



Installation Tips

Insulation Tips

- Check the installation design documentation and site survey report prior to beginning the installation
- On-site, check the routing for the cable, ensuring hazardous areas are avoided or identified and report to the Project Engineer
- 90 metres is the maximum length of the horizontal cable measurement between the patch panel and data outlet
- Cable must be supported along its length by cleats, cable trays, trucking, etc., loose laying in false ceilings is not recommended
- Cable routes must be planned and agreed with the customer and Project Engineer
- UTP cable must not be run outside buildings or in connecting ducts
- Segregation from electrical services is of maximum importance. Advice must be sought if in doubt from the cable system designer or Project Engineer. (There is no real standard for this.) Good installation practice is to refer to TIA/EIA 569 or BS6701 and codes from bodies such as ECIA and IEE. (See Table 1)
- Don't overfill cable trays and conduits. When using trunking, remember that bends in the trunking will limit the amount of cables that can be installed into it.
Example: A 50 x 50m straight piece of trunking looks as if it will hold 60 to 80 cables but a maximum of 40 is recommended. (If in doubt ask.)
- Do not overfill conduit maximum of three Category 5 cables in a 20mm conduit, or Six in a 25 mm conduit 6 4 pair UTP TAKE OUT
- Do not install data cables into containment systems that house electric cable under any circumstances
- Do not allow the cables to 'kink' or exceed 90-degree bends or the bend radius of the cable. The bend radius is normally 8 times the cable diameter

Installation Guidelines

UTP Structured Cable (Cont.)

- Do not stress the cables, over tighten tie wraps or use poorly designed support systems
- Keep the pair twists within 13mm of the termination and ensure the twists are tight
- Maintain the cable sheath as close as possible to the termination
- When stripping the cable sheaths, do not score the conductors or the conductor sheath
- Label all outlets and patch panels to the convention agreed with the customer or as designated by the Project Engineer
- In cabinets and termination points all cables must be dressed and be of a neat appearance
- Upon completion of the installation carry out testing as required by the customers or Project Engineer's specification
- Complete accurately any site drawings or schedules as required

Remember the performance integrity of the cable system will only be as good as the quality of the installation.

Ref. TIA/EIA 569

Minimum separation distances between pathways and power wiring of 480 volts or less, are shown in Table 1

Table 1: Separation of Telecommunications Pathways from $\frac{27}{32}$ 480V Power Lines

Condition	Minimum Separation Distance		
	<2 Kva	2-5 Kva	>5 Kva
Unshielded power lines or electrical equipment in proximity to open or non-metal pathways	127mm (5 in)	305mm (12 in)	610mm (24 in)
Unshielded power lines or electrical equipment in proximity to a grounded metal conduit pathway	64mm (2.5 in)	152mm (6 in)	305mm (12 in)
Power lines enclosed in a grounded metal conduit (or equivalent shielding) in proximity to a grounded metal conduit pathway	-	76mm (3 in)	152mm (6 in)

NB THESE ARE MINIMUM DISTANCES FOR SEPARATION

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