Polycab, thermosetting insulated and thermoplastic sheathed low duty cable conforming to BS 7211 standard.

These includes low duty cable and confirming the construction and performance of thermosetting insulated cable of voltage rating up to and including 450/750 V as per BS 7211. These cables emit limited amount of smoke and corrosive gases than compared to polyvinyl chloride manufactured as per BS 6004 in the event of fire. These are intended to use for electric power and lighting applications.

These cables are available in single and multicore with maximum conductor operating temperature of 90˚C and maximum conductor short circuit temperature 250˚C.

Conductor: High conductivity annealed plain stranded copper conductor produced in-house from state-of-the art Contirod line.

Insulation: In-house developed high insulation resistance cross-linked polyethylene thermoset insulation or halogen free cross linked compound.

Covering: In case of multicore cable an extruded layer of synthetic polymeric material suitable with cable operating temperature.

Sheath: In-house developed thermoplastic compound having low emission of smoke and corrosive gases when exposed to fire.

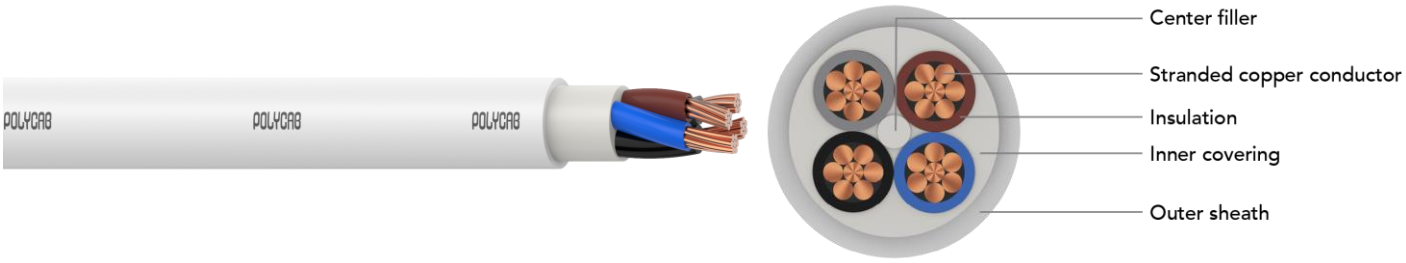
The construction based on the application and requirement of the user against BS 7211.

[POLYCAB 6181B BS 7211 SC - Lighting and Appliances wire, 450/750 V AC]

[POLYCAB 6241B/6242B/6243B BS EN 7211 MC - Lighting and Appliances wire, 300/500 V AC]

[POLYCAB 6182B/6183B/6184B/6185B BS 7211 – Lighting and Appliances wire, 450/750 V AC]

POLYCAB 6182B/6183B/6184B/6185B BS 7211
Lighting and Appliances wire, 450/750 V AC



Application
POLYCAB 6182B/6183B/6184B/6185B BS 7211 MC cable with thermosetting insulation and halogen free material sheathed fulfils the requirement as per BS 7211. These cables produce lower level of smoke and corrosive gases under exposure to fore compared PVC insulated cable and can be used for lighting and domestic appliances.

Voltage Rating
450/750 V

Operation Temperature
Max. Operating: 90˚ C

Construction
- Annealed solid or stranded copper conductor as per IEC 60228, class 1 or class 2
- Insulated with Cross linked compound Type GP 8 or EI 5 confirming to BS 7655-1.3/EN 50363-5
- Extruded inner covering of synthetic polymeric material
- Sheathed with halogen free material type LTS4 confirming to BS 7655-6.1

Core Identification

2 core	Brown and blue
3-core	Brown, black and grey
4-core	Blue, brown, black and grey
5-core	Green/yellow, blue, brown, black and grey

Bending Radius

Fixed installation	->8 x Overall Diameter
Occasional	->6 x Overall Diameter

Standard and References
IEC 60228
BS 7655-1.3/EN 50363-5
BS 7655-6.1
BS 7211:1998

Test Voltage
2500V AC at (20±5) °C

Compliance

Conductor Resistance test	- IEC 60228
Insulation Resistance test	- BS 7211
Flame propagation test	- BS EN 60332-1-2
Corrosive and acid gas	- BS EN 60754-1
Single vertical flame	- BS EN 50265-2-1
Smoke emission	- BS EN 61034-2

Approval
The cable is compliant with European Regulation EN 50575, the construction Products Regulation(CPR).

POLYCAB 6182B/6183B/6184B/6185B BS 7211

Lighting and Appliances wire, 450/750 V AC

Product Code	Construction n x mm²	Class of conductor	Overall Diameter (Approx.) mm	Weight (Approx.) kg/km
LDBS06CXUALC002C001S	2 x 1	1	8.2	96
LDBS06CXUALC002C1.5S	2 x 1.5	1	8.8	117
LDBS06CXUALC002C2.5S	2 x 2.5	1	9.6	149
LDBS06CXUALC002C004S	2 x 4	1	10.6	197
LDBS06CXUALC002C006S	2 x 6	1	11.6	254
LDBS06CXUALC002C010S	2 x 10	1	13.2	362
LDBS06CXUALC002C001S	2 x 1	2	8.5	102
LDBS06CXUALC002C1.5S	2 x 1.5	2	9.2	124
LDBS06CXUALC002C2.5S	2 x 2.5	2	10.0	156
LDBS06CXUALC002C004S	2 x 4	2	11.2	207
LDBS06CXUALC002C006S	2 x 6	2	12.6	277
LDBS06CXUALC002C010S	2 x 10	2	14.9	410
LDBS06CXUALC002C016S	2 x 16	2	17	573
LDBS06CXUALC002C025S	2 x 25	2	20.8	876
LDBS06CXUALC002C035S	2 x 35	2	23.5	1158
LDBS06CXUALC003C001S	3 x 1	1	8.6	109
LDBS06CXUALC003C1.5S	3 x 1.5	1	9.3	136
LDBS06CXUALC003C2.5S	3 x 2.5	1	10.1	178
LDBS06CXUALC003C004S	3 x 4	1	11.2	241
LDBS06CXUALC003C006S	3 x 6	1	12.3	316
LDBS06CXUALC003C010S	3 x 10	1	15.8	508
LDBS06CXUALC003C001S	3 x 1	2	8.9	115
LDBS06CXUALC003C1.5S	3 x 1.5	2	9.7	143
LDBS06CXUALC003C2.5S	3 x 2.5	2	10.5	184
LDBS06CXUALC003C004S	3 x 4	2	11.7	250
LDBS06CXUALC003C006S	3 x 6	2	13.3	338
LDBS06CXUALC003C010S	3 x 10	2	15.7	508
LDBS06CXUALC003C016S	3 x 16	2	18.0	724
LDBS06CXUALC003C025S	3 x 25	2	22.2	1112
LDBS06CXUALC003C035S	3 x 35	2	25.0	1481
LDBS06CXUALC004C001S	4 x 1	1	9.2	129
LDBS06CXUALC004C1.5S	4 x 1.5	1	9.9	162
LDBS06CXUALC004C2.5S	4 x 2.5	1	10.9	216
LDBS06CXUALC004C004S	4 x 4	1	12.1	296
LDBS06CXUALC004C006S	4 x 6	1	13.7	407
LDBS06CXUALC004C010S	4 x 10	1	17.1	631
LDBS06CXUALC004C001S	4 x 1	2	9.6	136
LDBS06CXUALC004C1.5S	4 x 1.5	2	10.4	170
LDBS06CXUALC004C2.5S	4 x 2.5	2	11.4	222
LDBS06CXUALC004C004S	4 x 4	2	12.8	306

POLYCAB 6182B/6183B/6184B/6185B BS 7211

Lighting and Appliances wire, 450/750 V AC

Product Code	Construction n x mm²	Class of conductor	Overall Diameter (Approx.) mm	Weight (Approx.) kg/km
LDBS06CXUALC004C006S	4 x 6	2	14.9	430
LDBS06CXUALC004C010S	4 x 10	2	17.1	631
LDBS06CXUALC004C016S	4 x 16	2	19.7	908
LDBS06CXUALC004C025S	4 x 25	2	24.6	1427
LDBS06CXUALC004C035S	4 x 35	2	27.8	1900
LDBS06CXUALC005C001S	5 x 1	1	9.9	133
LDBS06CXUALC005C1.5S	5 x 1.5	1	10.7	170
LDBS06CXUALC005C2.5S	5 x 2.5	1	11.8	229
LDBS06CXUALC005C004S	5 x 4	1	13.5	333
LDBS06CXUALC005C006S	5 x 6	1	15.3	457
LDBS06CXUALC005C010S	5 x 10	1	18.7	681
LDBS06CXUALC005C001S	5 x 1	2	10.3	139
LDBS06CXUALC005C1.5S	5 x 1.5	2	11.2	176
LDBS06CXUALC005C2.5S	5 x 2.5	2	12.4	232
LDBS06CXUALC005C004S	5 x 4	2	14.7	353
LDBS06CXUALC005C006S	5 x 6	2	16.2	460
LDBS06CXUALC005C010S	5 x 10	2	18.7	681
LDBS06CXUALC005C016S	5 x 16	2	21.9	1009
LDBS06CXUALC005C025S	5 x 25	2	27.3	1578
LDBS06CXUALC005C035S	5 x 35	2	30.4	2077

POLYCAB 6182B/6183B/6184B/6185B BS 7211
Lighting and Appliances wire, 450/750 V AC

Electrical characteristics

Current carrying capacity and maximum DC conductor resistance.

Nominal cross sectional area	Reference Method A (enclosed in conduit in thermally insulating wall etc.)		Reference Method B (enclosed in conduit on a wall or in trunking etc.)		Reference Method C (clipped direct)		Reference Method E (free air or on a perforated cable tray etc horizontal or vertical)		Maximum DC conductor resistance at 20ºC
	1 two-core cable, single-phase a.c. or d.c.	1 three- or four-core cable, three-phase a.c.	1 two-core cable, single-phase a.c. or d.c.	1 three- or four-core cable, three-phase a.c.	1 two-core cable, single-phase a.c. or d.c.	1 three- or four-core cable, three-phase a.c.	1 two-core cable, single-phase a.c. or d.c.	1 three- or four-core cable, three-phase a.c.	
mm²	Amp.	Amp.	Amp.	Amp.	Amp.	Amp.	Amp.	Amp.	Ω/km
1	14.5	13	17	15	19	14	21	18	18.1
1.5	18.5	16.5	22	19.5	24	22	26	23	12.1
2.5	25	22	30	26	33	30	36	32	7.41
4	33	30	40	35	45	40	49	42	4.61
6	42	38	51	44	58	52	63	54	3.08
10	57	51	69	60	80	71	86	75	1.83
16	76	68	91	80	107	96	115	100	1.15
25	99	89	119	105	138	119	149	127	0.727
35	121	109	146	128	171	147	185	158	0.524

Ambient temperature: 30˚C
Conductor operating temperature: 90˚C
The above table is in accordance with Table 4E2A of BS 7671:2018

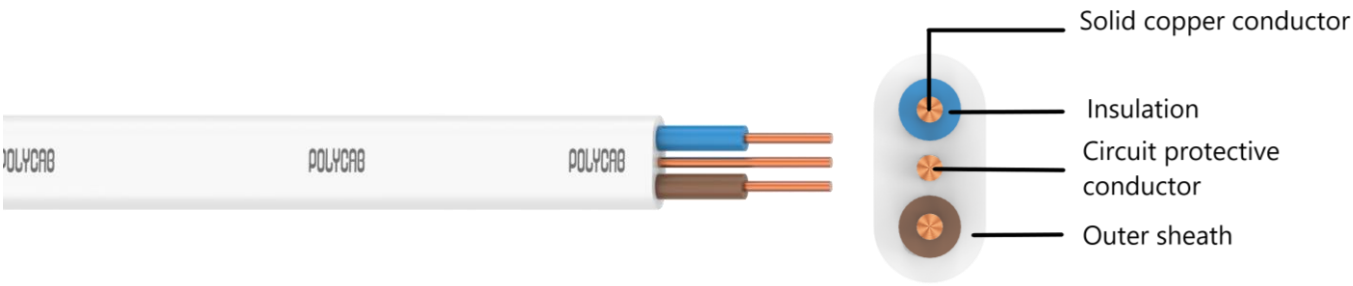
De-Rating Factor

De-rating factor for 90˚C thermosetting insulated cable

Air Temperature	35°C to 50°C	55°C	60°C	65°C	70°C
De-rating factor	1	0.96	0.83	0.67	0.47

POLYCAB 6241B/6242B/6243B BS EN 7211 MC

Lighting and Appliances wire, 300/500 V AC



Application

POLYCAB 6241B/6242B/6243B BS 7211 MC stranded copper conductor thermosetting material insulated and halogen free material sheathed with CPC (Circuit protective conductor) fulfils the requirement as per BS 7211. These cables produce lower level of smoke and corrosive gases under exposure to fore compared PVC insulated cable and can be used for lighting and domestic appliances.

Voltage Rating

300/500 V

Operation Temperature

Max.: 90˚ C

Construction

- Annealed solid or stranded copper conductor as per IEC 60228, class 1 or class 2
- Insulated with Cross linked compound type GP8 or EI 5 confirming to BS 7655-1.3/BS EN 50363-5
- Bare circuit protective conductor
- Sheathed with Halogen free material Type LTS4 confirming to BS 7655-6.1.

Core Identification

Single core	Brown or Blue
2 core	Brown and Blue or 2 x 1 & 2 x 1.5 cables, Brown and Brown
3 core	Brown, Black (Centre core), Grey

Position of CPC

2 core Circuit protective conductor (CPC) placed in between cores in same plane

3 core Circuit protective conductor (CPC) Centrally placed with black and grey cores in same plane

Bending Radius

Fixed installation – 3 x Overall Diameter

Standard and References

IEC 60228
BS 7655-1.3/BS EN 50363-5
BS 7655-6.1
BS 7211:1998

Test Voltage

2000V AC at (20±5) °C

Compliance

Conductor Resistance test	- IEC 60228
Insulation Resistance test	- BS 7211
Corrosive and acid gas	- EN 50267-2-2
Single vertical flame	- EN 50265-2-1
Smoke emission	- BS EN 50268-2

Approval

The cable is compliant with European Regulation EN 50575, the construction Products Regulation(CPR).

POLYCAB 6241B/6242B/6243B BS EN 7211 MC

Lighting and Appliances wire, 300/500 V AC

Product Code	Construction n x mm²	Class of conductor	Nominal insulation thickness mm	Overall Diameter (Approx.) mm	Weight (Approx.) kg/km
LDBS04CXUALC001C001S	1 x 1	1	0.7	4.3 x 5.5	51
LDBS04CXUALC001C1.5S	1 x 1.5	1	0.7	4.6 x 5.8	60
LDBS04CXUALC002C001S	2 x 1	1	0.7	4.3 x 8	77
LDBS04CXUALC002C1.5S	2 x 1.5	1	0.7	4.6 x 8.6	95
LDBS04CXUALC002C2.5S	2 x 2.5	1	0.7	5.2 x 9.8	132
LDBS04CXUALC002C001S	2 x 1	2	0.7	4.46 x 8.32	81
LDBS04CXUALC002C1.5S	2 x 1.5	2	0.7	4.79 x 8.98	99
LDBS04CXUALC002C2.5S	2 x 2.5	2	0.7	5.41 x 10.22	136
LDBS04CXUALC002C004S	2 x 4	2	0.7	5.98 x 11.36	181
LDBS04CXUALC002C006S	2 x 6	2	0.7	6.72 x 13.04	249
LDBS04CXUALC002C010S	2 x 10	2	0.7	7.85 x 15.85	381
LDBS04CXUALC002C016S	2 x 16	2	0.7	9.1 x 18.75	562
LDBS04CXUALC003C001S	3 x 1	1	0.7	4.3 x 10.5	108
LDBS04CXUALC003C1.5S	3 x 1.5	1	0.7	4.6 x 11.4	135
LDBS04CXUALC003C2.5S	3 x 2.5	1	0.7	5.2 x 13	188
LDBS04CXUALC003C004S	3 x 4	2	0.7	5.98 x 15.34	265
LDBS04CXUALC003C006S	3 x 6	2	0.7	6.72 x 17.56	363
LDBS04CXUALC003C010S	3 x 10	2	0.7	7.85 x 21.3	556
LDBS04CXUALC003C016S	3 x 16	2	0.7	9.1 x 25.25	820

Electrical characteristics

Current carrying capacity and maximum DC conductor resistance.

Nominal cross sectional area mm²	Reference method A* (in conduit in wall) Amp.	Reference method C* (clipped direct) Amp.	Max. DC conductor Resistance at 20˚C Ω/km
1	11.5	16	18.1
1.5	14.5	20	12.1
2.5	20	27	7.41
4	26	37	4.61
6	32	47	3.08
10	44	64	1.83
16	57	85	1.15

Ambient temperature: 30˚C

Conductor operating temperature: 70˚C

The above table is in accordance with Table 4D5 of BS 7671:2018

Note- A* For full installation method refer to Table 4A2 Installation Method 2 but for flat twin and earth cable of the 17th Edition of IEE Wiring Regulations.
C* For full installation method refer to Table 4A2 Installation Method 20 but for flat twin and earth cable of the 17th Edition of IEE Wiring Regulations.

De-Rating Factor

De-rating factor for 70˚C thermosetting insulated cable

Air Temperature	35°C	40°C	45°C	50°C	55°C
De-rating factor	0.91	0.82	0.71	0.58	0.41