

ABA Industry, Inc.

Specification for Approval

Product Part Number----**TSR2304S03XX**

F/UTP, 23AWG solid bare copper, CAT.6A, CMR, 660MHz

APPLICATION

- Structure cabling for horizontal and building backbone cable.
- Transmission of digital and analogue for data, video, and audio applications.
- Overall metal shielded providing good protection from EMI noise.
- IEEE 802.3an 10GBASE-T and legacy speeds.
- CDDI / ATM / Token Ring
- IEEE 802.3af (PoE) / IEEE 802.3at (PoE+)

STANDARD COMPLIANCES

- ANSI/TIA-568.2-D (2018)
- ISO/IEC 11801-1
- IEC 61156-5 (Edition 2.1)
- UL 1666 (CMR)
- UL 444
- UL 444 LP-Rating 0.5A
- CSA 22.2 NO.214
- EU Directive 2011/65/EU (RoHS2)
- EU Directive 2006/95/EC (LVD)

CONSTRUCTION

Conductors

- 23 AWG solid bare annealed copper

Insulation

- CMR: Polyolefin (PO)

Color Code

- Pair 1: Blue-White 1.11 ± 0.02 mm
- Pair 2: Orange-White 1.06 ± 0.02 mm
- Pair 3: Green-White 1.11 ± 0.02 mm
- Pair 4: Brown-White 1.05 ± 0.02 mm

Separator

- Filler

Core Tape

- Mylar

Drain wire

- 26AWG solid tinned copper

Shield

- Polyester-backed aluminum foil (aluminum side in)

Jacket

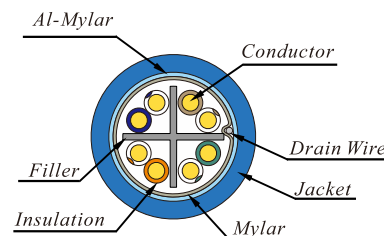
- CMR: Flame retardant PVC

Marking

ELITE 10GS CAT 6A --- E142890 FTP 4PR 23AWG
75°C C(UL)US CMR-LP (0.5A) --- FT4 ETL
VERIFIED TO TIA-568.2-D CAT 6A mmyy¹ RoHS
COMPLIANT XXXXFT

Note 1: mmyy is date code.

CROSS-SECTION



ELECTRICAL CHARACTERISTICS

DC Resistance Ohms/100 m (328 ft) @ 20°C	9.38
DC Resistance Unbalanced Individual Pair %	4.00
Delay Skew (Max) ns/100 m	45
Nom. Velocity of Propagation % Speed of Light	68
Characteristic Impedance Frequency (f):	Ohms 100 ± 15

PHYSICAL CHARACTERISTICS

Nominal Cable Diameter (mm)	7.4
Nominal Cable Weight (kg/1000 ft)	17.1
Minimum Bend Radius	≥ 8 times O.D.
Maximum Pulling Force	≤ 110 N
Temperature Rating (°C)	
Storage & shipping:	-20°C to 75°C
Installation:	0 to +60
Operation:	-20 to +60

Transmission Performance (at 20°C)

Frequency (MHz)	IL (Max.)	NEXT (Min.)	PS. NEXT (Min.)	ACR (Min.)	PS. ACR (Min.)	ACRF (Min.)	PS. ACRF (Min.)	RL (Min.)	Propagation Delay (Max.)
	dB/100m	dB/100m	dB/100m	dB/100m	dB/100m	dB/100m	dB/100m	dB/100m	ns/100m
1	2.08	74.30	72.30	72.22	70.22	67.80	64.80	20.00	570.00
4	3.80	65.27	63.27	61.47	59.47	55.76	52.76	23.01	532.00
8	5.31	60.75	58.75	55.44	53.44	49.74	46.74	24.52	546.73
10	5.93	59.30	57.30	53.37	51.37	47.80	44.80	25.00	545.38
16	7.49	56.24	54.24	48.75	46.75	43.72	40.72	25.00	543.00
20	8.38	54.78	52.78	46.41	44.41	41.78	38.78	25.00	542.05
25	9.38	53.33	51.33	43.95	41.95	39.84	36.84	24.32	541.20
31.25	10.50	51.88	49.88	41.37	39.37	37.90	34.90	23.64	540.44
62.5	14.99	47.36	45.36	32.37	30.37	31.88	28.88	21.54	538.55
100	19.14	44.30	42.30	25.17	23.17	27.80	24.80	20.11	537.60
150	23.68	41.66	39.66	17.98	15.98	24.28	21.28	18.87	536.94
200	27.58	39.78	37.78	12.21	10.21	21.78	18.78	18.00	536.55
250	31.07	38.33	36.33	7.26	5.26	19.84	16.84	17.32	536.28
300	34.27	37.14	35.14	2.88	0.88	18.26	15.26	16.77	536.08
350	37.25	36.14	34.14	N.A.	N.A.	16.92	13.92	16.30	535.92
400	40.05	35.27	33.27	N.A.	N.A.	15.76	12.76	15.89	535.80
450	42.71	34.50	32.50	N.A.	N.A.	14.74	11.74	15.53	535.70
500	45.26	33.82	31.82	N.A.	N.A.	13.82	10.82	15.21	535.61
550	47.70	33.19	31.19	N.A.	N.A.	12.99	9.99	14.92	535.54
600	50.05	32.63	30.63	N.A.	N.A.	12.24	9.24	14.66	535.47
650	52.33	32.11	30.11	N.A.	N.A.	11.54	8.54	14.42	535.41
660	52.77	32.01	30.01	N.A.	N.A.	11.41	8.41	14.37	535.40

Values above 500MHz are for information only.

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