

GENERAL INFORMATION

Installation guidelines for copper data cables

Quality assurance on the construction site

- Please check the following points:
 - Did the delivery include the right cable type?
 - Does the product show any damage caused by transit?
 - Is a temporary store organised for the cables on the construction site?
 - Do the cable and connection components comply with the requested Category/Class?
 - Do you have shielded connection components for the shielded cable?

Storage

- If you do not intend to install the data cables immediately after delivery they should be stored in a place that offers protection from mechanical and temperature influences.
- The store should be dry and protected from environmental influences.
- Stored cables should be kept in their original packaging until they are to be installed.

Regulations, standards and guidelines

- In general, always follow the regulations and guidelines specific to the country in which the materials are being installed. Always follow the manufacturer's guidelines for the cables and connecting hardware.

Open installation, wall openings, cable trays

- Copper data cables should be installed in separate containment from other installed cables.
- Where this is the case, cables can be laid in open trays in all areas (pathways, risers, communications rooms, etc.).
- The cables can be held in place using cable ties or similar equipment. Cables should not be crushed when using these devices. Please see the passage 'Pressure on data cables'.
- Before installation the edges of wall apertures should be smooth and rounded off. This will prevent the need to remove and replace cables with a damaged sheath at a later date.
- The bending radius of the cables may not fall below the value stipulated by the manufacturer.
- The radius of the cable channels must correspond to the specified bending radius of the cables.

Lubricants for cable moving

- Never use milking grease or other oiliferous and fatty substances.
- For cable pulling the following lubricants may be used:
 - Yellow lubricant (Wire-Pulling, Lubricant of Klein tools; 51000)
 - Talcum

Pulling force of data cables

- You can find the permitted pulling force per cable on the Datwyler copper cable data sheets.

Cable pulling

- Always pull cables directly from the drum or box. When using reels always use suitable equipment that will ensure free rotation of the reel.
- Never pull the cables over the flange of the reel (risk of twisting).
- Rewind unused cable and fix the end firmly.
- Use all wires for retracting.
Please fix the open wires with insulating tape between the moving equipment and the cable sheath.

Bending radius

- The bending radius of copper data cables should always be bigger than 8x the overall diameter of the cable during installation (in accordance with EN50173) - unless otherwise specified by the cable manufacturer.
- Always check the data sheets for exact specifications.
If two different bending radii are listed, this means:
 - bend radius with the higher value: during installation
 - bend radius with the lower value: after installation

Pressure on data cables

- Avoid any pressure on copper data cables! Crushing that effects the wires can have a negative effect on the transmission characteristics of the cable.
The most frequent reasons of crushing are improperly fixed cables, crossing of cables and mechanical stress.

Heat influence

- Foamed wires are sensitive to direct heat influence.
Never expose Datwyler data cables to direct heat sources.
Never use a hot air gun or a gas burner (e.g. when using heat shrinking tubing).

Cable laying

- Lay data cables in separate channels from power cable and always cross at 90° using a bridge.
That avoids negative EMC influence.
Please see the passage «Regulations, standards and guidelines».

Terminating at the patch panel

- Always follow the connecting hardware manuals.
- Avoid storing 'reserve loops' at the patch panel.
- For cables with pairs in metal foil (S/FTP, PiMF) the foil screen should be maintained as close as possible to the point of termination.
- If the cable provides an additional stabilizing element and a metal foil these must be brought as close as possible to the point of termination.