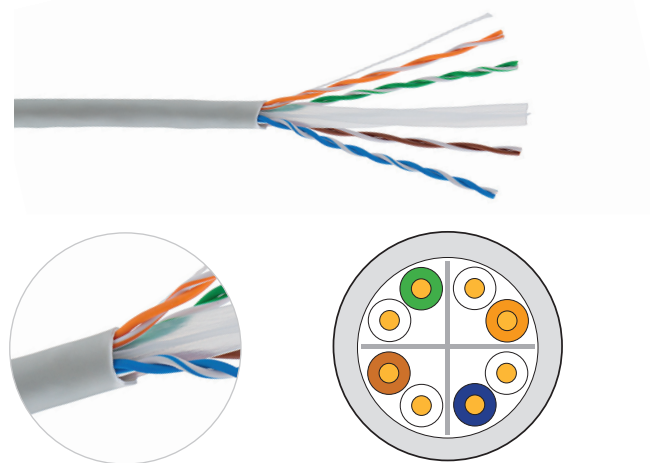


# UTP (U/UTP) cable 4x2xAWG23, Category 6, 400 MHz, Euroclass E<sub>ca</sub>

P/N: KE400U23-Eca



## Features

- unshielded cable with AL/PET foil, PVC sheath
- enables transmission of all high-speed protocols including 1000BASE-T
- tested in bandwidth up to 400 MHz
- enables RJ45 connectors to be mounted directly to the cable

## Application

- primary (Campus), secondary (Riser), tertiary (Horizontal)
- IEEE 802.3: 10BASE-T; 100BASE-TX; 1000BASE-T
- IEEE 802.5: 16 MB; ISDN; TPDDI; ATM

## Construction

Conductor	bare copper wire, AWG23
Insulation	polyethylene, Ø 1,00 mm
Twisting	2 cores to the pair
Screen	Al-laminated plastic foil
Cable lay up	4 pairs to the core
Sheath	PVC, gray RAL 7035
Outer cable diameter	5,9 mm

## Reaction to fire and flame resistance

Reaction to fire	$E_{ca}$	
	flame retardancy	IEC 60332-1-2
Fire safety	smoke performance	—
	halogen acidity	—

## Mechanical properties

Min. bending radius	installation	47 mm
	operation	24 mm
Temperature range	installation	0 °C to +50 °C
	operation	-20 °C to +60 °C
Max. tensile load		80 N (8 kg)

## Electrical properties at 20°C

Loop resistance	—	$\leq 190 \Omega / \text{km}$
Resistance unbalance	—	$\leq 2 \%$
Insulation resistance	(500V)	$\geq 2\,000 \text{ M}\Omega \times \text{km}$
Capacity	at 800 Hz	nom. 48 nF/ km
Capacity unbalance	(pair/ground)	$\leq 1500 \text{ pF/ km}$
Characteristic impedance	at 100 MHz	$(100 \pm 15) \Omega$
Nominal velocity of propagation (NVP)	—	cca 69 %
Propagation delay	Nominal	$\leq 535 \text{ ns/ } 100 \text{ m}$
Delay skew	Nominal	$\leq 20 \text{ ns/ } 100 \text{ m}$
Test voltage	(DC, 1 min)	1 000 V
	core/core; core/screen	
Transfer impedance	at 1MHz	$\leq 50 \text{ m}\Omega / \text{m}$
	at 10MHz	$\leq 100 \text{ m}\Omega / \text{m}$
	at 30MHz	$\leq 200 \text{ m}\Omega / \text{m}$
Coupling attenuation	—	$\geq 55 \text{ dB}$

**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	71,0	68,0	69,1	66,1	68,0	65,0	20,0
4,0	3,7	62,0	59,0	58,3	55,3	56,0	53,0	23,0
10,0	6,0	56,0	53,0	50,0	47,0	48,0	45,0	25,0
16,0	7,6	53,0	50,0	45,4	42,4	44,0	41,0	25,0
20,0	8,5	51,0	48,0	42,5	39,5	42,0	39,0	25,0
31,2	10,7	49,0	46,0	38,3	35,3	38,0	35,0	24,0
62,5	15,7	44,0	41,0	28,3	25,3	32,0	29,0	22,0
100,0	19,8	41,0	38,0	21,2	18,2	28,0	25,0	20,0
125,0	22,3	40,0	37,0	17,7	14,7	26,0	23,0	19,0
155,5	24,2	38,0	35,0	13,8	10,8	24,0	21,0	—
175,5	25,7	37,0	34,0	11,3	8,3	23,0	20,0	—
200,0	27,5	36,0	33,0	8,5	5,5	22,0	19,0	—
250,0	29,2	35,0	32,0	5,8	2,8	20,0	17,0	—
300,0	32,0	34,0	31,0	2,0	-1,0	16,0	13,0	—



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.