



















Indoor cables

	Cable type	Page	Ordering key	Weight kg/km	Number of fibers
	Semi-tight tubes 0.9 mm	32	01.../CH...9	0.8	1
	Tight tubes 0.9 mm	34	01.../F...9	0.8	1
	Tight tubes 0.6 mm	36	01.../V-T6...	0.3	1
	Simplex	38	01.../VJH...14 01.../CWJH...17 01.../CWJH...20 01.../CWJH...24 01.../CWJH...27	2.0 3.0 4.0 5.3 7.0	1 1 1 1 1
	Duplex figure 8 (Zip cord)	40	02.../VJH...14 02.../FJH...17 02.../CWJH...17 02.../CWJH...20 02.../CWJH...27	4.4 6.5 6.6 9.0 14.3	2 2 2 2 2
	Duplex figure 0	42	02.../VJH-A...14 02.../CWJH-A...20 02.../CWJH-A...27	9.4 19 24	2 2 2
	Duplex round	44	02.../V(ZN)H...21	4.3	2
	OptiPack	46	12.../(ZN)H...20 12.../(ZN)H...30 24.../(ZN)H...30 24.../(ZN)H...36	3.6 8.0 8.3 11.0	8 or 12 8 or 12 24 24
	Breakout 1.4 mm	48	12.../VJSNH...14 16.../VJSNH...14 24.../VJSNH...14	83 76 105	12 16 24
	Breakout 2.0 mm	50	04.../CWJSNH...20 08.../CWJSNH...20 12.../CWJSNH...20 24.../CWJSNH...20	48 77 146 190	4 8 12 24

p = passed

Tube Ø mm	Ø Single fiber cable mm	Jacket Ø mm	Jacket material	Direct connector assembly	Tensile strength N	Crush resistance N/dm	Temperature range in service °C	Fire propagation IEC 60332-1-2	Fire propagation IEC 60332-3	CPR 2011/305/EU
0.9		0.9	LSFH™	•	20	1000	-25 to +75			
0.9		0.9	TPE	•	20	1000	-40 to +80			
0.6		0.6	acrylate	•	20	500	-40 to +85			
0.6		1.4	LSFH™	•	150	2000	-25 to +70	p		Dca-s1a, d0, a1
0.9		1.7	LSFH™	•	150	3000	-25 to +70	p	p	Dca-s1a, d0, a1
0.9		2.0	LSFH™	•	400	3000	-25 to +70	p	p	Dca-s1a, d0, a1
0.9		2.4	LSFH™	•	400	5000	-25 to +70	p	p	Dca-s1a, d0, a1
0.9		2.7	LSFH™	•	400	5000	-10 to +70	p	p	Dca-s1a, d0, a1
0.6	1.4	1.4 x 3.0	LSFH™	•	300	7500	-25 to +70	p	p	
0.9	1.7	1.7 x 3.5	LSFH™	•	300	10 000	-40 to +70	p	p	
0.9	1.7	1.7 x 3.5	LSFH™	•	300	4000	-25 to +70	p	p	Dca-s1a, d0, a1
0.9	2.0	2.0 x 4.1	LSFH™	•	800	6000	-25 to +70	p	p	Dca-s1a, d0, a1
0.9	2.7	2.7 x 5.5	LSFH™	•	800	10 000	-25 to +70	p	p	Dca-s1a, d0, a1
0.6	1.4	2.3 x 3.7	LSFH™	•	300	9000	-25 to +70	p	p	Dca-s1a, d0, a1
0.9	2.0	3.1 x 5.2	LSFH™	•	800	7000	-25 to +70	p	p	Dca-s1a, d0, a1
0.9	2.7	3.5 x 6.2	LSFH™	•	800	10 000	-25 to +70	p	p	Dca-s1a, d0, a1
0.6		2.1	LSFH™	•	200	5000	-25 to +70	p	p	Dca-s1a, d0, a1
		2.0	LSFH™	•	200	1000	-10 to +60	p	p	Dca-s1a, d0, a1
		3.0	LSFH™	•	200	1000	-10 to +60	p	p	Dca-s1a, d0, a1
		3.0	LSFH™	•	500	5000	-20 to +70	p	p	Dca-s1a, d0, a1
		3.6"	LSFH™	•	500	5000	-20 to +70	p	p	Dca-s1a, d0, a1
0.6	1.4	9.0	LSFH™	•	3000	12 000	-25 to +70	p	p	Dca-s2a, d2, a1
0.6	1.4	9.0	LSFH™	•	4000	12 000	-25 to +70	p	p	Dca-s1a, d2, a1
0.6	1.4	10.6	LSFH™	•	5000	9000	-25 to +70	p	p	CCa-s1a, d1, a1
0.9	2.0	7	LSFH™	•	1200	7500	-25 to +70	p	p	Dca-s1a, d0, a1
0.9	2.0	9	LSFH™	•	2400	7500	-25 to +70	p	p	Cca-s1a, d2, a1
0.9	2.0	12	LSFH™	•	4000	7500	-25 to +70	p	p	Cca-s1a, d2, a1
0.9	2.0	14	LSFH™	•	7200	4000	-25 to +70	p	p	Cca-s1a, d1, a1

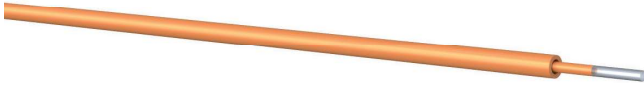
Indoor cables (continuance)

	Cable type	Page	Ordering key	Weight kg/km	Number of fibers
	Fire resistant breakout 2.0 mm	52	04-.../CWJSNHIH-...20 08-.../CWJSNHIH-...20 12-.../CWJSNHIH-...20	108 147 216	4 8 12
	OptiPack breakout - 12	54	24/48-.../[ZN]SNH-...20 72-.../[ZN]SNH-...20 96-.../[ZN]SNH-...20 144-.../[ZN]SNH-...20	44 58 80 93	24/48 72 96 144
	OptiPack breakout - 24	56	48/96-.../[ZN]SNH-...30 144-.../[ZN]SNH-...30 288-.../[ZN]SNH-...30	76.5 110.5 143	48/96 144 288
	Riser	58	04-.../FSN(ZN)H-...50 12-.../FSN(ZN)H-...70 24-.../FSN(ZN)H-...88	28 52 77	4 12 24
	FTTH simplex	60	01-E9A2/CWJH-...27-FG	7	1
	FTTH Microtube	62	04-E9A2/MH(ZN)H-...23	4.7	4
	FTTH indoor	64	04-E9A2/V(ZN)H-...28	8	4
	FTTH indoor HOMESTAR	66	01-E9A./F(ZN)H-...48 02-E9A./FSN(ZN)H-...48 04-E9A./FSN(ZN)H-...48	25 25 25	1 2 4

p = passed

Tube Ø mm	Ø Single fiber cable mm	Jacket Ø mm	Jacket material	Direct connector assembly	Tensile strength N	Crush resistance N/dm	Temperature range in service °C	Fire propagation IEC 60332-1-2	Fire propagation IEC 60332-3	CPR 2011/305/EU
0.9	2.0	10.0	LSFH™	•	1200	4000	-25 to +70	p		
0.9	2.0	12.0	LSFH™	•	2400	4000	-25 to +70	p	p	
0.9	2.0	15.0	LSFH™	•	4000	4000	-25 to +70	p	p	
	2.0	6.6	LSFH™	•	600	5000	-10 to +60	p	p	
	2.0	7.6	LSFH™	•	800	5000	-10 to +60	p	p	
	2.0	9.2	LSFH™	•	1000	5000	-10 to +60	p	p	
	2.0	10.3	LSFH™	•	1400	5000	-10 to +60	p	p	
	3.0	9.3	LSFH™	•	600	5000	-10 to +60	p	p	
	3.0	11.0	LSFH™	•	800	5000	-10 to +60	p	p	
	3.0	13.5	LSFH™	•	1400	5000	-10 to +60	p	p	
0.9		5.0	LSFH™	•	1200	18 000	-20 to +70	p	p	Dca-s2a, d0, a1
0.9		7.0	LSFH™	•	3000	18 000	-20 to +70	p	p	
0.9		8.8	LSFH™	•	4500	15 000	-20 to +70	p	p	
0.9		2.7	LSFH™	•	400	7000	-25 to +70	p	p	Dca-s1a, d0, a1
		2.3	LSFH™	•	400	5000	-20 to +70	p	p	Dca-s1a, d0, a1
0.6		2.8	LSFH™	•	400	2000	-40 to +70	p		Dca-s1a, d0, a1
0.9		4.8	LSFH™	•	400	20 000	-25 to +70	p		
0.9		4.8	LSFH™	•	500	15 000	-25 to +70	p		
0.9		4.8	LSFH™	•	500	10 000	-25 to +70	p		

Semi-tight tubes 0.9 mm



Properties

- Metal free indoor cable
- For direct connector assembly
- Tube can be stripped up to 2 m in one piece
- Tight bending radii
- High flexibility
- Halogen free and non-corrosive fire gases
- Jacket material according to UL 94V-0
- Jelly free, dry

Applications

- Pigtail assemblies for fusion or mechanical splicing within distribution frames and termination boxes
- Mini patch cables within protected enclosures
- For termination with passive optical components such as connectors

Design

Tube	coloured fiber in dry tube (jelly free)	
Tube material	halogen free (LSFH)	
Tube colour	E9	yellow
	G50-OM2	orange
	G50-OM3	turquoise
	G50-OM4	heather violet
	G50-OM5	lime green
	G62.5-OM1	blue
	other colours on request	

According to IEC 60794-1-2

Ordering information

01-.../CH-...9

Please see page 140.

Semi-tight tubes 0.9 mm

Specification		Semi-tight tube dry		
Tube Ø		mm	0.9	
Approx. weight		kg/km	0.8	

Mechanical properties				
Tensile strength	during installation	N	20	IEC 60794-1-2 E1
	in service	N	10	
Min. bend radius ¹⁾	during installation	mm	25	IEC 60794-1-2 E11
	in service	mm	25	
Crush resistance	short-term	N/dm	1000	IEC 60794-1-2 E3
	long-term	N/dm	500	
Impact resistance	Wp = 0.74 J	impacts	3	IEC 60794-1-2 E4
Kink resistance	r = 5 mm		passed	IEC 60794-1-2 E10
Torsion	± 360°, length = 1000 mm, F = 5N	cycles	3	IEC 60794-1-2 E7

Thermal properties				
Temperature range	during installation	°C	-10 to +50	IEC 60794-1-22 F12
	in service	°C	-25 to +75	
	in storage	°C	-40 to +75	

Combustion properties				
Fire load		MJ/m	0.02	
2011/65/EC (RoHS)			compliant	

¹⁾ Smaller bending radius are possible with E9/125 LowBend (ITU G.657) and G50/125-OM3/OM4 BendOptimized.

Tight tubes 0.9 mm



Properties

- Metal free indoor cable
- For direct connector assembly
- Tube can be stripped up to 30 mm in one piece
- Tight bending radii
- For high mechanical and thermal stability
- Halogen free and non-corrosive fire gases
- Improved crush resistance

Applications

- Patch cable within distribution frames and termination boxes
- In thermally and mechanically critical environments
- For mobile or flexible systems

Design

Tube	buffer layer on fiber	
Tube material	halogen free (TPE)	
Tube colour	E9	yellow
	G50 - OM2	orange
	G50 - OM3	turquoise
	G50 - OM4	heather violet
	G50 - OM5	lime green
	G62.5 - OM1	blue
	other colours on request	

According to IEC 60794-1-2

Ordering information

01-.../F-...9

Please see page 140.

Tight tubes 0.9 mm

Specification		Tight tube	
Tube Ø	mm	0.9	
Approx. weight	kg/km	0.8	

Mechanical properties				
Tensile strength	during installation ($r \geq 25$ mm)	N	20	IEC 60794-1-2 E1
	in service ($r \geq 25$ mm)	N	10	
Min. bend radius ¹⁾	during installation	mm	25	IEC 60794-1-2 E11
	in service	mm	25	
Crush resistance	short-term	N/dm	1000	IEC 60794-1-2 E3
	long-term	N/dm	500	
Impact resistance	$W_p = 0.74$ J, $r = 25$ mm	impacts	100	IEC 60794-1-2 E4
Torsion	$\pm 7200^\circ$, length = 1000 mm, $F = 5$ N	cycles	3	IEC 60794-1-2 E7

Thermal properties				
Temperature range	during installation	°C	-10 to +60	IEC 60794-1-22 F12
	in service	°C	-40 to +85	
	in storage	°C	-40 to +60	

Combustion properties				
Fire load	MJ/m	0.02		
2011/65/EC (RoHS)		compliant		

¹⁾ Smaller bending radius are possible with E9/125 LowBend (ITU G.657) and G50/125-OM3/OM4 BendOptimized.

Tight tubes 0.6 mm



Properties

- Metal free indoor cable
- For direct connector assembly
- Tube can be stripped up to 30 mm in one piece
- Tight bending radii
- For high thermal stability
- Halogen free and non-corrosive fire gases

Applications

- Data cable in distribution network – FTTH
- Installation in indoor area

Design

Tube	coloured fiber with a transparent buffer layer	
Tube material	acrylat	
Tube colour	E9	yellow
	G50 – OM2	orange
	G50 – OM3	turquoise
	G50 – OM4	heather violet
	G50 – OM5	lime green
	G62.5 – OM1	blue
	other colours on request	

According to IEC 60794-1-2

Ordering information

01-.../V-T6-...

Please see page 140.

Tight tubes 0.6 mm

Specification		Tight tube	
Tube Ø	mm	0.6	
Approx. weight	kg/km	0.3	

Mechanical properties				
Tensile strength	during installation	N	20	IEC 60794-1-2 E1
	in service	N	10	
Min. bend radius ¹⁾	during installation	mm	25	IEC 60794-1-2 E11
	in service	mm	25	
Crush resistance	short-term	N/dm	500	IEC 60794-1-2 E3
	long-term	N/dm	250	

Thermal properties				
Temperature range	during installation	°C	-10 to +60	IEC 60794-1-22 F12
	in service	°C	-40 to +85	
	in storage	°C	-40 to +60	

Combustion properties			
Fire load	MJ/m	0.007	
2011/65/EC (RoHS)		compliant	

¹⁾ Smaller bending radius are possible with E9/125 LowBend (ITU G.657) and G50/125-OM3/OM4 BendOptimized.

Simplex cables



Properties

- Metal free indoor cable
- Each fiber strain relieved
- For direct connector assembly with strain relief
- Tight bending radii
- High flexibility
- Halogen free and non-corrosive fire gases
- Jacket material according to UL 94V-0
- Low fire load for high safety requirements

Applications

- Patch cables for data centers
- Installation in indoor area
- Measurement cable withstanding mechanical loading
- Data cable in distribution centres
- Strain-relieved pigtail
- Ideal for applications involving safety requirements in case of fire



Design

Tube	tight buffered tube 0.6 mm, stripped up to 30 mm semi-tight tubes 0.9 mm, stripped up to 1 m	
Strain relief	aramide yarn	
Jacket material	LSFH™	
Tube colour	E9	yellow
	G50 - OM2	orange
	G50 - OM3	turquoise
	G50 - OM4	heather violet
	G50 - OM5	lime green
	G62.5 - OM1	orange

According to IEC 60794-1-2

Ordering information

01-.../VJH...14

01-.../CWJH...17

01-.../CWJH...20

01-.../CWJH...24

01-.../CWJH...27

Please see page 141.

Simplex cables

Specification							
Jacket Ø	mm	1.4	1.7	2.0	2.4	2.7	
Tube Ø	mm	0.6	0.9	0.9	0.9	0.9	
Approx weight	kg/km	2.0	3.0	4.0	5.3	7.0	

Mechanical properties								
Tensile strength	during installation	N	150	150	400	400	400	IEC 60794-1-2 E1
	in service	N	100	100	200	200	200	
Min. bend radius ¹⁾	during installation	mm	25	50	50	50	50	IEC 60794-1-2 E11
	in service	mm	25	25	25	25	25	
Crush resistance	short-term	N/dm	2000	3000	3000	5000	5000	IEC 60794-1-2 E3
	long-term	N/dm	500	1000	1000	1000	1000	
Impact resistance	W _p = 0.5 J	impacts	10	3	3	10	20	IEC 60794-1-2 E4
	W _p = 0.74 J							
	W _p = 1.0 J							
Repeated bending	r = 25 mm	cycles	1000	5000	5000	1000	5000	IEC 60794-1-2 E6

Thermal properties								
Temperature range	during installation	°C	-10 to +50	-10 to +50	-10 to +50	-10 to +50	-10 to +50	IEC 60794-1-22 F12
	in service	°C	-25 to +70	-25 to +70	-25 to +70	-25 to +70	-10 to +70	
	in storage	°C	-40 to +70	-40 to +70	-40 to +70	-40 to +70	-40 to +70	

Combustion properties								
Fire load		MJ/m	0.05	0.08	0.10	0.15	0.17	
Fire propagation	on vertical single cable			p	p	p	p	IEC 60332-1-2 IEC 60332-3-25
	on vertical cable bundle				p	p	p	
Smoke density			p	p	p	p	p	IEC 61034-2
Halogen acid gas	jacket material		p	p	p	p	p	IEC 60754-1
Degree of acidity	jacket material		p	p	p	p	p	IEC 60754-2
2011/65/EC (RoHS)			compliant					
(EU) No 305/2011 (CPR)				Dca-s1a, d0, a1				EN 50575

p = passed

¹⁾ Smaller bending radius are possible with E9/125 LowBend (ITU G.657) and G50/125-OM3/OM4 BendOptimized.

Duplex figure 8 (zip cord)



Properties

- Metal free indoor cable
- Each fiber strain relieved
- For direct connector assembly with strain relief
- Tight bending radii
- For high thermal stability
- Halogen free and non-corrosive fire gases
- Jacket material according to UL 94V-0
- Low fire load for high safety requirements

Applications

- Installation in indoor area
- Patch cable in distribution centres
- Data cable in distribution networks
- Ideal for applications involving safety requirements in case of fire



Design

Tube	2 semi-tight tubes 0.9 mm 2 tight tubes 0.6 mm/0.9 mm	
Strain relief	aramide yarn	
Jacket material	LSFH™	
Tube colour	E9	yellow
	G50 - OM2	orange
	G50 - OM3	turquoise
	G50 - OM4	heather violet
	G50 - OM5	lime green
	G62.5 - OM1	orange

According to IEC 60794-1-2

Ordering information

02.../VJH...14

02.../FJH...17

02.../CWJH...17

02.../CWJH...20

02.../CWJH...27

Please see page 142, 143.

Duplex figure 8 (zip cord)

Specification							
Jacket Ø	mm	1.4 x 3.0	1.7 x 3.5	1.7 x 3.5	2.0 x 4.1	2.7 x 5.5	
Single fiber cable Ø	mm	1.4	1.7	1.7	2.0	2.7	
Tube Ø	mm	0.6 tight	0.9 tight	0.9 semi-tight	0.9 semi-tight	0.9 semi-tight	
Channel marking on single fiber							inscription on one side
Approx weight	kg/km	4.4	6.5	6.6	9.0	14.3	

Mechanical properties								
Tensile strength	during installation	N	300	300	300	800	800	IEC 60794-1-2 E1
	in service	N	2 x 100	2 x 100	2 x 100	2 x 200	2 x 200	
Min. bend radius ¹¹	during installation	mm	25	50	50	50	50	IEC 60794-1-2 E11
	in service	mm	25	25	25	25	25	
Crush resistance	short-term	N/dm	7500	10 000	10 000	10 000	10 000	IEC 60794-1-2 E3
	long-term	N/dm	2500	4000	4000	5000	5000	
Impact resistance	W _p = 0.74 J	impacts	10	40	40	20	20	IEC 60794-1-2 E4
	W _p = 1.0 J							
Repeated bending	r = 25 mm, weight = 0.5 kg	cycles	1000	5000	5000	5000	10 000	IEC 60794-1-2 E6

Thermal properties								
Temperature range	during installation	°C	-10 to +50	-10 to +50	-10 to +50	-10 to +50	-10 to +50	IEC 60794-1-22 F1
	in service	°C	-25 to +70	-40 to +70	-25 to +70	-25 to +70	-10 to +70	
	in storage	°C	-40 to +70	-40 to +70	-40 to +70	-40 to +70	-25 to +70	

Combustion properties								
Fire load		MJ/m	0.10	0.13	0.13	0.22	0.34	
Fire propagation	on a vertical single cable			p	p	p	p	IEC 60332-1-2
	on a vertical cable bundle				p	p	p	IEC 60332-3-25
Halogen acid gas	jacket material		p	p	p	p	p	IEC 60754-1
Degree of acidity	jacket material		p	p	p	p	p	IEC 60754-2
2011/65/EC (RoHS)			compliant					
(EU) No 305/2011 (CPR)					Dca-s1a, d0, a1			EN 50575

p = passed

¹¹ Smaller bending radius are possible with E9/125 LowBend (ITU G.657) and G50/125-OM3/OM4 BendOptimized

Duplex cables figure 0



Properties

- Metal free indoor cable
- Each fiber strain relieved
- For direct connector assembly with strain relief
- Tight bending radii
- Low fire load for high safety requirements
- Jacket material according to UL 94V-0
- Halogen free and non-corrosive fire gases

Applications

- Installation in indoor area
- Patch cable in distribution centres
- Data cable in distribution networks
- Ideal for applications involving safety requirements in case of fire



Design

Tube	2 simplex cables with semi-tight tubes 0.9 mm 2 simplex cables with tight tubes 0.6 mm	
Strain relief	aramide yarn	
Jacket material	LSFH™	
Tube colour	E9	yellow
	G50 - OM2	orange
	G50 - OM3	turquoise
	G50 - OM4	heather violet
	G50 - OM5	lime green
	G62.5 - OM1	orange

According to IEC 60794-1-2

Ordering information

02-.../VJH-A...14

02-.../CWJH-A...20

02-.../CWJH-A...27

Please see page 143.

Duplex cables figure 0

Specification					
Jacket Ø	mm	2.3 × 3.7	3.1 × 5.2	3.5 × 6.2	
Single fiber cable Ø	mm	1.4	2.0	2.7	
Tube Ø	mm	0.6 tight	0.9 semi-tight	0.9 semi-tight	
Channel marking on single cable		numbered	numbered	coloured	
Approx. weight	kg/km	9.4	13.7	24	

Mechanical properties						
Tensile strength	during installation	N	300	800	800	IEC 60794-1-2 E1
	in service	N	2 × 100	2 × 200	2 × 200	
Min. bend radius ¹¹	during installation	mm	25	50	50	IEC 60794-1-2 E11
	in service	mm	25	25	25	
Crush resistance	short-term	N/dm	9000	7000	10 000	IEC 60794-1-2 E3
	long-term	N/dm	4000	5000	5000	
Impact resistance	W _p = 1.0 J	impacts	50	20	20	IEC 60794-1-2 E4
Repeated bending	r = 25 mm, weight = 0.5 kg	cycles	10 000	10 000	10 000	IEC 60794-1-2 E6

Thermal properties						
Temperature range	during installation	°C	-10 to +50	-10 to +50	-10 to +50	IEC 60794-1-22 F12
	in service	°C	-25 to +70	-10 to +70	-10 to +70	
	in storage	°C	-25 to +70	-25 to +70	-25 to +70	

Combustion properties						
Fire load		MJ/m	0.22	0.33	0.45	
Fire propagation	on a vertical single cable		p	p	p	IEC 60332-1-2
	on a vertical cable bundle		p	p	p	IEC 60332-3-25
Halogen acid gas	jacket material		p	p	p	IEC 60754-1
Degree of acidity	jacket material		p	p	p	IEC 60754-2
2011/65/EC (RoHS)			compliant			
(EU) No 305/2011 (CPR)				Dca-s1 a, d0, a1		EN 50575

p = passed

¹¹ Smaller bending radius are possible with E9/125 LowBend (ITU G.657) and G50/125-OM3/OM4 BendOptimized.

Duplex round cables (LC uniboot compatible)



Properties

- Metal free indoor cable
- Strain relieve with aramide yarn
- For direct connector assembly
- Tight bending radii
- High flexibility
- Low smoke, halogen free and self-extinguishing
- Jacket material according to UL 94V-0
- LC Uniboot compatible



Applications

- Patch cables for data centers
- Duplex cable for LC Uniboot

Design

Tube	2 tight buffered tubes 0.6 mm	
Strain relief	aramide yarn	
Jacket material	LSFH™	
Tube colour	E9 low bend	yellow
	G50 - OM3	turquoise
	G50 - OM4	heather violet
	G50 - OM5	lime green

According to IEC 60794-1-2

Ordering information

02-.../V{ZN}H...21

Please see page 143.

Duplex round cables (LC uniboot compatible)

Specification				
Jacket Ø		mm	2.1	
Tube Ø		mm	0.6 tight	
Approx. weight		kg/km	4.3	

Mechanical properties				
Tensile strength	during installation	N	200	IEC 60794-1-2 E1
	in service	N	100	
Min. bend radius	during installation	mm	15	IEC 60794-1-2 E11
	in service	mm	10	
Crush resistance	short-term	N/dm	5000	IEC 60794-1-2 E3
	long-term	N/dm	900	
Kink resistance	radius 3 mm		p	IEC 60794-1-2 E10

Thermal properties				
Temperature range	during installation	°C	-10 to +50	IEC 60794-1-22-F1
	in service	°C	-25 to +70	
	in storage	°C	-25 to +70	

Combustion properties				
Fire load		MJ/m	0.11	
Fire propagation	on a vertical single cable		p	IEC 60332-1-2
	on a vertical cable bundle		p	IEC 60332-3-25
Halogen acid gas	jacket material		p	IEC 60754-1
Degree of acidity	jacket material		p	IEC 60754-2
2011/65/EC (RoHS)			compliant	
(EU) No 305/2011 (CPR)			Dca-s1a, d0, a1	EN 50575

p = passed

Optipack cable with 8, 12 and 24 fibers



Properties

- Metal free indoor cable
- Strain relief with aramide yarn
- For direct connector assembly with strain relief
- Tight bending radii
- Low smoke, halogen free and self-extinguishing
- Optimized outer-diameter construction
- Ruggedized and non-ruggedized cable construction

Applications

- data center
- Fits multi fiber connectors (as MPO/MTP®)

Design

Strain relief	aramide yarn	
Jacket material	LSFH™	
Tube colour	E9 low bend	yellow
	G50 - OM3	turquoise
	G50 - OM4	heather violet
	G50 - OM5	lime green

According to IEC 60794-1-2

Ordering information

08-.../(ZN)H-...20
12-.../(ZN)H-...20
24-.../(ZN)H-...30
08-.../(ZN)H-...30
12-.../(ZN)H-...30
24-.../(ZN)H-...36

Please see page 144.

Optipack cable with 8, 12 and 24 fibers

Specification						
Type		Non-ruggedized		Ruggedized		
No. of fibers	fibers	8 and 12	24	8 and 12	24	
Jacket Ø	mm	2.0	3.0	3.0	3.6	
Approx weight	kg/km	3.6	8.0	8.3	11.0	

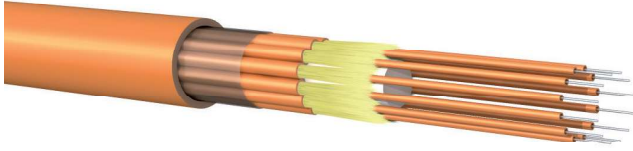
Mechanical properties							
Tensile strength	during installation	N	200	200	500	500	IEC 60794-1-21 E1
	in service	N	100	100	200	200	
Min. bend radius	during installation	mm	20	20	20	20	IEC 60794-1-21 E11
	in service	mm	10	10	10	10	
Crush resistance	during installation	N/dm	1000	1000	5000	5000	IEC 60794-1-21 E3
	in service	N/dm	100	100	1000	1000	
Impact resistance	W _p =0.5J		50	50			IEC 60794-1-21 E4
	W _p =1.0J	impacts			50	50	
Kink resistance	r=5mm		p	p	p	p	IEC 60794-1-21 E10

Thermal properties							
Temperature range	during installation	°C	-10 to +50	-10 to +50	-10 to +50	-10 to +50	IEC 60794-1-22 F12
	in service	°C	-10 to +60	-10 to +60	-20 to +70	-20 to +70	
	in storage	°C	-20 to +70	-20 to +70	-20 to +70	-20 to +70	

Combustion properties							
Fire load		MJ/m	0.07	0.17	0.18	0.24	
Fire propagation	on a vertical single cable		p	p	p	p	IEC 60332-1-2
	on a vertical cable bundle		p	p	p	p	IEC 60332-3-25
Smoke density			p	p	p	p	IEC 61034-2
Halogen acid gas	jacket material		p	p	p	p	IEC 60754-1
Degree of acidity	jacket material		p	p	p	p	IEC 60754-2
2011/65/EC (RoHS)			compliant				
(EU) No 305/2011 (CPR)			Dca-s1a, d0, a1				EN 50575

p = passed

Breakout cables 1.4 mm



Properties

- Metal free indoor cable
- Each fiber strain relieved
- For direct connector assembly with strain relieved
- Ripcord for easy jacket removal
- Low smoke, halogen free and self-extinguishing
- Optimized outer-diameter construction

Applications

- Installation in indoor areas
- Data cable in distribution networks
- For installations in cable ducts
- For horizontal and collapsed backbone cabling
- Terminations possible for SFF connectors only



Design

Cable design	central strength member, non-metallic 12 to 24 single fiber cables with tight buffered tube 0.6 mm strain relief (aramide yarn) separating tape and 1 ripcord	
Channel marketing	single fiber cable numbered	
Jacket material	LSFH™	
Tube/jacket colour	E9	yellow
	G50 - OM3	turquoise
	G50 - OM4	heather violet
	G50 - OM5	lime green
	G62.5 - OM1	orange

According to IEC 60794-1-2

Ordering information

12.../VJSNH...14
16.../VJSNH...14
24.../VJSNH...14

Please see page 144.

Breakout cables 1.4 mm

Specification		12	16	24	
Jacket Ø	mm	9.0	9.0	10.6	
Single fiber cable Ø	mm	1.4	1.4	1.4	numbered
Tube Ø	mm	0.6	0.6	0.6	
Approx. weight	kg/km	83	76	105	

Mechanical properties						
Tensile strength	during installation	N	3000	4000	5000	IEC 60794-1-2 E1
	in service	N	12 × 70	16 × 70	24 × 70	
Min. bend radius	during installation	mm	130	130	160	IEC 60794-1-2 E11
	in service	mm	90	90	100	
Crush resistance	short-term	N/dm	12 000	12 000	9000	IEC 60794-1-2 E3
	long-term	N/dm	3000	3000	3000	
Impact resistance	W _p = 2.21 J	impacts	100	100	100	IEC 60794-1-2 E4
Repeated bending	r = 100 mm	cycles	2000	2000	2000	IEC 60794-1-2 E6
	r = 200 mm					

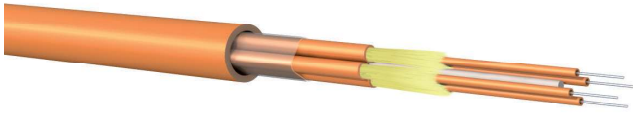
Thermal properties						
Temperature range	during installation	°C	-10 to +60			IEC 60794-1-22 F1
	in service	°C	-25 to +70			
	in storage	°C	-25 to +70			

Combustion properties						
Fire load		MJ/m	2.2	2.3	3.1	
Fire propagation	on a vertical single cable		p	p	p	IEC 60332-1-2
	on a vertical cable bundle		p	p	p	IEC 60332-3-25
Smoke density			p	p	p	IEC 61034-2
Halogen acid gas	jacket material		p	p	p	IEC 60754-1
Degree of acidity	jacket material		p	p	p	IEC 60754-2
2011/65/EC (RoHS)			compliant	compliant	compliant	
(EU) No 305/2011 (CPR)			*	**	***	EN 50575

p = passed

- * Dca-s2, d2, a1
- ** Dca-s1a, d2, a1
- *** Cca-s1a, d0, a1

Breakout cables 2.0 mm



Properties

- Metal free indoor cable
- Each fiber strain relieved
- For direct connector assembly with strain relief
- Ripcord for easy jacket removal
- Low smoke, halogen free and self-extinguishing
- Cable with improved fire performance

Applications

- Installation in indoor areas
- Data cable in distribution networks
- For installation in cable ducts
- Deal for applications involving high safety requirements in case of fire
- For horizontal and collapsed backbone cabling



Design

Cable design	central strength member, non-metallic 4 to 24 single fiber cables with semi-tight tubes strain relief (aramide yarn) separating tape and 1 ripcord	
Channel marketing	single fiber cable numbered	
Jacket material	LSFH™	
Tube/jacket colour	E9	yellow
	G50 - OM2	orange
	G50 - OM3	turquoise
	G50 - OM4	heather violet
	G50 - OM5	lime green
	G62.5 - OM1	orange

According to IEC 60794-1-2

Ordering information

04.../CWJSNH...20

08.../CWJSNH...20

12.../CWJSNH...20

24.../CWJSNH...20

Please see page 145.

Approvals

DNV GL Type approved

Certificate No. TAE 000010R

Breakout cables 2.0 mm

Specification		4	8	12	24	
Jacket Ø	mm	7.0	9.0	12.0	14.0	
Single fiber cable Ø	mm	2.0	2.0	2.0	2.0	numbered
Tube Ø	mm	0.9	0.9	0.9	0.9	
Approx. weight	kg/km	48	77	146	190	

Mechanical properties							
Tensile strength	during installation	N	1200	2400	4000	7200	IEC 60794-1-2 E1
	in service	N	4 × 100	8 × 100	12 × 100	24 × 100	
Min. bend radius	during installation	mm	100	120	180	240	IEC 60794-1-2 E11
	in service	mm	70	80	120	140	
Crush resistance	short-term	N/dm	7500	7500	7500	4000	IEC 60794-1-2 E3
	long-term	N/dm	2000	2000	2000	2000	
Impact resistance	W _p = 2.21 J, r = 25 mm	impacts	50	50	50	50	IEC 60794-1-2 E4
Torsion	± 360°, l = 1000 mm m = 2 kg	cycles	25 000	25 000	25 000	25 000	IEC 60794-1-2 E7

Thermal properties						
Temperature range	during installation	°C	-10 to +60			IEC 60794-1-22 F12
	in service	°C	-25 to +70			
	in storage	°C	-40 to +70			

Combustion properties							
Fire load		MJ/m	1.09	1.72	3.40	4.1	
Fire propagation	on a vertical single cable		p	p	p	p	IEC 60332-1-2
	on a vertical cable bundle		p	p	p	p	IEC 60332-3-24
Smoke density			p	p	p	p	IEC 61034-2
Halogen acid gas	jacket material		p	p	p	p	IEC 60754-1
Degree of acidity	jacket material		p	p	p	p	IEC 60754-2
2011/65/EC (RoHS)			compliant				
(EU) No 305/2011 (CPR)			*	**	**	***	EN 50575

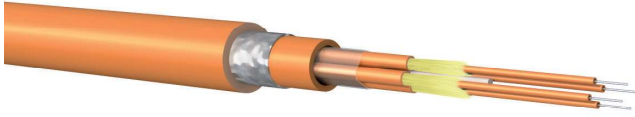
p = passed

* Dca-s1a, d0, a1

** Dca-s1a, d2, a1

*** Cca-s1a, d1, a1

Fire resistant breakout cables 2.0 mm



Properties

- Metal free indoor cable
- Each fiber strain relieved
- For direct connector assembly with strain relief
- Ripcord for easy jacket removal
- Low smoke, halogen free and self-extinguishing
- Cable with improved fire performance

Applications

- Installation in indoor areas
- Data cable in distribution networks
- For installation in cable ducts
- Ideal for applications involving high safety requirements in case of fire
- For horizontal and collapsed backbone cabling

Design

Cable design	central strength member, non-metallic 4 to 12 single fiber cables with semi-tight tubes strain relief (aramide yarn) separating tape and 1 ripcord	
Channel marketing	single fiber cable numbered	
Jacket material	LSFH™ - double jacket with flame barrier	
Tube/jacket colour	E9	yellow
	G50 - OM2	orange
	G50 - OM3	turquoise
	G50 - OM4	heather violet
	G50 - OM5	lime green
	G62.5 - OM1	orange

According to IEC 60794-1-2

Ordering information

04.../CWJSNHH...20

08.../CWJSNHH...20

12.../CWJSNHH...20

Please see page 145.

Approvals

DNV GL Type approved

Certificate No. TAE 0000192

Fire resistant breakout cables 2.0 mm

Specification			4	8	12	
Jacket Ø		mm	10.0	12.0	15.0	
Single fiber cable Ø		mm	2.0	2.0	2.0	numbered
Tube Ø		mm	0.9	0.9	0.9	
Approx. weight		kg/km	108	147	216	

Mechanical properties						
Tensile strength	during installation	N	1200	2400	4000	IEC 60794-1-2 E1
	in service	N	4 × 100	8 × 100	12 × 100	
Min. bend radius	during installation	mm	145	175	220	IEC 60794-1-2 E11
	in service	mm	95	115	145	
Crush resistance	short-term	N/dm	4000	4000	4000	IEC 60794-1-2 E3
	long-term	N/dm	2000	2000	2000	
Impact resistance	Wp = 2.21 J, r = 25 mm	impacts	50	50	50	IEC 60794-1-2 E4
Repeated bending	r = 100 mm	cycles	1000	1000	1000	IEC 60794-1-2 E6

Thermal properties						
Temperature range	during installation	°C	-10 to +60			IEC 60794-1-22 F12
	in service	°C	-25 to +70			
	in storage	°C	-40 to +70			

Combustion properties						
Fire load		MJ/m	2.50	3.35	5.00	
Fire propagation	on a vertical single cable		p	p	p	IEC 60332-1-2
	on a vertical cable bundle		p	p	p	IEC 60332-3-24
Fire test	with circuit integrity (CI)	min.	180	180	180	IEC 60331-25
Fire test	with circuit integrity (CI) with shock	min.	180	180	180	IEC 60331-31
Smoke density			p	p	p	IEC 61034-2
Halogen acid gas	jacket material		p	p	p	IEC 60754-1
Degree of acidity	jacket material		p	p	p	IEC 60754-2
2011/65/EC (RoHS)			compliant			

p = passed

Optipack breakout cables with 16 to 144 fibers



Properties

- Single tubes with 8 or 12 fibers
- Metal free indoor cable
- Strain relieved with aramide yarn
- Ripcord for easy jacket removal
- Low smoke, halogen free and self-extinguishing
- Cable with improved fire performance

Applications

- Installation in indoor areas
- Data center in distribution networks
- Ideal for applications involving high safety requirements in case of fire
- For horizontal and collapsed backbone cabling
- Fits multi fiber connectors (MPO/MTP®)



Design

Cable design	central strength member, non-metallic 16 to 144 optical fibers strain relief (aramide yarn) separating tape and 1 ripcord	
Jacket material	LSFH™	
Channel marketing	single fiber cable numbered	
Tube/jacket colour	E9 low bend	yellow
	G50 - OM3	turquoise
	G50 - OM4	heather violet
	G50 - OM5	lime green

According to IEC 60794-1-2

Ordering information

16-8.../[ZN]SNH...20	24-12.../[ZN]SNH...20
32-8.../[ZN]SNH...20	48-12.../[ZN]SNH...20
48-8.../[ZN]SNH...20	72-12.../[ZN]SNH...20
64-8.../[ZN]SNH...20	96-12.../[ZN]SNH...20
96-8.../[ZN]SNH...20	144-12.../[ZN]SNH...20

Please see page 146.

Optipack breakout cables with 16 to 144 fibers

Specification						
Single cable fiber count	8 fiber	16/32	48	64	96	
	12 fiber	24/48	72	96	144	
Jacket Ø	mm	6.6	7.6	9.2	10.3	
Single cable Ø	mm	2	2	2	2	numbered
Approx. Weight	kg/km	44	58	80	93	

Mechanical properties							
Tensile strength	during installation	N	600	800	1000	1400	IEC 60794-1-21 E1
	in service	N	4 x 100	6 x 100	8 x 100	12 x 100	
Min. bend radius	during installation	mm	90	110	130	150	IEC 60794-1-21 E11
	in service	mm	60	70	90	100	
Crush resistance	during installation	N/dm	5000	5000	5000	5000	IEC 60794-1-21 E3
	in service	N/dm	1000	1000	1000	1000	
Impact resistance	Wp=1.0J	impacts	50	50	50	50	IEC 60794-1-21 E4
Kink resistance	r=20mm r=25mm		p	p	p	p	IEC 60794-1-21 E10

Thermal properties							
Temperature range	during installation	°C	-10 to +50	-10 to +50	-10 to +50	-10 to +50	IEC 60794-1-22 F12
	in service	°C	-10 to +70	-10 to +70	-10 to +70	-10 to +70	
	in storage	°C	-20 to +70	-20 to +70	-20 to +70	-20 to +70	

Combustion properties							
Fire load		MJ/m	0.97	1.2	1.75	2.07	
Fire propagation	on a vertical single cable		p	p	p	p	IEC 60332-1-2 IEC 60332-3-25
	on a vertical cable bundle		p	p	p	p	
Smoke density			p	p	p	p	IEC 61034-2
Halogen acid gas	jacket material		p	p	p	p	IEC 60754-1
Degree of acidity	jacket material		p	p	p	p	IEC 60754-2
2011/65/EC (RoHS)			compliant				
(EU) No 305/2011 (CPR)			classes on request				EN 50575

p = passed

Optipack breakout cables with 48 to 288 fibers



Properties

- Single tubes with 24 fibers
- Metal free indoor cable
- Strain relieved with aramide yarn
- Ripcord for easy jacket removal
- Low smoke, halogen free and self-extinguishing
- Cable with improved fire performance

Applications

- Installation in indoor areas
- Data cable in distribution networks
- Ideal for applications involving high safety requirements in case of fire
- For horizontal and collapsed backbone cabling
- Fits multi fiber connectors (MPO/MTP®)



Design

Cable design	central strength member, non-metallic 48 to 288 optical fibers strain relief (aramide yarn) separating tape and 1 ripcord	
Jacket material	LSFH™	
Channel marketing	single fiber cable numbered	
Tube/jacket colour	E9 low bend	yellow
	G50 - OM3	turquoise
	G50 - OM4	heather violet
	G50 - OM5	lime green

According to IEC 60794-1-2

Ordering information

96-24.../(ZN)SNH...30
144-24.../(ZN)SNH...30
288-24.../(ZN)SNH...30

Please see page 146.

Optipack breakout cables with 48 to 288 fibers

Specification					
Single cable fiber count		96	144	288	
Jacket Ø	mm	9.3	11	13.5	
Single cable Ø	mm	3	3	3	numbered
Approx. Weight	kg/km	76.5	110.5	143	

Mechanical properties						
Tensile strength	during installation	N	600	800	1400	IEC 60794-1-21 E1
	in service	N	4 x 100	6 x 100	12 x 100	
Min. bend radius	during installation	mm	130	160	200	IEC 60794-1-21 E11
	in service	mm	90	110	135	
Crush resistance	during installation	N/dm	5000	5000	5000	IEC 60794-1-21 E3
	in service	N/dm	1000	1000	1000	
Impact resistance	W _p =1.0J	impacts	50	50	50	IEC 60794-1-21 E4
Kink resistance	r=25mm		p	p	p	IEC 60794-1-21 E10

Thermal properties						
Temperature range	during installation	°C	-10 to +50	-10 to +50	-10 to +50	IEC 60794-1-22 F12
	in service	°C	-10 to +70	-10 to +70	-10 to +70	
	in storage	°C	-20 to +70	-20 to +70	-20 to +70	

Combustion properties						
Fire load		MJ/m	1.7	2.5	3.3	
Fire propagation	on a vertical single cable		p	p	p	IEC 60332-1-2
	on a vertical cable bundle		p	p	p	IEC 60332-3-25
Smoke density			p	p	p	IEC 61034-2
Halogen acid gas	jacket material		p	p	p	IEC 60754-1
Degree of acidity	jacket material		p	p	p	IEC 60754-2
2011/65/EC (RoHS)			compliant			
(EU) No 305/2011 (CPR)			classes on request			EN 50575

p = passed

Riser cables (distribution cables)



Properties

- Metal free indoor cable
- Strain relief with aramide yarn
- For direct connector assembly
- Ripcord for easy jacket removal
- For high mechanical and thermal stability
- Low smoke, halogen free and self-extinguishing

Applications

- Internal building distribution
- Rising zone/LAN
- Applications with high safety requirements
- For horizontal and collapsed backbone cabling



Design

Cable design	central strength member, non-metallic 4 to 24 tight tube fibers strain relief (aramide yarn) 1 ripcord
Tube colour	according to colour code
Jacket material	LSFH™
Outer jacket colour	black

According to IEC 60794-1-2

Ordering information

04.../FSN(ZN)H...50
12.../FSN(ZN)H...70
24.../FSN(ZN)H...88

Please see page 147.

Riser cables (distribution cables)

Specification		4	12	24	fiber
Jacket Ø	mm	5.0	7.0	8.8	
Tube Ø	mm	0.9	0.9	0.9	coloured
Approx. weight	kg/km	28	52	77	

Mechanical properties						
Tensile strength	during installation	N	1200	3000	4500	IEC 60794-1-2 E1
	in service	N	400	1000	1500	
Min. bend radius ¹⁾	during installation	mm	100	130	130	IEC 60794-1-2 E11
	in service	mm	50	70	100	
Crush resistance	short-term	N/dm	18 000	18 000	15 000	IEC 60794-1-2 E3
	long-term	N/dm	3000	3000	2000	
Impact resistance	W _p = 2.21 J	impacts	100	100	100	IEC 60794-1-2 E4
Repeated bending	r = 50 mm	cycles	1000	2000	2000	IEC 60794-1-2 E6

Thermal properties						
Temperature range	during installation	°C	-10 to +50			IEC 60794-1-22 F1
	in service	°C	-20 to +70			
	in storage	°C	-25 to +70			

Combustion properties						
Fire load		MJ/m	0.4	1.1	1.9	
Fire propagation	on a vertical single cable		p	p	p	IEC 60332-1-2
	on a vertical cable bundle		p	p	p	IEC 60332-3-24
Smoke density			p	p	p	IEC 61034-2
Halogen acid gas	jacket material		p	p	p	IEC 60754-1
Degree of acidity	jacket material		p	p	p	IEC 60754-2
2011/65/EC (RoHS)			compliant			
(EU) No 305/2011 (CPR)				Dca-s2, d0, a1		EN 50575

p = passed

¹⁾ Smaller bending radius are possible with E9/125 LowBend (ITU G.657) and G50/125-OM3/OM4 BendOptimized.

FTTH simplex indoor cables



Properties

- Metal free indoor cable
- Strain relief with aramide yarn
- Tube can be stripped up to 1 m in one piece
- For direct connector assembly
- Tight bending radii
- Low smoke, halogen free and non-corrosive
- Jacket material according to UL94V-0

Applications

- Data cable in distribution network – FTTH
- Installation in indoor areas
- For horizontal and collapsed backbone cabling

Design

Cable design	1 semi-tight tube
Strain relief	aramide yarn
Jacket material	LSFH™
Jacket colour	white/grey

According to IEC 60794-1-2

Ordering information

01-E9A2/CWJH...27-FG

Please see page 146.

FTTH simplex indoor cables

Specification			
Jacket Ø	mm	2.7	
Tube Ø	mm	0.9	
Approx. weight	kg/km	7.0	

Mechanical properties				
Tensile strength	during installation	N	400	IEC 60794-1-2 E1
	in service	N	200	
Min. bend radius ¹⁾	during installation	mm	50	IEC 60794-1-2 E11
	in service	mm	25	
Crush resistance	short-term	N/dm	7000	IEC 60794-1-2 E3
	long-term	N/dm	5000	
Impact resistance	Wp = 1.0 J	impacts	20	IEC 60794-1-2 E4
Repeated bending	r = 25 mm	cycles	5000	IEC 60794-1-2 E6

Thermal properties				
Temperature range	during installation	°C	-10 to +50	IEC 60794-1-22 F12
	in service	°C	-25 to +70	
	in storage	°C	-25 to +70	

Combustion properties				
Fire load		MJ/m	0.17	
Fire propagation	on a vertical single cable		p	IEC 60332-1-2
	on a vertical cable bundle		p	IEC 60332-3-25
Halogen acid gas	jacket material		p	IEC 60754-1
Degree of acidity	jacket material		p	IEC 60754-2
2011/65/EC (RoHS)			compliant	
(EU) No 305/2011 (CPR)			Dca-s1a, d0, a1	EN 50575

p = passed

¹⁾ Smaller bending radius are possible with E9/125 LowBend (ITU G.657) and G50/125-OM3/OM4 BendOptimized.

FTTH Microtube



Properties

- Metal free indoor cable
- Strain relieved with aramide yarn
- Ripcord for easy jacket removal
- No need for cleaning the fibers (jelly free)
- Tight bending radii
- Halogen free and non-corrosive fire gases
- Jacket material according to UL 94V-0
- Easy stripping

Applications

- Data cable in distribution network – FTTH
- Installation in indoor areas
- For horizontal and collapsed backbone cabling



Design

Cable design	Microtube dry with 4 fibers
Strain relief	aramide yarn
Jacket material	LSFH™
Jacket colour	white/grey/yellow

According to IEC 60794-1-2

Ordering information

04-E9A2/MH(ZN)H...23

Please see page 147.

FTTH Microtube

Specification			
Number of fibers		4	
Jacket Ø	mm	2.3	
Approx. weight	kg/km	5.2	

Mechanical properties				
Tensile strength	during installation	N	400	IEC 60794-1-2 E1
	in service	N	200	
Min. bend radius	during installation	mm	10	IEC 60794-1-2 E11
	in service	mm	10	
Crush resistance	short-term	N/dm	1000	IEC 60794-1-2 E3
	long-term	N/dm	500	
Impact resistance	W _p = 1 J	impacts	3	IEC 60794-1-2 E4
Kink resistance	r = 5 mm		p	IEC 60794-1-2 E10

Thermal properties				
Temperature range	during installation	°C	-5 to +50	IEC 60794-1-22 F1
	in service	°C	-10 to +60	
	in storage	°C	-20 to +70	

Combustion properties				
Fire load		MJ/m	0.09	
Fire propagation	on a vertical single cable		p	IEC 60332-1-2 IEC 60332-3-25
	on a vertical cable bundle		p	
Smoke density			p	IEC 61034-2
Halogen acid gas	jacket material		p	IEC 60754-1
Degree of acidity	jacket material		p	IEC 60754-2
2011/65/EC (RoHS)			compliant	
(EU) No 305/2011 (CPR)			Dca-s1a, d0, a1	EN 50575

p = passed

FTTH indoor cables with tight tubes 0.6 mm



Properties

- Metal free indoor and outdoor cable
- Strain relieved with aramide yarn
- For direct connector assembly
- Tight bending radii
- Halogen free and non-corrosive fire gases
- Optimized outer-diameter construction

Applications

- Data cable in distribution network – FTTH
- Installation in indoor areas
- For horizontal and collapsed backbone cabling

Design

Cable design	4 tight tubes buffered 0.6 mm, easy stripping
Strain relief	aramide yarn
Jacket material	LSFH™
Jacket colour	grey

According to IEC 60794-1-2

Ordering information

04-E9A2/V(ZN)H...28

Please see page 147.

FTTH indoor cables with tight tubes 0.6 mm

Specification			
Number of fibers	mm	4	
Jacket Ø		2.8	
Tube Ø	mm	0.6	easy stripping/coloured
Approx. weight	kg/km	8	

Mechanical properties				
Tensile strength	during installation	N	400	IEC 60794-1-2 E1
	in service	N	200	
Min. bend radius	during installation	mm	7.5	IEC 60794-1-2 E11
	in service	mm	7.5	
Crush resistance	short-term	N/dm	2000	IEC 60794-1-2 E3
	long-term	N/dm	1000	
Impact resistance	Wp = 1 J	impacts	5	IEC 60794-1-2 E4
Repeated bending	r = 30 mm	cycles	5000	IEC 60794-1-2 E6
Kink resistance	r = 6 mm	cycles	p	IEC 60794-1-2 E10
Coiling capability	length = 100 m/r = 70 mm	cycles	3	HUBER+SUHNER

Thermal properties				
Temperature range	during installation	°C	-20 to +70	IEC 60794-1-22 F1
	in service	°C	-40 to +70	
	in storage	°C	-40 to +70	

Combustion properties				
Fire load		MJ/m	0.19	
Fire propagation	on a vertical single cable		p	IEC 60332-1-2
Smoke density			p	IEC 61034-2
Halogen acid gas	jacket material		p	IEC 60754-1
Degree of acidity	jacket material		p	IEC 60754-2
2011/65/EC (RoHS)			compliant	
(EU) No 305/2011 (CPR)			Dca-s1a, d0, a1	EN 50575

p = passed

FTTH indoor cables HOMESTAR



Properties

- Metal free indoor and outdoor cable
- Strain relieved with aramide yarn
- For direct connector assembly
- Tight bending radii
- Low smoke, halogenfree and self-extinguishing

Applications

- Data cable in distribution network – FTTH
- Installation in indoor areas
- For horizontal and collapsed backbone cabling

Design

Cable design	central strength member, non-metallic 1, 2 to 4 tight buffered tubes
Strain relief	aramide yarn
Jacket material	LSFH™
Jacket colour	grey

According to IEC 60794-1-2

Ordering information

01-E9A.../F(ZN)H...48

02-E9A.../FSN(ZN)H...48

04-E9A.../FSN(ZN)H...48

Please see page 147.

FTTH indoor cables HOMESTAR

Specification						
Number of fibers		1	2	4		
Jacket Ø	mm	4.8	4.8	4.8		
Tube Ø	mm	0.9	0.9	0.9	coloured	
Approx. weight	kg/km	25	25	25		

Mechanical properties						
Tensile strength	during installation	N	400	500	500	IEC 60794-1-2 E1
	in service	N	200	300	300	
Min. bend radius	during installation	mm	10	10	10	IEC 60794-1-2 E11
	in service	mm	10	10	10	
Crush resistance	short-term	N/dm	20 000	15 000	10 000	IEC 60794-1-2 E3
	long-term	N/dm	1500	1500	1500	
Impact resistance	Wp = 2.21 J	impacts	100	100	100	IEC 60794-1-2 E4
Repeated bending	r = 30 mm	cycles	5000	5000	5000	IEC 60794-1-2 E6
Kink resistance	r = 7.5 mm		p	p	p	IEC 60794-1-2 E10
Torsion	angle = ± 360° / length = 500 mm	cycles	1000	1000	1000	IEC 60794-1-2 E7
H+S Crush resistance	short-term	N/5 mm	400	500	500	HUBER+SUHNER
	long-term	N/5 mm	200	300	300	

Thermal properties						
Temperature range	during installation	°C	-10 to +50			IEC 60794-1-22 F1
	in service	°C	-25 to +70			
	in storage	°C	-25 to +70			

Combustion properties						
Fire load		MJ/m	0.6	0.6	0.6	
Fire propagation	on a vertical single cable		p	p	p	IEC 60332-1-2
Smoke density			p	p	p	IEC 61034-2
Halogen acid gas	jacket material		p	p	p	IEC 60754-1
Degree of acidity	jacket material		p	p	p	IEC 60754-2
2011/65/EC (RoHS)			compliant			

p = passed

Order information for indoor cables

Semi-tight tubes 0.9 mm

available as standard only: 2000 m



Item no.	Cable type	Description
22521983	01-E9/CH-E9-FE	1-fiber, 9/125 µm acc.G.652.D/G.657-A1, Ø 0.9 mm, tube and fiber color: yellow
84065234	01-E9A2/CH-E9-FG	1-fiber, 9/125 µm acc.G.657-A2, Ø 0.9 mm, tube color yellow and fiber color black
22520626	01-G50/CH-D9-FD	1-fiber, 50/125 µm OM2, Ø 0.9 mm, tube and fiber color: orange
84005132	01-G50/CH-M9-F-FM	1-fiber, 50/125 µm OM3 BendOptimized, Ø 0.9 mm, tube and fiber color: turquoise
84121373	01-G50/CH-L9-G-FL	1-fiber, 50/125 µm OM4 BendOptimized, Ø 0.9 mm, tube and fiber color: heather violet
22520967	01-G62/CH-C9-FC	1-fiber, 62.5/125 µm OM1, Ø 0.9 mm, tube and fiber color: blue

On request: up to 12 different colors for all different fiber types available; up to 24 different colors with ring marking for all different fiber types available.

Tight tubes 0.9 mm

available as standard only: 2000 m



Item no.	Cable type	Description
22521478	01-E9/F-E9	1-fiber, 9/125 µm acc.G.652.D/G.657-A1, Ø 0.9 mm, tube color: yellow
23012983	01-E9/F-F9	1-fiber, 9/125 µm acc.G.652.D/G.657-A1, Ø 0.9 mm, tube color white
84145050	01-E9A2/F-E9-FG	1-fiber, 9/125 µm G.657-A2, Ø 0.9 mm, tube color: yellow
85001241	01-E9A2/F-F9	1-fiber, 9/125 µm G.657-A2, Ø 0.9 mm, tube color: white
22521479	01-G50/F-D9	1-fiber, 50/125 µm OM2, Ø 0.9 mm, tube color: orange
22523050	01-G62/F-C9	1-fiber, 62.5/125 µm OM1, Ø 0.9 mm, tube color: blue

Tight tubes 0.6 mm

available as standard only: 2000 m



Item no.	Cable type	Description
84077172	01-E9A2/V-T6-FA	1-fiber, 9/125 µm acc.G.657-A2, Ø 0.6 mm, tube color: red
84077173	01-E9A2/V-T6-FB	1-fiber, 9/125 µm acc.G.657-A2, Ø 0.6 mm, tube color: green
84077174	01-E9A2/V-T6-FE	1-fiber, 9/125 µm acc.G.657-A2, Ø 0.6 mm, tube color: yellow
84077175	01-E9A2/V-T6-FC	1-fiber, 9/125 µm acc.G.657-A2, Ø 0.6 mm, tube color: blue

Order information for indoor cables

Simplex cables 1.4 mm

LSFH™ jacket with tight tube 0.6 mm



Item no.	Cable type	Description
84099204	01-E9LB/VJH-E14	1-fiber, 9/125 µm acc.G.657-A2, Ø 1.4 mm, jacket LSFH yellow
84093690	01-G50/VJH-M14-F	1-fiber, 50/125 µm OM3 BendOptimized, Ø 1.4 mm, jacket LSFH turquoise
ibid	01-G50/VJH-L14-G	1-fiber, 50/125 µm OM4 BendOptimized, Ø 1.4 mm, jacket LSFH heather violet

Simplex cables 1.7 mm

LSFH™ jacket with semi-tight tube 0.9 mm



Item no.	Cable type	Description
85020782	01-E9/CWJH-E17#D	1-fiber, 9/125 µm acc.G.652.D/G.657-A1, Ø 1.7 mm, jacket LSFH yellow
84078975	01-E9A2/CWJH-E17-FG#D	1-fiber, 9/125 µm acc.G.657-A2, Ø 1.7 mm, jacket LSFH yellow

Simplex cables 2.0 mm

LSFH™ jacket with semi-tight tube 0.9 mm



Item no.	Cable type	Description
84012397	01-E9/CWJH-E20#D	1-fiber, 9/125 µm acc.G.652.D/G.657-A1, Ø 2.0 mm, jacket LSFH yellow
84044941	01-E9/CWJH-C20#D	1-fiber, 9/125 µm acc.G.652.D/G.657-A1, Ø 2.0 mm, jacket LSFH blue
84065255	01-E9A2/CWJH-E20-FG#D	1-fiber, 9/125 µm acc.ITU-G.657-A2, Ø 2.0 mm, jacket LSFH yellow
84000564	01-G50/CWJH-D20#D	1-fiber, 50/125 µm OM2, Ø 2.0 mm, jacket LSFH orange
84033249	01-G50/CWJH-M20-F#D	1-fiber, 50/125 µm OM3 BendOptimized, Ø 2.0 mm, jacket LSFH turquoise
84121677	01-G50/CWJH-L20-G#D	1-fiber, 50/125 µm OM4 BendOptimized, Ø 2.0 mm, jacket LSFH heather violet
84000565	01-G62/CWJH-D20#D	1-fiber, 62.5/125 µm OM1, Ø 2.0 mm, jacket LSFH orange

Simplex cables 2.4 mm

LSFH™ jacket with semi-tight tube 0.9 mm



Item no.	Cable type	Description
85020593	01-E9/CWJH-E24#D	1-fiber, 9/125 µm acc.G.652.D/G.657-A1, Ø 2.4 mm, jacket LSFH yellow

Simplex cables 2.7 mm

LSFH™ jacket with semi-tight tube 0.9 mm



Item no.	Cable type	Description
22523125	01-E9/CWJH-E27#D	1-fiber, 9/125 µm acc.G.652.D/G.657-A1, Ø 2.4 mm, jacket LSFH yellow
84086802	01-E9A2/CWJH-E27-FG#D	1-fiber, 9/125 µm acc.ITU-G.657-A2, Ø 2.7 mm, jacket LSFH yellow
22523126	01-G50/CWJH-D27#D	1-fiber, 50/125 µm OM2, Ø 2.7 mm, jacket LSFH orange
22523127	01-G62/CWJH-D27#D	1-fiber, 62.5/125 µm OM1, Ø 2.7 mm, jacket LSFH orange

Order information for indoor cables

Duplex cables figure 8 - 1.4 mm LSFH™ jacket with tight tube 0.6 mm



Item no.	Cable type	Description
84065738	02-E9/VJH-E14	2-fiber, 9/125 µm acc.G.652.D/G.657-A1, Ø 1.4 × 3.0 mm, jacket LSFH yellow
84126462	02-E9A2/VJH-E14-FG	2-fiber, 9/125 µm acc.G.657-A2, Ø 1.4 × 3.0 mm, jacket LSFH yellow
84145087	02-G50/VJH-M14-F	2-fiber, 50/125 µm OM3 BendOptimized, Ø 1.4 × 3.0 mm, jacket LSFH turquoise
84146528	02-G50/VJH-L14-G	2-fiber, 50/125 µm OM4 BendOptimized, Ø 1.4 × 3.0 mm, jacket LSFH heather violet

Duplex cables figure 8 - 1.7 mm LSFH™ jacket with tight tube 0.9 mm



Item no.	Cable type	Description
23040758	02-E9/FJH-E17	2-fiber, 9/125 µm acc.G.652.D/G.657-A1, Ø 1.7 × 3.4 mm, jacket LSFH yellow
84127588	02-E9A2/FJH-E17-FG	2-fiber, 9/125 µm acc.ITU-G.657-A2, Ø 1.7 × 3.4 mm, jacket LSFH yellow
23040759	02-G50/FJH-D17	2-fiber, 50/125 µm OM2, Ø 1.7 × 3.4 mm, jacket LSFH orange
84005418	02-G50/FJH-M17-F	2-fiber, 50/125 µm OM3 BendOptimized, Ø 1.7 × 3.4 mm, jacket LSFH turquoise
84121679	02-G50/FJH-L17-G	2-fiber, 50/125 µm OM4 BendOptimized, Ø 1.7 × 3.4 mm, jacket LSFH heather violet
23040760	02-G62/FJH-D17	2-fiber, 62.5/125 µm OM1, Ø 1.7 × 3.4 mm, jacket LSFH orange

Duplex cables figure 8 - 1.7 mm LSFH™ jacket with semi-tight tubes 0.9 mm



Item no.	Cable type	Description
85024637	02-E9/CWJH-E17#D	2-fiber, 9/125 µm acc.G.652.D/G.657-A1, Ø 1.7 × 3.4 mm, jacket LSFH yellow
85029964	02-E9A2/CWJH-E17-FG#D	2-fiber, 9/125 µm acc.G.657-A2, Ø 1.7 × 3.4 mm, jacket LSFH yellow
85030614	02-G50/CWJH-M17-F#D	2-fiber, 50/125 µm OM3 BendOptimized, Ø 1.7 × 3.4 mm, jacket LSFH turquoise

Duplex cables figure 8 - 2.0 mm LSFH™ jacket with semi-tight tube 0.9 mm



Item no.	Cable type	Description
84008151	02-E9/CWJH-E20#D	2-fiber, 9/125 µm acc.G.652.D/G.657-A1, Ø 2.0 × 4.1 mm, jacket LSFH yellow
84065256	02-E9A2/CWJH-E20-FG#D	2-fiber, 9/125 µm acc.ITU-G.657-A2, Ø 2.0 × 4.1 mm, jacket LSFH yellow
84008152	02-G50/CWJH-D20#D	2-fiber, 50/125 µm OM2, Ø 2.0 × 4.1 mm, jacket LSFH orange
84008169	02-G50/CWJH-M20-F#D	2-fiber, 50/125 µm OM3 BendOptimized, Ø 2.0 × 4.1 mm, jacket LSFH turquoise
84121856	02-G50/CWJH-L20-G#D	2-fiber, 50/125 µm OM4 BendOptimized, Ø 2.0 × 4.1 mm, jacket LSFH heather violet
84008153	02-G62/CWJH-D20#D	2-fiber, 62.5/125 µm OM1, Ø 2.0 × 4.1 mm, jacket LSFH orange

Order information for indoor cables

Duplex cables figure 8 – 2.7 mm

LSFH™ jacket with semi-tight tube 0.9 mm



Item no.	Cable type	Description
22523202	02-E9/CWJH-E27#D	2-fiber, 9/125 µm acc.G.652.D/G.657-A1, Ø 2.7 × 5.4 mm, jacket LSFH yellow
22523203	02-G50/CWJH-D27#D	2-fiber, 50/125 µm OM2, Ø 2.7 × 5.4 mm, jacket LSFH orange
84005133	02-G50/CWJH-M27-F#D	2-fiber, 50/125 µm OM3 BendOptimized, Ø 2.7 × 5.4 mm, jacket LSFH turquoise
22523204	02-G62/CWJH-D27#D	2-fiber, 62.5/125 µm OM1, Ø 2.7 × 5.4 mm, jacket LSFH orange

Duplex cable figure 0 – 1.4 mm

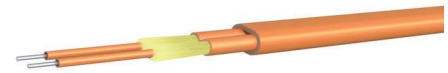
LSFH™ jacket with tight tube 0.6 mm



Item no.	Cable type	Description
84149009	02-E9/VJH-AE14	2-fiber, 9/125 µm acc.G.652.D/G.657-A1, Ø 2.3 × 3.7 mm, jacket LSFH yellow
84148983	02-E9A2/VJH-AE14-FG	2-fiber, 9/125 µm acc.G.657-A2, Ø 2.3 × 3.7 mm, jacket LSFH yellow
84153026	02-G50/VJH-AM14-F	2-fiber, 50/125 µm OM3 BendOptimized, Ø 2.3 × 3.7 mm, jacket LSFH turquoise
84153207	02-G50/VJH-AL14-G	2-fiber, 50/125 µm OM4 BendOptimized, Ø 2.3 × 3.7 mm, jacket LSFH heather violet

Duplex cables figure 0 – 2.0 mm

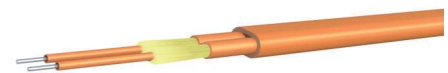
LSFH™ jacket with semi-tight tube 0.9 mm



Item no.	Cable type	Description
23039888	02-E9/CWJH-AE20#D	2-fiber, 9/125 µm acc.G.652.D/G.657-A1, Ø 3.1 × 5.2 mm, jacket LSFH yellow
84073839	02-E9A2/CWJH-AE20-FG#D	2-fiber, 9/125 µm acc.ITU-G.657-A2, Ø 3.1 × 5.2 mm, jacket LSFH yellow
23039889	02-G50/CWJH-AD20#D	2-fiber, 50/125 µm OM2, Ø 3.1 × 5.2 mm, jacket LSFH orange
84005553	02-G50/CWJH-AM20-F#D	2-fiber, 50/125 µm OM3 BendOptimized, Ø 3.1 × 5.2 mm, jacket LSFH turquoise
84121859	02-G50/CWJH-AL20-G#D	2-fiber, 50/125 µm OM4 BendOptimized, Ø 3.1 × 5.2 mm, jacket LSFH heather violet
23039891	02-G62/CWJH-AD20#D	2-fiber, 62.5/125 µm OM1, Ø 3.1 × 5.2 mm, jacket LSFH orange

Duplex cables figure 0 – 2.7 mm

LSFH™ jacket with semi-tight tube 0.9 mm



Item no.	Cable type	Description
22523252	02-E9/CWJH-AE27#D	2-fiber, 9/125 µm acc.G.652.D/G.657-A1, Ø 3.5 × 6.2 mm, jacket LSFH yellow
22523253	02-G50/CWJH-AD27#D	2-fiber, 50/125 µm OM2, Ø 3.5 × 6.2 mm, jacket LSFH orange
84005135	02-G50/CWJH-AM27-F#D	2-fiber, 50/125 µm OM3 BandOptimized, Ø 3.5 × 6.2 mm, jacket LSFH turquoise
22523254	02-G62/CWJH-AD27#D	2-fiber, 62.5/125 µm OM1, Ø 3.5 × 6.2 mm, jacket LSFH orange

Duplex cables round 2.1 mm

LSFH™ jacket with tight tube 0.6 mm for LC Uniboot



Item no.	Cable type	Description
84107633	02-E9A2/V(ZN)H-E21#D	2-fiber, 9/125 µm acc.ITU-G.657-A2, Ø 2.1 mm, jacket LSFH yellow
84107634	02-G50/V(ZN)H-M21-F#D	2-fiber, 50/125 µm OM3 BandOptimized, Ø 2.1 mm, jacket LSFH turquoise
84124505	02-G50/V(ZN)H-L21-G#D	2-fiber, 50/125 µm OM4 BandOptimized, Ø 2.1 mm, jacket LSFH heather violet

Order information for indoor cables

Optipack 8 - 2.0mm

Multi-fiber patch cable

LSFH™ jacket with 8 fibers for MTP®/MPO



Item no.	Cable type	Description
85072218	08-E9A2/(ZN)H-E20_TIA#D	Optipack cable Ø 2.0mm, 8 x 9/125µm G.657.A2, LSFH yellow, TIA fiber colour code
85072217	08-G50/(ZN)H-M20-F_TIA#D	Optipack cable Ø 2.0mm, 8 x 50/125µm OM3, LSFH turquoise, TIA fiber colour code
85070835	08-G50/(ZN)H-L20-G_TIA#D	Optipack cable Ø 2.0mm, 8 x 50/125µm OM4, LSFH heather violet, TIA fiber colour code

Optipack 12 - 2.0mm

Multi-fiber patch cable

LSFH™ jacket with 12 fibers for MTP®/MPO



Item no.	Cable type	Description
85065690	12-E9A2/(ZN)H-E20#D	Optipack cable Ø 2.0mm, 12 x 9/125µm G.657.A2, LSFH yellow
85068193	12-G50/(ZN)H-M20-F#D	Optipack cable Ø 2.0mm, 12 x 50/125µm OM3, LSFH turquoise
85068194	12-G50/(ZN)H-L20-G#D	Optipack cable Ø 2.0mm, 12 x 50/125µm OM4, LSFH heather violet

Optipack 12 - 3.0 mm

Multi-fiber patch cable

LSFH™ jacket with 12 fibers for MTP®/MPO



Item no.	Cable type	Description
84138650	12-E9A2/(ZN)H-E30#D	12-fiber, 9/125 µm acc.G.657-A2, Ø 3.0 mm, jacket LSFH yellow
84150817	12-G50/(ZN)H-M30-F OM3#D	12-fiber, 50/125 µm OM3 BendOptimized, Ø 3.0 mm, jacket LSFH turquoise
84144927	12-G50/(ZN)H-L30-G OM4#D	12-fiber, 50/125 µm OM4 BendOptimized, Ø 3.0 mm, jacket LSFH heather violet

Optipack 24 - 3.6 mm

Multi-fiber patch cable

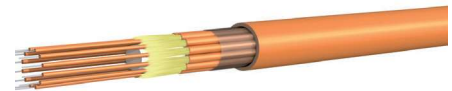
LSFH™ jacket with 24 fibers for MTP®/MPO



Item no.	Cable type	Description
85001254	24-E9A2/(ZN)H-E36#D	24-fiber, 9/125 µm acc.G.657-A2, Ø 3.6 mm, jacket LSFH yellow
85001255	24-G50/(ZN)H-M36-F OM3#D	24-fiber, 50/125 µm OM3 BendOptimized, Ø 3.6 mm, jacket LSFH turquoise
85001256	24-G50/(ZN)H-L36-G OM4#D	24-fiber, 50/125 µm OM4 BendOptimized, Ø 3.6 mm, jacket LSFH heather violet

Breakout cable - 1.4 mm

LSFH™ jacket with tight tube 0.6 mm

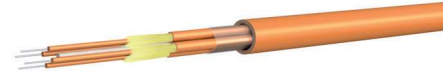


Item no.	Cable type	Description
84127584	12-E9/VJSNHE14#D	12-fiber, 9/125 µm acc.G.652.D/G.657-A1, Ø 9 mm, jacket LSFH yellow
84150017	12-G50/VJSNH-M14-F OM3#D	12-fiber, 50/125 µm OM3 BendOptimized, Ø 9 mm, jacket LSFH turquoise
84150018	12-G50/VJSNH-L14-G OM4#D	12-fiber, 50/125 µm OM4 BendOptimized, Ø 9 mm, jacket LSFH heather violet
84127585	16-E9/VJSNHE14#D	16-fiber, 9/125 µm acc.G.652.D/G.657-A1, Ø 9 mm, jacket LSFH yellow
84137530	18-E9/VJSNHE14#D	18-fiber, 9/125 µm acc.G.652.D/G.657-A1, Ø 9.5 mm, jacket LSFH yellow
84127586	24-E9/VJSNHE14#C	24-fiber, 9/125 µm acc.G.652.D/G.657-A1, Ø 10.6 mm, jacket LSFH yellow
84144533	24-E9A2/VJSNHE14#C	24-fiber, 9/125 µm acc.ITU-G.657-A2, Ø 10.6 mm, jacket LSFH yellow
84138289	24-G50/VJSNH-M14-F OM3#C	24-fiber, 50/125 µm OM3 BendOptimized, Ø 10.6 mm, jacket LSFH turquoise
84135616	24-G50/VJSNH-L14-G OM4#D	24-fiber, 50/125 µm OM4 BendOptimized, Ø 10.6 mm, jacket LSFH heather violet

Order information for indoor cables

Breakout cables – 2.0 mm

LSFH™ jacket with semi-tight tube 0.9 mm



Item no.	Cable type	Description
84008843	04-E9/CWJSNHE20#D	4-fiber, 9/125 µm acc.G.652.D/G.657-A1, Ø 7 mm, jacket LSFH yellow
84008846	04-G50/CWJSNH-D20#D	4-fiber, 50/125 µm OM2, Ø 7 mm, jacket LSFH orange
84033250	04-G50/CWJSNH-M20-F#D	4-fiber, 50/125 µm OM3 BendOptimized, Ø 7 mm, jacket LSFH turquoise
84121850	04-G50/CWJSNH-L20-G#D	4-fiber, 50/125 µm OM4 BendOptimized, Ø 7 mm, jacket LSFH heather violet
84008847	04-G62/CWJSNH-D20#D	4-fiber, 62/125 µm OM1, Ø 7 mm, jacket LSFH orange
84009199	08-E9/CWJSNHE20#C	8-fiber, 9/125 µm acc.G.652.D/G.657-A1, Ø 7 mm, jacket LSFH yellow
84009200	08-G50/CWJSNH-D20#C	8-fiber, 50/125 µm OM2, Ø 9 mm, jacket LSFH orange
84033251	08-G50/CWJSNH-M20-F#C	8-fiber, 50/125 µm OM3 BendOptimized, Ø 9 mm, jacket LSFH turquoise
84121854	08-G50/CWJSNH-L20-G#C	8-fiber, 50/125 µm OM4 BendOptimized, Ø 9 mm, jacket LSFH heather violet
84009201	08-G62/CWJSNH-D20#C	8-fiber, 62/125 µm OM1, Ø 9 mm, jacket LSFH orange
84009443	12-E9/CWJSNHE20#C	12-fiber, 9/125 µm acc.G.652.D/G.657-A1, Ø 12 mm, jacket LSFH yellow
84073652	12-E9A2/CWJSNHE20-FG#C	12-fiber, 9/125 µm acc.G.657-A2, Ø 12 mm, jacket LSFH yellow
84009444	12-G50/CWJSNH-D20#C	12-fiber, 50/125 µm OM2, Ø 12 mm, jacket LSFH orange
84033252	12-G50/CWJSNH-M20-F#C	12-fiber, 50/125 µm OM3 BendOptimized, Ø 12 mm, jacket LSFH turquoise
84121855	12-G50/CWJSNH-L20-G#C	12-fiber, 50/125 µm OM4 BendOptimized, Ø 12 mm, jacket LSFH heather violet
84009445	12-G62/CWJSNH-D20#C	12-fiber, 62/125 µm OM1, Ø 12 mm, jacket LSFH orange
85063202	24-E9/CWJSNHE20#C	24-fiber, 9/125 µm acc.G.652.D/G.657-A1, Ø 12 mm, jacket LSFH yellow

Breakout cables – fire resistance – 2.0 mm

LSFH™ jacket with semi-tight tube 0.9 mm



Item no.	Cable type	Description
84018102	04-E9/CWJSNHIH-E20	4-fiber, 9/125 µm acc.G.652.D/G.657-A1, Ø 10 mm, jacket LSFH yellow
84018103	04-G50/CWJSNHIH-D20	4-fiber, 50/125 µm OM2, Ø 10 mm, jacket LSFH orange
84150417	04-G50/CWJSNHIH-L20-G	4-fiber, 50/125 µm OM4 BendOptimized, Ø 10 mm, jacket LSFH heather violet
84018104	04-G62/CWJSNHIH-D20	4-fiber, 62/125 µm OM1, Ø 10 mm, jacket LSFH orange
84018106	08-E9/CWJSNHIH-E20	8-fiber, 9/125 µm acc.G.652.D/G.657-A1, Ø 12 mm, jacket LSFH yellow
84018107	08-G50/CWJSNHIH-D20	8-fiber, 50/125 µm OM2, Ø 12 mm, jacket LSFH orange
85001062	08-G50/CWJSNHIH-L20-G	8-fiber, 50/125 µm OM4 BendOptimized, Ø 12 mm, jacket LSFH heather violet
84018108	08-G62/CWJSNHIH-D20	8-fiber, 62/125 µm OM1, Ø 12 mm, jacket LSFH orange
84018109	12-E9/CWJSNHIH-E20	12-fiber, 9/125 µm acc.G.652.D/G.657-A1, Ø 15 mm, jacket LSFH yellow
84018110	12-G50/CWJSNHIH-D20	12-fiber, 50/125 µm OM2, Ø 15 mm, jacket LSFH orange
84150427	12-G50/CWJSNHIH-L20-G	12-fiber, 50/125 µm OM4 BendOptimized, Ø 15 mm, jacket LSFH heather violet
84018111	12-G62/CWJSNHIH-D20	12-fiber, 62/125 µm OM1, Ø 15 mm, jacket LSFH orange

Order information for indoor cables

Optipack 8 - breakout - 2.0 mm up to 96

Multi-fiber breakout cable

LSFH™ jacket with 8 fibers for MTP®/MPO



Item no.	Cable type	Description
85080335	24-8G50/(ZN)SNH-M20-F_TIA	Optipack breakout cable 2.0mm / Ø 6.6mm, 24 x 50/125µm OM3, LSFH turquoise, TIA fiber colour code
85080309	24-8G50/(ZN)SNH-L20-G_TIA	Optipack breakout cable 2.0mm / Ø 6.6mm, 24 x 50/125µm OM4, LSFH heather violet, TIA fiber colour code
85080338	48-8E9A2/(ZN)SNH-E20_TIA	Optipack breakout cable 2.0mm / Ø 7.6mm, 48 x 9/125µm G.657A2, LSFH yellow, TIA fiber colour code
85080353	48-8G50/(ZN)SNH-M20-F_TIA	Optipack breakout cable 2.0mm / Ø 7.6mm, 48 x 50/125µm OM3, LSFH turquoise, TIA fiber colour code
85080348	48-8G50/(ZN)SNH-L20-G_TIA	Optipack breakout cable 2.0mm / Ø 7.6mm, 48 x 50/125µm OM4, LSFH heather violet, TIA fiber colour code
85080343	96-8E9A2/(ZN)SNH-E20_TIA	Optipack breakout cable 2.0mm / Ø 10.3mm, 96 x 9/125µm G.657A2, LSFH yellow, TIA fiber colour code
85080356	96-8G50/(ZN)SNH-M20-F_TIA	Optipack breakout cable 2.0mm / Ø 10.3mm, 96 x 50/125µm OM3, LSFH turquoise, TIA fiber colour code
85080354	96-8G50/(ZN)SNH-L20-G_TIA	Optipack breakout cable 2.0mm / Ø 10.3mm, 96 x 50/125µm OM4, LSFH heather violet, TIA fiber colour code

Optipack 12 – breakout – 3.0 mm up to 144

Multi-fiber breakout cable

LSFH™ jacket with 12 fibers for MTP®/MPO



Item no.	Cable type	Description
85078582	24-12E9A2/(ZN)SNH-E20	Optipack breakout cable 2.0mm / Ø 6.6mm, 24 x 9/125µm G.657A2, LSFH yellow
85070323	48-12E9A2/(ZN)SNH-E20	Optipack breakout cable 2.0mm / Ø 6.6mm, 48 x 9/125µm G.657A2, LSFH yellow
85080362	48-12G50/(ZN)SNH-M20-F	Optipack breakout cable 2.0mm / Ø 6.6mm, 48 x 50/125µm OM3, LSFH turquoise
85075764	48-12G50/(ZN)SNH-L20-G	Optipack breakout cable 2.0mm / Ø 6.6mm, 48 x 50/125µm OM4, LSFH heather violet
85070324	72-12E9A2/(ZN)SNH-E20	Optipack breakout cable 2.0mm / Ø 7.6mm, 72 x 9/125µm G.657A2, LSFH yellow
85080365	72-12G50/(ZN)SNH-M20-F	Optipack breakout cable 2.0mm / Ø 7.6mm, 72 x 50/125µm OM3, LSFH turquoise
85075765	72-12G50/(ZN)SNH-L20-G	Optipack breakout cable 2.0mm / Ø 7.6mm, 72 x 50/125µm OM4, LSFH heather violet
85070335	96-12E9A2/(ZN)SNH-E20	Optipack breakout cable 2.0mm / Ø 9.2mm, 96 x 9/125µm G.657A2, LSFH yellow
85075766	96-12G50/(ZN)SNH-L20-G	Optipack breakout cable 2.0mm / Ø 9.2mm, 96 x 50/125µm OM4, LSFH heather violet
85070334	144-12E9A2/(ZN)SNH-E20	Optipack breakout cable 2.0mm / Ø 10.3mm, 144 x 9/125µm G.657A2, LSFH yellow
85080366	144-12G50/(ZN)SNH-M20-F	Optipack breakout cable 2.0mm / Ø 10.3mm, 144 x 50/125µm OM3, LSFH turquoise
85075767	144-12G50/(ZN)SNH-L20-G	Optipack breakout cable 2.0mm / Ø 10.3mm, 144 x 50/125µm OM4, LSFH heather violet

Optipack 24 – breakout – 3.6 mm up to 288

Multi-fiber breakout cable

LSFH™ jacket with 24 fibers for MTP®/MPO



Item no.	Cable type	Description
85082337	48-24E9A2/(ZN)SNH-E30	Optipack breakout cable 3.0mm / Ø 9.3mm, 48 x 9/125µm G.657A2, LSFH yellow
85082338	48-24G50/(ZN)SNH-L30-G	Optipack breakout cable 3.0mm / Ø 9.3mm, 48 x 50/125µm OM4, LSFH heather violet
85070350	96-24E9A2/(ZN)SNH-E30	Optipack breakout cable 3.0mm / Ø 9.3mm, 96 x 9/125µm G.657A2, LSFH yellow
85076399	96-24G50/(ZN)SNH-L30-G	Optipack breakout cable 3.0mm / Ø 9.3mm, 96 x 50/125µm OM4, LSFH heather violet
85070351	144-24E9A2/(ZN)SNH-E30	Optipack breakout cable 3.0mm / Ø 11.0mm, 144 x 9/125µm G.657A2, LSFH yellow
85076405	144-24G50/(ZN)SNH-L30-G	Optipack breakout cable 3.0mm / Ø 11.0mm, 144 x 50/125µm OM4, LSFH heather violet

FTTH Simplex cables 2.7 mm

LSFH™ jacket with semi-tight tube 0.9 mm



Item no.	Cable type	Description
84075437	01-E9A2/CWJH-H27-FG#D	1-fiber, 9/125 µm acc.ITU-G.657-A2, Ø 2.7 mm, jacket LSFH light grey
85021554	01-E9A3/CWJH-F27-FG_blank#D	1-fiber, 9/125 µm acc.ITU-G.657-A2/B3, Ø 2.7 mm, jacket LSFH white, no labelling

Order information for indoor cables

Riser cables (mini breakout)

LSFH™ jacket with tight tube 0.9 mm



Item no.	Cable type	Description
22523404	04-E9/FSN(ZN)H-G50	4-fiber, 9/125 µm acc.G.652.D/G.657-A1, Ø 5 mm, jacket LSFH black
22521830	04-G50/FSN(ZN)H-G50	4-fiber, 50/125 µm OM2, Ø 5 mm, jacket LSFH black
84101315	04-G50/FSN(ZN)H-G50-F	4-fiber, 50/125 µm OM3 BendOptimized, Ø 5 mm, jacket LSFH black
84098281	04-G50/FSN(ZN)H-G50-G	4-fiber, 50/125 µm OM4 BendOptimized, Ø 5 mm, jacket LSFH black
22521829	04-G62/FSN(ZN)H-G50	4-fiber, 62.5/125 µm OM1, Ø 5 mm, jacket LSFH black
22523407	12-E9/FSN(ZN)H-G70#D	12-fiber, 9/125 µm acc.G.652.D/G.657-A1, Ø 7 mm, jacket LSFH black
84047888	12-E9/FSN(ZN)H-E70#D	12-fiber, 9/125 µm acc.G.652.D/G.657-A1, Ø 7 mm, jacket LSFH yellow
22521838	12-G50/FSN(ZN)H-G70#D	12-fiber, 50/125 µm OM2, Ø 7 mm, jacket LSFH black
84067095	12-G50/FSN(ZN)H-M70-F#D	12-fiber, 50/125 µm OM3 BendOptimized, Ø 7 mm, jacket LSFH turquoise
84136187	12-G50/FSN(ZN)H-L70-G#D	12-fiber, 50/125 µm OM4 BendOptimized, Ø 7 mm, jacket LSFH heather violet
22521839	12-G62/FSN(ZN)H-G70#D	12-fiber, 62.5/125 µm OM1, Ø 7 mm, jacket LSFH black
84066463	24-E9/FSN(ZN)H-G88	24-fiber, 9/125 µm acc.G.652.D/G.657-A1, Ø 8.8 mm, jacket LSFH black
84148070	24-E9/FSN(ZN)H-E88	24-fiber, 9/125 µm acc.G.652.D/G.657-A1, Ø 8.8 mm, jacket LSFH yellow
84066644	24-G50/FSN(ZN)H-G88	24-fiber, 50/125 µm OM2, Ø 8.8 mm, jacket LSFH black
84144587	24-G50/FSN(ZN)H-G88-F	24-fiber, 50/125 µm OM3 BendOptimized, Ø 8.8 mm, jacket LSFH black
84110821	24-G50/FSN(ZN)H-G88-G	24-fiber, 50/125 µm OM4 BendOptimized, Ø 8.8 mm, jacket LSFH black
84148078	24-G50/FSN(ZN)H-L88-G	24-fiber, 50/125 µm OM4 BendOptimized, Ø 8.8 mm, jacket LSFH heather violet
84068521	24-G62/FSN(ZN)H-G88	24-fiber, 62.5/125 µm OM1, Ø 8.8 mm, jacket LSFH black

FTTH Microtube cables 2.3 mm

LSFH™ jacket up to 4 fibers



Item no.	Cable type	Description
85024198	04-4E9A2/MH(ZN)H-H23#D	4-fiber, 9/125 µm acc.G.657-A2, Ø 2.3 mm, jacket LSFH light grey
85018124	04-E9A2/MH(ZN)H-E23#D	4-fiber, 9/125 µm acc.G.657-A2, Ø 2.3 mm, jacket LSFH yellow

FTTH Indoor cables 2.8 mm

LSFH™ jacket with tight tube 0.6 mm



Item no.	Cable type	Description
84067597	04-E9A2/V(ZN)H-H28#D	4-fiber, 9/125 µm acc.G.657-A2, Ø 2.8 mm, jacket LSFH light grey
84089089	04-E9A2/V(ZN)H-E28#D	4-fiber, 9/125 µm acc.G.657-A2, Ø 2.8 mm, jacket LSFH yellow

FTTH Indoor HOMESTAR cables 4.8 mm

LSFH™ jacket with tight tube 0.9 mm



Item no.	Cable type	Description
84067283	01-E9/F(ZN)H-H48	1-fiber, 9/125 µm acc.G.652.D/G.657-A1, Ø 4.8 mm, jacket LSFH light grey
84060987	02-E9/FSN(ZN)H-H48	2-fiber, 9/125 µm acc.G.652.D/G.657-A1, Ø 4.8 mm, jacket LSFH light grey
84063363	04-E9/FSN(ZN)H-H48	4-fiber, 9/125 µm acc.G.652.D/G.657-A1, Ø 4.8 mm, jacket LSFH light grey