

## Application

Triaxial cable is used to interconnect video cameras to related equipment. Triax cables contain 2 isolated shields and a solid or stranded center conductor. Isolated shields allow the triax to provide multiple functions over 1 cable through multiplexing techniques, e.g. DC power to camera, intercom to operator, teleprompter feeds, monitoring feeds and even automatic or robotic functions.

## Construction & Dimensions

4 3.3 3.2 3.1 2 1



### 1. Conductor

### 2. Dielectric

#### 3.1 Braid

#### 3.2 Insulation

#### 3.3 Braid

### 4. Jacket

- |                           |  |
|---------------------------|--|
| 1. <b>Inner Conductor</b> | Innenleiter - Conduttore Interno - Conducteur - Conductor - Проводник                            |
| Material                  | stranded, silver plated copper   |
| Diameter                  | 2.2 mm (7x0.75)  |
| 2. <b>Dielectric</b>      | Dielektrikum - Dielettrico - Diélectrique - Dieléctrico - Диэлектрик                             |
| Material                  | foam PE  |
| Diameter over insulation  | 9.7 mm   |
| 3. <b>Outer Conductor</b> | Aussenleiter - Conduttore Esterno - Conducteur extérieur - Conductor externo - Внешний проводник |
| Material                  | braid + insulation + braid   |
| Diameter screen           | 10.4 mm  |
| 3.1 Shielding braid       | silver plated copper   |
| Coverage:                 | 80%  |
| 3.2 Insulation            | polyethylene   |
| 3.3 Shielding braid       | bare copper braid  |
| Coverage                  | 80%  |
| 4. <b>Jacket</b>          | Aussenmantel - Guaina - Gaine - Revestimiento - Оболочка   |
| Material                  | PVC  |
| Diameter:                 | 14.5 ± 0.2 mm  |
| Color and text:           | see table Marking  |

## Requirements and test methods

### Electrical characteristics

Mean characteristic impedance:  $75 \pm 3 \Omega$

Wellenwiderstand - Impedenza Caratteristica Principale - Impédance nominale - Características eléctricas - Электрические характеристики

Nominal capacitance conductor to shield: 54 pF/m

Капаци́тает - Capacità Nominale Conduttore/Schermo - Capacité nominale entre conducteur et blindage - Capacitancia nominal de conductor a blindaje - Номинальная емкость "проводник-экран"

**7785A**  
**Triax Cable 14 mm PVC**

Rev. 2/ 2005-07-01 2/2

**Nominal velocity of propagation:** 82%  
Ausbreitungsgeschwindigkeit - Velocità Nominale di Propagazione - Vitesse de propagation nominale - Velocidad nominal de propagación - Номинальная скорость распространения сигнала

**Max. DC loop resistance:** 12.1  $\Omega$ /km  
Schleifenwiderstand – Resistenza continua di Loop – xxx - Resistencia de bucle CC - Сопротивление петли пост. Тока

**Max. inner conductor DC resistance @ 20 °C:** 5.7  $\Omega$ /km  
Gleichstromwiderstand Innenleiter - Resistenza Nominale DC del Conduttore Interno - Résistance du conducteur intérieur - Resistencia CC nominal del conductor interno - Номин. сопротивление пост. тока внутреннего проводника при

**Max. outer conductor DC resistance @ 20 °C:** 6.4  $\Omega$ /km  
Gleichstromwiderstand Aussenleiter - Resistenza Nominale DC del Conduttore Esterno - Résistance du conducteur extérieur - Resistencia CC nominal del conductor externo - Номин. сопротивление пост. тока внутреннего проводника при

**Return loss at 5- 850 MHz:**  $\geq$  21 dB  
Rueckflussdaempfung - Perdite Cumulative di Riflessione - Taux de réflexion du signal - Pérdida de retorno - Обратные потери на

**Screening attenuation at 30-1000 MHz:**  $\geq$  75 dB  
Schirmungsmass – Effic. Schermatura - xxx de blindage

**Nominal Attenuation:** Wellendaempfung - Attenuazione Nominale – Affaiblissement - Atenuación nominal - Номинальное затухание

MHz	dB/100m	MHz	dB/100m
1	0.4	50	2.8
10	1.3	60	3.1
20	1.7	100	4.2
40	2.5	300	7.6
		1000	14.3



**Mechanical and physical characteristics**

Temperature range - storage/operation -40°C to +70°C  
Temperature range - installation -5 °C to + 70°C

**Minimum bending radius** 10x  $\varnothing$  cable  
Biegeradius - Raggio Minimo di Curvatura - Rayon de courbure minimum - Radio de curvatura mínimo - Минимальный радиус изгиба

**Nominal cable weight** 235 kg/km  
Gewicht - Peso Nominale del Cavo – Poids - Peso nominal del cable - Номинальный вес кабеля

**Ordering information**

**MARKING**

Jacket colour	Text
Red	BELDEN-NL BRILLIANCE (R) 7785A VIDEO TRIAX14

Meter marking: yes, MM-YY: month and year of manufacturing

**PACKAGING (PUT-UP, -0/+10%)**

305m, 500m, 600m reels

Each reel is labelled with the following data: Belden Logo, Belden code number, item description, length on the reel and date of manufacturing.