

# MegaLine® E2-45 U/F

## S<sub>2</sub>P<sub>1</sub>A<sub>2</sub>C<sub>4</sub>E<sub>2</sub>

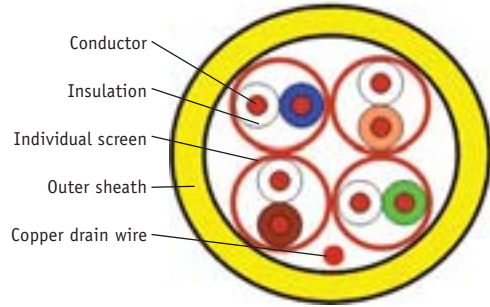
Type: KS-02YSH 4x2xAWG 23/1 PIMF

Type: KS-02YSH 2x(4x2xAWG 23/1 PIMF)



### Construction:

- Conductor: bare copper wire, AWG 23/1
- Insulation: cellular-PE, core-Ø: max. 1.40 mm
- Twisting element: Pair
- Individual screen: aluminium bonded polyester tape
- Twisting: 4 pairs
- Tape: plastic foil (optional) with underlayered tinned copper drain wire AWG 24/1
- Outer sheath: halogen-free, flame retardend compound



### Printing outer sheath:

- KERPEN MegaLine® E2-45 U/F 4P H SPACE CODE 21242
- "VDE approval mark" "Production lot code"
- "Meter marking"

Colour code: wh/bu, wh/or, wh/gn, wh/bn  
Colour outer sheath: yellow, RAL 1021

### Fire behaviour:

- Flame retardance: acc. to IEC 60332-1-2
- Halogen acid gas emission: acc. to IEC 60754-2
- Smoke density: acc. to IEC 61034
- Calorific value (MJ/m): 0.6/1.2 (approx.)

S	1	2	3	4	5
	IEC 60332-2-2	IEC-60332-1-2	IEC-60332-3-24	EFP Grade 1	EFP Grade 2

Security (Fire behaviour)

### Performance:

- Better than category 6 acc. EN 50288 and IEC 61156
- very good NEXT, low SKEW
- Bandwidth 450 MHz

P	1	2	3	4	5
	> class E	> class E <sub>A</sub>	> class F	> class F <sub>A</sub>	> class "G"
	> 250 MHz	> 500 MHz	> 600 MHz	> 1,000 MHz	> 1,200 MHz

Performance (Cabling class, bandwidth)

### Applications:

- Installation cable for generic cabling systems acc. ISO/IEC 11801 and EN 50173 (2. edition).
- Ideal for all applications of classes D up to E up to 1 GbE acc. IEEE 802.3 an (draft), Cable sharing, VoIP, PoE

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

Application (Ethernet, TV)

### Mechanical characteristics:

- Bending radius:
  - during installation: 8 x overall diameter (min.)
  - after installation: 4 x overall diameter (min.)
- Tensile strength: 110/220 (max.)
- Crush (N/100mm): 1,000
- Impact (number of shocks): 10

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

Construction (Conductor size, Tensile strength)

### Electromagnetic behaviour:

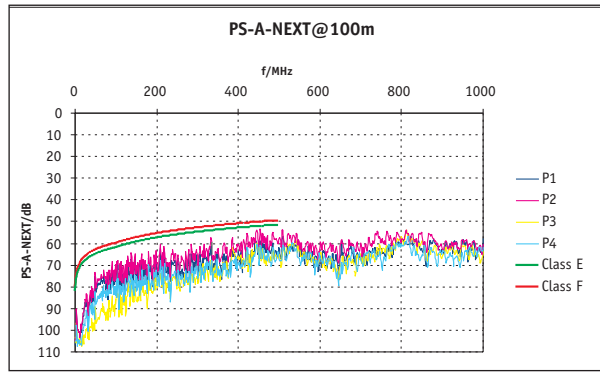
- Transfer impedance at 10 MHz (mOhm/m):
  - 80 (nominal value)
- Screening attenuation up to 1,000 MHz (dB):
  - 50 (nominal value)
- Coupling attenuation up to 1,000 MHz (dB):
  - 60 (nominal value)

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

EMC (Coupling attenuation)

**Electrical characteristics at 20°C:**

- DC resistance (Ohm/km): 82 (max.)
- Insulation resistance (Gohm x km): 5 (min.)
- Mutual capacitance (pF/m): 42 (approx.)
- Transfer capacitance (e) (pF/km): 1,500 (approx.)
- Signal velocity (c): 0.8 (approx.)
- Propagation delay (ns/100m): 420 (approx.)
- Skew at 100 MHz (ns/100m): 7 (approx.)
- Characteristic impedance at 100 MHz (Ohm): 100 ± 5
- Test voltage Ueff (V): 1,000
- Operating voltage Ueff (V): 125 (max.)



Frequency MHz	Attenuation dB/100m		NEXT dB		PS-NEXT dB		ACR dB@100m		PS-ACR dB@100m		EL-FEXT dB@100m		PS-ELFEXT dB@100m		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	1.9	2.1	95	66	92	64	93	64	90	62	88	66	85	64	25.4	-
4	3.2	3.8	95	65	92	63	92	61	89	59	89	58	86	55	28.6	23
10	5.2	6	90	59	87	57	85	53	82	51	92	50	89	47	33.5	25
16	7	7.6	90	56	87	54	83	49	80	47	98	46	95	43	35.6	25
31.25	9.9	10.7	85	52	82	50	75	41	72	39	98	40	95	37	37	23.6
62.5	13.5	15.5	80	47	77	45	66	32	63	30	95	34	92	31	35.9	21.5
100	17.9	19.9	75	44	72	42	57	24	54	22	88	30	85	27	34.3	20.1
155	22.5	25.3	72	41	69	39	49	16	46	14	81	26	78	23	32.2	18.8
200	26.9	29.1	68	40	65	38	41	11	38	9	75	24	72	21	31.3	18
250	30.4	33	66	38	63	36	36	5	33	3	72	22	69	19	29.2	17.3
300	33.1	-	65	-	62	-	32	-	29	-	69	-	66	-	28	-
450	39.3	-	63	-	60	-	24	-	21	-	64	-	61	-	27	-

\* EN 50288-5-1/IEC 61156-5

**Chemical characteristics:**

Free of hazardous substances acc. to RoHS 2002/95/EG

**Certificates and Approvals:**

Quality mark with production control: <VDE>

Number of registration VDE

Link performance: KERPEN ELine™ systems and further commercial cabling systems

Inspection certificate: acc. to DIN 55350-18-4.2.1 respectively EN 10204

In agreement to LVD (73/23/EEC):

**Thermal characteristics:**

Temperature range for fixed installation:

-20°C up to + 60°C

Temperature range for mobile operation:

0°C up to + 50°C

Article number	Size	Overall diameter mm	Weight kg/km	Copper number kg/km	Colour sheat
7KS60005	4P	7.4 (approx.)	55 (approx.)	23.5	yellow, RAL 1021
7KS60006	2x4P	7.5 x 15.4 (approx.)	124 (approx.)	47	yellow, RAL 1021

Package: Drum 1,000 m