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Firetuf Powerplus Cables

MEETING THE DEMANDS OF TODAY'S FIRE ENGINEERING SYSTEMS

FIRETUF® OHLS® CABLES

FIRETUF® powerplus

By utilisation of high performance materials, Draka has now enhanced the circuit integrity performance of this design of 600/1000V SWA armoured power cable so as to meet the most onerous requirements of BS7346-6 : 2005 - "Components for smoke and heat control systems - Part 6: specification for cable systems". The new standard defines fire performance requirements of various types of fire rated cables in maintaining circuit integrity for life safety, fire fighting and property protection systems.

Fire Safety systems include automatic fire suppression facilities, fire detection and alarms, fire compartmentalisation, smoke control and ventilation, sprinkler and wet risers, ventilation and shutters, fire fighting lifts etc.

All these systems require secure power supplies in the event of fire and the result of emphasis on the performance of the existing generation of power cables has highlighted the need for enhanced performance.

Firetuf Powerplus meets the specified requirement of the constructional standard BS7846 and in providing enhanced circuit integrity preserves the handling and installation characteristics of a wire armoured design.

The Building Regulations Approved Document B on fire safety was revised on 1st April 2007 and this now specifies fire performance in accordance with BS7346-6.

Firetuf Powerplus can be specified with confidence in meeting the demanding performance required to support modern fire engineering systems in today's buildings.

Construction

Conductors:	Plain annealed stranded copper conductors. For sizes up to and including 35mm² these are circular. Shaped conductors start at 50mm² with the exception of 2 core cables where shaped conductors start at 25mm².
Insulation:	Mica-glass fire-resistant tapes, covered by an extruded layer of cross-linked polyethylene.
Binder:	Polyester tape.
Bedding:	An extruded layer of Zero Halogen, Low Smoke (OHLS®) compound.
Armour:	Single layer of galvanised steel wires.
Sheath:	Thermoplastic Zero Halogen, Low Smoke (OHLS®) compound.

Physical Characteristics

Voltage rating(Uo/U): 600/1000V.

Operating temp:	-40˚C to +90˚C (The cable should not be flexed when either the ambient or cable temperature is below 0˚C).
Min. bending radius:	8 x overall diameter of cable.

Note: In the event of a fire, the increase in impedance may require consideration to the installation of larger conductor sizes, to accommodate motor starting loads and the performance of protective conductors.

Standards Achieved

Circuit integrity:	BS7346-6 120 mins.
Acid gas emission:	IEC 60754, BS EN 50267.
Flame propagation:	IEC 60332-3, BS EN 50265, BS EN 50266.
Smoke emission:	IEC 61034, BS EN 50268.

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Firetuf Powerplus Technical Data

2 Core

Nominal area of conductor mm^2	Insulation thickness mm	Nominal armour wire dia. mm	Approx. dia. under armour mm	Approx. overall diameter mm	Approx. cable weight kg/km	Max conductor resistance DC@20°C Ω/km	Max conductor resistance AC@90°C Ω/km	Reactance @50Hz Ω/km	Impedance AC@90°C Ω/km	Star capacitance μF/km	Max. arm. resistance at 20°C Ω/km
10*	0.7	1.25	15.0	20.8	830	1.830	2.333	0.093	2.335	0.32	6.0
16*	0.7	1.25	16.7	23.2	1000	1.150	1.466	0.088	1.469	0.35	3.8
25	0.9	1.25	16.5	23.2	1100	0.727	0.927	0.082	0.930	0.38	3.7
35	0.9	1.6	18.5	26.1	1550	0.524	0.668	0.077	0.673	0.42	2.5
50	1.0	1.6	20.8	28.6	1850	0.387	0.494	0.076	0.500	0.45	2.3
70	1.1	1.6	23.8	31.8	2450	0.268	0.342	0.075	0.349	0.49	2.0
95	1.1	2.0	26.9	35.9	3350	0.193	0.247	0.074	0.258	0.55	1.4
120	1.2	2.0	29.7	38.9	3900	0.153	0.196	0.072	0.209	0.57	1.3

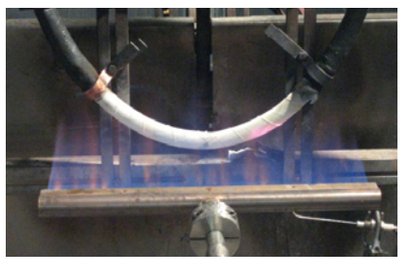
3 Core

Nominal area of conductor mm^2	Insulation thickness mm	Nominal armour wire dia. mm	Approx. dia. under armour mm	Approx. overall diameter mm	Approx. cable weight kg/km	Max conductor resistance DC@20°C Ω/km	Max conductor resistance AC@90°C Ω/km	Reactance @50Hz Ω/km	Impedance AC@90°C Ω/km	Star capacitance μF/km	Max. arm. resistance at 20°C Ω/km
10*	0.7	1.25	16.1	22.4	1080	1.830	2.333	0.093	2.335	0.32	4.0
16*	0.7	1.25	18.0	24.5	1310	1.150	1.466	0.088	1.469	0.35	3.6
25*	0.9	1.6	21.0	28.4	1800	0.727	0.927	0.082	0.930	0.37	2.5
35*	0.9	1.6	23.3	30.9	2200	0.524	0.668	0.077	0.673	0.42	2.3
50	1.0	1.6	23.8	31.4	2450	0.387	0.494	0.076	0.500	0.45	2.0
70	1.1	1.6	27.3	35.1	3200	0.268	0.342	0.075	0.349	0.49	1.8
95	1.1	2.0	30.9	37.9	4450	0.193	0.247	0.074	0.258	0.55	1.3
120	1.2	2.0	34.1	43.3	5300	0.153	0.196	0.072	0.209	0.57	1.2

4 Core

Nominal area of conductor mm^2	Insulation thickness mm	Nominal armour wire dia. mm	Approx. dia. under armour mm	Approx. overall diameter mm	Approx. cable weight kg/km	Max conductor resistance DC@20°C Ω/km	Max conductor resistance AC@90°C Ω/km	Reactance @50Hz Ω/km	Impedance AC@90°C Ω/km	Star capacitance μF/km	Max. arm. resistance at 20°C Ω/km
10*	0.7	1.25	17.8	24.1	1260	1.830	2.333	0.093	2.335	0.32	3.7
16*	0.7	1.25	19.9	26.4	1640	1.150	1.466	0.088	1.469	0.35	3.2
25*	0.9	1.6	23.2	30.6	2150	0.727	0.927	0.082	0.930	0.37	2.3
35*	0.9	1.6	25.8	33.4	2650	0.524	0.668	0.077	0.673	0.42	2.0
50	1.0	1.6	27.2	35.0	3100	0.387	0.494	0.076	0.500	0.45	1.8
70	1.1	2.0	31.7	40.7	4400	0.268	0.342	0.075	0.349	0.48	1.2
95	1.1	2.0	35.5	44.7	5650	0.193	0.247	0.074	0.258	0.55	1.1
120	1.2	2.5	34.7	50.1	7250	0.153	0.196	0.072	0.209	0.55	0.76

Shaped conductors unless otherwise stated.
* Circular conductors



Firetuf Powerplus designs achieve the highest rating of 120 minutes when subjected to integrated testing involving direct impact and high pressure water spray. The details of this test are currently documented in Annex B of BS7346, but will soon be published as a stand alone standard BS8491.

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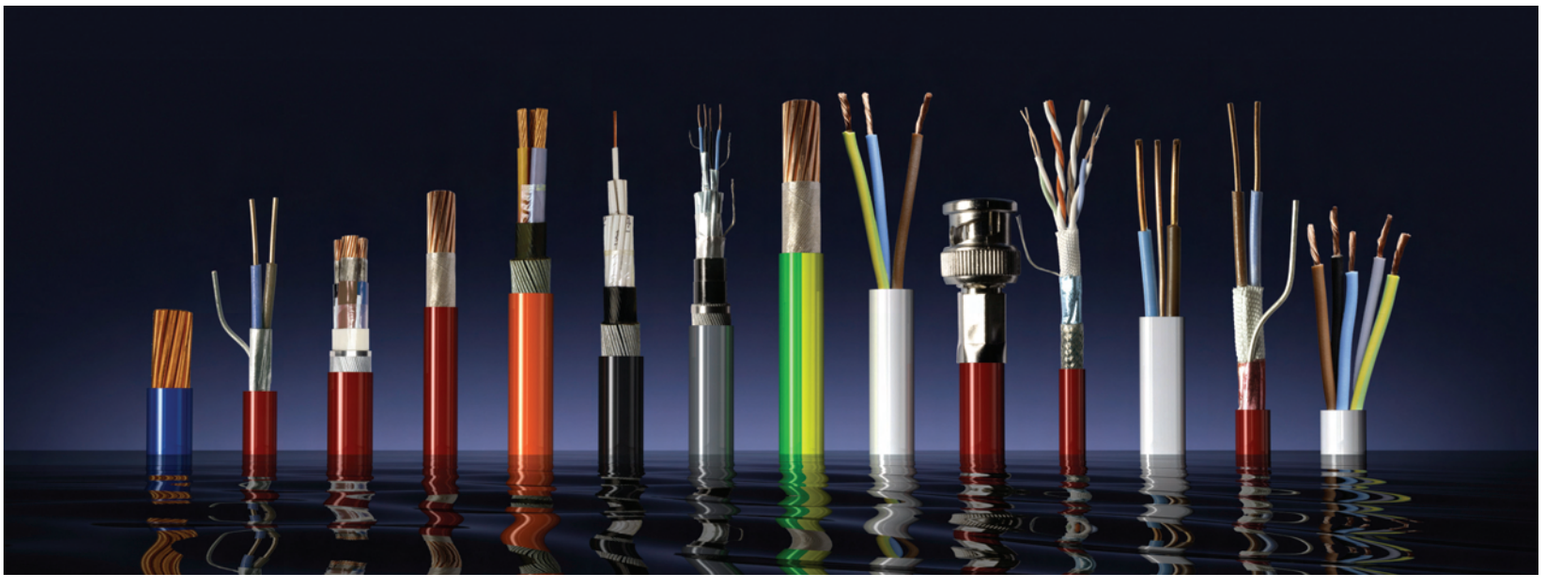
Nobody knows more about cable



Authoratitive, dynamic and forward thinking, Draka in the UK has the expertise, experience and innovation to develop market-leading products and a customer driven commitment to deliver excellent service to the market.

Draka's extensive range of cabling products are readily available through an efficient network of wholesalers, distributors and sales offices serving a diverse range of industries and applications. We are founded on strong values and across our business we never lose sight of the fact that our products are ultimately delivering power for people to live their lives comfortably, efficiently and risk free.

Never before has specifying the right product for the right application been so important and in specifying Draka you can be safe in the knowledge that you are choosing the world's most trusted cable brand.

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The world's most trusted cable brand

Draka Cableteq | Low Voltage
Draka UK Limited, P.O. Box 6500
Alfreton Road, Derby, DE21 4ZH, UK
Tel: +44 (0)1332 345431 Fax: +44 (0)1332 331237
email: firetuf@draka.com

www.drakauk.com

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