

# EM-KIE/F HF

## Flame retardant polyethylene insulated wires for electrical equipment

- Heat resistance ★★
  - Oil resistance ★
  - Noise resistance ★
  - Flame resistance ★★
  - Torsion resistance ★★
  - Flexibility resistance ★★★★★
  - Cable carrier ★
- ※The characteristic is an aim.

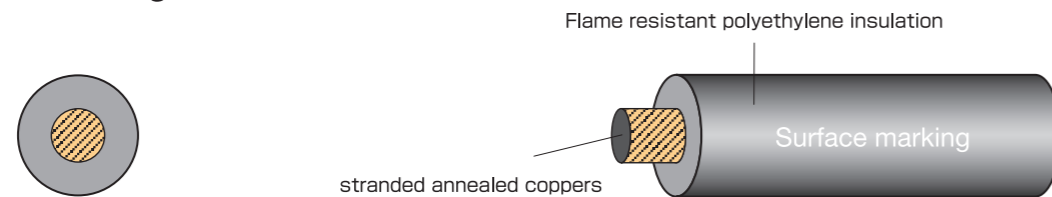
### > Application

- Wiring of electrical machinery and apparatus not exceeding 600V.
- Corresponds to halogen-free requirement.
- Rated voltage:600V. Temp:75°C.

### > Feature

- Flexible annealed copper stranded conductor.
- Non-halogen flame-resistant polyethylene for insulation.
- Halogen-free, low smoke evolution.
- Heat resistance 75 °C.
- Cold -50 °C.
- Reference to JIS C3612,JIS C 3316.
- 0.75mm<sup>2</sup>~5.5mm<sup>2</sup> wires conform to Electrical Appliance and Material Safety Law. (0.5mm<sup>2</sup> wires out of Electrical Appliance and Material Safety Law)

### > Construction figure



### > Surface marking

(1) 0.5mm<sup>2</sup> wires



(2) 0.75mm<sup>2</sup>~5.5mm<sup>2</sup> wires



### > Identification

●Black, white, red, green, yellow, blue.

|                     |  |
|---------------------|--|
| Certification       | Electrical Appliance and Material Safety   |
| Applicable standard | Law/Departmental order to determine a technical standard of the electrical equipment |
| Official symbol     | EM-KIE/F   |
| Voltage rating      | 600V   |
| Temperature rating  | 75°C   |
| Conductor           | JIS C 3102   |
| Flame rating        | JIS 3005の4.26.2のb)   |

Meeting standard



### > Construction table

| No. of cores | Conductor       |                        |                       | Flame resistant polyethylene insulation |                       | Approx. weight (lbs/1000ft) (kg/km) | Electrical Characteristics      |                                  |                               | Allowable ampacity (A) |
|--------------|-----------------|------------------------|-----------------------|---|-----------------------|-------------------------------------|---------------------------------|----------------------------------|-------------------------------|------------------------|
|              | Size (AWG) (mm) | Construction (Line/mm) | Outside diameter (mm) | Outside diameter (inch)                 | Outside diameter (mm) |                                     | Conductor resistance (Ω/km20°C) | Insulation resistance (MΩkm20°C) | Electrical strength (V/1min.) |                        |
| 1C           | 0.5             | 20/0.18 (20/7.1mil)    | 0.9 (35mil)           | 0.098                                   | 2.5                   | 7(10)                               | less than 36.7                  | more than 50                     | 1500                          | 10                     |
| 1C           | 0.75            | 30/0.18 (30/7.1mil)    | 1.1 (43mil)           | 0.106                                   | 2.7                   | 9(13)                               | less than 24.4                  | more than 50                     | 1500                          | 14                     |
| 1C           | 1.25            | 50/0.18 (50/7.1mil)    | 1.5 (59mil)           | 0.122                                   | 3.1                   | 13(19)                              | less than 14.7                  | more than 50                     | 1500                          | 20                     |
| 1C           | 2               | 37/0.26 (37/10.2mil)   | 1.8 (71mil)           | 0.134                                   | 3.4                   | 18(27)                              | less than 9.50                  | more than 50                     | 1500                          | 26                     |
| 1C           | 3.5             | 45/0.32 (45/12.6mil)   | 2.5 (98mil)           | 0.161                                   | 4.1                   | 30(44)                              | less than 5.09                  | more than 50                     | 1500                          | 39                     |
| 1C           | 5.5             | 70/0.32 (70/12.6mil)   | 3.1 (122mil)          | 0.201                                   | 5.1                   | 46(69)                              | less than 3.27                  | more than 50                     | 1500                          | 54                     |

### > 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   | 40   | 50   | 60   | 70   | 80 | 90 | 100 |
| Adjustment factors       | 1.00 | 0.88 | 0.75 | 0.58 | 0.33 | —  | —  | —   |

#### ● 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

Please contact us which sizes are available.