

# **SPECIFICATION FOR APPROVAL**

DOCUMENT : EYNLSF641AW-PB-1000

STYLE : 75°C 300V  
COMMUNICATION CABLE

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DESCRIPTION: Category 6 LSZH Bulk Cable  
Shielded, Solid - Blue

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RECOGNIZED: 3P

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**BLACK BOX NETWORK SERVICES**

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## SPECIFICATION

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|-------------------------------------------------------------------------------------------------------------------------------|----------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| STYLE                                                                                                                         | 75°C 300V<br>COMMUNICATION CABLE |                                                                                                                              |
| SIZE                                                                                                                          | F/UTP 23AWG×4P                   | ESTABLISHED DATE :<br>Feb/29/2012                                                                                            |
| STANDARD : ISO/IEC 11801 & EN50173-1 & IEC 60332-1-2 754 1034 811 HD 624.7 TIA CAT 6                                          |                                  |                                                                                                                              |
| APPLICATION : LOCAL AREA NETWORK CABLE ARE SUITABLE FOR<br>PERFECT AUDIO DATA AND VIDEO OF TRANSFER FOR<br>HORIZONTAL NETWORK |                                  |                                                                                                                              |
| CONSTRUCTION :                                                                                                                |                                  |                                                                                                                              |
| CONDUCTOR                                                                                                                     | SIZE                             | 23AWG                                                                                                                        |
|                                                                                                                               | CONSTRUCTION                     | SOLID BARE COPPER                                                                                                            |
|                                                                                                                               | COND. DIAM.                      | 1/0.550±0.02 mm 0.02165±0.00078 inch                                                                                         |
| INSULATION                                                                                                                    | AVG. THICK.                      | 0.250 mm 0.00984 inch                                                                                                        |
|                                                                                                                               | MIN. THICK.                      | 0.240 mm 0.00944 inch                                                                                                        |
|                                                                                                                               | DIAMETER                         | 1.050 ± 0.02 mm 0.04133±0.00078 inch                                                                                         |
|                                                                                                                               | MATERIAL                         | HDPE                                                                                                                         |
|                                                                                                                               | COLOR CODES                      | 1.BLUE × WHITE/BLUE STRIPE<br>2.ORANGE × WHITE/ORANGE STRIPE<br>3.GREEN × WHITE/GREEN STRIPE<br>4.BROWN × WHITE/BROWN STRIPE |
| SHIELDED                                                                                                                      | PAIR STRANDED                    | 2 CORES STRANDED                                                                                                             |
|                                                                                                                               | FILLER(SLOT)                     | PE ISOLATOR SEPARATOR                                                                                                        |
|                                                                                                                               | ASSEMBLY STRANDED                | 4 PAIR STRANDED                                                                                                              |
|                                                                                                                               | MYLAR TAPE                       | 25 × 0.025 mm 0.98425x0.00098 inch                                                                                           |
|                                                                                                                               | DRAIN WIRE                       | 7/0.16±0.01 mm (TINNED COPPER)<br>0.27559/0.00629±0.00039 inch                                                               |
|                                                                                                                               | AL-MYLAR TAPE                    | 23 × 0.063 mm 0.90551x0.00248 inch                                                                                           |
| JACKETED                                                                                                                      | AVG. THICK.                      | 0.45 mm 0.01771 inch                                                                                                         |
|                                                                                                                               | MIN. THICK.                      | 0.40 mm 0.01574 inch                                                                                                         |
|                                                                                                                               | DIAMETER                         | 7.20 ± 0.20 mm 0.28346±0.00787 inch                                                                                          |
|                                                                                                                               | MATERIAL                         | LSZH                                                                                                                         |
|                                                                                                                               | COLOR                            | Blue                                                                                                                         |
| PACKAGING                                                                                                                     | Reel or Spool                    | Spool                                                                                                                        |

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| ELECTRICAL & PHYSICAL PROPERTIES :                                                                                                                          |        |                  |                                           |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|------------------|-------------------------------------------|
| ITEM                                                                                                                                                        |        |                  | 23AWG × 4P                                |
| RATING TEMP VOLTAGE                                                                                                                                         |        |                  | 75℃ 300V                                  |
| CONDUCTOR RESISTANCE                                                                                                                                        |        |                  | 9.38 OHM/100m/20℃ MAX.                    |
| DIELECTRIC STRENGTH                                                                                                                                         |        |                  | AC 1.5 KV/2SEC.                           |
| SPARK TEST                                                                                                                                                  |        |                  | 2.5 KV                                    |
| INSULATION                                                                                                                                                  | UNAGED | TENSILE STRENGTH | 2176 PSI MIN. (1.53 Kg/m m <sup>2</sup> ) |
|                                                                                                                                                             |        | ELONGATION       | 300% MIN.                                 |
|                                                                                                                                                             | AGED   | TENSILE STRENGTH | UNAGED MIN. 75%(100℃×48HRS)               |
|                                                                                                                                                             |        | ELONGATION       | UNAGED MIN. 75%(100℃×48HRS)               |
| JACKETED                                                                                                                                                    | UNAGED | TENSILE STRENGTH | 1306 PSI MIN.(0.92 Kg/m m <sup>2</sup> )  |
|                                                                                                                                                             |        | ELONGATION       | 100% MIN.                                 |
|                                                                                                                                                             | AGED   | TENSILE STRENGTH | UNAGED MIN. 70%(100℃×168HRS)              |
|                                                                                                                                                             |        | ELONGATION       | UNAGED MIN. 50%(100℃×168HRS)              |
| INSULATION SHRINKBACK                                                                                                                                       |        |                  | 150m/m, 121℃±1℃×1HR ≤ 9.5m/m              |
| COLD BEND TEST                                                                                                                                              |        |                  | AT -20℃×OD*8 NO CRACK                     |
| FLAME RETARDANT TEST                                                                                                                                        |        |                  | IEC 60332-1-2                             |
| ACID GAS EVOLUTION                                                                                                                                          |        |                  | PH ≥ 4.3                                  |
| SMOK GENERATION                                                                                                                                             |        |                  | 60% MIN(TRANSMISSION OF LIGHT)            |
| DC RESISTANCE UNBALANCE                                                                                                                                     |        |                  | 5% MAX.                                   |
| PAIR-TO-GROUND CAPACITANCE UNBALANCE                                                                                                                        |        |                  | 330 pF/100m MAX.                          |
| CHARACTERISTIC IMPEDANCE                                                                                                                                    |        |                  | 1 ~ 250 MHz 100±15 OHMS                   |
| PROPAGATION DELAY                                                                                                                                           |        |                  | 250 MHz 534 nS/100m MAX.                  |
| DELAY SKEW                                                                                                                                                  |        |                  | 1 ~ 250 MHz 40 nS /100m MAX.              |
| MARKING :                                                                                                                                                   |        |                  |                                           |
| BLACK BOX CORPORATION GUARANTEED FOR LIFE (724)746-5500 --- CATEGORY 6 SHIELDED<br>--- F/UTP 4PR 23AWG LSZH 3P VERIFIED ANSI/TIA-568-C.2 CAT 6 MM-YY XXXXFT |        |                  |                                           |

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### Electrical Performance

| ITEM(dB)<br>Frequency<br>(MHz) | IL<br>MAX.<br>(dB/100m) | NEXT<br>MIN.<br>(d B) | ACR<br>MIN.<br>(dB) | PS.<br>NEXT<br>MIN.<br>(dB) | PS.<br>ACR<br>MIN.<br>(dB) | ACRF<br>MIN.<br>(dB)/100m) | PS.<br>ACRF<br>MIN.<br>(dB/100m) | R.L.<br>MIN.<br>(dB) |
|--------------------------------|-------------------------|-----------------------|---------------------|-----------------------------|----------------------------|----------------------------|----------------------------------|----------------------|
| 1                              | 2.0                     | 74.3                  | 72.3                | 72.3                        | 70.3                       | 67.8                       | 64.8                             | 20.0                 |
| 4                              | 3.8                     | 65.3                  | 61.5                | 63.3                        | 59.5                       | 55.7                       | 52.7                             | 23.0                 |
| 8                              | 5.3                     | 60.8                  | 55.3                | 58.8                        | 53.3                       | 49.7                       | 46.7                             | 24.5                 |
| 10                             | 6.0                     | 59.3                  | 53.3                | 57.3                        | 51.3                       | 47.8                       | 44.8                             | 25.0                 |
| 16                             | 7.6                     | 56.3                  | 48.7                | 54.3                        | 46.7                       | 43.7                       | 40.7                             | 25.0                 |
| 20                             | 8.5                     | 54.8                  | 46.3                | 52.8                        | 44.3                       | 41.7                       | 38.7                             | 25.0                 |
| 25                             | 9.6                     | 53.3                  | 43.7                | 51.3                        | 41.7                       | 39.8                       | 36.8                             | 24.3                 |
| 31.25                          | 10.7                    | 51.9                  | 41.2                | 49.9                        | 39.2                       | 37.9                       | 34.9                             | 23.6                 |
| 62.5                           | 15.4                    | 47.4                  | 32.0                | 45.1                        | 30.0                       | 31.8                       | 28.8                             | 21.5                 |
| 100                            | 19.8                    | 44.3                  | 24.5                | 42.3                        | 22.5                       | 27.8                       | 24.8                             | 20.1                 |
| 155                            | 25.1                    | 41.5                  | 16.4                | 39.5                        | 14.4                       | 23.9                       | 20.9                             | 18.8                 |
| 200                            | 29.0                    | 39.8                  | 10.8                | 37.8                        | 8.8                        | 21.7                       | 18.7                             | 18.0                 |
| 250                            | 32.8                    | 38.3                  | 5.5                 | 36.3                        | 3.5                        | 19.8                       | 16.8                             | 17.3                 |

