

# FP400<sup>®</sup>

FIRE RESISTANT ARMoured POWER CABLE - BS 7846 F2 600/1000 V



Certificate No 077b  
Certificate No 517b



## CABLE DESCRIPTION

### Conductor

Plain annealed copper stranded conductor meets the requirements of: BS EN 60228 Class 2

### Insulation

Mineral ceramic (Mica/Glass) fire resistant tape. 90°C cross - linked insulation.

### Bedding

Extruded LSOH

### Armour

Single layer of galvanised steel wires.

### Sheath

Extruded LSOH.

### Key Applications

- > Fire resistant, low fire hazard armoured power and control cable
- > Use for fire performance circuits in public buildings

### British Standards

- > BS 6387 CWZ
- > BS 7846 F2
- > London Underground 1.085 Approved Product Register (Section 12)
- > BASEC and LPCB approved

### Core identification

HARMONISED CORE IDENTIFICATION:

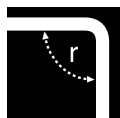
- o brown-blue
- o o brown-black-grey
- o o o blue-brown-black-grey
- 7-37 cores white with printed numbers

NON HARMONISED CORE IDENTIFICATION:

- o red-black
- o o red-yellow-blue
- o o o black-red-yellow-blue
- Non harmonised colours to special order.



Temperature Range  
-25 to +90°C



Bending Radius  
8D



Mechanical Impact  
High



Fire Performance  
BSEN60332-1-2  
BSEN60332-3-24



Flexibility  
Rigid



Halogen Free  
BSEN60754-1



Low Smoke Emissions  
BSEN61034-2



Fire Resistant  
BS6387 CWZ

Nominal cross sectional area mm <sup>2</sup>	Approximate overall diameter mm	Approximate diameter under armour mm	Nominal diameter of armour wires mm	Approximate cable weight kg/km	Maximum conductor resistance at 20°C ohms/km	Short Circuit rating (1 sec) of conductor KA	Current rating Three phase AC Clipped direct Amps	Current rating Three phase AC Free Air Amps	Volt drop Three phase AC mV/A/m
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### Three Core

1.5	13.5	9.2	0.9	350	12.1	0.20	23	25	27
2.5	15.0	10.5	0.9	430	7.41	0.35	31	33	16
4	16.0	11.5	0.9	510	4.61	0.57	42	44	10
6	17.5	12.9	0.9	620	3.08	0.86	53	56	6.8
10	21.0	15.2	1.25	950	1.83	1.4	73	78	4.0
16	23.0	16.7	1.25	1200	1.15	2.2	94	99	2.5
25	27.0	20.4	1.6	1800	0.727	3.6	124	131	1.65
35	30.0	23.2	1.6	2200	0.524	5.0	154	162	1.15
50	31.0	23.8	1.6	2500	0.387	7.1	187	197	0.87
70	34.0	27.0	1.6	3200	0.268	10.0	238	251	0.60
95	38.0	30.0	2.0	4300	0.193	13.6	289	304	0.45
120	41.0	33.1	2.0	5200	0.153	17.2	335	353	0.37
150	46.0	37.0	2.5	6500	0.124	21.4	386	406	0.30
185	51.0	41.4	2.5	7900	0.0991	26.5	441	463	0.26
240	56.0	46.1	2.5	9900	0.0754	34.3	520	546	0.21
300	61.0	50.6	2.5	11900	0.0601	42.9	599	628	0.185
400	67.0	56.3	2.5	14600	0.0470	57.2	673	728	0.165

### Four Core

1.5	14.5	10.2	0.9	395	12.1	0.20	23	25	27
2.5	16.5	11.7	0.9	495	7.41	0.35	31	33	16
4	17.5	12.9	0.9	590	4.61	0.57	42	44	10
6	20.0	14.4	1.25	840	3.08	0.86	53	56	6.8
10	22.0	16.8	1.25	1100	1.83	1.4	73	78	4.0
16	24.0	18.4	1.25	1400	1.15	2.2	94	99	2.5
25	30.0	22.6	1.6	2100	0.727	3.6	124	131	1.65
35	33.0	25.7	1.6	2700	0.524	5.0	154	162	1.15
50	34.0	27.3	1.6	3100	0.387	7.1	187	197	0.87
70	38.0	30.3	2.0	4300	0.268	10.0	238	251	0.60
95	42.0	33.8	2.0	5400	0.193	13.6	289	304	0.45
120	47.0	37.8	2.5	6900	0.153	17.2	335	353	0.37
150	52.0	41.9	2.5	8200	0.124	21.4	386	406	0.30
185	57.0	46.7	2.5	10000	0.0991	26.5	441	463	0.26
240	62.0	52.2	2.5	12500	0.0754	34.3	520	546	0.21
300	68.0	57.3	2.5	15200	0.0601	42.9	599	628	0.185
400	76.0	64.2	3.15	19600	0.0470	57.2	673	728	0.165

Nominal cross sectional area mm <sup>2</sup>	Approximate overall diameter mm	Approximate diameter under armour mm	Nominal diameter of armour wires mm	Approximate cable weight kg/km	Maximum conductor resistance at 20°C ohms/km	Short Circuit rating (1 sec) of conductor KA	Current rating Three phase AC Clipped direct Amps	Current rating Three phase AC Free Air Amps	Volt drop Three phase AC mV/A/m
<b>Five Core</b>									
1.5	16.0	11.2	0.9	450	12.10	0.2	23.00	29.00	27.0
2.5	17.5	12.9	0.9	550	7.41	0.4	31.00	39.00	16.0
4	19.0	14.2	0.9	665	4.61	0.6	42.00	52.00	10.0
6	21.5	15.9	1.25	950	3.08	0.9	53.00	66.00	6.8
10	24.0	18.2	1.25	1250	1.83	1.4	73.00	90.00	4.0
16	27.0	20.3	1.6	1750	1.15	2.2	94.00	115.00	2.5
25	32.0	25.0	1.6	2450	0.73	3.6	124.00	152.00	1.7
35	36.0	28.4	1.6	3100	0.52	5.0	154.00	188.00	1.2

No LPCB approval for 5 Core, BASEC approval for 1.5-10mm<sup>2</sup> inclusive

Nominal cross sectional area mm <sup>2</sup>	Approximate overall diameter mm	Approximate diameter under armour mm	Nominal diameter of armour wires mm	Approximate cable weight kg/km	Maximum conductor resistance at 20°C ohms/km	Current rating DC or Single phase AC Clipped direct Amps	Current rating DC or Single phase AC Free Air Amps	Volt drop DC mV/A/m	Volt drop Single phase AC mV/A/m
<b>Two Core</b>									
1.5	13.0	8.6	0.9	320	12.1	27	29	31	31
2.5	14.0	9.9	0.9	380	7.41	36	39	19	19
4	15.0	10.8	0.9	445	4.61	49	52	12	12
6	16.5	12.1	0.9	540	3.08	62	66	7.9	7.9
10	19.0	14.3	0.9	720	1.83	85	90	4.7	4.7
16	21.0	15.6	0.9	990	1.15	110	115	2.9	2.9
25	25.0	18.9	1.25	1350	0.727	146	152	1.85	1.9
35	28.0	21.7	1.6	1900	0.524	180	188	1.35	1.35
50	28.0	21.3	1.6	1950	0.387	219	228	0.98	1.00
70	32.0	24.4	1.6	2450	0.268	279	291	0.67	0.69
95	33.0	25.3	2.0	3200	0.193	338	354	0.49	0.52
120	37.0	28.7	2.0	3800	0.153	392	410	0.39	0.42
150	39.0	31.2	2.0	4500	0.124	451	472	0.31	0.35
185	44.0	34.7	2.5	5800	0.0991	515	539	0.25	0.29
240	49.0	39.4	2.5	7100	0.0754	607	636	0.195	0.24
300	53.0	40.5	2.5	8600	0.0601	698	732	0.155	0.21
400	58.0	48.2	2.5	10500	0.0470	787	847	0.120	0.19

Circular conductor 1.5 - 35mm<sup>2</sup> .

Shaped conductor 50mm<sup>2</sup> and above.

Current ratings in accordance with BS 7671/IET Wiring Regulations.

The tabulated ratings are based upon a 30°C ambient temperature and 90°C operating temperature.

## Installation

Minimum recommended installation temperature 0°C.

Suitable for indoor and outdoor installations. Should be installed in accordance with BS 7671/IET Wiring Regulations or any other appropriate national regulations. Suitable for direct burial, trough, tray, ladder or other installations requiring a robust armoured cable.

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DERRICK**  
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For further information please  
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