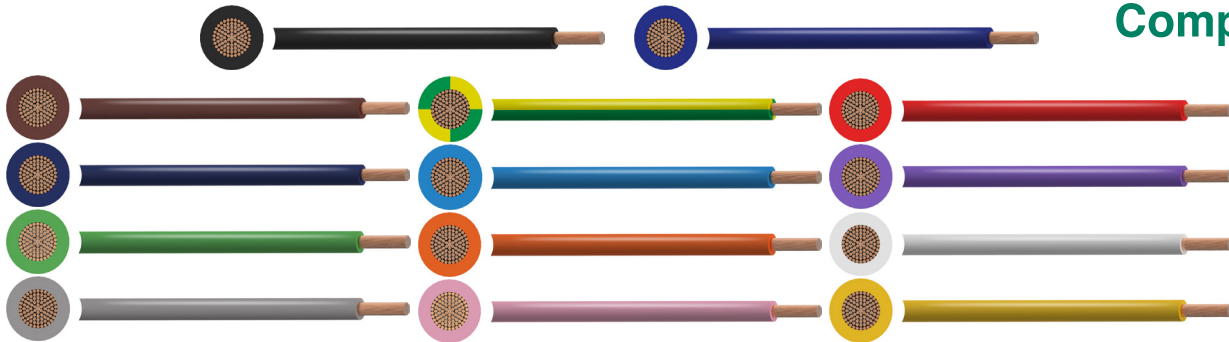


RoHS  
Compliant



## Application

High temperature, flame retardant cable designed for use in the switch control, relay and instrumentation panels of power switchgear and for purposes such as internal connectors in rectifier equipment, motor starters and controllers. Tri-rated cable 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,  
BS EN/IEC 60332, BS EN 60228

## Construction

UL Style Number : 1015  
 Conductor : Class 5 flexible copper conductor  
 Insulation : PVC (Polyvinyl Chloride) Type T13  
 Insulation Material Type : Non-Hygroscopic

## Characteristics

Voltage Rating (Uo/U) : UL, CSA: 600/1000V  
 BS 6231: 600/1000V  
 BS EN 50525-2-31: 300/500V, 450/750V  
 Temperature Rating : UL, CSA: +105°C  
 BS 6231: +90°C  
 Minimum: -15°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 35mm<sup>2</sup>, 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.

This product range is available on reels of 100 m and 50 m or 500 m (in select sizes), or per metre

**Dimensions**

Part Number	No. of Cores	Colour	Nominal Cross Sectional Area mm <sup>2</sup>	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 (Lower Limit 2.4 – Upper Limit 3)	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					
PP001304		Black					
PP001305		Red					
PP001306		Yellow					
PP001307		White					
PP001308		Blue					
PP001309		Brown					
PP001310	Orange						
PP001186	1	Black	0.75	19	0.8	2.85 (Lower Limit 2.6 – Upper Limit 3.1)	15
PP001196		Blue					15
PP001205		Brown					15
PP001215		Dark Blue					15
PP001222		Green					15
PP001229		Grey					15
PP001239		Green/Yellow					15
PP001249		Light Blue					15
PP001256		Orange					15
PP001263		Pink					15
PP001270		Red					15
PP001280		Violet					15
PP001287		White					15
PP001296		Yellow					15
PP001311		Black					15

# Tri-Rated Flexible PVC Equipment Wire



Part Number	No. of Cores	Colour	Nominal Cross Sectional Area mm <sup>2</sup>	Approximate AWG	Nominal Thickness of Insulation mm	Nominal Overall Diameter mm	Nominal Weight kg/km	
PP001312	1	Red	0.75	19	0.8	2.85 (Lower Limit 2.6 – Upper Limit 3.1)	15	
PP001313		Blue						
PP001314		Green/Yellow						
PP001315		Brown						
PP001187		Black	1	18		0.8	3 (Lower Limit 2.7 – Upper Limit 3.3)	18
PP001197		Blue						
PP001206		Brown						
PP001216		Dark Blue						
PP001223		Green						
PP001230		Grey						
PP001240		Green/Yellow						
PP001250		Light Blue						
PP001257		Orange						
PP001264		Pink						
PP001271		Red						
PP001281		Violet						
PP001288		White						
PP001297		Yellow						
PP001316		Black	1.5	16		0.8	3.3 (Lower Limit 3 – Upper Limit 3.6)	23
PP001317		Red						
PP001318		Green/Yellow						
PP001319		Brown						
PP001320		Blue						
PP001188		Black						
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							

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Part Number	No. of Cores	Colour	Nominal Cross Sectional Area mm <sup>2</sup>	Approximate AWG	Nominal Thickness of Insulation mm	Nominal Overall Diameter mm	Nominal Weight kg/km
PP001321	1	Black	1.5	16	0.8	3.3 (Lower Limit 3 – Upper Limit 3.6)	23
PP001322		Red					
PP001323		Green/Yellow					
PP001324		White					
PP001325		Blue					
PP001326		Brown					
PP001189		Black	2.5	14		3.75 (Lower Limit 3.4 – Upper Limit 4.1)	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					
PP001327		Black	4	12		4.35 (Lower Limit 3.9 – Upper Limit 4.8)	48
PP001328		Red					
PP001329		Green/Yellow					
PP001330		Blue					
PP001190		Black					
PP001200		Blue					
PP001209		Brown					
PP001219		Dark Blue					
PP001226		Green					
PP001233		Grey					
PP001243		Green/Yellow					
PP001253		Light Blue					
PP001260		Orange					
PP001267	Pink						
PP001274	Red						
PP001284	Violet						

Part Number	No. of Cores	Colour	Nominal Cross Sectional Area mm <sup>2</sup>	Approximate AWG	Nominal Thickness of Insulation mm	Nominal Overall Diameter mm	Nominal Weight kg/km						
PP001291	1	White	4	12	0.8	4.35 (Lower Limit 3.9 – Upper Limit 4.8)	48						
PP001300		Yellow											
PP001191		Black	6	10		0.8	4.85 (Lower Limit 4.4 – Upper Limit 5.3)	69					
PP001201		Blue											
PP001210		Brown											
PP001220		Dark Blue											
PP001227		Green											
PP001234		Grey											
PP001244		Green/Yellow											
PP001254		Light Blue											
PP001261		Orange											
PP001268		Pink											
PP001275		Red											
PP001285		Violet											
PP001292		White											
PP001301		Yellow											
PP001192		Black							10	8	1	6.3 (Lower Limit 5.7 – Upper Limit 7.2)	117
PP001202		Blue											
PP001211		Brown											
PP001235		Grey											
PP001245		Green/Yellow											
PP001276		Red											
PP001293		White											
PP001302		Yellow											
PP001193		Black	16	6		1	8.1 (Lower Limit 6.7 – Upper Limit 9)	191					
PP001203		Blue											
PP001212		Brown											
PP001236		Grey											
PP001246	Green/Yellow												
PP001277	Red												
PP001294	White												
PP001303	Yellow												
PP001194	Black	25	4	1.2	9.4 (Lower Limit 8.4mm – Upper Limit 11.5mm)	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 <sup>2</sup>	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 <sup>2</sup>	Current Rating (Peak) 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

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 <sup>2</sup>	Colour	Reel Length	Part Number
Tri-Rated Flexible PVC Equipment Wire	0.5	Black	100 m or Per M	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
		0.5		Black
	Red		PP001305	
	Yellow		PP001306	
	White		PP001307	
	Blue		PP001308	
	Brown		PP001309	
	Orange		PP001310	
	0.75	Black	100 m or Per M	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		
0.75		Black	500 m	PP001311
	Red	PP001312		

# Tri-Rated Flexible PVC Equipment Wire



Description	Nominal Cross Sectional Area mm <sup>2</sup>	Colour	Reel Length	Part Number	
Tri-Rated Flexible PVC Equipment Wire	0.75	Blue	500 m	PP001313	
		Green/Yellow		PP001314	
		Brown		PP001315	
	1	1	Black	100 m or Per M	PP001187
			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
			Black		PP001316
			Red		PP001317
			Green/Yellow		PP001318
			Brown		PP001319
			Blue		PP001320
	1.5	1.5	Black	100 m or Per M	PP001188
			Blue		PP001198
			Brown		PP001207
			Dark Blue		PP001217
			Green		PP001224
			Grey		PP001231
			Green/Yellow		PP001241
			Light Blue		PP001251
			Orange		PP001258
			Pink		PP001265
			Red		PP001272
Violet			PP001282		
White			PP001289		
Yellow			PP001298		
1.5	1.5	Black	500 m	PP001321	
		Red		PP001322	

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Description	Nominal Cross Sectional Area mm <sup>2</sup>	Colour	Reel Length	Part Number	
Tri-Rated Flexible PVC Equipment Wire	1.5	Green/Yellow	500 m	PP001323	
		White		PP001324	
		Blue		PP001325	
		Brown		PP001326	
	2.5	100 m or Per M	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	
			500 m	Black	PP001327
				Red	PP001328
				Green/Yellow	PP001329
				Blue	PP001330
	4	100 m or Per M	Black	PP001190	
			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	100 m or Per M	Black	PP001191		
		Blue	PP001201		

Description	Nominal Cross Sectional Area mm <sup>2</sup>	Colour	Reel Length	Part Number
Tri-Rated Flexible PVC Equipment Wire	6	Brown	100 m or Per M	PP001210
		Dark Blue		PP001220
		Green		PP001227
		Grey		PP001234
		Green/Yellow		PP001244
		Light Blue		PP001254
		Orange		PP001261
		Pink		PP001268
		Red		PP001275
		Violet		PP001285
		White		PP001292
		Yellow		PP001301
	10	Black	100 m or Per M	PP001192
		Blue		PP001202
		Brown		PP001211
		Grey		PP001235
		Green/Yellow		PP001245
		Red		PP001276
		White		PP001293
		Yellow		PP001302
	16	Black	100 m or Per M	PP001193
		Blue		PP001203
		Brown		PP001212
		Grey		PP001236
		Green/Yellow		PP001246
		Red		PP001277
		White		PP001294
		Yellow		PP001303
	25	Black	50 m or Per M	PP001194
		Brown		PP001213
		Grey		PP001237
		Green/Yellow		PP001247
		Red		PP001278

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