

Xtra-Guard® Performance Cable



Xtra-Guard® Flex Cable

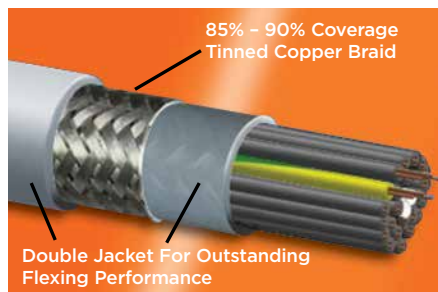
Flexible/Flexing



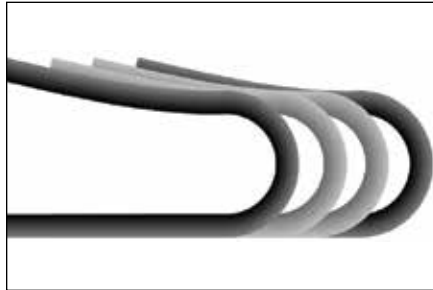
Xtra-Guard cables are available in a variety of configurations to allow exactly the right cable to be selected for your flexing application. There are four common types of cable flexing movements to consider when designing and applying a high-flexing cable and they are:

- **Rolling flex**, such as C-track or Cartesian motions
- **Bending flex** or “tic-toc,” such as hinged panels
- **Torsional flex**, such as twisting
- **Variable/random motion flex**

Different cable construction methods and materials are used depending on the cable flexing movement. For example: torsional cables will have a different lay length and cabling from a rolling flex cable. The performance of a cable is evaluated using physical test data and statistical analysis to produce what is known as “flex life” and overall system reliability.

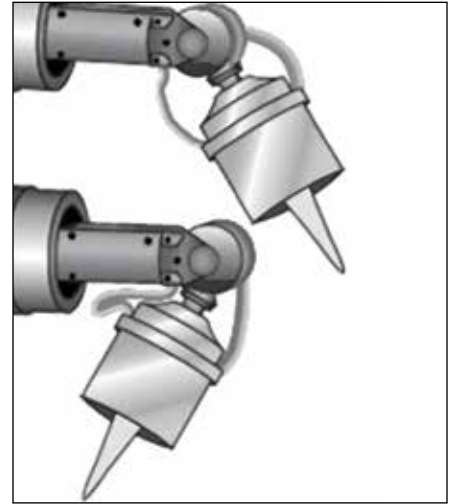


Our high-flex shielding options include a double-jacket configuration with 85% braid coverage to achieve high shielding effectiveness while maintaining the desired flexibility. For torsional flex applications, we offer spiral wound shielding with 90% coverage.



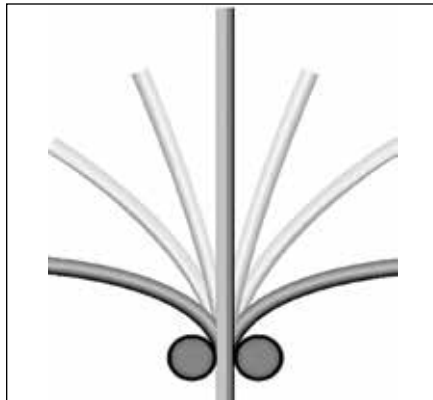
Rolling Flex

- Xtra-Guard Continuous Flex Control Cable (600 V)
- Xtra-Guard Continuous Flex Data Cable (300 V)



Variable/Random Flex

- Xtra-Guard Standard Flex Cable (600 V)
- Xtra-Guard Continuous Flex Control Cable (600 V)
- Xtra-Guard Continuous Flex Data Cable (300 V)

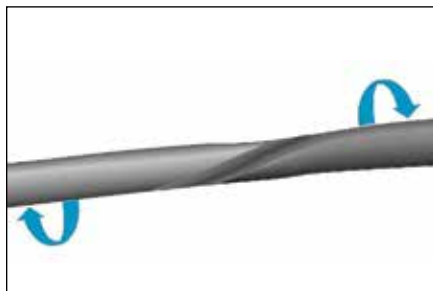


Applications

- Cartesian robots
- Articulated multi-axis robots
- Automation networking
- Machine tools
- Automotive assembly equipment
- Conveyor systems
- Control panels
- Flex and static track
- Transfer shuttles
- Sensor/actuator-to-controller connections
- Material-handling equipment

Bending Flex

- Xtra-Guard Standard Flex Cable (600 V)
- Xtra-Guard Continuous Flex Control Cable (600 V)
- Xtra-Guard Continuous Flex Data Cable (300 V)

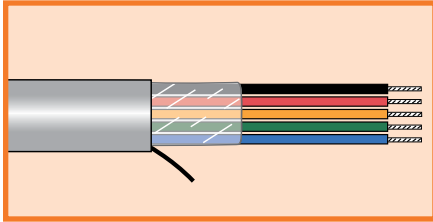


Torsion Flex

- Xtra-Guard Torsional Flex Cable (600 V)

Xtra-Guard® Continuous Flex Data

C-Track or High Flexing Applications Up to 6 Million
Flex Life Cycles 300 V Unshielded, Multiconductor



UL CM
UL AWM 2661
CSA AWM I/II A/B FT4
CSA CMG
CE

Operating Temperature

- +5°C to +105°C (flexing)
- -10°C to +105°C (stationary)

Conductor Color Coding

- Chart D
- Jacket color: slate

Materials

- Finely stranded tinned copper conductors
- Lubricated semi-rigid PVC insulation
- Oil-resistant PVC jacket

Availability

100 ft (30.5 m)
500 ft (152 m)
1000 ft (305 m)
Bulk, cut to length

FIT® Tubing Recommendations

- FIT-FLEX: Highly flexible, cross-linked silicone rubber
- FIT-650: Chemical/temperature resistant cross-linked fluoroelastomer



28 AWG (0.09 mm²)

Stranding: 7/36 (7 x 0.13 mm)
Insulation thickness: 0.010 (0.25 mm)

Part No.	Conductors	Nominal Diameter		Jacket Thickness	
		Inch	mm	Inch	mm
86002	2	0.154	3.91	0.040	1.02
86003	3	0.160	4.06	0.040	1.02
86004	4	0.170	4.32	0.040	1.02
86005	5	0.180	4.57	0.040	1.02
86007	7	0.203	5.16	0.040	1.02
86012	12	0.263	6.68	0.040	1.02
86018	18	0.262	6.65	0.040	1.02
86025	25	0.309	7.85	0.040	1.02

26 AWG (0.14 mm²)

Stranding: 7/34 (7 x 0.16 mm)
Insulation thickness: 0.010 (0.25 mm)

Part No.	Conductors	Nominal Diameter		Jacket Thickness	
		Inch	mm	Inch	mm
86102	2	0.162	4.11	0.040	1.02
86103	3	0.168	4.27	0.040	1.02
86104	4	0.179	4.55	0.040	1.02
86105	5	0.191	4.85	0.040	1.02
86107	7	0.217	5.51	0.040	1.02
86112	12	0.283	7.19	0.040	1.02
86118	18	0.282	7.16	0.040	1.02
86125	25	0.335	8.51	0.040	1.02

24 AWG (0.20 mm²)

Stranding: 10/34 (10 x 0.16 mm)
Insulation thickness: 0.010 (0.25 mm)

Part No.	Conductors	Nominal Diameter		Jacket Thickness	
		Inch	mm	Inch	mm
86202	2	0.172	4.37	0.040	1.02
86203	3	0.179	4.55	0.040	1.02
86204	4	0.191	4.85	0.040	1.02
86205	5	0.205	5.21	0.040	1.02
86207	7	0.233	5.92	0.040	1.02
86212	12	0.307	7.80	0.040	1.02
86218	18	0.307	7.80	0.040	1.02
86225	25	0.376	9.55	0.045	1.14

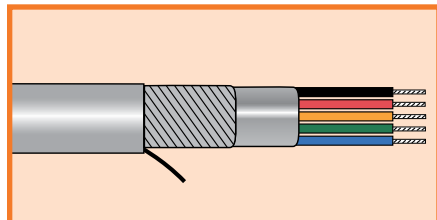
22 AWG (0.38 mm²)

Stranding: 19/34 (19 x 0.16 mm)
Insulation thickness: 0.010 (0.25 mm)

Part No.	Conductors	Nominal Diameter		Jacket Thickness	
		Inch	mm	Inch	mm
86302	2	0.188	4.78	0.040	1.02
86303	3	0.197	5.00	0.040	1.02
86304	4	0.211	5.36	0.040	1.02
86305	5	0.227	5.77	0.040	1.02
86307	7	0.260	6.60	0.040	1.02
86312	12	0.347	8.81	0.040	1.02
86318	18	0.347	8.81	0.040	1.02
86325	25	0.426	10.82	0.045	1.14

Xtra-Guard® Continuous Flex Data

C-Track or High Flexing Applications Up to 6 Million
Flex Life Cycles 300 V Foil/Spiral Shield, Multiconductor



UL CM
UL AWM 2661
CSA AWM I/II A/B FT4
CSA CMG
CE

Operating Temperature

- +5°C to 105°C (flexing)
- -10°C to 105°C (stationary)

Conductor Color Coding

- Chart D
- Jacket color: slate

Materials

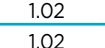
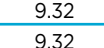
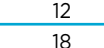
- Finely stranded tinned copper conductors
- Lubricated semi-rigid PVC insulation
- Foil + spiral shield
Aluminum/polyester foil shield, 25% overlap min.
Foil facing outward
Tinned copper spiral shield, 90% coverage
- Oil-resistant PVC jacket

Availability

100 ft (30.5 m)
500 ft (152 m)
1000 ft (305 m)
Bulk, cut to length

FIT® Tubing Recommendations

- FIT-FLEX: Highly flexible, cross-linked silicone rubber
- FIT-650: Chemical/temperature resistant cross-linked fluoroelastomer



28 AWG (0.09 mm²)

Stranding: 7/36 (7 x 0.13 mm)
Insulation thickness: 0.010 (0.25 mm)

Part No.	Conductors	Nominal Diameter		Jacket Thickness	
		Inch	mm	Inch	mm
86002CY	2	0.174	4.42	0.040	1.02
86003CY	3	0.180	4.57	0.040	1.02
86004CY	4	0.190	4.83	0.040	1.02
86005CY	5	0.200	5.08	0.040	1.02
86007CY	7	0.223	5.66	0.040	1.02
86012CY	12	0.283	7.19	0.040	1.02
86018CY	18	0.282	7.16	0.040	1.02
86025CY	25	0.329	8.36	0.040	1.02

26 AWG (0.14 mm²)

Stranding: 7/34 (7 x 0.16 mm)
Insulation thickness: 0.010 (0.25 mm)

Part No.	Conductors	Nominal Diameter		Jacket Thickness	
		Inch	mm	Inch	mm
86102CY	2	0.182	4.62	0.040	1.02
86103CY	3	0.188	4.78	0.040	1.02
86104CY	4	0.199	5.05	0.040	1.02
86105CY	5	0.211	5.36	0.040	1.02
86107CY	7	0.237	6.02	0.040	1.02
86112CY	12	0.303	7.70	0.040	1.02
86118CY	18	0.302	7.67	0.040	1.02
86125CY	25	0.355	9.02	0.040	1.02

24 AWG (0.20 mm²)

Stranding: 10/34 (10 x 0.16 mm)
Insulation thickness: 0.010 (0.25 mm)

Part No.	Conductors	Nominal Diameter		Jacket Thickness	
		Inch	mm	Inch	mm
86202CY	2	0.192	4.88	0.040	1.02
86203CY	3	0.199	5.05	0.040	1.02
86204CY	4	0.211	5.36	0.040	1.02
86205CY	5	0.225	5.72	0.040	1.02
86207CY	7	0.253	6.43	0.040	1.02
86212CY	12	0.327	8.31	0.040	1.02
86218CY	18	0.327	8.31	0.040	1.02
86225CY	25	0.396	10.06	0.045	1.14

22 AWG (0.38 mm²)

Stranding: 19/34 (19 x 0.16 mm)
Insulation thickness: 0.010 (0.25 mm)

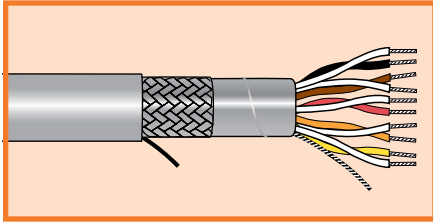
Part No.	Conductors	Nominal Diameter		Jacket Thickness	
		Inch	mm	Inch	mm
86302CY	2	0.208	5.28	0.040	1.02
86303CY	3	0.217	5.51	0.040	1.02
86304CY	4	0.231	5.87	0.040	1.02
86305CY	5	0.247	6.27	0.040	1.02
86307CY	7	0.280	7.11	0.040	1.02
86312CY	12	0.367	9.32	0.040	1.02
86318CY	18	0.367	9.32	0.040	1.02
86325CY	25	0.446	11.33	0.045	1.14

Alpha Wire | www.alphawire.com | 1-800-52 ALPHA

Specifications subject to change. For complete specifications and availability, visit www.alphawire.com.

Xtra-Guard® Continuous Flex Data

C-Track or High Flexing Applications Up to 6 Million
Flex Life Cycles 300 V Foil + Braid Shield, Multipair



UL CM
UL AWM 2661
CSA AWM I/II A/B FT4
CSA CMG
CE

Operating Temperature

- +5°C to +105°C (flexing)
- -10°C to +105°C (stationary)

Conductor Color Coding

- Chart A
- Jacket color: slate

Materials

- Finely stranded tinned copper conductors
- Lubricated semi-rigid PVC insulation
- Foil + braid shield
Aluminum/polyester foil shield, with 25% overlap and tinned copper drain wire
- Tinned copper braid with 85% coverage
- Oil-resistant PVC jacket

Availability

100 ft (30.5 m)
500 ft (152 m)
1000 ft (305 m)
Bulk, cut to length

FIT® Tubing Recommendations

- FIT-FLEX: Highly flexible, cross-linked silicone rubber
- FIT-650: Chemical/temperature resistant cross-linked fluoroelastomer

28 AWG (0.09 mm²)

Stranding: 7/36 (7 x 0.13 mm)
Insulation thickness: 0.010 (0.25 mm)

Part No.	Pairs	Nominal Diameter		Jacket Thickness	
		Inch	mm	Inch	mm
86401CY	1	0.186	4.72	0.040	1.02
86402CY	2	0.231	5.87	0.040	1.02
86403CY	3	0.240	6.10	0.040	1.02
86404CY	4	0.256	6.50	0.040	1.02
86405CY	5	0.274	6.96	0.040	1.02
86406CY	6	0.293	7.44	0.040	1.02
86408CY	8	0.331	8.41	0.040	1.02
86410CY	10	0.365	9.27	0.045	1.14
86414CY	14	0.381	9.68	0.045	1.14

26 AWG (0.14 mm²)

Stranding: 7/34 (7 x 0.16 mm)
Insulation thickness: 0.010 (0.25 mm)

Part No.	Pairs	Nominal Diameter		Jacket Thickness	
		Inch	mm	Inch	mm
86501CY	1	0.194	4.93	0.040	1.02
86502CY	2	0.244	6.20	0.040	1.02
86503CY	3	0.254	6.45	0.040	1.02
86504CY	4	0.272	6.91	0.040	1.02
86505CY	5	0.292	7.42	0.040	1.02
86506CY	6	0.313	7.95	0.040	1.02
86508CY	8	0.355	9.02	0.040	1.02
86510CY	10	0.392	9.96	0.045	1.14
86514CY	14	0.426	10.82	0.053	1.35

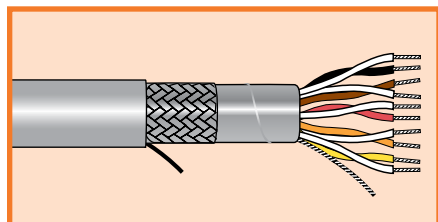


Alpha Wire | www.alphawire.com | 1-800-52 ALPHA

Specifications subject to change. For complete specifications and availability, visit www.alphawire.com.

Xtra-Guard® Continuous Flex Data

C-Track or High Flexing Applications Up to 6 Million
Flex Life Cycles
300 V Foil + Braid Shield, Multipair



UL CM
UL AWM 2661
CSA AWM I/II A/B FT4
CSA CMG
CE

Operating Temperature

- +5°C to +105°C (flexing)
- -10°C to +105°C (stationary)

Conductor Color Coding

- Chart A
- Jacket color: slate

Materials

- Finely stranded tinned copper conductors
- Lubricated semi-rigid PVC insulation
- Foil + braid shield
Aluminum/polyester foil shield, with 25% overlap and tinned copper drain wire
Tinned copper braid with 85% coverage
- Oil-resistant PVC jacket

Availability

100 ft (30.5 m)
500 ft (152 m)
1000 ft (305 m)
Bulk, cut to length

FIT® Tubing Recommendations

- FIT-FLEX: Highly flexible, cross-linked silicone rubber
- FIT-650: Chemical/temperature resistant cross-linked fluoroelastomer

24 AWG (0.20 mm²)

Stranding: 10/34 (10 x 0.16 mm)
Insulation thickness: 0.010 (0.25 mm)

Part No.	Pairs	Nominal Diameter		Jacket Thickness	
		Inch	mm	Inch	mm
86601CY	1	0.204	5.18	0.040	1.02
86602CY	2	0.260	6.60	0.040	1.02
86603CY	3	0.272	6.91	0.040	1.02
86604CY	4	0.292	7.42	0.040	1.02
86605CY	5	0.314	7.98	0.040	1.02
86606CY	6	0.337	8.56	0.040	1.02
86608CY	8	0.385	9.78	0.040	1.02
86610CY	10	0.427	10.85	0.045	1.14
86614CY	14	0.463	11.76	0.053	1.35

22 AWG (0.38 mm²)

Stranding: 19/34 (19 x 0.16 mm)
Insulation thickness: 0.010 (0.25 mm)

Part No.	Pairs	Nominal Diameter		Jacket Thickness	
		Inch	mm	Inch	mm
86701CY	1	0.220	5.59	0.040	1.02
86702CY	2	0.287	7.29	0.040	1.02
86703CY	3	0.301	7.65	0.040	1.02
86704CY	4	0.324	8.23	0.040	1.02
86705CY	5	0.350	8.89	0.040	1.02
86706CY	6	0.377	9.58	0.040	1.02
86708CY	8	0.443	11.25	0.045	1.14
86710CY	10	0.497	12.62	0.053	1.35
86714CY	14	0.527	13.39	0.053	1.35

