I14a: UC$^{\text{FIBRE}}$ I/O ST CST LSHF-FR B2$_{\text{ca}}$

1800N, universal, ST, up to 144f, FireRes®, CST, FireRes® sheath

B2$_{\text{ca}}$ CPR
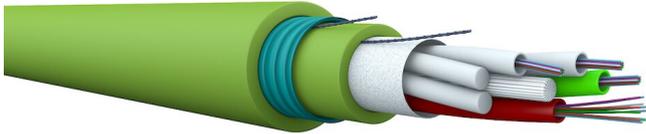
GENERAL INFO

The intended installation environment is in tunnels and subways, where flame retardance is required. The steel armour makes the cable rodent proof.

CABLE FEATURES

- FO cable in stranded gel-filled loose tube design for structured cabling.
- The cable is UV-resistant, with steel tape armoring, longitudinally water blocked and rodent-proof.
- The jacket is made of halogen-free, flame-retardant material according to IEC60332-1-2 and EN50399 for use in public buildings with high personal risk and higher Euro fire class B2ca s1 d1 a1.
- For use as a flame-retardant cable indoors.
- The fiber optic cable exceeds the requirements of EN50173-1 and ISO/IEC11801.

Latest version of this data sheet is available for download: ProductFamily410891

CERTIFICATIONS AND DESIGN STANDARDS

B2$_{\text{ca}}$ CPR **3P THIRD PARTY TESTING**

EN 50399 Class B2ca-s1-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 60794-6-10	Family specification for universal indoor-outdoor cables
IEC 60332-3-24	Bundled fire test

APPLICATION PROPERTIES

Resistant to UV	UV stabilised
Outdoor installation With rodent protection	Yes
Operation temperature (min) [°C]	-40 and (max) [°C] 70
Installation temperature (min) [°C]	-30 and (max) [°C] 60
Storage temperature (min) [°C]	-30 and (max) [°C] 60
Bending radius (rule)	During installation (loaded) = 20xOD, Permanent (unloaded) = 10xOD

CABLE CONSTRUCTION

Type of tube	Stranded loose tube with Ø2.3 mm gel-filled loose tubes with 12 fibres each
Longitudinal water blocking cable	Yes
Rip cord	Yes
Material inner sheath	Low smoke zero halogen
Rip cord	Yes
Armouring/reinforcement	Steel, galvanised, Armouring tape
Material outer sheath	1.5mm, Low smoke zero halogen FireRes®
Cable shape	Round
Cable marking example	PRYSMIAN UCFIBRE I/O ST CST LSHF-FR B2ca-s1-d1-a1 'Fibre count' 'Fibre type''Fibre brand' 'Item No' 'Factory No' 'Batch Number' 'Meter mark' U-DQH(SR)H 'Number of Elements' x 'Fibre count per element' 'Fibre family' 'Mode field diameter' /125 'Transmission Class'
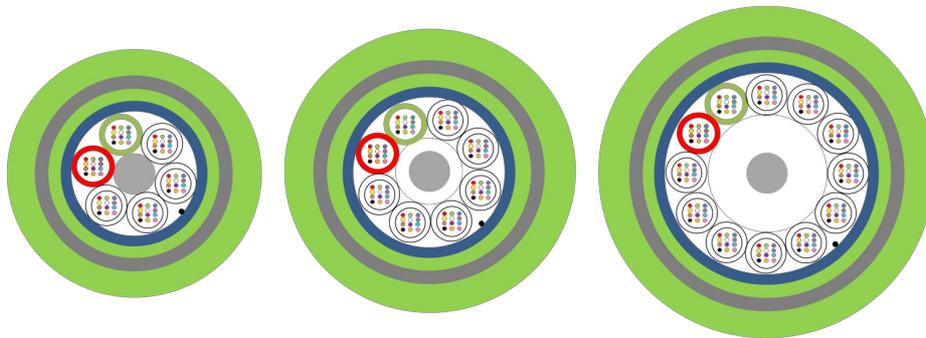
IDENTIFICATION

Fibre colour code

in accordance with IEC 60794-2 and VDE 0888 read more

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: BendBrightXSG.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

FIRE PROPERTIES

Flame retardant according to IEC 60332-1-2	Yes
Reaction-to-fire class (acc. EN 13501-6)	B2ca
Smoke development class (acc. EN 13501-6)	s1
Euro class flaming droplets/particles (acc. EN 13501-6)	d1
Euro class acidity (acc. EN 13501-6)	a1

MECHANICAL PROPERTIES

Crush	IEC 60794-1-21 E3	3,000 N/10cm
Max. tensile strength during installation	IEC 60794-1-21 E1	1,800 N
Permanent tensile strength	IEC 60794-1-21 E1	1,200 N
Impact test	IEC 60794-1-21 E4	20 N·m
Torsion test	IEC 60794-1-21 E7	5 cycles ±1turn
Kink	IEC 60794-1-21 E10	The cables do not form a kink when a loop is drawn together to a diameter 20 times the cable nominal diameter.

CABLE DESIGN DETAILS

Number of fibres	Number of fibres per tube	Nominal outer diameter [mm]	Fire load [MJ/km]	Cable weight [kg/km]
12	12	14.4	2,739	241
24	12	14.4	2,436	246
48	12	14.4	2,436	253
72	12	14.4	2,665	255
96	12	14.4	2,562	248
120	12	19	4,371	437
144	12	19	4,351	439

ORDERING DETAILS

Product name	Number of fibres	Category (fibre)	Fibre datasheet	Colour outer sheath	DOP number	SAP code
UCFIBRE I/O ST CST LSHF-FR B2 12 SM7A1 Y	12	OS2	C17	Yellow		I14a-12SM7A1
UCFIBRE I/O ST CST LSHFFR B2 48 SM7A1 YL	48	OS2	C17	Yellow	1018292	60108043
UCFIBRE I/O ST CST LSHF-FR B2 72 SM7A1 Y	72	OS2	C17	Yellow		I14a-72SM7A1
UCFIBRE I/O ST CST LSHF-FR B2 96 SM7A1 YL	96	OS2	C17	Yellow	1016461	60104666
UCFIBRE IO ST CST LSHFFR B2 120 SM7A1 YL	120	OS2	C17	Yellow	1016365	60104343
UCFIBRE I/O ST CST LSHF-FR B2 144A1 YL	144	OS2	C17	Yellow	1016159	60103320
UCFIBRE I/O ST CST LSHF-FR B2 24 SM7A2 Y	24	OS2	C24	Yellow		I14a-24SM7A2
UCFIBRE I/O ST CST LSHF-FR B2 48 SM7A2 Y	48	OS2	C24	Yellow		I14a-48SM7A2
UCFIBRE I/O ST CST LSHF-FR B2 72 SM7A2 Y	72	OS2	C24	Yellow		I14a-72SM7A2
UCFIBRE I/O ST CST LSHF-FR B2 96 SM7A2 Y	96	OS2	C24	Yellow		I14a-96SM7A2
UCFIBRE I/O ST CST LSHF-FR B2 144 SM7A2 Y	144	OS2	C24	Yellow		I14a-144SM7A2
UCFIBRE I/O ST CST LSHFFR B2 24 SM7A1 YL	24	OS2	C53	Yellow	1017857	60106699
UCFIBRE I/O ST CST LSHF-FR B2 24 OM3B AQ	24	OM3	C31	Turquoise		I14a-24OM3B
UCFIBRE I/O ST CST LSHF-FR B2 96 OM3B AQ	96	OM3	C31	Turquoise		I14a-96OM3B
UCFIBRE I/O ST CST LSHF-FR B2 144 OM3B AQ	144	OM3	C31	Aqua		I14a-144OM3B
UCFIBRE I/O ST CST LSHF-FR B2 12 OM4B EV	12	OM4	C32	Erika-violet		I14a-12OM4B
UCFIBRE I/O ST CST LSHF-FR B2 24 OM4B EV	24	OM4	C32	Erika-violet		I14a-24OM4B

ORDERING DETAILS

Product name	Number of fibres	Category (fibre)	Fibre datasheet	Colour outer sheath	DOP number	SAP code
UCFIBRE I/O ST CST LSHF-FR B2 96 OM5B LI	96	OM5	C39	Lime green		I14a-96OM5B
UCFIBRE I/O ST CST LSHF-FR B2 144 OM5B LI	144	OM5	C39	Lime green		I14a-44OM5B

*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