



D-DAC HFFR Dca

12x SM G.657.A2 (2x6)

Article number: 75556

Date: 19-11-2021

The D-DAC HFFR Dca (Dry Direct Access Cable Halogen Free Flame Retardant) is a universal, dielectric and lightweight fibre optic cable, for all types of FTTx applications. This cable is robust and waterproof and has a flexible sheath of small and easily stripped diameter, which makes it perfectly suitable for indoor installation. Optical fibers are grouped in "soft tube" modules allowing easy and quick opening. The D-DAC HFFR Dca is suitable for installation outdoors (directly in the ground, in ducts, or on the facade) and indoors (riser). This cable is intended to serve housing of high buildings (MDU) from the last underground distribution point of the access network, without transition. This product offers an ideal, fast and economical solution for "Fiber To The Home" connections in collective housing.

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Product characteristics

Cable type	DAC
Fibre type	Single mode 9/125
Optical fibre standard	ITU-T G.657.A2
Number of fibers	12
Number of fibers per optical element	6
Number of cores	2
Strain relief	Yes
Optical element	Soft tube
Cable metal free	Yes
Stripability outer sheath	1000 mm
Stripability optical element	> 100 mm, down to primary coating
Type of strain relief	FRP + Aramid
Material outer sheath	HFFR



Product characteristics

Colour outer sheath	Black
Outer sheath thickness	1,7 mm
Outer diameter approx.	5,9 mm
Max. outer diameter	6,1 mm
Marking	ACE - TKF - D-DAC HFFR Dca 12 x SM G.657.A2 (2x6) 75556 {Batch} [-CE-] DoP0081 {Year} {Length}

Application

Standardization	EN IEC 60794-2
Test procedures	EN IEC 60794-1-2
Application	Inside/Outside
Euro fire class according to EN 13501-6	Dca
Euro class smoke production according to EN 13501-6	s1
Euro class flaming droplets/particles according to EN 13501-6	d1
Euro class acidity according to EN 13501-6	a1

Mechanical specification

Tensile load short term (Tm)	1000 N
Cable strain by Tm	0,6 %
Max. fiber strain at Tm	0,6 %
Tensile load Long Term (TI)	300 N
Max. fiber strain at TI	0,2 %
Min. bending radius during installation	45 mm
Min. bending radius after installation	60 mm
Crush resistance E3A short (1min)	2500 N/dm
Crush resistance E3A long	1000 N/dm
Crush load E3A long application time	10 min
Striking surface radius	300 mm
Torsion resistance	1800 °/m
Kink resistance	60 mm



Optical specification

Category according to EN 50173	OS2
Max. attenuation @ 1310 nm	0,38 dB/km
Max. attenuation @ 1550 nm	0,25 dB/km
Max. attenuation @ 1625 nm	0,30 dB/km

Environmental specification

Longitudinal water blocking cable	Yes
Longitudinal watertight construction	Super Absorbing Polymer
Installation temperature	-10/50 °C
Operational temperature range Ta1 - Tb1	-30/70 °C
Max. attenuation increase during Ta1 - Tb1	0,05 dB
Operational temperature range Ta2 - Tb2	-40/70 °C
Max. attenuation increase during Ta2 - Tb2	0,15 dB
TC sample length for TC acc. F1 or F12	1000 m
UV resistant	Yes
UV-protection	ISO 4892/2
Color fastness	Blue wool scale 8

Other specification

Halogen free (acc. EN 60754-1/2)	Yes
Halogen free	IEC 60754-1&2 / EN 50257-2-1 / EN 50267-2-2 / EN50267-2-3
Low smoke (acc. EN 61034-2)	Yes
Smoke density	IEC 61034-1&2 / EN 50268-1&2
Vertical flame propagation (for single cable)	IEC 60332-1-2 / EN 50265-2-1
Vertical flame spread (for bunched cables)	IEC 60332-3-25 / EN 50266-2-5 (cat.D)



Logistical specifications

Unit	meter
Weight (kg)	0.037
Default packaging	H X 2000/100



Fibre specification G.657.A2

ACE-DS-OT-VSP-SM-G657A2-v05-e

date : 11-08-2020

Technical product information

Product characteristics - optical fibers

Fibre

Type of fibre	Hydrogen passivated, dispersion unshifted, groove assisted, bending loss insensitive single mode fibre 9/125 µm Full compatible with G.652.D fibre Optical and geometrical properties exceed ITU-recommendations G.652.D and G.657.A1
Standard	IEC-60793-2-50, B-657.A2
Standard	ITU-T G.657.A2

Characteristics

Parameter	Properties	Unit
Mode field diameter: 1310 nm	8.6 ± 0.4	µm
Mode field diameter: 1550 nm	9.6 ± 0.5	µm
Core/cladding concentricity error	max. 0.5	µm
Cladding diameter	125.0 ± 0.5	µm
Cladding non-circularity	max. 0.7	%
Coating diameter	242 ± 5	µm
Coating/cladding concentricity error	max. 8	µm
Temperature sensitivity: -60 to +85 °C	max. 0.05	dB/km
Bending sensitivity - 100 turns around Ø50 mm - 1550 nm	max. 0.05	dB
Bending sensitivity - 100 turns around Ø60 mm - 1625 nm	max. 0.05	dB
Bending sensitivity - 10 turns around Ø30 mm - 1550 nm	max. 0.03	dB
Bending sensitivity - 10 turns around Ø30 mm - 1625 nm	max. 0.1	dB
Bending sensitivity - 1 turn around Ø20 mm - 1550 nm	max. 0.1	dB
Bending sensitivity - 1 turn around Ø20 mm - 1625 nm	max. 0.2	dB
Bending sensitivity - 1 turn around Ø15 mm - 1550 nm	max. 0.5	dB
Bending sensitivity - 1 turn around Ø15 mm - 1625 nm	max. 1.0	dB
Proof test level	min. 0.70	GPa
Fibre curl	min. 4	m
Cable cut-off wavelength	max. 1260	nm
Zero-dispersion wavelength	1300 – 1324	nm
Zero-dispersion slope	max. 0.090	ps/nm ² ·km
Chromatic dispersion: 1550 nm	max. 18	ps/nm·km
Chromatic dispersion: 1625 nm	max. 22	ps/nm·km
Polarisation mode dispersion: max. individual fibre	max. 0.1	ps/nm·km
PMD _Q	max. 0.06	ps/√km
Max. attenuation at 1383 nm (α ₁₃₈₃) [note a]	< max. α ₁₃₁₀	-
Effective group core refractive index: 1310 nm	1.4676	-
Effective group core refractive index: 1550 nm	1.4683	-
Effective group core refractive index: 1625 nm	1.4685	-

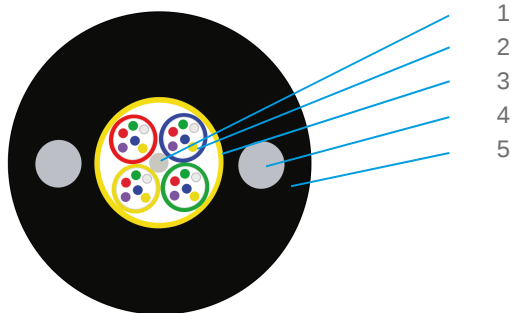
note a: after hydrogen ageing

Revision date: 28-5-2020

TECHNICAL PRODUCT INFORMATION

Cable construction and colour code

D-DAC HFFR Dca



Description

- | | |
|---|-------------------------------|
| 1 | Swelling yarn |
| 2 | Soft tube with optical fibres |
| 3 | Swelling aramid yarns |
| 4 | Reinforcement FRP |
| 5 | Outer sheath |

Standard colours

Fibres		Tubes	
Group 1		Layer 1	
1	Red	1	Red
2	Blue	2	Blue
3	Green	3	Green
4	Yellow	4	Yellow
5	Violet		
6	White		