DK7000A data cable S/FTP Cat 7A Dca LSFH 23AWG

Category-7A and Dca Euroclass data cable, S/FTP type (Foiled pairs and foiled cable), with copper conductor and LSFH sheath (Low Smoke Free of Halogen).
It achieves a bandwidth up to 1500 MHz (higher than the 1000 MHz specified by the standard).
This cable, due to its technical characteristics, is recommended for PoE++ applications (Type 3 and Type 4).

Ref.	219202
Logical ref.	CAT7ALF500V
EAN13	8424450267530

Other features

Colour	White
Length	500.00 m

Packaging info

Reel	500 m
Pallet	9000 m

Physical data

Net weight	57.00 g
Gross volume	0.06 dm³
Gross weight	60.00 g
Width	8.00 mm
Height	1,000.00 mm
Depth	8.00 mm
Main product weight	57.00 g

Highlights

- S/FTP data Cable
- Solid copper inner conductor (23AWG)
- Compatible with PoE/PoE+/PoE++ (Power over Ethernet) technology, allowing the cable to power network devices
- Aluminium+polyester shielding foil
- Tinned copper outer shielding braid
- LSFH (Low Smoke Free of Halogen) outer sheath
- 79% nominal speed
- Certified according to the applicable standards as defined in the available declarations of conformity and performance

Discover

Category 7A

Data cable category Cat 7A complies with the standard for 10 Gigabit Ethernet and it is backwards compatible, with the standards of the inferior categories (Cat 6A/6/5e and Cat 7). Category 7A evolves over category 7, allowing to achieve transmission frequencies of up to 1000 MHz (in each pair) and 10 Gbps of throughput. It includes characteristics and specifications to avoid crosstalk and noise. This type of data cable can be used in 10BASE-T, 100BASE-T, 1000BASE-T and 10GBASE-T compliant systems.

Our category 7A cables are characterized:

- Comply with: EN 50173-1:2011, ISO/IEC 11801-1:2017, IEC 61156-5:2009, EN 50288-4-1:2013, EN 50288-4-2:2013
- Transfer rate up to 10Gbps
- Frequency range of up to 1500 MHz (higher than the 1000 MHz specified by the standard)
- Nominal impedance of 100 ohms
- Maximum resistance per conductor below 93,8 ohms/Km

Compatibility of RJ45 connectors with Televes data cables:

Reference		CAT 6							CAT 6A				CAT 7	CAT 7A
		212201	212330	2123	212302	212305	212310	212101	219302	219312	219322	219332	219102	219202
Female connectors	209901/209907	OK	OK	OK	OK	OK	OK	X	X	X	X	X	X	X
	209905	OK	OK	OK	OK	OK	OK	X	X	X	X	X	X	X
	209921/209925	OK	OK	OK	OK	OK	OK	X	X	OK	X	OK	X	X
	209926	OK	OK	OK	OK	OK	OK	X	X	OK	X	OK	X	X
	209903	OK*	OK*	OK*	OK*	OK*	OK*	OK	X	X	X	X	X	X
	209923	OK*	OK*	OK*	OK*	OK*	OK*	OK	OK	OK*	OK	OK*	**	**
	209929/209501	OK*	OK*	OK*	OK*	OK*	OK*	OK	OK	OK*	OK	OK*	**	**
Male connectors	209902	OK	OK	OK	OK	OK	OK	X	X	X	X	X	X	X
	209961/209962	OK	OK	OK	OK	OK	OK	X	X	X	X	X	X	X
	209904	OK*	OK*	OK*	OK*	OK*	OK*	OK	X	X	X	X	X	X
	209906	OK	OK	OK	OK	OK	OK	X	X	X	X	X	X	X
	209965/209966	OK	OK	OK	OK	OK	OK	X	X	X	X	X	X	X
	209922	OK*	OK*	OK*	OK*	OK*	OK*	X	X	OK	X	OK	X	X
	209924	OK*	OK*	OK*	OK*	OK*	OK*	OK*	OK	OK*	OK	OK	**	**

OK Compatible
OK* Compatible, but there are better choices
X Incompatible
** Mechanical compatibility

What is the PoE technology?

PoE (Power over Ethernet) technology enables the simultaneous transmission of power and data over the same Ethernet network cable, eliminating the need for separate power supplies. Currently, there are three main standards: IEEE 802.3af (PoE), IEEE 802.3at (PoE+), and IEEE 802.3bt (PoE++/4PPoE). The latter defines two additional types (Type 3 and Type 4) with higher power levels, making four PoE levels in total.
The three aspects that differentiate the different types of PoE are:

- Maximum PSE (Power Sourcing Equipment) Power: Indicates the maximum amount of electrical power that can be supplied by an equipment over the Ethernet cable.
- Power for the PD (Powered Device): This is the electrical power that can be received by the device powered by the cable.
- Number of Twisted Pairs Used: Refers to how many twisted pairs in the Ethernet cable are used

to deliver electrical power.

Standard	Type of PoE		Maximum PSE Power	Power for the PD	No. of Pairs Used
IEEE 802.3af	Type 1	PoE	15.4W	12.95W	2
IEEE 802.3at	Type 2	PoE+	30W	25.5W	2
IEEE 802.3bt	Type 3	PoE++	60W	51W	4
	Type 4	4PPoE	90-100W	71W	4

Recommended uses according to PoE type:

- Type 1: IP phones, basic IP cameras. low-demand Wi-Fi access points, sensors or simple IoT devices.
- Type 2: Dual band Wi-Fi access points, IP motion cameras (PTZ), IP video phones, alarm systems.
- Type 3: Wi-Fi 6 / Wi-Fi 6E access points, heated PTZ cameras, multimedia terminals, video conferencing equipment.
- Type 4: Monitors or touch screens, desktops, high-performance network equipment.

Devices compatible with a specific type of PoE can also be powered using a higher type, which provides greater versatility and scalability in installations.
The recommended data cables and connectors for Types 3 and 4 are CAT6A and above with shielding. This recommendation is based on their better ability to dissipate the heat generated during the transmission of electrical power.
CAT6A UTP cables and connectors are technically compatible with PoE++ technology, but they may present limitations over distances greater than 55 m. Since they lack shielding, thermal dissipation is less efficient, which can cause voltage drops along the run and affect the proper operation of the powered device. This also happens with CAT5e and CAT6; they are compatible with PoE++ but not recommended for distances over 55 m.
Main advantages of PoE technology in installations:

- Quick and cost-effective installation by using the same cable for power and data transmission.
- Greater installation flexibility as there is no need to rely on auxiliary power sockets.
- More efficient management and optimised maintenance thanks to the monitoring and administration of the power supply of all equipment from a single point.
- Cost reduction by avoiding electrical conduits and external power supplies.
- Increased safety by minimising electrical risks in the installation, thanks to the use of low voltage.

Mounting details

DETAIL VIEW OF THE DATA CABLE SECTION

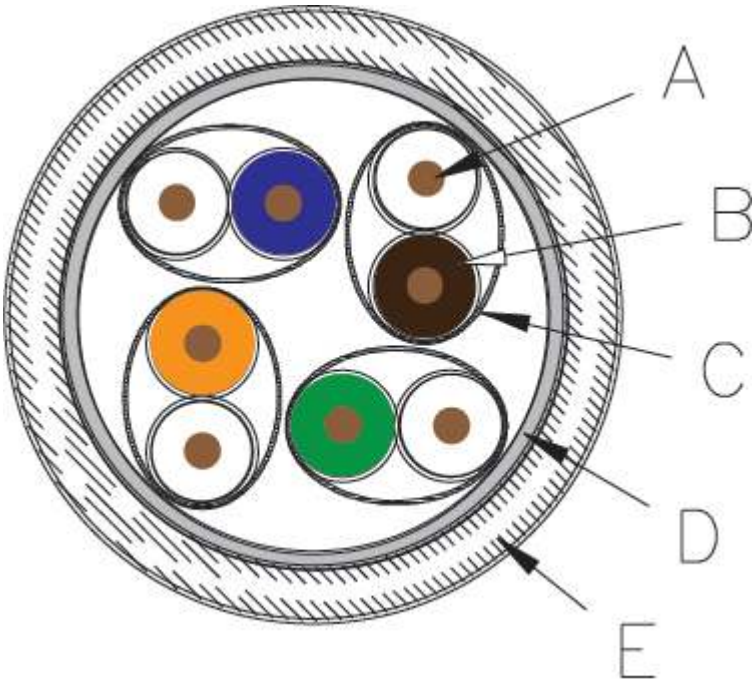
A. Inner conductor

B. Inner conductor isolation

C. Shielding foil

D. Outer shielding braid

E. Outer sheath



Televes®

Technical specifications : Ref. 219202

Model		DK7000A																			
Type		S/FTP																			
Euroclass		Dca																			
Euroclass: Smoke Production		s1a																			
Euroclass: Flaming droplets		d2																			
Euroclass: Acidity		a1																			
Categorie		Cat 7A																			
Transmission bandwidth		1500MHz																			
Transfer rate		10Gbps																			
Conductor Diameter	in	0.023																			
Conductor Material		Solid copper																			
Conductor type AWG		23																			
Copper weight	kg/km	20.35																			
Conductor isolation Diameter	in	0.056																			
Conductor isolation Material		Polyethylene																			
Crucifix filler		No																			
Shielding foil of pairs		Aluminium + Polyester																			
Outer shielding braid		Tinned copper (CuSn)																			
Outer sheath Diameter	in	0.303																			
Outer sheath Material		LSFH																			
Outer sheath Thickness	in	0.028																			
Rip cord		No																			
Spark Test	Vac	3000																			
Nominal impedance	Ω	100																			
Conductor resistance	Ohm/100 m	< 9.38																			
Nominal speed	%	79																			
Working voltage	V	125																			
Operating temperature	°F	-13 ... 158																			
Frequencies		1 MHz	4 MHz	8 MHz	10 MHz	16 MHz	20 MHz	25 MHz	31,25 MHz	62,5 MHz	100 MHz	200 MHz	250 MHz	300 MHz	400 MHz	500 MHz	600 MHz	800 MHz	1000 MHz	1200 MHz	1500 MHz
Attenuation (max.)	dB/100m	4	--	4.9	--	8	--	--	--	--	20.3	--	32.5	--	--	46.7	51.4	--	67.6	--	--
Attenuation (typ.)	dB/100m	2	3.5	--	5.4	6.9	7.7	8.7	9.8	14.1	17.9	25.6	28.7	31.5	37.2	42	46.4	54.1	60.7	69.7	75.4
NEXT (min.)	dB/100m	65	--	--	--	65	--	--	--	--	65	--	59.1	--	--	53.6	52.1	--	47.9	--	--
NEXT (typ.)	dB/100m	83.1	90.2	89.7	90.5	90.8	91.2	88.6	87.1	82.7	78.2	72.5	71.1	69.1	67.6	66.3	65	63.6	60.8	59.7	55.4
PS NEXT (min.)	dB/100m	62	--	--	--	62	--	--	--	--	62	--	56.1	--	--	50.6	49.1	--	44.9	--	--
PS NEXT (typ.)	dB/100m	81.8	87.7	87	87.4	87.9	88.1	86.2	85.3	80.4	76	70	68.8	67.3	66.1	64.4	63	62.5	58.7	58	55
ACR-N (min.)	dB/100m	61	--	--	--	57	--	--	--	--	44.7	--	26.7	--	--	6.9	0.7	--	-19.6	--	--
ACR-N (typ.)	dB/100m	81.1	86.7	84.8	85	83.9	83.5	79.8	77.2	68.5	60.1	46.6	42	37.2	30.5	24.4	18.7	9.7	-0.1	-5	-15
PS ACR-N (min.)	dB/100m	58	--	--	--	54	--	--	--	--	41.7	--	23.7	--	--	3.9	-2.3	--	-22.6	--	--
PS ACR-N (typ.)	dB/100m	79.9	84.2	82.1	82	81	80.4	77.4	76.3	66.1	57.9	44.2	39.7	35.3	28.9	22.6	16.6	8.5	-2.1	-6.9	-15.8
ACR-F (min.)	dB/100m	65	--	--	--	63	--	--	--	--	47.4	--	39.4	--	--	33.4	31.8	--	27.4	--	--
ACR-F (typ.)	dB/100m	81.5	85.3	88.2	88.4	84.7	82.5	82	79.9	77	74.2	66.2	66.5	63.7	57.7	50.7	55	48.7	39.9	21.5	18
PS ACR-F (min.)	dB/100m	62	--	--	--	60.3	--	--	--	--	44.4	--	36.4	--	--	30.4	28.8	--	24.4	--	--
PS ACR-F (typ.)	dB/100m	78.4	83	85.1	85.7	81.9	81	79.9	78.2	75.5	73	64.9	64.3	62	56.4	50.4	53.5	47.1	37.6	18.9	14
Return losses (min.)	dB	21	--	--	--	20	--	--	--	--	14	--	10	--	--	10	--	--	8	--	--
Return losses	dB	26	28.7	30.1	31.6	33.3	32.9	31.7	36.5	33.5	33.2	27.8	25.7	24.9	23	20.3	19.3	17.7	16.2	14	13