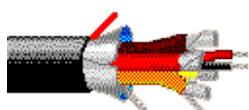


# Detailed Specifications & Technical Data



ENGLISH MEASUREMENT VERSION

1821R Multi-Conductor - CMR Rated Cable



For more Information  
please call

1-800-Belden1



## Description:

22 AWG stranded (7x30) TC conductor, polyolefin insulation, individually shielded with bonded Beldfoil®, numbered/color-coded PVC jackets, jackets and shields are bonded so both strip simultaneously, overall black PVC jacket and nylon rip cord.

## Physical Characteristics (Overall)

### Conductor

AWG:

# Pairs	AWG	Stranding	Conductor Material	Dia. (in.)
24	22	7x30	TC - Tinned Copper	.030

Total Number of Conductors: 48

### Insulation

Insulation Material:

Insulation Material	Dia. (in.)
PO - Polyolefin	.050

### Inner Shield

Inner Shield Material:

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

Inner Shield Drain Wire AWG:

AWG
22

Inner Shield Drain Wire Stranding: 7x30

Inner Shield Drain Wire Conductor Material: TC - Tinned Copper

### Inner Jacket

Inner Jacket Material:

Inner Jacket Material	Nom. Dia. (in.)
PVC - Polyvinyl Chloride	.133

### 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
18	19x30	TC - Tinned Copper

### Outer Jacket

Outer Jacket Material:

Outer Jacket Material
PVC - Polyvinyl Chloride

Outer Jacket Ripcord: Yes

### Overall Cable

Overall Cabling Color Code Chart:

# Detailed Specifications & Technical Data



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Number	Color
1	Brown
2	Red
3	Orange
4	Yellow
5	Green
6	Blue
7	Purple
8	Gray
9	White
10	Black
11	Tan
12	Pink
13	Gray/Brown Stripe
14	Gray/Red Stripe
15	Gray/Orange Stripe
16	Gray/Yellow Stripe
17	Gray/Green Stripe
18	Gray/Blue Stripe
19	Gray/Purple Stripe
20	Gray/Gray Stripe
21	Gray/White Stripe
22	Gray/Black Stripe
23	Gray/Tan Stripe
24	Gray/Pink Stripe

**Overall Nominal Diameter:** 0.969 in.

## Pair

Pair Color Code Chart:

Color
Red and Black

Pair Lay Length & Direction:

Lay Length (in.)	Twists (twist/ft)
1.500	8.000

## Mechanical Characteristics (Overall)

**Operating Temperature Range:** -20°C To +60°C

**Bulk Cable Weight:** 478 lbs/1000 ft.

**Max. Recommended Pulling Tension:** 679.900 lbs.

**Min. Bend Radius/Minor Axis:** 9 in.

## Applicable Specifications and Agency Compliance (Overall)

Applicable Standards & Environmental Programs

**NEC/UL Specification:** CMR

**CEC/C(UL) Specification:** CMG

**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

# Detailed Specifications & Technical Data

ENGLISH MEASUREMENT VERSION

**BELDEN**  
SENDING ALL THE RIGHT SIGNALS

1821R Multi-Conductor - CMR Rated Cable

## Flame Test

UL Flame Test: UL1666 Riser

CSA Flame Test: FT4

## Plenum/Non-Plenum

Plenum (Y/N): No

## Electrical Characteristics (Overall)

### Nom. Characteristic Impedance:

Impedance (Ohm)  
50

### Nom. Inductance:

Inductance ( $\mu$ H/ft)  
.18

### Nom. Capacitance Conductor to Conductor:

Capacitance (pF/ft)  
31

### Nom. Capacitance Cond. to Other Conductor & Shield:

Capacitance (pF/ft)  
56

### Nominal Velocity of Propagation:

VP (%)  
66

### Nom. Conductor DC Resistance:

DCR @ 20°C (Ohm/1000 ft)  
14.8

### Nominal Outer Shield DC Resistance:

DCR @ 20°C (Ohm/1000 ft)  
11.8

Ind. Pair Nominal Shield DC Resistance @ 20  
Deg. C: 14.100 Ohm/1000 ft

### Max. Operating Voltage - UL:

Voltage  
300 V RMS

### Max. Recommended Current:

Current  
1.45 Amps per conductor @ 25°C

## Notes (Overall)

**Notes:** Pair jackets and shields are bonded so both strip simultaneously with automatic stripping equipment. Beldfoil® provides high reliability with ease of termination.

## Put Ups and Colors:

Item #	Putup	Ship Weight	Color	Notes	Item Desc
1821R 0101000	1,000 FT	518.000 LB	BLACK	C	24 #22 FS PR PVC FS PVC
1821R 010500	500 FT	263.500 LB	BLACK	C	24 #22 FS PR PVC FS PVC

**Notes:**

C = CRATE REEL PUT-UP.

# Detailed Specifications & Technical Data



ENGLISH MEASUREMENT VERSION

## 1821R Multi-Conductor - CMR Rated Cable

Revision Number: 1    Revision Date: 04-18-2008

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