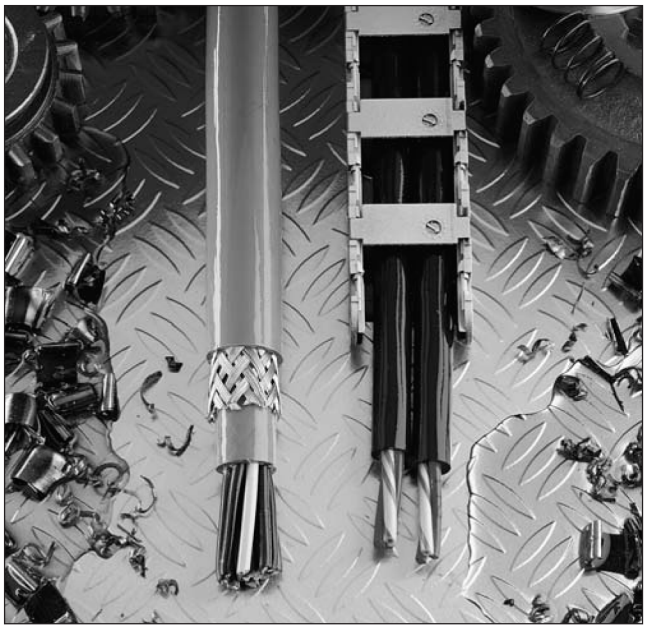
XTRA•GUARD® Flexible Cables

PERMANENT SOLUTIONS FOR CRITICAL FLEXING APPLICATIONS

Manufactured In The U.S.A.

Choose **XTRA•GUARD® Flexible Cables** to deliver high speed dependability along with the flexibility needed in cases of difficult and/or complex cable positioning. **XTRA•GUARD® Flexible Cables** feature unsurpassed flame and moisture resistance, outstanding oil and chemical resistance, premium grade PVC and Polyurethane jackets. **XTRA•GUARD® Flexible Cables** are UL Recognized or Listed, CSA certified, tested to MIL-C-13777G for flex life and are CE marked. Product performance is verified with certified test reports. Call or visit our web site at www.alphawire.com for up-to-date cable test information.

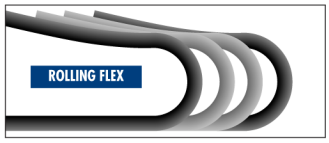


COMMON FLEXING APPLICATIONS

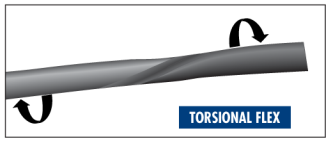
There are four common types of cable flexing movements to consider when designing and applying a high-flex cable. They are rolling flex, bending flex or "tic-toc", torsional flex and variable/random motion flex (see illustrations at right).

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 method than a rolling flex cable. Cable performance is evaluated using physical test data and statistical analysis to produce flex life and overall system reliability.

An understanding of the cables' application will allow the designer to choose the correct cable and reliably predict the products' lifetime and performance.

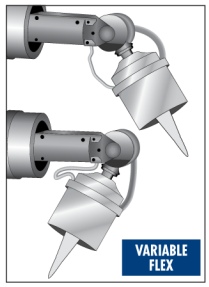


For ROLLING FLEX APPLICATIONS SPECIFY AND CHOOSE:
XTRA•GUARD® High-Flex Control Cable
XTRA•GUARD® High-Flex Mini Diameter Data Cable



For TORSIONAL FLEX APPLICATIONS SPECIFY AND CHOOSE:
XTRA•GUARD® High-Flex Torsion Robotic Cable

For BENDING FLEX APPLICATIONS SPECIFY AND CHOOSE:
XTRA•GUARD® Standard-Flex Control Cable
XTRA•GUARD® High-Flex Control Cable
XTRA•GUARD® High-Flex Mini Diameter Data Cable



For VARIABLE FLEX APPLICATIONS SPECIFY AND CHOOSE:
XTRA•GUARD® Standard-Flex Control Cable
XTRA•GUARD® High-Flex Control Cable
XTRA•GUARD® High-Flex Mini Diameter Data Cable

APPLICATIONS

- Applications Requiring Increased Flexibility
- Machine Tools
- CNC Machine Centers
- Data Processing Equipment
- Automation Equipment
- Material Handling Equipment
- Applications Requiring Continuous Flexing
- Robotics
- Installation in Cable Track
- Assembly Lines
- Industrial Electronic Processing Equipment
- DataComm Connections
- Connecting Sensors & Actuators to Controllers
- Sensor & I/O Interconnects
- Automation Networking
- PLC, Microprocessor & Computer Interconnects
- Twisting & Random Robotic Flexing Applications
- Power Supply to Welding, Painting & Articulating Robots

XTRA•GUARD® Flexible Cables

HIGH-FLEX CONTROL CABLE

CONTINUOUS FLEXING, OIL RESISTANT, MULTICONDUCTOR, UNSHIELDED

UL AWM STYLE 2587
CSA AWM II A/B FT1
RoHS COMPLIANT
600 VOLT

CHOOSE XTRA•GUARD HIGH-FLEX CONTROL CABLES FOR:

- Extra Flexibility and Durability for Continuous Motion
- Extended Cycle Life 13.8 Million (Test Report Available)
- Outstanding Oil and Chemical Resistance
- Jacket Meets VDE 0472, Section 803 Oil Test
- UL Recognized **and** CSA Certified, CE Marked

XTRA•GUARD HIGH-FLEX CONTROL CABLE APPLICATIONS:

- Applications Requiring Continuous Flexing
- Robotics
- Installation in Cable Track
- Data Processing Equipment
- Assembly Lines
- Automation Equipment
- Material Handling Equipment

CHARACTERISTICS

OPERATING TEMPERATURE:

- –5°C to 90°C (Flexing)
- –40°C to 90°C (Stationary)

VOLTAGE RATING:

- 600 Volt

COLOR DESCRIPTION:

- Color Code: Numerically Numbered (Alternate and Inverted) Red Conductors with One Green/Yellow Conductor on Outside Layer
- Jacket Color: Black

PRODUCT DESCRIPTION:

- Conductor: Super Finely Stranded Bare Copper
- Insulation: Lubricated PVC
- Fillers: Non-Wicking, Solid PVC Rod
- Wrap: Non-Wicking Fabric
- Jacket: Oil Resistant PVC

SPECIFICATIONS

- **Bend Radius:** 8X Cable Diameter
- UL AWM Style 2587
- CSA AWM II A/B FT1
- Jacket Meets VDE 0472, Section 803 Oil Test
- Passes MIL-C-13777G Flexlife Test
- CE LVD-CD 73/23/EEC Modified by CD 93/68/EEC
- RoHS Compliant

Recognized Component — Underwriters Laboratories Inc.
Certified — Canadian Standards Association
CE
RoHS Compliant

AVAILABILITY

- **In Stock:** Bulk, Cut to Length

FIT® TUBING RECOMMENDATION

FIT® FLEX – Highly Flexible, Irradiated Silicone Rubber
(See Page 134 for Product Specifications)

FIT®-650 – Chemical and Temperature Resistant Irradiated Viton®
(See Page 132 for Product Specifications)

Viton® is a registered trademark of DuPont Dow Elastomers

20 AWG (0,5mm²), **65/38** (65/0,1mm), Insulation Thickness: **0.022"** (0,56mm)

Alpha Part No.	No. of Cond.	Jacket Thickness Inches	Jacket Thickness mm	Nominal Diameter Inches	Nominal Diameter mm
85003	**3**	0.035	0,89	0.266	6,8
85004	**4**	0.035	0,89	0.287	7,3
85005	**5**	0.035	0,89	0.319	8,1
85007	**7**	0.040	1,00	0.368	9,3
85012	**12**	0.045	1,10	0.454	11,5
85018	**18**	0.050	1,30	0.535	13,6
85025	**25**	0.065	1,70	0.666	16,9
85034	**34**	0.065	1,70	0.733	18,6

18 AWG (1,0mm²), **105/38** (105/0,1mm), Insulation Thickness: **0.022"** (0,56mm)

Alpha Part No.	No. of Cond.	Jacket Thickness Inches	Jacket Thickness mm	Nominal Diameter Inches	Nominal Diameter mm
85803	**3**	0.035	0,89	0.286	7,3
85804	**4**	0.035	0,89	0.310	7,9
85805	**5**	0.035	0,89	0.337	8,6
85807	**7**	0.045	1,10	0.407	10,3
85812	**12**	0.050	1,30	0.502	12,8
85815	**15**	0.050	1,30	0.553	14,0
85818	**18**	0.085	2,20	0.583	14,8
85825	**25**	0.085	2,20	0.722	18,3
85834	**34**	0.085	2,20	0.799	20,3

16 AWG (1,5mm²), **168/38** (168/0,1mm), Insulation Thickness: **0.022"** (0,56mm)

Alpha Part No.	No. of Cond.	Jacket Thickness Inches	Jacket Thickness mm	Nominal Diameter Inches	Nominal Diameter mm
85603	**3**	0.035	0,89	0.325	8,3
85604	**4**	0.035	0,89	0.354	9,0
85605	**5**	0.035	0,89	0.387	9,8
85607	**7**	0.040	1,00	0.456	11,6
85612	**12**	0.045	1,10	0.567	14,4
85618	**18**	0.045	1,10	0.662	16,8
85625	**25**	0.065	1,70	0.833	21,1
85634	**34**	0.065	1,70	0.924	23,5

14 AWG (2,50mm), **266/38** (266/0,10mm), Insulation Thickness: **0.022"** (0,56mm)

Alpha Part No.	No. of Cond.	Jacket Thickness Inches	Jacket Thickness mm	Nominal Diameter Inches	Nominal Diameter mm
85404	**4**	0.050	1,30	0.425	10,8
85407	**7**	0.070	1,80	0.571	14,5

12 AWG (4,00mm), **413/38** (413/0,10mm), Insulation Thickness: **0.022"** (0,56mm)

Alpha Part No.	No. of Cond.	Jacket Thickness Inches	Jacket Thickness mm	Nominal Diameter Inches	Nominal Diameter mm
85204	**4**	0.070	1,8	0.521	13,2
85207	**7**	0.100	2,5	0.699	17,8

10 AWG (6,0mm²), **658/38** (658/0,1mm), Insulation Thickness: **0.022"** (0,56mm)

Alpha Part No.	No. of Cond.	Jacket Thickness Inches	Jacket Thickness mm	Nominal Diameter Inches	Nominal Diameter mm
85104	**4**	0.070	1,80	0.581	14,8
85107	**7**	0.100	2,50	0.789	20,0