# Poly vinyl chloride insulated wires for electorical apparatus

Heat resistance
Oil resistance
Noise resistance
Flame resistance
Flexibility
non-migratory
Transport property
\*\*The characteristic is an aim.

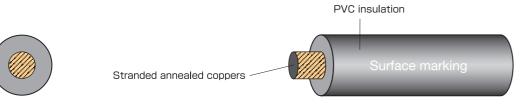
## Application

- Wiring of electrical machinery and apparatus not exceeding 600V.
- Rated voltage:600V. Temp:60°C.

#### Feature

- Flexible annealed copper stranded conductor.
- Flexibility, 8mm²-100mm² is, use the 0.32mm wire instead of 0.45mm conductor wire.
- Reference to JIS C 3316.
- 0.75mm²~100mm² wires conform to Electrical Appliance and Material Safety Law. (0.5mm² wires out of Electrical Appliance and Material Safety Law)

## > Construction figure



## Surface marking

(1)0.75~100mm<sup>2</sup> wires



(2)0.5, 125~325mm<sup>2</sup> wires



**%**Only surface marking displays LFV.

### Identification

- ·0.5mm<sup>2</sup> wire is black, white, red, green, yellow, blue.
- ·0.75mm<sup>2</sup>~100mm<sup>2</sup> wire is black, white, red, green, yellow, blue, and Y/G
- ·80SQ is black or green.
- ·150mm<sup>2</sup>~250mm<sup>2</sup> wire is black, white, red, green, yellow, and blue.
- ·325mm<sup>2</sup> wire is black, white, red, yellow, and blue.
- \*Y/G indicates green core with yellow stripe (30~50%)

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





### Construction table

|              | Conductor              |                               |                             | Flame resistant polyethlehe insulation |                              | Approx.                           | Electrical Characteristics      |                                  |                                     | Allowable       |  |
|--------------|------------------------|-------------------------------|-----------------------------|--|------------------------------|-----------------------------------|---------------------------------|----------------------------------|-------------------------------------|-----------------|--|
| No. of cores | Size<br>(AWG)<br>(mm²) | Construction (Line/mm)        | Outside<br>diameter<br>(mm) | Overall diameter approx.(inch)         | Overall diameter approx.(mm) | weight<br>(lbs/1000ft)<br>(kg/km) | Conductor resistance (Ω/km20°C) | Insulation resistance (MΩkm20°C) | Electrical<br>strength<br>(V/1min.) | ampacity<br>(A) |  |
| 1C           | 0.5                    | 20/0.18<br>(20/7.1mil)        | 0.9<br>(35mil)              | 0.098                                  | 2.5                          | 7<br>(11)                         | less than<br>36.7               | more than<br>50                  | 2000                                | 9.6             |  |
| 1C           | 0.75                   | 30/0.18<br>(30/7.1mil)        | 1.1<br>(43mil)              | 0.106                                  | 2.7                          | 9 (14)                            | less than<br>24.4               | more than<br>50                  | 2000                                | 12              |  |
| 1C           | 1.25                   | 50/0.18<br>(50/7.1mil)        | 1.5<br>(59mil)              | 0.122                                  | 3.1                          | 13<br>(20)                        | less than<br>14.7               | more than<br>50                  | 2000                                | 19              |  |
| 1C           | 2                      | 37/0.26<br>(37/10.2mil)       | 1.8<br>(71mil)              | 0.134                                  | 3.4                          | 18<br>(27)                        | less than<br>9.50               | more than<br>50                  | 2000                                | 27              |  |
| 1C           | 3.5                    | 45/0.32<br>(45/12.6mil)       | 2.5<br>(98mil)              | 0.161                                  | 4.1                          | 30<br>(45)                        | less than<br>5.09               | more than<br>50                  | 2000                                | 37              |  |
| 1C           | 5.5                    | 70/0.32<br>(70/12.6mil)       | 3.1<br>(122mil)             | 0.201                                  | 5.1                          | 47<br>(70)                        | less than<br>3.27               | more than<br>50                  | 2000                                | 49              |  |
| 1C           | 8                      | 98/0.32<br>(98/12.6mil)       | 3.7<br>(146mil)             | 0.240                                  | 6.1                          | 67<br>(100)                       | less than<br>2.32               | more than<br>50                  | 2000                                | 61              |  |
| 1C           | 14                     | 172/0.32<br>(172/12.6mil)     | 4.9<br>(193mil)             | 0.303                                  | 7.7                          | <b>111</b> (165)                  | less than<br>1.32               | more than<br>40                  | 2000                                | 88              |  |
| 1C           | 22                     | 7/39/0.32<br>(7/39/12.6mil)   | 6.7<br>(264mil)             | 0.390                                  | 9.9                          | 185<br>(275)                      | less than<br>0.844              | more than<br>40                  | 2000                                | 115             |  |
| 1C           | 38                     | 7/67/0.32<br>(7/67/12.6mil)   | 8.8<br>(346mil)             | 0.488                                  | 12.4                         | 302<br>(450)                      | less than<br>0.496              | more than<br>40                  | 2500                                | 162             |  |
| 1C           | 60                     | 19/39/0.32<br>(19/39/12.6mil) | 11.2<br>(441mil)            | 0.583                                  | 14.8                         | 457<br>(680)                      | less than<br>0.311              | more than<br>30                  | 2500                                | 217             |  |
| 1C           | 80                     | 19/52/0.32<br>(19/52/12.6mil) | 13.1<br>(516mil)            | 0.673                                  | 17.1                         | 605<br>(900)                      | less than 0.230                 | more than<br>30                  | 2500                                | 270             |  |
| 1C           | 100                    | 19/67/0.32<br>(19/67/12.6mil) | 14.7<br>(579mil)            | 0.736                                  | 18.7                         | 759<br>(1130)                     | less than<br>0.183              | more than<br>30                  | 2500                                | 298             |  |
| 1C           | 150                    | 27/34/0.45<br>(27/34/17.7mil) | 18.0<br>(709mil)            | 0.882                                  | 22.4                         | 1068<br>(1590)                    | less than<br>0.129              | more than<br>20                  | 3000                                | 395             |  |
| 1C           | 200                    | 37/34/0.45<br>(37/34/17.7mil) | 20.4<br>(803mil)            | 0.992                                  | 25.2                         | 1445<br>(2150)                    | less than<br>0.0939             | more than<br>20                  | 3000                                | 469             |  |
| 1C           | 250                    | 37/42/0.45<br>(37/42/17.7mil) | 22.7<br>(894mil)            | 1.083                                  | 27.5                         | 1761<br>(2620)                    | less than<br>0.0760             | more than<br>20                  | 3000                                | 556             |  |
| 1C           | 325                    | 37/55/0.45<br>(37/55/17.7mil) | 25.9<br>(1020mil)           | 1,224                                  | 31.1                         | 2291<br>(3410)                    | less than<br>0.0581             | more than<br>20                  | 3000                                | 650             |  |

## Allowable ampacity

- ·The allowable ampacity of this catalog is a value at one in the air construction and the ambient temperature 30°C.
- ·Please multiply the following correction coefficient by the ambient temperature and the cable-laying conditions, etc.
- •Adjustment factors(at ambient temperature)

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

Adjustment factors (for multiple-line laying)

| No. of conductors  | 2~3  | 4    | 5~6  | 7~15 | 16~40 | 41~60 | 61~  |
|--------------------|------|------|------|------|-------|-------|------|
| Adjustment factors | 0.70 | 0.63 | 0.56 | 0.49 | 0.43  | 0.39  | 0.34 |

#### Standard sales length

| Size            | Standard length (m) |     |     |     |      |  |  |  |
|-----------------|---------------------|-----|-----|-----|------|--|--|--|
| (mm²)           | 100                 | 200 | 300 | 600 | 1000 |  |  |  |
| 0.5~2           |                     | 0   |     |     |      |  |  |  |
| 3.5             | 0                   |     |     |     |      |  |  |  |
| 5.5~14<br>22~38 | 0                   |     |     |     | 0    |  |  |  |
| 22~38           | 0                   |     |     | 0   |      |  |  |  |
| 60              |                     |     | 0   |     |      |  |  |  |
| 80              | 0                   |     | 0   |     |      |  |  |  |
| 100~200         |                     |     | 0   |     |      |  |  |  |
| 250,325         |                     |     |     |     |      |  |  |  |

325mm<sup>2</sup>: Make-to-order product.

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