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Power and Wiring Cables

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Flat Twin & Flat Three Core PVC 6242Y & 6243Y

Insulated & sheathed with uninsulated circuit protective conductor as option

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Application

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PVC insulated and sheathed cable for installation clipped to flat surfaces, or embedded in plaster, etc. For domestic and industrial wiring.

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Specifications

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- In accordance with BS6004.
- **Conductors:** Solid Class 1 (up to 2.5mm²) and stranded Class 2 (above 2.5mm²) copper conductors to BS EN 60228
- **Insulation:** PVC insulation Type TI.1 to BS EN 50363-3
- **Core Identification:**
2 core - brown, blue
3 core - brown, black, grey
- PVC sheath Type 6 to BS7655.

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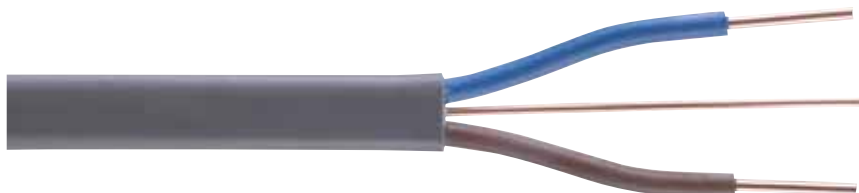
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- **Position of Protective Conductor:**
Twin - centrally placed between brown and blue cores.
Three core - centrally placed between black and grey cores.
- Flame retardant to BS EN 60332-1-2.
- **Temperature Rating:** 70°C maximum conductor operating temperature.
- **Voltage Rating:** 300/500V.



Flat Twin & Flat Three Core PVC 6242Y & 6243Y

Insulated & sheathed with uninsulated circuit protective conductor as option

Anixter Number	Nominal Conductor Area mm ²	Conductor Class	Insulation Thickness mm	Minimum O/D mm	Maximum O/D mm	Approx Weight kg/km	Minimum Bending Radius (fixed bend) mm	
6192Y - Flat Twin								
6192Y-0010	1.0	1	0.6	4.0 x 6.2	4.7 x 7.4	54	23	
6192Y-0015	1.5	1	0.7	4.4 x 7.0	5.4 x 8.4	70	26	
6192Y-0025	2.5	1	0.8	5.2 x 8.4	6.2 x 9.8	105	30	
6192Y-0040	4	2	0.8	5.6 x 9.6	7.2 x 11.5	150	50	
6192Y-0060	6	2	0.8	6.4 x 10.5	8.0 x 13.0	205	60	
6192Y-0100	10	2	1.0	7.8 x 13.0	9.6 x 16.0	325	70	
6192Y-0160	16	2	1.0	9.0 x 15.5	11.0 x 18.5	465	80	
6193Y - Flat Three Core								
6193Y-0010	1.0	1	0.6	4.0 x 8.4	4.7 x 9.8	77	30	
6193Y-0015	1.5	1	0.7	4.4 x 9.8	5.4 x 11.5	100	50	
6193Y-0025	2.5	1	0.8	5.2 x 11.5	6.2 x 13.5	150	60	
6193Y-0040	4	2	0.8	5.8 x 13.5	7.4 x 16.5	230	70	
6193Y-0060	6	2	0.8	6.4 x 15.0	8.0 x 18.0	300	80	
6193Y-0100	10	2	1.0	7.8 x 19.0	9.6 x 22.5	480	90	
6193Y-0160	16	2	1.0	9.0 x 22.0	11.0 x 26.5	700	160	
Anixter Number	Nominal Conductor Area mm ²	Conductor Class	Insulation Thickness mm	Minimum O/D mm	Maximum O/D mm	Nom earth Conductor Area mm ²	Approx Weight kg/km	Min Bending Radius (fixed bend) mm
6242Y - Flat Twin + Earth								
6242Y-0010	1.0	1	0.6	4.0 x 7.2	4.7 x 8.6	1.0	69	26
6242Y-0015	1.5	1	0.7	4.4 x 8.2	5.4 x 9.6	1.0	85	29
6242Y-0025	2.5	1	0.8	5.2 x 9.8	6.2 x 11.5	1.5	120	50
6242Y-0040	4	2	0.8	5.6 x 10.5	7.2 x 13	1.5	175	60
6242Y-0060	6	2	0.8	6.4 x 12.5	8.0 x 15	2.5	240	60
6242Y-0100	10	2	1.0	7.8 x 15.5	9.6 x 19	4	390	80
6242Y-0160	16	2	1.0	9 x 18	11 x 22.5	6	560	90
6243Y - Flat Three Core + Earth								
6243Y-0010	1.0	1	0.6	4.0 x 9.0	4.7 x 11	1.0	92	50
6243Y-0015	1.5	1	0.7	4.4 x 10.5	5.4 x 12.5	1.0	115	50
6243Y-0025	2.5	1	0.8	5.2 x 12.5	6.2 x 14.5	1.0	170	60
6243Y-0040	4	2	0.8	5.8 x 14.5	7.4 x 18	1.5	255	80
6243Y-0060	6	2	0.8	6.4 x 16.5	8 x 20	2.5	340	80
6243Y-0100	10	2	1.0	7.8 x 21.0	9.6 x 25.5	4	550	160
6243Y-0160	16	2	1.0	9 x 24.5	11 x 29.5	6	790	180

For further technical information see page 1:56 For conductor short-circuit ratings see page 19:27.

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Technical Information

- Flat Twin, Flat Twin & Earth
- Flat Three core, Flat Three core & Earth

Multi-core PVC-insulated flat cables, non-armoured, with or without protective conductor (copper conductors).

BS6004 — Flat Twin, Flat Three core

Ambient temperature: 30°C Conductor operating temperature: 70°C

CURRENT - CARRYING CAPACITY (Amperes)

Conductor Cross Sectional Area	Reference Method 100# (above a plasterboard ceiling covered by thermal insulation NOT EXCEEDING 100mm in thickness)	Reference Method 101# (above a plasterboard ceiling covered by thermal insulation EXCEEDING 100mm in thickness)	Reference Method 102# (in a stud wall with thermal insulation with cable TOUCHING the inner wall surface)	Reference Method 103# (in a stud wall with thermal insulation with cable NOT TOUCHING the inner wall surface)	Reference Method C* (clipped direct)	Reference Method A* (enclosed n conduit in an insulated wall)
1	2	3	4	5	6	7
mm²	(A)	(A)	(A)	(A)	(A)	(A)
1	13	10.5	13	8	16	11.5
1.5	16	13	16	10	20	14.5
2.5	21	17	21	13.5	27	20
4	27	22	27	17.5	37	26
6	34	27	35	23.5	47	32
10	45	36	47	32	64	44
16	57	46	63	42.5	85	57

A* For full installation method refer to Table 4A2 Installation Method 2 but for flat twin and earth cable

C* For full installation method refer to Table 4A2 Installation Method 20 but for flat twin and earth cable

100# For full installation method refer to Table 4A2 Installation Method 100

101# For full installation method refer to Table 4A2 Installation Method 101

102# For full installation method refer to Table 4A2 Installation Method 102

103# For full installation method refer to Table 4A2 Installation Method 103

Wherever practicable, a cable is to be fixed in a position such that it will not be covered with thermal insulation.

Regulation 523.7, BS 5803-5: Appendix C: Avoidance of overheating of electric cables.

Building Regulations Approved document B and Thermal insulation: avoiding risks, BR 262, BRE, 2001 refer.

VOLTAGE DROP (per Ampere per metre):

Conductor Cross Sectional Area	Two Core Cable d.c.	Two Core Cable Single Phase a.c.	Three or Four Core Cable Three Phase a.c.
1	2	3	4
mm ²	mV	mV	mV
1	44	44	38
1.5	29	29	25
2.5	18	18	15
4	11	11	9.5
6	7.3	7.3	6.4
10	4.4	4.4	3.8
16	2.8	2.8	2.4

If cables are to be used in ambient air temperatures other than 30°C the following rating factors should be applied:

Ambient air temp °C	25	30	35	40	45	50	55	60	65
Rating factor	1.03	1.0	0.94	0.87	0.79	0.71	0.61	0.50	0.35

For further guidance refer to BS7671 (IEE Wiring Regulations - latest edition).

* With or without protective conductor.