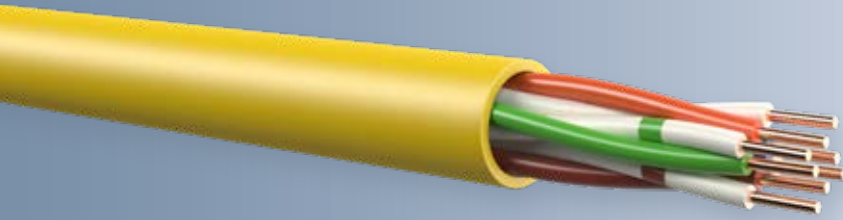


# MegaLine® E2-30 U/U

Category 6

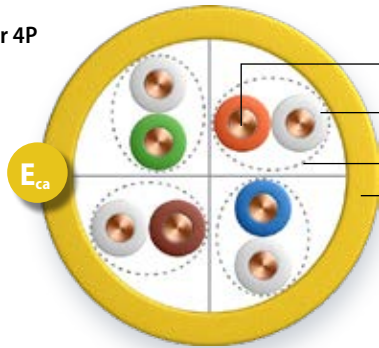


Type KS-2YH 4x2xAWG 23/1

## Advantages

- Better than Category 6
- bandwidth 300 MHz
- RoHS and REACh conformity

## Construction for 4P



Conductor	Bare copper wire, AWG 23/1
Insulation	PE
Twisting element	Pair
Twisting	4 pairs separated by a cross element
Outer sheath	halogen-free, flame-retardant compound

## Fire behaviour

Flame retardancy	acc. to IEC 60332-1-2
Halogen free	acc. to IEC 60754-1/2
Smoke density	acc. to IEC 61034-1/2
Acid formation	acc. to EN 60754-2
Fire load (reference value)	0.65 MJ/m
EU Construction Products Regulation	acc. to EN 50575 / EN 50399

## Performance

Better than Category 6 acc. to EN 50288 and IEC 61156, bandwidth (typical) 300 MHz

## Applications

Installation cable for use in structured cabling acc. to ISO/IEC 11801 and EN 50173 (3rd Edition).  
Ideal for all applications of classes D to E up to 1 GbE acc. to IEEE 802.3 ab, VoIP, PoE/PoE+.

## Mechanical characteristics

Bending radius during installation	8 x outer diameter (min.)
after installation	4 x outer diameter (min.)
Tensile strength (max.)	110 N
Crush strength	1000 N/100 mm
Impact strength (number of shocks)	10

## Electromagnetic behaviour

Coupling attenuation up to 1000 MHz (nom.)	45 dB
Separating class acc. to EN 50174-2	b

## Security (fire behaviour)

S	1 IEC 60332-2-2	2 IEC-60332-1-2	3 IEC-60332-3-24	4 EFP Grade 1	5 EFP Grade 2
		E <sub>ca</sub> /D <sub>ca</sub>	E <sub>ca</sub> /D <sub>ca</sub>	C <sub>ca</sub>	B2 <sub>ca</sub>

## Performance (cable class, bandwidth)

P	1 > Class E > 250 MHz	2 > Class E <sub>A</sub> > 500 MHz	3 > Class F > 600 MHz	4 > Class F <sub>A</sub> > 1000 MHz	5 > Class F <sub>A</sub> + > 1200 MHz

## Application (ethernet, TV)

A	1 > 100 MbE	2 > 1 GbE	3 up to 10 GbE	4 > 10 GbE	5 > 10 GbE TV

## Construction (conductor dimension, tensile strength)

C	1 AWG 27	2 AWG 26/25	3 AWG 24	4 AWG 23	5 AWG 22

## EMC (coupling attenuation)

E	1 > 40 dB	2 > 50 dB	3 > 60 dB	4 > 70 dB	5 > 80 dB

### Electrical characteristics (HF) at 20 °C

Frequency MHz	Attenuation dB/100 m		NEXT dB		PS-NEXT dB		ACR dB at 100 m		PS-ACR dB at 100 m		EL-FEXT dB at 100 m		PS-ELFEXT dB at 100 m		RL dB	
	typ.	Cat. 6 max.*	typ.	Cat. 6 min.*	typ.	Cat. 6 min.*	typ.	Cat. 6 min.*	typ.	Cat. 6 min.*	typ.	Cat. 6 min.*	typ.	Cat. 6 min.*	typ.	Cat. 6 min.*
1	1.8	2.1	94	66	91	64	92	64	89	62	102	66	99	64	25.4	–
4	2.7	3.8	88	65	85	63	85	61	82	59	96	58	93	55	30.3	23
10	4.7	6	81	59	78	57	76	53	73	51	85	50	82	47	33.9	25
16	6.6	7.6	76	56	73	54	70	49	67	47	78	46	75	43	33.6	25
32.25	9.5	10.9	72	52	69	50	62	41	59	39	70	40	67	37	33.7	23.6
62.5	13	15.5	68	47	65	45	55	32	52	30	63	34	60	31	34.4	21.5
100	17.4	19.9	64	44	61	42	46	24	43	22	57	30	54	27	33.5	20.1
155	22	25.3	60	41	57	39	38	16	35	14	50	26	47	23	32.2	18.8
200	26.6	29.1	58	40	55	38	31	11	28	9	45	24	42	21	30.5	18
250	30.4	33	57	38	54	36	27	5	24	3	40	22	37	19	29	17.3
300	33.1	–	54	–	51	–	20	–	17	–	37	–	34	–	27	–

\* EN 50288-6-1(2014)/IEC 61156-5 (2009)

### Electrical characteristics (LF) at 20 °C

Direct current resistance	max.	78 Ω/km
Insulation resistance	min.	5 GΩ x km
Mutual capacitance	approx.	50 pF/m
Capacitive coupling (e)	approx.	1100 pF/km
Signal tempo (c)	approx.	0.67
Propagation delay	approx.	528 ns/100 m
Skew at 100 MHz	approx.	30 ns/100 m
Charact. impedance	at 100 MHz	100 ± 5 Ω
Testing voltage U <sub>eff</sub>		1000 V
Operating voltage	max.	125 V

### Thermal properties

For fixed installation	–20 °C to +60 °C
For mobile operation	0 °C to +50 °C

### Chemical characteristics

Free of hazardous substances acc. to RoHS 2011/65/EU

### Cable printing

LEONI MegaLine E2-30 U/U 4P H SPACE Code "xxxxx"  
"CPR Class" "DoP no." "Batch number" "Metre marking"

### Colour code

WH-BU/BU, WH-OG/OG, WH-GN/GN, WH-BN/BN

### Certificates and approvals

Link performance: LEONI MegaLine® systems  
and other commonly available connector systems  
Test certificates: according to DIN 55350-18-4.2.1 or EN 10204  
Compliant with LVD (2014/35/EU): **CE**  
Compliant with Construction Products Regulation  
(EU/305/2011): **CE**

Dimension	Outer Ø approx.	Weight approx.	Copper no.*	CPR class	DoP no.	Sheath colour	Order no.
	mm	kg/km	kg/km				
4P	6.4	45	21	E <sub>a</sub>	CDESK0000011	● Rape yellow	LKD 7KS6 0002 xxxx

Packaging: xxxx

Standard length: 0100 = 1000 m 0050 = 500 m 0000 = general

\* see page 17: Definition of copper no.