

### STANDARDS

ANSI/TIA-568-C.2  
IEC 61156-5  
EN 50288-4-1  
EN 50173  
ISO/IEC 11801  
EN 50575  
EN 50399  
EN 13501-6

### APPLICATIONS

10BASE-T (IEEE 802.3)  
4/16 Mbps TOKEN RING (IEEE 802.5)  
100BASE-VG-AnyLAN  
100 Mbps TP-PMD (ANSI X3T9.5)  
100BASE-T (IEEE 802.3)  
55/155 Mbps ATM  
1000BASE-T (Gigabit Ethernet)  
1.2 / 2.4 Gbps ATM  
10G BASE-T

### REACTION TO FIRE

Class: D<sub>ca</sub>-s2,d2,a1  
(according to EN 13501-6)

### COLOUR CODES

| Pairs | Colours Combinations |
|-------|----------------------|
| 1     | White / Blue         |
| 2     | White / Orange       |
| 3     | White / Green        |
| 4     | White / Brown        |

Outer sheath colour: White [BL]

### PART NUMBER / PACKAGING

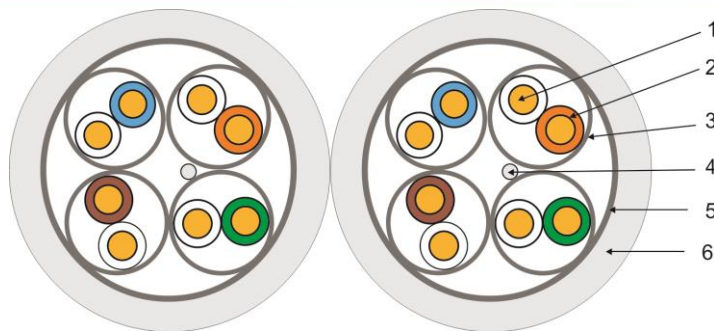
591D081BLP / Reels 500m  
591D082BLP / Reels 1000m

### OTHER CHARACTERISTICS

Storage Temperature -20°C to 70°C  
Operating Temperature -20°C to 70°C

Laying Temperature -5°C to +50°C  
(recommendation: between -5°C and +5°C,  
prior storage 24h at 20°C)

Edition: March 2017



(Not at scale)

### CONSTRUCTION

- 1 – Conductor: 23 AWG, Solid Bare Annealed Copper.
- 2 – Insulation: Polyolefin Foam-Skin.
- 3 – Varying short pair lay-length (4 pairs).  
Individual Aluminium/polyester shielding.
- 4 – Tinned copper drain wire.
- 5 – Overall Aluminium/polyester shielding.
- 6 – Sheath: LSZH material.

### ELECTRICAL AND DIMENSIONAL CHARACTERISTICS

|                                    |   |
|------------------------------------|---|
| Max. dc Resistance (Ω/km) @20°C:   | 95.0  |
| Nom. Mutual Capacity (nF/km)@1kHz: | 56  |
| NVP (% of light speed):            | 70  |
| Mean input Impedance (Ω):          | 100 ± 5 @ 100MHz                              |
| Propagation delay (ns@10MHz):      | max. 518                                      |
| Delay Skew (ns/100m):              | max. 40                                       |
| Coupling Att dB (min.):            | @30-100MHz 75<br>@100-1000MHz 75-20log(f/100) |
| Max. pulling tension (N):          | 80  |

|                           | Approx. outer diameter x height (mm) | Approx. weight (kg/km) | Min. bending radius (mm) |
|---------------------------|--------------------------------------|------------------------|--------------------------|
| Euroclass D <sub>ca</sub> | 8.0 x 16.3                           | 119.4                  | 32                       |

### TRANSMISSION CHARACTERISTICS

| Freq  | ATTN           | NEXT      | PS-NEXT   | ELFEXT         | PS-ELFEXT      | ACR            | PS-ACR         | RL             |
|-------|----------------|-----------|-----------|----------------|----------------|----------------|----------------|----------------|
| MHz   | dB/100m (max.) | dB (min.) | dB (min.) | dB/100m (min.) | dB/100m (min.) | dB/100m (min.) | dB/100m (min.) | dB/100m (min.) |
|       |                |           |           | (ACR-F)        | (PSACR-F)      |                |                |                |
| 1*    | 2.0            | 78.0      | 75.0      | 78.0           | 75.0           | 76.0           | 73.0           | 20.0           |
| 4     | 3.7            | 78.0      | 75.0      | 78.0           | 75.0           | 74.3           | 71.3           | 23.0           |
| 8     | 5.2            | 78.0      | 75.0      | 77.2           | 74.2           | 72.8           | 69.8           | 24.5           |
| 10    | 5.9            | 78.0      | 75.0      | 75.3           | 72.3           | 72.1           | 69.1           | 25.0           |
| 16    | 7.4            | 78.0      | 75.0      | 71.2           | 68.2           | 70.6           | 67.6           | 25.0           |
| 25    | 9.3            | 78.0      | 75.0      | 67.3           | 64.3           | 68.7           | 65.7           | 24.3           |
| 31.25 | 10.4           | 78.0      | 75.0      | 65.4           | 62.4           | 67.6           | 64.6           | 23.6           |
| 62.5  | 14.9           | 75.5      | 72.5      | 59.4           | 56.4           | 60.6           | 57.6           | 21.5           |
| 100   | 19.0           | 72.4      | 69.4      | 55.3           | 52.3           | 53.4           | 50.4           | 20.1           |
| 155   | 24.0           | 69.5      | 66.5      | 51.5           | 48.5           | 45.6           | 42.6           | 18.8           |
| 200   | 27.5           | 67.9      | 64.9      | 49.3           | 46.3           | 40.4           | 37.4           | 18.0           |
| 250   | 31.0           | 66.4      | 63.4      | 47.3           | 44.3           | 35.5           | 32.5           | 17.3           |
| 300   | 34.2           | 65.2      | 62.2      | 45.8           | 42.8           | 31.1           | 28.1           | 17.3           |
| 350   | 37.2           | 64.2      | 61.2      | 44.4           | 41.4           | 27.1           | 24.1           | 17.3           |
| 400   | 40.0           | 63.4      | 60.4      | 43.3           | 40.3           | 23.4           | 20.4           | 17.3           |
| 500   | 45.3           | 61.9      | 58.9      | 41.3           | 38.3           | 16.7           | 13.7           | 17.3           |
| 600   | 50.1           | 60.7      | 57.7      | 39.7           | 36.7           | 10.6           | 7.6            | 17.3           |

\* For information only.

Note: DATA cables are not suitable for low impedance applications as: heating, lighting, etc...

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