Avoiding common cabling pitfalls

Proper installation and maintenance of cabling systems will ensure system integrity, operational dependability, and longevity. The illustrations provided in this section display both correct and incorrect installations, to illustrate common cabling problems, and simple effective solutions for them.

Bend radius

Procuring commensurate bend radius allows the cable to absorb the impact of bending, with less tension, thereby, increasing its life cycle. Increasing bend radius can significantly increase the duration of the cable’s life and reduce costs. Allow bending radii of 5 times cable diameter for fixed and 10 times for flexing installations.

Cable bundling

When attaching single cables to equipment, or bundling several cables together, care must be taken that the cable ties do not pinch or deform the cable. Correct cable bundling enables movement without stress to the cable, which will translate into long lasting usage.

Figure 1: Recommended flexing installation.

Figure 2: Recommended fixed installation

Figure 3: Correct bundling.

Figure 4: Incorrect bundling.

NOTE: undo stress on cables due to over tightened bundling straps.
Cable Specifications

Cable Installation Guide

Cable installation for motion applications

When the connected cable is subjected to any motion between two points, the cable length should be adequate to prevent any undue stress on the cable or plugs. Cable loops and C-tracks are the solution to eliminate cable stress due to motion.

Figure 5: Cable and Coil Loop.

Figure 6: C-Track.

Figure 7: Closed Loop.
Stress Points

Implementing a sufficient stress loop from a connection point will reduce excessive wear and eliminate a common problem: stress points pictured below. Note the rugged overmolded body, which provides exceptional stress relief in conjunction with the correctly installed stress loop.

**Figure 8: Correct Stress Loop.**

**Figure 9: Incorrect Stress Loop.**

**Figure 10: Inside Cornering.**

**Figure 9: Outside Cornering.**

**NOTE:** the generous allowance for bending around and within corners.

**NOTE:** outside cornering is not recommended.

**NOTE:** the stress on housing and cable due to small cable loop.

**NOTE:** make allowances for sharp corners and extra stress to the cable and fastening points.