod and/or non-hygrosopic filler to give the completed cable a circular cross section.

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

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

5. Core Identification

The cores shall be identified by color or numerals printed on the insulation, as follows :

For 2-cores to 21-cores :

| Conductor Number | Base color | Tracer color | Conductor Number | Base color | Tracer color |
|------------------|------------|--------------|------------------|------------|--------------|
| 1 | Black | - | 12 | Black | White |
| 2 | White | - | 13 | Red | White |
| 3 | Red | - | 14 | Green | White |
| 4 | Green | - | 15 | Blue | White |
| 5 | Orange | - | 16 | Black | Red |
| 6 | Blue | - | 17 | White | Red |
| 7 | White | Black | 18 | Orange | Red |
| 8 | Red | Black | 19 | Blue | Red |
| 9 | Green | Black | 20 | Red | Green |
| 10 | Orange | Black | 21 | Orange | Green |
| 11 | Blue | Black | | | |

For 22-cores to 30-cores :

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

6. Inner Sheath

The inner sheath shall be polyvinyl chloride (PVC) compound meet the requirements of TIS 838-2531.

The minimum thickness shall be not less than 80% of the value in Table 1.

The color of the inner sheath shall be black.

7. Metallic Shield

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

The thickness of the copper tape shall be approximate 0.1 mm.

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

8. Outer Sheath

The outer sheath shall be sunlight resistant polyvinyl chloride (PVC) compound meet the requirements of TIS 838-2531.


The average thickness of the outer sheath shall not be less than that given in Table 1.

The minimum thickness shall be not less than 80% of the value in Table 1.

The color of the outer sheath shall be black.

9. 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 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. TIS logo and standard number
9. The continuous reel length marking (in figure) shall be made on the outer sheath at every 1 meter

10. Test and Properties

The cable shall be meet the requirements in Test and Inspection and Table 1 when tested in accordance with TIS 838-2531, IEC 60332-1 and TIS 2427-2552 (Same as IEC 60228 : 2004)


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

11. Packing

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

The reels shall be covered with suitable covering 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 "600V-CVV-S"
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 5 minutes, V2500

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

Definition concerning the tests

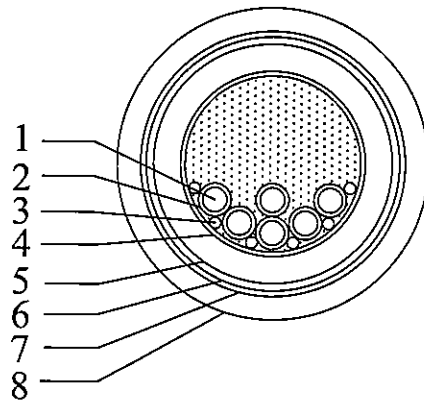
Routine tests: Tests made by the manufacturer on each manufactured length of cable to check that each length meets the specified requirements.

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 | Non-compacted concentric stranded annealed copper |
| 2 | Insulation | Polyvinyl chloride (PVC) |
| 3 | Filler | PVC rod and/or PP Calcium Yarn (Non-hygrosopic) |
| 4 | Binder tape | Spun bond tape or suitable tape |
| 5 | Inner sheath | Polyvinyl chloride (PVC) |
| 6 | Metallic shield | Copper tape |
| 7 | Separator tape | Spun bond tape or suitable tape |
| 8 | Outer sheath | Polyvinyl chloride (PVC) |

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 ²) | Conductor (wires/type) | Conductor diameter approx. (mm) | Insulation thickness nominal (mm) | Inner sheath thickness nominal (mm) | Dia. of inner sheath approx. (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 | 1.0 | 7/Non-compacted | 1.29 | 0.76 | 1.14 | 9.5 | 1.14 | 12.5 | 18.1 | 0.0117 | 180 | 300 |
| 2 | 1.5 | 7/Non-compacted | 1.59 | 1.14 | 1.14 | 11.5 | 1.14 | 14.5 | 12.1 | 0.0136 | 240 | 300 |
| 2 | 2.5 | 7/Non-compacted | 2.01 | 1.14 | 1.14 | 12.0 | 1.14 | 15.0 | 7.41 | 0.0113 | 280 | 300 |
| 2 | 4 | 7/Non-compacted | 2.55 | 1.14 | 1.14 | 13.5 | 1.52 | 17.5 | 4.61 | 0.0098 | 370 | 300 |
| 2 | 6 | 7/Non-compacted | 3.12 | 1.14 | 1.14 | 14.5 | 1.52 | 18.5 | 3.08 | 0.0084 | 430 | 300 |
| 2 | 10 | 7/Non-compacted | 4.05 | 1.14 | 1.14 | 16.0 | 1.52 | 20.0 | 1.83 | 0.0069 | 550 | 300 |
| 3 | 1.0 | 7/Non-compacted | 1.29 | 0.76 | 1.14 | 10.0 | 1.14 | 13.0 | 18.1 | 0.0117 | 200 | 300 |
| 3 | 1.5 | 7/Non-compacted | 1.59 | 1.14 | 1.14 | 12.0 | 1.14 | 15.0 | 12.1 | 0.0136 | 270 | 300 |
| 3 | 2.5 | 7/Non-compacted | 2.01 | 1.14 | 1.14 | 13.0 | 1.52 | 17.0 | 7.41 | 0.0113 | 350 | 300 |
| 3 | 4 | 7/Non-compacted | 2.55 | 1.14 | 1.14 | 14.5 | 1.52 | 18.0 | 4.61 | 0.0098 | 430 | 300 |
| 3 | 6 | 7/Non-compacted | 3.12 | 1.14 | 1.14 | 15.5 | 1.52 | 19.5 | 3.08 | 0.0084 | 500 | 300 |
| 3 | 10 | 7/Non-compacted | 4.05 | 1.14 | 1.14 | 17.0 | 1.52 | 21.0 | 1.83 | 0.0069 | 700 | 300 |
| 4 | 1.0 | 7/Non-compacted | 1.29 | 0.76 | 1.14 | 10.5 | 1.14 | 13.5 | 18.1 | 0.0117 | 230 | 300 |
| 4 | 1.5 | 7/Non-compacted | 1.59 | 1.14 | 1.14 | 13.0 | 1.52 | 17.0 | 12.1 | 0.0136 | 350 | 300 |
| 4 | 2.5 | 7/Non-compacted | 2.01 | 1.14 | 1.14 | 14.0 | 1.52 | 18.0 | 7.41 | 0.0113 | 420 | 300 |
| 4 | 4 | 7/Non-compacted | 2.55 | 1.14 | 1.14 | 15.5 | 1.52 | 19.5 | 4.61 | 0.0098 | 500 | 300 |
| 4 | 6 | 7/Non-compacted | 3.12 | 1.14 | 1.14 | 17.0 | 1.52 | 20.5 | 3.08 | 0.0084 | 650 | 300 |
| 4 | 10 | 7/Non-compacted | 4.05 | 1.14 | 1.14 | 19.0 | 2.03 | 24.0 | 1.83 | 0.0069 | 900 | 300 |

Table 1 (continued)

| No. of cores | Size (mm ²) | Conductor (wires/type) | Conductor diameter approx. (mm) | Insulation thickness nominal (mm) | Inner sheath thickness nominal (mm) | Dia. of inner sheath approx. (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) |
|--------------|-------------------------|------------------------|---------------------------------|-----------------------------------|-------------------------------------|-----------------------------------|-------------------------------------|-------------------------------|--|--|---------------------------------|-----------------------------|
| 5 | 1.0 | 7/Non-compacted | 1.29 | 0.76 | 1.14 | 11.5 | 1.14 | 14.5 | 18.1 | 0.0117 | 260 | 300 |
| 5 | 1.5 | 7/Non-compacted | 1.59 | 1.14 | 1.14 | 14.5 | 1.52 | 18.5 | 12.1 | 0.0136 | 410 | 300 |
| 5 | 2.5 | 7/Non-compacted | 2.01 | 1.14 | 1.14 | 15.5 | 1.52 | 19.5 | 7.41 | 0.0113 | 480 | 300 |
| 5 | 4 | 7/Non-compacted | 2.55 | 1.14 | 1.14 | 17.0 | 1.52 | 21.0 | 4.61 | 0.0098 | 600 | 300 |
| 5 | 6 | 7/Non-compacted | 3.12 | 1.14 | 1.14 | 18.5 | 1.52 | 22.5 | 3.08 | 0.0084 | 750 | 300 |
| 5 | 10 | 7/Non-compacted | 4.05 | 1.14 | 1.14 | 21.0 | 2.03 | 26.0 | 1.83 | 0.0069 | 1100 | 300 |
| 6 | 1.0 | 7/Non-compacted | 1.29 | 0.76 | 1.14 | 12.5 | 1.14 | 15.5 | 18.1 | 0.0117 | 290 | 300 |
| 6 | 1.5 | 7/Non-compacted | 1.59 | 1.14 | 1.14 | 15.5 | 1.52 | 19.5 | 12.1 | 0.0136 | 460 | 300 |
| 6 | 2.5 | 7/Non-compacted | 2.01 | 1.14 | 1.14 | 17.0 | 1.52 | 21.0 | 7.41 | 0.0113 | 550 | 300 |
| 6 | 4 | 7/Non-compacted | 2.55 | 1.14 | 1.14 | 18.5 | 1.52 | 22.5 | 4.61 | 0.0098 | 700 | 300 |
| 6 | 6 | 7/Non-compacted | 3.12 | 1.14 | 1.14 | 20.0 | 2.03 | 25.0 | 3.08 | 0.0084 | 900 | 300 |
| 7 | 1.0 | 7/Non-compacted | 1.29 | 0.76 | 1.14 | 12.5 | 1.14 | 15.5 | 18.1 | 0.0117 | 310 | 300 |
| 7 | 1.5 | 7/Non-compacted | 1.59 | 1.14 | 1.14 | 15.5 | 1.52 | 19.5 | 12.1 | 0.0136 | 480 | 300 |
| 7 | 2.5 | 7/Non-compacted | 2.01 | 1.14 | 1.14 | 17.0 | 1.52 | 21.0 | 7.41 | 0.0113 | 600 | 300 |
| 7 | 4 | 7/Non-compacted | 2.55 | 1.14 | 1.14 | 18.5 | 1.52 | 22.5 | 4.61 | 0.0098 | 750 | 300 |
| 7 | 6 | 7/Non-compacted | 3.12 | 1.14 | 1.14 | 20.0 | 2.03 | 25.0 | 3.08 | 0.0084 | 1000 | 300 |

Table 1 (continued)

| No. of cores | Size (mm ²) | Conductor (wires/type) | Conductor diameter approx. (mm) | Insulation thickness nominal (mm) | Inner sheath thickness nominal (mm) | Dia. of inner sheath approx. (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) |
|--------------|-------------------------|------------------------|---------------------------------|-----------------------------------|-------------------------------------|-----------------------------------|-------------------------------------|-------------------------------|---|---|---------------------------------|-----------------------------|
| 8 | 1.0 | 7/Non-compacted | 1.29 | 0.76 | 1.14 | 13.5 | 1.52 | 17.5 | 18.1 | 0.0117 | 380 | 300 |
| 8 | 1.5 | 7/Non-compacted | 1.59 | 1.14 | 1.14 | 17.0 | 1.52 | 21.0 | 12.1 | 0.0136 | 550 | 300 |
| 8 | 2.5 | 7/Non-compacted | 2.01 | 1.14 | 1.14 | 18.5 | 1.52 | 22.0 | 7.41 | 0.0113 | 650 | 300 |
| 8 | 4 | 7/Non-compacted | 2.55 | 1.14 | 1.14 | 20.5 | 2.03 | 25.5 | 4.61 | 0.0098 | 900 | 300 |
| 8 | 6 | 7/Non-compacted | 3.12 | 1.14 | 1.14 | 22.0 | 2.03 | 27.0 | 3.08 | 0.0084 | 1100 | 300 |
| 9 | 1.0 | 7/Non-compacted | 1.29 | 0.76 | 1.14 | 14.5 | 1.52 | 18.5 | 18.1 | 0.0117 | 430 | 300 |
| 9 | 1.5 | 7/Non-compacted | 1.59 | 1.14 | 1.14 | 18.5 | 1.52 | 22.0 | 12.1 | 0.0136 | 600 | 300 |
| 9 | 2.5 | 7/Non-compacted | 2.01 | 1.14 | 1.14 | 20.0 | 2.03 | 25.0 | 7.41 | 0.0113 | 800 | 300 |
| 9 | 4 | 7/Non-compacted | 2.55 | 1.14 | 1.14 | 22.0 | 2.03 | 27.0 | 4.61 | 0.0098 | 1000 | 300 |
| 9 | 6 | 7/Non-compacted | 3.12 | 1.14 | 1.14 | 24.0 | 2.03 | 29.0 | 3.08 | 0.0084 | 1200 | 300 |
| 10 | 1.0 | 7/Non-compacted | 1.29 | 0.76 | 1.14 | 15.5 | 1.52 | 19.5 | 18.1 | 0.0117 | 460 | 300 |
| 10 | 1.5 | 7/Non-compacted | 1.59 | 1.14 | 1.14 | 19.5 | 1.52 | 23.5 | 12.1 | 0.0136 | 650 | 300 |
| 10 | 2.5 | 7/Non-compacted | 2.01 | 1.14 | 1.14 | 21.5 | 2.03 | 26.5 | 7.41 | 0.0113 | 850 | 300 |
| 10 | 4 | 7/Non-compacted | 2.55 | 1.14 | 1.14 | 23.5 | 2.03 | 28.5 | 4.61 | 0.0098 | 1100 | 300 |
| 10 | 6 | 7/Non-compacted | 3.12 | 1.14 | 1.14 | 25.5 | 2.03 | 30.5 | 3.08 | 0.0084 | 1400 | 300 |

Table 1 (continued)

| No. of cores | Size (mm ²) | Conductor (wires/type) | Conductor diameter approx. (mm) | Insulation thickness nominal (mm) | Inner sheath thickness nominal (mm) | Dia. of inner sheath approx. (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) |
|--------------|-------------------------|------------------------|---------------------------------|-----------------------------------|-------------------------------------|-----------------------------------|-------------------------------------|-------------------------------|--|---|---------------------------------|-----------------------------|
| 11 | 1.0 | 7/Non-compacted | 1.29 | 0.76 | 1.14 | 15.5 | 1.52 | 19.5 | 18.1 | 0.0117 | 470 | 300 |
| 11 | 1.5 | 7/Non-compacted | 1.59 | 1.14 | 1.14 | 19.5 | 1.52 | 23.5 | 12.1 | 0.0136 | 700 | 300 |
| 11 | 2.5 | 7/Non-compacted | 2.01 | 1.14 | 1.14 | 21.5 | 2.03 | 26.5 | 7.41 | 0.0113 | 900 | 300 |
| 11 | 4 | 7/Non-compacted | 2.55 | 1.14 | 1.14 | 23.5 | 2.03 | 28.5 | 4.61 | 0.0098 | 1200 | 300 |
| 11 | 6 | 7/Non-compacted | 3.12 | 1.14 | 1.14 | 25.5 | 2.03 | 30.5 | 3.08 | 0.0084 | 1400 | 300 |
| | | | | | | | | | | | | |
| 12 | 1.0 | 7/Non-compacted | 1.29 | 0.76 | 1.14 | 16.5 | 1.52 | 20.0 | 18.1 | 0.0117 | 500 | 300 |
| 12 | 1.5 | 7/Non-compacted | 1.59 | 1.14 | 1.14 | 20.5 | 1.52 | 24.5 | 12.1 | 0.0136 | 750 | 300 |
| 12 | 2.5 | 7/Non-compacted | 2.01 | 1.14 | 1.14 | 22.0 | 2.03 | 27.0 | 7.41 | 0.0113 | 950 | 300 |
| 12 | 4 | 7/Non-compacted | 2.55 | 1.14 | 1.14 | 24.5 | 2.03 | 29.5 | 4.61 | 0.0098 | 1200 | 300 |
| 12 | 6 | 7/Non-compacted | 3.12 | 1.14 | 1.14 | 27.0 | 2.03 | 32.0 | 3.08 | 0.0084 | 1600 | 300 |
| | | | | | | | | | | | | |
| 13 | 1.0 | 7/Non-compacted | 1.29 | 0.76 | 1.14 | 17.0 | 1.52 | 21.0 | 18.1 | 0.0117 | 550 | 300 |
| 13 | 1.5 | 7/Non-compacted | 1.59 | 1.14 | 1.14 | 21.5 | 2.03 | 26.5 | 12.1 | 0.0136 | 850 | 300 |
| 13 | 2.5 | 7/Non-compacted | 2.01 | 1.14 | 1.14 | 23.5 | 2.03 | 28.5 | 7.41 | 0.0113 | 1000 | 300 |
| 13 | 4 | 7/Non-compacted | 2.55 | 1.14 | 1.14 | 26.0 | 2.03 | 31.0 | 4.61 | 0.0098 | 1300 | 300 |
| 13 | 6 | 7/Non-compacted | 3.12 | 1.14 | 1.14 | 28.0 | 2.03 | 33.0 | 3.08 | 0.0084 | 1700 | 300 |

Table 1 (continued)

| No. of cores | Size (mm ²) | Conductor (wires/type) | Conductor diameter approx. (mm) | Insulation thickness nominal (mm) | Inner sheath thickness nominal (mm) | Dia. of inner sheath approx. (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 | 1.0 | 7/Non-compacted | 1.29 | 0.76 | 1.14 | 17.0 | 1.52 | 21.0 | 18.1 | 0.0117 | 550 | 300 |
| 14 | 1.5 | 7/Non-compacted | 1.59 | 1.14 | 1.14 | 21.5 | 2.03 | 26.5 | 12.1 | 0.0136 | 850 | 300 |
| 14 | 2.5 | 7/Non-compacted | 2.01 | 1.14 | 1.14 | 23.5 | 2.03 | 28.5 | 7.41 | 0.0113 | 1000 | 300 |
| 14 | 4 | 7/Non-compacted | 2.55 | 1.14 | 1.14 | 26.0 | 2.03 | 31.0 | 4.61 | 0.0098 | 1400 | 300 |
| 14 | 6 | 7/Non-compacted | 3.12 | 1.14 | 1.14 | 28.0 | 2.03 | 33.0 | 3.08 | 0.0084 | 1700 | 300 |
| | | | | | | | | | | | | |
| 15 | 1.0 | 7/Non-compacted | 1.29 | 0.76 | 1.14 | 17.5 | 1.52 | 21.5 | 18.1 | 0.0117 | 550 | 300 |
| 15 | 1.5 | 7/Non-compacted | 1.59 | 1.14 | 1.14 | 22.5 | 2.03 | 27.5 | 12.1 | 0.0136 | 900 | 300 |
| 15 | 2.5 | 7/Non-compacted | 2.01 | 1.14 | 1.14 | 24.0 | 2.03 | 29.0 | 7.41 | 0.0113 | 1100 | 300 |
| 15 | 4 | 7/Non-compacted | 2.55 | 1.14 | 1.14 | 27.0 | 2.03 | 32.0 | 4.61 | 0.0098 | 1500 | 300 |
| 15 | 6 | 7/Non-compacted | 3.12 | 1.14 | 1.14 | 29.5 | 2.03 | 34.5 | 3.08 | 0.0084 | 1800 | 300 |
| | | | | | | | | | | | | |
| 16 | 1.0 | 7/Non-compacted | 1.29 | 0.76 | 1.14 | 18.0 | 1.52 | 22.0 | 18.1 | 0.0117 | 600 | 300 |
| 16 | 1.5 | 7/Non-compacted | 1.59 | 1.14 | 1.14 | 23.0 | 2.03 | 28.0 | 12.1 | 0.0136 | 950 | 300 |
| 16 | 2.5 | 7/Non-compacted | 2.01 | 1.14 | 1.14 | 24.5 | 2.03 | 29.5 | 7.41 | 0.0113 | 1200 | 300 |
| 16 | 4 | 7/Non-compacted | 2.55 | 1.14 | 1.14 | 27.5 | 2.03 | 32.5 | 4.61 | 0.0098 | 1500 | 300 |
| 16 | 6 | 7/Non-compacted | 3.12 | 1.14 | 1.14 | 30.0 | 2.03 | 35.0 | 3.08 | 0.0084 | 1900 | 300 |

Table 1 (continued)

| No. of cores | Size (mm ²) | Conductor (wires/type) | Conductor diameter approx. (mm) | Insulation thickness nominal (mm) | Inner sheath thickness nominal (mm) | Dia. of inner sheath approx. (mm) | Outer sheath thickness nominal (mm) | Overall diameter approx. (mm) | Conductor resistance at 20 °C maximum (Ohm/km) | Insulation esistance at 70 °C minimum (MOhm-km) | Weight of cable approx. (kg/km) | Standard packing length (m) |
|--------------|-------------------------|------------------------|---------------------------------|-----------------------------------|-------------------------------------|-----------------------------------|-------------------------------------|-------------------------------|--|---|---------------------------------|-----------------------------|
| 17 | 1.0 | 7/Non-compacted | 1.29 | 0.76 | 1.14 | 19.0 | 1.52 | 23.0 | 18.1 | 0.0117 | 650 | 300 |
| 17 | 1.5 | 7/Non-compacted | 1.59 | 1.14 | 1.14 | 24.0 | 2.03 | 29.0 | 12.1 | 0.0136 | 1000 | 300 |
| 17 | 2.5 | 7/Non-compacted | 2.01 | 1.14 | 1.14 | 26.0 | 2.03 | 31.0 | 7.41 | 0.0113 | 1300 | 300 |
| 17 | 4 | 7/Non-compacted | 2.55 | 1.14 | 1.14 | 29.0 | 2.03 | 34.0 | 4.61 | 0.0098 | 1600 | 300 |
| 17 | 6 | 7/Non-compacted | 3.12 | 1.14 | 1.14 | 31.5 | 2.03 | 37.0 | 3.08 | 0.0084 | 2100 | 300 |
| | | | | | | | | | | | | |
| 18 | 1.0 | 7/Non-compacted | 1.29 | 0.76 | 1.14 | 19.0 | 1.52 | 23.0 | 18.1 | 0.0117 | 650 | 300 |
| 18 | 1.5 | 7/Non-compacted | 1.59 | 1.14 | 1.14 | 24.0 | 2.03 | 29.0 | 12.1 | 0.0136 | 1000 | 300 |
| 18 | 2.5 | 7/Non-compacted | 2.01 | 1.14 | 1.14 | 26.0 | 2.03 | 31.0 | 7.41 | 0.0113 | 1300 | 300 |
| 18 | 4 | 7/Non-compacted | 2.55 | 1.14 | 1.14 | 29.0 | 2.03 | 34.0 | 4.61 | 0.0098 | 1600 | 300 |
| 18 | 6 | 7/Non-compacted | 3.12 | 1.14 | 1.14 | 31.5 | 2.03 | 36.5 | 3.08 | 0.0084 | 2100 | 300 |
| | | | | | | | | | | | | |
| 19 | 1.0 | 7/Non-compacted | 1.29 | 0.76 | 1.14 | 19.0 | 1.52 | 23.0 | 18.1 | 0.0117 | 650 | 300 |
| 19 | 1.5 | 7/Non-compacted | 1.59 | 1.14 | 1.14 | 24.0 | 2.03 | 29.0 | 12.1 | 0.0136 | 1000 | 300 |
| 19 | 2.5 | 7/Non-compacted | 2.01 | 1.14 | 1.14 | 26.0 | 2.03 | 31.0 | 7.41 | 0.0113 | 1300 | 300 |
| 19 | 4 | 7/Non-compacted | 2.55 | 1.14 | 1.14 | 29.0 | 2.03 | 34.0 | 4.61 | 0.0098 | 1700 | 300 |
| 19 | 6 | 7/Non-compacted | 3.12 | 1.14 | 1.14 | 31.5 | 2.03 | 36.5 | 3.08 | 0.0084 | 2100 | 300 |

Table 1 (continued)

| No. of cores | Size (mm ²) | Conductor (wires/type) | Conductor diameter approx. (mm) | Insulation thickness nominal (mm) | Inner sheath thickness nominal (mm) | Dia. of inner sheath approx. (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) |
|--------------|-------------------------|------------------------|---------------------------------|-----------------------------------|-------------------------------------|-----------------------------------|-------------------------------------|-------------------------------|--|--|---------------------------------|-----------------------------|
| 20 | 1.0 | 7/Non-compacted | 1.29 | 0.76 | 1.14 | 19.5 | 1.52 | 23.5 | 18.1 | 0.0117 | 700 | 300 |
| 20 | 1.5 | 7/Non-compacted | 1.59 | 1.14 | 1.14 | 24.5 | 2.03 | 29.5 | 12.1 | 0.0136 | 1100 | 300 |
| 20 | 2.5 | 7/Non-compacted | 2.01 | 1.14 | 1.14 | 27.0 | 2.03 | 32.0 | 7.41 | 0.0113 | 1400 | 300 |
| 20 | 4 | 7/Non-compacted | 2.55 | 1.14 | 1.14 | 30.0 | 2.03 | 35.0 | 4.61 | 0.0098 | 1800 | 300 |
| 20 | 6 | 7/Non-compacted | 3.12 | 1.14 | 1.14 | 32.5 | 2.03 | 37.5 | 3.08 | 0.0084 | 2300 | 300 |
| | | | | | | | | | | | | |
| 21 | 1.0 | 7/Non-compacted | 1.29 | 0.76 | 1.14 | 20.0 | 1.52 | 24.0 | 18.1 | 0.0117 | 750 | 300 |
| 21 | 1.5 | 7/Non-compacted | 1.59 | 1.14 | 1.14 | 25.5 | 2.03 | 30.5 | 12.1 | 0.0136 | 1100 | 300 |
| 21 | 2.5 | 7/Non-compacted | 2.01 | 1.14 | 1.14 | 27.5 | 2.03 | 32.5 | 7.41 | 0.0113 | 1400 | 300 |
| 21 | 4 | 7/Non-compacted | 2.55 | 1.14 | 1.14 | 30.5 | 2.03 | 35.5 | 4.61 | 0.0098 | 1900 | 300 |
| 21 | 6 | 7/Non-compacted | 3.12 | 1.14 | 1.14 | 33.5 | 2.03 | 38.5 | 3.08 | 0.0084 | 2400 | 300 |
| | | | | | | | | | | | | |
| 22 | 1.0 | 7/Non-compacted | 1.29 | 0.76 | 1.14 | 21.0 | 2.03 | 26.0 | 18.1 | 0.0117 | 800 | 300 |
| 22 | 1.5 | 7/Non-compacted | 1.59 | 1.14 | 1.14 | 26.5 | 2.03 | 31.5 | 12.1 | 0.0136 | 1200 | 300 |
| 22 | 2.5 | 7/Non-compacted | 2.01 | 1.14 | 1.14 | 29.0 | 2.03 | 34.0 | 7.41 | 0.0113 | 1500 | 300 |
| 22 | 4 | 7/Non-compacted | 2.55 | 1.14 | 1.14 | 32.5 | 2.03 | 37.5 | 4.61 | 0.0098 | 1900 | 300 |
| 22 | 6 | 7/Non-compacted | 3.12 | 1.14 | 1.14 | 35.0 | 2.03 | 40.0 | 3.08 | 0.0084 | 2500 | 300 |

Table 1 (continued)

| No. of cores | Size (mm ²) | Conductor (wires/type) | Conductor diameter approx. (mm) | Insulation thickness nominal (mm) | Inner sheath thickness nominal (mm) | Dia. of inner sheath approx. (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 | 1.0 | 7/Non-compacted | 1.29 | 0.76 | 1.14 | 21.0 | 2.03 | 26.0 | 18.1 | 0.0117 | 850 | 300 |
| 23 | 1.5 | 7/Non-compacted | 1.59 | 1.14 | 1.14 | 26.5 | 2.03 | 31.5 | 12.1 | 0.0136 | 1200 | 300 |
| 23 | 2.5 | 7/Non-compacted | 2.01 | 1.14 | 1.14 | 29.0 | 2.03 | 34.0 | 7.41 | 0.0113 | 1500 | 300 |
| 23 | 4 | 7/Non-compacted | 2.55 | 1.14 | 1.14 | 32.5 | 2.03 | 37.5 | 4.61 | 0.0098 | 2000 | 300 |
| 23 | 6 | 7/Non-compacted | 3.12 | 1.14 | 1.14 | 35.0 | 2.03 | 40.0 | 3.08 | 0.0084 | 2600 | 300 |
| | | | | | | | | | | | | |
| 24 | 1.0 | 7/Non-compacted | 1.29 | 0.76 | 1.14 | 22.0 | 2.03 | 27.0 | 18.1 | 0.0117 | 850 | 300 |
| 24 | 1.5 | 7/Non-compacted | 1.59 | 1.14 | 1.14 | 28.0 | 2.03 | 33.0 | 12.1 | 0.0136 | 1300 | 300 |
| 24 | 2.5 | 7/Non-compacted | 2.01 | 1.14 | 1.14 | 30.5 | 2.03 | 35.5 | 7.41 | 0.0113 | 1600 | 300 |
| 24 | 4 | 7/Non-compacted | 2.55 | 1.14 | 1.14 | 34.0 | 2.03 | 39.0 | 4.61 | 0.0098 | 2100 | 300 |
| 24 | 6 | 7/Non-compacted | 3.12 | 1.14 | 1.14 | 37.0 | 2.03 | 42.0 | 3.08 | 0.0084 | 2700 | 300 |
| | | | | | | | | | | | | |
| 25 | 1.0 | 7/Non-compacted | 1.29 | 0.76 | 1.14 | 22.0 | 2.03 | 27.0 | 18.1 | 0.0117 | 900 | 300 |
| 25 | 1.5 | 7/Non-compacted | 1.59 | 1.14 | 1.14 | 28.0 | 2.03 | 33.0 | 12.1 | 0.0136 | 1300 | 300 |
| 25 | 2.5 | 7/Non-compacted | 2.01 | 1.14 | 1.14 | 30.5 | 2.03 | 35.5 | 7.41 | 0.0113 | 1600 | 300 |
| 25 | 4 | 7/Non-compacted | 2.55 | 1.14 | 1.14 | 34.0 | 2.03 | 39.0 | 4.61 | 0.0098 | 2200 | 300 |
| 25 | 6 | 7/Non-compacted | 3.12 | 1.14 | 1.14 | 37.0 | 2.03 | 42.0 | 3.08 | 0.0084 | 2800 | 300 |

Table 1 (continued)

| No. of cores | Size (mm ²) | Conductor (wires/type) | Conductor diameter approx. (mm) | Insulation thickness nominal (mm) | Inner sheath thickness nominal (mm) | Dia. of inner sheath approx. (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) |
|--------------|-------------------------|------------------------|---------------------------------|-----------------------------------|-------------------------------------|-----------------------------------|-------------------------------------|-------------------------------|---|---|---------------------------------|-----------------------------|
| 26 | 1.0 | 7/Non-compacted | 1.29 | 0.76 | 1.14 | 22.0 | 2.03 | 27.0 | 18.1 | 0.0117 | 900 | 300 |
| 26 | 1.5 | 7/Non-compacted | 1.59 | 1.14 | 1.14 | 28.0 | 2.03 | 33.0 | 12.1 | 0.0136 | 1300 | 300 |
| 26 | 2.5 | 7/Non-compacted | 2.01 | 1.14 | 1.14 | 30.5 | 2.03 | 35.5 | 7.41 | 0.0113 | 1700 | 300 |
| 26 | 4 | 7/Non-compacted | 2.55 | 1.14 | 1.14 | 34.0 | 2.03 | 39.0 | 4.61 | 0.0098 | 2200 | 300 |
| 26 | 6 | 7/Non-compacted | 3.12 | 1.14 | 1.14 | 37.0 | 2.03 | 42.0 | 3.08 | 0.0084 | 2800 | 300 |
| 27 | 1.0 | 7/Non-compacted | 1.29 | 0.76 | 1.14 | 22.5 | 2.03 | 27.5 | 18.1 | 0.0117 | 950 | 300 |
| 27 | 1.5 | 7/Non-compacted | 1.59 | 1.14 | 1.14 | 29.0 | 2.03 | 34.0 | 12.1 | 0.0136 | 1400 | 300 |
| 27 | 2.5 | 7/Non-compacted | 2.01 | 1.14 | 1.14 | 31.5 | 2.03 | 36.5 | 7.41 | 0.0113 | 1700 | 300 |
| 27 | 4 | 7/Non-compacted | 2.55 | 1.14 | 1.14 | 35.0 | 2.03 | 40.0 | 4.61 | 0.0098 | 2300 | 300 |
| 28 | 1.0 | 7/Non-compacted | 1.29 | 0.76 | 1.14 | 23.5 | 2.03 | 28.5 | 18.1 | 0.0117 | 1000 | 300 |
| 28 | 1.5 | 7/Non-compacted | 1.59 | 1.14 | 1.14 | 30.0 | 2.03 | 35.0 | 12.1 | 0.0136 | 1500 | 300 |
| 28 | 2.5 | 7/Non-compacted | 2.01 | 1.14 | 1.14 | 32.5 | 2.03 | 37.5 | 7.41 | 0.0113 | 1800 | 300 |
| 28 | 4 | 7/Non-compacted | 2.55 | 1.14 | 1.14 | 36.5 | 2.03 | 41.5 | 4.61 | 0.0098 | 2400 | 300 |

Table 1 (continued)

| No. of cores | Size (mm ²) | Conductor (wires/type) | Conductor diameter approx. (mm) | Insulation thickness nominal (mm) | Inner sheath thickness nominal (mm) | Dia. of inner sheath approx. (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) |
|--------------|-------------------------|------------------------|---------------------------------|-----------------------------------|-------------------------------------|-----------------------------------|-------------------------------------|-------------------------------|--|--|---------------------------------|-----------------------------|
| 29 | 1.0 | 7/Non-compacted | 1.29 | 0.76 | 1.14 | 23.5 | 2.03 | 28.5 | 18.1 | 0.0117 | 1000 | 300 |
| 29 | 1.5 | 7/Non-compacted | 1.59 | 1.14 | 1.14 | 30.0 | 2.03 | 35.0 | 12.1 | 0.0136 | 1500 | 300 |
| 29 | 2.5 | 7/Non-compacted | 2.01 | 1.14 | 1.14 | 32.5 | 2.03 | 37.5 | 7.41 | 0.0113 | 1800 | 300 |
| 29 | 4 | 7/Non-compacted | 2.55 | 1.14 | 1.14 | 36.5 | 2.03 | 41.5 | 4.61 | 0.0098 | 2400 | 300 |
| | | | | | | | | | | | | |
| 30 | 1.0 | 7/Non-compacted | 1.29 | 0.76 | 1.14 | 23.5 | 2.03 | 28.5 | 18.1 | 0.0117 | 1000 | 300 |
| 30 | 1.5 | 7/Non-compacted | 1.59 | 1.14 | 1.14 | 30.0 | 2.03 | 35.0 | 12.1 | 0.0136 | 1500 | 300 |
| 30 | 2.5 | 7/Non-compacted | 2.01 | 1.14 | 1.14 | 32.5 | 2.03 | 37.5 | 7.41 | 0.0113 | 1900 | 300 |
| 30 | 4 | 7/Non-compacted | 2.55 | 1.14 | 1.14 | 36.5 | 2.03 | 41.5 | 4.61 | 0.0098 | 2500 | 300 |