

# Equipment Wire

## Tri Rated

pro-POWER

### Application

High temperature, flame retardant cable 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 Colour

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

### Standards

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

No of Cores × Nominal Cross Sectional (mm <sup>2</sup> )	AWG	Nominal Thickness of Insulation (mm)	Nominal Overall Diameter (mm)	Nominal Weight kg/Km
1 × 0.5	22	0.80	2.55	12
1 × 0.75	20	0.80	2.75	15
1 × 1	18	0.80	2.90	18
1 × 1.5	16	0.80	3.15	23
1 × 2.5	14	0.80	3.60	34
1 × 4	12	0.80	4.15	48
1 × 6	10	0.80	4.70	67
1 × 10	8	1.14	6.40	119
1 × 16	6	1.52	8.45	187
1 × 25	4	1.52	9.60	291
1 × 35	2	1.52	10.85	406
1 × 50	1	2.02	13.30	580

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pro-POWER

No of Cores × Nominal Cross Sectional (mm <sup>2</sup> )	AWG	Nominal Thickness of Insulation (mm)	Nominal Overall Diameter (mm)	Nominal Weight kg/Km
1 × 70	2/0	2.02	15.30	780
1 × 95	3/0	2.02	17.10	1055
1 × 120	4/0	2.02	18.45	1175
1 × 150	250 MCM	2.41	21.00	1425
1 × 185	350 MCM	2.41	22.90	1735
1 × 240	450 MCM	2.41	25.60	2310

### Conductors

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

Nominal Cross Sectional Area mm <sup>2</sup>	Maximum Diameter of Wires in Conductor (mm)	Maximum Resistance of Conductor at 20°C Plain Wires (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
35	0.41	0.554
50	0.41	0.386
70	0.51	0.272
95	0.51	0.206
120	0.51	0.161
150	0.51	0.129
185	0.51	0.106
240	0.51	0.0801

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

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pro-POWER

### Electrical Characteristics

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

Nominal Cross Sectional Area mm <sup>2</sup>	Current Rating Amps	Voltage Drop 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
35	167	0.64
50	204	0.45
70	259	0.32
95	321	0.24
120	374	0.19
150	418	0.16
185	480	0.13
240	593	0.1

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

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

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## Tri Rated

pro-POWER

### Part Number Table

Description	Part Number		
Wire, Tri Rated, 100m, Black, 22AWG	4155	Wire, Tri Rated, 100m, Light Blue 1mm	4191
Wire, Tri Rated, 100m, Blue, 22AWG	4156	Wire, Tri Rated, 100m, Blue, 16AWG	4192
Wire, Tri Rated, 100m, Brown, 22AWG	4157	Wire, Tri Rated, 100m, Pink, 16AWG	4193
Wire, Tri Rated, 100m, Violet, 22AWG	4158	Wire, Tri Rated, 100m, Black, 16AWG	4194
Wire, Tri Rated, 100m, Red, 22AWG	4159	Wire, Tri Rated, 100m, Brown, 16AWG	4195
Wire, Tri Rated, 100m, Orange, 22AWG	4160	Wire, Tri Rated, 100m, Red, 16AWG	4196
Wire, Tri Rated, 100m, White, 22AWG	4161	Wire, Tri Rated, 100m, White, 16AWG	4197
Wire, Tri Rated, 100m, Grey, 22AWG	4162	Wire, Tri Rated, 100m, Yellow, 16AWG	4198
Wire, Tri Rated, 100m, Yellow, 22AWG	4163	Wire, Tri Rated, 100m, Orange, 16AWG	4199
Wire, Tri Rated, 100m, GRN/YEL, 22AWG	4164	Wire, Tri Rated, 100m, Grey, 16AWG	4200
Wire, Tri Rated, 100m, Pink, 22AWG	4165	Wire, Tri Rated, 100m, GRN/YEL, 16AWG	4201
Wire, Tri Rated, 100m, Light Blue, 22AWG	4166	Wire, Tri Rated, 100m, Light Blue, 16AWG	4202
Wire, Tri Rated, 100m, Black, 20AWG	4167	Wire, Tri Rated, 100m, White, 14AWG	4203
Wire, Tri Rated, 100m, Blue, 20AWG	4168	Wire, Tri Rated, 100m, Orange, 14AWG	4204
Wire, Tri Rated, 100m, Brown, 20AWG	4169	Wire, Tri Rated, 100m, Blue, 14AWG	4205
Wire, Tri Rated, 100m, Violet, 20AWG	4170	Wire, Tri Rated, 100m, Black, 14AWG	4206
Wire, Tri Rated, 100m, Red, 20AWG	4171	Wire, Tri Rated, 100m, Brown, 14AWG	4207
Wire, Tri Rated, 100m, Grey, 20AWG	4172	Wire, Tri Rated, 100m, Red, 14AWG	4208
Wire, Tri Rated, 100m, White, 20AWG	4173	Wire, Tri Rated, 100m, Yellow, 14AWG	4209
Wire, Tri Rated, 100m, Pink, 20AWG	4174	Wire, Tri Rated, 100m, Grey, 14AWG	4210
Wire, Tri Rated, 100m, GRN/YEL, 20AWG	4175	Wire, Tri Rated, 100m, GRN/YEL, 14AWG	4211
Wire, Tri Rated, 100m, Yellow, 20AWG	4176	Wire, Tri Rated, 100m, Violet, 14AWG	4212
Wire, Tri Rated, 100m, Orange, 20AWG	4177	Wire, Tri Rated, 100m, Pink, 14AWG	4213
Wire, Tri Rated, 100m, Light Blue, 20AWG	4178	Wire, Tri Rated, 100m, Light Blue, 14AWG	4214
Wire, Tri Rated, 100m, GRN/YEL, 18AWG	4179	Wire, Tri Rated, 100m, Blue, 12AWG	4215
Wire, Tri Rated, 100m, Black , 18AWG	4180	Wire, Tri Rated, 100m, GRN/YEL, 12AWG	4216
Wire, Tri Rated, 100m, Brown, 18AWG	4181	Wire, Tri Rated, 100m, Red, 12AWG	4217
Wire, Tri Rated, 100m, White, 18AWG	4182	Wire, Tri Rated, 100m, Black, 12AWG	4218
Wire, Tri Rated, 100m, Red, 18AWG	4183	Wire, Tri Rated, 100m, Brown, 12AWG	4219
Wire, Tri Rated, 100m, Yellow, 18AWG	4184	Wire, Tri Rated, 100m, Yellow, 12AWG	4220
Wire, Tri Rated, 100m, Blue, 18AWG	4185	Wire, Tri Rated, 100m, Grey, 12AWG	4221
Wire, Tri Rated, 100m, Grey, 18AWG	4186	Wire, Tri Rated, 100m, Red, 10AWG	4222
Wire, Tri Rated, 100m, Orange, 18AWG	4187	Wire, Tri Rated, 100m, Yellow, 10AWG	4223
Wire, Tri Rated, 100m, Violet, 18AWG	4189	Wire, Tri Rated, 100m, Grey, 10AWG	4224
Wire, Tri Rated, 100m, Pink 1mm	4190	Wire, Tri Rated, 100m, GRN/YEL, 10AWG	4225
		Wire, Tri Rated, 100m, Blue, 10AWG	4226

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pro-POWER

Wire, Tri Rated, 100m, Black, 10AWG	4227
Wire, Tri Rated, 100m, Brown, 10AWG	4228
Wire, Tri Rated, 100m, Black, 8AWG	4229
Wire, Tri Rated, 100m, Blue, 8AWG	4230
Wire, Tri Rated, 100m, Brown, 8AWG	4231
Wire, Tri Rated, 100m, Red, 8AWG	4232
Wire, Tri Rated, 100m, Yellow, 8AWG	4234
Wire, Tri Rated, 100m, Grey, 8AWG	4235
Wire, Tri Rated, 100m, GRN/YEL, 8AWG	4236
Wire, Tri Rated, 100m, Black, 6AWG	4237

Wire, Tri Rated, 100m, Blue, 6AWG	4238
Wire, Tri Rated, 100m, Brown, 6AWG	4239
Wire, Tri Rated, 100m, Red, 6AWG	4240
Wire, Tri Rated, 100m, Yellow, 6AWG	4241
Wire, Tri Rated, 100m, Grey, 6AWG	4242
Wire, Tri Rated, 100m, GRN/YEL, 6AWG	4243
Wire, Tri Rated, 100m, Brown, 4AWG	4244
Wire, Tri Rated, 100m, Red, 4AWG	4245
Wire, Tri Rated, 100m, Grey, 4AWG	4246
Wire, Tri Rated, 100m, GRN/YEL, 25mm	4247

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