

# TECHNICAL SPECIFICATION

## 1. GENERAL INFORMATION

### 1.1 Scope

| Product type                         | Application             |
|--------------------------------------|-------------------------|
| SF/UTP 4 pairs Cat5E Lan Cable 24AWG | ethernet network system |

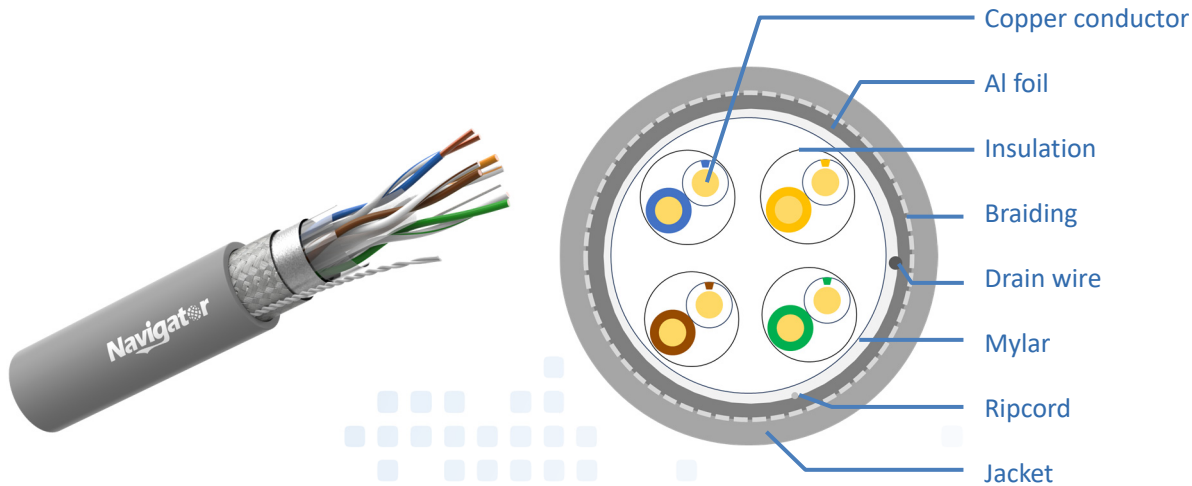
### 1.2 Reference

The following standards were used as reference documents for the cables provided by Navigator:

|                  |                                                                                      |
|------------------|--------------------------------------------------------------------------------------|
| ANSI/TIA-568-2-D | Generic Telecommunications Cabling for Customer Premises                             |
| IEC 11801        | Information technology – Generic cabling for customer premises                       |
| IEC 61156        | Multicore and symmetrical pair/quad cables for digital communications                |
| BS EN 50288      | Multi-element metallic cables used in analogue and digital communication and control |

## 2. PRODUCT INFORMATION

### 2.1 Product Images



### 2.2 Features & Application

- Solid bare copper provides better performance than copper clad aluminum
- Rated for 1G Base-T Ethernet
- Tested with a Fluke cable analyzer
- Less Susceptible to RFI/EMI in Noisy Environments

### 2.3 Product specifications

|                       |                                                              |                     |                                                                                                    |
|-----------------------|--------------------------------------------------------------|---------------------|----------------------------------------------------------------------------------------------------|
| Physical parameters   | Conductor                                                    | Material            | Solid bare copper                                                                                  |
|                       |                                                              | Wire Gauge          | 24AWG                                                                                              |
|                       | Insulation                                                   | Material            | HDPE                                                                                               |
|                       |                                                              | Diameter – mm (in)  | 1.04 (0.041)                                                                                       |
|                       | Core color                                                   |                     | 1.white – blue/blue<br>2.white – orange/orange<br>3.whiite – green/green<br>4.whiite – brown/brown |
|                       | Inner shield                                                 |                     | Aluminum foil                                                                                      |
|                       | Drain wire – mm (in)                                         |                     | TC – 0.4(0.016)                                                                                    |
|                       | Outer shield                                                 |                     | Al/TC braid                                                                                        |
|                       | Sheath                                                       | Material            | PVC/LSZH/PE                                                                                        |
|                       |                                                              | Thickness – mm (in) | 0.55(0.022)                                                                                        |
|                       |                                                              | Diameter – mm (in)  | 6.7(0.264)                                                                                         |
|                       |                                                              | Color               | Optional                                                                                           |
|                       | Storage temperature - °C (°F)                                |                     | 0~40 (32~104)                                                                                      |
|                       | Operation temperature - °C (°F)                              |                     | -20~60 (-4~140)                                                                                    |
| Electrical parameters | Conductor resistance @ 20°C (68 °F)                          |                     | ≤9.38Ω/100m (≤ 2.86Ω/100ft)                                                                        |
|                       | Electrical resistance unbalance between pairs @ 20°C (68 °F) |                     | ≤2.5%                                                                                              |

|  |                                      |                            |
|--|--------------------------------------|----------------------------|
|  | Insulation resistance @ 20°C (68 °F) | > 5000MΩ/km (8046.72MΩ/mi) |
|  | Mutual capacitance of a pair         | ≤5.6nF/100m (1.71nF/100ft) |

### 2.3 Test performance

| Frequency | $Z_c$    | Insertion Loss | Return Loss | NEXT    | PSNEXT  | ACRF    | PSACRF  |
|-----------|----------|----------------|-------------|---------|---------|---------|---------|
| MHz       | $\Omega$ | dB/100m        | dB          | dB/100m | dB/100m | dB/100m | dB/100m |
| 1.0       | 100±15   | ≤2.04          | ≥20.0       | ≥65.30  | ≥62.30  | ≥64.00  | ≥61.00  |
| 4.0       |          | ≤4.05          | ≥23.0       | ≥56.27  | ≥53.27  | ≥51.96  | ≥48.96  |
| 8.0       |          | ≤5.77          | ≥24.5       | ≥51.75  | ≥48.75  | ≥45.94  | ≥42.94  |
| 10.0      |          | ≤6.47          | ≥25.0       | ≥50.30  | ≥47.30  | ≥44.00  | ≥41.00  |
| 16.0      |          | ≤8.25          | ≥25.0       | ≥47.24  | ≥44.24  | ≥39.92  | ≥36.92  |
| 25.0      |          | ≤10.42         | ≥24.3       | ≥44.3   | ≥41.30  | ≥36.00  | ≥33.12  |
| 31.25     |          | ≤11.71         | ≥23.6       | ≥42.89  | ≥39.89  | ≥34.12  | ≥31.12  |
| 62.5      |          | ≤16.99         | ≥21.5       | ≥38.36  | ≥35.36  | ≥28.08  | ≥25.08  |
| 100       |          | ≤21.98         | ≥20.1       | ≥35.30  | ≥32.30  | ≥24.00  | ≥21.00  |