

Detailed Specifications & Technical Data

METRIC MEASUREMENT VERSION

BELDEN
SENDING ALL THE RIGHT SIGNALS

543945 Coax - Surveillance and CCTV Applications



For more Information
please call

1-800-Belden1



General Description:

Surveillance & CCTV Cable, RG59, Rated-CMG, 20 AWG solid bare copper, foamed polyolefin core, 93% bare copper braid, PVC jacket

Usage (Overall)

| | |
|------------------------|-------------------------|
| Suitable Applications: | Analog Video/CCTV Coax. |
|------------------------|-------------------------|

Physical Characteristics (Overall)

Conductor

AWG:

| # Coax | AWG | Stranding | Conductor Material | Dia. (mm) |
|--------|-----|-----------|--------------------|-----------|
| 1 | 20 | Solid | BC - Bare Copper | 0.8128 |

Insulation

Insulation Material:

| Insulation Material | Dia. (mm) |
|--------------------------------------|-----------|
| Gas-injected FPE - Foam Polyethylene | 3.683 |

Outer Shield

Outer Shield Material:

| Type | Outer Shield Material | Coverage (%) |
|-------|-----------------------|--------------|
| Braid | BC - Bare Copper | 93.000 |

Outer Jacket

Outer Jacket Material:

| Outer Jacket Material |
|--------------------------|
| PVC - Polyvinyl Chloride |

Overall Cable

| | |
|---------------------------|----------|
| Overall Nominal Diameter: | 5.893 mm |
|---------------------------|----------|

Mechanical Characteristics (Overall)

| | |
|------------------------------|----------------|
| Operating Temperature Range: | -30°C To +75°C |
|------------------------------|----------------|

| | |
|------------------------|------|
| UL Temperature Rating: | 75°C |
|------------------------|------|

| | |
|--------------------|--------------|
| Bulk Cable Weight: | 43.158 Kg/Km |
|--------------------|--------------|

| | |
|-----------------------------------|-----------|
| Max. Recommended Pulling Tension: | 253.547 N |
|-----------------------------------|-----------|

| | |
|------------------------------|-----------|
| Min. Bend Radius/Minor Axis: | 63.500 mm |
|------------------------------|-----------|

Applicable Specifications and Agency Compliance (Overall)

Applicable Standards & Environmental Programs

| | |
|-------------------------|-----|
| NEC/(UL) Specification: | CMG |
|-------------------------|-----|

| | |
|---------------|-----|
| NEC Articles: | 800 |
|---------------|-----|

| | |
|--------------------------|-----|
| CEC/C(UL) Specification: | CMG |
|--------------------------|-----|

| | |
|------------------------------------|-----|
| EU Directive 2011/65/EU (RoHS II): | Yes |
|------------------------------------|-----|

| | |
|-------------|-----|
| 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 |
|-----------------------------|-----|

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| RG Type: | 59/U | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|-------------|-----------------------|-------------|--------------|--------|-----------|-----------------|----------|-----------|--------|-----|--------------|----------------|---------|-----------|--------|-----|--------------|----------------|----------|-----------|---------|---|--------------|---------------|--------|-----------|-------|--|--------------|-----------------|----------|-----------|-------|--|--------------|
| Series Type: | Series 59 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Flame Test | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| UL Flame Test: | UL1685 FT4/IEEE 1202 Vertical Tray Flame Test | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C(UL) Flame Test: | FT4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Suitability | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Suitability - Indoor: | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Suitability - Outdoor: | Yes - Black only. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Suitability - Aerial: | Yes - Black only. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Plenum/Non-Plenum | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Plenum (Y/N): | No | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Electrical Characteristics (Overall) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Nom. Characteristic Impedance: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Impedance (Ohm) | 75 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Nom. Inductance: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inductance (μ H/m) | 0.318257 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Nom. Capacitance Conductor to Shield: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Capacitance (pF/m) | 53.4803 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Nominal Velocity of Propagation: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| VP (%) | 83 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Nominal Delay: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Delay (ns/m) | 4.036 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Nom. Conductor DC Resistance: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DCR @ 20°C (Ohm/km) | 32.81 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Nominal Outer Shield DC Resistance: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DCR @ 20°C (Ohm/km) | 10.827 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Nom. Attenuation: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1"> <thead> <tr> <th>Freq. (MHz)</th> <th>Attenuation (dB/100m)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>0.9843</td> </tr> <tr> <td>5</td> <td>2.13265</td> </tr> <tr> <td>10</td> <td>2.9529</td> </tr> <tr> <td>50</td> <td>6.2339</td> </tr> <tr> <td>100</td> <td>8.5306</td> </tr> <tr> <td>200</td> <td>11.8116</td> </tr> <tr> <td>400</td> <td>16.405</td> </tr> <tr> <td>700</td> <td>22.967</td> </tr> <tr> <td>900</td> <td>26.248</td> </tr> <tr> <td>1000</td> <td>27.8885</td> </tr> </tbody> </table> | | Freq. (MHz) | Attenuation (dB/100m) | 1 | 0.9843 | 5 | 2.13265 | 10 | 2.9529 | 50 | 6.2339 | 100 | 8.5306 | 200 | 11.8116 | 400 | 16.405 | 700 | 22.967 | 900 | 26.248 | 1000 | 27.8885 | | | | | | | | | | | | | | |
| Freq. (MHz) | Attenuation (dB/100m) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 0.9843 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | 2.13265 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | 2.9529 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 50 | 6.2339 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 100 | 8.5306 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 200 | 11.8116 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 400 | 16.405 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 700 | 22.967 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 900 | 26.248 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1000 | 27.8885 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Max. Attenuation: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| Freq. (MHz) | Attenuation (dB/100m) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5.000 | 2.461 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 50.000 | 7.054 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Max. Operating Voltage - UL: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Voltage | 300 V RMS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Put Ups and Colors: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1"> <thead> <tr> <th>Item #</th> <th>Putup</th> <th>Ship Weight</th> <th>Color</th> <th>Notes</th> <th>Item Desc</th> </tr> </thead> <tbody> <tr> <td>543945 009U1000</td> <td>1,000 FT</td> <td>31.000 LB</td> <td>WHITE</td> <td></td> <td>RG-59/U COAX</td> </tr> <tr> <td>543945 009U500</td> <td>500 FT</td> <td>16.000 LB</td> <td>WHITE</td> <td></td> <td>RG-59/U COAX</td> </tr> <tr> <td>543945 0091000</td> <td>1,000 FT</td> <td>33.000 LB</td> <td>WHITE</td> <td>C</td> <td>RG-59/U COAX</td> </tr> <tr> <td>543945 009500</td> <td>500 FT</td> <td>16.000 LB</td> <td>WHITE</td> <td></td> <td>RG-59/U COAX</td> </tr> <tr> <td>543945 010U1000</td> <td>1,000 FT</td> <td>31.000 LB</td> <td>BLACK</td> <td></td> <td>RG-59/U COAX</td> </tr> </tbody> </table> | | Item # | Putup | Ship Weight | Color | Notes | Item Desc | 543945 009U1000 | 1,000 FT | 31.000 LB | WHITE | | RG-59/U COAX | 543945 009U500 | 500 FT | 16.000 LB | WHITE | | RG-59/U COAX | 543945 0091000 | 1,000 FT | 33.000 LB | WHITE | C | RG-59/U COAX | 543945 009500 | 500 FT | 16.000 LB | WHITE | | RG-59/U COAX | 543945 010U1000 | 1,000 FT | 31.000 LB | BLACK | | RG-59/U COAX |
| Item # | Putup | Ship Weight | Color | Notes | Item Desc | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 543945 009U1000 | 1,000 FT | 31.000 LB | WHITE | | RG-59/U COAX | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 543945 009U500 | 500 FT | 16.000 LB | WHITE | | RG-59/U COAX | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 543945 0091000 | 1,000 FT | 33.000 LB | WHITE | C | RG-59/U COAX | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 543945 009500 | 500 FT | 16.000 LB | WHITE | | RG-59/U COAX | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 543945 010U1000 | 1,000 FT | 31.000 LB | BLACK | | RG-59/U COAX | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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|----------------|----------|-----------|-------|---|--------------|
| 543945 010U500 | 500 FT | 16.000 LB | BLACK | | RG-59/U COAX |
| 543945 0101000 | 1,000 FT | 33.000 LB | BLACK | C | RG-59/U COAX |
| 543945 010500 | 500 FT | 16.000 LB | BLACK | C | RG-59/U COAX |

Notes:

C = CRATE REEL PUT-UP.

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