

UC^{FIBRE™} | DIN LSHF-FR ES9

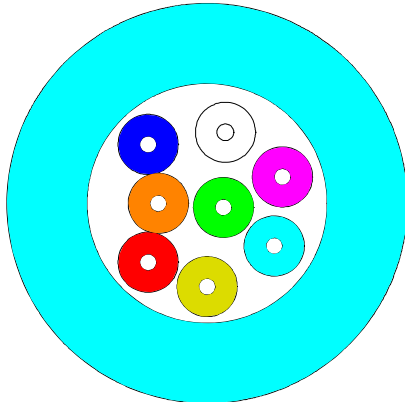
ES9 tight buffer, 2 – 24 fibre, Aramid aramid yarns, FireRes[®] sheath

DIN/VDE J-V(ZN)H

NO

FR COMTLK

DK D02



Application and Installation

This distribution or mini-break-out cable can be used for many indoor applications.

The cable features Draka's ES9 tight buffer.

Typical cable applications include: LAN and WAN backbones, central office interconnections, backbones in data centres, and many other.

The cable features aramid yarns for ease of installation.

The cable is suited for installation in ducts and on trays.

The cable features an UV stabilised, water and moisture resistant FireRes[®] sheathing, the cable is thus well suited for shorter outdoor runs.

Standards

EN 187 000
IEC 60794-2
IEC 60794-2-20
ISO 11801 2nd edition
EN 50 173-1

Construction

Fibre	2 - 24 tightly buffered fibres 900 µm ± 50 µm.			
Fibre colour code	1	Red	13	Yellow w/mark every 70 mm
	2	Green	14	White w/mark every 70 mm
	3	Blue	15	Grey w/mark every 70 mm
	4	Yellow	16	Turquoise w/mark every 70 mm
	5	White	17	Orange w/mark every 70 mm
	6	Grey	18	Pink w/mark every 70 mm
	7	Brown	19	Yellow w/mark every 35 mm
	8	Violet	20	White w/mark every 35 mm
	9	Turquoise	21	Grey w/mark every 35 mm
	10	Black	22	Turquoise w/mark every 35 mm

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	11 Orange	23 Orange w/mark every 35 mm
	12 Pink	24 Pink w/mark every 35 mm
Strength member	Ultra high modulus aramid yarns	
Sheath colours	Cable with SM fibres	Yellow
	Cable with M5 fibres	Orange
	Cable with M6 fibres	Grey
	Cable with OM3 and OM4 fibres	Aqua
Sheath	1.1 mm LSHF-FR fire retardant, UV stabilised, EN 50290-2-27	

Fire rating

IEC 60332-1-2	Single vertical wire test
IEC 60332-3-24 = IEC 332-3C	Vertically-mounted bunched wires and cables (cable with up to 12 fibres)
IEC 60754-1	No halogens
IEC 60754-2	No acid matters
IEC 61034-2	No dense smoke

Heat of combustion

2	370 MJ/km	0.10 KWh/m
4	475 MJ/km	0.13 KWh/m
6	575 MJ/km	0.16 KWh/m
8	660 MJ/km	0.18 KWh/m
12	900 MJ/km	0.25 KWh/m
16	1000 MJ/km	0.28 KWh/m
24	1400 MJ/km	0.39 KWh/m

Physical properties

IEC 60974-1-2

Property	Test method	Value	
Permanent tensile strength	E1	2, 4, 6 and 8 fibres	280 N
		12 and 16 fibres	340 N
		24 fibres	400 N
Short term tensile strength (some days)	E1	2, 4, 6 and 8 fibres	560 N
		12 and 16 fibres	680 N
		24 fibres	800 N
Maximum installation load (a few hours)	-	2, 4, 6 and 8 fibres	1000 N
		12 and 16 fibres	1200 N
		24 fibres	1500 N
Impact	E4	20 J	
Crush (compressive strength)	E3	3000 N/ 100 mm	
Torsion	E7	5 cycles ± 1 turn	
Temperature range	F1	Operation and installation	-20 °C to 70 °C
		Storage	-40 °C to 70 °C

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Mechanical properties

Fibre count	Nominal diameter	Nominal cable weight	Minimum bending radius Long term/short term
2	4.5 mm	21 kg/km	100/50 mm
4	5 mm	26 kg/km	100/50 mm
6	5.5 mm	30 kg/km	100/50 mm
8	6 mm	35 kg/km	100/50 mm
12	6.5 mm	45 kg/km	130/75 mm
16	7 mm	50 kg/km	130/75 mm
24	8 mm	65 kg/km	230/115 mm

Product codes – ordering information

Item No.	Fibre count	Product code	Fibre type	Fibre data sheet
1020481	2	UC ^{FIBRE} I DI LSHF-FR ES9 2 MM52	OM2 50/125 multi mode 600/1200	C01a
1018952	4	UC ^{FIBRE} I DI LSHF-FR ES9 4 MM52	OM2 50/125 multi mode 600/1200	C01a
1020001	6	UC ^{FIBRE} I DI LSHF-FR ES9 6 MM52	OM2 50/125 multi mode 600/1200	C01a
1020002	8	UC ^{FIBRE} I DI LSHF-FR ES9 8 MM52	OM2 50/125 multi mode 600/1200	C01a
1019028	12	UC ^{FIBRE} I DI LSHF-FR ES9 12 MM52	OM2 50/125 multi mode 600/1200	C01a
1020003	24	UC ^{FIBRE} I DI LSHF-FR ES9 24 MM52	OM2 50/125 multi mode 600/1200	C01a
1020008	4	UC ^{FIBRE} I DI LSHF-FR ES9 4 MM53	OM3 MaxCap-OM3	C12
1020009	12	UC ^{FIBRE} I DI LSHF-FR ES9 12 MM53	OM3 MaxCap-OM3	C12
1020004	4	UC ^{FIBRE} I DI LSHF-FR ES9 4 MM61	OM1 62.5/125 multi mode	C02
1020005	6	UC ^{FIBRE} I DI LSHF-FR ES9 6 MM61	OM1 62.5/125 multi mode	C02
1020006	8	UC ^{FIBRE} I DI LSHF-FR ES9 8 MM61	OM2 62.5/125 multi mode	C02
1020007	12	UC ^{FIBRE} I DI LSHF-FR ES9 12 MM61	OM1 62.5/125 multi mode	C02
1020010	4	UC ^{FIBRE} I DI LSHF-FR ES9 4 SM2D	OS2 single mode	C03e
1020011	6	UC ^{FIBRE} I DI LSHF-FR ES9 6 SM2D	OS2 single mode	C03e
1020012	8	UC ^{FIBRE} I DI LSHF-FR ES9 8 SM2D	OS2 single mode	C03e
1020013	12	UC ^{FIBRE} I DI LSHF-FR ES9 12 SM2D	OS2 single mode	C03e
1020014	24	UC ^{FIBRE} I DI LSHF-FR ES9 24 SM2D	OS2 single mode	C03e
1018987	12	UC ^{FIBRE} I DI LSHF-FR ES9 12 SM7B	BendBright [®] XS G.657.A2	C24

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