



## Application:

High temperature, flame retardant wire designed for use in switch control, relay and instrumentation panels for power, switch gear and for purposes such as internal connectors in equipment, motor starters and controllers

## Insulation Colours:

Black, Red, Blue, Yellow, Green/Yellow, Grey, Brown, Orange, White, Violet, Pink, Light Blue, Green

## Standards:

UL1015 (file number E352035), BS6231 Type CK

## Conductor:

Class 5 flexible plain copper conductor to BS EN 60228:2005 (previously BS6360)

## Insulation:

PVC

## Voltage Rating:

BS6231 : 600/1,000V

## Temperature Rating:

BS6231 : 90°C/105°C for 15,000 hours

## Minimum Bending Radius:

6 × OD

## Dimensions:

| Nominal Cross Sectional (mm <sup>2</sup> ) | AWG | Stranding     | Nominal Thickness of Insulation (mm) | Nominal Overall Diameter (mm) | Nominal Weight kg/Km |
|--------------------------------------------|-----|---------------|--------------------------------------|-------------------------------|----------------------|
| 0.5                                        | 22  | 16mm × 0.2mm  | 0.80                                 | 2.55                          | 12                   |
| 0.75                                       | 20  | 24mm × 0.2mm  | 0.80                                 | 2.75                          | 15                   |
| 1                                          | 18  | 32mm × 0.2mm  | 0.80                                 | 2.90                          | 18                   |
| 1.5                                        | 16  | 30mm × 0.25mm | 0.80                                 | 3.15                          | 23                   |
| 2.5                                        | 14  | 50mm × 0.25mm | 0.80                                 | 3.60                          | 34                   |
| 4                                          | 12  | 56mm × 0.3mm  | 0.80                                 | 4.15                          | 48                   |
| 6                                          | 10  | 84mm × 0.3mm  | 0.80                                 | 4.70                          | 67                   |
| 10                                         | 8   | 80mm × 0.4mm  | 1.14                                 | 6.40                          | 119                  |
| 16                                         | 6   | 126mm × 0.4mm | 1.52                                 | 8.45                          | 187                  |
| 25                                         | 4   | 196mm × 0.4mm | 1.52                                 | 9.60                          | 291                  |

## Conductors:

Class 5 flexible Copper Conductors for Single Core and Multi-Core cable

| Nominal Cross Sectional Area<br>mm <sup>2</sup> | Maximum Diameter<br>of Wires<br>in Conductor<br>(mm) | Maximum Resistance of<br>Conductor at 20°C<br>Plain Wires<br>(Ω/km) |
|-------------------------------------------------|------------------------------------------------------|---------------------------------------------------------------------|
| 0.5                                             | 0.21                                                 | 39                                                                  |
| 0.75                                            | 0.21                                                 | 26                                                                  |
| 1                                               | 0.21                                                 | 19.5                                                                |
| 1.5                                             | 0.26                                                 | 13.3                                                                |
| 2.5                                             | 0.26                                                 | 7.98                                                                |
| 4                                               | 0.31                                                 | 4.95                                                                |
| 6                                               | 0.31                                                 | 3.3                                                                 |
| 10                                              | 0.41                                                 | 1.91                                                                |
| 16                                              | 0.41                                                 | 1.21                                                                |
| 25                                              | 0.41                                                 | 0.78                                                                |

Table in accordance with BS EN 60228:2005 (previously BS6360)

## Electrical Characteristics:

Current Carrying Capacity (amperes) and Voltage Drop (per ampere per metre)

| Nominal Cross Sectional Area<br>mm <sup>2</sup> | Current Rating<br>Amps | Voltage Drop<br>mV/A/m |
|-------------------------------------------------|------------------------|------------------------|
| 0.5                                             | 11                     | 46                     |
| 0.75                                            | 14                     | 31                     |
| 1                                               | 17                     | 22                     |
| 1.5                                             | 21                     | 15                     |
| 2.5                                             | 30                     | 9.1                    |
| 4                                               | 41                     | 5.7                    |
| 6                                               | 53                     | 3.8                    |
| 10                                              | 75                     | 2.2                    |
| 16                                              | 100                    | 1.4                    |
| 25                                              | 136                    | 0.89                   |

Current ratings are based on a conductor operating temperature of 85°C and an ambient air temperature of 45°C and assumes single cable isolated in free air.

## Correction Factors:

| Ambient Temperature | 45°C | 50°C | 55°C | 60°C | 65°C | 70°C | 75°C |
|---------------------|------|------|------|------|------|------|------|
| Reduction Factor    | 1    | 0.97 | 0.9  | 0.82 | 0.73 | 0.63 | 0.52 |

# Tri-Rated Equipment Wire

pro-POWER

Where Cables are to be grouped, the following factors should be applied :

|                           |     |     |      |     |      |      |     |
|---------------------------|-----|-----|------|-----|------|------|-----|
| Number of cables in group | 2   | 3   | 4    | 5   | 6    | 7    | 8   |
| Reduction Factor          | 0.8 | 0.7 | 0.65 | 0.6 | 0.56 | 0.53 | 0.5 |

## Part Number Table

| Description                             | Part Number | Description                             | Part Number |
|-----------------------------------------|-------------|-----------------------------------------|-------------|
| Equipment Wire, 100m, Black, 22AWG      | PP000717    | Equipment Wire, 100m, Blue, 18AWG       | PP000747    |
| Equipment Wire, 100m, Blue, 22AWG       | PP000718    | Equipment Wire, 100m, Grey, 18AWG       | PP000748    |
| Equipment Wire, 100m, Brown, 22AWG      | PP000719    | Equipment Wire, 100m, Orange, 18AWG     | PP000749    |
| Equipment Wire, 100m, Violet, 22AWG     | PP000720    | Equipment Wire, 100m, Violet, 18AWG     | PP000750    |
| Equipment Wire, 100m, Red, 22AWG        | PP000721    | Equipment Wire, 100m, Pink, 18AWG       | PP000751    |
| Equipment Wire, 100m, Orange, 22AWG     | PP000722    | Equipment Wire, 100m, Light Blue, 18AWG | PP000752    |
| Equipment Wire, 100m, White, 22AWG      | PP000723    | Equipment Wire, 100m, Green, 18AWG      | PP000412    |
| Equipment Wire, 100m, Grey, 22AWG       | PP000724    | Equipment Wire, 100m, Blue, 16AWG       | PP000753    |
| Equipment Wire, 100m, Yellow, 22AWG     | PP000725    | Equipment Wire, 100m, Pink, 16AWG       | PP000754    |
| Equipment Wire, 100m, GRN/YEL, 22AWG    | PP000726    | Equipment Wire, 100m, Black, 16AWG      | PP000755    |
| Equipment Wire, 100m, Pink, 22AWG       | PP000727    | Equipment Wire, 100m, Brown, 16AWG      | PP000756    |
| Equipment Wire, 100m, Light Blue, 22AWG | PP000728    | Equipment Wire, 100m, Red, 16AWG        | PP000757    |
| Equipment Wire, 100m, Green, 22AWG      | PP000410    | Equipment Wire, 100m, White, 16AWG      | PP000758    |
| Equipment Wire, 100m, Black, 20AWG      | PP000729    | Equipment Wire, 100m, Yellow, 16AWG     | PP000759    |
| Equipment Wire, 100m, Blue, 20AWG       | PP000730    | Equipment Wire, 100m, Orange, 16AWG     | PP000760    |
| Equipment Wire, 100m, Brown, 20AWG      | PP000731    | Equipment Wire, 100m, Grey, 16AWG       | PP000761    |
| Equipment Wire, 100m, Violet, 20AWG     | PP000732    | Equipment Wire, 100m, GRN/YEL, 16AWG    | PP000762    |
| Equipment Wire, 100m, Red, 20AWG        | PP000733    | Equipment Wire, 100m, Light Blue, 16AWG | PP000763    |
| Equipment Wire, 100m, Grey, 20AWG       | PP000734    | Equipment Wire, 100m, Violet, 16AWG     | PP000413    |
| Equipment Wire, 100m, White, 20AWG      | PP000735    | Equipment Wire, 100m, Green, 16AWG      | PP000414    |
| Equipment Wire, 100m, Pink, 20AWG       | PP000736    | Equipment Wire, 100m, White, 14AWG      | PP000764    |
| Equipment Wire, 100m, GRN/YEL, 20AWG    | PP000737    | Equipment Wire, 100m, Orange, 14AWG     | PP000765    |
| Equipment Wire, 100m, Yellow, 20AWG     | PP000738    | Equipment Wire, 100m, Blue, 14AWG       | PP000766    |
| Equipment Wire, 100m, Orange, 20AWG     | PP000739    | Equipment Wire, 100m, Black, 14AWG      | PP000767    |
| Equipment Wire, 100m, Light Blue, 20AWG | PP000740    | Equipment Wire, 100m, Brown, 14AWG      | PP000768    |
| Equipment Wire, 100m, Green, 20AWG      | PP000411    | Equipment Wire, 100m, Red, 14AWG        | PP000769    |
| Equipment Wire, 100m, GRN/YEL, 18AWG    | PP000741    | Equipment Wire, 100m, Yellow, 14AWG     | PP000770    |
| Equipment Wire, 100m, Black, 18AWG      | PP000742    | Equipment Wire, 100m, Grey, 14AWG       | PP000771    |
| Equipment Wire, 100m, Brown, 18AWG      | PP000743    | Equipment Wire, 100m, GRN/YEL, 14AWG    | PP000772    |
| Equipment Wire, 100m, White, 18AWG      | PP000744    | Equipment Wire, 100m, Violet, 14AWG     | PP000773    |
| Equipment Wire, 100m, Red, 18AWG        | PP000745    | Equipment Wire, 100m, Pink, 14AWG       | PP000774    |
| Equipment Wire, 100m, Yellow, 18AWG     | PP000746    | Equipment Wire, 100m, Light Blue, 14AWG | PP000775    |

# Tri-Rated Equipment Wire

pro-POWER

| Description                          | Part Number |
|--------------------------------------|-------------|
| Equipment Wire, 100m, Green, 14AWG   | PP000415    |
| Equipment Wire, 100m, Blue, 12AWG    | PP000776    |
| Equipment Wire, 100m, GRN/YEL, 12AWG | PP000777    |
| Equipment Wire, 100m, Red, 12AWG     | PP000778    |
| Equipment Wire, 100m, Black, 12AWG   | PP000779    |
| Equipment Wire, 100m, Brown, 12AWG   | PP000780    |
| Equipment Wire, 100m, Yellow, 12AWG  | PP000781    |
| Equipment Wire, 100m, Grey, 12AWG    | PP000782    |
| Equipment Wire, 100m, Red, 10AWG     | PP000783    |
| Equipment Wire, 100m, Yellow, 10AWG  | PP000784    |
| Equipment Wire, 100m, Grey, 10AWG    | PP000785    |
| Equipment Wire, 100m, GRN/YEL, 10AWG | PP000786    |
| Equipment Wire, 100m, Blue, 10AWG    | PP000787    |
| Equipment Wire, 100m, Black, 10AWG   | PP000788    |
| Equipment Wire, 100m, Brown, 10AWG   | PP000789    |
| Equipment Wire, 100m, Black, 8AWG    | PP000790    |
| Equipment Wire, 100m, Blue, 8AWG     | PP000791    |

| Description                         | Part Number |
|-------------------------------------|-------------|
| Equipment Wire, 100m, Brown, 8AWG   | PP000792    |
| Equipment Wire, 100m, Red, 8AWG     | PP000793    |
| Equipment Wire, 100m, Yellow, 8AWG  | PP000794    |
| Equipment Wire, 100m, Grey, 8AWG    | PP000795    |
| Equipment Wire, 100m, GRN/YEL, 8AWG | PP000796    |
| Equipment Wire, 100m, Black, 6AWG   | PP000797    |
| Equipment Wire, 100m, Blue, 6AWG    | PP000798    |
| Equipment Wire, 100m, Brown, 6AWG   | PP000799    |
| Equipment Wire, 100m, Red, 6AWG     | PP000800    |
| Equipment Wire, 100m, Yellow, 6AWG  | PP000801    |
| Equipment Wire, 100m, Grey, 6AWG    | PP000802    |
| Equipment Wire, 100m, GRN/YEL, 6AWG | PP000803    |
| Equipment Wire, 100m, Brown, 4AWG   | PP000804    |
| Equipment Wire, 100m, Red, 4AWG     | PP000805    |
| Equipment Wire, 100m, Grey, 4AWG    | PP000806    |
| Equipment Wire, 100m, GRN/YEL, 4AWG | PP000807    |

**Important Notice :** This data sheet and its contents (the "Information") belong to the members of the Premier Farnell group of companies (the "Group") or are licensed to it. No licence is granted for the use of it other than for information purposes in connection with the products to which it relates. No licence of any intellectual property rights is granted. The Information is subject to change without notice and replaces all data sheets previously supplied. The Information supplied is believed to be accurate but the Group assumes no responsibility for its accuracy or completeness, any error in or omission from it or for any use made of it. Users of this data sheet should check for themselves the Information and the suitability of the products for their purpose and not make any assumptions based on information included or omitted. Liability for loss or damage resulting from any reliance on the Information or use of it (including liability resulting from negligence or where the Group was aware of the possibility of such loss or damage arising) is excluded. This will not operate to limit or restrict the Group's liability for death or personal injury resulting from its negligence. pro-POWER is the registered trademark of the Group. © Premier Farnell plc 2012.

[www.element14.com](http://www.element14.com)  
[www.farnell.com](http://www.farnell.com)  
[www.newark.com](http://www.newark.com)  
[www.cpc.co.uk](http://www.cpc.co.uk)

pro-POWER