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SENDING ALL THE RIGHT SIGNALS					

TECHNICAL DATA SHEET	code	PRG11C0
	version	5
	date	2008-08-13
COAX PRG11 CU PE	page	1/2

APPLICATION

Coaxial cables used in cabled distribution networks designed according the European Standard EN 50117-2-1 and EN50117-2-4 operating at frequencies between 5 and 3000 MHz.

CONSTRUCTION

1 2 3.1 3.2 4

1 Inner conductor Solid soft annealed copper

2 Dielectric Gas injected PE

3.1 Foil Copper

3.2 Braid Annealed copper

4 Sheath PE according the European Standard HD 624.

REQUIREMENTS AND TEST METHODS

Test methods in accordance with European standard EN 50117-1.

Mechanical characteristics

1. Inner conductor.

Diameter: $1.55 \text{ mm} \pm 0.02 \text{ mm}$

2. Dielectric:

Diameter: $7.25 \text{ mm} \pm 0.2 \text{ mm}$

Centricity: ≥ 0.85

Adhesion: 12 - 120 N at 25 mm

3. Outer conductor:

Diameter screen: $7.9 \text{ mm} \pm 0.25 \text{ mm}$

Foil overlap: $\geq 2 \text{ mm}$ Coverage braid: $46 \% \pm 5 \%$

4. Sheath:

Diameter: $10.1 \text{ mm} \pm 0.3 \text{ mm}$

Tensile strength: $\geq 10 \text{ N/mm}^2$ Elongation at break: $\geq 300 \%$

5. Cable:

Crush resistance of cable: < 1% (load of 700N)

Storage/operating temperature: -60°C to +70°C

Minimum installation temperature: -5 °C Minimum static bend radius: 100 mm



TECHNICAL DATA SHEET	code	PRG11C0
	version	5
	date	2008-08-13
COAX PRG11 CU PE	page	2/2

Electrical characteristics

 $\begin{array}{lll} \mbox{Mean characteristic impedance:} & 75 \pm 3 \ \Omega \\ \mbox{Regularity of impedance:} & > 46 \ dB \\ \mbox{DC loop resistance:} & \leq 20 \ \Omega/\mbox{km} \\ \mbox{DC resistance inner conductor:} & \leq 9.4 \ \Omega/\mbox{km} \\ \mbox{DC resistance outer conductor:} & \leq 12.3 \ \Omega/\mbox{km} \\ \mbox{Capacitance:} & 55 \ \mbox{pF/m} \pm 2 \ \mbox{pF/m} \end{array}$

Velocity ratio: 0.81 ± 0.02 Insulation resistance: $> 10^4 \text{ M}\Omega.\text{km}$

Voltage test of dielectric: 3 kVdcScreening efficiency 30-1000 MHz: $\geq 85 \text{ dB}$

Transfer Impedance: < 15 mOhm/m

Return loss at 5-30 MHz: \geq 26 dB* \leq 30-470 MHz: \geq 26 dB*

470-1000 MHz: $\geq 20 \text{ dB}^{\circ}$ 470-1000 MHz: $\geq 23 \text{ dB}^{*}$ 1000-2000 MHz: $\geq 18 \text{ dB}^{*}$ 2000-3000 MHz: $\geq 16 \text{ dB}^{*}$

^{*}Max. 3 peak values 4 dB lower than specified.

Attenuation at	Nominal	Attenuation at	Nominal
5 MHz:	0.9 dB/100m	1350 MHz:	16.1 dB/100m
50 MHz:	2.8 dB/100m	1600 MHz:	17.8 dB/100m
100 MHz:	3.9 dB/100m	1750 MHz:	18.7 dB/100m
200 MHz:	5.7 dB/100m	2150 MHz:	21.1 dB/100m
400 MHz:	8.2 dB/100m	2400 MHz:	22.5 dB/100m
600 MHz:	10.2 dB/100m	2600 MHz:	23.6 dB/100m
800 MHz:	12.0 dB/100m	2800 MHz:	24.7 dB/100m
1000 MHz:	13.6 dB/100m	3000 MHz:	25.7 dB/100m
3.6			

Maximum attenuation is 10% higher.

REVISIONS

#	Description	Date	Initials
4	Operating temperature changed from -40C to -60C	12-08-2008	PMB
5	Added Transfer Impedance, change DC resistance outer	13-08-2008	PMB
	conductor from 10.6 to 12.3 Ohm/m		



Belden declares this product to be in compliance with the environmental regulations EU RoHS (Directive 2002/95/EC, 27 January 2003); this is valid for all material produced after the RoHS compliant date for this product.