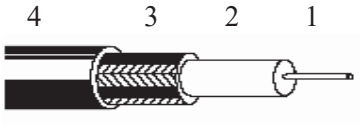
Product Datasheet
MRG5800
50 Ohm Transmission

Rev. 2/ 2005-11-30 2/2

Application

Transmission cable is used for low and high power radio frequency (RF) connections. Examples include radio antenna tower connections, CB and cellular phone antenna connections and microwave transmitter and receiver applications.

Construction & Dimensions



1. **Conductor**
2. **Dielectric**
3. **Braid**
4. **Jacket**

1. **Inner Conductor** Innenleiter - Conduttore Interno – Conducteur – Conductor - Проводник

Material	stranded (19x0.18) tinned copper
Diameter	0.91 mm

2. **Dielectric** Dielektrikum – Dielettrico – Diélectrique – Dieléctrico - Диэлектрик

Material	PE
Diameter over insulation	2.95 mm

3. **Outer Conductor** Aussenleiter - Conduttore Esterno - Conducteur extérieur - Conductor externo - Внешний проводник

Material	braid
Diameter screen	3.5 mm
Shielding braid	tinned copper braid
Coverage	93% ± 5%

4. **Jacket** Aussenmantel – Guaina – Gaine – Revestimiento - Оболочка

Material	PVC
Diameter:	4.95 ± 0.2 mm
Color and text:	see table Marking

Requirements and test methods

Electrical characteristics

Mean characteristic impedance: 50 ± 3 Ω

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

Nominal capacitance conductor to shield: 100 pF/m

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

Nominal velocity of propagation: 66%

Ausbreitungsgeschwindigkeit - Velocità Nominale di Propagazione - Vitesse de propagation nominale - Velocidad nominal de propagación - Номинальная скорость распространения сигнала

Max. DC loop resistance: 52.0 Ω/km

Schleifenwiderstand – Resistenza continua di Loop – Resistenza (DC) di Loop - Resistencia de bucle CC - Сопротиление петли пост. Тока

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Max. inner conductor DC resistance @ 20 ˚C: 36.0 Ω/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: 16.0 Ω/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- 470 MHz:	≥ 20 dB*
	470-1000 MHz:	≥ 18 dB*
	1000-2000 MHz:	≥ 16 dB*
	2000-3000 MHz:	≥ 15 dB*

Rueckflussdaempfung - Perdite Cumulative di Riflessione - Taux de réflexion du signal - Pérdida de retorno - Обратные потери на

Screening attenuation at 30-1000 MHz: ≥ 65 dB
Schirmungsmass – Attenuazione dello Schermo- L'affaiblissement lié au blindage - Eficacia de blindaje - Эффективность экранирования

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

MHz	dB/100m	MHz	dB/100m
5	3.3	862	45.8
50	10.6	1000	49.6
100	15.1	1350	58.2
230	23.1	1750	66.8
400	30.7	2150	74.6
800	44.1	2400	79.2



Mechanical and physical characteristics

Temperature range - storage/operation	-15°C to +70°C
Temperature range - installation	-5 °C to + 70˚C
Minimum bending radius	10x Ø cable

Biegeradius - Raggio Minimo di Curvatura - Rayon de courbure minimum - Radio de curvatura mínimo - Минимальный радиус изгиба

Nominal cable weight 35 kg/km
Gewicht - Peso Nominale del Cavo – Poids - Peso nominal del cable - Номинальный вес кабеля

MARKING

Jacket colour	Text
Black, White	BELDEN-NL MRG5800 0.91/2.95 PVC 44

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