# **Detailed Specifications & Technical Data**



ENGLISH MEASUREMENT VERSION

#### 5439X5 Coax - Surveillance and CCTV Applications



For more Information please call

1-800-Belden1



#### **General Description:**

Surveillance, CCTV Cable, RG59, Rated-CM, 20 AWG solid bare copper, foamed polyolefin core, 95% bare copper braid, CoreGuard® water resistant tape, PVC jacket, UV resistant

Usage (Overall)	
Suitable Applications:	Low Voltage, CCTV, Sunlight Resistant, Moisture Resistant
Physical Characteristics (Overall)	
Conductor	
AWG: # Coax AWG Stranding Conductor Material Dia. (in.)	
1 20 Solid BC - Bare Copper .032	
Insulation	
Insulation Material:	
Insulation Material Dia. (in.) Gas-injected FPE - Foam Polyethylene  .145	
Outer Shield Outer Shield Material:	
Type     Outer Shield Material     Coverage (%)       Braid     BC - Bare Copper     95	
Outer Jacket Outer Jacket Material:	
Outer Jacket Material PVC - Polyvinyl Chloride	
Outer Jacket Separator Material:	Water resistant tape (over braid, under jacket)
Overall Cable	
Overall Nominal Diameter:	0.244 in.
Mechanical Characteristics (Overall)	
Operating Temperature Range:	-30°C To +75°C
UL Temperature Rating:	75°C
Bulk Cable Weight:	31 lbs/1000 ft.
Max. Recommended Pulling Tension:	57 lbs.
Min. Bend Radius/Minor Axis:	2.500 in.
Applicable Specifications and Agency Compliance (O	verall)
Applicable Standards & Environmental Programs	
NEC/(UL) Specification:	CM
NEC Articles:	800
CEC/C(UL) Specification:	СМ
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):	04/24/2006
EU Directive 2002/96/EC (WEEE):	Yes
EU Directive 2003/11/EC (BFR):	Yes
CA Prop 65 (CJ for Wire & Cable):	Yes

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### 5439X5 Coax - Surveillance and CCTV Applications

Suitability - Indoor:     Yes       Suitability - Cutodoor:     Yes       Torman Constructions     Yes       Denum (VM):     No       Contractoristic Coreanity     No       Contractoristic Impedance:     No       No	RG Type	r #39 (China RoHS):	Yes
tame Test     UL lees UL cading       CUL Plane Test:     FT1       CUL Plane Test:     FT1       Sutability - Indoor:     Yes       Sutability - Cudoor:     Yes       Brain Test Sutability - Cudoor:     Yes       Sutability - Cudoor:     Yes       Brain Test Sutability - Cudoor:     Yes       Sutability - Cudoor:     Yes       Definition Planue     No       Concortical Characteristics (Overall)     No       Concortical Characteristics (Overall)     No       Concortical Characteristics (Overall)     No       Concortical Characteristics (Overall)     No       Sum Inductance Conductor to Shield:     Concortical Characteristics       Capacital Conductor to Propagation:     Ver Planue       Ver Planue     Concortical Characteristics       Capacital Confination (Confination (Conf		:	59/U
UP Finance Test:     UT 1000 UP 10000 UP 10000 UP 1000 UP 1000 UP 1000 UP 10000 UP 1000 UP 1000 UP	Series T	ype:	Series 59
C(UL) Flame Test:     F11       Uitability     Suitability - Outdoor:     Yes       Renum (NO)     No       Control Characteristics (Overall)     No       Control Characteristics (Overall)     No       Inductance:     Inductance:       Inductance:     Inductance:       Inductance:     Inductance:       Inductor of Propagation:     Yes       037     Sominal Delay:       036     Sominal Delay:       132     Sominal Delay:       Delay (INT)     Sominal Delay:       133     Sominal Delay:       135     Sominal Delay:       136     Sominal Delay:	lame Test		
Nutability     Yes       Subability - Andoor:     Yes       Subability - Andoor:     Yes       Subability - Andoor:     Yes       Sunget Resistance:     Yes       Plenum (YA):     No       Constraints (Overall)     Overall       om: Anacoleristic Impedance:     Impedance (Overall)       mm. Inductance:     Impedance (Overall)       mm. Inductance:     Impedance Contuctor to Shield:       Cognitione Contuctor to Shield:     Cognitione Contuctor to Shield:       Cognine Contuctor to Shield: <td>UL Flam</td> <td>e Test:</td> <td>UL1685 UL Loading</td>	UL Flam	e Test:	UL1685 UL Loading
Subability - Outdoor:     Yes       Subability - Outdoor:     Yes       Subability - Outdoor:     Yes       Penum (VIN::     No       Contractoristics (Overall)     No       Contractoristics (Intractoristics (I	C(UL) Fla	ame Test:	FT1
Suitability - Outdoor:     Yes       Suinging Resistance:     Yes       Plenum (Yih):     No       Interference (Partial Control (Control (Contro) (Contro) (Control (Control (Control (Control (Contro) (Control (	Suitability		
Sunight Resistance:     Yes       Plenum (YM):     No       Identified (Second)     No       Identified (Second)     Second)       Social (Second)	Suitabilif	ty - Indoor:	Yes
Plenum (VN):     No       Identical Characteristic Impedance:     Impedance (UNIT)       Total Construction (UNIT)     Total Construction (UNIT)       Total Constreliad Construction (UNIT)     Total Co	Suitabili	ty - Outdoor:	Yes
Biolicitical Characteristics (Overall)     Nom. Characteristic Impedance:     Impedance (Ohm)     7a     Nom. Inductance:     Inductance (ptill)     Oga     Spacetance Conductor to Shield:     Spacetance Conductor to Shield:     Spacetance (ptill)     Italiance (ptill)     Spacetance (ptill)     Spacetance:     Define (ptill)     Spacetance:	Sunlight	Resistance:	Yes
Biolicitical Characteristics (Overall)     Nom. Characteristic Impedance:     Impedance (Ohm)     7a     Nom. Inductance:     Inductance (ptill)     Oga     Spacetance Conductor to Shield:     Spacetance Conductor to Shield:     Spacetance (ptill)     Italiance (ptill)     Spacetance (ptill)     Spacetance:     Define (ptill)     Spacetance:	Plenum/Nor	n-Plenum	
Non. Characteristic Impodance:     Impodance (Dim)     73     Non. Inductance:     Inductance (Control of Nield)     Gapacitance Conductor to Shield:     Monial Volocity of Propagation:     VP (%)     33     Non. Noticout of Consistance:     DCR @ 20°C (Ohm/1000 ft)     35     Non. Attenuation     1   20     1   20     20   36     1   30     1   30     1   30     1   30     1   30     1   30     1   30     1   30     1   30     20   360     200   3.60     200   3.60     200   3.60     200   3.60     200   3.60	Plenum (	(Y/N):	No
Non. Characteristic Impodance:     Impodance (Dim)     73     Non. Inductance:     Inductance (Control of Nield)     Gapacitance Conductor to Shield:     Monial Volocity of Propagation:     VP (%)     33     Non. Noticout of Consistance:     DCR @ 20°C (Ohm/1000 ft)     35     Non. Attenuation     1   20     1   20     20   36     1   30     1   30     1   30     1   30     1   30     1   30     1   30     1   30     1   30     20   360     200   3.60     200   3.60     200   3.60     200   3.60     200   3.60			
Impaired (OIM)     75     Non. Inductance     Impaired (Pirt)     1097     Non. Capacitance (Diff)     10.3     Nonlial Velocity of Propagation:     VB (3.3)     Nonlial Velocity of Propagation:     VB (3.3)     Nonlial Delay:     Delay (1977)     Nonlial Color DC Resistance:     DC (2000)     DC (2000)     10.0     Non. Attonuation:     For (Mit2) Attenuation (dB/100 f)     100     200     300     200     300     200     300     200     300     200     300     200     300     200     300     200     300     200     300     200     300     200     300     200     300     200     300     200     300			rail)
73     Inductance:			
Wm. Inductance:     Inductance:     Inductance:     037     Sm. Capacitance Conductor to Shield:     Capacitance (pF/II)     16.3     Tominal Velocity of Propagation:     VF (%)     Sm.     Sm.     Delay (ms/I)     1.1     CCR @ 20° (Ohm/1000 ff)     1.2     Sm.     CDCR @ 20° (Ohm/1000 ff)     1.5     Sm.     CDCR @ 20° (Ohm/1000 ff)     1.5     Sm.     Sm.     CDCR @ 20° (Ohm/1000 ff)     1.5     Sm.	-	e (Ohm)	
Normal Velocity of Propagation:     VP (%)     33     Normal Velocity of Propagation:     VP (%)     33     Normal Velocity of Propagation:     VP (%)     33     Normal Velocity of Propagation:     Delay (nart)     1:1     1:2     Normal Velocity of Resistance:     Delay (nart)     3:5     Normal Velocity of Resistance:     Delay (nart)     3:5     Normal Velocity of Resistance:     Per Q (NF) A tensation (dB/00 ft)     3:5     Normal Velocity of Resistance:     Delay (S)     Normal Velocity of Resistance:     Normal Velocity of Resistance:     Delay (S)     Normal Velocity of Resistance:     Delay (S)     Normal Velocity of Resistance:     Normal Velocity of Resistance:     1:1   30     1:2   30     1:2   30     1:2   30     1:3   30     1:0   30     1:0   30     1:0	75		
Normal Velocity of Propagation:     VP (%)     33     Normal Velocity of Propagation:     VP (%)     33     Normal Velocity of Propagation:     VP (%)     33     Normal Velocity of Propagation:     Delay (nart)     1:1     1:2     Normal Velocity of Resistance:     Delay (nart)     3:5     Normal Velocity of Resistance:     Delay (nart)     3:5     Normal Velocity of Resistance:     Per Q (NF) A tensation (dB/00 ft)     3:5     Normal Velocity of Resistance:     Delay (S)     Normal Velocity of Resistance:     Normal Velocity of Resistance:     Delay (S)     Normal Velocity of Resistance:     Delay (S)     Normal Velocity of Resistance:     Normal Velocity of Resistance:     1:1   30     1:2   30     1:2   30     1:2   30     1:3   30     1:0   30     1:0   30     1:0	Nom. Inducta	nce:	
007     Nom. Capacitance Conductor to Shield:     Capacitance (pF/f)     18.3     Nominal Velocity of Propagation:     VP (%)     33     Nominal Delay:     Delay (nami)     Nom. Conductor DC Resistance:     DCR 202 (Dim/1000 ft)     10.1     Dominal Duter Shield DC Resistance:     DCR 202 (Ohm/1000 ft)     3.5     Nom. Attenuation:     Preq. (Mtz) Attenuation (dB/100 ft.)     1   30     5.00     10.0   2.60     20.0   3.60     20.0   3.60     20.0   3.60     20.0   3.60     20.0   3.60     20.0   3.60     20.0   3.60     20.0   3.60     20.0   3.60     20.0   3.60     20.0   3.60     20.0   3.60     20.0   3.60     20.0   3.60     20.0   3.60			
Nom. Capacitance Conductor to Shield:     Capacitance (pF/ft)     16.3     Nominal Volcoity of Propagation:     VP (%)     3     Nominal Volcoity of Propagation:     VP (%)     3     Delay (nift)     121     Nom. Capacitance (Columi 1000 ft)     10.0     DCR 202 C (Ohm/1000 ft)     3.5     Nom. Attenuation:     PCR 203 (Ohm/1000 ft)     3.5     Nom. Attenuation:     Value 400     2.60 <td></td> <td></td> <td></td>			
Capacitance (pF/fi)     16.3     Nominal Velocity of Propagation:     VP (%)     33     Nominal Delay:     Delay (ns/fi)     121     Nom. Attenuation     DR @ 20°C (Ohm/1000 ft)     3.5     Nom. Attenuation     100     100     2.6	.097		
Capacitance (pF/fi)     16.3     Nominal Velocity of Propagation:     VP (%)     33     Nominal Delay:     Delay (ns/fi)     121     Nom. Attenuation     DR @ 20°C (Ohm/1000 ft)     3.5     Nom. Attenuation     100     100     2.6	Nom. Capacit	ance Conductor to Shield	
16.3     Nominal Velocity of Propagation:     VP (3)     Nominal Delay:     Data (naff)     121     Nom. Conductor DC Resistance:     DCR @ 20°C (Ohm/1000 ft)     100     101     000     103     Nom. Resistance:     DCR @ 20°C (Ohm/1000 ft)     13.5     Nom. Resistance:     DCR @ 20°C (Ohm/1000 ft)     13.5     Nom. Resistance:     DCR @ 20°C (Ohm/1000 ft)     13.5     Nom. Resistance:     DCR @ 20°C (Ohm/1000 ft)     15.5     100     200			
Nominal Velocity of Propagation:     VP (%)     83     Nominal Delay:     Delay (ns/ft)     121     Nom: Conductor DC Resistance:     DCR @ 20°C (Ohm/1000 ft)     10.0     Nominal Duter Shield DC Resistance:     DCR @ 20°C (Ohm/1000 ft)     3.5     Nominal Duter Shield DC Resistance:     PCR @ 20°C (Ohm/1000 ft)     3.5     Nominal Duter Shield DC Resistance:     PCR @ 20°C (Ohm/1000 ft)     3.5     Nominal Duter Shield DC Resistance:     PCR @ 20°C (Ohm/1000 ft)     3.5     Nom.     Nominal Duter Shield DC Resistance:     PCR @ 20°C (Ohm/1000 ft)     3.5     Nominal Duter Shield DC Resistance:     Nominal Duter Shield DC Resistance: <td< td=""><td>-</td><td></td><td></td></td<>	-		
VP (%) 83     Nominal Delay:     Delay (ns/f) 1.21     Nom. Conductor DC Resistance:     DCR @ 20°C (Ohm/1000 ft) 10.0     Nominal Outer Shield DC Resistance:     DCR @ 20°C (Ohm/1000 ft) 3.5     Nom.     Nom.     Pfreq. (Mt2) Attonuation (dB/100 ft) 10     1   30     5   65     100   2.60     200   3.60     100   2.60     200   3.60     100   2.60     200   3.60     1000   8.50     Now.   S.50     Now.   S.50     Now.   S.50     1000   8.50     1000   8.50     1000   8.50     Now.   S.50     1000   8.50     1000   8.50     Now.   S.50     1000   8.50     1000   8.50     1000   8.50     1000   8.50	10.5		
33     Nominal Delay:     Daily (nsift)     121     Nom. Conductor DC Resistance:     DCR @ 20°C (Ohm/1000 ft)     10.0     Nominal Outer Shield DC Resistance:     DCR @ 20°C (Ohm/1000 ft)     3.5     Nom. Attenuation $100$ 2.60     2.60 </th <th>Nominal Velo</th> <th>city of Propagation:</th> <th></th>	Nominal Velo	city of Propagation:	
33     Nominal Delay:     Daily (nsift)     121     Nom. Conductor DC Resistance:     DCR @ 20°C (Ohm/1000 ft)     10.0     Nominal Outer Shield DC Resistance:     DCR @ 20°C (Ohm/1000 ft)     3.5     Nom. Attenuation $100$ 2.60     2.60 </th <th></th> <th></th> <th></th>			
Vominal Delay:     Delay (ns/ft)     1.21     Nom. Conductor DC Resistance:     DCR @ 20°C (Ohm/1000 ft)     10.0     Nominal Outer Shield DC Resistance:     DCR @ 20°C (Ohm/1000 ft)     3.5     Nom. Attenuation:     Freq. (MHz) Attenuation (dB/100 ft.)     1   .30     50   1.90     10   .80     10   .80     10   .80     10   .80     10   .80     10   .80     100   8.50     Now. Attenuation:   Nome Attenuation (dB/100 ft.)     1   .30     50   1.90     100   8.60     100   8.50     1000   8.50     1000   8.50     1000   8.50     1000   8.50     1000   8.50     1000   8.50     1000   8.50     1000   8.50     1000   8.50     1000   8.50     1000 </th <th></th> <th></th> <th></th>			
Delay (ns/ft)     1.21     Nom. Conductor DC Resistance:     DCR @ 20°C (Ohm/1000 ft)     1.0     Nominal Outer Shield DC Resistance:     DCR @ 20°C (Ohm/1000 ft)     3.5     Nom.     Nom.     Freq. (MH2) Attenuation (dB/100 ft.)     1   30     5   65     10   90     5   65     10   90     5   65     10   90     10   90     10   2.60     200   3.60     400   5.00     7.00   900     900   8.50	00		
1.21     Nom. Conductor DC Resistance:     DCR @ 20°C (Ohm/1000 ft)     10.0     Nominal Outer Shield DC Resistance:     DCR @ 20°C (Ohm/1000 ft)     3.5     Nom.     Nom.     Attenuation     Freq. (MH2 Attenuatin (dB/100 ft.)     1   30     5   65     10   90     200   3.60     400   5.00     700   7.00     900   8.50	Nominal Dela	y:	
1.21     Nom. Conductor DC Resistance:     DCR @ 20°C (Ohm/1000 ft)     10.0     Nominal Outer Shield DC Resistance:     DCR @ 20°C (Ohm/1000 ft)     3.5     Nom.     Nom.     Attenuation     Freq. (MH2 Attenuatin (dB/100 ft.)     1   30     5   65     10   90     200   3.60     400   5.00     700   7.00     900   8.50	Delay (ns/	ft)	
Nom. Conductor DC Resistance:     DCR @ 20°C (Ohm/1000 ft)     10.0     Nomial Outer Shield DC Resistance:     DCR @ 20°C (Ohm/1000 ft)     3.5     Nom. Attenuation:     Freq. (MHz)     1   30     5   65     10   90     50   1.90     100   2.60     200   3.60     400   5.00     100   8.50     Max. Operating Voltage - UL:     Voltage 300 V RMS			
DCR @ 20°C (Ohm/1000 ft)     10.0     DOC @ 20°C (Ohm/1000 ft)     3.5     Nom. Attenuation (dB/100 ft.)     1   30     5   65     100   300     50   1.90     100   2.60     200   3.60     100   8.00     100   8.00     100   8.50			
10.0     Norminal Outer Shield DC Resistance:     DCR @ 20°C (Ohm/1000 ft)     3.5     Normination:     Freq. (MHz) Attenuation (dB/100 ft.)     1   30     5   65     10   90     50   1.90     100   2.60     200   3.60     400   5.00     900   8.00     100   8.50     Mark: Everation:     Voltage - UL:     Voltage   3.00 V RMS	Nom. Conduc	tor DC Resistance:	
Nominal Outer Shield DC Resistance:     DCR @ 20°C (Ohm/1000 ft)     3.5     Nom. Attenuation (dB/100 ft.)     1   .30     5   .65     10   .90     50   1.90     100   2.60     200   3.60     400   5.00     700   7.00     900   8.50	DCR @ 20	°C (Ohm/1000 ft)	
DCR @ 20°C (Ohm/1000 ft)     3.5     Norm. Attenuation (dB/100 ft.)     1   30     5   .65     10   .90     50   1.90     100   2.60     200   3.60     400   5.00     700   7.00     900   8.50	10.0		
DCR @ 20°C (Ohm/1000 ft)     3.5     Norm. Attenuation (dB/100 ft.)     1   30     5   .65     10   .90     50   1.90     100   2.60     200   3.60     400   5.00     700   7.00     900   8.50			
3.5     Nom. Attenuation (dB/100 ft.)     1   30     5   65     10   90     50   1.90     100   2.60     200   3.60     400   5.00     700   7.00     900   8.00     1000   8.50			
Nom. Attenuation:     Freq. (MHz)   Attenuation (dB/100 ft.)     1   .30     5   .65     10   .90     50   1.90     100   2.60     200   3.60     400   5.00     700   7.00     800   8.50	DCR @ 20	°C (Ohm/1000 ft)	
Freq. (MHz)   Attenuation (dB/100 ft.)     1   .30     5   .65     10   .90     50   1.90     100   2.60     200   3.60     400   5.00     700   7.00     900   8.00     1000   8.50	3.5		
Freq. (MHz)   Attenuation (dB/100 ft.)     1   .30     5   .65     10   .90     50   1.90     100   2.60     200   3.60     400   5.00     700   7.00     900   8.00     1000   8.50			
1   .30     5   .65     10   .90     50   1.90     100   2.60     200   3.60     400   5.00     700   7.00     900   8.00     1000   8.50			
5   .65     10   .90     50   1.90     100   2.60     200   3.60     400   5.00     700   7.00     900   8.00     1000   8.50			
10   .90     50   1.90     100   2.60     200   3.60     400   5.00     700   7.00     900   8.00     1000   8.50			
50   1.90     100   2.60     200   3.60     400   5.00     700   7.00     900   8.00     1000   8.50			
100   2.60     200   3.60     400   5.00     700   7.00     900   8.00     1000   8.50		.90	
200   3.60     400   5.00     700   7.00     900   8.00     1000   8.50     Max. Operating Voltage - UL:     Voltage   300 V RMS	50	1.90	
200   3.60     400   5.00     700   7.00     900   8.00     1000   8.50     Max. Operating Voltage - UL:     Voltage     300 V RMS	100	2.60	
400   5.00     700   7.00     900   8.00     1000   8.50     Max. Operating Voltage - UL:     Voltage     300 V RMS			
700 7.00   900 8.00   1000 8.50   Max. Operating Voltage - UL:   Voltage 300 V RMS			
900 8.00   1000 8.50   Max. Operating Voltage - UL:   Voltage   300 V RMS			
1000 8.50   Max. Operating Voltage - UL:   Voltage   300 V RMS			
Max. Operating Voltage - UL: Voltage 300 V RMS			
Voltage 300 V RMS	900		
Voltage 300 V RMS	900	8.50	
300 V RMS	900 1000		-
	900 1000 Max. Operatin		
	900 1000 Max. Operatin Voltage	ng Voltage - UL:	
	900 1000 Max. Operatin Voltage	ng Voltage - UL:	

Item #	Putup	Ship Weight	Color	Notes	Item Desc
5439X5 0101000	1,000 FT	33.000 LB	BLACK	С	RG-59/U COAX

Notes: C = CRATE REEL PUT-UP.

## **Detailed Specifications & Technical Data**



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Revision Number: 1 Revision Date: 03-11-2013

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product. Belden declares this product to be in compliance with EU LVD (Low Voltage Directive 73/23/EEC), as amended by directive 93/68/EEC.