

# S/FTP cable 4x2xAWG23, Category 7, 1000 MHz, LSOH, Euroclass D<sub>ca</sub> - s2, d2, a1

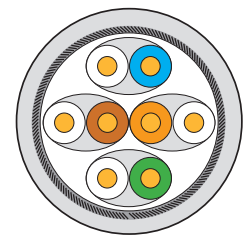
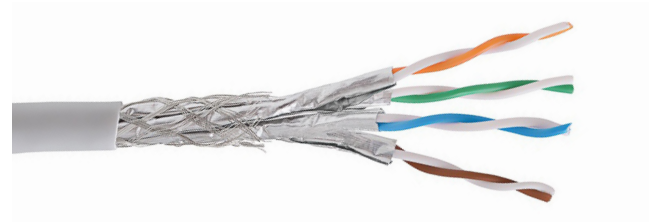
P/N: KE1000HS23-Dca

10  
Gigabit

Cat. 7

1000  
MHz

LSOH

D<sub>ca</sub>

## Features

- each pair individually shielded with AL/PET foil, overall braid, halogen-free sheath
- enables transmission of all high-speed protocols including 10GBASE-T
- enables also transmission of non-standard protocols used in hospitals, residential areas (home networking) and so on
- tested in a bandwidth up to 1000 MHz
- suitable for environments with higher level of electromagnetic interference

## Application

- primary (Campus), secondary (Riser), tertiary (Horizontal)
- IEEE 802.3: 10GBASE-T; 100BASE-TX; 1000BASE-T; 10GBASE-T
- IEEE 802.5: 16 MB; ISDN; TPDDI; ATM
- high bandwidth digital applications with low BER
- multimedia transmissions like digital and analog video and voice (for specific protocol related details contact your supplier)

## Construction

Conductor	bare copper wire, AWG23
Insulation	foamskin polyethylene, Ø 1,28 mm
Twisting	2 cores to the pair
Pair screen	Al-laminated plastic foil
Cable lay up	4 pairs to the core
Overall screen	braid 30 %
Sheath	LSOH, gray RAL7035
Outer cable diameter	7 mm

## Reaction to fire and flame resistance

Reaction to fire	D <sub>ca</sub> - s2, d2, a1	
Fire safety	flame retardancy	IEC 60332-1-1, IEC 60332-1-2
	smoke performance	IEC 61034-1, IEC 61034-2
	halogen acidity	IEC 60754-2

## Mechanical properties

Min. bending radius	installation	56 mm
	operation	28 mm
Temperature range	installation	0 °C to +50 °C
	operation	-20 °C to +60 °C
Max. tensile load	100 N (10 kg)	

## Electrical properties at 20°C

Loop resistance	—	≤ 165 Ω/ km
Resistance unbalance	—	≤ 2 %
Insulation resistance	(500V)	≥ 2 000 MΩ x km
Capacity	at 800 Hz	nom. 43 nF/ km
Capacity unbalance	(pair/ground)	≤ 1500 pF/ km
Characteristic impedance	at 100 MHz	(100 ± 15) Ω
	(100–250) MHz	(100 ± 20) Ω
Nominal velocity of propagation (NVP)	—	cca 78 %
Propagation delay	Nominal	≤ 427 ns/ 100 m
Delay skew	Nominal	≤ 12 ns/ 100 m
Test voltage	(DC, 1 min)	1 000 V
	core/core; core/screen	
Transfer impedance	at 1 MHz	≤ 12 mΩ/ m
	at 10 MHz	≤ 10 mΩ/ m
	at 30 MHz	≤ 30 mΩ/ m
Coupling attenuation	Typ II	≥ 80 dB
Segregation classification acc. EN 50174-2	—	d

**Transmission properties at 20°C**

f (MHz)	Attenuation (dB/100m)	NEXT (dB min)	PS-NEXT (dB min)	ACR (dB/100m)	PS-ACR (dB/100m)	ELFEXT (dB/100m)	PS-ELFEXT (dB/100m)	Return loss (dB)
4,0	3,7	78,0	75,0	97,0	94,0	78,0	75,00	23,01
10,0	5,86	78,0	75,0	95,0	92,0	75,30	72,30	25,0
16,0	7,41	78,0	75,0	93,0	90,0	71,22	68,22	25,0
31,2	10,41	78,0	75,0	90,0	87,0	65,40	62,40	23,64
62,5	14,88	75,46	72,46	86,0	83,0	59,38	56,38	21,54
100,0	19,00	72,40	69,40	83,0	80,0	55,30	52,30	20,11
250,0	30,97	66,43	63,43	62,0	59,0	47,34	44,34	17,30
500,0	45,26	61,92	58,92	48,0	45,0	41,32	38,32	17,30
600,0	50,10	60,73	57,73	40,0	37,0	39,74	36,74	17,30
900,0	63,01	58,09	55,09	23,0	20,0	36,22	33,22	15,50
1000,0	66,93	57,40	54,40	17,0	14,0	35,30	32,30	15,10



This product is certified on a component level by FORCE Technology international independent laboratories according to ISO/IEC 11801-1:2017 (Ed.1.0) / ISO/IEC 11801-2:2017 (Ed.1.0), IEC 61156-5:2020 (Ed.3.0.), EN 50173-1:2018 / EN 50173-2:2018, EN 50288-4-1:2013, IEC 60332-1-1:2015 (Ed.1.1) / IEC 60332-1-2:2015 (Ed.1.1), IEC 60754-2:2019 (Ed.2.1), IEC 61034-1:2019 (Ed. 3.2) / IEC 61034-2:2019 (Ed.3.2).

Mass production of this product is under permanent supervision of third party international laboratories performing FORCE Technology EC VERIFIED quality audit of the manufacturer's production.

The determination of Reaction to Fire Class Performance of this cable has been performed by Product Certification Body notified by European Commission, which also carries out the assessment and verification of constant performance (AVCP) in the System 3.