

# MegaLine® D1-20 F/U

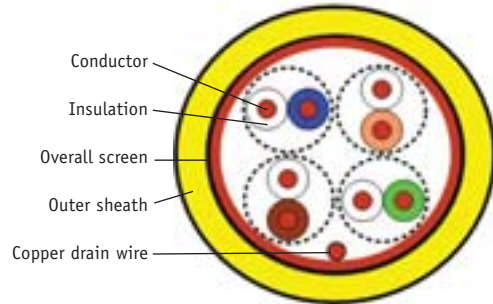
S<sub>2</sub>P<sub>0</sub>A<sub>1</sub>C<sub>3</sub>E<sub>2</sub>

Type: KS-2Y(ST)H 4x2xAWG 24/1



### Construction:

- Conductor: bare copper wire, AWG 24/1
- Insulation: PE
- Twisting element: Pair
- Twisting: 4 pairs
- Overall screen: aluminium bonded polyester tape, metal side inside, with underlayered tinned copper drain wire AWG 24/1
- Outer sheath: halogen-free, flame retardend compound



### Printing outer sheath:

KERPEN MegaLine® D1-20 F/U 4P H SPACE CODE 20132  
 "Production lot code" "Meter marking"

Colour code: whbu/bu, whor/or, whgn/gn, whbn/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): 0.5 (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 5 acc. EN 50288 and IEC 61156  
 Bandwidth 200 MHz

P	1	2	3	4	5
	> class E > 250 MHz	> class E <sub>A</sub> > 500 MHz	> class F > 600 MHz	> class F <sub>A</sub> > 1,000 MHz	> class "G" > 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 class D up to 1 GbE acc. IEEE 802.3 ab, 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: 85 (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): 93.2 (max.)
- Insulation resistance (Gohm x km): 500 (min.)
- Mutual capacitance (pF/m): 50 (approx.)
- Transfer capacitance (e) (pF/km): 1,500 (approx.)
- Signal velocity (c): 0.66 (approx.)
- Propagation delay (ns/100m): 517 (approx.)
- Skew at 100 MHz (ns/100m): 15 (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.5 max.*	typ.	Cat.5 min.*	typ.	Cat.5 min.*	typ.	Cat.5 min.*	typ.	Cat.5 min.*	typ.	Cat.5 min.*	typ.	Cat.5 min.*	typ.	Cat.5 min.*
1	2	2.1	75	65	72	62	73	63	70	60	89	64	86	61	24.8	-
4	3.1	4	69	56	66	53	66	52	63	49	84	52	81	49	28.6	23
10	5.1	6.3	62	50	59	47	57	44	54	41	76	44	73	41	33.3	25
16	7	8	58	47	55	44	51	39	48	36	70	40	67	37	34.3	25
31.25	9.7	11.4	53	43	50	40	44	31	41	28	63	34	60	31	33.9	23.6
62.5	13.2	16.5	49	38	46	35	36	22	33	19	58	28	55	25	31.3	21.5
100	17.6	21.3	45	35	42	32	28	14	25	11	52	24	49	21	27.7	20.1
155	22.3	-	42	-	39	-	20	-	17	-	49	-	46	-	24.7	-
200	26.5	-	40	-	37	-	14	-	11	-	45	-	42	-	22.4	-

\* EN 50288-2-1/IEC 61156-5

**Certificates and Approvals:**

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): **CE**

**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
7KS50004	4P	6.4 (approx.)	47 (approx.)	18	yellow, RAL 1021

Package: Drum 1,000 m