

## Specification for Approval

### Product Part Number

- DB2404L5ESH

### Product Description

- F/UTP, 24AWG solid bare copper, CAT.5E, CMX outdoor
- Overall metal foil screen with drain wire
- Sunlight resistant
- With water-blocking tape

### Product Features

- High performance of transmission.
- High quality of safety property.
- Sweep frequency up to 350 MHz.

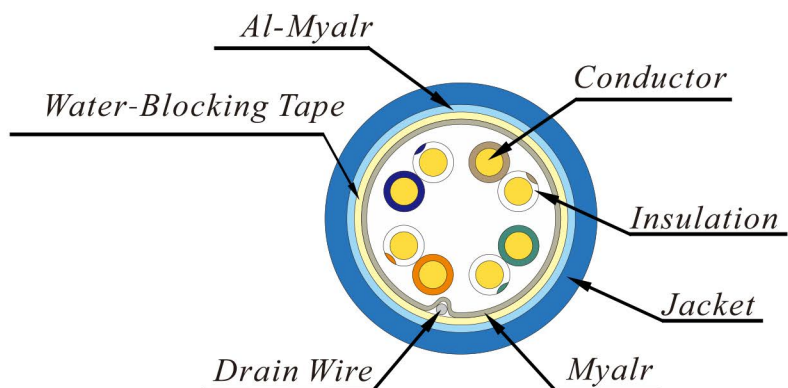
### Application

- For outdoor and direct burial use.
- Transmission of digital and analogue for data, video and audio applications.
- Overall metal shielded providing good protection from EMI noise.
- IEEE 802.3u 100BASE-T and legacy speeds.
- CDDI / ATM / Token Ring
- IEEE 802.3af (PoE) / IEEE 802.3at (PoE+)

### Applicable Standard

- Electrical Transmission
  - ANSI/TIA-568-C.2 (2009)
  - ISO/IEC 11801 (Edition 2.2)
  - IEC 61156-5 (Edition 2.0)
- Flame Test
  - UL 2556 (CMX)
- Material and Construction
  - UL 444
  - CSA 22.2 NO.214
- EU Directive 2011/65/EC (RoHS2)
- EU Directive 2006/95/EC (LVD)
- CE compliance date: 2010.01.01

### Sectional Drawing



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### Material and Construction

Conductor	Material	24AWG solid bare copper	
Insulation	Material	Polyolefin (PO)	
	Color code & diameter	Blue & white/blue Stripe	1.04 ± 0.02 mm
		Orange & white/orange stripe	1.00 ± 0.02 mm
		Green & white/green stripe	1.04 ± 0.02 mm
Brown & white/brown stripe		1.00 ± 0.02 mm	
Twisted	Description	Left hand direction	
Assembly	Description	Left hand direction	
Shield	Material	Mylar tape	
Shield	Material	Water-blocking tape	
Drain wire	Material	24AWG solid tinned copper	
Shield	Material	Al Mylar tape	
	Description	100 % coverage and mylar side facing out	
Jacket	Material	Flame retardant polyvinyl chloride (FRPVC) or Polyethylene (PE)	
	Diameter	6.75 ± 0.2 mm	
	Thickness	0.50 ± 0.05 mm	
	Color	Per customer's request	
Marking	<p>WELTRON CAT 5E GIGASYSTEM TESTED TO 350MHz---E465248-001 FTP 4PR 24AWG 75°C (UL) CMX OUTDOOR UV RESISTANT DIRECT BURIAL---ETL VERIFIED TO TIA-568-C. 2 mmyy<sup>1</sup> RoHS COMPLIANT XXXFT</p> <p>Note 1: mmyy is date code.</p>		

### Usage & Environmental Condition

Temperature range	Storage & shipping	-20°C to 75°C
	Installation	0°C to 60°C
	Operation	-20°C to 60°C
Minimum bending radius	≥ 4 times of overall diameter	
Maximum pulling tension	≤ 110 N	

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### Physical & Electrical Characteristics (at 20°C)

Temperature & voltage rating	75°C / 300V
Spark test	2.5 KV DC
AC leakage current through overall jacket	≤ 10mA (1.5KV AC)
Cable cold bend	-20°C for 4 hr
Conductor DC resistance	≤ 9.38 Ω/100m
Resistance unbalance	≤ 5%
Dielectric strength	1.5 KV ac for 2 s
Insulation resistance	≥ 5000 MΩ · Km
Mutual capacitance	≤ 5.6 nF/100m
Capacitance unbalance pair-to-ground	≤ 330 pF/100m

### Transmission Performance (at 20°C)

Frequency (MHz)	IL	NEXT	PS.NEXT	ACR	PS.ACR	ACRF	PS.ACRF	RL	Propagation Delay	Delay Skew
	Max. dB/100m	Min. dB/100m	Min. dB/100m	Min. dB/100m	Min. dB/100m	Min. dB/100m	Min. dB/100m	Min. dB/100m	Max. ns/100m	Max. ns/100m
1	2.04	65.30	62.30	63.26	60.26	63.80	60.80	20.00	570.00	45.00
4	4.05	56.27	53.27	52.22	49.22	51.76	48.76	23.01	552.00	
8	5.77	51.75	48.75	45.99	42.99	45.74	42.74	24.52	546.73	
10	6.47	50.30	47.30	43.83	40.83	43.80	40.80	25.00	545.38	
16	8.25	47.24	44.24	38.99	35.99	39.72	36.72	25.00	543.00	
20	9.27	45.78	42.78	36.52	33.52	37.78	34.78	25.00	542.05	
25	10.42	44.33	41.33	33.91	30.91	35.84	32.84	24.32	541.20	
31.25	11.72	42.88	39.88	31.15	28.15	33.90	30.90	23.64	540.44	
62.5	16.99	38.36	35.36	21.37	18.37	27.88	24.88	21.54	538.55	
100	21.98	35.30	32.30	13.33	10.33	23.80	20.80	20.11	537.60	
150	27.54	32.66	29.66	5.11	2.11	20.28	17.28	18.87	536.94	
200	32.42	30.78	27.78	N.A.	N.A.	17.78	14.78	18.00	536.55	
250	36.85	29.33	26.33	N.A.	N.A.	15.84	12.84	17.32	536.28	
300	40.97	28.14	25.14	N.A.	N.A.	14.26	11.26	16.77	536.08	
350	44.85	27.14	24.14	N.A.	N.A.	12.92	9.92	16.30	535.92	

Values above 100MHz are for information only.