



## Introducing EIS's New Line of Continuous Flex Control Cables For use with Robotic Arms & Automation Equipment



At EIS Wire & Cable, our customers' needs for custom cables suitable for the most demanding application is at the forefront of our designs.

We design our custom continuous flex cables for use in industrial applications where continuous motion and flexing is of high importance and mission critical. Applications include; for use on Robotic Arms or Automation equipment that require movement.

Our extensive one year in-house testing has collected data in a variety of flex test methods and validating our cables for use in continuous flex application with specific ratings for applicable designs.

### **Available designs:**

Our cable designs are available with a variety of jacket materials, such as, PVC, TPE and TPU in both shielded and unshielded configurations and offer superior quality and optimum longevity of use, maximizing your equipment's up-time and minimizing your maintenance cost.

Basic design configurations offered in gauge sizes 24AWG – 18AWG with a minimum of 19 strands on the wire gauge selection. Also available in 300V and



600V rating and -30C to 105C temperature rating with agency approvals available for Tray cable, Communications, AWM in UL & CSA, as well as MSHA and PMSHA.

**Flex Testing Protocol:** The Automation Industry has recognized a series of test methodologies that ensure extended life expectancy in continuous motion industrial settings.

The flex test protocol commonly used for these types of cables include **Bend Radius Test** (Tic-Tock) and **Torsion Flex Test** (Twist-Bend). These test methods were designed to replicate the harsh mechanical stresses that cables would see in a robotic or motion application. Cable designs that can withstand these rigorous test methods are deemed suitable for rolling flex (C-Track), repetitive single point, and robotic applications.

### **EIS Wire & Cable - Cable Design Flex Ratings:**

#### **Bend Radius Test (Tic-Tock)**

Minimum .010" wall PVC or SRPVC primary insulation, PVC or TPE jacket, shielded and unshielded.

- 2-6 conductors – 10 million cycles rated
- 7-15 conductors – 2 million cycles rated

Minimum .010" wall PVC or SRPVC primary insulation, TPU jacket, shielded and unshielded

- 2-6 conductors – 2 million cycles rated

#### **Torsion Flex Test (Twist-Bend)**

Minimum .010" wall PVC or SRPVC primary insulation, PVC or TPE jacket, shielded and unshielded.

- 2-6 conductors – 20 million cycles rated
- 7-10 conductors – 10 million cycles rated