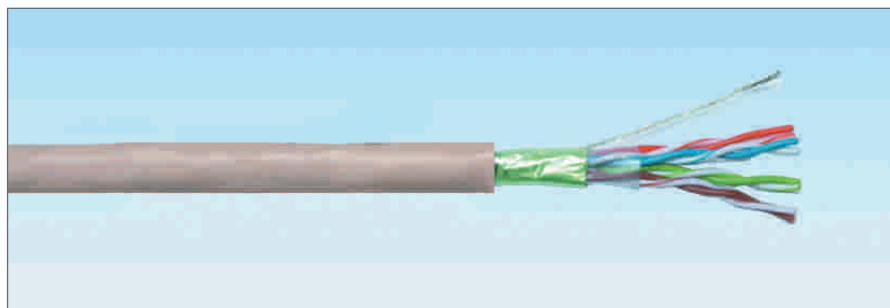


## Category 5e F/UTP 100 Ohm Horizontal LAN Cables



### Description

HCS DataLink 100e cable series consists of 100 Ohm impedance, 4-pair and 8-pair F/UTP cables for horizontal installations in local area networks (LANs). All cables fully conform to and provide a substantial margin above all Category 5e requirements of TIA/EIA-568-B.2 and IEC 61156-5.

### Applications

HCS DataLink 100e Horizontal cables support all presently available LAN applications, including the following protocols:

- 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 100e Cables are tested and verified for full compliance with the following standards:

- Category 5e according to ANSI/TIA/EIA-568-B.2
- Category 5e according to IEC 61156-5 (for ISO/IEC-11801 2nd Edition).
- 100 MHz according to CENELEC EN 50288-2
- Category 5 according to ICEA S-90-661-1997

### Benefits & Features

- ✓ Testing every box or 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 - 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.
- ✓ Descending sequential meter mark - providing easy stock and left-over handling.
- ✓ Smooth and rigid jacket - proving fast and easy cable pulling and installation.
- ✓ Batch number printed every meter - providing fast retrieval of test results from data-base.
- ✓ A comprehensive product range - providing all state-of-the-art cable constructions.
- ✓ Large variety of packaging options - providing minimum scrap and left-over cable sections.
- ✓ Unique DoubleSafe™ Quality Assurance Program - providing lowest rejection rate available.

### Physical and Mechanical Properties

4 color-coded, unshielded twisted pairs cabled together, overall taped-wrapped with a polyester tape and an aluminum foil 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, 24AWG, 0.5 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/Blue, Orange x White/Orange, Green x White/Green, Brown x White/Brown.
Overall Tape Wrap	Plastic tape, providing 100% coverage.
Overall shield	Laminated aluminum foil (foil face in) providing 100% coverage.
Drain wire	24 AWG solid tin-coated copper conductor laid in close contact under the shield.
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
Installation temperature range	0 to +50C
Flame Test	IEC 60332-1
Halogen content in LSOH cables	Null.

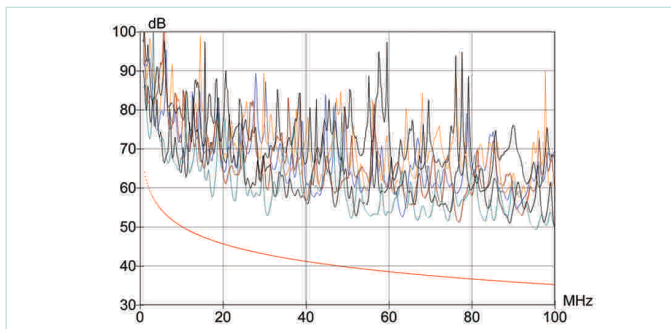
## Category 5e F/UTP 100 Ohm Horizontal LAN Cables

### Transmission Properties and Electrical Specifications

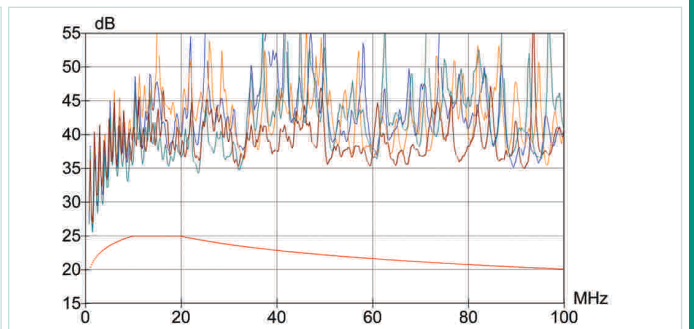
Frequency	Insertion Loss		NEXT		PS NEXT		EL FEXT		PS EL FEXT		RL		SKEW	Prop. Delay	TCL
	dB/100m		dB		dB		dB/100m		dB/100m		dB		nS/100m	nS/100m	dB
MHz	Max	Nom	Min	Nom	Min	Nom	Min	Nom	Min	Nom	Min	Nom	Max	Max	Min
0.00	2.0	1.8	65.3	90	62.3	86	63.8	90	60.8	87	20.0	30	40.0	550	40.0
4.00	4.1	3.7	56.3	75	53.3	71	51.7	80	48.8	77	23.3	35	40.0	532	34.0
8.00	5.8	5.3	51.8	70	48.8	66	45.7	75	42.7	72	25.0	35	40.0	527	31.0
10.00	6.5	6.0	50.3	67	47.3	63	43.8	70	40.8	67	25.0	35	40.0	525	30.0
16.00	8.2	7.6	47.3	65	44.3	61	39.7	65	36.7	62	25.0	40	40.0	523	28.0
25.00	10.4	9.6	44.3	63	41.3	59	35.8	60	32.8	57	25.0	40	40.0	521	26.0
31.25	11.7	10.7	42.9	60	39.9	56	33.9	55	30.9	52	24.1	40	40.0	520	25.1
62.50	17.0	15.3	38.4	58	35.4	54	27.8	50	24.8	47	22.0	35	40.0	519	22.0
100.00	22.0	19.8	35.3	53	32.3	49	23.8	45	20.8	42	20.6	35	40.0	518	20.0

Characteristic Impedance	100±6 Ohm @ 1-100 MHz.
DC Resistance	93 Ohm/Km max.
Resistance unbalance	2% max.
Capacitance	47 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%
Insulation Resistance	5000 MegaOhm • Km min. @ 500 Vdc
Coupling attenuation	55 dB min @ 30-100 MHz
Transfer Impedance	50 mOhm/m max. @ 1-30 MHz

Typical NEXT Loss



Typical Return Loss



### Ordering Information

HCS P/N	Description	OD mm	Weight Kg/Km	Cal. Value Kj/m	Packaging	Notes
H5E-00411-DP	4x2x24# F/UTP CAT 5e PVC Grey	6.1	43	481	500m Drum	-
H5E-00411-DM	4x2x24# F/UTP CAT 5e PVC Grey	6.1	43	481	1000m Drum	-
H5E-00412-DP	4x2x24# F/UTP CAT 5e LS0H Grey	6.1	42	482	500m Drum	-
H5E-00412-DM	4x2x24# F/UTP CAT 5e LS0H Grey	6.1	42	484	1000m Drum	-
H5E-00813-DP	2x(4x2x24#) F/UTP CAT 5e PVC Grey	6.2x12.3	87	965	500m Drum	FIG-8
H5E-00813-DM	2x(4x2x24#) F/UTP CAT 5e PVC Grey	6.2x12.3	87	965	1000m Drum	FIG-8
H5E-00814-DP	2x(4x2x24#) F/UTP CAT 5e LS0H Grey	6.2x12.3	85	975	500m Drum	FIG-8
H5E-00814-DM	2x(4x2x24#) F/UTP CAT 5e LS0H Grey	6.2x12.3	85	975	1000m Drum	FIG-8

Note: Standard jacket color: Light Gray RAL 7035. Other colors available upon request.