

7423A Multi-Conductor - 600V FCC Control Cables for Moderate Flexing

**Description:**

16 AWG stranded (26x30) bare copper conductors, PVC insulation, unshielded, oil- and abrasion-resistant PVC jacket.

Physical Characteristics (Overall)**Conductor**

AWG:

# Conductors	AWG	Stranding	Conductor Material
4	16	26x30	BC - Bare Copper

Insulation

Insulation Material:

Insulation Material	Wall Thickness (in.)
PVC - Polyvinyl Chloride	.022

Insulation Resistance:

6.1 Megaohms minimum @ 1000 ft.

Outer Shield

Outer Shield Material:

Outer Shield Material
Unshielded

Outer Jacket

Outer Jacket Material:

Outer Jacket Material	Nom. Wall Thickness (in.)
PVC - Polyvinyl Chloride	.040

Overall Cabling

Overall Cabling Color Code Chart:

Number	Color
1	Black printed #1
2	Black printed #2
3	Black printed #3
4	Green/Yellow

Overall Nominal Diameter:

0.330 in.

Mechanical Characteristics (Overall)

Operating Temperature Range:	-40°C To +90°C
Other Temperature Range:	Flexing: -5°C To +90°C
UL Temperature Rating:	90°C (UL AWM Style 2587)
Bulk Cable Weight:	70 lbs/1000 ft.
Max. Recommended Pulling Tension:	140 lbs.
Min. Bend Radius (Install)/Minor Axis:	3.300 in.
Min. Bend Radius (Continuous Flexing):	4.900 in.

Applicable Specifications and Agency Compliance (Overall)**Applicable Standards & Environmental Programs**

7423A Multi-Conductor - 600V FCC Control Cables for Moderate Flexing

AWM Specification:	UL Style 2587 (600 V 90°C)
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CSA Specification:	AWM I/II A/B
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EU Directive 2000/53/EC (ELV):	Yes
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EU Directive 2002/95/EC (RoHS):	Yes
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EU RoHS Compliance Date (mm/dd/yyyy):	10/01/2005
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EU Directive 2002/96/EC (WEEE):	Yes
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EU Directive 2003/11/EC (BFR):	Yes
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CA Prop 65 (CJ for Wire & Cable):	Yes
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MII Order #39 (China RoHS):	Yes
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Flame Test

UL Flame Test:	VW-1
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CSA Flame Test:	FT1
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Suitability

Oil Resistance:	Yes
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Plenum/Non-Plenum

Plenum (Y/N):	No
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Electrical Characteristics (Overall)

Nom. Conductor DC Resistance:

DCR @ 20°C (Ohm/1000 ft)

4.0

Max. Operating Voltage - UL:

Voltage

600 V RMS (UL AWM Style 2587)

Put Ups and Colors:

Item #	Putup	Ship Weight	Color	Notes	Item Desc
7423A 0081000	1,000 FT	80.000 LB	GRAY	C Z	4C 16 26/30 BC PVC,PVC
7423A 008250	250 FT	24.000 LB	GRAY	C Z	4C 16 26/30 BC PVC,PVC
7423A 008500	500 FT	41.000 LB	GRAY	C Z	4C 16 26/30 BC PVC,PVC

Notes:

C = CRATE REEL PUT-UP.

Z = FINAL PUT-UP LENGTH MAY VARY (+ OR -) 10% FOR SPOOLS OR REELS AND(+ OR -) 5% FOR UNREEL CARTONS FROM LENGTH SHOWN.

Belden Infinity® Flexible Automation Cable

Overview and Application Guide

Belden Infinity is a complete line of control, data, video, and power cables specifically designed to handle the rigorous speeds and near-constant motion encountered in automated equipment such as robots, pick and place machines, automatic handling systems, multi-axis machine tools, and conveyor systems.

When the application demands highly flexible cables offering exceptional cable life and performance, specify Belden Infinity.

Belden Infinity Means More Performance And Longer Life

Reduced Cable Memory — Belden Infinity's unique design and neutralized cabling, results in cables that are relaxed, with almost no memory.

Greater Flex Life — Belden Infinity cables offer superior flexibility and are able to handle the vigorous motions and high speeds encountered in automated equipment.

Greater System Uptime — Belden Infinity cables combine specialized manufacturing techniques with precision copper stranding and rugged insulation and jacketing compounds to maximize flex life and reliability.

No Talc Problems — Unlike the potentially harmful talc used in other cables, Belden's non-toxic, non-irritating slipper compound facilitates flexing and also complies with OSHA regulations. It's safer for employees and operators and is less likely to contaminate solder joints or mechanical compounds.

CE Conformity — All Belden Infinity cables are CE marked per the Conformité Européenne low voltage directive, allowing trade of product in Europe.

Custom Designs — Other designs available upon request.

Product Series Descriptions

- **C-TC+** — The C-TC+ series is designed for C-track and extreme flex applications up to 9 million flex cycles*. This series utilizes super fine stranding and some of the tightest lay lengths allowed by UL, providing outstanding flex life.
- **FCC** — The FCC series is a cost effective alternative for C-track and moderate flexing applications rated up to 1 million flex cycles*.
- **Flex Data Cables** — Belden Infinity Flex Data cables are designed for industrial applications where precise data transmission is combined with high-flexing. These cables are ideal for effective operation of computer controlled equipment or other automated production processes, even in harsh environments.
- **Flex Vision** — Belden Infinity Vision cables are continuous flex video cables designed for machine vision applications. They are ideal for motion-controlled video and with inspection and measurement equipment.

Application Guide

Belden Infinity Series	C-Track Systems	Multi-Axis Machining	Robotics	Automated Assembly Systems	Material Handling Systems	Pick & Place Systems	Automated Storage Retrieval	Gantry Systems	Machine Vision	Motion-Controlled Video	Inspection & Measure Equip.	Festooling	Servo	Power
FCC Oil & abrasion resistant 600V UL & CSA rated Life Expectancy: Over 1 million flex cycles*	●	●		●	●	●	●	●			●	●	●	●
C-TC+ Oil & abrasion resistant 600V UL & CSA rated Life Expectancy: Over 9 million flex cycles*	★	★	●	★	★	★	★	★			★	★	★	★
DATA Oil & abrasion resistant 300V UL & CSA rated Life Expectancy: Over 1 million flex cycles*	●	●	●	●	●	●	●	●			●	●		
VISION 30V UL & CSA rated Life Expectancy: Over 1 million flex cycles*	●	●		●	●	●	●	●	★	+	+	●		

● Good + Better ★ Best

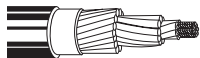
*Based on proper installation techniques in a C-track cable guide.

Belden Infinity® Flexible Automation Cable

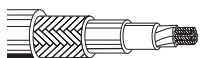
600V FCC Control Cables for Moderate Flexing

(1 Million Flex Cycles*)

Description	Part No.	No. of Cond.	Standard Lengths		Standard Unit Weight		Insulation Thickness		Jacket Thickness		Nominal OD		Maximum Pull Tension	
			Ft.	m	Lbs.	kg	Inch	mm	Inch	mm	Inch	mm	Lbs.	N

16 AWG Stranded (26x30) Bare Copper Conductors • Unshielded • Color Code: Black w/numbers + Green/Yellow ground**PVC Insulation • Gray Oil- and Abrasion-resistant PVC Jacket**UL AWM Style 2587 (600V 90°C)
CSA AWM I/II A/B

7421A	2	250 †	76.2	15.0	6.8	.022	.56	.040	1.02	.290	7.37	70	311
		500 †	152.4	35.0	15.9								
		1000 †	304.8	68.0	30.9								
7422A	3	250 †	76.2	18.8	8.5	.022	.56	.040	1.02	.305	7.75	105	467
		500 †	152.4	34.5	15.7								
		1000 †	304.8	65.0	29.5								
7423A	4	250 †	76.2	22.5	10.2	.022	.56	.040	1.02	.330	8.38	140	623
		500 †	152.4	41.5	18.8								
		1000 †	304.8	80.0	36.3								
7424A	5	250 †	76.2	27.5	12.5	.022	.56	.040	1.02	.360	9.14	175	778
		500 †	152.4	49.5	22.5								
		1000 †	304.8	96.0	43.6								
7425A	7	250 †	76.2	35.0	15.9	.022	.56	.040	1.02	.425	10.80	236	1050
		500 †	152.4	64.0	29.1								
		1000 †	304.8	129.0	58.6								
7426A	9	250 †	76.2	50.5	22.9	.022	.56	.060	1.52	.540	13.72	304	1352
		500 †	152.4	95.0	43.1								
		1000 †	304.8	190.0	86.3								
7427A	12	250 †	76.2	55.3	25.1	.022	.56	.065	1.65	.565	14.35	405	1801
		500 †	152.4	114.0	51.8								
		1000 †	304.8	220.0	100.0								
7428A	18	250 †	76.2	79.0	35.9	.022	.56	.065	1.65	.650	16.51	608	2705
		500 †	152.4	158.0	71.7								
7429A	25	250 †	76.2	109.0	49.5	.022	.56	.060	1.52	.750	19.05	875	3892
		500 †	152.4	218.5	99.2								
7430A	34	250 †	76.2	171.3	77.7	.022	.56	.075	1.91	.878	22.30	1145	5093

Temp Rating: -40° to 90°C
(-5° to 90°C flexing)**16 AWG** Stranded (26x30) BC Conductors • TC Braid Shield (85% Coverage) • Color Code: Black w/numbers + Green/Yellow ground**PVC Insulation • PVC Inner Jacket • Gray Oil- and Abrasion-resistant PVC Outer Jacket**UL AWM Style 2587 (600V 90°C)
CSA AWM I/II A/B

7423AS	4	250 †	76.2	36.0	16.3	.022	.56	Inner: .025	.64	.400	10.16	140	623
		500 †	152.4	68.0	30.9			Outer: .035	.89				
7427AS	12	250 †	76.2	81.8	37.1	.022	.56	Inner: .025	.64	.630	16.00	420	1868
		500 †	152.4	164.5	74.7			Outer: .060	1.52				
7428AS	18	250 †	76.2	119.0	54.1	.022	.56	Inner: .025	.64	.740	18.80	630	2802
		500 †	152.4	238.5	108.3			Outer: .070	1.78				

Temp Rating: -40° to 90°C
(-5° to 90°C flexing)

BC = Bare Copper • TC = Tinned Copper

*Based on proper installation techniques in a C-track cable guide.

†Final put-up length may vary ±10% from length shown.