

D34: UC^{FIBRE} I/O DI LSHF-FR C_{ca} ES9

I/O distribution cable, 2-24f, glass yarns, FireRes® sheath



GENERAL INFO

This distribution or mini-break-out cable can be used for many indoor and limited outdoor applications. Typical cable applications include: LAN and WAN backbones, central office interconnections, backbones in data centres, and many other. Glass yarns provide a degree of rodent protection. This cable features high flame retardance with Cca approval. The cable is well suited for installation in ducts and on trays. The cable features UV stabilised FireRes® sheathing, water-blocked. This cable features Draka's ES9 easy strippable tight buffer.

CABLE FEATURES

- Fiber optic cable as mini breakout design for structured cabling.
- The cable is metal-free and longitudinally water blocked.
- It features Draka's ES9 easy strippable tight buffer.
- The jacket is made of halogen-free, flame-retardant material according to IEC60332-1; for use in public buildings with high personal risk according to Euro fire class Cca,s1a-d1-a1.
- Use outdoors for duct installation 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: [ProductFamily239143](#)

CERTIFICATIONS AND DESIGN STANDARDS



ISO/IEC 11801
EN 50173
IEC 60794-1-1
IEC 60794-1-21
IEC 60794-1-22
EN 50575
IEC 61034-2
IEC 60754-2
IEC 60332-3-24

Generic telecom cabling for customer premises
Information technology - Generic cabling systems
Generic Specification Fibre Optic Cables
Mechanical Test Methods
Environmental Test Procedures
Cables in construction works subject to reaction to fire
Smoke Density
Weighted Values of pH and Conductivity
Bundled fire test

APPLICATION PROPERTIES

Resistant to UV	No
Outdoor installation With rodent protection	No
Operation temperature (min) [°C]*	-30 and (max) [°C] 60
Installation temperature (min) [°C]	-20 and (max) [°C] 60
Storage temperature (min) [°C]	-30 and (max) [°C] 60
Bending radius (rule)	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	
Longitudinal water blocking cable	Yes
Material outer sheath	Low smoke zero halogen, FireRes®
Cable shape	Round
Cable marking example	Draka UCFIBRE I/O DI LSHF-FR Cca-s1a-d1-a1 ES9 'Fibre count' 'Fibre type' 'Fibre brand' 'Item No' 'Factory No' 'Batch Number' 'Meter mark' U-VQ(ZN)BH '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	In accordance with EN/IEC 60332-3-24
Reaction-to-fire class (acc. EN 13501-6)	Cca
Smoke development class (acc. EN 13501-6)	s1a
Euro class flaming droplets/particles (acc. EN 13501-6)	d1
Euro class acidity (acc. EN 13501-6)	a1

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]
6	6.6	1.5	170	0.44	49	878
12	8	1.5	300	0.9	66	1,205
24	9.3	1.5	470	1.4	91	1,654

* 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-FR ES9 C 24 SM7A1 YL	Yellow	24	OS2	C17	1014927	60097107
UCFIBRE I/O DI LSHF-FR ES9 C 6 OM3B AQ	Turquoise	6	OM3	C31	1012659	60093490
UCFIBRE I/O DI LSHF-FR ES9 C 12 OM3B AQ	Turquoise	12	OM3	C31	1014926	60097106
UCFIBRE I/O DI LSHF-FR ES9 C 6 OM4B EV	Erika-violet	6	OM4	C32	1012765	60076357
UCFIBRE I/O DI LSHF-FR ES9 C 24 OM4B EV	Erika-violet	24	OM4	C32	1012726	60071141

*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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