

## Twisted-Pair Structured Cabling

Product code: **Spark1002**



### U/UTP CAT6, 24AWG Solid Conductor, PE Jacket, Fca

#### Application

Ethernet 1000BASE-T, Ethernet 100BASE-TX, Ethernet 10BASE-T, PoE++, PoE+, PoE

#### General

|                     |                                                                                   |
|---------------------|-----------------------------------------------------------------------------------|
| Cable Type          | Category 6                                                                        |
| Operating Frequency | 250 MHz Max.                                                                      |
| Conductor           | Solid Copper                                                                      |
| Number of Pairs     | 4                                                                                 |
| Insulation Material | HDPE                                                                              |
| Insulation Colour   | Blue, White/Blue; Orange, White/Orange;<br>Green, White/Green; Brown, White/Brown |
| Separator           | LDPE                                                                              |
| Wrapping            | PET tape                                                                          |
| Rip Cord            | Yes                                                                               |
| Jacket Material     | PE                                                                                |

#### Dimensions

|                       |                     |
|-----------------------|---------------------|
| Conductor diameter    | $0.51 \pm 0.005$ mm |
| Insulation diameter   | 0.92 mm             |
| Insulation thickness  | 0.21 mm             |
| Diameter over jacket  | $5.80 \pm 0.3$ mm   |
| Jacket wall thickness | 0.50 mm             |

#### Mechanical Characteristics

|                                         |                                 |
|-----------------------------------------|---------------------------------|
| Operating Temperature                   | -40°C to +70°C                  |
| Bend Radius (Stationary   Installation) | 28 mm   56 mm                   |
| Pull Tension                            | 100 N Max.                      |
| Before Aging                            |                                 |
| Tensile Strength                        | $\geq 15.0$ Mpa                 |
| Elongation                              | $\geq 450$ %                    |
| After Aging(110°C $\pm$ 2°C,168h)       |                                 |
| Tensile Strength                        | $\geq 70$ % of Unaged           |
| Elongation                              | $\geq 70$ % of Unaged           |
| UV Resistance                           | ASTM D4329-92 (720hours UL1581) |



## Twisted-Pair Structured Cabling

Product code: **Spark1002**

### Electrical Characteristics

|                                      |                                       |
|--------------------------------------|---------------------------------------|
| Transmission Standards               | ANSI/TIA-568.2-D (100M FLUKE CHANNEL) |
| Operating Voltage                    | 80 V Max.                             |
| Characteristic Impedance             | 100 $\pm$ 15 Ohms                     |
| Conductor DC Resistance              | 93.8 Ohms/ km                         |
| DC Resistance Unbalance              | 3 % Max.                              |
| Insulation Resistance                | 5000 MOhms/km Min.                    |
| Dielectric Strength                  | 1500 Vac   2500 Vdc Min.              |
| Mutual Capacitance                   | 5.6 nF/100m                           |
| Pair to Ground Capacitance Unbalance | 330 pF/100m                           |
| Velocity of Propagation              | 69 % Nominal                          |
| Delay Skew                           | 45 ns Max.                            |

### Standard and Compliance

|                                    |                                                          |
|------------------------------------|----------------------------------------------------------|
| RoHS3 (2011/65/EU & (EU) 2015/863) | Compliant                                                |
| REACH                              | Compliant                                                |
| Warranty                           | 3 years (full terms and conditions available on request) |

### OEM Information

| Item                                     | Remarks                                                            |
|------------------------------------------|--------------------------------------------------------------------|
| CPR Classification                       | CPR Fca                                                            |
| Jacket Colour                            | Black RAL9011                                                      |
| Marking on Cable Jacket                  | Spark-Net 1002 - Cat-6 U/UTP-PE, 24AWG-Fca, Solid Copper conductor |
| Packing Length                           | 305M                                                               |
| Inner Packing Material                   | Pull-Box                                                           |
| ISO - 11801-2 + TIA - EIA 568A - 568.2-D |                                                                    |