

| Page      | Material   | Name      | Voltage | Temp.  | Specification           |
|-----------|------------|-----------|---------|--------|-------------------------|
| A.2       | ETFE       | KU 01     | 600 V   | 150°C  | NF C 93-524             |
| A.3       | ETFE       | RT        | 600 V   | 150°C  | Habia internal standard |
| A.4       | ETFE       | H-GM20-A  | 600 V   | 150°C  | VG 95218-020A           |
| A.5       | ETFE       | H-WZ(T)   | 300 V   | 150°C  | Habia internal standard |
| A.6       | ETFE       | H-ZT-TPC  | 250 V   | 150°C  | Habia internal standard |
| A.7       | ETFE       | H-ZT      | 250 V   | 150°C  | Habia internal standard |
| A.8       | ETFE       | H-Z-TPC   | 600 V   | 150°C  | Habia internal standard |
| A.9       | ETFE       | H-Z       | 600 V   | 150°C  | Habia internal standard |
| A.10      | ETFE       | H-ZZ-TPC  | 1000 V  | 150°C  | Habia internal standard |
| A.11      | ETFE       | H-ZZ      | 1000 V  | 150°C  | Habia internal standard |
| A.12      | ETFE       | M-ZL      | 600 V   | 150°C  | Acc. to Mil-W-22759/18  |
| A.13      | ETFE       | M-ZLA     | 600 V   | 150°C  | Acc. to Mil-W-22759/19  |
| A.14      | ETFE       | M-ZN      | 600 V   | 150°C  | Acc. to Mil-W-22759/16  |
| A.15      | ETFE       | M-ZNA     | 600 V   | 150°C  | Acc. to Mil-W-22759/17  |
| A.16      | FEP        | KT-TPC    | 250 V   | 180°C  | NEMA HP-4               |
| A.17      | FEP        | KT        | 250 V   | 200°C  | NEMA HP-4               |
| A.18/A.19 | FEP        | K-TPC     | 600 V   | 180°C  | NEMA HP-4               |
| A.20/A.21 | FEP        | K         | 600 V   | 200°C  | NEMA HP-4               |
| A.22/A.23 | FEP        | KK-TPC    | 1000 V  | 180°C  | NEMA HP-4               |
| A.24/A.25 | FEP        | KK        | 1000 V  | 200°C  | NEMA HP-4               |
| A.26      | FEP        | H-UKT     | 160 V   | 200°C  | Habia internal standard |
| A.27      | FEP        | H-WK(T)   | 300 V   | 200°C  | Habia internal standard |
| A.28      | Habiaflame | RV        | 600 V   | >260°C | IEC 60331               |
| A.29      | HFI 120    | H-N       | 600 V   | 120°C  | Habia internal standard |
| A.30      | HFI 140    | D-D       | 600 V   | 120°C  | DSP 61-12 Pt 18 / 5     |
| A.31      | HFI 150    | H-B       | 600 V   | 135°C  | Habia internal standard |
| A.32      | HFI 260    | H-M-TPC   | 600 V   | 150°C  | Habia internal standard |
| A.33      | HFI 260    | H-M-NPC   | 600 V   | 190°C  | Habia internal standard |
| A.34      | HFX 125    | XM        | 600 V   | 125°C  | Habia internal standard |
| A.35      | Hi-Flex    | -         | 600 V   | 150°C  | Habia internal standard |
| A.36      | Kapton     | H-HT      | 250 V   | 200°C  | Habia internal standard |
| A.37      | Kapton     | H-H       | 600 V   | 200°C  | Habia internal standard |
| A.38      | Kapton     | H-HH      | 1000 V  | 200°C  | Habia internal standard |
| A.39      | LSI 155    | D-F1T     | 600 V   | 135°C  | DSP 61-12 Pt 33 / 001   |
| A.40      | LSI 155    | D-F2T     | 600 V   | 135°C  | DSP 61-12 Pt 33 / 001   |
| A.41      | LSI 155    | D-F1S     | 600 V   | 150°C  | DSP 61-12 Pt 33 / 001   |
| A.42      | LSI 155    | D-F2S     | 600 V   | 150°C  | DSP 61-12 Pt 33 / 001   |
| A.43      | PFA        | H-AT      | 300 V   | 200°C  | Habia internal standard |
| A.44      | PFA        | H-A       | 600 V   | 200°C  | Habia internal standard |
| A.45      | PFA        | H-AA      | 1000 V  | 200°C  | Habia internal standard |
| A.46      | PTFE       | ET        | 250 V   | 200°C  | NEMA HP-3               |
| A.47      | PTFE       | ET-NPC    | 250 V   | 260°C  | NEMA HP-3               |
| A.48      | PTFE       | E         | 600 V   | 200°C  | NEMA HP-3               |
| A.49      | PTFE       | E-NPC     | 600 V   | 260°C  | NEMA HP-3               |
| A.50      | PTFE       | EE        | 1000 V  | 200°C  | NEMA HP-3               |
| A.51      | PTFE       | EE-NPC    | 1000 V  | 260°C  | NEMA HP-3               |
| A.52      | PTFE       | KZ 04     | 250 V   | 200°C  | NF C 93-523             |
| A.53      | PTFE       | KZ 05     | 600 V   | 200°C  | NF C 93-523             |
| A.54      | PTFE       | KZ 06     | 1000 V  | 200°C  | NF C 93-523             |
| A.55      | PTFE       | KZ 07     | 250 V   | 260°C  | NF C 93-524             |
| A.56      | PTFE       | KZ 08     | 600 V   | 260°C  | NF C 93-525             |
| A.57      | PTFE       | KZ 09     | 1000 V  | 260°C  | NF C 93-526             |
| A.58      | PTFE       | B-ET      | 300 V   | 190°C  | BS 3G 210 Type A        |
| A.59      | PTFE       | B-E       | 600 V   | 190°C  | BS 3G 210 Type B        |
| A.60      | PTFE       | B-EE      | 1000 V  | 190°C  | BS 3G 210 Type C        |
| A.61      | PTFE       | H-RET     | 250 V   | 200°C  | Habia internal standard |
| A.62      | PTFE       | H-RET-NPC | 250 V   | 260°C  | Habia internal standard |
| A.63      | PTFE       | H-RE      | 600 V   | 200°C  | Habia internal standard |
| A.64      | PTFE       | H-RE-NPC  | 600 V   | 260°C  | Habia internal standard |
| A.65/A.66 | PTFE       | H-REE     | 1000 V  | 200°C  | Habia internal standard |
| A.67/A.68 | PTFE       | H-REE-NPC | 1000 V  | 260°C  | Habia internal standard |
| A.69      | PTFE       | H-UT      | 160 V   | 200°C  | Habia internal standard |
| A.70      | TPS 125 XL | H-GM25-G  | 600 V   | 150°C  | VG 95218-025G           |

















**Properties:**

Radiation resistance:  
10 E5 Gy

Flame retardant  
Low Smoke Generation

Suitable for use in:  
Oils  
Fuels  
Acids  
Bases

**Construction:**

Conductor  
Insulation  
Temperature rating (°C)  
Colours  
Voltage  
Test voltage

\*TBC

Tin Plated Copper (TPC)  
ETFE  
-65 / +150  
XX = Colour code  
1000 V AC  
5000 V AC

Value to be confirmed

**Colour code:**

|         |    |
|---------|----|
| Black   | 00 |
| Brown   | 11 |
| Red     | 22 |
| Orange  | 33 |
| Yellow  | 44 |
| Green   | 55 |
| Blue    | 66 |
| Violet  | 77 |
| Grey    | 88 |
| White   | 99 |
| Pink    | 29 |
| Natural | 89 |

**Notes:**

All dimensions nominal (± 4%)  
unless otherwise stated.  
All dimensions in mm.

Air temperature correction factor for current rating:

H-ZZ-TPC


| °C     | 10   | 20   | 30   | 40   | 50   | 60   | 70   | 80   | 90   | 100  | 110  | 120  | 130  | 140  |
|--------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Factor | 1.16 | 1.11 | 1.06 | 1.00 | 0.94 | 0.88 | 0.82 | 0.76 | 0.69 | 0.62 | 0.54 | 0.45 | 0.35 | 0.23 |

Multicore correction factor for current rating:

| Cores  | 2 | 3    | 4    | 6    | 8    | 10   | 12   | 16   | 20   | 24   | 28   | 32   | 36   | 40   |
|--------|---|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Factor | 1 | 0.88 | 0.80 | 0.69 | 0.62 | 0.59 | 0.55 | 0.51 | 0.48 | 0.43 | 0.41 | 0.39 | 0.38 | 0.36 |

| Type          | Size |       | Conductor  |        |                           | Finished Wire |           |                |               | Order Reference |
|---------------|------|-------|------------|--------|---------------------------|---------------|-----------|----------------|---------------|-----------------|
|               | AWG  | mm²   | Stranding  | Wire Ø | DC Res @ 20°C (Ohms / km) | Core Ø        | Tolerance | Weight (kg/km) | Amps (@ 40°C) |                 |
| H-ZZ 3201 TPC | 32   | 0,031 | 1 x 0,20   | 0,20   | 584                       | 0,91          | ± 0,05    | 2,0            | 2             | 579xx3201       |
| H-ZZ 3207 TPC | 32   | 0,035 | 7 x 0,08   | 0,24   | 620                       | 0,94          | ± 0,05    | 2,0            | 2             | 579xx3207       |
| H-ZZ 3001 TPC | 30   | 0,049 | 1 x 0,25   | 0,25   | 381                       | 0,96          | ± 0,05    | 2,3            | 3             | 579xx3001       |
| H-ZZ 3007 TPC | 30   | 0,057 | 7 x 0,10   | 0,30   | 374                       | 1,01          | ± 0,05    | 2,3            | 3             | 579xx3007       |
| H-ZZ 2801 TPC | 28   | 0,080 | 1 x 0,32   | 0,32   | 235                       | 1,03          | ± 0,05    | 2,9            | 4             | 579xx2801       |
| H-ZZ 2807 TPC | 28   | 0,089 | 7 x 0,13   | 0,38   | 225                       | 1,09          | ± 0,05    | 2,9            | 4             | 579xx2807       |
| H-ZZ 2601 TPC | 26   | 0,126 | 1 x 0,40   | 0,40   | 149                       | 1,11          | ± 0,05    | 3,6            | 6             | 579xx2601       |
| H-ZZ 2607 TPC | 26   | 0,141 | 7 x 0,16   | 0,48   | 142                       | 1,19          | ± 0,05    | 3,6            | 6             | 579xx2607       |
| H-ZZ 2619 TPC | 26   | 0,155 | 19 x 0,10  | 0,48   | 135                       | 1,19          | ± 0,05    | 3,8            | 6             | 579xx2619       |
| H-ZZ 2401 TPC | 24   | 0,204 | 1 x 0,51   | 0,51   | 91,2                      | 1,22          | ± 0,05    | 4,8            | 9             | 579xx2401       |
| H-ZZ 2407 TPC | 24   | 0,220 | 7 x 0,20   | 0,60   | 88,6                      | 1,31          | ± 0,05    | 4,8            | 9             | 579xx2407       |
| H-ZZ 2419 TPC | 24   | 0,241 | 19 x 0,13  | 0,60   | 86,0                      | 1,31          | ± 0,05    | 5,0            | 9             | 579xx2419       |
| H-ZZ 2201 TPC | 22   | 0,322 | 1 x 0,64   | 0,64   | 58,1                      | 1,35          | ± 0,05    | 6,4            | 12            | 579xx2201       |
| H-ZZ 2207 TPC | 22   | 0,355 | 7 x 0,25   | 0,76   | 56,1                      | 1,47          | ± 0,05    | 6,4            | 12            | 579xx2207       |
| H-ZZ 2219 TPC | 22   | 0,382 | 19 x 0,16  | 0,76   | 53,1                      | 1,47          | ± 0,05    | 6,7            | 12            | 579xx2219       |
| H-ZZ 2001 TPC | 20   | 0,515 | 1 x 0,81   | 0,81   | 35,8                      | 1,52          | ± 0,05    | 8,9            | 16            | 579xx2001       |
| H-ZZ 2007 TPC | 20   | 0,563 | 7 x 0,32   | 0,96   | 35,1                      | 1,67          | ± 0,05    | 8,9            | 16            | 579xx2007       |
| H-ZZ 2019 TPC | 20   | 0,597 | 19 x 0,20  | 0,97   | 32,4                      | 1,67          | ± 0,05    | 9,5            | 16            | 579xx2019       |
| H-ZZ 1819 TPC | 18   | 0,963 | 19 x 0,25  | 1,21   | 20,4                      | 2,00          | ± 0,08    | 14             | 22            | 579xx1819       |
| H-ZZ 1619 TPC | 16   | 1,229 | 19 x 0,29  | 1,36   | 15,8                      | 2,19          | ± 0,10    | 17             | 27            | 579xx1619       |
| H-ZZ 1419 TPC | 14   | 1,870 | 19 x 0,36  | 1,70   | 10,0                      | 2,58          | ± 0,13    | 25             | 37            | 579xx1419       |
| H-ZZ 1219 TPC | 12   | 3,022 | 19 x 0,45  | 2,14   | 6,30                      | 3,09          | ± 0,16    | 36             | 50            | 579xx1219       |
| H-ZZ 1037 TPC | 10   | 4,650 | 37 x 0,40  | 2,82   | 4,13                      | 3,62          | ± 0,16    | 55             | 69            | 579xx1037       |
| H-ZZ 8133 TPC | 8    | 8,60  | 133 x 0,29 | 4,10   | 2,30                      | 5,20          | ± 0,21    | 95             | 109           | 579xx8133       |
| H-ZZ 6133 TPC | 6    | 14,0  | 133 x 0,36 | 5,15   | 1,46                      | 6,20          | ± 0,30    | 140            | 150           | 579xx6133       |
| H-ZZ 4133 TPC | 4    | 22,0  | 133 x 0,45 | 6,50   | 0,919                     | 7,80          | ± 0,40    | 225            | 207           | 579xx4133       |
| H-ZZ 2665 TPC | 2    | 34,0  | 665 x 0,25 | 8,40   | 0,557                     | 9,50          | ± 0,50    | 335            | TBC*          | 579xx2665       |

Data provided indicates nominal values unless stated otherwise and is only valid for reference purposes at the time of publication and is subject to change without prior notice.

Ref: EQ-eHZZtpc-03  
Date: 2007-05-11  
Approved by: 

## Equipment Wire, 1000V, +150°C

#### Properties:

Radiation resistance:  
10 E5 Gy

Flame retardant  
Low Smoke Generation

Suitable for use in:

Oils  
Fuels  
Acids  
Bases

#### Construction:

Conductor  
Insulation  
Temperature rating (°C)  
Colours  
Voltage  
Test voltage

\*TBC

Silver Plated Copper (SPC)  
ETFE  
-65 / +150  
XX = Colour code  
1000 V AC  
5000 V AC

Value to be confirmed

#### Colour code:

|         |    |
|---------|----|
| Black   | 00 |
| Brown   | 11 |
| Red     | 22 |
| Orange  | 33 |
| Yellow  | 44 |
| Green   | 55 |
| Blue    | 66 |
| Violet  | 77 |
| Grey    | 88 |
| White   | 99 |
| Pink    | 29 |
| Natural | 89 |

#### Notes:

All dimensions nominal (± 4%)  
unless otherwise stated.  
All dimensions in mm.

Air temperature correction factor for current rating:

H-ZZ


| °C     | 10   | 20   | 30   | 40   | 50   | 60   | 70   | 80   | 90   | 100  | 110  | 120  | 130  | 140  |
|--------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Factor | 1.16 | 1.11 | 1.06 | 1.00 | 0.94 | 0.88 | 0.82 | 0.76 | 0.69 | 0.62 | 0.54 | 0.45 | 0.35 | 0.23 |

Multicore correction factor for current rating:

| Cores  | 2 | 3    | 4    | 6    | 8    | 10   | 12   | 16   | 20   | 24   | 28   | 32   | 36   | 40   |
|--------|---|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Factor | 1 | 0.88 | 0.80 | 0.69 | 0.62 | 0.59 | 0.55 | 0.51 | 0.48 | 0.43 | 0.41 | 0.39 | 0.38 | 0.36 |

| Type      | Size |       | Conductor  |        |                           | Finished Wire |           |                |               | Order Reference |
|-----------|------|-------|------------|--------|---------------------------|---------------|-----------|----------------|---------------|-----------------|
|           | AWG  | mm²   | Stranding  | Wire Ø | DC Res @ 20°C (Ohms / km) | Core Ø        | Tolerance | Weight (kg/km) | Amps (@ 40°C) |                 |
| H-ZZ 3201 | 32   | 0,031 | 1 x 0,20   | 0,20   | 554                       | 0,91          | ± 0,05    | 2,0            | 2             | 569xx3201       |
| H-ZZ 3207 | 32   | 0,035 | 7 x 0,08   | 0,24   | 567                       | 0,94          | ± 0,05    | 2,0            | 2             | 569xx3207       |
| H-ZZ 3001 | 30   | 0,049 | 1 x 0,25   | 0,25   | 354                       | 0,96          | ± 0,05    | 2,3            | 3             | 569xx3001       |
| H-ZZ 3007 | 30   | 0,057 | 7 x 0,10   | 0,30   | 330                       | 1,01          | ± 0,05    | 2,3            | 3             | 569xx3007       |
| H-ZZ 2801 | 28   | 0,080 | 1 x 0,32   | 0,32   | 223                       | 1,03          | ± 0,05    | 2,9            | 4             | 569xx2801       |
| H-ZZ 2807 | 28   | 0,089 | 7 x 0,13   | 0,38   | 209                       | 1,09          | ± 0,05    | 2,9            | 4             | 569xx2807       |
| H-ZZ 2601 | 26   | 0,126 | 1 x 0,40   | 0,40   | 140                       | 1,11          | ± 0,05    | 3,6            | 6             | 569xx2601       |
| H-ZZ 2607 | 26   | 0,141 | 7 x 0,16   | 0,48   | 132                       | 1,19          | ± 0,05    | 3,6            | 6             | 569xx2607       |
| H-ZZ 2619 | 26   | 0,155 | 19 x 0,10  | 0,48   | 126                       | 1,19          | ± 0,05    | 3,8            | 6             | 569xx2619       |
| H-ZZ 2401 | 24   | 0,204 | 1 x 0,51   | 0,51   | 87,9                      | 1,22          | ± 0,05    | 4,8            | 9             | 569xx2401       |
| H-ZZ 2407 | 24   | 0,220 | 7 x 0,20   | 0,60   | 82,6                      | 1,31          | ± 0,05    | 4,8            | 9             | 569xx2407       |
| H-ZZ 2419 | 24   | 0,241 | 19 x 0,13  | 0,60   | 79,7                      | 1,31          | ± 0,05    | 5,0            | 9             | 569xx2419       |
| H-ZZ 2201 | 22   | 0,322 | 1 x 0,64   | 0,64   | 55,7                      | 1,35          | ± 0,05    | 6,4            | 12            | 569xx2201       |
| H-ZZ 2207 | 22   | 0,355 | 7 x 0,25   | 0,76   | 52,1                      | 1,47          | ± 0,05    | 6,4            | 12            | 569xx2207       |
| H-ZZ 2219 | 22   | 0,382 | 19 x 0,16  | 0,76   | 49,5                      | 1,47          | ± 0,05    | 6,7            | 12            | 569xx2219       |
| H-ZZ 2001 | 20   | 0,515 | 1 x 0,81   | 0,81   | 34,4                      | 1,52          | ± 0,05    | 8,9            | 16            | 569xx2001       |
| H-ZZ 2007 | 20   | 0,563 | 7 x 0,32   | 0,96   | 32,8                      | 1,67          | ± 0,05    | 8,9            | 16            | 569xx2007       |
| H-ZZ 2019 | 20   | 0,597 | 19 x 0,20  | 0,97   | 30,1                      | 1,67          | ± 0,05    | 9,5            | 16            | 569xx2019       |
| H-ZZ 1819 | 18   | 0,963 | 19 x 0,25  | 1,21   | 18,9                      | 2,00          | ± 0,08    | 14             | 22            | 569xx1819       |
| H-ZZ 1619 | 16   | 1,229 | 19 x 0,29  | 1,36   | 14,8                      | 2,19          | ± 0,10    | 17             | 27            | 569xx1619       |
| H-ZZ 1419 | 14   | 1,870 | 19 x 0,36  | 1,70   | 9,44                      | 2,58          | ± 0,13    | 25             | 37            | 569xx1419       |
| H-ZZ 1219 | 12   | 3,022 | 19 x 0,45  | 2,14   | 5,93                      | 3,09          | ± 0,16    | 36             | 50            | 569xx1219       |
| H-ZZ 1037 | 10   | 4,650 | 37 x 0,40  | 2,82   | 3,90                      | 3,62          | ± 0,16    | 55             | 69            | 569xx1037       |
| H-ZZ 8133 | 8    | 8,60  | 133 x 0,29 | 4,10   | 2,15                      | 5,20          | ± 0,21    | 95             | 109           | 569xx8133       |
| H-ZZ 6133 | 6    | 14,0  | 133 x 0,36 | 5,15   | 1,37                      | 6,20          | ± 0,30    | 140            | 150           | 569xx6133       |
| H-ZZ 4133 | 4    | 22,0  | 133 x 0,45 | 6,50   | 0,866                     | 7,80          | ± 0,40    | 225            | 207           | 569xx4133       |
| H-ZZ 2665 | 2    | 34,0  | 665 x 0,25 | 8,40   | 0,445                     | 9,50          | ± 0,50    | 335            | TBC*          | 569xx2665       |

Data provided indicates nominal values unless stated otherwise and is only valid for reference purposes at the time of publication and is subject to change without prior notice.

Ref: EQ-eHZZ-03  
Date: 2007-05-11  
Approved by: 









**Properties:**

Radiation resistance:  
10 E4 Gy

Flame retardant  
Low Smoke Generation

Suitable for use in:

Oils  
Fuels  
Acids  
Bases

**Construction:**

Conductor Tin Plated Copper (TPC)  
Insulation FEP  
Temperature rating (°C) -65 / +180\*  
Colours XX = Colour code  
Voltage 250 V AC  
Test voltage 2500 V AC

\* Temperature range according to the specification is: -65 / +150°C  
\*\* Metric size. Construction in accordance with, but not included in NEMA HP-4

**Colour code:**

|         |    |
|---------|----|
| Black   | 00 |
| Brown   | 11 |
| Red     | 22 |
| Orange  | 33 |
| Yellow  | 44 |
| Green   | 55 |
| Blue    | 66 |
| Violet  | 77 |
| Grey    | 88 |
| White   | 99 |
| Pink    | 29 |
| Natural | 89 |

**Notes:**

All dimensions nominal (± 4%)  
unless otherwise stated.  
All dimensions in mm.

Air temperature correction factor for current rating:

KT-TPC


| °C     | 10   | 20   | 30   | 40   | 50   | 60   | 70   | 80   | 90   | 100  | 110  | 120  | 130  | 140  |
|--------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Factor | 1.16 | 1.11 | 1.06 | 1.00 | 0.94 | 0.88 | 0.82 | 0.76 | 0.69 | 0.62 | 0.54 | 0.45 | 0.35 | 0.23 |

Multicore correction factor for current rating:

| Cores  | 2 | 3    | 4    | 6    | 8    | 10   | 12   | 16   | 20   | 24   | 28   | 32   | 36   | 40   |
|--------|---|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Factor | 1 | 0.88 | 0.80 | 0.69 | 0.62 | 0.59 | 0.55 | 0.51 | 0.48 | 0.43 | 0.41 | 0.39 | 0.38 | 0.36 |

| Type           | Size |       | Conductor  |        |                           | Finished Wire |               |                |               | Order Reference |
|----------------|------|-------|------------|--------|---------------------------|---------------|---------------|----------------|---------------|-----------------|
|                | AWG  | mm²   | Stranding  | Wire Ø | DC Res @ 20°C (Ohms / km) | Core Ø        | Tolerance     | Weight (kg/km) | Amps (@ 40°C) |                 |
| KT 3201 TPC    | 32   | 0,031 | 1 x 0,203  | 0,20   | 584,0                     | 0,51          | ± 0,05        | 0,8            | 2             | 558xx3201       |
| KT 3207 TPC    | 32   | 0,035 | 7 x 0,079  | 0,24   | 597,1                     | 0,56          | ± 0,05        | 0,8            | 2             | 558xx3207       |
| KT 3219 TPC    | 32   | 0,040 | 19 x 0,051 | 0,24   | 554,5                     | 0,56          | ± 0,05        | 0,8            | 2             | 558xx3219       |
| KT 3001 TPC    | 30   | 0,049 | 1 x 0,254  | 0,25   | 374,0                     | 0,56          | ± 0,05        | 0,9            | 3             | 558xx3001       |
| KT 3007 TPC    | 30   | 0,057 | 7 x 0,102  | 0,30   | 354,3                     | 0,61          | ± 0,05        | 1,0            | 3             | 558xx3007       |
| KT 3019 TPC    | 30   | 0,060 | 19 x 0,064 | 0,30   | 347,8                     | 0,61          | ± 0,05        | 1,0            | 3             | 558xx3019       |
| KT 2801 TPC    | 28   | 0,080 | 1 x 0,320  | 0,32   | 232,3                     | 0,64          | + 0,05 - 0,06 | 1,2            | 4             | 558xx2801       |
| KT 2807 TPC    | 28   | 0,089 | 7 x 0,127  | 0,38   | 223,8                     | 0,69          | ± 0,05        | 1,5            | 4             | 558xx2807       |
| KT 2819 TPC    | 28   | 0,090 | 19 x 0,079 | 0,37   | 222,1                     | 0,69          | ± 0,05        | 1,5            | 4             | 558xx2819       |
| KT 2601 TPC    | 26   | 0,126 | 1 x 0,404  | 0,40   | 146,0                     | 0,71          | ± 0,05        | 1,7            | 6             | 558xx2601       |
| KT 2607 TPC    | 26   | 0,141 | 7 x 0,160  | 0,48   | 139,8                     | 0,79          | ± 0,05        | 2,1            | 6             | 558xx2607       |
| KT 2619 TPC    | 26   | 0,155 | 19 x 0,102 | 0,48   | 131,6                     | 0,79          | ± 0,05        | 2,2            | 6             | 558xx2619       |
| KT 2401 TPC    | 24   | 0,204 | 1 x 0,511  | 0,51   | 89,2                      | 0,81          | ± 0,05        | 2,5            | 8             | 558xx2401       |
| KT 2407 TPC    | 24   | 0,220 | 7 x 0,203  | 0,60   | 86,0                      | 0,91          | + 0,06 - 0,05 | 3,0            | 8             | 558xx2407       |
| KT 2419 TPC    | 24   | 0,241 | 19 x 0,127 | 0,60   | 83,3                      | 0,91          | + 0,06 - 0,05 | 3,2            | 8             | 558xx2419       |
| KT 0,25 TPC ** | -    | 0,250 | 14 x 0,150 | 0,66   | 76,9                      | 0,95          | ± 0,05        | 3,4            | 9             | 558xx0025       |
| KT 2201 TPC    | 22   | 0,322 | 1 x 0,643  | 0,64   | 56,4                      | 0,95          | + 0,07 - 0,06 | 3,7            | 12            | 558xx2201       |
| KT 2207 TPC    | 22   | 0,355 | 7 x 0,254  | 0,76   | 54,8                      | 1,07          | ± 0,05        | 4,4            | 12            | 558xx2207       |
| KT 2219 TPC    | 22   | 0,382 | 19 x 0,160 | 0,76   | 52,2                      | 1,07          | ± 0,05        | 4,7            | 12            | 558xx2219       |
| KT 0,50 TPC ** | -    | 0,500 | 19 x 0,185 | 0,93   | 40,1                      | 1,25          | ± 0,05        | 5,7            | 14            | 558xx1950       |
| KT 0,50 TPC ** | -    | 0,500 | 16 x 0,200 | 0,88   | 40,1                      | 1,25          | ± 0,05        | 5,7            | 14            | 558xx0050       |
| KT 2001 TPC    | 20   | 0,515 | 1 x 0,813  | 0,81   | 35,1                      | 1,12          | ± 0,05        | 5,6            | 16            | 558xx2001       |
| KT 2007 TPC    | 20   | 0,563 | 7 x 0,320  | 0,96   | 34,1                      | 1,27          | ± 0,05        | 6,6            | 16            | 558xx2007       |
| KT 2019 TPC    | 20   | 0,597 | 19 x 0,203 | 0,96   | 32,0                      | 1,27          | ± 0,05        | 7,1            | 16            | 558xx2019       |
| KT 0,75 TPC ** | -    | 0,750 | 19 x 0,225 | 1,13   | 26,7                      | 1,45          | ± 0,05        | 8,8            | 19            | 558xx1975       |
| KT 0,75 TPC ** | -    | 0,750 | 24 x 0,200 | 1,05   | 26,7                      | 1,45          | ± 0,05        | 8,8            | 19            | 558xx0075       |

Data provided indicates nominal values unless stated otherwise and is only valid for reference purposes at the time of publication and is subject to change without prior notice.

Ref: EQ-eKTtpc-05  
Date: 2008-04-30  
Approved by: 



**Properties:**

 Radiation resistance:  
10 E4 Gy

 Flame retardant  
Low Smoke Generation

Suitable for use in:

 Oils  
Fuels  
Acids  
Bases

**Construction:**

 Conductor  
Insulation  
Temperature rating (°C)  
Colours  
Voltage  
Test voltage  
Tin Plated Copper (TPC)  
FEP  
-65 / +180\*  
XX = Colour code  
600 V AC  
3400 V AC

\* Specification only rates temperature at: -65 / +150°C

\*\* Metric size. Construction in accordance with, but not included in NEMA HP-4

**Colour code:**

|         |    |
|---------|----|
| Black   | 00 |
| Brown   | 11 |
| Red     | 22 |
| Orange  | 33 |
| Yellow  | 44 |
| Green   | 55 |
| Blue    | 66 |
| Violet  | 77 |
| Grey    | 88 |
| White   | 99 |
| Pink    | 29 |
| Natural | 89 |

**Notes:**

 All dimensions nominal (± 4%)  
unless otherwise stated.  
All dimensions in mm.

Air temperature correction factor for current rating:

K-TPC


| °C     | 10   | 20   | 30   | 40   | 50   | 60   | 70   | 80   | 90   | 100  | 110  | 120  | 130  | 140  |
|--------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Factor | 1.16 | 1.11 | 1.06 | 1.00 | 0.94 | 0.88 | 0.82 | 0.76 | 0.69 | 0.62 | 0.54 | 0.45 | 0.35 | 0.23 |

Multicore correction factor for current rating:

| Cores  | 2 | 3    | 4    | 6    | 8    | 10   | 12   | 16   | 20   | 24   | 28   | 32   | 36   | 40   |
|--------|---|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Factor | 1 | 0.88 | 0.80 | 0.69 | 0.62 | 0.59 | 0.55 | 0.51 | 0.48 | 0.43 | 0.41 | 0.39 | 0.38 | 0.36 |

| Type          | Size |       | Conductor  |        |                           | Finished Wire |               |                |               | Order Reference |
|---------------|------|-------|------------|--------|---------------------------|---------------|---------------|----------------|---------------|-----------------|
|               | AWG  | mm²   | Stranding  | Wire Ø | DC Res @ 20°C (Ohms / km) | Core Ø        | Tolerance     | Weight (kg/km) | Amps (@ 40°C) |                 |
| K 3201 TPC    | 32   | 0,031 | 1 x 0,203  | 0,20   | 584,0                     | 0,71          | ± 0,10        | 1,1            | 2             | 559xx3201       |
| K 3207 TPC    | 32   | 0,035 | 7 x 0,079  | 0,24   | 597,1                     | 0,76          | ± 0,10        | 1,2            | 2             | 559xx3207       |
| K 3219 TPC    | 32   | 0,040 | 19 x 0,051 | 0,24   | 554,5                     | 0,76          | ± 0,10        | 1,2            | 2             | 559xx3219       |
| K 3001 TPC    | 30   | 0,049 | 1 x 0,254  | 0,25   | 374,0                     | 0,76          | ± 0,10        | 1,3            | 3             | 559xx3001       |
| K 3007 TPC    | 30   | 0,057 | 7 x 0,102  | 0,30   | 354,3                     | 0,81          | ± 0,10        | 1,5            | 3             | 559xx3007       |
| K 3019 TPC    | 30   | 0,060 | 19 x 0,064 | 0,30   | 347,8                     | 0,81          | ± 0,10        | 1,5            | 3             | 559xx3019       |
| K 2801 TPC    | 28   | 0,080 | 1 x 0,320  | 0,32   | 232,3                     | 0,84          | ± 0,10        | 1,7            | 4             | 559xx2801       |
| K 2807 TPC    | 28   | 0,089 | 7 x 0,127  | 0,38   | 223,8                     | 0,89          | ± 0,10        | 2,0            | 4             | 559xx2807       |
| K 2819 TPC    | 28   | 0,090 | 19 x 0,079 | 0,37   | 222,1                     | 0,89          | ± 0,10        | 2,0            | 4             | 559xx2819       |
| K 2601 TPC    | 26   | 0,126 | 1 x 0,404  | 0,40   | 146,0                     | 0,91          | ± 0,10        | 2,3            | 6             | 559xx2601       |
| K 2607 TPC    | 26   | 0,141 | 7 x 0,160  | 0,48   | 139,8                     | 0,99          | ± 0,10        | 2,7            | 6             | 559xx2607       |
| K 2619 TPC    | 26   | 0,155 | 19 x 0,102 | 0,48   | 131,6                     | 0,99          | ± 0,10        | 2,8            | 6             | 559xx2619       |
| K 2401 TPC    | 24   | 0,204 | 1 x 0,511  | 0,51   | 89,2                      | 1,02          | + 0,10 - 0,11 | 3,1            | 8             | 559xx2401       |
| K 2407 TPC    | 24   | 0,220 | 7 x 0,203  | 0,60   | 86,0                      | 1,12          | ± 0,10        | 3,7            | 8             | 559xx2407       |
| K 2419 TPC    | 24   | 0,241 | 19 x 0,127 | 0,60   | 83,3                      | 1,12          | ± 0,10        | 3,9            | 8             | 559xx2419       |
| K 0,25 TPC ** | -    | 0,250 | 14 x 0,150 | 0,66   | 76,9                      | 1,15          | ± 0,10        | 3,9            | 9             | 559xx0025       |
| K 2201 TPC    | 22   | 0,322 | 1 x 0,643  | 0,64   | 56,4                      | 1,16          | + 0,11 - 0,12 | 4,4            | 12            | 559xx2201       |
| K 2207 TPC    | 22   | 0,355 | 7 x 0,254  | 0,76   | 54,8                      | 1,27          | ± 0,10        | 5,2            | 12            | 559xx2207       |
| K 2219 TPC    | 22   | 0,382 | 19 x 0,160 | 0,76   | 52,2                      | 1,27          | ± 0,10        | 5,5            | 12            | 559xx2219       |
| K 0,5 TPC **  | -    | 0,500 | 19 x 0,185 | 0,93   | 40,1                      | 1,45          | ± 0,10        | 6,7            | 14            | 559xx1950       |
| K 0,5 TPC **  | -    | 0,500 | 16 x 0,200 | 0,88   | 40,1                      | 1,45          | ± 0,10        | 6,7            | 14            | 559xx0050       |
| K 2001 TPC    | 20   | 0,515 | 1 x 0,813  | 0,81   | 35,1                      | 1,32          | ± 0,10        | 6,5            | 16            | 559xx2001       |
| K 2007 TPC    | 20   | 0,563 | 7 x 0,320  | 0,96   | 34,1                      | 1,47          | ± 0,10        | 7,5            | 16            | 559xx2007       |
| K 2019 TPC    | 20   | 0,597 | 19 x 0,203 | 0,96   | 32,0                      | 1,47          | ± 0,10        | 8,1            | 16            | 559xx2019       |
| K 0,75 TPC ** | -    | 0,750 | 19 x 0,225 | 1,13   | 26,7                      | 1,65          | ± 0,10        | 9,5            | 19            | 559xx1975       |
| K 0,75 TPC ** | -    | 0,750 | 24 x 0,200 | 1,05   | 26,7                      | 1,65          | ± 0,10        | 9,5            | 19            | 559xx0075       |
| K 1801 TPC    | 18   | 0,817 | 1 x 1,024  | 1,02   | 22,2                      | 1,55          | ± 0,13        | 9,6            | 22            | 559xx1801       |
| K 1807 TPC    | 18   | 0,880 | 7 x 0,404  | 1,21   | 21,5                      | 1,75          | + 0,13 - 0,12 | 12             | 22            | 559xx1807       |
| K 1819 TPC    | 18   | 0,963 | 19 x 0,254 | 1,20   | 20,4                      | 1,75          | + 0,13 - 0,12 | 12             | 22            | 559xx1819       |
| K 1,0 TPC **  | -    | 1,000 | 32 x 0,200 | 1,20   | 20,0                      | 1,80          | ± 0,12        | 13             | 22            | 559xx0100       |
| K 1601 TPC    | 16   | 1,301 | 1 x 1,290  | 1,29   | 14,0                      | 1,88          | ± 0,18        | 15             | 27            | 559xx1601       |
| K 1619 TPC    | 16   | 1,229 | 19 x 0,287 | 1,36   | 15,8                      | 2,03          | ± 0,18        | 16             | 27            | 559xx1619       |
| K 1,5 TPC **  | -    | 1,500 | 30 x 0,250 | 1,50   | 13,7                      | 2,08          | ± 0,18        | 17             | 30            | 559xx0150       |
| K 1419 TPC    | 14   | 1,870 | 19 x 0,361 | 1,71   | 10,0                      | 2,41          | + 0,18 - 0,17 | 23             | 36            | 559xx1419       |
| K 2,5 TPC **  | -    | 2,500 | 50 x 0,250 | 1,95   | 8,2                       | 2,58          | ± 0,18        | 28             | 42            | 559xx0250       |
| K 1219 TPC    | 12   | 3,022 | 19 x 0,455 | 2,15   | 6,3                       | 2,90          | + 0,17 - 0,18 | 33             | 50            | 559xx1219       |
| K 1237 TPC    | 12   | 2,976 | 37 x 0,320 | 2,24   | 6,6                       | 2,84          | + 0,18 - 0,17 | 34             | 50            | 559xx1237       |
| K 4 TPC **    | -    | 4,000 | 56 x 0,300 | 2,48   | 5,1                       | 3,13          | ± 0,18        | 42             | 59            | 559xx0400       |

Data provided indicates nominal values unless stated otherwise and is only valid for reference purposes at the time of publication and is subject to change without prior notice.

 Ref: EQ-eKtpc-05  
Date: 2008-04-28  
Approved by: 



### Equipment Wire, 600V, +200°C\*, NEMA HP-4

FEP

**Properties:**

Radiation resistance:  
10 E4 Gy

Flame retardant  
Low Smoke Generation

Suitable for use in:

Oils  
Fuels  
Acids  
Bases

**Construction:**

Conductor Silver Plated Copper (SPC)  
Insulation FEP  
Temperature rating (°C) -65 / +200\*  
Colours XX = Colour code  
Voltage 600 V AC  
Test voltage 3400 V AC

\* Specification only rates temperature at: -65 / +150°C  
\*\* Metric size. Construction in accordance with, but not included in NEMA HP-4

**Colour code:**

Black 00  
Brown 11  
Red 22  
Orange 33  
Yellow 44  
Green 55  
Blue 66  
Violet 77  
Grey 88  
White 99  
Pink 29  
Natural 89

Air temperature correction factor for current rating:

| °C     | 20   | 40   | 60   | 80   | 100  | 120  | 140  | 160  | 180  |  |  |  |  |
|--------|------|------|------|------|------|------|------|------|------|--|--|--|--|
| Factor | 1.08 | 1.00 | 0.92 | 0.84 | 0.75 | 0.65 | 0.55 | 0.42 | 0.28 |  |  |  |  |

Multicore correction factor for current rating:


| Cores  | 2 | 3    | 4    | 6    | 8    | 10   | 12   | 16   | 20   | 24   | 28   | 32   | 36   | 40   |
|--------|---|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Factor | 1 | 0.88 | 0.80 | 0.69 | 0.62 | 0.59 | 0.55 | 0.51 | 0.48 | 0.43 | 0.41 | 0.39 | 0.38 | 0.36 |

**Notes:**

All dimensions nominal (± 4%)  
unless otherwise stated.  
All dimensions in mm.

| Type      | Size |       | Conductor  |        |                           | Finished Wire |               |                |               | Order Reference |
|-----------|------|-------|------------|--------|---------------------------|---------------|---------------|----------------|---------------|-----------------|
|           | AWG  | mm²   | Stranding  | Wire Ø | DC Res @ 20°C (Ohms / km) | Core Ø        | Tolerance     | Weight (kg/km) | Amps (@ 40°C) |                 |
| K 3201    | 32   | 0,031 | 1 x 0,203  | 0,20   | 544,6                     | 0,71          | ± 0,10        | 1,1            | 3             | 562xx3201       |
| K 3207    | 32   | 0,035 | 7 x 0,079  | 0,24   | 557,7                     | 0,76          | ± 0,10        | 1,2            | 3             | 562xx3207       |
| K 3219    | 32   | 0,040 | 19 x 0,051 | 0,24   | 515,1                     | 0,76          | ± 0,10        | 1,2            | 3             | 562xx3219       |
| K 3001    | 30   | 0,049 | 1 x 0,254  | 0,25   | 347,8                     | 0,76          | ± 0,10        | 1,3            | 4             | 562xx3001       |
| K 3007    | 30   | 0,057 | 7 x 0,102  | 0,30   | 328,1                     | 0,81          | ± 0,10        | 1,5            | 4             | 562xx3007       |
| K 3019    | 30   | 0,060 | 19 x 0,064 | 0,30   | 323,5                     | 0,81          | ± 0,10        | 1,5            | 4             | 562xx3019       |
| K 2801    | 28   | 0,080 | 1 x 0,320  | 0,32   | 218,8                     | 0,84          | ± 0,10        | 1,7            | 5             | 562xx2801       |
| K 2807    | 28   | 0,089 | 7 x 0,127  | 0,38   | 208,7                     | 0,89          | ± 0,10        | 2,0            | 5             | 562xx2807       |
| K 2819    | 28   | 0,090 | 19 x 0,079 | 0,37   | 207,0                     | 0,89          | ± 0,10        | 2,0            | 5             | 562xx2819       |
| K 2601    | 26   | 0,126 | 1 x 0,404  | 0,40   | 137,5                     | 0,91          | ± 0,10        | 2,3            | 7             | 562xx2601       |
| K 2607    | 26   | 0,141 | 7 x 0,160  | 0,48   | 130,2                     | 0,99          | ± 0,10        | 2,7            | 7             | 562xx2607       |
| K 2619    | 26   | 0,155 | 19 x 0,102 | 0,48   | 122,4                     | 0,99          | ± 0,10        | 2,8            | 7             | 562xx2619       |
| K 2401    | 24   | 0,204 | 1 x 0,511  | 0,51   | 85,96                     | 1,02          | + 0,10 - 0,11 | 3,1            | 10            | 562xx2401       |
| K 2407    | 24   | 0,220 | 7 x 0,203  | 0,60   | 80,38                     | 1,12          | ± 0,10        | 3,7            | 10            | 562xx2407       |
| K 2419    | 24   | 0,241 | 19 x 0,127 | 0,60   | 77,43                     | 1,12          | ± 0,10        | 3,9            | 10            | 562xx2419       |
| K 0,25 ** | -    | 0,250 | 14 x 0,150 | 0,66   | 76,90                     | 1,15          | ± 0,10        | 3,9            | 10            | 562xx0025       |
| K 2201    | 22   | 0,322 | 1 x 0,643  | 0,64   | 54,13                     | 1,16          | + 0,11 - 0,12 | 4,4            | 14            | 562xx2201       |
| K 2207    | 22   | 0,355 | 7 x 0,254  | 0,76   | 51,18                     | 1,27          | ± 0,10        | 5,2            | 14            | 562xx2207       |
| K 2219    | 22   | 0,382 | 19 x 0,160 | 0,76   | 48,56                     | 1,27          | ± 0,10        | 5,5            | 14            | 562xx2219       |
| K 0,5 **  | -    | 0,500 | 19 x 0,185 | 0,93   | 40,10                     | 1,45          | ± 0,10        | 6,7            | 17            | 562xx0050       |
| K 2001    | 20   | 0,515 | 1 x 0,813  | 0,81   | 33,79                     | 1,32          | ± 0,10        | 6,5            | 19            | 562xx2001       |
| K 2007    | 20   | 0,563 | 7 x 0,320  | 0,96   | 32,19                     | 1,47          | ± 0,10        | 7,5            | 19            | 562xx2007       |
| K 2019    | 20   | 0,597 | 19 x 0,203 | 0,96   | 29,86                     | 1,47          | ± 0,10        | 8,1            | 19            | 562xx2019       |
| K 0,75 ** | -    | 0,750 | 19 x 0,225 | 1,13   | 26,70                     | 1,65          | ± 0,10        | 9,5            | 22            | 562xx0075       |
| K 1801    | 18   | 0,817 | 1 x 1,024  | 1,02   | 21,39                     | 1,55          | ± 0,13        | 9,6            | 27            | 562xx1801       |
| K 1807    | 18   | 0,880 | 7 x 0,404  | 1,21   | 20,21                     | 1,75          | + 0,13 - 0,12 | 12             | 27            | 562xx1807       |
| K 1819    | 18   | 0,963 | 19 x 0,254 | 1,20   | 19,00                     | 1,75          | + 0,13 - 0,12 | 12             | 27            | 562xx1819       |
| K 1,0 **  | -    | 1,000 | 32 x 0,200 | 1,20   | 20,00                     | 1,80          | ± 0,12        | 13             | 27            | 562xx0100       |
| K 1601    | 16   | 1,301 | 1 x 1,290  | 1,29   | 13,45                     | 1,88          | ± 0,18        | 15             | 32            | 562xx1601       |
| K 1619    | 16   | 1,229 | 19 x 0,287 | 1,36   | 14,90                     | 2,03          | ± 0,18        | 16             | 32            | 562xx1619       |
| K 1,5 **  | -    | 1,500 | 30 x 0,250 | 1,50   | 13,70                     | 2,08          | ± 0,18        | 17             | 35            | 562xx0150       |
| K 1419    | 14   | 1,870 | 19 x 0,361 | 1,71   | 9,42                      | 2,41          | + 0,18 - 0,17 | 23             | 43            | 562xx1419       |
| K 2,5 **  | -    | 2,500 | 50 x 0,250 | 1,95   | 8,21                      | 2,58          | ± 0,18        | 28             | 50            | 562xx0250       |
| K 1219    | 12   | 3,022 | 19 x 0,455 | 2,15   | 5,94                      | 2,90          | + 0,17 - 0,18 | 33             | 59            | 562xx1219       |
| K 1237    | 12   | 2,976 | 37 x 0,320 | 2,24   | 6,20                      | 2,84          | + 0,18 - 0,17 | 34             | 59            | 562xx1237       |
| K 4 **    | -    | 4,000 | 56 x 0,300 | 2,48   | 5,09                      | 3,13          | ± 0,18        | 42             | 70            | 562xx0400       |
| K 1037    | 10   | 4,650 | 37 x 0,404 | 2,82   | 3,90                      | 3,40          | + 0,18 - 0,17 | 52             | 81            | 562xx1037       |
| K 6 **    | -    | 6,000 | 84 x 0,300 | 2,92   | 3,39                      | 3,83          | ± 0,18        | 62             | 92            | 562xx0600       |

Data provided indicates nominal values unless stated otherwise and is only valid for reference purposes at the time of publication and is subject to change without prior notice.

Ref: EQ-eK-05  
Date: 2008-05-08  
Approved by: 



**Properties:**

 Radiation resistance:  
10 E4 Gy

 Flame retardant  
Low Smoke Generation

Suitable for use in:

 Oils  
Fuels  
Acids  
Bases

**Construction:**

 Conductor  
Insulation  
Temperature rating (°C)  
Colours  
Voltage  
Test voltage  
Tin Plated Copper (TPC)  
FEP  
-65 / +180\*  
XX = Colour code  
1000 V AC  
5000 V AC

\* Specification only rates temperature at: -65 / +150°C

\*\* Metric size. Construction in accordance with, but not included in NEMA HP-4

**Colour code:**

|         |    |
|---------|----|
| Black   | 00 |
| Brown   | 11 |
| Red     | 22 |
| Orange  | 33 |
| Yellow  | 44 |
| Green   | 55 |
| Blue    | 66 |
| Violet  | 77 |
| Grey    | 88 |
| White   | 99 |
| Pink    | 29 |
| Natural | 89 |

**Notes:**

 All dimensions nominal (± 4%)  
unless otherwise stated.  
All dimensions in mm.

Air temperature correction factor for current rating:

KK-TPC

| °C     | 10   | 20   | 30   | 40   | 50   | 60   | 70   | 80   | 90   | 100  | 110  | 120  | 130  | 140  |
|--------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Factor | 1.16 | 1.11 | 1.06 | 1.00 | 0.94 | 0.88 | 0.82 | 0.76 | 0.69 | 0.62 | 0.54 | 0.45 | 0.35 | 0.23 |

Multicore correction factor for current rating:

| Cores  | 2 | 3    | 4    | 6    | 8    | 10   | 12   | 16   | 20   | 24   | 28   | 32   | 36   | 40   |
|--------|---|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Factor | 1 | 0.88 | 0.80 | 0.69 | 0.62 | 0.59 | 0.55 | 0.51 | 0.48 | 0.43 | 0.41 | 0.39 | 0.38 | 0.36 |

| Type           | Size |       | Conductor  |        |                           | Finished Wire |               |                |               | Order Reference |
|----------------|------|-------|------------|--------|---------------------------|---------------|---------------|----------------|---------------|-----------------|
|                | AWG  | mm²   | Stranding  | Wire Ø | DC Res @ 20°C (Ohms / km) | Core Ø        | Tolerance     | Weight (kg/km) | Amps (@ 40°C) |                 |
| KK 3201 TPC    | 32   | 0,031 | 1 x 0,203  | 0,20   | 584,0                     | 0,94          | ± 0,10        | 1,8            | 2             | 560xx3201       |
| KK 3207 TPC    | 32   | 0,035 | 7 x 0,079  | 0,24   | 597,1                     | 0,99          | ± 0,10        | 1,2            | 2             | 560xx3207       |
| KK 3219 TPC    | 32   | 0,040 | 19 x 0,051 | 0,24   | 554,5                     | 0,99          | ± 0,10        | 1,2            | 2             | 560xx3219       |
| KK 3001 TPC    | 30   | 0,049 | 1 x 0,254  | 0,25   | 374,0                     | 1,02          | + 0,10 - 0,11 | 1,3            | 3             | 560xx3001       |
| KK 3007 TPC    | 30   | 0,057 | 7 x 0,102  | 0,30   | 354,3                     | 1,07          | ± 0,10        | 1,5            | 3             | 560xx3007       |
| KK 3019 TPC    | 30   | 0,060 | 19 x 0,064 | 0,30   | 347,8                     | 1,07          | ± 0,10        | 1,5            | 3             | 560xx3019       |
| KK 2801 TPC    | 28   | 0,080 | 1 x 0,320  | 0,32   | 232,3                     | 1,09          | ± 0,10        | 1,7            | 4             | 560xx2801       |
| KK 2807 TPC    | 28   | 0,089 | 7 x 0,127  | 0,38   | 223,8                     | 1,14          | ± 0,10        | 2,0            | 4             | 560xx2807       |
| KK 2819 TPC    | 28   | 0,090 | 19 x 0,079 | 0,37   | 222,1                     | 1,14          | ± 0,10        | 2,0            | 4             | 560xx2819       |
| KK 2601 TPC    | 26   | 0,126 | 1 x 0,404  | 0,40   | 146,0                     | 1,17          | ± 0,10        | 2,3            | 6             | 560xx2601       |
| KK 2607 TPC    | 26   | 0,141 | 7 x 0,160  | 0,48   | 139,8                     | 1,24          | + 0,11 - 0,10 | 2,7            | 6             | 560xx2607       |
| KK 2619 TPC    | 26   | 0,155 | 19 x 0,102 | 0,48   | 131,6                     | 1,24          | + 0,11 - 0,10 | 2,8            | 6             | 560xx2619       |
| KK 2401 TPC    | 24   | 0,204 | 1 x 0,511  | 0,51   | 89,24                     | 1,27          | ± 0,10        | 3,1            | 8             | 560xx2401       |
| KK 2407 TPC    | 24   | 0,220 | 7 x 0,203  | 0,60   | 85,96                     | 1,37          | ± 0,10        | 3,7            | 8             | 560xx2407       |
| KK 2419 TPC    | 24   | 0,241 | 19 x 0,127 | 0,60   | 83,33                     | 1,37          | ± 0,10        | 3,9            | 8             | 560xx2419       |
| KK 0,25 TPC ** | -    | 0,250 | 14 x 0,150 | 0,66   | 76,90                     | 1,38          | ± 0,10        | 4,0            | 9             | 560xx0025       |
| KK 2201 TPC    | 22   | 0,322 | 1 x 0,643  | 0,64   | 56,43                     | 1,41          | ± 0,11        | 4,4            | 12            | 560xx2201       |
| KK 2207 TPC    | 22   | 0,355 | 7 x 0,254  | 0,76   | 54,79                     | 1,52          | + 0,11 - 0,10 | 5,2            | 12            | 560xx2207       |
| KK 2219 TPC    | 22   | 0,382 | 19 x 0,160 | 0,76   | 52,17                     | 1,52          | + 0,11 - 0,10 | 5,5            | 12            | 560xx2219       |
| KK 0,5 TPC **  | -    | 0,500 | 19 x 0,185 | 0,93   | 40,10                     | 1,68          | ± 0,10        | 6,5            | 14            | 560xx1950       |
| KK 0,5 TPC **  | -    | 0,500 | 16 x 0,200 | 0,88   | 40,10                     | 1,68          | ± 0,10        | 6,5            | 14            | 560xx0050       |
| KK 2001 TPC    | 20   | 0,515 | 1 x 0,813  | 0,81   | 35,10                     | 1,57          | + 0,11 - 0,10 | 6,5            | 16            | 560xx2001       |
| KK 2007 TPC    | 20   | 0,563 | 7 x 0,320  | 0,96   | 34,12                     | 1,73          | ± 0,10        | 7,5            | 16            | 560xx2007       |
| KK 2019 TPC    | 20   | 0,597 | 19 x 0,203 | 0,96   | 32,02                     | 1,73          | ± 0,10        | 8,1            | 16            | 560xx2019       |
| KK 0,75 TPC ** | -    | 0,750 | 19 x 0,225 | 1,13   | 26,70                     | 1,90          | ± 0,10        | 11             | 19            | 560xx1975       |
| KK 0,75 TPC ** | -    | 0,750 | 24 x 0,200 | 1,05   | 26,70                     | 1,90          | ± 0,10        | 11             | 19            | 560xx0075       |
| KK 1801 TPC    | 18   | 0,817 | 1 x 1,024  | 1,02   | 22,24                     | 1,80          | + 0,13 - 0,12 | 9,6            | 22            | 560xx1801       |
| KK 1807 TPC    | 18   | 0,880 | 7 x 0,404  | 1,21   | 21,46                     | 2,01          | + 0,12 - 0,13 | 12             | 22            | 560xx1807       |
| KK 1819 TPC    | 18   | 0,963 | 19 x 0,254 | 1,20   | 20,41                     | 2,01          | + 0,12 - 0,13 | 12             | 22            | 560xx1819       |
| KK 1,0 TPC **  | -    | 1,000 | 32 x 0,200 | 1,20   | 20,00                     | 2,05          | ± 0,12        | 12             | 22            | 560xx0100       |
| KK 1601 TPC    | 16   | 1,301 | 1 x 1,290  | 1,29   | 13,98                     | 2,11          | ± 0,15        | 15             | 27            | 560xx1601       |
| KK 1619 TPC    | 16   | 1,229 | 19 x 0,287 | 1,36   | 15,81                     | 2,26          | ± 0,15        | 16             | 27            | 560xx1619       |
| KK 1,5 TPC **  | -    | 1,500 | 30 x 0,250 | 1,50   | 13,70                     | 2,35          | ± 0,15        | 20             | 30            | 560xx0150       |
| KK 1419 TPC    | 14   | 1,870 | 19 x 0,361 | 1,71   | 10,01                     | 2,69          | + 0,21 - 0,20 | 23             | 36            | 560xx1419       |
| KK 2,5 TPC **  | -    | 2,500 | 50 x 0,250 | 1,95   | 8,210                     | 2,88          | ± 0,20        | 30             | 42            | 560xx0250       |
| KK 1219 TPC    | 12   | 3,022 | 19 x 0,455 | 2,15   | 6,299                     | 3,18          | + 0,20 - 0,21 | 33             | 50            | 560xx1219       |
| KK 1237 TPC    | 12   | 2,976 | 37 x 0,320 | 2,24   | 6,594                     | 3,12          | + 0,21 - 0,20 | 34             | 50            | 560xx1237       |
| KK 4 TPC **    | -    | 4,000 | 56 x 0,300 | 2,48   | 5,090                     | 3,45          | ± 0,20        | 47             | 59            | 560xx0400       |

Data provided indicates nominal values unless stated otherwise and is only valid for reference purposes at the time of publication and is subject to change without prior notice.

Ref: EQ-eKktpc-05

Date: 2008-05-08

Approved by:



### Equipment Wire, 1000V, +200°C\*, NEMA HP-4

FEP

**Properties:**

Radiation resistance:  
10 E4 Gy

Flame retardant  
Low Smoke Generation

Suitable for use in:

Oils  
Fuels  
Acids  
Bases

**Construction:**

Conductor Silver Plated Copper (SPC)  
Insulation FEP  
Temperature rating (°C) -65 / +200\*  
Colours XX = Colour code  
Voltage 1000 V AC  
Test voltage 5000 V AC

\* Specification only rates temperature at: -65 / +150°C  
\*\* Metric size. Construction in accordance with, but not included in NEMA HP-4

**Colour code:**

|         |    |
|---------|----|
| Black   | 00 |
| Brown   | 11 |
| Red     | 22 |
| Orange  | 33 |
| Yellow  | 44 |
| Green   | 55 |
| Blue    | 66 |
| Violet  | 77 |
| Grey    | 88 |
| White   | 99 |
| Pink    | 29 |
| Natural | 89 |

Air temperature correction factor for current rating:

KK

| °C     | 20   | 40   | 60   | 80   | 100  | 120  | 140  | 160  | 180  |  |  |  |  |
|--------|------|------|------|------|------|------|------|------|------|--|--|--|--|
| Factor | 1.08 | 1.00 | 0.92 | 0.84 | 0.75 | 0.65 | 0.55 | 0.42 | 0.28 |  |  |  |  |

Multicore correction factor for current rating:


| Cores  | 2 | 3    | 4    | 6    | 8    | 10   | 12   | 16   | 20   | 24   | 28   | 32   | 36   | 40   |
|--------|---|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Factor | 1 | 0.88 | 0.80 | 0.69 | 0.62 | 0.59 | 0.55 | 0.51 | 0.48 | 0.43 | 0.41 | 0.39 | 0.38 | 0.36 |

**Notes:**

All dimensions nominal (± 4%)  
unless otherwise stated.  
All dimensions in mm.

| Type       | Size |       | Conductor  |        |                           | Finished Wire |               |                |               | Order Reference |
|------------|------|-------|------------|--------|---------------------------|---------------|---------------|----------------|---------------|-----------------|
|            | AWG  | mm²   | Stranding  | Wire Ø | DC Res @ 20°C (Ohms / km) | Core Ø        | Tolerance     | Weight (kg/km) | Amps (@ 40°C) |                 |
| KK 3201    | 32   | 0,031 | 1 x 0,203  | 0,20   | 544,6                     | 0,94          | ± 0,10        | 1,8            | 3             | 563xx3201       |
| KK 3207    | 32   | 0,035 | 7 x 0,079  | 0,24   | 557,7                     | 0,99          | ± 0,10        | 1,2            | 3             | 563xx3207       |
| KK 3219    | 32   | 0,040 | 19 x 0,051 | 0,24   | 515,1                     | 0,99          | ± 0,10        | 1,2            | 3             | 563xx3219       |
| KK 3001    | 30   | 0,049 | 1 x 0,254  | 0,25   | 347,8                     | 1,02          | + 0,10 - 0,11 | 1,3            | 4             | 563xx3001       |
| KK 3007    | 30   | 0,057 | 7 x 0,102  | 0,30   | 328,1                     | 1,07          | ± 0,10        | 1,5            | 4             | 563xx3007       |
| KK 3019    | 30   | 0,060 | 19 x 0,064 | 0,30   | 323,5                     | 1,07          | ± 0,10        | 1,5            | 4             | 563xx3019       |
| KK 2801    | 28   | 0,080 | 1 x 0,320  | 0,32   | 218,8                     | 1,09          | ± 0,10        | 1,7            | 5             | 563xx2801       |
| KK 2807    | 28   | 0,089 | 7 x 0,127  | 0,38   | 208,7                     | 1,14          | ± 0,10        | 2,0            | 5             | 563xx2807       |
| KK 2819    | 28   | 0,090 | 19 x 0,079 | 0,37   | 207,0                     | 1,14          | ± 0,10        | 2,0            | 5             | 563xx2819       |
| KK 2601    | 26   | 0,126 | 1 x 0,404  | 0,40   | 137,5                     | 1,17          | ± 0,10        | 2,3            | 7             | 563xx2601       |
| KK 2607    | 26   | 0,141 | 7 x 0,160  | 0,48   | 130,2                     | 1,24          | + 0,11 - 0,10 | 2,7            | 7             | 563xx2607       |
| KK 2619    | 26   | 0,155 | 19 x 0,102 | 0,48   | 122,4                     | 1,24          | + 0,11 - 0,10 | 2,8            | 7             | 563xx2619       |
| KK 2401    | 24   | 0,204 | 1 x 0,511  | 0,51   | 85,96                     | 1,27          | ± 0,10        | 3,1            | 10            | 563xx2401       |
| KK 2407    | 24   | 0,220 | 7 x 0,203  | 0,60   | 80,38                     | 1,37          | ± 0,10        | 3,7            | 10            | 563xx2407       |
| KK 2419    | 24   | 0,241 | 19 x 0,127 | 0,60   | 77,43                     | 1,37          | ± 0,10        | 3,9            | 10            | 563xx2419       |
| KK 0,25 ** | -    | 0,250 | 14 x 0,150 | 0,66   | 76,90                     | 1,38          | ± 0,10        | 4,0            | 11            | 563xx0025       |
| KK 2201    | 22   | 0,322 | 1 x 0,643  | 0,64   | 54,13                     | 1,41          | ± 0,11        | 4,4            | 14            | 563xx2201       |
| KK 2207    | 22   | 0,355 | 7 x 0,254  | 0,76   | 51,18                     | 1,52          | + 0,11 - 0,10 | 5,2            | 14            | 563xx2207       |
| KK 2219    | 22   | 0,382 | 19 x 0,160 | 0,76   | 48,56                     | 1,52          | + 0,11 - 0,10 | 5,5            | 14            | 563xx2219       |
| KK 0,5 **  | -    | 0,500 | 19 x 0,185 | 0,93   | 40,10                     | 1,68          | ± 0,10        | 6,5            | 17            | 563xx0050       |
| KK 2001    | 20   | 0,515 | 1 x 0,813  | 0,81   | 33,79                     | 1,57          | + 0,11 - 0,10 | 6,5            | 19            | 563xx2001       |
| KK 2007    | 20   | 0,563 | 7 x 0,320  | 0,96   | 32,19                     | 1,73          | ± 0,10        | 7,5            | 19            | 563xx2007       |
| KK 2019    | 20   | 0,597 | 19 x 0,203 | 0,96   | 29,86                     | 1,73          | ± 0,10        | 8,1            | 19            | 563xx2019       |
| KK 0,75 ** | -    | 0,750 | 19 x 0,225 | 1,13   | 26,70                     | 1,90          | ± 0,10        | 11             | 22            | 563xx0075       |
| KK 1801    | 18   | 0,817 | 1 x 1,024  | 1,02   | 21,39                     | 1,80          | + 0,13 - 0,12 | 9,6            | 27            | 563xx1801       |
| KK 1807    | 18   | 0,880 | 7 x 0,404  | 1,21   | 20,21                     | 2,01          | + 0,12 - 0,13 | 12             | 27            | 563xx1807       |
| KK 1819    | 18   | 0,963 | 19 x 0,254 | 1,20   | 19,00                     | 2,01          | + 0,12 - 0,13 | 12             | 27            | 563xx1819       |
| KK 1,0 **  | -    | 1,000 | 32 x 0,200 | 1,20   | 20,00                     | 2,05          | ± 0,12        | 12             | 27            | 563xx0100       |
| KK 1601    | 16   | 1,301 | 1 x 1,290  | 1,29   | 13,45                     | 2,11          | ± 0,15        | 15             | 32            | 563xx1601       |
| KK 1619    | 16   | 1,229 | 19 x 0,287 | 1,36   | 14,90                     | 2,26          | ± 0,15        | 16             | 32            | 563xx1619       |
| KK 1,5 **  | -    | 1,500 | 30 x 0,250 | 1,50   | 13,70                     | 2,35          | ± 0,15        | 20             | 35            | 563xx0150       |
| KK 1419    | 14   | 1,870 | 19 x 0,361 | 1,71   | 9,416                     | 2,69          | + 0,21 - 0,20 | 23             | 43            | 563xx1419       |
| KK 2,5 **  | -    | 2,500 | 50 x 0,250 | 1,95   | 8,210                     | 2,88          | ± 0,20        | 30             | 50            | 563xx0250       |
| KK 1219    | 12   | 3,022 | 19 x 0,455 | 2,15   | 5,938                     | 3,18          | + 0,20 - 0,21 | 33             | 59            | 563xx1219       |
| KK 1237    | 12   | 2,976 | 37 x 0,320 | 2,24   | 6,201                     | 3,12          | + 0,21 - 0,20 | 34             | 59            | 563xx1237       |
| KK 4 **    | -    | 4,000 | 56 x 0,300 | 2,48   | 5,090                     | 3,45          | ± 0,20        | 47             | 70            | 563xx0400       |
| KK 1037    | 10   | 4,650 | 37 x 0,404 | 2,82   | 3,904                     | 3,68          | + 0,21 - 0,20 | 52             | 81            | 563xx1037       |
| KK 6 **    | -    | 6,000 | 84 x 0,300 | 2,92   | 3,390                     | 4,24          | ± 0,20        | 66             | 92            | 563xx0600       |

Data provided indicates nominal values unless stated otherwise and is only valid for reference purposes at the time of publication and is subject to change without prior notice.

Ref: EQ-eKK-04  
Date: 2008-05-08  
Approved by: 

















**Properties:**

Radiation resistance:  
>10 E7 Gy

Flame retardant  
Low Smoke Generation  
Zero Halogen

Suitable for use in:  
Oils  
Fuels  
Acids  
Bases

**Construction:**

Conductor: Nickel Plated Copper (NPC)  
Insulation: HFI 260  
Temperature rating (°C): -60 / +190\*  
Colours: XX = Colour code\*\*  
Voltage: 600 V AC  
Test voltage: 3000 V AC

\*Temperature rating (°C): +190 (continuous 20000 hrs)  
+260 (approx. 1300 hrs)  
\*\*Colours: Presently only available in Black (00) and Natural (89)

**Colour code:**

|         |    |
|---------|----|
| Black   | 00 |
| Brown   | 11 |
| Red     | 22 |
| Orange  | 33 |
| Yellow  | 44 |
| Green   | 55 |
| Blue    | 66 |
| Violet  | 77 |
| Grey    | 88 |
| White   | 99 |
| Pink    | 29 |
| Natural | 89 |

**Notes:**

All dimensions nominal (± 4%)  
unless otherwise stated.  
All dimensions in mm.

Air temperature correction factor for current rating:

H-M-NPC

| °C     | 20   | 40   | 60   | 80   | 100  | 120  | 140  | 160  | 180  |  |  |  |  |  |
|--------|------|------|------|------|------|------|------|------|------|--|--|--|--|--|
| Factor | 1.08 | 1.00 | 0.92 | 0.84 | 0.75 | 0.65 | 0.55 | 0.42 | 0.28 |  |  |  |  |  |

Multicore correction factor for current rating:

| Cores  | 2 | 3    | 4    | 6    | 8    | 10   | 12   | 16   | 20   | 24   | 28   | 32   | 36   | 40   |
|--------|---|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Factor | 1 | 0.88 | 0.80 | 0.69 | 0.62 | 0.59 | 0.55 | 0.51 | 0.48 | 0.43 | 0.41 | 0.39 | 0.38 | 0.36 |

| Type         | Size |       | Conductor |        |                           | Finished Wire |           |                |               | Order Reference |
|--------------|------|-------|-----------|--------|---------------------------|---------------|-----------|----------------|---------------|-----------------|
|              | AWG  | mm²   | Stranding | Wire Ø | DC Res @ 20°C (Ohms / km) | Core Ø        | Tolerance | Weight (kg/km) | Amps (@ 40°C) |                 |
| H-M 3007 NPC | 30   | 0,057 | 7 x 0,10  | 0,30   | 361                       | 0,70          | ± 0,07    | 0,9            | 4             | 590xx3007       |
| H-M 2807 NPC | 28   | 0,089 | 7 x 0,13  | 0,38   | 221                       | 0,78          | ± 0,07    | 1,2            | 5             | 590xx2807       |
| H-M 2619 NPC | 26   | 0,155 | 19 x 0,10 | 0,48   | 134                       | 0,88          | ± 0,07    | 1,9            | 7             | 590xx2619       |
| H-M 2419 NPC | 24   | 0,241 | 19 x 0,13 | 0,60   | 82,6                      | 1,00          | ± 0,10    | 2,7            | 10            | 590xx2419       |
| H-M 2219 NPC | 22   | 0,382 | 19 x 0,16 | 0,76   | 51,5                      | 1,16          | ± 0,10    | 4,0            | 14            | 590xx2219       |
| H-M 0,5 NPC  | -    | 0,50  | 16 x 0,20 | 0,88   | 40,1                      | 1,28          | ± 0,10    | 5,2            | 17            | 590xx0050       |
| H-M 2019 NPC | 20   | 0,597 | 19 x 0,20 | 0,96   | 31,7                      | 1,36          | ± 0,10    | 6,2            | 19            | 590xx2019       |
| H-M 0,75 NPC | -    | 0,75  | 24 x 0,20 | 1,05   | 26,7                      | 1,45          | ± 0,10    | 7,5            | 22            | 590xx0075       |
| H-M 1819 NPC | 18   | 0,963 | 19 x 0,25 | 1,20   | 19,7                      | 1,60          | ± 0,10    | 9,5            | 26            | 590xx1819       |
| H-M 1,0 NPC  | -    | 1,00  | 32 x 0,20 | 1,20   | 20,0                      | 1,60          | ± 0,10    | 9,5            | 26            | 590xx0100       |
| H-M 1619 NPC | 16   | 1,229 | 19 x 0,29 | 1,36   | 15,5                      | 1,86          | ± 0,13    | 12,0           | 31            | 590xx1619       |
| H-M 1,5 NPC  | -    | 1,50  | 30 x 0,25 | 1,50   | 13,7                      | 2,00          | ± 0,13    | 14,8           | 34            | 590xx0150       |
| H-M 1419 NPC | 14   | 1,870 | 19 x 0,36 | 1,71   | 9,80                      | 2,21          | ± 0,13    | 18,5           | 42            | 590xx1419       |
| H-M 2,5 NPC  | -    | 2,50  | 50 x 0,25 | 1,95   | 8,21                      | 2,45          | ± 0,13    | 24,0           | 49            | 590xx0250       |
| H-M 1237 NPC | 12   | 2,976 | 37 x 0,32 | 2,24   | 6,46                      | 2,74          | ± 0,13    | 29,0           | 57            | 590xx1237       |
|              |      |       |           |        |                           |               |           |                |               |                 |
|              |      |       |           |        |                           |               |           |                |               |                 |
|              |      |       |           |        |                           |               |           |                |               |                 |
|              |      |       |           |        |                           |               |           |                |               |                 |
|              |      |       |           |        |                           |               |           |                |               |                 |
|              |      |       |           |        |                           |               |           |                |               |                 |
|              |      |       |           |        |                           |               |           |                |               |                 |
|              |      |       |           |        |                           |               |           |                |               |                 |
|              |      |       |           |        |                           |               |           |                |               |                 |
|              |      |       |           |        |                           |               |           |                |               |                 |
|              |      |       |           |        |                           |               |           |                |               |                 |
|              |      |       |           |        |                           |               |           |                |               |                 |
|              |      |       |           |        |                           |               |           |                |               |                 |
|              |      |       |           |        |                           |               |           |                |               |                 |
|              |      |       |           |        |                           |               |           |                |               |                 |
|              |      |       |           |        |                           |               |           |                |               |                 |
|              |      |       |           |        |                           |               |           |                |               |                 |

Data provided indicates nominal values unless stated otherwise and is only valid for reference purposes at the time of publication and is subject to change without prior notice.

Ref: EQ-eHMnpc-01  
Date: 2006-09-26  
Approved by:





















### Equipment Wire, 600V, +200°C

**Properties:**

 Radiation resistance:  
10 E4 Gy

 Flame retardant  
Low Smoke Generation

Suitable for use in:

 Oils  
Fuels  
Acids  
Bases

**Construction:**

 Conductor  
Insulation  
Temperature rating (°C)  
Colours  
Voltage  
Test voltage

 Silver Plated Copper (SPC)  
PFA  
-65 / +200  
XX = Colour code  
600 V AC  
3400 V AC

**Colour code:**

|         |    |
|---------|----|
| Black   | 00 |
| Brown   | 11 |
| Red     | 22 |
| Orange  | 33 |
| Yellow  | 44 |
| Green   | 55 |
| Blue    | 66 |
| Violet  | 77 |
| Grey    | 88 |
| White   | 99 |
| Pink    | 29 |
| Natural | 89 |

Air temperature correction factor for current rating:

H-A

| °C     | 20   | 40   | 60   | 80   | 100  | 120  | 140  | 160  | 180  |  |  |  |  |
|--------|------|------|------|------|------|------|------|------|------|--|--|--|--|
| Factor | 1.08 | 1.00 | 0.92 | 0.84 | 0.75 | 0.65 | 0.55 | 0.42 | 0.28 |  |  |  |  |

**Notes:**


 All dimensions nominal (± 4%)  
unless otherwise stated.  
All dimensions in mm.

Multicore correction factor for current rating:

| Cores  | 2 | 3    | 4    | 6    | 8    | 10   | 12   | 16   | 20   | 24   | 28   | 32   | 36   | 40   |
|--------|---|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Factor | 1 | 0.88 | 0.80 | 0.69 | 0.62 | 0.59 | 0.55 | 0.51 | 0.48 | 0.43 | 0.41 | 0.39 | 0.38 | 0.36 |

| Type     | Size |       | Conductor |        |                           | Finished Wire |           |                |               | Order Reference |
|----------|------|-------|-----------|--------|---------------------------|---------------|-----------|----------------|---------------|-----------------|
|          | AWG  | mm²   | Stranding | Wire Ø | DC Res @ 20°C (Ohms / km) | Core Ø        | Tolerance | Weight (kg/km) | Amps (@ 40°C) |                 |
| H-A 3201 | 32   | 0,031 | 1 x 0,20  | 0,20   | 544                       | 0,74          | ± 0,10    | 1,1            | 3             | 548xx3201       |
| H-A 3207 | 32   | 0,035 | 7 x 0,08  | 0,24   | 557                       | 0,76          | ± 0,10    | 1,2            | 3             | 548xx3207       |
| H-A 3001 | 30   | 0,049 | 1 x 0,25  | 0,25   | 347                       | 0,76          | ± 0,10    | 1,3            | 4             | 548xx3001       |
| H-A 3007 | 30   | 0,057 | 7 x 0,10  | 0,30   | 328                       | 0,81          | ± 0,10    | 1,5            | 4             | 548xx3007       |
| H-A 2801 | 28   | 0,080 | 1 x 0,32  | 0,32   | 218                       | 0,84          | ± 0,10    | 1,7            | 6             | 548xx2801       |
| H-A 2807 | 28   | 0,089 | 7 x 0,13  | 0,38   | 208                       | 0,89          | ± 0,10    | 2,0            | 6             | 548xx2807       |
| H-A 2601 | 26   | 0,126 | 1 x 0,40  | 0,40   | 137                       | 0,91          | ± 0,10    | 2,3            | 8             | 548xx2601       |
| H-A 2607 | 26   | 0,141 | 7 x 0,16  | 0,48   | 130                       | 0,99          | ± 0,10    | 2,7            | 8             | 548xx2607       |
| H-A 2619 | 26   | 0,155 | 19 x 0,10 | 0,48   | 122                       | 1,00          | ± 0,10    | 2,8            | 8             | 548xx2619       |
| H-A 2401 | 24   | 0,204 | 1 x 0,51  | 0,51   | 86,0                      | 1,02          | ± 0,10    | 3,1            | 11            | 548xx2401       |
| H-A 2407 | 24   | 0,220 | 7 x 0,20  | 0,60   | 80,4                      | 1,12          | ± 0,10    | 3,7            | 11            | 548xx2407       |
| H-A 2419 | 24   | 0,241 | 19 x 0,13 | 0,60   | 77,4                      | 1,13          | ± 0,10    | 3,9            | 11            | 548xx2419       |
| H-A 2201 | 22   | 0,322 | 1 x 0,64  | 0,64   | 54,1                      | 1,15          | ± 0,10    | 4,4            | 14            | 548xx2201       |
| H-A 2207 | 22   | 0,355 | 7 x 0,25  | 0,76   | 51,2                      | 1,27          | ± 0,10    | 5,2            | 14            | 548xx2207       |
| H-A 2219 | 22   | 0,382 | 19 x 0,16 | 0,76   | 48,5                      | 1,30          | ± 0,10    | 5,5            | 14            | 548xx2219       |
| H-A 2001 | 20   | 0,515 | 1 x 0,81  | 0,81   | 33,8                      | 1,32          | ± 0,10    | 6,5            | 19            | 548xx2001       |
| H-A 2007 | 20   | 0,563 | 7 x 0,32  | 0,96   | 32,2                      | 1,47          | ± 0,10    | 7,5            | 19            | 548xx2007       |
| H-A 2019 | 20   | 0,597 | 19 x 0,20 | 0,97   | 29,9                      | 1,47          | ± 0,10    | 8,1            | 19            | 548xx2019       |
| H-A 1801 | 18   | 0,817 | 1 x 1,02  | 1,02   | 21,4                      | 1,54          | ± 0,12    | 9,6            | 27            | 548xx1801       |
| H-A 1807 | 18   | 0,880 | 7 x 0,40  | 1,21   | 20,2                      | 1,75          | ± 0,12    | 12             | 27            | 548xx1807       |
| H-A 1819 | 18   | 0,963 | 19 x 0,25 | 1,21   | 19,0                      | 1,75          | ± 0,12    | 12             | 27            | 548xx1819       |
| H-A 1601 | 16   | 1,301 | 1 x 1,29  | 1,29   | 13,5                      | 1,87          | ± 0,16    | 15             | 32            | 548xx1601       |
| H-A 1619 | 16   | 1,229 | 19 x 0,29 | 1,36   | 14,8                      | 2,03          | ± 0,18    | 16             | 32            | 548xx1619       |
| H-A 1419 | 14   | 1,870 | 19 x 0,36 | 1,70   | 9,42                      | 2,42          | ± 0,18    | 23             | 43            | 548xx1419       |
| H-A 1219 | 12   | 3,022 | 19 x 0,45 | 2,14   | 5,93                      | 2,90          | ± 0,18    | 33             | 59            | 548xx1219       |
| H-A 1237 | 12   | 2,976 | 37 x 0,32 | 2,42   | 6,20                      | 2,85          | ± 0,18    | 34             | 59            | 548xx1237       |
| H-A 1037 | 10   | 4,650 | 37 x 0,40 | 2,82   | 3,90                      | 3,40          | ± 0,18    | 52             | 82            | 548xx1037       |

Data provided indicates nominal values unless stated otherwise and is only valid for reference purposes at the time of publication and is subject to change without prior notice.

 Ref: EQ-eHA-02  
Date: 2007-05-11  
Approved by: 









**Properties:**

Radiation resistance:  
10 E3 Gy

Flame retardant  
Low Smoke Generation

Suitable for use in:

- Oils
- Fuels
- Acids
- Bases

**Construction:**

Conductor  
Insulation  
Temperature rating (°C)  
Colours  
Voltage  
Test voltage

Nickel Plated Copper (NPC)  
Extruded PTFE  
-65 / +260  
XX = Colour code  
600 V AC  
3400 V AC

**Colour code:**

|         |    |
|---------|----|
| Black   | 00 |
| Brown   | 11 |
| Red     | 22 |
| Orange  | 33 |
| Yellow  | 44 |
| Green   | 55 |
| Blue    | 66 |
| Violet  | 77 |
| Grey    | 88 |
| White   | 99 |
| Pink    | 29 |
| Natural | 89 |

**Notes:**

All dimensions nominal (± 4%)  
unless otherwise stated.  
All dimensions in mm.

Air temperature correction factor for current rating:

E-NPC


| °C     | 20   | 40   | 60   | 80   | 100  | 120  | 140  | 160  | 180  | 200  | 220  | 240  |  |  |
|--------|------|------|------|------|------|------|------|------|------|------|------|------|--|--|
| Factor | 1.06 | 1.00 | 0.94 | 0.88 | 0.82 | 0.76 | 0.69 | 0.61 | 0.54 | 0.45 | 0.35 | 0.23 |  |  |

Multicore correction factor for current rating:

| Cores  | 2 | 3    | 4    | 6    | 8    | 10   | 12   | 16   | 20   | 24   | 28   | 32   | 36   | 40   |
|--------|---|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Factor | 1 | 0.88 | 0.80 | 0.69 | 0.62 | 0.59 | 0.55 | 0.51 | 0.48 | 0.43 | 0.41 | 0.39 | 0.38 | 0.36 |

| Type       | Size |       | Conductor  |        |                           | Finished Wire |           |                |               | Order Reference |
|------------|------|-------|------------|--------|---------------------------|---------------|-----------|----------------|---------------|-----------------|
|            | AWG  | mm²   | Stranding  | Wire Ø | DC Res @ 20°C (Ohms / km) | Core Ø        | Tolerance | Weight (kg/km) | Amps (@ 40°C) |                 |
| E 3201 NPC | 32   | 0,031 | 1 x 0,20   | 0,20   | 580                       | 0,74          | ± 0,10    | 1,1            | 4             | 412xx3201       |
| E 3207 NPC | 32   | 0,035 | 7 x 0,08   | 0,24   | 610                       | 0,76          | ± 0,10    | 1,2            | 4             | 412xx3207       |
| E 3001 NPC | 30   | 0,049 | 1 x 0,25   | 0,25   | 360                       | 0,76          | ± 0,10    | 1,3            | 5             | 412xx3001       |
| E 3007 NPC | 30   | 0,057 | 7 x 0,10   | 0,30   | 360                       | 0,81          | ± 0,10    | 1,5            | 5             | 412xx3007       |
| E 2801 NPC | 28   | 0,080 | 1 x 0,32   | 0,32   | 227                       | 0,84          | ± 0,10    | 1,7            | 7             | 412xx2801       |
| E 2807 NPC | 28   | 0,089 | 7 x 0,13   | 0,38   | 221                       | 0,89          | ± 0,10    | 2,0            | 7             | 412xx2807       |
| E 2601 NPC | 26   | 0,126 | 1 x 0,40   | 0,40   | 143                       | 0,91          | ± 0,10    | 2,3            | 9             | 412xx2601       |
| E 2607 NPC | 26   | 0,141 | 7 x 0,16   | 0,48   | 138                       | 0,99          | ± 0,10    | 2,7            | 9             | 412xx2607       |
| E 2619 NPC | 26   | 0,155 | 19 x 0,10  | 0,48   | 134                       | 1,00          | ± 0,10    | 2,8            | 9             | 412xx2619       |
| E 2401 NPC | 24   | 0,204 | 1 x 0,51   | 0,51   | 89,6                      | 1,02          | ± 0,10    | 3,1            | 12            | 412xx2401       |
| E 2407 NPC | 24   | 0,220 | 7 x 0,20   | 0,60   | 85,3                      | 1,12          | ± 0,10    | 3,7            | 12            | 412xx2407       |
| E 2419 NPC | 24   | 0,241 | 19 x 0,13  | 0,60   | 82,6                      | 1,13          | ± 0,10    | 3,9            | 12            | 412xx2419       |
| E 2201 NPC | 22   | 0,322 | 1 x 0,64   | 0,64   | 56,4                      | 1,15          | ± 0,10    | 4,4            | 14            | 412xx2201       |
| E 2207 NPC | 22   | 0,355 | 7 x 0,25   | 0,76   | 53,1                      | 1,27          | ± 0,10    | 5,2            | 14            | 412xx2207       |
| E 2219 NPC | 22   | 0,382 | 19 x 0,16  | 0,76   | 51,5                      | 1,30          | ± 0,10    | 5,5            | 14            | 412xx2219       |
| E 0,5 NPC  | -    | 0,50  | 19 x 0,185 | 0,93   | 40,1                      | 1,45          | ± 0,10    | 7,7            | 19            | 412xx0050       |
| E 2001 NPC | 20   | 0,515 | 1 x 0,81   | 0,81   | 35,4                      | 1,32          | ± 0,10    | 6,5            | 22            | 412xx2001       |
| E 2007 NPC | 20   | 0,563 | 7 x 0,32   | 0,96   | 33,4                      | 1,47          | ± 0,10    | 7,5            | 22            | 412xx2007       |
| E 2019 NPC | 20   | 0,597 | 19 x 0,20  | 0,97   | 31,7                      | 1,47          | ± 0,10    | 8,1            | 22            | 412xx2019       |
| E 0,75 NPC | -    | 0,75  | 19 x 0,225 | 1,13   | 26,7                      | 1,65          | ± 0,12    | 9,6            | 25            | 412xx0075       |
| E 1801 NPC | 18   | 0,817 | 1 x 1,02   | 1,02   | 22,2                      | 1,54          | ± 0,12    | 9,6            | 27            | 412xx1801       |
| E 1807 NPC | 18   | 0,880 | 7 x 0,40   | 1,21   | 21,0                      | 1,75          | ± 0,12    | 12             | 27            | 412xx1807       |
| E 1819 NPC | 18   | 0,963 | 19 x 0,25  | 1,21   | 19,7                      | 1,75          | ± 0,12    | 12             | 27            | 412xx1819       |
| E 1601 NPC | 16   | 1,301 | 1 x 1,29   | 1,29   | 15,5                      | 1,87          | ± 0,16    | 15             | 32            | 412xx1601       |
| E 1619 NPC | 16   | 1,229 | 19 x 0,29  | 1,36   | 14,0                      | 2,03          | ± 0,18    | 16             | 32            | 412xx1619       |
| E 1,5 NPC  | -    | 1,50  | 37 x 0,225 | 1,50   | 13,5                      | 2,08          | ± 0,18    | 18             | 40            | 412xx0150       |
| E 1419 NPC | 14   | 1,870 | 19 x 0,36  | 1,70   | 9,80                      | 2,42          | ± 0,18    | 23             | 43            | 412xx1419       |
| E 2,5 NPC  | -    | 2,50  | 61 x 0,225 | 1,95   | 8,21                      | 2,58          | ± 0,18    | 27             | 57            | 412xx0250       |
| E 1219 NPC | 12   | 3,022 | 19 x 0,45  | 2,14   | 6,16                      | 2,90          | ± 0,18    | 33             | 67            | 412xx1219       |

Data provided indicates nominal values unless stated otherwise and is only valid for reference purposes at the time of publication and is subject to change without prior notice.

Ref: EQ-eEncp-04  
Date: 2007-05-11  
Approved by: 



















### Equipment Wire, 600V, +190°C, BS 3G 210 Type B

### PTFE

**Properties:**

Radiation resistance:  
10 E3 Gy

Flame retardant  
Low Smoke Generation

Suitable for use in:

Oils  
Fuels  
Acids  
Bases

**Construction:**

Conductor Silver Plated Copper (SPC)  
Insulation PTFE  
Temperature rating (°C) -50 / +190\*  
Colours XX = Colour code  
Voltage 600 V AC  
Test voltage 3400 V AC

\*Temperature rating (°C) (fixed installed) -75 / +190  
\*Temperature rating (°C) (NPC conductor) +260

**Colour code:**

Black 00  
Brown 11  
Red 22  
Orange 33  
Yellow 44  
Green 55  
Blue 66  
Violet 77  
Grey 88  
White 99  
Pink 29  
Natural 89

**Notes:**

All dimensions nominal (± 4%)  
unless otherwise stated.  
All dimensions in mm.

Air temperature correction factor for current rating:

B-E

| °C     | 20   | 40   | 60   | 80   | 100  | 120  | 140  | 160  | 180  |  |  |  |  |
|--------|------|------|------|------|------|------|------|------|------|--|--|--|--|
| Factor | 1.08 | 1.00 | 0.92 | 0.84 | 0.75 | 0.65 | 0.55 | 0.42 | 0.28 |  |  |  |  |

Multicore correction factor for current rating:

| Cores  | 2 | 3    | 4    | 6    | 8    | 10   | 12   | 16   | 20   | 24   | 28   | 32   | 36   | 40   |
|--------|---|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Factor | 1 | 0.88 | 0.80 | 0.69 | 0.62 | 0.59 | 0.55 | 0.51 | 0.48 | 0.43 | 0.41 | 0.39 | 0.38 | 0.36 |

| Type     | Size |       | Conductor |        |                           | Finished Wire |           |                |               | Order Reference |
|----------|------|-------|-----------|--------|---------------------------|---------------|-----------|----------------|---------------|-----------------|
|          | AWG  | mm²   | Stranding | Wire Ø | DC Res @ 20°C (Ohms / km) | Core Ø        | Tolerance | Weight (kg/km) | Amps (@ 40°C) |                 |
| B-E 3207 | 32   | 0,035 | 7 x 0,08  | 0,24   | 570,7                     | 0,74          | ± 0,10    | 1,44           | 3             | 537xx3207       |
| B-E 3007 | 30   | 0,055 | 7 x 0,10  | 0,30   | 365,3                     | 0,80          | ± 0,10    | 1,75           | 4             | 537xx3007       |
| B-E 2807 | 28   | 0,079 | 7 x 0,12  | 0,36   | 223,3                     | 0,88          | ± 0,10    | 2,10           | 6             | 537xx2807       |
| B-E 2601 | 26   | 0,125 | 1 x 0,40  | 0,40   | 144,0                     | 0,90          | ± 0,10    | 2,56           | 8             | 537xx2601       |
| B-E 2607 | 26   | 0,124 | 7 x 0,15  | 0,45   | 155,1                     | 0,95          | ± 0,10    | 2,74           | 8             | 537xx2607       |
| B-E 2619 | 26   | 0,149 | 19 x 0,10 | 0,50   | 130,0                     | 1,00          | ± 0,10    | 3,09           | 11            | 537xx2619       |
| B-E 2407 | 24   | 0,219 | 7 x 0,20  | 0,60   | 87,2                      | 1,10          | ± 0,10    | 3,95           | 11            | 537xx2407       |
| B-E 2419 | 24   | 0,215 | 19 x 0,12 | 0,60   | 89,8                      | 1,10          | ± 0,10    | 3,89           | 11            | 537xx2419       |
| B-E 2301 | 23   | 0,283 | 1 x 0,60  | 0,60   | 64,0                      | 1,10          | ± 0,10    | 4,00           | 11            | 537xx2301       |
| B-E 2219 | 22   | 0,335 | 19 x 0,15 | 0,75   | 57,1                      | 1,25          | ± 0,10    | 5,44           | 14            | 537xx2219       |
| B-E 2019 | 20   | 0,596 | 19 x 0,20 | 1,00   | 32,14                     | 1,50          | ± 0,10    | 8,43           | 19            | 537xx2019       |
| B-E 1819 | 18   | 0,932 | 19 x 0,25 | 1,25   | 20,57                     | 1,75          | ± 0,10    | 12,11          | 27            | 537xx1819       |

Data provided indicates nominal values unless stated otherwise and is only valid for reference purposes at the time of publication and is subject to change without prior notice.

Ref: EQ-eBE-04  
Date: 2008-06-09  
Approved by:



|                                   |                         |                                |                     |    |
|-----------------------------------|-------------------------|--------------------------------|---------------------|----|
| <b>Properties:</b>                | <b>Construction:</b>    |                                | <b>Colour code:</b> |    |
| Radiation resistance:<br>10 E3 Gy | Conductor               | Silver Plated Copper (SPC)     | Black               | 00 |
| Flame retardant                   | Insulation              | Wrapped and sintered PTFE tape | Brown               | 11 |
| Low smoke generation              | Temperature rating (°C) | -65 / +200                     | Red                 | 22 |
| Suitable for use in:              | Colours                 | XX = Colour code               | Orange              | 33 |
| Oils                              | Voltage                 | 250 V AC                       | Yellow              | 44 |
| Fuels                             | Test voltage            | 2500 V AC                      | Green               | 55 |
| Acids                             |                         |                                | Blue                | 66 |
| Bases                             |                         |                                | Violet              | 77 |
|                                   |                         |                                | Grey                | 88 |
|                                   |                         |                                | White               | 99 |
|                                   |                         |                                | Pink                | 29 |
|                                   |                         |                                | Natural             | 89 |

**Notes:**  
All dimensions nominal (± 4%)  
unless otherwise stated.  
All dimensions in mm.

| Air temperature correction factor for current rating: |      |      |      |      |      |      |      |      |      |      | H-RET |      |      |      |  |
|---|------|------|------|------|------|------|------|------|------|------|-------|------|------|------|--|
| °C  | 20   | 40   | 60   | 80   | 100  | 120  | 140  | 160  | 180  |      |       |      |      |      |  |
| Factor  | 1.08 | 1.00 | 0.92 | 0.84 | 0.75 | 0.65 | 0.55 | 0.42 | 0.28 |      |       |      |      |      |  |
| Multicore correction factor for current rating:       |      |      |      |      |      |      |      |      |      |      |       |      |      |      |  |
| Cores   | 2    | 3    | 4    | 6    | 8    | 10   | 12   | 16   | 20   | 24   | 28    | 32   | 36   | 40   |  |
| Factor  | 1    | 0.88 | 0.80 | 0.69 | 0.62 | 0.59 | 0.55 | 0.51 | 0.48 | 0.43 | 0.41  | 0.39 | 0.38 | 0.36 |  |

| Type       | Size |       | Conductor  |        |                           | Finished Wire |           |                |               | Order Reference |
|------------|------|-------|------------|--------|---------------------------|---------------|-----------|----------------|---------------|-----------------|
|            | AWG  | mm²   | Stranding  | Wire Ø | DC Res @ 20°C (Ohms / km) | Core Ø        | Tolerance | Weight (kg/km) | Amps (@ 40°C) |                 |
| H-RET 3207 | 32   | 0,035 | 7 x 0,08   | 0,24   | 557                       | 0,56          | ± 0,05    | 0,8            | 3             | 311xx3207       |
| H-RET 3001 | 30   | 0,049 | 1 x 0,25   | 0,25   | 347                       | 0,56          | ± 0,05    | 0,9            | 4             | 311xx3001       |
| H-RET 3007 | 30   | 0,057 | 7 x 0,10   | 0,30   | 328                       | 0,61          | ± 0,05    | 1,0            | 4             | 311xx3007       |
| H-RET 2801 | 28   | 0,080 | 1 x 0,32   | 0,32   | 218                       | 0,64          | ± 0,05    | 1,2            | 6             | 311xx2801       |
| H-RET 2807 | 28   | 0,089 | 7 x 0,13   | 0,38   | 208                       | 0,69          | ± 0,05    | 1,5            | 6             | 311xx2807       |
| H-RET 2601 | 26   | 0,126 | 1 x 0,40   | 0,40   | 137                       | 0,71          | ± 0,05    | 1,7            | 8             | 311xx2601       |
| H-RET 2607 | 26   | 0,141 | 7 x 0,16   | 0,48   | 130                       | 0,79          | ± 0,05    | 2,1            | 8             | 311xx2607       |
| H-RET 2619 | 26   | 0,155 | 19 x 0,10  | 0,48   | 122                       | 0,79          | ± 0,05    | 2,2            | 8             | 311xx2619       |
| H-RET 2401 | 24   | 0,204 | 1 x 0,51   | 0,51   | 86,0                      | 0,81          | ± 0,05    | 2,5            | 10            | 311xx2401       |
| H-RET 2407 | 24   | 0,220 | 7 x 0,20   | 0,60   | 80,4                      | 0,91          | ± 0,05    | 3,0            | 10            | 311xx2407       |
| H-RET 2419 | 24   | 0,241 | 19 x 0,13  | 0,60   | 77,4                      | 0,91          | ± 0,05    | 3,2            | 10            | 311xx2419       |
| H-RET 2201 | 22   | 0,322 | 1 x 0,64   | 0,64   | 54,1                      | 0,95          | ± 0,05    | 3,7            | 14            | 311xx2201       |
| H-RET 2207 | 22   | 0,355 | 7 x 0,25   | 0,76   | 51,2                      | 1,07          | ± 0,05    | 4,4            | 14            | 311xx2207       |
| H-RET 2219 | 22   | 0,382 | 19 x 0,16  | 0,76   | 48,5                      | 1,07          | ± 0,05    | 4,7            | 14            | 311xx2219       |
| H-RET 0,50 | -    | 0,50  | 19 x 0,185 | 0,93   | 40,1                      | 1,25          | ± 0,05    | 5,5            | 17            | 311xx0050       |
| H-RET 0,50 | -    | 0,50  | 16 x 0,20  | 0,88   | 40,1                      | 1,25          | ± 0,05    | 5,5            | 17            | 311xx1650       |
| H-RET 2001 | 20   | 0,515 | 1 x 0,81   | 0,81   | 33,8                      | 1,12          | ± 0,05    | 5,6            | 19            | 311xx2001       |
| H-RET 2007 | 20   | 0,563 | 7 x 0,32   | 0,96   | 32,2                      | 1,27          | ± 0,05    | 6,6            | 19            | 311xx2007       |
| H-RET 2019 | 20   | 0,597 | 19 x 0,20  | 0,97   | 29,9                      | 1,27          | ± 0,05    | 7,1            | 19            | 311xx2019       |
| H-RET 0,75 | -    | 0,75  | 19 x 0,225 | 1,13   | 26,7                      | 1,45          | ± 0,05    | 9,1            | 22            | 311xx0075       |
| H-RET 0,75 | -    | 0,75  | 24 x 0,20  | 1,05   | 26,7                      | 1,45          | ± 0,05    | 9,1            | 22            | 311xx2475       |
|            |      |       |            |        |                           |               |           |                |               |                 |
|            |      |       |            |        |                           |               |           |                |               |                 |
|            |      |       |            |        |                           |               |           |                |               |                 |
|            |      |       |            |        |                           |               |           |                |               |                 |
|            |      |       |            |        |                           |               |           |                |               |                 |
|            |      |       |            |        |                           |               |           |                |               |                 |
|            |      |       |            |        |                           |               |           |                |               |                 |
|            |      |       |            |        |                           |               |           |                |               |                 |
|            |      |       |            |        |                           |               |           |                |               |                 |
|            |      |       |            |        |                           |               |           |                |               |                 |
|            |      |       |            |        |                           |               |           |                |               |                 |
|            |      |       |            |        |                           |               |           |                |               |                 |
|            |      |       |            |        |                           |               |           |                |               |                 |
|            |      |       |            |        |                           |               |           |                |               |                 |
|            |      |       |            |        |                           |               |           |                |               |                 |

Data provided indicates nominal values unless stated otherwise and is only valid for reference purposes at the time of publication and is subject to change without prior notice.

Ref: EQ-eHRET-03  
Date: 2006-05-11  
Approved by:



**Properties:**

 Radiation resistance:  
10 E3 Gy

 Flame retardant  
Low Smoke Generation

Suitable for use in:

 Oils  
Fuels  
Acids  
Bases

**Construction:**

 Conductor Silver Plated Copper (SPC)  
 Insulation Wrapped and sintered PTFE tape  
 Temperature rating (°C) -65 / +200  
 Colours XX = Colour code  
 Voltage 600 V AC  
 Test voltage 3400 V AC

**Colour code:**

|         |    |
|---------|----|
| Black   | 00 |
| Brown   | 11 |
| Red     | 22 |
| Orange  | 33 |
| Yellow  | 44 |
| Green   | 55 |
| Blue    | 66 |
| Violet  | 77 |
| Grey    | 88 |
| White   | 99 |
| Pink    | 29 |
| Natural | 89 |

**Notes:**

 All dimensions nominal (± 4%)  
 unless otherwise stated.  
 All dimensions in mm.

Air temperature correction factor for current rating:

H-RE


| °C     | 20   | 40   | 60   | 80   | 100  | 120  | 140  | 160  | 180  |  |  |  |  |
|--------|------|------|------|------|------|------|------|------|------|--|--|--|--|
| Factor | 1.08 | 1.00 | 0.92 | 0.84 | 0.75 | 0.65 | 0.55 | 0.42 | 0.28 |  |  |  |  |

Multicore correction factor for current rating:

| Cores  | 2 | 3    | 4    | 6    | 8    | 10   | 12   | 16   | 20   | 24   | 28   | 32   | 36   | 40   |
|--------|---|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Factor | 1 | 0.88 | 0.80 | 0.69 | 0.62 | 0.59 | 0.55 | 0.51 | 0.48 | 0.43 | 0.41 | 0.39 | 0.38 | 0.36 |

| Type      | Size |       | Conductor  |        |                           | Finished Wire |           |                |               | Order Reference |
|-----------|------|-------|------------|--------|---------------------------|---------------|-----------|----------------|---------------|-----------------|
|           | AWG  | mm²   | Stranding  | Wire Ø | DC Res @ 20°C (Ohms / km) | Core Ø        | Tolerance | Weight (kg/km) | Amps (@ 40°C) |                 |
| H-RE 3201 | 32   | 0,031 | 1 x 0,20   | 0,20   | 544                       | 0,74          | ± 0,10    | 1,1            | 3             | 312xx3201       |
| H-RE 3207 | 32   | 0,035 | 7 x 0,08   | 0,24   | 557                       | 0,76          | ± 0,10    | 1,2            | 3             | 312xx3207       |
| H-RE 3001 | 30   | 0,049 | 1 x 0,25   | 0,25   | 347                       | 0,76          | ± 0,10    | 1,3            | 4             | 312xx3001       |
| H-RE 3007 | 30   | 0,057 | 7 x 0,10   | 0,30   | 328                       | 0,81          | ± 0,10    | 1,5            | 4             | 312xx3007       |
| H-RE 2801 | 28   | 0,080 | 1 x 0,32   | 0,32   | 218                       | 0,84          | ± 0,10    | 1,7            | 6             | 312xx2801       |
| H-RE 2807 | 28   | 0,089 | 7 x 0,13   | 0,38   | 208                       | 0,89          | ± 0,10    | 2,0            | 6             | 312xx2807       |
| H-RE 2601 | 26   | 0,126 | 1 x 0,40   | 0,40   | 137                       | 0,91          | ± 0,10    | 2,3            | 8             | 312xx2601       |
| H-RE 2607 | 26   | 0,141 | 7 x 0,16   | 0,48   | 130                       | 0,99          | ± 0,10    | 2,7            | 8             | 312xx2607       |
| H-RE 2619 | 26   | 0,155 | 19 x 0,10  | 0,48   | 122                       | 1,00          | ± 0,10    | 2,8            | 8             | 312xx2619       |
| H-RE 2401 | 24   | 0,204 | 1 x 0,51   | 0,51   | 86,0                      | 1,02          | ± 0,10    | 3,1            | 10            | 312xx2401       |
| H-RE 2407 | 24   | 0,220 | 7 x 0,20   | 0,60   | 80,4                      | 1,12          | ± 0,10    | 3,7            | 10            | 312xx2407       |
| H-RE 2419 | 24   | 0,241 | 19 x 0,13  | 0,60   | 77,4                      | 1,13          | ± 0,10    | 3,9            | 10            | 312xx2419       |
| H-RE 2201 | 22   | 0,322 | 1 x 0,64   | 0,64   | 54,1                      | 1,15          | ± 0,10    | 4,4            | 14            | 312xx2201       |
| H-RE 2207 | 22   | 0,355 | 7 x 0,25   | 0,76   | 51,2                      | 1,27          | ± 0,10    | 5,2            | 14            | 312xx2207       |
| H-RE 2219 | 22   | 0,382 | 19 x 0,16  | 0,76   | 48,5                      | 1,30          | ± 0,10    | 5,5            | 14            | 312xx2219       |
| H-RE 0,5  | -    | 0,50  | 19 x 0,185 | 0,93   | 40,1                      | 1,45          | ± 0,10    | 7,7            | 17            | 312xx0050       |
| H-RE 0,5  | -    | 0,50  | 16 x 0,20  | 0,88   | 40,1                      | 1,45          | ± 0,10    | 7,7            | 17            | 312xx1650       |
| H-RE 2001 | 20   | 0,515 | 1 x 0,81   | 0,81   | 33,8                      | 1,32          | ± 0,10    | 6,5            | 19            | 312xx2001       |
| H-RE 2007 | 20   | 0,563 | 7 x 0,32   | 0,96   | 32,2                      | 1,47          | ± 0,10    | 7,5            | 19            | 312xx2007       |
| H-RE 2019 | 20   | 0,597 | 19 x 0,20  | 0,97   | 29,9                      | 1,47          | ± 0,10    | 8,1            | 19            | 312xx2019       |
| H-RE 0,75 | -    | 0,75  | 19 x 0,225 | 1,13   | 26,7                      | 1,65          | ± 0,12    | 9,6            | 22            | 312xx0075       |
| H-RE 0,75 | -    | 0,75  | 24 x 0,20  | 1,05   | 26,7                      | 1,65          | ± 0,12    | 9,6            | 22            | 312xx2475       |
| H-RE 1801 | 18   | 0,817 | 1 x 1,02   | 1,02   | 21,4                      | 1,54          | ± 0,12    | 9,6            | 27            | 312xx1801       |
| H-RE 1807 | 18   | 0,880 | 7 x 0,40   | 1,21   | 20,2                      | 1,75          | ± 0,12    | 12             | 27            | 312xx1807       |
| H-RE 1819 | 18   | 0,963 | 19 x 0,25  | 1,21   | 19,0                      | 1,75          | ± 0,12    | 12             | 27            | 312xx1819       |
| H-RE 1,0  | -    | 1,00  | 32 x 0,20  | 1,20   | 20,0                      | 1,80          | ± 0,14    | 12             | 27            | 312xx0100       |
| H-RE 1601 | 16   | 1,301 | 1 x 1,29   | 1,29   | 13,5                      | 1,87          | ± 0,16    | 15             | 32            | 312xx1601       |
| H-RE 1619 | 16   | 1,229 | 19 x 0,29  | 1,36   | 14,8                      | 2,03          | ± 0,18    | 16             | 32            | 312xx1619       |
| H-RE 1,5  | -    | 1,50  | 19 x 0,32  | 1,50   | 13,7                      | 2,08          | ± 0,18    | 18             | 35            | 312xx0150       |
| H-RE 1419 | 14   | 1,870 | 19 x 0,36  | 1,70   | 9,42                      | 2,42          | ± 0,18    | 23             | 43            | 312xx1419       |
| H-RE 2,5  | -    | 2,50  | 50 x 0,25  | 1,95   | 8,21                      | 2,58          | ± 0,18    | 27             | 50            | 312xx0250       |
| H-RE 1219 | 12   | 3,022 | 19 x 0,45  | 2,14   | 5,93                      | 2,90          | ± 0,18    | 33             | 59            | 312xx1219       |
| H-RE 1237 | 12   | 2,976 | 37 x 0,32  | 2,42   | 6,20                      | 2,85          | ± 0,18    | 34             | 59            | 312xx1237       |
| H-RE 4    | -    | 4,00  | 56 x 0,30  | 2,48   | 5,09                      | 3,13          | ± 0,18    | 42             | 70            | 312xx0400       |
| H-RE 1037 | 10   | 4,650 | 37 x 0,40  | 2,82   | 3,90                      | 3,40          | ± 0,18    | 52             | 82            | 312xx1037       |

Data provided indicates nominal values unless stated otherwise and is only valid for reference purposes at the time of publication and is subject to change without prior notice.

 Ref: EQ-eHRE-03  
 Date: 2007-05-11  
 Approved by: 

**Properties:**

 Radiation resistance:  
10 E3 Gy

 Flame retardant  
Low Smoke Generation

Suitable for use in:

 Oils  
Fuels  
Acids  
Bases

**Construction:**

 Conductor  
Insulation  
Temperature rating (°C)  
Colours  
Voltage  
Test voltage  
Nickel Plated Copper (NPC)  
Wrapped and sintered PTFE tape  
-65 / +260  
XX = Colour code  
600 V AC  
3400 V AC

**Colour code:**

 Black 00  
Brown 11  
Red 22  
Orange 33  
Yellow 44  
Green 55  
Blue 66  
Violet 77  
Grey 88  
White 99  
Pink 29  
Natural 89

**Notes:**

 All dimensions nominal (± 4%)  
unless otherwise stated.  
All dimensions in mm.

Air temperature correction factor for current rating:

H-RE-NPC


| °C     | 20   | 40   | 60   | 80   | 100  | 120  | 140  | 160  | 180  | 200  | 220  | 240  |  |  |
|--------|------|------|------|------|------|------|------|------|------|------|------|------|--|--|
| Factor | 1.06 | 1.00 | 0.94 | 0.88 | 0.82 | 0.76 | 0.69 | 0.61 | 0.54 | 0.45 | 0.35 | 0.23 |  |  |

Multicore correction factor for current rating:

| Cores  | 2 | 3    | 4    | 6    | 8    | 10   | 12   | 16   | 20   | 24   | 28   | 32   | 36   | 40   |
|--------|---|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Factor | 1 | 0.88 | 0.80 | 0.69 | 0.62 | 0.59 | 0.55 | 0.51 | 0.48 | 0.43 | 0.41 | 0.39 | 0.38 | 0.36 |

| Type          | Size |       | Conductor  |        |                           | Finished Wire |           |                |               | Order Reference |
|---------------|------|-------|------------|--------|---------------------------|---------------|-----------|----------------|---------------|-----------------|
|               | AWG  | mm²   | Stranding  | Wire Ø | DC Res @ 20°C (Ohms / km) | Core Ø        | Tolerance | Weight (kg/km) | Amps (@ 40°C) |                 |
| H-RE 3201 NPC | 32   | 0,031 | 1 x 0,20   | 0,20   | 580                       | 0,74          | ± 0,10    | 1,1            | 4             | 212xx3201       |
| H-RE 3207 NPC | 32   | 0,035 | 7 x 0,08   | 0,24   | 610                       | 0,76          | ± 0,10    | 1,2            | 4             | 212xx3207       |
| H-RE 3001 NPC | 30   | 0,049 | 1 x 0,25   | 0,25   | 360                       | 0,76          | ± 0,10    | 1,3            | 5             | 212xx3001       |
| H-RE 3007 NPC | 30   | 0,057 | 7 x 0,10   | 0,30   | 360                       | 0,81          | ± 0,10    | 1,5            | 5             | 212xx3007       |
| H-RE 2801 NPC | 28   | 0,080 | 1 x 0,32   | 0,32   | 227                       | 0,84          | ± 0,10    | 1,7            | 7             | 212xx2801       |
| H-RE 2807 NPC | 28   | 0,089 | 7 x 0,13   | 0,38   | 221                       | 0,89          | ± 0,10    | 2,0            | 7             | 212xx2807       |
| H-RE 2601 NPC | 26   | 0,126 | 1 x 0,40   | 0,40   | 143                       | 0,91          | ± 0,10    | 2,3            | 9             | 212xx2601       |
| H-RE 2607 NPC | 26   | 0,141 | 7 x 0,16   | 0,48   | 138                       | 0,99          | ± 0,10    | 2,7            | 9             | 212xx2607       |
| H-RE 2619 NPC | 26   | 0,155 | 19 x 0,10  | 0,48   | 134                       | 1,00          | ± 0,10    | 2,8            | 9             | 212xx2619       |
| H-RE 2401 NPC | 24   | 0,204 | 1 x 0,51   | 0,51   | 89,6                      | 1,02          | ± 0,10    | 3,1            | 12            | 212xx2401       |
| H-RE 2407 NPC | 24   | 0,220 | 7 x 0,20   | 0,60   | 85,3                      | 1,12          | ± 0,10    | 3,7            | 12            | 212xx2407       |
| H-RE 2419 NPC | 24   | 0,241 | 19 x 0,13  | 0,60   | 82,6                      | 1,13          | ± 0,10    | 3,9            | 12            | 212xx2419       |
| H-RE 2201 NPC | 22   | 0,322 | 1 x 0,64   | 0,64   | 56,4                      | 1,15          | ± 0,10    | 4,4            | 14            | 212xx2201       |
| H-RE 2207 NPC | 22   | 0,355 | 7 x 0,25   | 0,76   | 53,1                      | 1,27          | ± 0,10    | 5,2            | 14            | 212xx2207       |
| H-RE 2219 NPC | 22   | 0,382 | 19 x 0,16  | 0,76   | 51,5                      | 1,30          | ± 0,10    | 5,5            | 14            | 212xx2219       |
| H-RE 0,5 NPC  | -    | 0,50  | 19 x 0,185 | 0,93   | 40,1                      | 1,45          | ± 0,10    | 7,7            | 19            | 212xx0050       |
| H-RE 0,5 NPC  | -    | 0,50  | 16 x 0,20  | 0,88   | 40,1                      | 1,45          | ± 0,10    | 7,7            | 19            | 212xx1650       |
| H-RE 2001 NPC | 20   | 0,515 | 1 x 0,81   | 0,81   | 35,4                      | 1,32          | ± 0,10    | 6,5            | 22            | 212xx2001       |
| H-RE 2007 NPC | 20   | 0,563 | 7 x 0,32   | 0,96   | 33,4                      | 1,47          | ± 0,10    | 7,5            | 22            | 212xx2007       |
| H-RE 2019 NPC | 20   | 0,597 | 19 x 0,20  | 0,97   | 31,7                      | 1,47          | ± 0,10    | 8,1            | 22            | 212xx2019       |
| H-RE 0,75 NPC | -    | 0,75  | 19 x 0,225 | 1,13   | 26,7                      | 1,65          | ± 0,12    | 9,6            | 25            | 212xx0075       |
| H-RE 0,75 NPC | -    | 0,75  | 24 x 0,20  | 1,05   | 26,7                      | 1,65          | ± 0,12    | 9,6            | 25            | 212xx2475       |
| H-RE 1801 NPC | 18   | 0,817 | 1 x 1,02   | 1,02   | 22,2                      | 1,54          | ± 0,12    | 9,6            | 27            | 212xx1801       |
| H-RE 1807 NPC | 18   | 0,880 | 7 x 0,40   | 1,21   | 21,0                      | 1,75          | ± 0,12    | 12             | 27            | 212xx1807       |
| H-RE 1819 NPC | 18   | 0,963 | 19 x 0,25  | 1,21   | 19,7                      | 1,75          | ± 0,12    | 12             | 27            | 212xx1819       |
| H-RE 1,0 NPC  | -    | 1,00  | 32 x 0,20  | 1,20   | 20,0                      | 1,80          | ± 0,12    | 12             | 30            | 212xx0100       |
| H-RE 1601 NPC | 16   | 1,301 | 1 x 1,29   | 1,29   | 15,5                      | 1,87          | ± 0,16    | 15             | 32            | 212xx1601       |
| H-RE 1619 NPC | 16   | 1,229 | 19 x 0,29  | 1,36   | 14,0                      | 2,03          | ± 0,18    | 16             | 32            | 212xx1619       |
| H-RE 1,5 NPC  | -    | 1,50  | 30 x 0,25  | 1,50   | 13,7                      | 2,08          | ± 0,18    | 18             | 40            | 212xx0150       |
| H-RE 1419 NPC | 14   | 1,870 | 19 x 0,36  | 1,70   | 9,80                      | 2,42          | ± 0,18    | 23             | 43            | 212xx1419       |
| H-RE 2,5 NPC  | -    | 2,50  | 50 x 0,25  | 1,95   | 8,21                      | 2,58          | ± 0,18    | 27             | 57            | 212xx0250       |
| H-RE 1219 NPC | 12   | 3,022 | 19 x 0,45  | 2,14   | 6,16                      | 2,90          | ± 0,18    | 33             | 67            | 212xx1219       |
| H-RE 1237 NPC | 12   | 2,976 | 37 x 0,32  | 2,42   | 6,46                      | 2,85          | ± 0,18    | 34             | 67            | 212xx1237       |
| H-RE 4 NPC    | -    | 4,00  | 56 x 0,30  | 2,48   | 5,09                      | 3,13          | ± 0,18    | 42             | 80            | 212xx0400       |
| H-RE 1037 NPC | 10   | 4,650 | 37 x 0,40  | 2,82   | 4,06                      | 3,40          | ± 0,18    | 52             | 93            | 212xx1037       |

Data provided indicates nominal values unless stated otherwise and is only valid for reference purposes at the time of publication and is subject to change without prior notice.

 Ref: EQ-eHREnpc-03  
Date: 2007-05-11  
Approved by: 

**Properties:**

 Radiation resistance:  
10 E3 Gy

 Flame retardant  
Low Smoke Generation

Suitable for use in:

 Oils  
Fuels  
Acids  
Bases

**Construction:**

 Conductor Silver Plated Copper (SPC)  
 Insulation Wrapped and sintered PTFE tape  
 Temperature rating (°C) -65 / +200  
 Colours XX = Colour code  
 Voltage 1000 V AC  
 Test voltage 5000 V AC

**Colour code:**

|         |    |
|---------|----|
| Black   | 00 |
| Brown   | 11 |
| Red     | 22 |
| Orange  | 33 |
| Yellow  | 44 |
| Green   | 55 |
| Blue    | 66 |
| Violet  | 77 |
| Grey    | 88 |
| White   | 99 |
| Pink    | 29 |
| Natural | 89 |

Air temperature correction factor for current rating:

H-REE

| °C     | 20   | 40   | 60   | 80   | 100  | 120  | 140  | 160  | 180  |  |  |  |  |
|--------|------|------|------|------|------|------|------|------|------|--|--|--|--|
| Factor | 1.08 | 1.00 | 0.92 | 0.84 | 0.75 | 0.65 | 0.55 | 0.42 | 0.28 |  |  |  |  |

**Notes:**

 All dimensions nominal (± 4%)  
 unless otherwise stated.  
 All dimensions in mm.

Multicore correction factor for current rating:

| Cores  | 2 | 3    | 4    | 6    | 8    | 10   | 12   | 16   | 20   | 24   | 28   | 32   | 36   | 40   |
|--------|---|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Factor | 1 | 0.88 | 0.80 | 0.69 | 0.62 | 0.59 | 0.55 | 0.51 | 0.48 | 0.43 | 0.41 | 0.39 | 0.38 | 0.36 |

| Type       | Size |                 | Conductor  |        |                           | Finished Wire |           |                |               | Order Reference |
|------------|------|-----------------|------------|--------|---------------------------|---------------|-----------|----------------|---------------|-----------------|
|            | AWG  | mm <sup>2</sup> | Stranding  | Wire Ø | DC Res @ 20°C (Ohms / km) | Core Ø        | Tolerance | Weight (kg/km) | Amps (@ 40°C) |                 |
| H-REE 3201 | 32   | 0,031           | 1 x 0,20   | 0,20   | 544                       | 0,96          | ± 0,10    | 1,8            | 3             | 313xx3201       |
| H-REE 3207 | 32   | 0,035           | 7 x 0,08   | 0,24   | 557                       | 1,02          | ± 0,10    | 2,0            | 3             | 313xx3207       |
| H-REE 3001 | 30   | 0,049           | 1 x 0,25   | 0,25   | 347                       | 1,02          | ± 0,10    | 2,1            | 4             | 313xx3001       |
| H-REE 3007 | 30   | 0,057           | 7 x 0,10   | 0,30   | 328                       | 1,07          | ± 0,10    | 2,3            | 4             | 313xx3007       |
| H-REE 2801 | 28   | 0,080           | 1 x 0,32   | 0,32   | 218                       | 1,09          | ± 0,10    | 2,5            | 6             | 313xx2801       |
| H-REE 2807 | 28   | 0,089           | 7 x 0,13   | 0,38   | 208                       | 1,14          | ± 0,10    | 2,9            | 6             | 313xx2807       |
| H-REE 2601 | 26   | 0,126           | 1 x 0,40   | 0,40   | 137                       | 1,17          | ± 0,10    | 3,2            | 8             | 313xx2601       |
| H-REE 2607 | 26   | 0,141           | 7 x 0,16   | 0,48   | 130                       | 1,24          | ± 0,10    | 3,6            | 8             | 313xx2607       |
| H-REE 2619 | 26   | 0,155           | 19 x 0,10  | 0,48   | 122                       | 1,24          | ± 0,10    | 3,8            | 8             | 313xx2619       |
| H-REE 2401 | 24   | 0,204           | 1 x 0,51   | 0,51   | 86,0                      | 1,27          | ± 0,10    | 4,1            | 10            | 313xx2401       |
| H-REE 2407 | 24   | 0,220           | 7 x 0,20   | 0,60   | 80,4                      | 1,37          | ± 0,10    | 4,8            | 10            | 313xx2407       |
| H-REE 2419 | 24   | 0,241           | 19 x 0,13  | 0,60   | 77,4                      | 1,37          | ± 0,10    | 5,0            | 10            | 313xx2419       |
| H-REE 2201 | 22   | 0,322           | 1 x 0,64   | 0,64   | 54,1                      | 1,41          | ± 0,11    | 5,6            | 14            | 313xx2201       |
| H-REE 2207 | 22   | 0,355           | 7 x 0,25   | 0,76   | 51,2                      | 1,52          | ± 0,11    | 6,4            | 14            | 313xx2207       |
| H-REE 2219 | 22   | 0,382           | 19 x 0,16  | 0,76   | 48,5                      | 1,52          | ± 0,11    | 6,7            | 14            | 313xx2219       |
| H-REE 0,50 | -    | 0,50            | 19 x 0,185 | 0,93   | 40,1                      | 1,68          | ± 0,10    | 7,4            | 17            | 313xx0050       |
| H-REE 0,50 | -    | 0,50            | 16 x 0,20  | 0,88   | 40,1                      | 1,68          | ± 0,10    | 7,4            | 17            | 313xx1650       |
| H-REE 2001 | 20   | 0,515           | 1 x 0,81   | 0,81   | 33,8                      | 1,57          | ± 0,10    | 7,7            | 19            | 313xx2001       |
| H-REE 2007 | 20   | 0,563           | 7 x 0,32   | 0,96   | 32,2                      | 1,73          | ± 0,10    | 8,9            | 19            | 313xx2007       |
| H-REE 2019 | 20   | 0,597           | 19 x 0,20  | 0,97   | 29,9                      | 1,73          | ± 0,10    | 9,5            | 19            | 313xx2019       |
| H-REE 0,75 | -    | 0,75            | 19 x 0,225 | 1,13   | 26,7                      | 1,90          | ± 0,10    | 11             | 22            | 313xx0075       |
| H-REE 0,75 | -    | 0,75            | 24 x 0,20  | 1,05   | 26,7                      | 1,90          | ± 0,10    | 11             | 22            | 313xx2475       |
| H-REE 1801 | 18   | 0,817           | 1 x 1,02   | 1,02   | 21,4                      | 1,80          | ± 0,14    | 11             | 27            | 313xx1801       |
| H-REE 1807 | 18   | 0,880           | 7 x 0,40   | 1,21   | 20,2                      | 2,00          | ± 0,12    | 13             | 27            | 313xx1807       |
| H-REE 1819 | 18   | 0,963           | 19 x 0,25  | 1,21   | 19,0                      | 2,00          | ± 0,12    | 14             | 27            | 313xx1819       |
| H-REE 1,0  | -    | 1,00            | 32 x 0,20  | 1,20   | 20,0                      | 2,05          | ± 0,12    | 14             | 27            | 313xx0100       |
| H-REE 1601 | 16   | 1,301           | 1 x 1,29   | 1,29   | 13,5                      | 2,11          | ± 0,15    | 16             | 32            | 313xx1601       |
| H-REE 1619 | 16   | 1,229           | 19 x 0,29  | 1,36   | 14,8                      | 2,26          | ± 0,15    | 15             | 32            | 313xx1619       |
| H-REE 1,5  | -    | 1,50            | 30 x 0,25  | 1,50   | 13,7                      | 2,35          | ± 0,15    | 19             | 35            | 313xx0150       |
| H-REE 1419 | 14   | 1,870           | 19 x 0,36  | 1,70   | 9,42                      | 2,69          | ± 0,20    | 24             | 43            | 313xx1419       |
| H-REE 2,5  | -    | 2,50            | 50 x 0,25  | 1,95   | 8,21                      | 2,88          | ± 0,20    | 29             | 50            | 313xx0250       |
| H-REE 1219 | 12   | 3,022           | 19 x 0,45  | 2,14   | 5,93                      | 3,17          | ± 0,21    | 36             | 59            | 313xx1219       |
| H-REE 1237 | 12   | 2,976           | 37 x 0,32  | 2,42   | 6,20                      | 3,20          | ± 0,20    | 37             | 59            | 313xx1237       |
| H-REE 4    | -    | 4,00            | 56 x 0,30  | 2,48   | 5,09                      | 3,45          | ± 0,20    | 45             | 70            | 313xx0400       |
| H-REE 1037 | 10   | 4,650           | 37 x 0,40  | 2,82   | 3,90                      | 3,76          | ± 0,20    | 51             | 82            | 313xx1037       |
| H-REE 6    | -    | 6,00            | 84 x 0,30  | 2,92   | 3,39                      | 4,25          | ± 0,20    | 66             | 92            | 313xx0600       |
| H-REE 8133 | 8    | 8,600           | 133 x 0,29 | 4,10   | 2,17                      | 5,38          | ± 0,20    | 94             | 129           | 313xx8133       |
| H-REE 10   | -    | 10,00           | 80 x 0,40  | 3,93   | 1,95                      | 5,48          | ± 0,20    | 117            | 137           | 313xx1000       |

Data provided indicates nominal values unless stated otherwise and is only valid for reference purposes at the time of publication and is subject to change without prior notice.

Ref: EQ-eHREE-03

Date: 2007-05-11

Approved by:



**Properties:**

 Radiation resistance:  
10 E3 Gy

 Flame retardant  
Low Smoke Generation

Suitable for use in:

 Oils  
Fuels  
Acids  
Bases

**Construction:**

 Conductor  
Insulation  
Temperature rating (°C)  
Colours  
Voltage  
Test voltage  
Nickel Plated Copper (NPC)  
Wrapped and sintered PTFE tape  
-65 / +260  
XX = Colour code  
1000 V AC  
5000 V AC

**Colour code:**

 Black 00  
Brown 11  
Red 22  
Orange 33  
Yellow 44  
Green 55  
Blue 66  
Violet 77  
Grey 88  
White 99  
Pink 29  
Natural 89

**Notes:**

 All dimensions nominal (± 4%)  
unless otherwise stated.  
All dimensions in mm.

Air temperature correction factor for current rating:

H-REE-NPC

| °C     | 20   | 40   | 60   | 80   | 100  | 120  | 140  | 160  | 180  | 200  | 220  | 240  |  |  |
|--------|------|------|------|------|------|------|------|------|------|------|------|------|--|--|
| Factor | 1.06 | 1.00 | 0.94 | 0.88 | 0.82 | 0.76 | 0.69 | 0.61 | 0.54 | 0.45 | 0.35 | 0.23 |  |  |

Multicore correction factor for current rating:

| Cores  | 2 | 3    | 4    | 6    | 8    | 10   | 12   | 16   | 20   | 24   | 28   | 32   | 36   | 40   |
|--------|---|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Factor | 1 | 0.88 | 0.80 | 0.69 | 0.62 | 0.59 | 0.55 | 0.51 | 0.48 | 0.43 | 0.41 | 0.39 | 0.38 | 0.36 |

| Type           | Size |                 | Conductor  |        |                           | Finished Wire |           |                |               | Order Reference |
|----------------|------|-----------------|------------|--------|---------------------------|---------------|-----------|----------------|---------------|-----------------|
|                | AWG  | mm <sup>2</sup> | Stranding  | Wire Ø | DC Res @ 20°C (Ohms / km) | Core Ø        | Tolerance | Weight (kg/km) | Amps (@ 40°C) |                 |
| H-REE 3201 NPC | 32   | 0,031           | 1 x 0,20   | 0,20   | 544                       | 0,96          | ± 0,10    | 1,8            | 4             | 213xx3201       |
| H-REE 3207 NPC | 32   | 0,035           | 7 x 0,08   | 0,24   | 557                       | 1,02          | ± 0,10    | 2,0            | 4             | 213xx3207       |
| H-REE 3001 NPC | 30   | 0,049           | 1 x 0,25   | 0,25   | 347                       | 1,02          | ± 0,10    | 2,1            | 5             | 213xx3001       |
| H-REE 3007 NPC | 30   | 0,057           | 7 x 0,10   | 0,30   | 328                       | 1,07          | ± 0,10    | 2,3            | 5             | 213xx3007       |
| H-REE 2801 NPC | 28   | 0,080           | 1 x 0,32   | 0,32   | 218                       | 1,09          | ± 0,10    | 2,5            | 7             | 213xx2801       |
| H-REE 2807 NPC | 28   | 0,089           | 7 x 0,13   | 0,38   | 208                       | 1,14          | ± 0,10    | 2,9            | 7             | 213xx2807       |
| H-REE 2601 NPC | 26   | 0,126           | 1 x 0,40   | 0,40   | 137                       | 1,17          | ± 0,10    | 3,2            | 9             | 213xx2601       |
| H-REE 2607 NPC | 26   | 0,141           | 7 x 0,16   | 0,48   | 130                       | 1,24          | ± 0,10    | 3,6            | 9             | 213xx2607       |
| H-REE 2619 NPC | 26   | 0,155           | 19 x 0,10  | 0,48   | 122                       | 1,24          | ± 0,10    | 3,8            | 9             | 213xx2619       |
| H-REE 2401 NPC | 24   | 0,204           | 1 x 0,51   | 0,51   | 86,0                      | 1,27          | ± 0,10    | 4,1            | 12            | 213xx2401       |
| H-REE 2407 NPC | 24   | 0,220           | 7 x 0,20   | 0,60   | 80,4                      | 1,37          | ± 0,10    | 4,8            | 12            | 213xx2407       |
| H-REE 2419 NPC | 24   | 0,241           | 19 x 0,13  | 0,60   | 77,4                      | 1,37          | ± 0,10    | 5,0            | 12            | 213xx2419       |
| H-REE 2201 NPC | 22   | 0,322           | 1 x 0,64   | 0,64   | 54,1                      | 1,41          | ± 0,11    | 5,6            | 14            | 213xx2201       |
| H-REE 2207 NPC | 22   | 0,355           | 7 x 0,25   | 0,76   | 51,2                      | 1,52          | ± 0,11    | 6,4            | 14            | 213xx2207       |
| H-REE 2219 NPC | 22   | 0,382           | 19 x 0,16  | 0,76   | 48,5                      | 1,52          | ± 0,11    | 6,7            | 14            | 213xx2219       |
| H-REE 0,50 NPC | -    | 0,50            | 19 x 0,185 | 0,93   | 40,1                      | 1,68          | ± 0,10    | 7,4            | 19            | 213xx0050       |
| H-REE 0,50 NPC | -    | 0,50            | 16 x 0,20  | 0,88   | 40,1                      | 1,68          | ± 0,10    | 7,4            | 19            | 213xx1650       |
| H-REE 2001 NPC | 20   | 0,515           | 1 x 0,81   | 0,81   | 33,8                      | 1,57          | ± 0,10    | 7,7            | 22            | 213xx2001       |
| H-REE 2007 NPC | 20   | 0,563           | 7 x 0,32   | 0,96   | 32,2                      | 1,73          | ± 0,10    | 8,9            | 22            | 213xx2007       |
| H-REE 2019 NPC | 20   | 0,597           | 19 x 0,20  | 0,97   | 29,9                      | 1,73          | ± 0,10    | 9,5            | 22            | 213xx2019       |
| H-REE 0,75 NPC | -    | 0,75            | 19 x 0,225 | 1,13   | 26,7                      | 1,90          | ± 0,10    | 11             | 25            | 213xx0075       |
| H-REE 0,75 NPC | -    | 0,75            | 24 x 0,20  | 1,05   | 26,7                      | 1,90          | ± 0,10    | 11             | 25            | 213xx2475       |
| H-REE 1801 NPC | 18   | 0,817           | 1 x 1,02   | 1,02   | 21,4                      | 1,80          | ± 0,14    | 11             | 27            | 213xx1801       |
| H-REE 1807 NPC | 18   | 0,880           | 7 x 0,40   | 1,21   | 20,2                      | 2,00          | ± 0,12    | 13             | 27            | 213xx1807       |
| H-REE 1819 NPC | 18   | 0,963           | 19 x 0,25  | 1,21   | 19,0                      | 2,00          | ± 0,12    | 14             | 27            | 213xx1819       |
| H-REE 1,0 NPC  | -    | 1,00            | 32 x 0,20  | 1,20   | 20,0                      | 2,05          | ± 0,12    | 14             | 30            | 213xx0100       |
| H-REE 1601 NPC | 16   | 1,301           | 1 x 1,29   | 1,29   | 13,5                      | 2,11          | ± 0,15    | 16             | 32            | 213xx1601       |
| H-REE 1619 NPC | 16   | 1,229           | 19 x 0,29  | 1,36   | 14,8                      | 2,26          | ± 0,15    | 15             | 32            | 213xx1619       |
| H-REE 1,5 NPC  | -    | 1,50            | 30 x 0,25  | 1,50   | 13,7                      | 2,35          | ± 0,15    | 19             | 40            | 213xx0150       |
| H-REE 1419 NPC | 14   | 1,870           | 19 x 0,36  | 1,70   | 9,42                      | 2,69          | ± 0,20    | 24             | 43            | 213xx1419       |
| H-REE 2,5 NPC  | -    | 2,50            | 50 x 0,25  | 1,95   | 8,21                      | 2,88          | ± 0,20    | 29             | 57            | 213xx0250       |
| H-REE 1219 NPC | 12   | 3,022           | 19 x 0,45  | 2,14   | 5,93                      | 3,17          | ± 0,20    | 36             | 67            | 213xx1219       |
| H-REE 1237 NPC | 12   | 2,976           | 37 x 0,32  | 2,42   | 6,20                      | 3,20          | ± 0,20    | 37             | 67            | 213xx1237       |
| H-REE 4 NPC    | -    | 4,00            | 56 x 0,30  | 2,48   | 5,09                      | 3,45          | ± 0,20    | 45             | 80            | 213xx0400       |
| H-REE 1037 NPC | 10   | 4,650           | 37 x 0,40  | 2,82   | 3,90                      | 3,76          | ± 0,20    | 51             | 93            | 213xx1037       |
| H-REE 6 NPC    | -    | 6,00            | 84 x 0,30  | 2,92   | 3,39                      | 4,25          | ± 0,20    | 66             | 92            | 213xx0600       |
| H-REE 8133 NPC | 8    | 8,600           | 133 x 0,29 | 4,10   | 2,17                      | 5,38          | ± 0,20    | 94             | 129           | 213xx8133       |
| H-REE 10 NPC   | -    | 10,00           | 80 x 0,40  | 3,93   | 1,95                      | 5,48          | ± 0,20    | 117            | 137           | 213xx1000       |

Data provided indicates nominal values unless stated otherwise and is only valid for reference purposes at the time of publication and is subject to change without prior notice.

Ref: EQ-eHREEncp-03

Date: 2007-05-11

Approved by:





