Draka

A Brand of Prysmian Group

D31: UC^{FIBRE} I/O DI LSHF-FR B2$_{ca}$ ES9

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

B2$_{ca}$ CPR

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 B2ca approval. The cable is well suited for installation in ducts and on trays. The cable features UV stabilisedFireRes®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 and higher Euro fire class B2ca,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: ProductFamily239115

CERTIFICATIONS AND DESIGN STANDARDS

B2$_{ca}$ CPR

EN 50399 Class B2ca-s1a-d1-a1	Common test methods for cables under fire conditions
ISO/IEC 11801	Generic telecom cabling for customer premises
EN 50173	Information technology - Generic cabling systems
IEC 60332-1-2	Single wire fire test
EN 50575	Cables in construction works subject to reaction to fire
IEC 60794-1-1	Generic Specification Fibre Optic Cables
IEC 60794-1-21	Mechanical Test Methods
IEC 60794-1-22	Environmental Test Procedures
IEC 60754-2	Weighted Values of pH and Conductivity
IEC 61034-2	Smoke Density
IEC 60332-3-24	Bundled fire test

APPLICATION PROPERTIES

Resistant to UV	UV stabilised
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	24 tightly buffered fibres 900 µm ± 50 µm
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 B2ca-s1a-d1-a1 ES9 'fibre count' 'Fibre type' 'Fibre brand' 'Item No' 'Factory Code' 'Batch Number' 'Meter mark' U-VQ(ZN)H 'fibre count' 'Fibre family' 'Mode field diameter' /125 'Transmission Class'

IDENTIFICATION

Tight buffer colour code

in accordance with IEC 60794-3 and VDE 0888 read more

** Fibre is uncoloured.*

1 Red	13 Red w/mark every 70mm
2 Green	14 Green w/mark every 70mm
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

MECHANICAL PROPERTIES

Crush test	IEC 60794-1-21 E3	2,000 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)	B2ca
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]
2	5.8		160	0.3	49.2	510
4	6.2		160	0.3	49.2	590
6	6.6		160	0.3	49.2	638
12	8		160	0.8	66.9	909
24	9.3		160	1.3	91.2	1,287

** 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 B2 2 SM7A1 YL	Yellow	2	OS2	C17	-	D3102SM7A1
UCFIBRE I/O DI LSHF-FR ES9 B2 4 SM7A1 YL	Yellow	4	OS2	C17	-	D3104SM7A1
UCFIBRE I/O DI LSHFFR ES9 B2 12 SM7A1 YL	Yellow	12	OS2	C17	1015101	60097687
UCFIBRE I/O DI LSHFFR ES9 B2 24 SM7A1 YL	Yellow	24	OS2	C17	1015061	60097680
UCFIBRE I/O DI LSHF-FR ES9 B2 4 OM3B AQ	Turquoise	6	OM3	C31	1014951	60097033
UCFIBRE I/O DI LSHF-FR ES9 B2 12 OM4B EV	Erika-violet	12	OM4	C32	1015062	60097609
UCFIBRE I/O DI LSHF-FR ES9 B2 24 OM4B EV	Erika-violet	24	OM4	C32	1015063	60097532

**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*