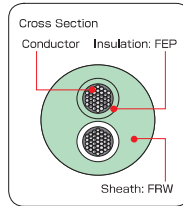


Fluorinated Ethylene Propylene(FEP) Insulation, Flexible Fluorine-Contained Heat-resistant Rubber(FRW) Sheath, Round Shape(R)

**KX-1-Toughler****Rated Temp. 200°C**

This kind of cable is widely used to the moving and bending parts of Robot, Injection Molding Machine, etc.

**Features:** Excellence in Flexibility, bending, Vibration-resistance, Heat-resistance, Cold-proof, Flame-retardant, and Chemical proof



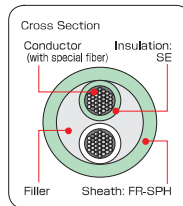
|                              |                               |                           |
|------------------------------|-------------------------------|---------------------------|
| Conductor                    | Nominal sectional area (SQ)   | 0.2                       |
|                              | Conductor (No./mm)            | 30/0.1                    |
|                              | Nom.O.D (mm)                  | 0.63                      |
| Insulation                   | Nom.thick (mm)                | 0.30                      |
|                              | Approx.O.D (mm)               | 1.23                      |
| Sheath                       | Nom.thick (mm)                | 0.80                      |
|                              | Approx.O.D (mm)               | 4.1                       |
| Electric Characteristics     | Voltage resistance (V/min)    | AC500                     |
|                              | Insulation resistance (MΩ.km) | Min. 500                  |
| Bending test Characteristics | Weight (kg/km)                | 31                        |
|                              | Bending test (O type) /time   | more than 5 million times |
|                              | Twisting Test/time            |                           |
|                              | Bending Test (U type)/time    |                           |

Special Polyethylene Insulation(SE), Flame-retardant special Elastomer Sheath(FR-SPH), Round Shape(R)

**KCB Tough EV3****Rated Temp. 90°C**

This kind of cable is widely used to the moving and bending parts of Robot, Injection Molding Machine, etc.

**Features:** Excellence in Flexibility, bending, Vibration-resistance, Flame-retardant



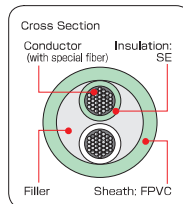
|                              |                               |                           |
|------------------------------|-------------------------------|---------------------------|
| Conductor                    | Nominal sectional area (SQ)   | 0.75                      |
|                              | Conductor (No./mm)            | 96/0.1                    |
|                              | Nom.O.D (mm)                  | 1.13                      |
| Insulation                   | Nom.thick (mm)                | 0.60                      |
|                              | Approx.O.D (mm)               | 2.33                      |
| Sheath                       | Nom.thick (mm)                | 1.00                      |
|                              | Approx.O.D (mm)               | 6.7                       |
| Electric Characteristics     | Voltage resistance (V/min)    | AC500                     |
|                              | Insulation resistance (MΩ.km) | Min. 500                  |
| Bending test Characteristics | Weight (kg/km)                | 51                        |
|                              | Bending test (O type) /time   | more than 5 million times |
|                              | Twisting Test/time            |                           |
|                              | Bending Test (U type)/time    |                           |

Special Polyethylene Insulation (SE), Flexible Polyvinyl Chloride Sheath(FPVC), Round Shape(R)

**KCB Sofura****Rated Temp. 60°C**

This kind of cable is widely used to the moving and bending parts of Robot, Injection Molding Machine, etc.

**Features:** Excellence in Flexibility, bending, Vibration-resistance



|                              |                               |                           |
|------------------------------|-------------------------------|---------------------------|
| Conductor                    | Nominal sectional area (SQ)   | 0.5                       |
|                              | Conductor (No./mm)            | 64/0.1                    |
|                              | Nom.O.D (mm)                  | 1.00                      |
| Insulation                   | Nom.thick (mm)                | 0.50                      |
|                              | Approx.O.D (mm)               | 2.00                      |
| Sheath                       | Nom.thick (mm)                | 0.80                      |
|                              | Approx.O.D (mm)               | 5.6                       |
| Electric Characteristics     | Voltage resistance (V/min)    | AC500                     |
|                              | Insulation resistance (MΩ.km) | Min. 500                  |
| Bending test Characteristics | Weight (kg/km)                | 35                        |
|                              | Bending test (O type) /time   | more than 5 million times |
|                              | Twisting Test/time            |                           |
|                              | Bending Test (U type)/time    |                           |

Insulation and Sheath: Fluorinated Ethylene Propylene (FEP), Shape: Flat (F), Shield: Tinned Copper Wire Braided (BT)

Type (P3) - ASTM - Division Symbol (P4) - **FEPFEP(UL) F-BT****Rated Temp. 200°C**

**Features:** Excellence in Heat-resistance, Cold-proof, Chemical proof, Damp-proof, Water-proof, Electro-static effect

This kind of cable can be used in a severe environment.



※UL Certificate Thermocouple Extension Cable  
( Style No.: UL13, File No.: E254583, Category: CL3R)

**How to Choose a Model**

An example, based on IEC-60584-3-2007

**KX-ASTM-SP-FEPFEP(UL) F-BT 1P × 16AWG(4/0.65)**

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

① Cable Type, ② Standard(Color Code), ③ Division Symbol (Class & Tolerance), ④ Insulation & Sheath  
⑤ Shape, ⑥ Shield, ⑦ Pair, ⑧ Conductor Size, ⑨ Conductor Combination

- **Cable Type:** Select from KX, JX, TX, EX, RX, BX, and NX(KCA and KCB can not be applied)
- **Standard:** IEC, JIS, and other international Standards
- **Division Symbols:** ① ASTM Standard(SP:Special Tolerance, ST: Standard Tolerance), ② IEC Standard (Precision Class:1-S/ Normal Class:2-S)

● **Insulation & Sheath:** FEPFEP (200°C) only

● **Applicable for some other kinds of shields as follows :**

- Tinned Copper Wire Braided(BT)
- Alumi-Mylar Tape with a Drain Wire(SL)
- Copper Tape(SA)
- Plain Copper Wire Braided(BA)

● **Conductor Size:** AWG23~AWG14

★**Remarks:** Applicable for 105°C PVC(UL) Category: CL3R and CL3X

|                          |                               |           |           |           |           |           |           |
|--------------------------|-------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|
| Conductor                | AWG                           | 23        | 20        | 19        | 17        | 16        | 14        |
|                          | Nominal sectional area (SQ)   | 0.3       | 0.5       | 0.75      | 1.25      | 1.3       | 2         |
|                          | Conductor (No./mm)            | 12/0.18   | 7/0.32    | 24/0.2    | 7/0.45    | 4/0.65    | 7/0.6     |
|                          | Nom.O.D (mm)                  | 0.72      | 0.96      | 1.13      | 1.35      | 1.57      | 1.8       |
| Insulation               | Nom.thick (mm)                | 0.30      | 0.30      | 0.30      | 0.30      | 0.30      | 0.30      |
|                          | Approx.O.D (mm)               | 1.32      | 1.56      | 1.73      | 1.95      | 2.17      | 2.4       |
| Shield                   | Nom.thick (mm)                | 0.30      | 0.30      | 0.30      | 0.30      | 0.30      | 0.30      |
|                          | Approx.O.D (mm)               | 2.0 × 3.3 | 2.2 × 3.8 | 2.4 × 4.1 | 2.6 × 4.5 | 2.8 × 5.0 | 3.1 × 5.6 |
| Sheath                   | Nom.thick (mm)                | 0.40      | 0.40      | 0.40      | 0.40      | 0.40      | 0.40      |
|                          | Approx.O.D (mm)               | 2.8 × 4.1 | 3.0 × 4.6 | 3.2 × 4.9 | 3.4 × 5.3 | 3.6 × 5.8 | 3.9 × 6.4 |
| Electric Characteristics | Voltage resistance (V/min)    | AC1500    | AC1500    | AC1500    | AC1500    | AC1500    | AC1500    |
|                          | Insulation resistance (MΩ.km) | 1500      | 1500      | 1500      | 1500      | 1500      | 1500      |
| Approx Length (153m/Ft)  |                               | 500       | 500       | 500       | 500       | 500       | 500       |
| Weight (kg/km)           |                               | 27        | 35        | 41        | 51        | 56        | 75        |

