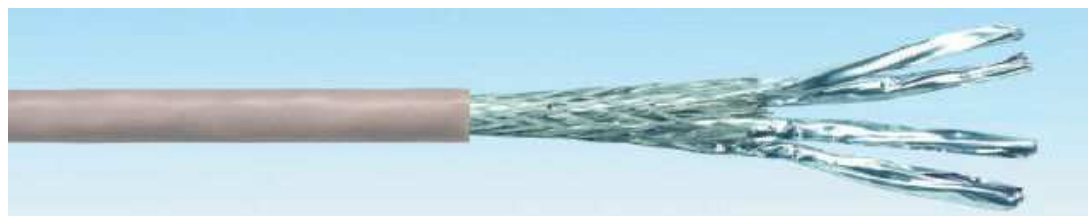


## Augmented Category 6 S/FTP 100 Ohm Horizontal LAN Cables



### Description

HCS DataLink 500A cable series consists of 100 Ohm impedance, 4-pair and 8-pair S/FTP cables for horizontal installations in local area networks (LANs). All cables fully conform to and provide a substantial margins above all Augmented Category 6 ScTP requirements of TIA/EIA-568-B.2-10 and Category 6<sub>A</sub> of IEC 61156-5.

### Applications

HCS DataLink 500A Horizontal cables support all presently available and future LAN applications, including the following protocols:

- 10GBASE-T 10 Gigabit Ethernet
- 1000BASE-T Gigabit Ethernet
- ATM 155
- TP-PMD
- 100BASE-T "Fast Ethernet"
- 100BASE-T2
- 100BASE-T4
- 100BASE-TX
- Token Ring 100 Mbps
- ATM 52
- ATM 25
- 10BASE-T Ethernet
- Token Ring 4 Mbps and 16 Mbps
- Broadband and Baseband Video
- ISDN Basic and Primary Access
- 1BASE-5 Starlan
- ISALAN
- ITU V.21 and X.11

### Qualifications and Approvals

HCS DataLink 500A Cables are tested and verified for full compliance with the following standards:

- Augmented Category 6 ScTP according to ANSI/TIA/EIA-568-B.2-10.
- Category 6<sub>A</sub> according to IEC 61156-5.

### Benefits & Features

- Exceptional transmission properties - suitable for 10GBE applications on 100m channels.
- Testing every reel of cable prior to shipment - providing the highest degree of quality assurance.
- Exceptional material properties and cable design - providing a unique Century™ Lifetime Warranty.
- High ACR values - providing low BER (Bit-Error-Rate) in all applications.
- Extremely high pair-balance, individual and overall foil shields - providing excellent EMC (Electro Magnetic Compatibility), minimizing radiation and maximizing noise immunity.
- Revolutionary pair lay scheme - providing an extremely low delay skew.
- Co-extruded crisp and clear spiral color coding of wires - providing positive wire identification and ease of installation.
- Batch number printed every meter - providing fast retrieval of test results from data-base.
- Unique DoubleSafe™ Quality Assurance Program providing lowest rejection rate available.

### Physical and Mechanical Properties

4 color-coded, individually foil-shielded twisted pairs cabled together, overall shielded with tin-coated copper braid and overall jacketed. Siamese (Figure-8) cables are made of two identical 4-pair cables connected in a zip-cord formation, one cable identified with a longitudinal rib.

Basic Conductor	Solid, 23AWG, 0.57 mm, bare annealed copper
Insulation	Polyolefin
Number of insulated conductors	8, twisted in 4 pairs. (8 pairs in FIG-8 cables)
Color Code of Pairs	Blue x White, Orange x White, Green x White, Brown x White.
Individual pair shield	Laminated aluminum foil (foil face outward) providing 100% coverage.
Drain wire	None.
Overall shield	Tin coated copper braid laid in close contact over the inner foils.
Outer Jacket	LSOH Halogen free flame retardant or PVC compound.
Standard Jacket Color	Light Gray RAL 7035. Other colors available upon request.
Standard Surface Marking	Includes HCS P/N, cable description, Meter mark and Batch Number.
Pulling force	50 N/mm <sup>2</sup> max.
Short Term Bend Radius	8xOD mm
Long Term Bend Radius	4xOD mm
Storage Temperature	-20 to +80C
Temperature operating range	-20 to +60C
Flame Test	IEC 60332-1
Halogen content in LSOH cables	Null.
Flame Test :	IEC 60332-1
Halogen content in LSOH cables	Null.

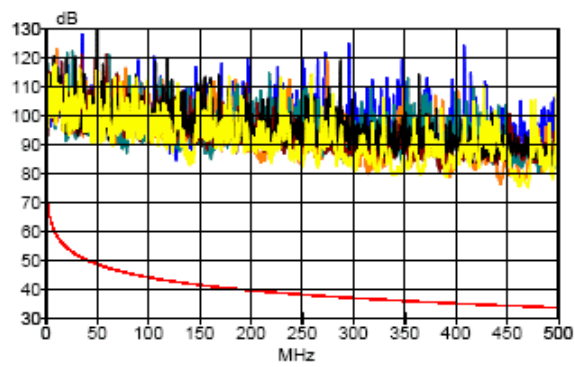


## Augmented Category 6 S/FTP 100 Ohm Horizontal LAN Cables

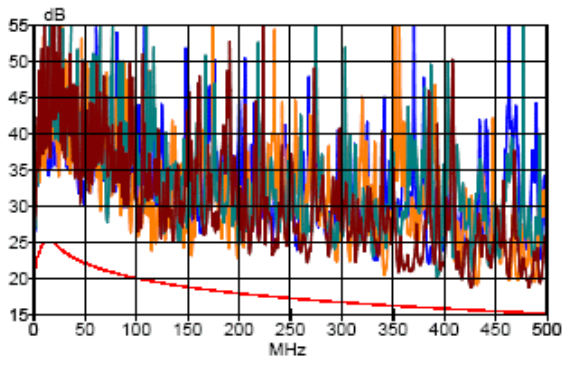
FREQ.	Insertion Loss	NEXT	PS NEXT	ELFEXT	PS ELFEXT	RL	Delay	TCL	EL-TCTL	PS ANEXT	PS AACRF
MHz	dB/100m	dB	dB	dB/100m	dB/100m	dB	nS/100m	dB	dB	dB	dB
	max.	min.	min.	min.	min.	min.	max.	min.	min.	min.	min.
1	2.0	74.3	72.3	67.8	64.8	20.0	570	40.0	35.0	67.0	67.0
10	5.9	59.3	57.3	47.8	44.8	25.0	545	40.0	15.0	67.0	58.2
20	8.3	54.8	52.8	41.8	38.8	25.0	542	37.0	9.0	67.0	52.2
25	9.3	53.3	51.3	39.8	36.8	24.3	541	36.0	7.0	67.0	50.2
30	10.2	52.1	50.1	38.3	35.3	23.8	541	35.2	5.5	67.0	48.7
62.5	14.9	47.4	45.4	31.9	28.9	21.5	539	32.0	NS	65.6	42.3
100	19.0	44.3	42.3	27.8	24.8	20.1	538	30.0	NS	62.5	38.2
200	27.5	39.8	37.8	21.8	18.8	18.0	537	27.0	NS	58.0	32.2
250	31.0	38.3	36.3	19.8	16.8	17.3	536	26.0	NS	56.5	30.2
300	34.2	37.1	35.1	18.3	15.3	16.8	536	25.2	NS	55.3	28.7
400	40.0	35.3	33.3	15.8	12.8	15.9	536	24.0	NS	53.5	26.2
500	45.3	33.8	31.8	13.8	10.8	15.2	536	23.0	NS	52.0	24.2

Characteristic Impedance	100±6 Ohm @ 1-500 MHz
DC Resistance	72 Ohm/Km max.
Resistance unbalance	2% max.
Capacitance	45 pF/m nom. @ 1 KHz
Cap. Unbalance (wire to ground)	1500 pF/Km max. @ 1 KHz.
Voltage rating	72 Vdc max.
Dielectric strength	1500 Volts/1 minute min rms
Velocity of Propagation (NVP)	67-69%
Propagation Delay Skew	45 nS/100m max @ 1-500 MHz
Insulation Resistance	5000 MegaOhm•Km min. @ 500 Vdc
Coupling attenuation	85 dB min @ 30-100 MHz 85-20Log(f/100) @100-500 MHz
Transfer Impedance	50 mOhm/m max @ 1 MHz. 100 mOhm/m max @ 10 MHz. 200 mOhm/m max @ 30 MHz. 1000 mOhm/m max @ 100 MHz.

Typical NEXT Loss



Typical Return Loss



### Ordering Information

HCS P/N	Description	OD mm	Weight Kg/Km	Cal. Value Kj/m	Packaging	Notes
H6A-00451-DK	4x2x23# S/FTP CAT 6A PVC Grey	7.5	68	650	305m Drum	-
H6A-00451-DP	4x2x23# S/FTP CAT 6A PVC Grey	7.5	68	650	500m Drum	-
H6A-00451-DM	4x2x23# S/FTP CAT 6A PVC Grey	7.5	68	650	1000m Drum	-
H6A-00452-DK	4x2x23# S/FTP CAT 6A LSOH Grey	7.5	67	655	305m Drum	-
H6A-00452-DP	4x2x23# S/FTP CAT 6A LSOH Grey	7.5	67	655	500m Drum	-
H6A-00452-DM	4x2x23# S/FTP CAT 6A LSOH Grey	7.5	67	655	1000m Drum	-
H6A-00853-DP	2x(4x2x23#) S/FTP CAT 6A PVC Grey	7.6x15.3	142	1300	500m Drum	FIG-8
H6A-00853-DM	2x(4x2x23#) S/FTP CAT 6A PVC Grey	7.6x15.3	142	1300	1000m Drum	FIG-8
H6A-00854-DP	2x(4x2x23#) S/FTP CAT 6A LSOH Grey	7.6x15.3	142	1310	500m Drum	FIG-8
H6A-00854-DM	2x(4x2x23#) S/FTP CAT 6A LSOH Grey	7.6x15.3	142	1310	1000m Drum	FIG-8