

D12b: UC^{FIBRE} I/O DI LSHF E_{ca} ES9

Universal distribution cable, 2-24f, glass yarns, FireBur® sheath.



Eca
CPR

GENERAL INFO

This distribution or mini-break-out cable can be used for many indoor applications and outdoor applications. The cable features Draka ES9 tight buffer. Typical cable applications include: LAN and WAN backbones, central office interconnections, backbones in data centres, and many other. The cable is suited for installation in ducts and on trays. The cable features an UV stabilised, water and moisture resistant FireBur® sheathing, the cable is thus well suited for outdoor runs; but is not longitudinal waterblocked.

CABLE FEATURES

- Fiber optic cable as mini breakout design for structured cabling.
- The cable is UV-resistant.
- The jacket is made of halogen-free, flame-retardant material according to IEC 60332-1-2 and Euro fire class Eca.
- Use outdoors, both in direct burial (in sand bed) and in ducts, and as a flame-retardant cable indoors.
- The fiber optic cable exceeds the requirements of EN50173-1, ISO/IEC11801 and EN/IEC60794-2.

More information on fiber optic cable applications: [read more](#)

Latest version of this data sheet is available for download: [ProductFamily238954](#)

CERTIFICATIONS AND DESIGN STANDARDS



ISO/IEC 11801

EN 50173

IEC 60794-1-1

IEC 60794-1-21

IEC 60794-1-22

Class Eca

EN 50575

Generic telecom cabling for customer premises

Information technology - Generic cabling systems

Generic Specification Fibre Optic Cables

Mechanical Test Methods

Environmental Test Procedures

Common test methods for cables under fire conditions

Cables in construction works subject to reaction to fire

APPLICATION PROPERTIES

Resistant to UV

Outdoor installation With rodent protection

Operation temperature (min) [°C]*

Installation temperature (min) [°C]

Storage temperature (min) [°C]

Bending radius (rule)

UV stabilised

No

-20 and (max) [°C] 60

-20 and (max) [°C] 60

-30 and (max) [°C] 60

During installation (loaded) = 20xOD, Permanent (unloaded) = 10xOD

*Temperature range recommended for cable installation, operation and storage tested according to the IEC 60794-1-22 F1.

CABLE CONSTRUCTION

Type of tube	2 - 24 tightly buffered fibres 900 µm ± 50 µm
Longitudinal water blocking cable	No
Material outer sheath	Low smoke zero halogen, FireBur®
Cable shape	Round
Cable marking example	Draka UCFIBRE I/O DI LSHF ES9 'Fibre count' 'Fibre type' 'Fibre brand' 'Item No' 'Factory code' 'Batch Number' 'Meter mark' U-V(ZN)H 'Fibre count' 'Fibre family' 'Mode field diameter' /125 'Transmission Class'

IDENTIFICATION

Tight buffer colour code	1 Red	13 Red w/mark every 70mm
<i>in accordance with IEC 60794-3 and VDE 0888 read more</i>	2 Green	14 Green w/mark every 70mm
<i>* Fibre is uncoloured.</i>	3 Blue	15 Blue w/mark every 70mm
	4 Yellow	16 Yellow w/mark every 70mm
	5 White	17 White w/mark every 70mm
	6 Grey	18 Grey w/mark every 70mm
	7 Brown	19 Brown w/mark every 70mm
	8 Violet	20 Violet w/mark every 70mm
	9 Turquoise	21 Turquoise w/mark every 70mm
	10 Black	22 White w/mark every 35mm
	11 Orange	23 Orange w/mark every 70mm
	12 Pink	24 Pink w/mark every 70mm

Sheath color	Cable with SM fibres: BendBrightXS G.657.A2, BendBright G.657.A1 Yellow, RAL 1018 Cable with mixed fibre types (hybrid) Blue, RAL 5015 Cable with OM1 Grey, RAL 7037 Cable with MaxCap-BendBright-OM2 Orange, RAL 2009 Cable with MaxCap-BendBright-OM3 Aqua, RAL 6027 Cable with MaxCap-BendBright-OM4 Erika-Violet, RAL 4003 Cable with BendBright WideCap-OM5 Lime-Green, RAL 6039
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MECHANICAL PROPERTIES

Crush test	IEC 60794-1-21 E3	1,000 N/10cm
Impact test	IEC 60794-1-21 E4	10 N·m
Torsion test	IEC 60794-1-21 E7	5 cycles ±1turn
Kink test	IEC 60794-1-21 E10	The cables do not form a kink when a loop is drawn together to a diameter 12 times the cable nominal diameter.

FIRE PROPERTIES

Flame retardant	Yes
Reaction-to-fire class (acc. EN 13501-6)	Eca

CABLE DETAILS

Number of fibres	Nominal outer diameter [mm]	Nominal thickness outer sheath [mm]	Permanent tensile strength [N]	Max. tensile strength during installation [kN]	Cable weight [kg/km]	Fire load [MJ/km]
2	6.2	1	500	1.5	31.7	690
4	6.4	1	500	1.5	34.4	750
6	6.6	1	500	1.5	37	794
8	6.8	1	500	1.5	39.6	854
12	7.3	1	500	1.5	44.4	932
24	8.6	1	500	2.4	65.2	1,380

* Maximum tensile strength during installation in accordance with IEC 60794-1-21 E1.

ORDERING DETAILS

Product name	Colour outer sheath	Number of fibres	Category (fibre)	Fibre datasheet	DOP number	SAP code
UCFIBRE I/O DI LSHF ES9 4 SM2D BL	Blue	4	OS2	C17	1004748	60018903
UCFIBRE I/O DI LSHF ES9 6 SM2D BL	Blue	6	OS2	C17	1004749	60018906
UCFIBRE I/O DI LSHF ES9 12 SM2D BL	Blue	12	OS2	C17	1004750	60018910
UCFIBRE I/O DI LSHF ES9 24 SM2D BL	Blue	24	OS2	C17	1002448	60018912
UCFIBRE I/O DI LSHF ES9 4 OM2B BL	Blue	4	OM2	C34	1004743	60018880
UCFIBRE I/O DI LSHF ES9 6 OM2B BL	Blue	6	OM2	C34	1002771	60011421
UCFIBRE I/O DI LSHF ES9 8 OM2B BL	Blue	8	OM2	C34	1004745	60018883
UCFIBRE I/O DI LSHF ES9 12 OM2B BL	Blue	12	OM2	C34	1004746	60018884
UCFIBRE I/O DI LSHF ES9 24 OM2B BL	Blue	24	OM2	C34	1004747	60018885
UCFIBRE I/O DI LSHF ES9 2 OM3B BL	Blue	2	OM3	C31	1002825	60019274
UCFIBRE I/O DI LSHF ES9 6 OM3B BL	Blue	6	OM3	C31	1002820	60018905
UCFIBRE I/O DI LSHF ES9 8 OM3B BL	Blue	8	OM3	C31	1004744	60018882
UCFIBRE I/O DI LSHF ES9 12 OM3B BL	Blue	12	OM3	C31	1002823	60018933
UCFIBRE I/O DI LSHF ES9 24 OM3B BL	Blue	24	OM3	C31	1002446	60011423
UCFIBRE I/O DI LSHF ES9 6 OM4B BL	Blue	6	OM4	C32	1002830	60019673
UCFIBRE I/O DI LSHF ES9 12 OM4B BL	Blue	12	OM4	C32	1002824	60018942
UCFIBRE I/O DI LSHF ES9 24 OM4B BL	Blue	24	OM4	C32	1002449	60018943
UCFIBRE I/O DI LSHF ES9 4 MM61 BL	Blue	4	OM1	C02	1004813	60058403
UCFIBRE I/O DI LSHF ES9 6 MM61 BL	Blue	6	OM1	C02	1002772	60012489
UCFIBRE I/O DI LSHF ES9 12 MM61 BL	Blue	12	OM1	C02	1002774	60018791

*DoP Numbers are per product code and any DoP number proves CPR approval for the cable. DoP files can be downloaded from the website: [DoP](#)

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