

GENERAL INFORMATION

Advantages of high-grade copper data cables

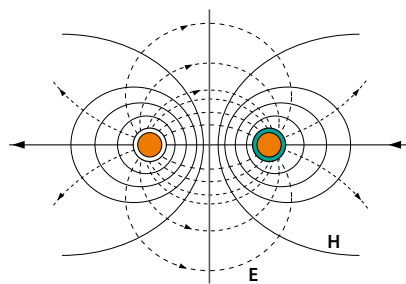
Insensitivity against external electrical and magnetic influences

The electromagnetic field of an unshielded copper data cable is not limited to the immediate area between the wires (see figure 1).

The electrical and magnetic fields close to an installed data cable are rarely uniform or constant. For an unshielded cable these fields directly effect the electrical transmission characteristics of the twisted pairs (see figure 3).

In a shielded data cable (foil and braid shielding of high quality) the electromagnetic field is contained within the overall shield. Therefore, major external influences have minimal effect on the transmission performance of the cable (figure 2). The impedance path is not influenced by the surrounding. The results are stable transmission characteristics (figure 4), usually indicated by excellent Return Loss (RL) values for installed cables.

Twisted Pair, unshielded



E = electric field
H = magnetic field

Figure 1

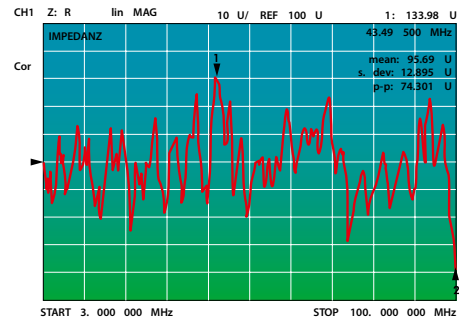
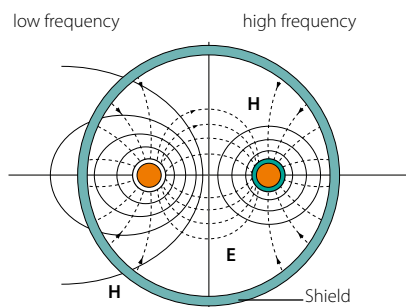


Figure 3

Twisted Pair, shielded



E = electric field
H = magnetic field

Figure 2

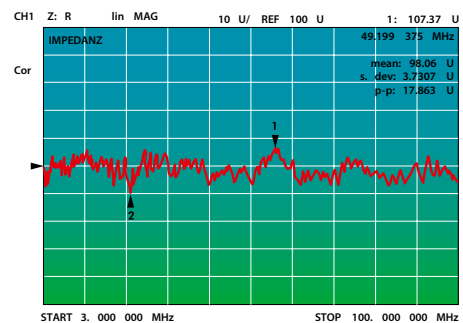


Figure 4