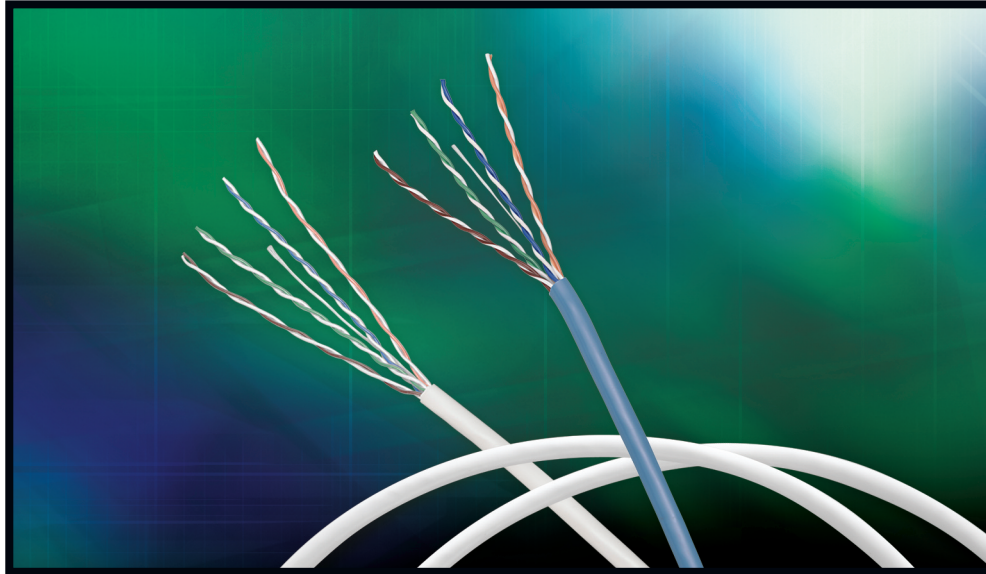


**NP 288**

**Belden® DataTwist®  
1200 Cables**

DataTwist 1200 Cables are part of the industry's most powerful Category 5e networking solution: Belden IBDN System 1200. DataTwist 1200 Cables exceed the TIA/EIA Category 5e requirements, have excellent PSNEXT and PSACR characteristics, and are easy to install.



**DataTwist 1200 Cables  
Provide Excellent Mechanical  
and Electrical Performance  
for Category 5e Networks**

**DataTwist 1200 Cable**

If your business is riding the wave of growth and expansion, you may be considering new ways of doing business and therefore a new or upgraded IT system to support these strategies. This is the ideal time to plan and implement new cabling or to upgrade your existing infrastructure.

The DataTwist 1200 Cable was developed to support high-speed network applications such as Gigabit Ethernet, and has guaranteed performance up to 350 MHz. Ideal for supporting up to 1000BaseT, this cable was designed to exceed current standards, providing built-in margin and optimizing network performance.

The DataTwist 1200 Cable consists of 4 pairs of 24 AWG insulated copper conductors with a round flexible core construction. The patented design features matched conductors on all four pairs, which provides for extremely stable electrical performance. All DataTwist 1200 cables feature a small diameter (less than 0.2 in.) for higher density installations - especially

valuable for runs inside conduit. For the installer, the DataTwist Cables come with a unique descending sequential printing scheme that shows exactly how much cable remains on the spool or in the box. And that translates into faster installations with less waste.

Belden DataTwist 1200 Cables are part of the Belden IBDN System 1200. Belden IBDN System 1200 substantially exceeds all requirements for Category 5e channels per the TIA/EIA-568-B.2 standard. Certified to support data rates up to 1.2 Gb/s for a system with a bandwidth of 160 MHz, the 1200 Solution provides the advanced performance required to fully support today's broad spectrum of business applications and the extended bandwidth required to support future growth.

To learn more about Belden IBDN copper-based structured cabling and connectivity systems, call 1.800.BELDEN.1 or visit our Website at [www.belden.com](http://www.belden.com).

## DataTwist 1200 Cables

The Belden IBDN 1200 Solution provides the advanced performance required to fully support today's broad spectrum of business applications and the extended bandwidth required to support future growth.

### Applications

DataTwist 1200 Cable is intended to be used for horizontal cable installations of high speed Local Area Networks (LANs) for transmission speeds up to 1.2 Gb/s. Specific applications include:

- 1000BASE-T Ethernet (1000 Mb/s)
- 155 Mb/s ATM, 100 Mb/s TP-PMD, 100 Mb/s Ethernet (100BASE-T), and other systems using up to 622 Mb/s transmission speeds
- 10 Mb/s Ethernet (ANSI/IEEE 802.3 10BASE-T)
- 4 Mb/s and 16 Mb/s Token Ring (ANSI/IEEE 802.5)
- Broadband video (77 channels at 550 MHz)

### Features & Benefits

- Minimized skew for parallel transmission protocols
- High flexibility design eases cable installation and dressing
- Size minimized for compactness of installations
- Materials selected to support 25-year performance warranties
- Descending distance marking for cable length reduces waste
- Matching tip and ring color code for ease of installation
- Available in CMR, CMP and LSZH versions

### Technical Specifications

#### Physical Characteristics

- Conductors: 24 AWG solid copper
- Insulation:
  - Plenum (Dual Insulation):  
Under layer: Polyolefin base  
Over layer: Fluorinated Ethylene Propylene (FEP)
  - Riser and LSZH: Polyolefin (PE)
- Cable Core: Four twisted pairs formed into a cable core
- Jacket w/ Rip Cord:
  - Plenum: LSPVC
  - Riser: PVC
  - LSZH: Low Smoke Zero Halogen Polymer Alloy
  - Jacket printed at intervals indicating cable code, AWG, listings (NEC Code), verification, date, manufacturing traceability code
  - Descending length markings start at highest number and end at 0

DataTwist 1200 Cables support high-speed LANs and a wide array of applications.





## Mechanical Characteristics

- Minimum Recommended Installation Temperature: 5°C (40°F)
- Temperature Rating: 60°C (140°F)

## Transmission Characteristics

- Values up to 350 MHz are minimum guaranteed values
- Values above 350 MHz are for information only
- DC Resistance @ 20°C, max.: 8.9 ohms/100 m
- DC Resistance Unbalance, max.: 3%

- Mutual Capacitance, max.: 5.6 nF/100 m
- Capacitance Unbalance Pair to Ground, max.: 330 pF/100 m
- Input Impedance:
  - 100 ± 15 ohms from 1 to 100 MHz
  - 100 ± 22 ohms from 101 to 200 MHz
- Nominal Velocity of Propagation (NVP):
  - Plenum: 72% @ 10 MHz
  - Riser: 68% @ 10 MHz
- Propagation Delay (Skew), max.: 25 ns/100 m

## Qualifications

- Meets or exceeds the Category 5e requirements per ANSI/TIA/EIA-568-A.5 or TIA/EIA-568-B.2
- Exceeds the Category 5 requirements per ANSI/TIA/EIA-568-A, CSA T529-95 and ISO/IEC 11801-1995
- Exceeds the Category 5 requirements per NEMA Standard WC 63.1-1996
- Exceeds the Category 5 requirements of ICEA S-90-661-1997
- Riser: ITS/ETL Certified as CMR, and listed as NEC Type CMR per UL Standard 444
- Plenum: ITS/ETL Certified as CMP, and listed as NEC Type CMP per UL Standard 444
- LSZH: ISO/IEC 332-1, 754-2 and 1034-2

## Key Electrical Attributes

| Frequency<br>(MHz) | NEXT (dB) |       | PSNEXT (dB) |       | ACR (dB) |       | PSACR (dB) |       | ELFEXT (dB) |       | PSELFEXT (dB) |       | Insertion Loss<br>(dB/100 m) |       | Return Loss (dB) |       |
|--------------------|-----------|-------|-------------|-------|----------|-------|------------|-------|-------------|-------|---------------|-------|------------------------------|-------|------------------|-------|
|                    | TIA *     | Spec. | TIA*        | Spec. | TIA*     | Spec. | TIA*       | Spec. | TIA*        | Spec. | TIA*          | Spec. | TIA*                         | Spec. | TIA*             | Spec. |
| 0.772              | 67.0      | 72.0  | 64.0        | 70.0  | 65.2     | 72.2  | 62.2       | 68.2  | -           | -     | -             | -     | 1.8                          | 1.8   | 19.4             | -     |
| 1                  | 65.3      | 70.3  | 62.3        | 68.3  | 63.3     | 70.3  | 60.3       | 66.3  | 63.8        | 67.8  | 60.8          | 64.8  | 2.0                          | 2.0   | 20.0             | 20.0  |
| 4                  | 56.3      | 61.3  | 53.3        | 59.3  | 52.2     | 59.3  | 49.2       | 55.3  | 51.8        | 55.8  | 48.8          | 52.8  | 4.1                          | 4.0   | 23.0             | 23.0  |
| 8                  | 51.8      | 56.8  | 48.8        | 54.8  | 46.0     | 53.1  | 43.0       | 49.1  | 45.7        | 49.7  | 42.7          | 46.7  | 5.8                          | 5.7   | 24.5             | 24.5  |
| 10                 | 50.3      | 55.3  | 47.3        | 53.3  | 43.8     | 50.9  | 40.8       | 46.9  | 43.8        | 47.8  | 40.8          | 44.8  | 6.5                          | 6.4   | 25.0             | 25.0  |
| 16                 | 47.2      | 52.2  | 44.2        | 50.2  | 39.0     | 46.1  | 36.0       | 42.1  | 39.7        | 43.7  | 36.7          | 40.7  | 8.2                          | 8.1   | 25.0             | 25.0  |
| 20                 | 45.8      | 50.8  | 42.8        | 48.8  | 36.5     | 43.7  | 33.5       | 39.7  | 37.8        | 41.8  | 34.8          | 38.8  | 9.3                          | 9.1   | 25.0             | 25.0  |
| 25                 | 44.3      | 49.3  | 41.3        | 47.3  | 33.9     | 41.1  | 30.9       | 37.1  | 35.8        | 39.8  | 32.8          | 36.8  | 10.4                         | 10.2  | 24.3             | 24.3  |
| 31.25              | 42.9      | 47.9  | 39.9        | 45.9  | 31.2     | 38.5  | 28.2       | 34.5  | 33.9        | 37.9  | 30.9          | 34.9  | 11.7                         | 11.4  | 23.6             | 23.6  |
| 62.5               | 38.4      | 43.4  | 35.4        | 41.4  | 21.4     | 29.0  | 18.4       | 25.0  | 27.9        | 31.9  | 24.9          | 28.9  | 17.0                         | 16.7  | 21.5             | 21.5  |
| 100                | 35.3      | 40.3  | 32.3        | 38.3  | 13.3     | 21.3  | 10.3       | 17.3  | 23.8        | 27.8  | 20.8          | 24.8  | 22.0                         | 21.0  | 20.1             | 20.1  |
| 200                | -         | 35.8  | -           | 33.8  | -        | 7.3   | -          | 3.3   | -           | 21.8  | -             | 18.8  | -                            | 30.5  | -                | 18.0  |
| 250                | -         | 34.3  | -           | 32.3  | -        | 1.9   | -          | -     | -           | 19.8  | -             | 16.8  | -                            | 34.4  | -                | 17.3  |
| 300                | -         | 33.1  | -           | 31.1  | -        | -     | -          | -     | -           | -     | -             | -     | -                            | 38.0  | -                | 16.8  |
| 350                | -         | 32.1  | -           | 30.1  | -        | -     | -          | -     | -           | -     | -             | -     | -                            | 41.4  | -                | 16.3  |
| 400                | -         | 31.3  | -           | 29.3  | -        | -     | -          | -     | -           | -     | -             | -     | -                            | 44.6  | -                | 15.9  |

\* TIA/EIA-568-B.2 Category 5e Standard.

Values above 350 MHz for engineering purposes only.

## Key Physical Attributes

| 4-pair,<br>24 AWG         | Nominal<br>O.D.     | Min. Bend<br>Radius  | Weight<br>(Cable Only)     |
|---------------------------|---------------------|----------------------|----------------------------|
| DataTwist 1212 Cable CMR  | 4.72 mm (0.186 in.) | 18.88 mm (0.744 in.) | 3.0 kg/100 m (20.0 lb/kft) |
| DataTwist 1213 Cable CMP  | 4.78 mm (0.188 in.) | 19.12 mm (0.752 in.) | 3.3 kg/100 m (22.0 lb/kft) |
| DataTwist 1224 Cable LSZH | 5.03 mm (0.198 in.) | 20.12 mm (0.792 in.) | 3.0 kg/100 m (20.0 lb/kft) |

## Ordering Information

### DataTwist 1212, 4-pair, 24 AWG, CMR, Cat 5e

| Belden Part Number | Color  | Length           | Packaging     | No. of Pack Per Pallet | Total Per Pallet    |
|--------------------|--------|------------------|---------------|------------------------|---------------------|
| 1212 003 U1000     | Orange | 305 m (1000 ft.) | TrapEZ Box    | 45 boxes/pallet        | 13725 m (45000 ft.) |
| 1212 004 U1000     | Yellow | 305 m (1000 ft.) | TrapEZ Box    | 45 boxes/pallet        | 13725 m (45000 ft.) |
| 1212 005 U1000     | Green  | 305 m (1000 ft.) | TrapEZ Box    | 45 boxes/pallet        | 13725 m (45000 ft.) |
| 1212 006 U1000     | Blue   | 305 m (1000 ft.) | TrapEZ Box    | 45 boxes/pallet        | 13725 m (45000 ft.) |
| 1212 008 U1000     | Gray   | 305 m (1000 ft.) | TrapEZ Box    | 45 boxes/pallet        | 13725 m (45000 ft.) |
| 1212 009 U1000     | White  | 305 m (1000 ft.) | TrapEZ Box    | 45 boxes/pallet        | 13725 m (45000 ft.) |
| 1212 010 U1000     | Black  | 305 m (1000 ft.) | TrapEZ Box    | 45 boxes/pallet        | 13725 m (45000 ft.) |
| 1212 006 1000      | Blue   | 305 m (1000 ft.) | 11-3/4N Spool | 36 spools/pallet       | 10980 m (36000 ft.) |
| 1212 009 1000      | White  | 305 m (1000 ft.) | 11-3/4N Spool | 36 spools/pallet       | 10980 m (36000 ft.) |
| 1212 006 2500      | Blue   | 762 m (2500 ft.) | 14N Spool     | 27 spools/pallet       | 20574 m (67500 ft.) |

### DataTwist 1213, 4-pair, 24 AWG, CMP, Cat 5e

| Belden Part Number | Color  | Length           | Packaging     | No. of Pack Per Pallet | Total Per Pallet    |
|--------------------|--------|------------------|---------------|------------------------|---------------------|
| 1213 003 U1000     | Orange | 305 m (1000 ft.) | TrapEZ Box    | 45 boxes/pallet        | 13725 m (45000 ft.) |
| 1213 004 U1000     | Yellow | 305 m (1000 ft.) | TrapEZ Box    | 45 boxes/pallet        | 13725 m (45000 ft.) |
| 1213 005 U1000     | Green  | 305 m (1000 ft.) | TrapEZ Box    | 45 boxes/pallet        | 13725 m (45000 ft.) |
| 1213 007 U1000     | Purple | 305 m (1000 ft.) | TrapEZ Box    | 45 boxes/pallet        | 13725 m (45000 ft.) |
| 1213 008 U1000     | Gray   | 305 m (1000 ft.) | TrapEZ Box    | 45 boxes/pallet        | 13725 m (45000 ft.) |
| 1213 009 U1000     | White  | 305 m (1000 ft.) | TrapEZ Box    | 45 boxes/pallet        | 13725 m (45000 ft.) |
| 1213 010 U1000     | Black  | 305 m (1000 ft.) | TrapEZ Box    | 45 boxes/pallet        | 13725 m (45000 ft.) |
| 1213 012 U1000     | Pink   | 305 m (1000 ft.) | TrapEZ Box    | 45 boxes/pallet        | 13725 m (45000 ft.) |
| 1213 D15 U1000     | Blue   | 305 m (1000 ft.) | TrapEZ Box    | 45 boxes/pallet        | 13725 m (45000 ft.) |
| 1213 009 1000      | White  | 305 m (1000 ft.) | 11-3/4N Spool | 36 spools/pallet       | 10980 m (36000 ft.) |
| 1213 D15 1000      | Blue   | 305 m (1000 ft.) | 11-3/4N Spool | 36 spools/pallet       | 10980 m (36000 ft.) |
| 1213 009 2500      | White  | 762 m (2500 ft.) | 14N Spool     | 27 spools/pallet       | 20574 m (67500 ft.) |
| 1213 D15 2500      | Blue   | 762 m (2500 ft.) | 14N Spool     | 27 spools/pallet       | 20574 m (67500 ft.) |

### DataTwist 1224, 4-pair, 24 AWG, LSZH, Cat 5e

| Belden Part Number | Color  | Length           | Packaging  | No. of Pack Per Pallet | Total Per Pallet    |
|--------------------|--------|------------------|------------|------------------------|---------------------|
| 1224 007 U1000     | Purple | 305 m (1000 ft.) | TrapEZ Box | 45 boxes/pallet        | 13725 m (45000 ft.) |

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