

## COMMUNICATION & CONTROL CABLE MULTI-CONDUCTOR SHIELDED

UL, CSA, and NEC approved wires for two way circuits.



### GENERAL INFO

In many electronic applications, two wires are required to complete circuits; these are often referred to as “balanced arrays” or “twisted pair” constructions. Paired cable designs find frequent application in circuits requiring circuit-to-circuit isolation from noise, minimization of capacitance imbalances and a reduction of EMI interference currents. Circuit separation is further enhanced in those designs employing individual circuit shields in concert with an overall shield. These shielding systems are available from General Cable in myriad combinations to suit the unique needs of the circuit designer. As with the multi-conductor designs, a wide array of insulating and jacketing materials are available to meet specific electronic applications. General Cable’s Carol® Brand communication cable products are manufactured to meet the latest UL, CSA and NEC requirements and approvals.

### CONSTRUCTION/DESIGN

Nominal outer diameter [inch]	Conductor strand count	Cable marking	Conductor category	AWG size
0.28	19/.0147	NA	Class 2 = stranded	14
0.23	19/.0117	CAROL (R) 16 AWG -- C4199A -- CSA C/US LL69381 CMG 105C OR CSA AWM I/II A/B 105C 600V FT4 -- E18621-8 "RU" AWM STYLE 2464 80C 300V -- ROHS -- MADE IN USA (date code) (sequential footage)	Class 2 = stranded	16
0.23	19/.0117	CAROL (R) 16 AWG -- C4199A -- CSA C/US LL69381 CMG 105C OR CSA AWM I/II A/B 105C 600V FT4 -- E18621-8 "RU" AWM STYLE 2464 80C 300V -- ROHS -- MADE IN USA (date code) (sequential footage)	Class 2 = stranded	16
0.23	19/.0117	CAROL (R) 16 AWG -- C4213A -- LL69381 CSA C/US CMG 105C OR CSA AWM I/II A/B 105C 600V FT4 -- E18621-8 ~RU~ AWM STYLE 2464 80C 300V --- ROHS CE -- MADE IN USA (DATE CODE) (SEQ FT) (PRINT EVERY 2 FT)	Class 2 = stranded	16
0.23	19/.0117	CAROL (R) 16 AWG -- C4199A -- CSA C/US LL69381 CMG 105C OR CSA AWM I/II A/B 105C 600V FT4 -- E18621-8 "RU" AWM STYLE 2464 80C 300V -- ROHS -- MADE IN USA (date code) (sequential footage)	Class 2 = stranded	16
0.23	19/.0117	CAROL (R) 16 AWG -- C4199A -- CSA C/US LL69381 CMG 105C OR CSA AWM I/II A/B 105C 600V FT4 -- E18621-8 "RU" AWM STYLE 2464 80C 300V -- ROHS -- MADE IN USA (date code) (sequential footage)	Class 2 = stranded	16
0.23	19/.0117	CAROL (R) 16 AWG -- C4213A -- LL69381 CSA C/US CMG 105C OR CSA AWM I/II A/B 105C 600V FT4 -- E18621-8 ~RU~ AWM STYLE 2464 80C 300V --- ROHS CE -- MADE IN USA (DATE CODE) (SEQ FT) (PRINT EVERY 2 FT)	Class 2 = stranded	16
0.205		CAROL (R) 18 AWG -- C4197A -- CSA C/US LL69381 CMG 105C OR CSA AWM I/II A/B 105C 600V FT4 -- E18621-8 "RU" AWM STYLE 2464 80C 300V -- ROHS -- MADE IN USA (date code) (sequential footage)	Class 2 = stranded	18
0.21	16/30	CAROL (R) 18 AWG -- C4212A -- LL69381 CSA C/US CMG 105C OR CSA AWM I/II A/B 105C 600V FT4 -- E18621-8 RU AWM STYLE 2464 80C 300V -- ROHS CE -- MADE IN USA (date code - MM (sequential footage)		
0.205		CAROL (R) 18 AWG -- C4197A -- CSA C/US LL69381 CMG 105C OR CSA AWM I/II A/B 105C 600V FT4 -- E18621-8 "RU" AWM STYLE 2464 80C 300V -- ROHS -- MADE IN USA (date code) (sequential footage)	Class 2 = stranded	18

## PRODUCT DETAILS

Part number	Product name	Cable marking	AWG size	Core colors	Number of cores	Color outer jacket
C4201A.30.10M	14/2C STRANDED SHIELDED CMG	NA	14		2	Gray
C4199A.30.10	16/2C STRANDED SHIELDED CMG	CAROL (R) 16 AWG -- C4199A -- CSA C/US LL69381 CMG 105C OR CSA AWM I/II A/B 105C 600V FT4 -- E18621-8 "RU" AWM STYLE 2464 80C 300V -- ROHS -- MADE IN USA (date code) (sequential footage)	16	Black, Red	2	Gray
C4199A.41.10	16/2C STRANDED SHIELDED CMG	CAROL (R) 16 AWG -- C4199A -- CSA C/US LL69381 CMG 105C OR CSA AWM I/II A/B 105C 600V FT4 -- E18621-8 "RU" AWM STYLE 2464 80C 300V -- ROHS -- MADE IN USA (date code) (sequential footage)	16	Black, Red	2	Gray
C4199A.30.10M	16/2C STRANDED SHIELDED CMG	CAROL (R) 16 AWG -- C4199A -- CSA C/US LL69381 CMG 105C OR CSA AWM I/II A/B 105C 600V FT4 -- E18621-8 "RU" AWM STYLE 2464 80C 300V -- ROHS -- MADE IN USA (date code) (sequential footage)	16	Black, Red	2	Gray
C4199A.41.10M	16/2C STRANDED SHIELDED CMG	CAROL (R) 16 AWG -- C4199A -- CSA C/US LL69381 CMG 105C OR CSA AWM I/II A/B 105C 600V FT4 -- E18621-8 "RU" AWM STYLE 2464 80C 300V -- ROHS -- MADE IN USA (date code) (sequential footage)	16	Black, Red	2	Gray
C4213A.30.10	16/2C STRANDED TC SHIELDED CMG	CAROL (R) 16 AWG -- C4213A -- LL69381 CSA C/US CMG 105C OR CSA AWM I/II A/B 105C 600V FT4 -- E18621-8 ~RU~ AWM STYLE 2464 80C 300V --- ROHS CE -- MADE IN USA (DATE CODE) (SEQ FT) (PRINT EVERY 2 FT)	16	Black, White	2	Gray
C4213A.41.10	16/2C STRANDED TC SHIELDED CMG	CAROL (R) 16 AWG -- C4213A -- LL69381 CSA C/US CMG 105C OR CSA AWM I/II A/B 105C 600V FT4 -- E18621-8 ~RU~ AWM STYLE 2464 80C 300V --- ROHS CE -- MADE IN USA (DATE CODE) (SEQ FT) (PRINT EVERY 2 FT)	16	Black, White	2	Gray
C4199A.41.01M	16/2C STRANDED SHIELDED CMG	CAROL (R) 16 AWG -- C4199A -- CSA C/US LL69381 CMG 105C OR CSA AWM I/II A/B 105C 600V FT4 -- E18621-8 "RU" AWM STYLE 2464 80C 300V -- ROHS -- MADE IN USA (date code) (sequential footage)	16	Black, Red	2	Black
C4199A.41.01	16/2C STRANDED SHIELDED CMG	CAROL (R) 16 AWG -- C4199A -- CSA C/US LL69381 CMG 105C OR CSA AWM I/II A/B 105C 600V FT4 -- E18621-8 "RU" AWM STYLE 2464 80C 300V -- ROHS -- MADE IN USA (date code) (sequential footage)	16	Black, Red	2	Black
C4213A.30.10M	16/2C STRANDED TC SHIELDED CMG	CAROL (R) 16 AWG -- C4213A -- LL69381 CSA C/US CMG 105C OR CSA AWM I/II A/B 105C 600V FT4 -- E18621-8 ~RU~ AWM STYLE 2464 80C 300V --- ROHS CE -- MADE IN USA (DATE CODE) (SEQ FT) (PRINT EVERY 2 FT)	16	Black, White	2	Gray

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Part number	Product name	Cable marking	AWG size	Core colors	Number of cores	Color outer jacket
C4213A.41.10M	16/2C STRANDED TC SHIELDED CMG	CAROL (R) 16 AWG -- C4213A -- LL69381 CSA C/US CMG 105C OR CSA AWM I/II A/B 105C 600V FT4 -- E18621-8 ~RU~ AWM STYLE 2464 80C 300V - -- ROHS CE -- MADE IN USA (DATE CODE) (SEQ FT) (PRINT EVERY 2 FT)	16	Black, White	2	Gray
C4197A.30.10M	18/2C STRANDED SHIELDED CMG	CAROL (R) 18 AWG -- C4197A -- CSA C/US LL69381 CMG 105C OR CSA AWM I/II A/B 105C 600V FT4 -- E18621-8 "RU" AWM STYLE 2464 80C 300V -- ROHS -- MADE IN USA (date code) (sequential footage)	18	Black, Red	2	Gray
C4212A.30.10M	18/2C STRANDED TC SHIELDED CMG	CAROL(R) 18 AWG -- C4212A -- LL69381 CSA C/US CMG 105C OR CSA AWM I/II A/B 105C 600V FT4 -- E18621-8 RU AWM STYLE 2464 80C 300V -- ROHS CE -- MADE IN USA (date code - MM/YY) (sequential footage)	18	Black, White	2	Gray
C4197A.30.10	18/2C STRANDED SHIELDED CMG	CAROL (R) 18 AWG -- C4197A -- CSA C/US LL69381 CMG 105C OR CSA AWM I/II A/B 105C 600V FT4 -- E18621-8 "RU" AWM STYLE 2464 80C 300V -- ROHS -- MADE IN USA (date code) (sequential footage)	18	Black, Red	2	Gray
C4212A.30.10	18/2C STRANDED TC SHIELDED CMG	CAROL(R) 18 AWG -- C4212A -- LL69381 CSA C/US CMG 105C OR CSA AWM I/II A/B 105C 600V FT4 -- E18621-8 RU AWM STYLE 2464 80C 300V -- ROHS CE -- MADE IN USA (date code - MM/YY) (sequential footage)	18	Black, Red	2	Gray
C4192A.30.10M	22/2C STRANDED SHIELDED CMG	CAROL (R) 22 AWG -- C4192A -- LL69381 CSA C/US CMG 105C OR CSA AWM I/II A/B 105C 600V FT4 -- E18621-8 ~RU~ AWM STYLE 2464 80C 300V - - ROHS CE -- MADE IN USA (DATE CODE) (SEQ FT) (PRINT EVERY 2 FT)	22	Black, Red	2	Gray
C4210A.30.10	22/2C STRANDED TC SHIELDED CMG	CAROL (R) 22 AWG -- C4210A -- CSA C/US LL69381 CMG 105C OR CSA AWM I/II A/B 105C 600V FT4 -- E18621-8 "RU" AWM STYLE 2464 80C 300V -- ROHS -- MADE IN USA (date code - MM/YY) (sequential footage)	22	Black, White	2	Gray
C4210A.30.10M	22/2C STRANDED TC SHIELDED CMG	NA	22	Black, White	2	Gray
C4192A.30.10	22/2C STRANDED SHIELDED CMG	CAROL (R) 22 AWG -- C4192A -- LL69381 CSA C/US CMG 105C OR CSA AWM I/II A/B 105C 600V FT4 -- E18621-8 ~RU~ AWM STYLE 2464 80C 300V - - ROHS CE -- MADE IN USA (DATE CODE) (SEQ FT) (PRINT EVERY 2 FT)	22	Black, Red	2	Gray
C4191A.21.10	24/2C STRANDED SHIELDED CMG	CAROL (R) 24 AWG--C4191A--CSA C/US LL69381 CMG 105C OR CSA AWM I/II A/B 105C 600V FT4 --- ~RU~ AWM STYLE 2464 80C 300V --- MADE IN USA (DATE CODE) (SEQUENTIAL FOOTAGE)	24	Black/Red	2	Gray

## APPLICATION PROPERTIES

Part number	Product name	Conductor resistance at operation temperature [mOhm/ft]	Nominal insulation thickness [inch]	Nominal outer diameter [inch]	Nominal operation capacitance [pF/ft]	Shield DC resistance [mOhm/ft]	Nominal insulation thickness [mm]	Nominal outer diameter [mm]
C4201A.30.10M	14/2C STRANDED SHIELDED CMG		0.015	0.28			0.38	6.88
C4199A.30.10	16/2C STRANDED SHIELDED CMG		0.012	0.23		16.9	0.3	5.82
C4199A.41.10	16/2C STRANDED SHIELDED CMG		0.012	0.23		16.9	0.3	5.82
C4199A.30.10M	16/2C STRANDED SHIELDED CMG		0.012	0.23			0.3	5.82
C4199A.41.10M	16/2C STRANDED SHIELDED CMG		0.012	0.23			0.3	5.82
C4213A.30.10	16/2C STRANDED TC SHIELDED CMG		0.012	0.23			0.3	5.82
C4213A.41.10	16/2C STRANDED TC SHIELDED CMG		0.012	0.23			0.3	5.82
C4199A.41.01M	16/2C STRANDED SHIELDED CMG		0.012	0.23			0.3	5.82
C4199A.41.01	16/2C STRANDED SHIELDED CMG		0.012	0.23			0.3	5.82
C4213A.30.10M	16/2C STRANDED TC SHIELDED CMG		0.012	0.23			0.3	5.82

## APPLICATION PROPERTIES

Part number	Product name	Conductor resistance at operation temperature [mOhm/ft]	Nominal insulation thickness [inch]	Nominal outer diameter [inch]	Nominal operation capacitance [pF/ft]	Shield DC resistance [mOhm/ft]	Nominal insulation thickness [mm]	Nominal outer diameter [mm]
C4213A.41.10M	16/2C STRANDED TC SHIELDED CMG		0.012	0.23			0.3	5.82
C4197A.30.10M	18/2C STRANDED SHIELDED CMG		0.012	0.205			0.3	5.21
C4212A.30.10M	18/2C STRANDED TC SHIELDED CMG		0.012	0.21			0.3	5.2
C4197A.30.10	18/2C STRANDED SHIELDED CMG		0.012	0.205			0.3	5.21
C4212A.30.10	18/2C STRANDED TC SHIELDED CMG		0.012	0.21			0.3	5.2
C4192A.30.10M	22/2C STRANDED SHIELDED CMG		0.011	0.18			0.28	4.34
C4210A.30.10	22/2C STRANDED TC SHIELDED CMG		0.011	0.18			0.28	4.34
C4210A.30.10M	22/2C STRANDED TC SHIELDED CMG		0.011	0.18			0.28	4.34
C4192A.30.10	22/2C STRANDED SHIELDED CMG		0.011	0.18			0.28	4.34
C4191A.21.10	24/2C STRANDED SHIELDED CMG		0.011	0.16		16.5	0.28	4.06

## PRODUCT DETAILS

SPEC number	Part number	Product name	Country of origin	Distribution type	Stock item	Net weight	Weight unit
	C4201A.30.10M	14/2C STRANDED SHIELDED CMG	US	Distribution products	MTO	6	LBS
	C4199A.30.10	16/2C STRANDED SHIELDED CMG	US	Distribution products	MTO	34	LBS
	C4199A.41.10	16/2C STRANDED SHIELDED CMG	US	Distribution products	MTO	36	LBS
	C4199A.30.10M	16/2C STRANDED SHIELDED CMG	US	Distribution products	MTS	15	LBS
	C4199A.41.10M	16/2C STRANDED SHIELDED CMG	US	Distribution products	MTO	1	LBS
	C4213A.30.10	16/2C STRANDED TC SHIELDED CMG	US	Distribution products	MTS	34	LBS
	C4213A.41.10	16/2C STRANDED TC SHIELDED CMG	US	Distribution products	MTO	1	LBS
	C4199A.41.01M	16/2C STRANDED SHIELDED CMG	US	Distribution products	MTO	49	LBS
	C4199A.41.01	16/2C STRANDED SHIELDED CMG	US	Distribution products	MTO	36	LBS
	C4213A.30.10M	16/2C STRANDED TC SHIELDED CMG	US	Distribution products	MTS	15	LBS

## PRODUCT DETAILS

SPEC number	Part number	Product name	Country of origin	Distribution type	Stock item	Net weight	Weight unit
	C4213A.41.10M	16/2C STRANDED TC SHIELDED CMG	US	Distribution products	MTO	15	LBS
	C4197A.30.10M	18/2C STRANDED SHIELDED CMG	US	Distribution products	MTS	12	LBS
	C4212A.30.10M	18/2C STRANDED TC SHIELDED CMG	US	Distribution products	MTS	12	LBS
	C4197A.30.10	18/2C STRANDED SHIELDED CMG	US	Distribution products	MTO	26	LBS
	C4212A.30.10	18/2C STRANDED TC SHIELDED CMG	US	Distribution products	MTO	26	LBS
	C4192A.30.10M	22/2C STRANDED SHIELDED CMG	US	Distribution products	MTS	8	LBS
	C4210A.30.10	22/2C STRANDED TC SHIELDED CMG	US	Distribution products	MTO	17	LBS
	C4210A.30.10M	22/2C STRANDED TC SHIELDED CMG	US	Distribution products	MTO	8	LBS
	C4192A.30.10	22/2C STRANDED SHIELDED CMG	US	Distribution products	MTS	17	LBS
	C4191A.21.10	24/2C STRANDED SHIELDED CMG	US	Distribution products	MTS	16	LBS

## PRODUCT PACKAGING

Part number	Product name	Packaging unit	Packaging length	Packaging width	Packaging height	Put up
C4201A.30.10M	14/2C STRANDED SHIELDED CMG	FOOT	0	0	0	1000 FT Pull-Pac
C4199A.30.10	16/2C STRANDED SHIELDED CMG	FOOT	99	99	16	1000 FT Pull-Pac
C4199A.41.10	16/2C STRANDED SHIELDED CMG	FOOT	12	12	7	1000 FT Reel
C4199A.30.10M	16/2C STRANDED SHIELDED CMG	FOOT	15	9	15	1000 FT Pull-Pac
C4199A.41.10M	16/2C STRANDED SHIELDED CMG	FOOT	22	20	1	1000 FT Reel
C4213A.30.10	16/2C STRANDED TC SHIELDED CMG	FOOT	99	99	16	1000 FT Pull-Pac
C4213A.41.10	16/2C STRANDED TC SHIELDED CMG	FOOT	99	99	99	1000 FT Reel
C4199A.41.01M	16/2C STRANDED SHIELDED CMG	FOOT	16	10	16	1000 FT Reel
C4199A.41.01	16/2C STRANDED SHIELDED CMG	FOOT	12	12	7	1000 FT Reel
C4213A.30.10M	16/2C STRANDED TC SHIELDED CMG	FOOT	15	9	15	1000 FT Pull-Pac



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Part number	Product name	Packaging unit	Packaging length	Packaging width	Packaging height	Put up
C4213A.41.10M	16/2C STRANDED TC SHIELDED CMG	FOOT	22	20	1	1000 FT Reel
C4197A.30.10M	18/2C STRANDED SHIELDED CMG	FOOT	15	9	15	1000 FT Pull-Pac
C4212A.30.10M	18/2C STRANDED TC SHIELDED CMG	FOOT	15	9	15	1000 FT Pull-Pac
C4197A.30.10	18/2C STRANDED SHIELDED CMG	FOOT	16	10	16	1000 FT Pull-Pac
C4212A.30.10	18/2C STRANDED TC SHIELDED CMG	FOOT	99	99	99	1000 FT Pull-Pac
C4192A.30.10M	22/2C STRANDED SHIELDED CMG	FOOT	13	8	13	1000 FT Pull-Pac
C4210A.30.10	22/2C STRANDED TC SHIELDED CMG	FOOT	99	99	99	1000 FT Pull-Pac
C4210A.30.10M	22/2C STRANDED TC SHIELDED CMG	FOOT	0	0	0	1000 FT Pull-Pac
C4192A.30.10	22/2C STRANDED SHIELDED CMG	FOOT	99	99	99	1000 FT Pull-Pac
C4191A.21.10	24/2C STRANDED SHIELDED CMG	FOOT	11	11	7	1000 FT Spool