SUNLIGHT

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# **SUNLIGHT 6SX LF**

PVC insulated oil flexible cable for electrical power supply (with shield)

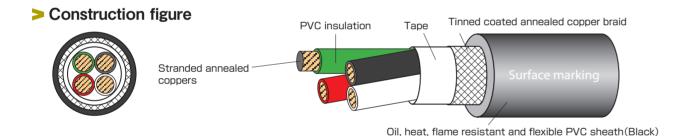
| Heat resistance               | *    |
|-------------------------------|------|
| Oil resistance                | **** |
| Noise resistance              | ***  |
| Flame resistance              | ***  |
| Flexibility                   | ***  |
| non-migratory                 | **** |
| Transport property            | **   |
| WTho characteristic is an ain | n    |

## > Application

- Environmental type cable as machine tools, construction machinery, applications under harsh conditions, such as a robot power circuit not higher than 600V.
- Oil, flexibility, use of shielded. Rated voltage:600V. Temp:60°C.

#### > Feature

- Oil, heat, flame retardant and soft PVC for sheath.
- Sheath material is non-migratory against ABS and PS resin.
- Chemical, water, abrasion, weather, light, cold resistance PVC for sheath. \*Do not guarantee outdoor use.
- Flame resisting : UL VW-1.
- Conform to Electrical Appliance and Material Safety Law.



## > Surface marking

(1)7 cores or less

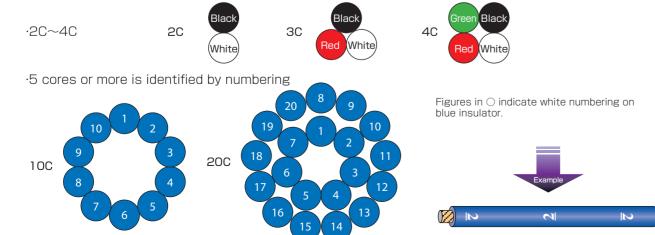
SUNLIGHT 6SX(耐油 難燃 柔軟 耐ノイズ) 600V ○○mm²<PS>E \*\* TAIYO CABLETEC LF R15

(2)8 cores or more

SUNLIGHT 6SX(耐油 難燃 柔軟 耐ノイズ) 600V ○○mm² TAIYO CABLETEC \*\* LF R15

\*\*R15 indicates "Compliant with RoHS Directive 2011/65/EU and Directive (EU) 2015/863 (10 substances)".

# > Identification



| Certification       | Electrical Appliance and Material Safety   |
|---------------------|--|
| Applicable standard | LawDepartmental order to determine a technical<br>standard of the electrical equipment |
| Official symbol     | VCT  |
| Voltage rating      | 600V   |
| Temperature rating  | 60°C   |
| Conductor           | JIS C 3102   |
| Flame rating        | JIS C 3005-4.26.2-b)   |





#### Construction table

|              |                            | Conductor                   |                             | PVC ins                       |                             |                                 | me-resistant Approx. Ell      |                         | Electri                         | Electrical Characteristics       |                                     |               |    |
|--------------|----------------------------|-----------------------------|-----------------------------|-------------------------------|-----------------------------|---------------------------------|-------------------------------|-------------------------|---------------------------------|----------------------------------|-------------------------------------|---------------|----|
| No. of cores | Size<br>( <sub>mm²</sub> ) | Construction (Line/mm)      | Outside<br>diameter<br>(mm) | Outside<br>diameter<br>(inch) | Outside<br>diameter<br>(mm) | Overall diameter approx. (inch) | Overall diameter approx. (mm) | (lbs/1000ft)<br>(kg/km) | Conductor resistance (Ω/km20°C) | Insulation resistance (MΩkm20°C) | Electrical<br>strength<br>(V/1min.) | ampaci<br>(A) |    |
| 2C           |                            |                             |                             |                               |                             | 0.378                           | 9.6                           | 74(110)                 |                                 |                                  |                                     | 12            |    |
| 3C           |                            |                             |                             |                               |                             | 0.394                           | 10.0                          | 87(130)                 |                                 |                                  |                                     | 11            |    |
| 4C           |                            |                             |                             |                               |                             | 0.429                           | 10.9                          | 104(155)                |                                 |                                  |                                     | 10            |    |
| 6C           | 0.75mm                     | 30/0.18                     | 1.1                         | 0.106                         | 2.7                         | 0.504                           | 12.8                          | 141(210)                |                                 | more than                        | 2000                                | 8.5           |    |
| 8C           | 0.7 0                      | (30/7.1mil)                 | (43mil)                     | 000                           |                             | 0.579                           | 14.7                          | 181(270)                | 25.1                            | 50                               | 2000                                | 7.9           |    |
| 10C          |                            |                             |                             |                               |                             | 0.654                           | 16.6                          | 228(340)                |                                 |                                  |                                     | 7.4           |    |
| 12C          |                            |                             |                             |                               |                             | 0.646                           | 16.4                          | 239(355)                |                                 |                                  |                                     | 6.8           |    |
| 20C          |                            |                             |                             |                               |                             | 0.783<br>0.417                  | 19.9                          | 356(530)                |                                 |                                  |                                     | 5.7<br>17     |    |
| 2C<br>3C     |                            |                             |                             |                               |                             | 0.417                           | 10.6                          | 94(140)                 |                                 |                                  |                                     | 15            |    |
|              |                            |                             |                             |                               |                             | 0.437                           | 11.1                          | 111(165)                |                                 |                                  |                                     | 13            |    |
| 4C<br>5C     |                            |                             |                             |                               |                             | 0.480                           | 12.2<br>13.1                  | 134(200)<br>158(235)    |                                 |                                  |                                     | 12            |    |
| 6C           |                            |                             |                             |                               |                             | 0.559                           | 14.2                          | 185(275)                |                                 |                                  |                                     | 11            |    |
| 7C           |                            | 50/0.18                     | 1.5                         |                               |                             | 0.598                           | 15.2                          | 212(315)                | loop these                      | more than                        |                                     | 11            |    |
| 8C           | 1.25MM                     | (50/7.1mil)                 | (59mil)                     | 0.122                         | 3.1                         | 0.596                           | 16.4                          | 239(355)                | less than<br>15.1               | 50                               | 2000                                | 10            |    |
| 10C          |                            | (30/7.111111)               | (391111)                    |                               |                             | 0.646<br>0.728                  | 18.5                          | 296(440)                | 15.1                            | 30                               |                                     | 9.9           |    |
| 12C          |                            |                             |                             |                               |                             | 0.720                           | 18.3                          | 312(465)                |                                 |                                  |                                     | 9.1           |    |
| 16C          |                            |                             |                             |                               |                             | 0.795                           | 20.2                          | 386(575)                |                                 |                                  |                                     | 8.2           |    |
| 20C          |                            |                             |                             |                               |                             | 0.793                           | 22.4                          | 474(705)                |                                 |                                  |                                     | 7.7           |    |
| 30C          |                            |                             |                             |                               |                             | 1.035                           | 26.3                          | 669(995)                |                                 |                                  |                                     | 6.7           |    |
| 200          |                            |                             |                             |                               |                             | 0.441                           | 11.2                          | 108(160)                |                                 |                                  |                                     | 22            |    |
| 2C<br>3C     |                            |                             |                             |                               |                             | 0.465                           | 11.8                          | 134(200)                |                                 |                                  |                                     | 19            |    |
| 4C           |                            |                             |                             |                               |                             | 0.508                           | 12.9                          | 165(245)                |                                 |                                  |                                     | 17            |    |
| 6C           |                            | 07/0.00                     | 4.0                         |                               |                             | 0.598                           | 15.2                          | 228(340)                |                                 |                                  |                                     | 14            |    |
| 8C           | 2.0mm                      | 37/0.26                     | 1.8                         | 0.134                         | 3.4                         | 0.697                           | 17.7                          | 299(445)                | less than                       | more than                        | 2000                                | 13            |    |
| 10C          |                            | (37/10.2mil)                | (71mil)                     | 0                             | 0.1                         | 0.787                           | 20.0                          | 373(555)                | 9.79                            | 50                               | 2000                                | 12            |    |
| 12C          |                            |                             |                             |                               |                             | 0.776                           | 19.7                          | 390(580)                |                                 |                                  |                                     | 11            |    |
| 20C          |                            |                             |                             |                               |                             | 0.953                           | 24.2                          | 608(905)                |                                 |                                  |                                     | 9.8           |    |
| 30C          |                            |                             |                             |                               |                             | 1.118                           | 28.4                          | 853(1270)               |                                 |                                  |                                     | 8.5           |    |
| 2C           | _                          | 45 (0.00                    | 0.5                         |                               |                             | 0.508                           | 12.9                          | 155(230)                |                                 |                                  |                                     | 32            |    |
| 3C           | 3.5MM                      | 45/0.32                     | 2.5                         | 0.161                         | 4.1                         | 0.531                           | 13.5                          | 188(280)                | less than                       | more than<br>40                  | 2000                                | 27            |    |
| 4C           |                            | (45/12.6mil)                | (98mil)                     |                               |                             | 0.587                           | 14.9                          | 239(355)                | 5.24                            | 40                               |                                     | 25            |    |
| 2C           |                            | 70/0.32                     | 3.1                         |                               |                             | 0.598                           | 15.2                          | 218(325)                | loop then                       | more than                        |                                     | 41            |    |
| 3C           | 5.5MM                      | (70/12.6mil)                | (122mil)                    | 0.201                         | 5.1                         | 0.638                           | 16.2                          | 276(410)                |                                 | 3.37                             | 40                                  | 2000          | 35 |
| 4C           |                            | (70/12.01111)               | (12211111)                  |                               |                             | 0.697                           | 17.7                          | 346(515)                | 3.37                            | 40                               |                                     | 32            |    |
| 2C           | 2                          | 98/0.32                     | 3.7                         |                               |                             | 0.693                           | 17.6                          | 289(430)                | less than                       | more than                        |                                     | 51            |    |
| 3C           | 8.OMM                      | (98/12.6mil)                | (146mil)                    | 0.240                         | 6.1                         | 0.728                           | 18.5                          | 362(540)                | 2.39                            | 40                               | 2000                                | 43            |    |
| 4C           |                            | 1                           |                             |                               |                             | 0.799                           | 20.3                          | 457(680)                |                                 |                                  |                                     | 39            |    |
| 3C           | 1400                       | 172/0.32                    | 4.9                         | 0.303                         | 7.7                         | 0.890                           | 22.6                          | 571(850)                | less than                       | more than                        | 2000                                | 62            |    |
| 4C           | 1                          | (172/12.6mil)               | (193mil)                    | 0.000                         |                             | 0.976                           | 24.8                          | 706(1050)               | 1.36                            | 40                               |                                     | 56            |    |
| 3C           | 22mm                       | 7/39/0.32<br>(7/39/12.6mil) | 6.7                         | 0.390                         | 9.9                         | 1.110                           | 27.9                          | 887(1320)               | less than                       | more than                        | 2000                                | 82            |    |
| 4C           | 22111111                   | (//39/12.6mil)              | (264mil)                    |                               |                             | 1.224                           | 30.9                          | 1122(1670)              | 0.869                           | 30                               |                                     | 74            |    |
| 3C           | 38៣៣                       | 7/67/0.32                   | 8.8                         | 0.488                         | 12.4                        | 1.350                           | 34.3                          | 1391(2070)              | less than                       | more than                        | 2500                                | 110           |    |
| 4C           | John                       | (7/67/12.6mil)              | (346mil)                    |                               |                             | 1.504                           | 38.2                          | 1801(2680)              | 0.511                           | 30                               |                                     | 100           |    |

Note: Six times of outer diameter is needed when you bend cables, and more diameter is needed when you bend cables repeatedly by cable reel, curtain, etc.

#### Allowable Ampacity

- ·The allowable ampacity of this catalog is a value at one in the air construction and the ambient temperature 30°C.
- ·Allowable ampacity is calculated based on JCS0168.
- ·Please multiply the following correction coefficient by the ambient temperature.
- Adjustment factors(at ambient temperature)

| Ambient temperature (°C) | 30   | 35   | 40   | 45   | 50   | 55   | 60 | 70 | 80 | 90 | 100 |
|--------------------------|------|------|------|------|------|------|----|----|----|----|-----|
| Adjustment factors       | 1.00 | 0.91 | 0.82 | 0.71 | 0.58 | 0.41 | _  | _  |    |    | _   |
|                          |      |      |      |      |      |      |    |    |    |    |     |

# > Oil resistance

| Insulating oil | Lubricating oil | Cutting oil I | Cutting oil II | Hydraulic oil | Grease |
|----------------|-----------------|---------------|----------------|---------------|--------|
| Α              | Α               | В             | В              | В             | В      |

\*A~C in the table indicate the characteristics below.

A:There is no problem on practical use at all.

B:Deterioration slightly no problem almost on practical use.

C:It is sometimes deteriorated to some degree, and not possible to use it.

#### Standard sales length

(The cut cable is available.)

**SUNLIGHT 6SX**