

## 1533R Multi-Conductor - Category 5e Nonbonded-Pair Cable



For more Information  
please call

1-800-Belden1

**Description:**

24 AWG solid bare copper conductors, non-plenum, Polyolefin insulation, overall Beldfoil® shield drain wire, RJ-45 compatible, see color code chart (below), PVC jacket (red, orange, yellow, green, blue or gray).

**Usage (Overall)****Suitable Applications:**

Premise Horizontal Cable, Gigabit Ethernet, 100BaseTX, 100BaseVG  
 ANYLAN, 155ATM, 622ATM, NTSC/PAL Component or Composite Video,  
 AES/EBU, Digital Video, RS-422, Noisy Environments, 100MHz Category 5e

**Physical Characteristics (Overall)****Conductor****AWG:**

| # Pairs | AWG | Stranding | Conductor Material |
|---------|-----|-----------|--------------------|
| 4       | 24  | Solid     | BC - Bare Copper   |

**Total Number of Conductors:**

8

**Insulation****Insulation Material:**

| Insulation Material |
|---------------------|
| PO - Polyolefin     |

**Outer Shield****Outer Shield Material:**

| Outer Shield Trade Name | Type | Outer Shield Material        | Coverage (%) |
|-------------------------|------|------------------------------|--------------|
| Beldfoil®               | Tape | Aluminum Foil-Polyester Tape | 100          |

**Outer Shield Drain Wire AWG:**

| AWG | Stranding | Drain Wire Conductor Material |
|-----|-----------|-------------------------------|
| 24  | 7x32      | TC - Tinned Copper            |

**Outer Jacket****Outer Jacket Material:**

| Outer Jacket Material    |
|--------------------------|
| PVC - Polyvinyl Chloride |

**Outer Jacket Diameter:**

| Nom. Dia. (in.) |
|-----------------|
| 0.260           |

**Pair****Pair Color Code Chart:**

| Number | Color                        |
|--------|------------------------------|
| 1      | White/Blue Stripe & Blue     |
| 2      | White/Orange Stripe & Orange |
| 3      | White/Green Stripe & Green   |
| 4      | White/Brown Stripe & Brown   |

**Mechanical Characteristics (Overall)****Operating Temperature Range:**

-20°C To +75°C

**Bulk Cable Weight:**

30 lbs/1000 ft.

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|                                   |           |
|-----------------------------------|-----------|
| Max. Recommended Pulling Tension: | 25 lbs.   |
| Min. Bend Radius/Minor Axis:      | 1 in.     |
| Min. Bend/Installation:           | 2.600 in. |

## Applicable Specifications and Agency Compliance (Overall)

## Applicable Standards &amp; Environmental Programs

|                                       |                                                      |
|---------------------------------------|------------------------------------------------------|
| NEC/(UL) Specification:               | CMR, UL444                                           |
| CEC/C(UL) Specification:              | CMR                                                  |
| Other Standards:                      | 11801 Category 5                                     |
| EU CE Mark:                           | Yes                                                  |
| EU Directive 2000/53/EC (ELV):        | Yes                                                  |
| EU Directive 2002/95/EC (RoHS):       | Yes                                                  |
| EU RoHS Compliance Date (mm/dd/yyyy): | 01/01/2004                                           |
| EU Directive 2002/96/EC (WEEE):       | Yes                                                  |
| EU Directive 2003/11/EC (BFR):        | Yes                                                  |
| CA Prop 65 (CJ for Wire & Cable):     | Yes                                                  |
| MII Order #39 (China RoHS):           | Yes                                                  |
| Telecommunications Standards:         | 568-B.2 Category 5e                                  |
| Other Specification:                  | NEMA WC-63.1 Category 5e, UL Verified to Category 5e |

## Flame Test

|                 |              |
|-----------------|--------------|
| UL Flame Test:  | UL1666 Riser |
| CSA Flame Test: | FT4          |

## Plenum/Non-Plenum

|                |       |
|----------------|-------|
| Plenum (Y/N):  | No    |
| Plenum Number: | 1533P |

## Electrical Characteristics (Overall)

## Nom. Mutual Capacitance:

|                     |
|---------------------|
| Capacitance (pF/ft) |
| 15                  |

|                                           |     |
|-------------------------------------------|-----|
| Maximum Capacitance Unbalance (pF/100 m): | 330 |
|-------------------------------------------|-----|

## Nominal Velocity of Propagation:

|        |
|--------|
| VP (%) |
| 70     |

## Maximum Delay:

|                  |
|------------------|
| Delay (ns/100 m) |
| 538 @ 100MHz     |

## Max. Delay Skew:

|                       |
|-----------------------|
| Delay Skew (ns/100 m) |
| 45                    |

## Maximum Conductor DC Resistance:

|                        |
|------------------------|
| DCR @ 20°C (Ohm/100 m) |
| 9.38                   |

## Max. Operating Voltage - UL:

|           |
|-----------|
| Voltage   |
| 300 V RMS |

## Maximum DCR Unbalanced:

|                          |
|--------------------------|
| DCR Unbalance @ 20°C (%) |
|--------------------------|

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## Electrical Characteristics-Premise (Overall)

Premise Cable Electrical Table 1:

| Freq. (MHz) | Max. Attenuation (dB/100 m) | Min. NEXT (dB) | Min. PSNEXT (dB) | Min. ACR (dB) | Min. PSACR (dB) | Min RL (dB) | Min. SRL (dB) |
|-------------|-----------------------------|----------------|------------------|---------------|-----------------|-------------|---------------|
| 1           | 2.0                         | 65.3           | 62.3             | 60.3          | 60.3            | 20.0        | 23.0          |
| 4           | 4.1                         | 56.3           | 53.3             | 49.2          | 49.2            | 23.0        | 23.0          |
| 8           | 5.8                         | 51.8           | 48.8             | 43.0          | 43.0            | 24.5        | 24.5          |
| 10          | 6.5                         | 50.3           | 47.3             | 40.8          | 40.8            | 25.0        | 25.0          |
| 16          | 8.2                         | 47.3           | 44.3             | 36.0          | 36.0            | 25.0        | 25.0          |
| 20          | 9.3                         | 45.8           | 42.8             | 33.5          | 33.5            | 25.0        | 25.0          |
| 25          | 10.4                        | 44.3           | 41.3             | 30.9          | 30.9            | 24.3        | 24.3          |
| 31.25       | 11.7                        | 42.9           | 39.9             | 28.2          | 28.2            | 23.6        | 23.6          |
| 62.5        | 17.0                        | 38.4           | 35.4             | 18.4          | 18.4            | 21.5        | 21.5          |
| 100         | 22.0                        | 35.3           | 32.3             | 10.3          | 10.3            | 20.1        | 20.1          |

Premise Cable Electrical Table 2:

| Freq. (MHz) | Input (Unfitted) Imp. (Ohms) | Fitted Impedance | Min. ELFEXT (dB) | Min. PSELFEXT (dB) |
|-------------|------------------------------|------------------|------------------|--------------------|
| 1           | 100 ± 15                     | 100 ± 15         | 63.8             | 60.8               |
| 4           | 100 ± 15                     | 100 ± 15         | 51.7             | 48.7               |
| 8           | 100 ± 15                     | 100 ± 15         | 45.7             | 42.7               |
| 10          | 100 ± 15                     | 100 ± 15         | 43.8             | 40.8               |
| 16          | 100 ± 15                     | 100 ± 15         | 39.7             | 36.7               |
| 20          | 100 ± 15                     | 100 ± 15         | 37.7             | 34.7               |
| 25          | 100 ± 15                     | 100 ± 15         | 35.8             | 32.8               |
| 31.25       | 100 ± 15                     | 100 ± 15         | 33.9             | 30.9               |
| 62.5        | 100 ± 15                     | 100 ± 15         | 27.8             | 24.8               |
| 100         | 100 ± 15                     | 100 ± 15         | 23.8             | 20.8               |

## Notes (Overall)

**Notes:** Shield is bonded to jacket inner wall for electrical stability. RJ-45 Compatible. Jacket sequentially marked at 2 ft. intervals.  
 Third party verified to TIA/EIA-568-B.2, Category 5e.

## Put Ups and Colors:

| Item #         | Putup    | Ship Weight | Color       | Notes | Item Desc                |
|----------------|----------|-------------|-------------|-------|--------------------------|
| 1533R F2VA1000 | 1,000 FT | 35.000 LB   | GRAY, DEC   |       | CAT5E 4PR F/UTP CMR RIB  |
| 1533R F2V1000  | 1,000 FT | 34.000 LB   | GRAY, DEC   | C     | CAT5E 4PR F/UTP CMR REEL |
| 1533R F2V1640  | 1,640 FT | 57.400 LB   | GRAY, DEC   | C     | CAT5E 4PR F/UTP CMR REEL |
| 1533R 002A1000 | 1,000 FT | 35.000 LB   | RED         | C     | CAT5E 4PR F/UTP CMR RIB  |
| 1533R 0021000  | 1,000 FT | 34.000 LB   | RED         | C     | CAT5E 4PR F/UTP CMR REEL |
| 1533R 003A1000 | 1,000 FT | 35.000 LB   | ORANGE      | C     | CAT5E 4PR F/UTP CMR RIB  |
| 1533R 0031000  | 1,000 FT | 34.000 LB   | ORANGE      | C     | CAT5E 4PR F/UTP CMR REEL |
| 1533R 004A1000 | 1,000 FT | 35.000 LB   | YELLOW      | C     | CAT5E 4PR F/UTP CMR RIB  |
| 1533R 0041000  | 1,000 FT | 34.000 LB   | YELLOW      | C     | CAT5E 4PR F/UTP CMR REEL |
| 1533R 005A1000 | 1,000 FT | 35.000 LB   | GREEN, DARK | C     | CAT5E 4PR F/UTP CMR RIB  |
| 1533R 0051000  | 1,000 FT | 34.000 LB   | GREEN, DARK | C     | CAT5E 4PR F/UTP CMR REEL |
| 1533R 006A1000 | 1,000 FT | 35.000 LB   | BLUE, LIGHT |       | CAT5E 4PR F/UTP CMR RIB  |
| 1533R 0061000  | 1,000 FT | 34.000 LB   | BLUE, LIGHT | C     | CAT5E 4PR F/UTP CMR REEL |
| 1533R 010A1000 | 1,000 FT | 35.000 LB   | BLACK       |       | CAT5E 4PR F/UTP CMR RIB  |
| 1533R 0101000  | 1,000 FT | 34.000 LB   | BLACK       | C     | CAT5E 4PR F/UTP CMR REEL |

**Notes:**

C = CRATE REEL PUT-UP.

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### Офис по работе с юридическими лицами:

105318, г.Москва, ул.Щербаковская д.3, офис 1107, 1118, ДЦ «Щербаковский»

Телефон: +7 495 668-12-70 (многоканальный)

Факс: +7 495 668-12-70 (доб.304)

E-mail: [info@moschip.ru](mailto:info@moschip.ru)

Skype отдела продаж:

moschip.ru

moschip.ru\_4

moschip.ru\_6

moschip.ru\_9