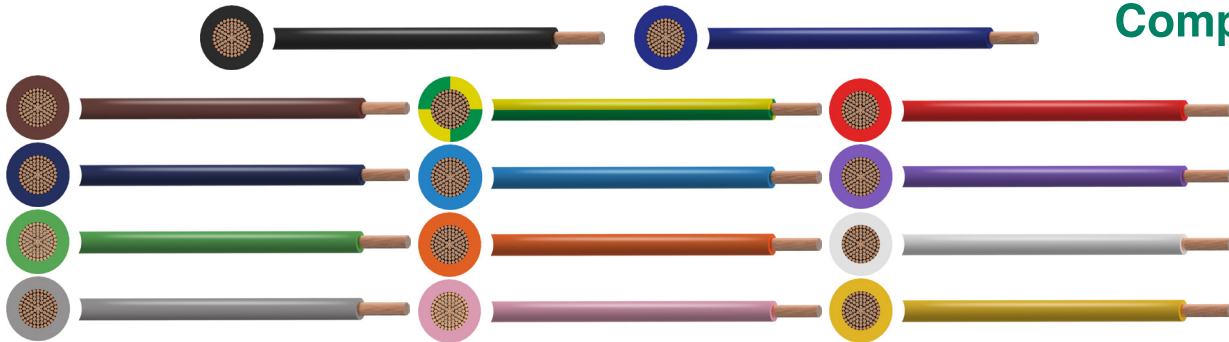


Tri-Rated Flexible PVC Equipment Wire **pro-POWER**

RoHS
Compliant



Application:

High temperature, flame retardant wire designed for use in the switch control, relay and instrumentation panels of power switch-gear and for purposes such as internal connectors in rectifier equipment, motor starters and controllers. Tri-rated wire is sometimes referred to as BS 6231 cable, H07V2-K or panel wire.

Cable Standards:

Made in accordance with the following:

BS EN 50525-2-31* BS 6231 Type CK, UL Subj.758, CSA C22.2 No. 210 (HD 21.7 S2) #LL246095,
BS EN/IEC 60332

Construction:

UL Style Number : 1015
Conductor : Class 5 flexible copper conductor according to BS EN 60228 (previously BS 6360)
Insulation : PVC (Polyvinyl Chloride) Type TI3 according to BS EN 50363

Characteristics:

Voltage Rating (Uo/U) : UL, CSA: 450/750V
BS 6231: 600/1000V
BS EN 50525-2-31: 300/500V, 450/750V
Temperature Rating : UL, CSA: +105°C
BS 6231: +90°C
Min. Bending Radius : 6 × overall diameter
Sheath Colour : Black, Blue, Brown, Dark Blue, Green, Grey, Green/Yellow, Light Blue, Orange, Pink, Red, Violet, White & Yellow

Note

*BS EN 50525-2-31 covers harmonised conductor sizes up to 35mm², wires above this size are generally to the specification. Where it is intended to connect wires contained within this datasheet to equipment or accessories confirmation should be obtained to ensure that they are capable of withstanding the operating temperature of the wire.

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Dimensions:

Part Number	No. of Cores	Colour	Nominal Cross Sectional Area mm ²	Approximate AWG	Nominal Thickness of Insulation mm	Nominal Overall Diameter mm	Nominal Weight kg/km					
PP001185	1	Black	0.5	21	0.8	2.7	11					
PP001195		Blue										
PP001204		Brown										
PP001214		Dark Blue										
PP001221		Green										
PP001228		Grey										
PP001238		Green/Yellow										
PP001248		Light Blue										
PP001255		Orange										
PP001262		Pink										
PP001269		Red										
PP001279		Violet										
PP001286		White										
PP001295		Yellow										
PP001186		Black						0.75	19	0.8	2.85	15
PP001196		Blue										
PP001205	Brown											
PP001215	Dark Blue											
PP001222	Green											
PP001229	Grey											
PP001239	Green/Yellow											
PP001249	Light Blue											
PP001256	Orange											
PP001263	Pink											
PP001270	Red											
PP001280	Violet											
PP001287	White											
PP001296	Yellow											
PP001187	Black	1	18	0.8	3	18						
PP001197	Blue											
PP001206	Brown											
PP001216	Dark Blue											
PP001223	Green											
PP001230	Grey											
PP001240	Green/Yellow											
PP001250	Light Blue											

Tri-Rated Flexible PVC Equipment Wire **pro-POWER**

Part Number	No. of Cores	Colour	Nominal Cross Sectional Area mm ²	Approximate AWG	Nominal Thickness of Insulation mm	Nominal Overall Diameter mm	Nominal Weight kg/km
PP001257	1	Orange	1	18	0.8	3	18
PP001264		Pink					
PP001271		Red					
PP001281		Violet					
PP001288		White					
PP001297		Yellow					
PP001188		Black	1.5	16		3.3	23
PP001198		Blue					
PP001207		Brown					
PP001217		Dark Blue					
PP001224		Green					
PP001231		Grey					
PP001241		Green/Yellow					
PP001251		Light Blue					
PP001258		Orange					
PP001265		Pink					
PP001272		Red					
PP001282		Violet					
PP001289		White					
PP001298		Yellow					
PP001189		Black	2.5	14		3.75	35
PP001199		Blue					
PP001208		Brown					
PP001218		Dark Blue					
PP001225		Green					
PP001232		Grey					
PP001242		Green/Yellow					
PP001252		Light Blue					
PP001259		Orange					
PP001266		Pink					
PP001273		Red					
PP001283		Violet					
PP001290		White					
PP001299	Yellow						
PP001190	Black	4	12	4.35	48		
PP001200	Blue						

Tri-Rated Flexible PVC Equipment Wire **pro-POWER**

Part Number	No. of Cores	Colour	Nominal Cross Sectional Area mm ²	Approximate AWG	Nominal Thickness of Insulation mm	Nominal Overall Diameter mm	Nominal Weight kg/km				
PP001209	1	Brown	4	12	0.8	4.35	48				
PP001219		Dark Blue		12							
PP001226		Green		12							
PP001233		Grey		12							
PP001243		Green/Yellow		12							
PP001253		Light Blue		12							
PP001260		Orange		12							
PP001267		Pink		12							
PP001274		Red		12							
PP001284		Violet		12							
PP001291		White		12							
PP001300		Yellow		12							
PP001191		Black		6				10	0.8	4.85	69
PP001201		Blue						10			
PP001210	Brown	10									
PP001220	Dark Blue	10									
PP001227	Green	10									
PP001234	Grey	10									
PP001244	Green/Yellow	10									
PP001254	Light Blue	10									
PP001261	Orange	10									
PP001268	Pink	10									
PP001275	Red	10									
PP001285	Violet	10									
PP001292	White	10									
PP001301	Yellow	10									
PP001192	Black	10	8	1	6.3	117					
PP001202	Blue		8								
PP001211	Brown		8								
PP001235	Grey		8								
PP001245	Green/Yellow		8								
PP001276	Red		8								
PP001293	White		8								
PP001302	Yellow		8								
PP001193	Black		16				6		8.1	191	
PP001203	Blue										

Tri-Rated Flexible PVC Equipment Wire **pro-POWER**

Part Number	No. of Cores	Colour	Nominal Cross Sectional Area mm ²	Approximate AWG	Nominal Thickness of Insulation mm	Nominal Overall Diameter mm	Nominal Weight kg/km
PP001212	1	Brown	16	6	1	8.1	191
PP001236		Grey					
PP001246		Green/Yellow					
PP001277		Red					
PP001294		White					
PP001303		Yellow					
PP001194		Black	25	4	1.2	9.4	281
PP001213		Brown					
PP001237		Grey					
PP001247		Green/Yellow					
PP001278	Red						

Conductors

Class 5 Flexible Copper Conductors for Single Core Wire

Nominal Cross Sectional Area mm ²	No. of Strands x Strand Size (mm)	Max. Resistance of Conductor at 20°C
		Plain Wires Ω/km
0.5	16 × 0.2	39
0.75	24 × 0.2	26
1	30 × 0.2	19.5
1.5	30 × 0.25	13.3
2.5	50 × 0.25	7.98
4	56 × 0.3	4.95
6	84 × 0.3	3.3
10	136 × 0.3	1.91
16	126 × 0.4	1.21
25	196 × 0.4	0.78

The above table is in accordance with BS EN 60228 (previously BS 6360)

Electrical Characteristics:

Current Carrying Capacity and Voltage Drop

Nominal Cross Sectional Area mm ²	Current Rating (Peak) Amps	Voltage Drop mV/A/m
0.5	11	46
0.75	14	31
1	17	22

Tri-Rated Flexible PVC Equipment Wire **pro-POWER**

Nominal Cross Sectional Area mm ²	Current Rating (Peak) Amps	Voltage Drop mV/A/m
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 90°C and an ambient air temperature of 45°C and assumes single wire isolated in free air.

De-Rating Factors:

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

Where wires are to be grouped, the following factors should be applied

No. of Wires in Group	2	3	4	5	6	7	8
De-Rating Factor	0.8	0.7	0.65	0.6	0.56	0.53	0.5

Part Number Table

Description	Nominal Cross Sectional Area mm ²	Colour	Reel Length	Part Number
Tri-Rated Flexible PVC Equipment Wire	0.5	Black	100m	PP001185
		Blue		PP001195
		Brown		PP001204
		Dark Blue		PP001214
		Green		PP001221
		Grey		PP001228
		Green/Yellow		PP001238
		Light Blue		PP001248
		Orange		PP001255
		Pink		PP001262
		Red		PP001269
		Violet		PP001279
		White		PP001286
		Yellow		PP001295

Tri-Rated Flexible PVC Equipment Wire **pro-POWER**

Description	Nominal Cross Sectional Area mm ²	Colour	Reel Length	Part Number
Tri-Rated Flexible PVC Equipment Wire	0.75	Black	100m	PP001186
		Blue		PP001196
		Brown		PP001205
		Dark Blue		PP001215
		Green		PP001222
		Grey		PP001229
		Green/Yellow		PP001239
		Light Blue		PP001249
		Orange		PP001256
		Pink		PP001263
		Red		PP001270
		Violet		PP001280
		White		PP001287
		Yellow		PP001296
		1		Black
	Blue			PP001197
	Brown			PP001206
	Dark Blue			PP001216
	Green			PP001223
	Grey			PP001230
	Green/Yellow			PP001240
	Light Blue			PP001250
	Orange			PP001257
	Pink			PP001264
	Red			PP001271
	Violet			PP001281
	White			PP001288
	Yellow			PP001297
	1.5			Black
		Blue		PP001198
		Brown		PP001207
		Dark Blue		PP001217
		Green		PP001224
		Grey		PP001231
		Green/Yellow		PP001241
		Light Blue		PP001251
Orange		PP001258		

Tri-Rated Flexible PVC Equipment Wire **pro-POWER**

Description	Nominal Cross Sectional Area mm ²	Colour	Reel Length	Part Number
Tri-Rated Flexible PVC Equipment Wire	1.5	Pink	100m	PP001265
		Red		PP001272
		Violet		PP001282
		White		PP001289
		Yellow		PP001298
	2.5	Black		PP001189
		Blue		PP001199
		Brown		PP001208
		Dark Blue		PP001218
		Green		PP001225
		Grey		PP001232
		Green/Yellow		PP001242
		Light Blue		PP001252
		Orange		PP001259
		Pink		PP001266
		Red		PP001273
		Violet		PP001283
		White		PP001290
		Yellow		PP001299
		4		Black
	Blue			PP001200
	Brown			PP001209
	Dark Blue			PP001219
	Green			PP001226
	Grey			PP001233
	Green/Yellow			PP001243
	Light Blue			PP001253
	Orange			PP001260
	Pink			PP001267
	Red			PP001274
	Violet			PP001284
	White			PP001291
	Yellow			PP001300
	6			Black
		Blue		PP001201
		Brown		PP001210
		Dark Blue		PP001220