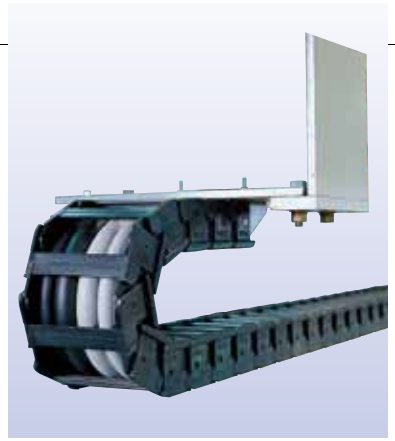
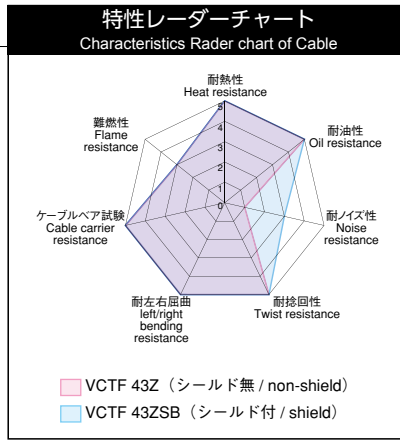


VCTF 43Z

VCTF 43ZSB

ハイブレン

UL AWM 2517



用 途 / Use

- ケーブルベア・ロボットへの配線
Wiring to cable carriers and robots
- 油環境下での配線
Wiring in oil environment
- 耐ノイズ性要求箇所への配線 (シールド付タイプ: VCTF 43ZSB)
Wiring to the portion requiring noise resistance (Shielded type: VCTF 43ZSB)

特 長 / Features

- 電気用品安全法 (0.75mm²以上) & UL・cUL AWM 規格ケーブル
VCTF cords designed to Electrical Appliance and Material Safety Law (0.75mm² or more) & UL standards
- 耐熱 (105℃)・耐油・耐屈曲性 可動用
Heat resistance (105℃), oil resistance, bending resistance, movable.
- 素線径 0.08mm可とうより線 (中心補強紐入り)
Flexible 0.08mm wire strand (containing reinforcement cord at its center)
- シースつや消し
Sheath mat type
- 耐ノイズ性 (シールド付タイプ: VCTF 43ZSB)
Noise resistance (Shielded type: VCTF 43ZSB)

認 証 / Approvals

cULus, <PS>E (0.75mm²以上に適用 / applicable to 0.75mm² or more)

使用温度範囲 / Temperature range

- 固定時 / Fixed: -20 ~ 105℃ *
 - 可動時 / Flexing: 0 ~ 105℃
- * 0℃以下でご利用の際は、衝撃・屈曲・振動等の外的力が加わらないようにしてください。
If you use it in temperature less than 0℃, you should be careful about shocks, flexure, vibration and so on.

曲げ半径 / Bending radius

- 固定時 / ケーブル外径の4倍以上推奨
Fixed: 4 times or more of the cable diameter
- 可動時 / ケーブル外径の7.5倍以上推奨
Flexing: 7.5 times or more of the cable diameter

RoHS 指令 / RoHS Directive

- 適合 / Conformity

テクニカルデータ / Technical data

| ケーブルタイプ / Cable designation | 国内 / JAPAN | UL・cUL |
|-----------------------------|--|------------------------------------|
| 適用サイズ / Adaptation size | 0.75 ~ 2mm ² * | 全サイズ / All size |
| 定格電圧 / Voltage rating | | 300V |
| 定格温度 / Temperature rating | 75℃ | 105℃ |
| 試験電圧 / Test voltage | | AC 2000V・1min |
| 難燃性 / Flame resistance | 60°傾斜 / 60° Angle | VW-1, FT1 |
| 適用規格 / Adaptation standard | 電気用品安全法 / Electrical Appliance and Material Safety Law * | UL AWM STYLE 2517 CSA C22.2 No.210 |

* 0.5mm²は電気用品安全法が適用されませんので、信号及び通信回路などの弱電流回路にご使用下さい。
0.5mm² of VCTF 43Z and VCTF 43ZSB are excluded to "Electrical Appliance and Material Safety Law", for this reason, those cable sizes should be used for cable connection to signal and communication circuits and other weak current electrical circuits JAPAN.

構造概略 / Construction

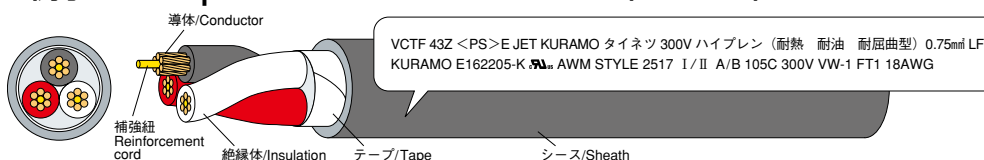
| 項目 / Item | 品名 / Code | VCTF 43Z | VCTF 43ZSB |
|------------------|-----------|---|---|
| 導体 / Conductor | | 軟銅複合より線 (中心補強紐入り) Rope-lay stranded of annealed copper (containing reinforcement cord at its center) | |
| 絶縁体 / Insulation | | 耐熱性ビニル混合物 / Heat resistant PVC | |
| より合わせ / Assembly | | 線心を円形により合わせ / Circular | |
| テープ / Tape | | テープ重ね巻き / Tape wrap around cores | |
| シールド / Shield | | — | すずめっき軟銅線編組 / Tin coated annealed copper braid |
| シース / Sheath | | 耐油・耐熱性ビニル混合物 (黒色) / Oil and heat resistant PVC (black) | |

線心識別 / Conductors identification

| 線心数 / No. of conductors | 線心識別方式 / Conductors identification | |
|-------------------------|---|--|
| 2心 / 2 | 絶縁体着色方式 Identification by color | 黒、白 / Black and white |
| 3心 / 3 | | 黒、白、赤 / Black, white and red |
| 4心 / 4 | | 黒、白、赤、緑 / 黄 / Black, white, red and green/yellow |
| 5心以上 / 5 or more | ナンバリング No. 方式 Identification by number | 白絶縁体表面に1、2、3、4・・・を連続表示 Marked on white insulation surface in order of 1,2,3,4 and so on |

● 緑 / 黄: 緑色と黄色のストライプ (色配分 緑60 : 黄40)
Green/yellow: Green/yellow strips (by the circumference, the covered of green and yellow is 60 to 40)

例示 / Example: VCTF 43Z 3 × 0.75mm² (18AWG)



■ 構造表 / Construction table

| 導体 / Conductor | | 絶縁 / Insulation | | 在庫 / Stocks | | シールド無し / Non-shield | | シールド付き / Shield | | 電気特性 / Electrical characteristics | | |
|--|---|-------------------------------------|-------------------------------|---------------------|-----------------|---|------------------------------------|---|------------------------------------|--------------------------------------|--|---|
| 公称断面積 Nominal cross sectional area | 外径 (約mm) Diameter (Approx.mm) 構成 (Construction) | 外径 (約mm) Diameter (Approx.mm) | 心数 Number of conductors | シールド無 Non-shield | シールド付 Shield | シース外径 (約mm) Sheath diameter (Approx.mm) | 概算重量 Approx.weight (kg / km) | シース外径 (約mm) Sheath diameter (Approx.mm) | 概算重量 Approx.weight (kg / km) | 許容電流 Allowable ampacity (A) | 導体抵抗 Conductor resistance 20°C (Ω / km) | 絶縁抵抗 Insulation resistance 20°C (M Ω km) |
| 0.5mm ² (20AWG) | 1.1 (6/18/0.08) | 2.35 | 2 | ○ | | 7.2 | 55 | 7.7 | 70 | 6 | 37.8 以下 (Max 37.8) | 5 以上 (Min 5) |
| | | | 3 | ○ | | 7.3 | 65 | 7.8 | 80 | 6 | | |
| | | | 4 | ○ | | 8.2 | 80 | 8.7 | 100 | 6 | | |
| | | | 5 | | | 9.0 | 95 | 9.5 | 110 | 5 | | |
| | | | 6 | ○ | | 9.5 | 110 | 10.0 | 130 | 5 | | |
| | | | 7 | | | 10.5 | 125 | 11.0 | 145 | 5 | | |
| | | | 8 | ○ | | 11.5 | 150 | 12.0 | 170 | 4 | | |
| | | | 10 | ○ | | 12.0 | 165 | 12.5 | 190 | 4 | | |
| | | | 12 | ○ | | 12.0 | 190 | 12.5 | 215 | 4 | | |
| | | | 14 | | | 13.0 | 205 | 13.5 | 240 | 4 | | |
| | | | 16 | ○ | | 14.0 | 245 | 14.5 | 275 | 3 | | |
| | | | 20 | ○ | | 16.0 | 320 | 16.5 | 355 | 3 | | |
| | | | 24 | | | 17.5 | 370 | 18.0 | 410 | 3 | | |
| 30 | | | 18.5 | 425 | 19.0 | 470 | 3 | | | | | |
| 0.75mm ² (18AWG) | 1.5 (6/28/0.08) | 2.7 | 2 | ○ | | 7.8 | 70 | 8.3 | 85 | 8 | 25.1 以下 (Max 25.1) | 5 以上 (Min 5) |
| | | | 3 | ○ | | 8.1 | 85 | 8.6 | 100 | 8 | | |
| | | | 4 | ○ | | 9.0 | 100 | 9.5 | 120 | 8 | | |
| | | | 5 | | | 10.0 | 120 | 10.5 | 140 | 7 | | |
| | | | 6 | ○ | | 10.5 | 145 | 11.0 | 165 | 7 | | |
| | | | 7 | | | 11.5 | 165 | 12.0 | 190 | 6 | | |
| | | | 8 | ○ | | 12.0 | 185 | 12.5 | 210 | 6 | | |
| | | | 10 | ○ | | 13.0 | 215 | 13.5 | 250 | 6 | | |
| | | | 12 | ○ | | 14.0 | 250 | 14.5 | 280 | 5 | | |
| | | | 14 | | | 14.5 | 285 | 16.0 | 340 | 5 | | |
| | | | 16 | ○ | | 16.0 | 345 | 16.5 | 380 | 5 | | |
| | | | 20 | ○ | | 17.5 | 420 | 18.0 | 460 | 4 | | |
| | | | 24 | | | 19.5 | 500 | 20.0 | 540 | 4 | | |
| 30 | | | 21.0 | 575 | 23.0 | 710 | 4 | | | | | |
| 1.25mm ² (16AWG) | 1.9 (6/47/0.08) | 3.1 | 2 | ○ | | 8.5 | 90 | 9.0 | 105 | 14 | 15.1 以下 (Max 15.1) | 5 以上 (Min 5) |
| | | | 3 | ○ | | 9.0 | 110 | 9.5 | 130 | 14 | | |
| | | | 4 | ○ | | 9.8 | 135 | 10.5 | 160 | 14 | | |
| | | | 5 | | | 11.0 | 165 | 11.5 | 190 | 11 | | |
| | | | 6 | ○ | | 12.0 | 195 | 12.5 | 220 | 10 | | |
| | | | 7 | | | 13.0 | 225 | 13.5 | 250 | 9 | | |
| | | | 8 | ○ | | 14.0 | 255 | 14.5 | 285 | 9 | | |
| | | | 10 | ○ | | 15.0 | 305 | 16.0 | 360 | 8 | | |
| | | | 12 | ○ | | 16.5 | 380 | 17.0 | 415 | 8 | | |
| | | | 14 | | | 17.0 | 425 | 17.5 | 460 | 7 | | |
| | | | 16 | | | 18.0 | 475 | 18.5 | 520 | 7 | | |
| | | | 20 | | | 20.0 | 585 | 20.5 | 630 | 6 | | |
| | | | 24 | | | 23.5 | 775 | 24.0 | 830 | 6 | | |
| 30 | | | 25.0 | 900 | 25.5 | 960 | 5 | | | | | |
| 2mm ² (14AWG) | 2.2 (6/71/0.08) | 3.4 | 2 | ○ | | 9.1 | 110 | 9.6 | 125 | 20 | 9.79 以下 (Max 9.79) | 5 以上 (Min 5) |
| | | | 3 | ○ | | 9.6 | 140 | 10.0 | 160 | 20 | | |
| | | | 4 | ○ | | 10.5 | 175 | 11.0 | 195 | 20 | | |
| | | | 5 | | | 12.0 | 210 | 12.5 | 235 | 14 | | |
| | | | 6 | ○ | | 12.5 | 250 | 13.0 | 275 | 13 | | |
| | | | 7 | | | 14.0 | 295 | 14.5 | 325 | 12 | | |
| | | | 8 | ○ | | 15.0 | 335 | 16.0 | 390 | 11 | | |
| | | | 10 | ○ | | 17.0 | 420 | 17.5 | 455 | 11 | | |
| | | | 12 | ○ | | 17.5 | 480 | 18.0 | 520 | 10 | | |
| | | | 14 | | | 18.5 | 550 | 19.0 | 590 | 9 | | |
| | | | 16 | | | 19.5 | 620 | 20.0 | 670 | 9 | | |
| | | | 20 | | | 23.5 | 845 | 24.0 | 890 | 8 | | |
| | | | 24 | | | 25.5 | 1000 | 26.0 | 1060 | 7 | | |
| 30 | | | 27.0 | 1170 | 27.0 | 1230 | 7 | | | | | |

○は在庫品です。/ ○ : Stocks

■ 許容電流について / Allowable ampacity

- 許容電流値は、周囲温度 30°C、空中一条敷設時の計算値を示し、保証値ではありません。
- Allowable ampacity (A) for cable is based on calculation under aerial one-cable and temperature at 30°C, not representing a guaranteed value.
- 周囲温度 30°C 以上の場合には、下表の電流減少係数を許容電流値に乗じて下さい。
- Allowable ampacity cable at ambient temperature above 30°C is to be determined by multiplying the current value by the appropriate current reduction factor in the following table1.
- 許容電流の値は、JCS0168 により算出した値であって、保証値ではありません。
- The allowable ampacity for cable are the calculated by JCS0168, but not guaranteed.
- JCS0168…日本電線工業会規格 “33kV 以下電力ケーブルの許容電流計算”
- “Calculation of the current rating of power cables for rated voltage up to and including 33kV”

■ 表 電流減少係数 / Table1 Current reduction factors

| 周囲温度 / Ambient temperature (°C) | 30 | 35 | 40 | 45 | 50 | 55 | 60 | 65 | 70 |
|------------------------------------|------|------|------|------|------|------|------|------|------|
| 電流減少係数 / Current reduction factors | 1.00 | 0.94 | 0.88 | 0.82 | 0.75 | 0.67 | 0.58 | 0.47 | 0.33 |

VCTE 43Z
VCTF 43ZSB

<PS>E

UL AWM

NFPA70
NFPA79

cUL/GSA

CE

CCC

TR-CU