CLEVELAND CABLE COMPANY

F120 Enhanced Fire Resistant Mains Cable 1kV - BS7846, BS8491, MGT, XLPE, SWA, LSZH - 25mm - 400mm

Fireproof mains cable, suitable for fixed installations such as power circuits, fire alarm systems and emergency lighting. Specifically designed to meet the stringent standards of BS8491, which includes enhanced resistance to heat and fire, direct impact of 10N and water jet as would be produced by a fire fighting unit.

Key Features

Voltage Rating
600/1000 Volts

Minimum Bending Radius
As Per Manufacturers Datasheet

UV/Ozone Resistance
Yes

Temperature Limits
Ambient Temperature -10°C to +90°C

Construction

- **Conductor**: Plain Annealed Stranded Copper Conductor
- **Insulation**: Cross Linked polyethylene (XLPE)
- **Bedding**: LSZH (Low smoke Zero Halogen)
- **Sheath**: Low smoke Zero Halogen (LSZH) to BS 7655
- **Separator**: MICA/Glass Fire Barrier Tape
- **Armour**: Galvanised Steel Wire Armour (SWA)
- **Sheath Colour**: Black

Standards

- BS7846/ BS8491 Circuit integrity : BS8519-2020 120 minutes / BS8491 acid gas emission to IEC 60754.
  Flame propagation to BS EN 50265 BS EN 50266 (IEC 60332-3)
  Smoke emission to IEC 60332-3
  BS EN 50267
  BS EN 50268
  BASEC Approved
  LPCB Approved

Core Colours

2 core - Brown, Blue

3 core - Brown, Black, Grey

4 core - Brown, Black, Grey, Blue

F120 Enhanced Fire Resistant Mains Cable 1kV - BS7846, BS8491, MGT, XLPE, SWA, LSZH - 25mm - 400mm - Dimensions

Reference	Conductor Size (mm2)	No Of Cores	Stranding(mm)	Overall Diameter(mm)	Weight(Kg/Km)	Helios	Gland Size	Solace	Thermis
FPE2X25	25	2	7/2.14	29	1640	FPC2732	32	1BC2732HT	NONE
FPE3X25	25	3	7/2.14	31.1	2070	FPC2732	32	1BC2732HT	NONE
FPE4X25	25	4	7/2.14	33.4	2410	FPC3238	40	1BC3238HT	NONE
FPE5X25	25	5	7/2.14	35.7	2810	FPC3238	40	1BC3238HT	NONE
FPE2X35	35	2	7/2.52	31.9	2130	FPC2732	32	1BC2732HT	NONE
FPE3X35	35	3	7/2.52	33.5	2480	FPC3238	40	1BC3238HT	NONE
FPE4X35	35	4	7/2.52	36.1	2920	FPC3238	40	1BC3238HT	NONE
FPE5X35	35	5	7/2.52	39.5	3170	FPC3238	40	1BC3238HT	NONE
FPE2X50	50	2	19/1.78	29.9	2030	FPC2732	32	1BC2732HT	NONE
FPE3X50	50	3	19/1.78	33.2	2630	FPC3238	40	1BC3238HT	NONE
FPE4X50	50	4	19/1.78	37.1	3280	FPC3238	40	1BC3238HT	NONE
FPE5X50	50	5	19/1.78	41.8	3850	FPC3238	40	1BC3238HT	NONE
FPE2X70	70	2	19/2.14	33.3	2580	FPC3238	40	1BC3238HT	NONE
FPE3X70	70	3	19/2.14	37	3400	FPC3238	40	1BC3238HT	NONE
FPE4X70	70	4	19/2.14	45.5	4570	FPC3846	50	1BC4551HT	2BC038048HT
FPE5X70	70	5	19/2.14	49.5	5670	FPC3846	50	1BC4551HT	2BC038048HT
FPE2X95	95	2	19/2.52	37.2	3440	FPC3238	50	1BC3238HT	NONE
FPE3X95	95	3	19/2.52	41.2	4550	FPC3846	50S	1BC3845HT	2BC038048HT
FPE4X95	95	4	19/2.52	46.4	5720	FPC4651	50	1BC4551HT	2BC038048HT
FPE2X120	120	2	37/2.03	39.9	4050	FPC3846	50S	1BC3845HT	2BC038048HT
FPE3X120	120	3	37/2.03	44.4	5410	FPC3846	50S	1BC3845HT	2BC038048HT
FPE4X120	120	4	37/2.03	51.2	7270	FPC5157	50	1BC5158HT	2BC048058HT
FPE2X150	150	2	37/2.25	43.1	4740	FPC3846	50S	1BC3845HT	2BC038048HT
FPE3X150	150	3	37/2.25	49.3	6800	FPC4651	50	1BC4551HT	2BC048058HT
FPE4X150	150	4	37/2.25	55.7	8580	FPC5157	63S	1BC5158HT	2BC048058HT
FPE2X185	185	2	37/2.52	48.1	6050	FPC4651	50	1BC4551HT	2BC048058HT
FPE3X185	185	3	37/2.52	53.7	8140	FPC5157	63S	1BC5158HT	2BC048058HT
FPE4X185	185	4	37/2.52	60.8	10300	FPC5765	63	1BC5865HT	2BC058070HT
FPE2X240	240	2	61/2.25	52.4	7390	FPC5157	50	1BC5158HT	2BC048058HT
FPE3X240	240	3	61/2.25	58.8	10040	FPC5765	63	1BC5865HT	2BC058070HT
FPE4X240	240	4	61/2.25	66.5	12800	NONE	75S	1BC6571HT	2BC058070HT
FPE2X300	300	2	61/2.52	56.5	8760	FPC5157	63S	1BC5158HT	2BC048058HT

Reference	Conductor Size (mm2)	No Of Cores	Stranding(mm)	Overall Diameter(mm)	Weight(Kg/Km)	Helios	Gland Size	Solace	Thermis
FPE3X300	300	3	61/2.52	63.5	12020	FPC5765	63	1BC5865HT	2BC058070HT
FPE4X300	300	4	61/2.52	72.1	15410	NONE	75	NONE	2BC070083HT
FPE3X400	400	3	61/2.85	70.1	14820	NONE	75S	1BC6571HT	2BC070083HT
FPE4X400	400	4	61/2.85	81.3	19910	NONE	90	NONE	2BC070083HT

Multicore 90°C thermosetting insulated and thermoplastic sheathed cables, non-armoured (COPPER CONDUCTORS) Reproduced from *BS7671:2018 Wiring Regulation*

TABLE 4E2A

CURRENT-CARRYING CAPACITY (amperes)

Ambient temperature: 30°C
Conductor operating temperature:90°C

Conductor 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)	
	1 two-core cable*, single-phase AC or DC	1 three- or four-core cable*, three-phase AC	1 two-core cable*, single-phase AC or DC	1 three- or four-core cable*, three-phase AC	1 two-core cable*, single-phase AC or DC	1 three- or four-core cable*, three-phase AC	1 two-core cable*, single-phase AC or DC	1 three- or four-core cable*, three-phase AC
(mm2)	(A)	(A)	(A)	(A)	(A)	(A)	(A)	(A)
1	14.5	13	17	15	19	17	21	18
1.5	18.5	16.5	22	19.5	24	22	26	23
2.5	25	22	30	26	33	30	36	32
4	33	30	40	35	45	40	49	42
6	42	38	51	44	58	52	63	54
10	57	51	69	60	80	71	86	75
16	76	68	91	80	107	96	115	100
25	99	89	119	105	138	119	149	127
35	121	109	146	128	171	147	185	158
50	145	130	175	154	209	179	225	192
70	183	164	221	194	269	229	289	246
95	220	197	265	233	328	278	352	298
120	253	227	305	268	382	322	410	346
150	290	259	334	300	441	371	473	399
185	329	295	384	340	506	424	542	456
240	386	346	459	398	599	500	641	538
300	442	396	532	455	693	576	741	621
400	-	-	625	536	803	667	865	741

* with or without a protective conductor

1. Where it is intended to connect the cables in this table to equipment or accessories designed to operate at a temperature lower than the maximum operating temperature of the cable, the cables should be rated at the maximum operating temperature of the equipment or accessory (see Regulation 512.1.5).
2. Where it is intended to group a cable in this table with other cables, the cable should be rated at the lowest of the maximum operating temperatures of any of the cables in the group (see Regulation 512.1.5).
3. For cables having flexible conductors see section 2.4 of this appendix for adjustment factors for current-carrying capacity and voltage drop.

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TABLE 4E2B

VOLTAGE DROP (per ampere per metre)

Conductor operating temperature:90°C

Conductor cross- sectional area	Two-core cable DC	Two-core cable, single-phase AC			Three- or four-core cable, three-phase AC		
(mm2)	(mV/A/m)	(mV/A/m)			(mV/A/m)		
1	46	46			40		
1.5	31	31			27		
2.5	19	19			16		
4	12	12			10		
6	7.9	7.9			6.8		
10	4.7	4.7			4.0		
16	2.9	2.9			2.5		
		R	X	Z	R	X	Z
25	1.85	1.85	0.160	1.90	0.160	0.140	1.65
35	1.35	1.35	0.151	1.35	1.15	0.135	1.15
50	0.98	0.99	0.155	1.00	0.86	0.1351	0.87
70	0.67	0.67	0.150	0.69	0.59	0.130	0.60
95	0.49	0.50	0.150	0.52	0.43	0.130	0.45
120	0.39	0.40	0.145	0.42	0.34	0.130	0.37
150	0.31	0.32	0.145	0.35	0.28	0.125	0.30
185	0.25	0.26	0.145	0.29	0.22	0.125	0.26
240	0.195	0.200	0.140	0.24	0.175	0.125	0.21
300	0.155	0.160	0.140	0.21	0.140	0.120	0.185
400	0.120	0.130	0.140	0.115	0.115	0.120	0.165

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