GIGALAN AUGMENTED CAT.7A S/FTP LSZH

Product Type	LAN Cable
Construction	RoHS Compliant
	Category 7A
	S/FTP
	LSZH

General Characteristics

Features	4 pairs twisted cable, using solid bare copper, 23 AWG, insulated with a high density polyethylene. Each pair is individually shielded by an aluminum foil tape. A solid tinned copper braid is applied over the cable core. External jacket using LSZH - low smoke zero halogen compound.
Installation Environment	Internal
Operation Environment	Non heavy
Compatibility	All FCS (Furukawa Cabling System) products
Applications	1. Exceeds physical and electrical requirements of EIA/TIA -568-C.2 2. Cable according with RoHS directive (Restriction of Hazardous Substances) 3. Can be used with all of the following protocols. a) 10GIGABIT ETHERNET, IEEE 802.3an, 10 Gbps; b) GIGABIT ETHERNET, IEEE 802.3z, 1000 Mbps; c) 100BASE-TX, IEEE 802.3u, 100 Mbps; d) 100BASE-T4, IEEE 802.3u ,100 Mbps; e) 100vg-AnyLAN, IEEE802.12, 100 Mbps; f) ATM -155 (UTP), AF-PHY-xxxx.000, 155/51/25 Mbps; g) TP-PMD , ANSI X3T9.5, 100 Mbps; h) 10BASE-T, IEEE802.3, 10 Mbps; i) TOKEN RING, IEEE802.5 , 4/16 Mbps; j) 3X-AS400, IBM, 10 Mbps; 4. Solutions: Data Center, Commercial Building, Government, Financial, Health, Education.
Standards Compliance	IEC 60332, ISO/IEC 11801, IEC 61156-5 CATEGORY 7A, IEC 60332, IEC 60754-2 (Acidity of smoke), IEC 61034-2 (smoke density), EN 50173-1.

Constructive characteristic

Conductor	Solid bare copper with nominal diameter 23AWG.
Insulation	Foamed Polyethylene. Insulated conductor nominal diameter: 1.4 mm
Insulation Resistance	5000 MΩ.km
Number of Pairs	4 pairs, 23AWG
Pair	Each conductor is identified according to the following color sequence.

Color Codes

Pair	Insulation Color "A"	Insulation Color "B"
1	Blue	White / Blue Stripe
2	Orange	White / Orange Stripe
3	Green	White / Green Stripe
4	Brown	White / Brown Stripe

Cabling	All individually shielded pairs are assembled, making the cable core.
Ripcord	Yes
Shield	Over each single pair an aluminum foil tape (Al/PET) is applied with its conductive side facing outwards. The cable core is covered by a solid tinned copper braid.
Sheath	LSZH compound suitable to meet the cable flame rating class
Nominal Diameter	7.9 mm
Color	Green - reference Munsell 5G 6/10 to 5G 5/10 Gray - reference RAL 7047 Yellow - reference Munsell Centroid 5Y 8.5/12
Physical Characteristics	
Cable Flammability Rating	**LSZH IEC 60332-3**: comply with IEC 60332 Part 3-25: "Test for vertical flame spread of vertically mounted bunched wires or cables"
Installation Temperature	0ºC up to 50ºC
StorageTemperature	-40^{O}C up to 70^{O}C
Operation Temperature	-20 ºC up to 75 ºC
Eletrical Characteristics	
Maximum Unbalance Resistance	2%
Conductor Max. DC Resistance at 20ºC	73.2 Ω/km
Maximum Mutual Capacitance 1kHz	56 pF/m
Max. Unbalance Capacitance Pair x Ground	1.6 pF/m
Maximum Delay Skew	25 ns/100 m
NVP	65%

Transfer Impedance

Transfer Impedance shall be in accordance with Grade 1 at IEC 61156-5 and shall not exceed the values shown in Table below at the discrete frequencies indicated.

Frequency	Maximum surface Transfer Impedance
(MHz)	(mΩ/m)
1	< 10
10	< 10
30	< 30
100	< 100

Transmission Performance

Freq., MHz	Att., max dB	NEXT, min dB worst pair	PS NEXT, min dB worst pair	ELFEXT, min dB worst pair	PS ELFEXT, min dB worst pair	Prop Delay, max dB	RL, min dB	Charact. Impedance Upper limit, Ohms	Charact. Impedance, Lower limit, Ohms	Coupling Att., min dB
4	3.7	78.0	75.0	78.0	75.0	552.0	23.0	115.2	86.8	-
8	5.2	78.0	75.0	77.2	74.2	546.7	24.5	112.6	88.8	-
10	5.8	78.0	75.0	75.3	72.3	545.4	25.0	111.9	89.4	-
16	7.3	78.0	75.0	71.2	68.2	543.0	25.0	111.9	89.4	-
20	8.2	78.0	75.0	69.3	66.3	542.0	25.0	111.9	89.4	-
25	9.2	78.0	75.0	67.3	64.3	541.2	24.3	112.9	88.5	-
31,25	10.3	78.0	75.0	65.4	62.4	540.4	23.6	114.1	87.7	85.0
62,5	14.6	78.0	75.0	59.4	56.4	538.6	21.5	118.3	84.5	85.0
100	18.5	75.4	72.4	55.3	52.3	537.6	20.1	121.9	82.0	85.0
150	22.8	72.8	69.8	51.8	48.8	536.9	18.9	125.7	79.6	81.5
200	26.5	70.9	67.9	49.3	46.3	536.5	18.0	128.8	77.6	79.0
250	29.7	69.4	66.4	47.3	44.3	536.3	17.3	131.5	76.0	77.0
300	32.7	68.2	65.2	45.8	42.8	536.1	16.8	131.6	76.0	75.5
500	42.8	64.9	61.9	41.3	38.3	535.6	15.2	131.6	76.0	71.0
600	47.1	63.7	60.7	39.7	36.7	535.5	17.3	131.6	76.0	69.4
800	54.9	61.9	58.9	37.2	34.2	535.3	16.1	137.4	72.8	66.9
1000	61.9	60.4	57.4	35.3	32.3	535.1	15.1	142.8	70.0	65.0

Marking

FURUKAWA GIGALAN AUGMENTED CAT. 7A S/FTP 23AWGX4P LSZH 75°C IEC 60332-3 VERIFIED TO IEC 61156-5 CAT 7A --- LZ AAMMDDHHmm JNN {1}m

Where:
Traceabitlity
AAMMDDHHmm: AA-year; MM- month; DD- day; HH- hour; mm- minute
JNN- Batch number
{1} - decreasing sequential length marking starting from 305 m to 000 m

Package

Standard Lengh

305 meters

Observations