Official MAGNETIC SHIELD CORPORATION Document

INTER-8 Weave Cable vs. Conventional Twisted-pair Cable

Current-carrying conductors can be the cause, or be affected by, electromagnetic interference. Twisted pair cable has been widely used and is superior to parallel conductors, but is of limited effectiveness in reducing electromagnetic radiation. Radiating unwanted fields can cause EMI compliance issues in today's complex circuits. Correspondingly, twisted pair cable is limited in avoiding unwanted pickup of external H-fields (D.C. to 100 KHz).

INTER-8® weave cable provides substantial improvement over the performance of a conventional twisted pair. INTER-8® weave cable consists of four separate conductors braided into interlocking loops and is a field-proven design of Magnetic Shield Corporation.

Because the INTER-8® WEAVE design incorporates parallel conductors, the cable provides double the current carrying capacity of a two wire cable of the same AWG size. In contrast to conventional twisted pair, INTER-8® WEAVE does not kink or untwist when left free.

INTER-8® WEAVE cable can be used to help solve many interference problems. Current-carrying conductors generating interference fields can be replaced with INTER-8® WEAVE cable to substantially reduce radiation. In low impedance circuits where external interference results in disturbing signals, INTER-8® WEAVE cable will reduce the circuit sensitivity to the external fields.

Among typical applications are cable connections to strain gages, thermocouples, photoelectric detectors, audio coils and transformers, piezoelectric transducers and preamplifiers.

The basic INTER-8® weave cable is unshielded. It is available with PVC insulation, or EFTE(1) high temperature insulation. For additional shielding, both are also available with an outer braided shield, made of Magnetic Shield Corporation's proprietary CO-NETIC® AA high permeability wire, to provide ultimate magnetic shielding. Shielded options are covered with an outer Jacket.