

MegaLine® G12-150 S/F

Category 7_A

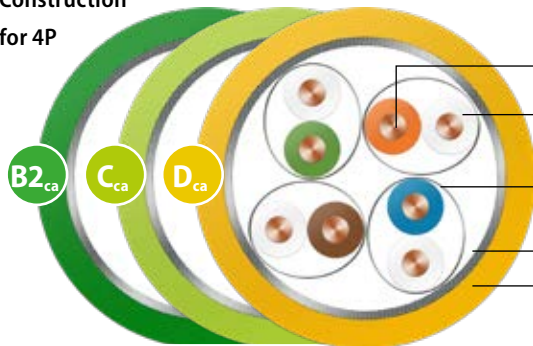


Types KS-02YSCH 4x2xAWG 22/1 PIMF
KS-02YSCH 2x(4x2xAWG 22/1 PIMF)

Benefits

- ▶ Better than category 7_A
- ▶ Bandwidth 1500 MHz
- ▶ Excellent shielding characteristics
- ▶ PVP-GHMT
- ▶ RoHS and REACH conformity

Construction for 4P



Conductor	Bare copper wire, AWG 22/1
Insulation	Foam PE, core Ø: Nominal value 1.6 mm
Twisting element	Pair
Individual shielding	Aluminium-bonded polyester foil, metal on the outside (PiMF)
Twisting	4 pairs
Overall shielding	Tinned copper wire braid
Outer sheath	halogen-free, flame-retardant compound

Fire behaviour

Flame retardancy	according to IEC 60332-3-24
Halogen free	according to IEC 60754-1/2
Smoke density	according to IEC 61034-1/2
Acidity	according to EN 60754-2
Fire load (reference value)	0.74 MJ/m (Sx), 1.5 MJ/m (Dx)
EU Construction Products Regulation	according to EN 50575 / EN 50399

Performance

Better than category 7_A according to EN 50288 and IEC 61156, excellent NEXT, low attenuation, excellent shielding characteristics, (shielding in pairs and overall shielding), low skew, bandwidth (typical): 1500 MHz

Applications

Installation cable for use in structured cabling according to ISO/IEC 11801 and EN 50173 (3rd edition). Ideal for all applications of Classes D to F_A, multimedia (TV, video, data, voice) >10 GbE according to IEEE 802.3an, 25G in line with TR-11801-9905 in channel links up to 50 m, cable sharing, VoIP, PoE/ PoE+/4PPoE.

Mechanical characteristics

Bending radius	During installation	8 x outer diameter (min.)
	After installation	4 x outer diameter (min.)
Tensile strength (max.)		130 N (Sx), 260 N (Dx)
Crush strength		1000 N/100 mm
Impact strength (number of shocks)		10

Electromagnetic behaviour

Coupling resistance at 10 MHz (nom.)	2 mΩ/m
Screen attenuation (nom.)	80 dB
Coupling attenuation (nom.)	90 dB
Separating class according to EN 50174-2	d

Security (fire behaviour)

	1 IEC 60332-2-2	2 IEC-60332-1-2	3 IEC-60332-3-24	4 EFP Grade 1	5 EFP Grade 2
S		E _{ca} /D _{ca}	E _{ca} /D _{ca}	C _{ca}	B2 _{ca}

Performance (cabling class, bandwidth)

	1 > Class E > 250 MHz	2 > Class E _A > 500 MHz	3 > Class F > 600 MHz	4 > Class F _A > 1000 MHz	5 > Class F _A + > 1200 MHz
P					

Application (Ethernet, TV)

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

Construction (conductor dimension, tensile strength)

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

EMC (coupling attenuation)

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

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. 7A+ max.*	Typ.	Cat. 7A+ min.*	Typ.	Cat. 7A+ min.*	Typ.	Cat. 7A+ min.*	Typ.	Cat. 7A+ min.*	Typ.	Cat. 7A+ min.*	Typ.	Cat. 7A+ min.*	Typ.	Cat. 7A+ min.*
1	1.6	1.9	110	80	107	77	108	78	105	75	109	80	106	77	26.1	23
10	4.2	5.4	110	78	107	75	106	72	103	69	109	74	106	71	32.3	25
100	14.4	17.5	110	76	107	73	96	58	93	55	93	54	90	51	36.2	20.1
200	21.5	25.3	110	72	107	69	88	47	85	46	86	48	83	45	35.5	18
250	24.5	28.5	105	70	102	67	81	42	78	39	83	46	80	43	34.8	17.3
500	34	41.8	105	65.5	102	62.5	71	24	68	21	70	40	67	37	31.8	17.3
600	37.7	46.3	100	64.3	97	61.3	62	18	59	15	64	38.4	61	35.4	28.5	17.3
800	44.5	54.5	95	62.5	92	59.5	50	8	47	5	58	35.9	55	32.9	25.3	16.1
900	48.1	58.4	95	61.7	92	58.7	47	3	44	0	54	34.9	51	31.9	23.8	15.5
1000	49	62	92	61	89	58	43	-1.1	40	-4	49	34	46	31	22.2	15.1
1200	54.9	69	88	59.8	85	56.8	34	-9	31	-12	40	32.4	37	29.4	20.2	14.3
1300	57	–	81	–	78	–	24	–	21	–	35	–	32	–	18.3	–
1400	58.1	–	74	–	71	–	16	–	13	–	30	–	27	–	16.3	–
1500	62	–	73	–	70	–	11	–	8	–	25	–	22	–	12.3	–

* EN 50288-9-1(2013)/IEC 61156-5 (2009)/IEC 61156-7(2003). If IO FEXT is min. 90 dB, EL-FEXT is fulfilled by design.

Electrical characteristics at 20°C

Direct current resistance	Max.	57.1 Ω/km
Insulation resistance	Min.	5 GΩ x km
Mutual capacitance	Approx.	42 pF/m
Capacitive coupling (e)	Approx.	1000 pF/km
Velocity of propagation (c)	Approx.	0.77
Propagation delay	Approx.	420 ns/100 m
Skew at 100 MHz	Approx.	3 ns/100 m
Charact. impedance	at 100 MHz	100 ± 5 Ω
Testing voltage U _{eff}		1000 V
Operating voltage	Max.	125 V

Thermal properties

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

Chemical characteristics

Free of hazardous substances according to RoHS 2011/65/EU

Cable printing for 4P

KERPEN DATACOM Made in Germany **MegaLine®** G12-150 S/F
4P H 25G 4PPoE "CPR Class" "DoP no." "Batch number" "Metre
marking"

Certificates and approvals

Quality mark with production control: GHMT PVP
Link performance: KERPEN DATACOM **MegaLine®** systems
and other commercially 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**

Dimensions	Outer Ø approx.	Weight approx.	Copper sales factor*	CPR Class	DoP no.	Sheath colour	Order no.
	mm	kg/km	kg/km				
4P	8.6	80	48	D _{ca} s2 d2 a1	CDESK0000007	◆ Colza yellow	LKD7KS80001xxxx
2 x 4P	8.6	162	96	D _{ca} s2 d2 a1	CDESK0000008	◆ Colza yellow	LKD7KS80010xxxx
4P	8.6	80	48	C _{ca} s1 d1 a1	CDESK0000034	◆ Lime green	LKD7KS8C001xxxx
2 x 4P	8.6	162	96	C _{ca} s1 d1 a1	CDESK0000040	◆ Lime green	LKD7KS8C010xxxx
4P	8.6	80	48	B2 _{ca} s1a d1 a1	CDESK0000010	◆ Yellow green	LKD7KS8B001xxxx
2 x 4P	8.6	162	96	B2 _{ca} s1a d1 a1	CDESK0000033	◆ Yellow green	LKD7KS8B010xxxx

Packaging: xxxx

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

* See page 17: Definition of copper sales factor