

## 1821R Multi-Conductor - CMR Rated Cable



For more Information  
please call

1-800-Belden1

**General 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. (mm)
24	22	7x30	TC - Tinned Copper	0.762

Total Number of Conductors: 48

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

Insulation Material	Dia. (mm)
PO - Polyolefin	1.27

**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. (mm)
PVC - Polyvinyl Chloride	3.3782

**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:**

## 1821R Multi-Conductor - CMR Rated Cable

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:** 24.613 mm

**Pair**

**Pair Color Code Chart:**

Color
Red and Black

**Mechanical Characteristics (Overall)**

<b>Operating Temperature Range:</b>	-20°C To +60°C
<b>Bulk Cable Weight:</b>	711.360 Kg/Km
<b>Max. Recommended Pulling Tension:</b>	3020.328 N
<b>Min. Bend Radius/Minor Axis:</b>	247.650 mm

**Applicable Specifications and Agency Compliance (Overall)****Applicable Standards & Environmental Programs**

<b>NEC/(UL) Specification:</b>	CMR
<b>CEC/C(UL) Specification:</b>	CMG
<b>EU CE Mark:</b>	Yes
<b>EU Directive 2000/53/EC (ELV):</b>	Yes
<b>EU Directive 2002/95/EC (RoHS):</b>	Yes
<b>EU RoHS Compliance Date (mm/dd/yyyy):</b>	01/01/2004
<b>EU Directive 2002/96/EC (WEEE):</b>	Yes
<b>EU Directive 2003/11/EC (BFR):</b>	Yes
<b>CA Prop 65 (CJ for Wire &amp; Cable):</b>	Yes
<b>MII Order #39 (China RoHS):</b>	Yes

**Flame Test**

<b>UL Flame Test:</b>	UL1666 Riser
<b>CSA Flame Test:</b>	FT4

## Plenum/Non-Plenum

Plenum (Y/N): No

## Electrical Characteristics (Overall)

## Nom. Characteristic Impedance:

Impedance (Ohm)

50

## Nom. Inductance:

Inductance (μH/m)

0.59058

## Nom. Capacitance Conductor to Conductor:

Capacitance (pF/m)

101.711

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

Capacitance (pF/m)

183.736

## Nominal Velocity of Propagation:

VP (%)

66

## Nom. Conductor DC Resistance:

DCR @ 20°C (Ohm/km)

48.5588

## Nominal Outer Shield DC Resistance:

DCR @ 20°C (Ohm/km)

38.7158

 Ind. Pair Nominal Shield DC Resistance @ 20  
 Deg. C: 46.262 Ohm/km

## 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	305 MT	234.962 KG	BLACK	C	24 #22 FS PR PVC FS PVC
1821R 010500	152 MT	119.522 KG	BLACK	C	24 #22 FS PR PVC FS PVC

## Notes:

C = CRATE REEL PUT-UP.

## Test Reports

## a) UL

- i) UL Test Reports are available on-line through the UL Client Document Access web portal.
- ii) UL Inspection Reports are also available through the UL Client Document Access web portal.

## b) CSA

- i) CSA "Descriptive Report and Test Results" documents are available on the CSA Gateway Portal.
- ii) CSA Inspection Reports are maintained on the CSA issued 'flash drive' at each manufacturing location.

\* other test data may be available if requested at time of order.

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