

## CAT5E OUTDOOR DIRECT BURIAL BULK CABLE

**23AWG • 4 Twisted Pairs • PE&PVC • FRPE • HDPE • Solid Bare Copper**

This specification covers design requirements and performance standards for procurement of UTP CAT 5E (Unshield Twisted Pair) direct cable. TSP brand guarantees a stable quality control system for us from the factory. Cable products pass several programs including ISO 9001, ISO 14001 and ROHS.

### PRODUCT DESCRIPTION

Our shielded Cat5E outdoor waterproof direct burial ethernet network cable allows you to extend your internet connection even in the harshest environments. Its weatherproof double outer jacket will enable you to bury your lines underground while protecting your wires from various elements.



### APPLICATION

- 1000BASE-T (IEEE802.3ab Gigabit Ethernet)
- 100BASE-TX (IEEE802.3u Fast Ethernet)
- 10BASE-T(IEEE802.3Ethernet)
- 52/155/622 Mbps and 1.2Gbps ATM
- 10GBASE-T(IEEE 802.3an 10Gigabit Ethernet 55m)
- POE,POE+(IEEE802.3af, IEEE802.3at) TP-PMD, TPDDI, ISDN, VOIP,
- Analog & Digital Voice, Digital & Analog Video
- 4/16Mbps Token Ring 2.5G BASE-T, 5G BASE-T (IEEE802.3bz)



Solid Pure Bare Copper



4 Twisted Pairs

### STANDARD

- ANSI/TIA-568-C.2 Category 5E, ANSI-TIA/EIA-568-B.2 Category 5E
- ISO/IEC 11801:2002 Class D, ISO/IEC 11801:2017 Class D
- EN50173 Category 5E, EN50288-3-1, EN50173-1 Category 5e
- EN 50173-1 , EN50288-3-1, EN 50288-6-1
- IEC61156-5, NEC800 , UL444
- NEMAWC63.1 ICEAS-90-661 Category 5E, NEMA WC 63.1., ASTM D 4566-9
- ANSI/TIA-568.2-D Category 5E
- RoHS Compliant

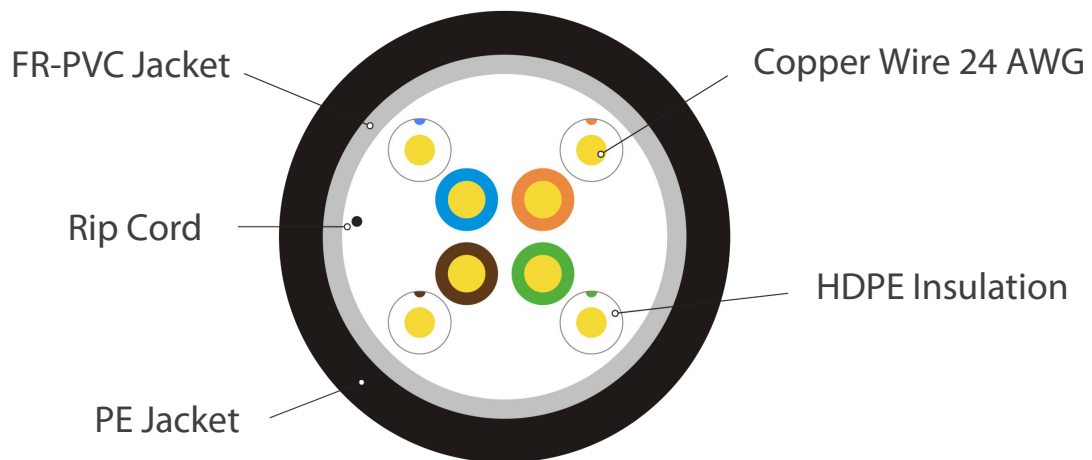
## // CONSTRUCTION CABLE

| Cable type               |                                     | UTP CAT5E                           |
|--------------------------|-------------------------------------|-------------------------------------|
| Conductor                | Material                            | Solid bare copper (BC)              |
|                          | Diameter                            | 23 AWG (0.51mm)                     |
| Insulation               | Material                            | HDPE<br>(High Density Polyethylene) |
|                          | Diameter                            | 0.90 ± 0.5 mm.                      |
| Inner jacket             | Material                            | FR-PVC Grey Color, Lead Free        |
|                          | Thickness                           | 1.0 ± 0.2 mm.                       |
|                          | Diameter                            | 5.1 mm.                             |
| Outer jacket             | Material                            | FR-PVC Grey Color, Lead Free        |
|                          | Thickness / Diameter                | 1.0 ± 0.2 mm. / 5.1 mm.             |
| Ripcord                  | Under jacket                        |                                     |
| Pair Colors              | Pair1 White/Blue-Blue               |                                     |
|                          | Pair2 White/Orange -Orange          |                                     |
|                          | Pair3 White/Green-Green             |                                     |
|                          | Pair4 White/Brown-Brown             |                                     |
| Diameter                 | 6.3 ± 0.2 mm.                       |                                     |
| Tensile                  | 120 N                               |                                     |
| Impedance                | 100 ± 15 ohm @1-600 MHz             |                                     |
| Mutual Capacitance       | 5.6nF Max/100 m                     |                                     |
| Capacitance, Unbalance   | 160pF Max/100 m                     |                                     |
| DC Resistance            | 9.38ohm Max/100 m                   |                                     |
| DC Resistance, Unbalance | 5% Max                              |                                     |
| Insulated Resistance     | 5000 M ohm/Km                       |                                     |
| Dielectric Strength      | 1KV/min                             |                                     |
| Propagation Delay        | 536 ns/ 100 m Max @ 350MHz          |                                     |
| Delay Skew               | 25 ns Max                           |                                     |
| NVP                      | 69%                                 |                                     |
| Voltage                  | 300 Volts AC or DC                  |                                     |
| Flame Rating             | CMX (UL444)                         |                                     |
| Minimum Bending Radius   | Install 8 X Cable Diameter          |                                     |
|                          | After Install 4 X Cable Diameter    |                                     |
| Tension                  | 9.7 MPa or 1400 PSI                 |                                     |
| Temperature Range        | Operation Temperature               | -40°C to +75 °C                     |
|                          | Installation Temperature            | -40°C to +75 °C                     |
|                          | Storage/Shipping Temperature        | -40°C to +80°C                      |
|                          | Rating Temp Voltage 75 OC, 300Volts |                                     |

## // TRANSMISSION PERFORMANCE

| FREQUENCY<br>(MHZ) | INSERTIONLOSS<br>(dB/100) | NEXT MIN.<br>(dB) |     | PSNEXTMIN.<br>(dB) |     | ELFEXTMIN.<br>(dB/100) |     | PS. ELFEXT MIN.<br>(dB/100) |     | ACR<br>(dB) | ATT<br>(dB) | PS-ARC<br>(dB) | RL MIN.<br>(dB) |     |
|--------------------|---------------------------|-------------------|-----|--------------------|-----|------------------------|-----|-----------------------------|-----|-------------|-------------|----------------|-----------------|-----|
|                    | Max.                      | min               | nom | min                | nom | min                    | nom | min                         | nom |             |             |                | min             | nom |
| 1                  | 1.7                       | 66                | 84  | 63                 | 77  | 64                     | 85  | 61                          | 77  | 66.3        | 2.1         | 64.3           | 20              | 36  |
| 4                  | 3.6                       | 57                | 75  | 54                 | 68  | 52                     | 75  | 49                          | 66  | 55.2        | 4.2         | 53.2           | 23              | 40  |
| 8                  | 5.1                       | 52                | 71  | 49                 | 64  | 46                     | 69  | 43                          | 60  | 49          | 5.9         | 47             | 24              | 37  |
| 10                 | 5.7                       | 51                | 69  | 48                 | 62  | 44                     | 67  | 41                          | 58  | 46.8        | 6.6         | 44.8           | 25              | 35  |
| 16                 | 7.3                       | 48                | 64  | 45                 | 59  | 40                     | 62  | 37                          | 54  | 42.1        | 8.3         | 40.1           | 25              | 37  |
| 20                 | 8.3                       | 46                | 62  | 43                 | 58  | 38                     | 60  | 35                          | 52  | 39.5        | 9.4         | 37.5           | 25              | 37  |
| 25                 | 9.3                       | 45                | 61  | 42                 | 55  | 36                     | 57  | 33                          | 49  | 36.9        | 10.3        | 34.9           | 24              | 37  |
| 31.25              | 11.1                      | 43                | 60  | 40                 | 54  | 34                     | 54  | 31                          | 46  | 34.2        | 11.8        | 32.2           | 23              | 35  |
| 62.5               | 17.0                      | 39                | 56  | 36                 | 50  | 28                     | 48  | 25                          | 41  | 24.4        | 17.1        | 24.4           | 21              | 35  |
| 100                | 15.0                      | 36                | 52  | 33                 | 46  | 24                     | 44  | 21                          | 36  | 16.3        | 28.2        | 143            | 20              | 33  |
| 155                | 19.3                      | -                 | 51  | -                  | 44  | -                      | 40  | -                           | 32  | 7.4         | 32.5        | 5.4            | -               | 27  |
| 200                | 23.7                      | -                 | 48  | -                  | 41  | -                      | 38  | -                           | 30  | 1.4         | 36.1        | 0              | -               | 26  |
| 250                | 27.5                      | -                 | 45  | -                  | 38  | -                      | 36  | -                           | 28  | -           | 41.1        | -              | -               | 26  |
| 350                | 37.4                      | -                 | 42  | -                  | 35  | -                      | 32  | -                           | 25  | -           | 22.2        | -              | -               | 25  |

## // STRUCTURE DESIGN



\*Product pictures and technical data in this datasheet are only for reference. Updates are subject to change without prior notice. The final interpretation right is reserved by Rabbit Innovation.,ltd

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