



## DUCAB FLAMBICC 6

**Ducab FlamBICC 6** (BS8519 Category 3 Power Cables) are special fire performance cables designed to operate during highly onerous fire conditions. Designed as per BS 7846 standard and LPCB approved for F120 fire test as per BS 8491. These are also approved to BASEC compliance.

As described in BS 8519, fire resistant cables are classified for Life Safety and Fire Fighting system with varying fire survival time of 30 minutes, 60 minutes or 120 minutes. The FlamBICC 6 cables fully comply with 120 minutes fire survival test. During the F120 fire survival test as per BS 8491 the same cable sample is subjected to fire + mechanical shock with direct impact on the cable water jet hitting the cable.

All Fire Fighting cable systems are required to function for 120 minutes.

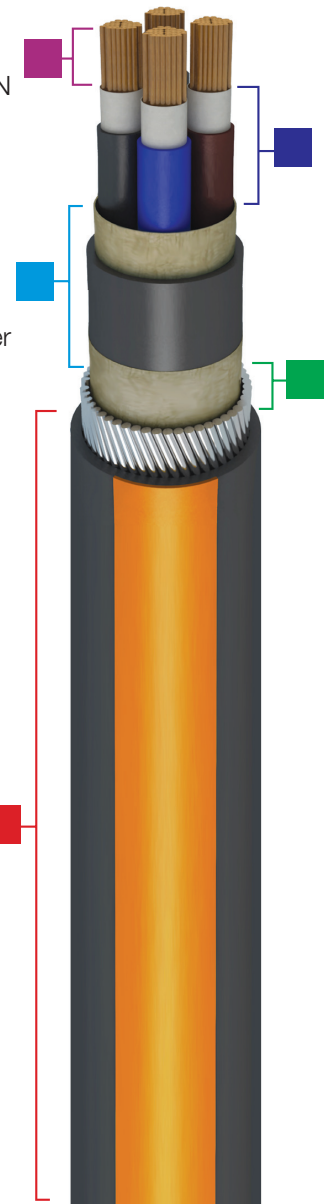
### CONSTRUCTION

- **Conductor:** Plain annealed Copper, stranded class 2 conductor to BS EN 60228
- **Dual Insulation:** Special grade of Mica Glass tape + extruded XLPE
- **Bedding:** LSZH along with glass fiber tape/s at appropriate layers
- **Armour:** Galvanised steel wire armoured
- **Outer sheath:** Robust LSZH sheath with Black colour as standard, other colours upon request

**Optional:** Longitudinal ORANGE STRIPE Identification on outer sheath.

### CHARACTERISTICS

General:	Ducab FlamBICC 6 are armoured cables designed as per BS 7846 to meet F120 fire test as per BS 8491.
Approvals:	LPCB and BASEC approved for 3 and 4 core cable designs
Voltage grade:	600 / 1000 V
Fire resistance:	F120 as per BS 8491
Flame propagation:	BS EN / IEC 60332-1 and BS EN / IEC 60332-3 Categories A, B & C
Acid gas emission:	Less than 0.5% when tested to IEC 60754 & BS EN 50267
Low smoke emission:	As per IEC 61034 & BS EN 50268
Cable Operating temperature:	Maximum 90°C
Short circuit temperature:	Maximum 250°C
Bending radius:	6 x Cable diameter for circular and 8 x Cable diameter for sector shaped cables



## TECHNICAL DATA OF 3 CORE CABLES

Fire Performance cables. Three Core Armoured Cable 600/1000 V Grade with stranded copper conductors (BS 7846)















Nominal conductor area	Approximate Diameter			Approximate cable weight	Maximum conductor resistance at 20° C	Maximum armour resistance at 20° C	Current rating on perforated cable trays/free air	Voltage drop (3Φ AC)
	Under armour	Over armour	Overall diameter					
mm <sup>2</sup>	mm	mm	mm	Kg/Km	Ohm/Km	Ohm/Km	Amp	mV/A/m
6*	16	17.8	21.8	940	3.08	6.7	56	6.8
10*	16	18.5	21.5	1100	1.83	4	78	4
16*	18.6	21.5	23.6	1300	1.15	3.5	99	2.6
25*	22	25.2	27.9	1850	0.727	2.5	131	1.6
35*	24.4	27.6	30.5	2260	0.524	2.3	162	1.2
50	25.9	29	31.8	2680	0.387	2	197	0.87
70	27.8	30.9	33.9	3385	0.268	1.8	251	0.61
95	31.6	35.5	38.9	4560	0.193	1.3	304	0.45
120	34.8	38.7	42.3	5450	0.153	1.2	353	0.36
150	38.8	43.7	47.4	6910	0.124	0.78	406	0.3
185	43.1	48	51.9	8285	0.0991	0.71	463	0.25
240	47.4	52.3	56.6	10210	0.0754	0.63	546	0.21
300	53.9	58.8	63.3	12390	0.0601	0.58	628	0.19
400	59.2	64.1	68.9	15155	0.047	0.52	728	0.17

\* Circular conductors, all others are sector shaped

Installation condition for above rating:

- Ambient Air Temperature 30°C
- Conductor operating temperature 90°C

### CORE IDENTIFICATIONS

CORES	STANDARD	ALTERNATIVE*
3 Cores	 Red  Yellow  Blue	 Brown  Black  Grey
4 Cores	 Red  Yellow  Blue  Black	 Blue  Brown  Black  Grey



## TECHNICAL DATA OF 4 CORE CABLES

Fire performance cables. Four Core Armoured Cable 600/1000 V Grade with stranded copper conductors (BS 7846)

Nominal conductor area	Approximate Diameter			Approximate cable weight	Maximum conductor resistance at 20° C	Maximum armour resistance at 20° C	Current rating on perforated cable trays/free air	Voltage drop (3φ AC)
	Under armour	Over armour	Overall diameter					
mm <sup>2</sup>	mm	mm	mm	Kg/Km	Ohm/Km	Ohm/Km	Amp	mV/A/m
6*	15.4	17.9	21.9	1000	3.08	7.7	56	6.8
10*	17.6	20.1	22.4	1230	1.83	6.8	78	3.7
16*	19.8	22.3	24.8	1580	1.15	4.3	99	2.6
25*	24.4	27.6	30.3	2385	0.727	3.7	131	1.6
35*	27	30.2	33.1	2930	0.524	3.1	162	1.2
50	27.5	30.6	33.6	3230	0.387	2.3	197	0.87
70	31.7	35.6	39	4520	0.268	2	251	0.61
95	35.4	39.3	42.9	5700	0.193	1.8	304	0.45
120	39	43.9	47.6	7260	0.153	1.2	353	0.36
150	43.7	48.6	52.5	8610	0.124	1.1	406	0.3
185	48.2	53.1	57.4	10370	0.0991	0.76	463	0.25
240	53.5	58.4	62.9	12960	0.0754	0.68	546	0.21
300	59.4	64.3	69.1	15690	0.0601	0.61	628	0.19
400	67.8	73.9	79.3	20300	0.047	0.54	728	0.17

\* Circular conductors, all others are sector shaped

Installation condition for above rating:

- Ambient Air Temperature 30°C
- Conductor operating temperature 90°C