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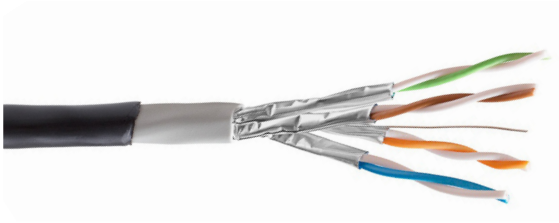
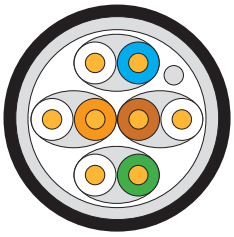
Datasheet
2022.5

Outdoor / direct burial STP cable 4x2xAWG23 Category 6_A, 550 MHz, with double-sheath, PE



P/N: KE550HS23OUT



10 Gigabit | Cat. 6_A interoperable | 550 MHz | OUTDOOR | PE

Features

- double sheath with total thickness of 1,7 mm
- extremely resistant to mechanical damage and environmental influences
- resistant to moisture, water and UV radiation
- cable core is identical with construction of KE550HS23/1E-Dca
- enables transmission of all high-speed protocols including 10GBASE-T
- tested in a bandwidth up to 550 MHz

Application

- primary (Campus), secondary (Riser), tertiary (Horizontal)
- IEEE 802.3: 10BASE-T; 100BASE-TX; 1000BASE-T; 10GBASE-T
- IEEE 802.5 16 MB; ISDN; FDDI; ATM
- high bandwidth digital applications with low BER

Construction

Conductor		bare copper wire, AWG 23
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
Sheath	**outer**	PE, black RAL9005
	inner	LSOH, gray RAL 7035
Outer cable diameter		8,7 mm
Outer PE sheath thickness		0,9 mm
Inner sheath thickness		0,8 mm

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Mechanical properties

Min. bending radius	installation	70 mm
	operation	35 mm
Temperature range	installation	0 °C to +50 °C
	operation	-20 °C to +70 °C
Max. tensile load		100 N (10 kg)
Cable weight (netto)		67 kg/km

Electrical properties at 20°C

Loop resistance	—	≤ 145 Ω/km
Resistance unbalance	—	≤ 2 %
Insulation resistance	(500V)	≥ 5 000 MΩ x km
Capacity	at 800 Hz	nom. 43 nF/km
Capacity unbalance	(pair/ground)	≤ 1500 pF/km
Characteristic impedance	1 – 100 MHz	100 ± 5 Ω
	100 – 250 MHz	100 ± 10 Ω
Nominal velocity of propagation (NVP)	—	cca 78 %
Propagation delay	Nominal	≤ 450 ns/100 m
Delay skew	Nominal	≤ 15 ns/100 m
Test voltage	(DC, 1 min) core/core; core/screen	1 000 V
Transfer impendance	at 1 MHz	≤ 50 mΩ/m
	at 10 MHz	≤ 100 mΩ/m
	at 30 MHz	≤ 200 mΩ/m
	at 100 MHz	≤ 1 000 mΩ/m
Coupling attenuation	Typ II (≥ 55 dB @ 100 MHz)	Alien crosstalk (ANEXT, AFEXT) is proven by design

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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)
1,0	1,9	100,0	97,0	97,0	94,0	103,0	100,0	–
4,0	3,5	100,0	97,0	96,0	93,0	103,0	100,0	26,0
10,0	5,5	100,0	97,0	94,0	91,0	96,0	93,0	29,0
16,0	6,9	100,0	97,0	92,0	89,0	92,0	90,0	29,0
20,0	7,8	100,0	97,0	91,0	88,0	90,0	87,0	29,0
31,2	9,7	100,0	97,0	89,6	86,0	86,0	83,0	28,0
62,5	13,8	100,0	97,0	85,0	82,0	80,0	77,0	27,0
100,0	17,7	99,0	96,0	82,0	80,0	76,0	73,0	25,0
125,0	19,6	94,0	91,0	74,0	71,0	74,0	71,0	24,0
155,5	22,3	93,0	90,0	71,0	68,0	72,0	69,0	24,0
175,5	23,4	92,0	89,0	69,0	66,0	72,0	69,0	23,0
200,0	25,3	91,0	88,0	66,0	63,0	70,0	67,0	23,0
250,0	28,7	89,0	86,0	61,0	58,0	68,0	65,0	22,0
300,0	32,3	88,0	85,0	57,0	54,0	66,0	63,0	22,0
400,0	38,0	86,0	83,0	47,0	45,0	63,0	60,0	21,0
500,0	41,2	84,0	81,0	39,0	36,0	60,0	57,0	20,0
550,0	43,5	83,0	80,0	33,0	30,0	58,0	55,0	18,0

EC VERIFIED

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 50288-10-1:2012, TIA-568.2-D:2018, 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.