



Guidelines – How To Wire IDRANet Connectors

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The following guidelines and illustrations show how to prepare and terminate Cat5 cable for connection to an IDRANet network. As each installation is different and will have unique features, the information is provided as is and is intended for guideline purposes only.

End of Spur Termination

Carefully remove outer sheath without cutting into the cores within. If the outer foil is cut that is not a problem as this is removed anyway.



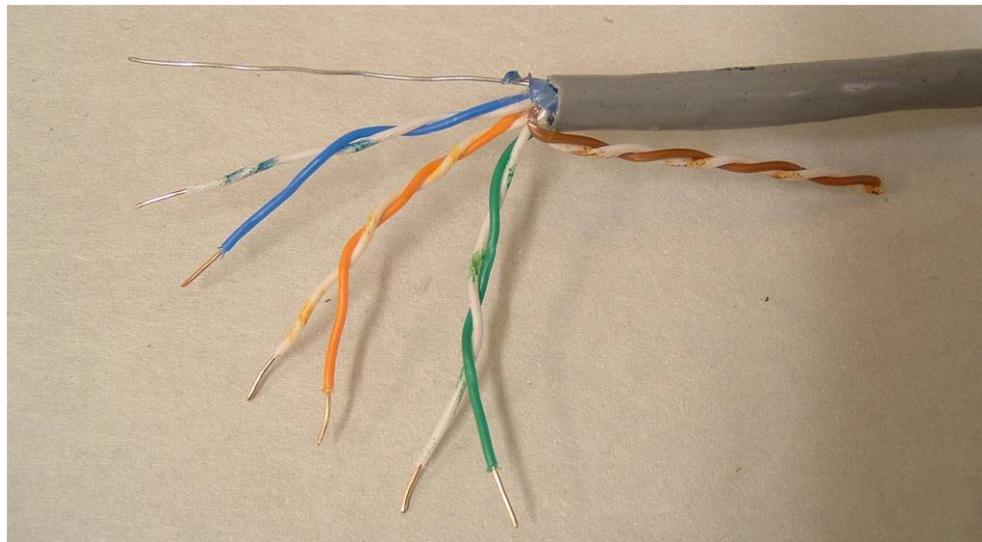
Peel back the screen to reveal drain wire and inner cores. Cut or tear away the foil screen being careful not to damage the bare screen drain wire.



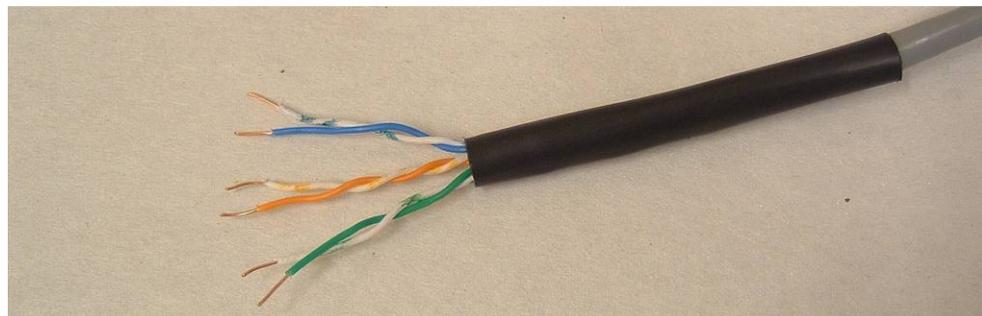
Unwrap the outer clear plastic sheath which covers the 4 twisted pair cables and drain wire and remove this.



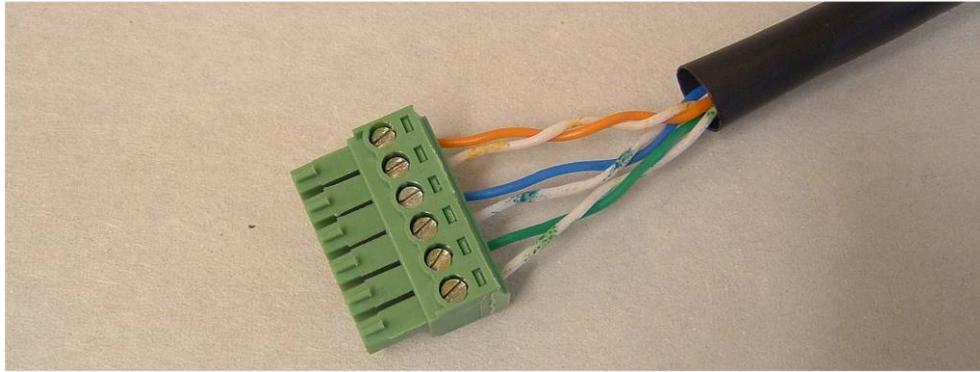
Separate the 4 twisted pairs (still keeping them loosely twisted) and place the brown pair aside, as this is not normally used (if this is to be used to double up ignore this stage). Strip the end of the wires using suitable wire strippers being careful not to nick the copper core, as this will make it liable to fracture if flexed.



Fold back the screen wire and brown twisted pair (if these are not used) and cover with insulation tape or heat shrink sleeving as shown



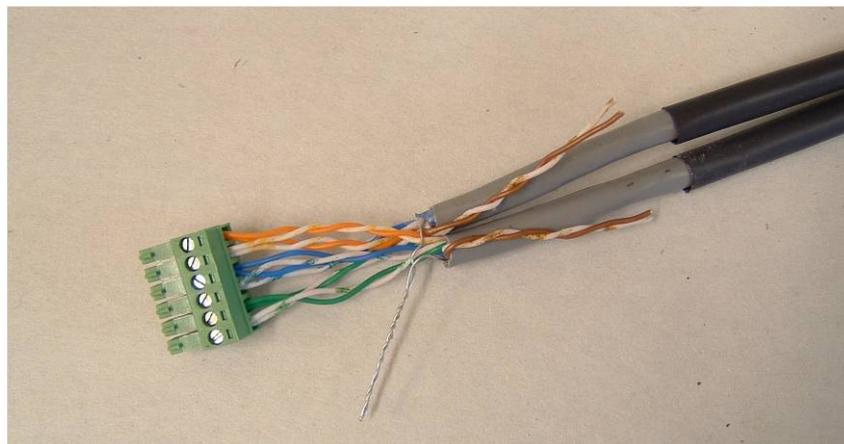
Connect the plug as illustrated ensuring the colours are in the correct order. Ensure the wires are all secured but do not overtighten the screws as it may break the solid cores. The termination is now complete



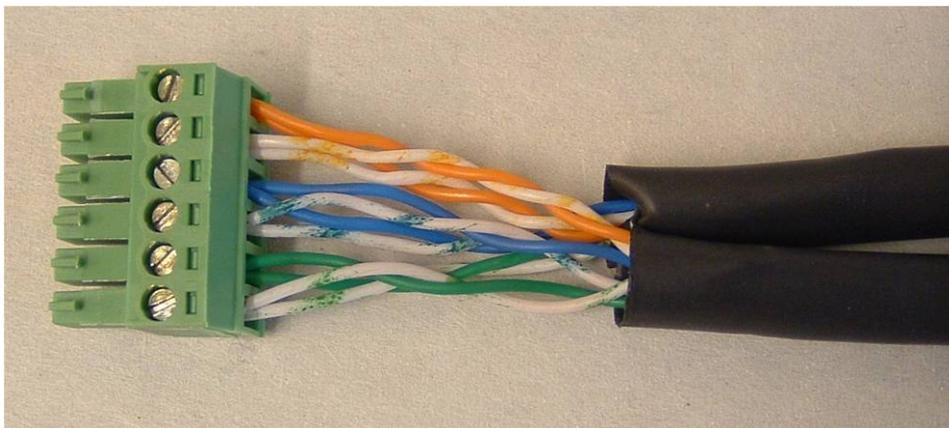
Daisy Chaining A Connection

IDRANet has an open architecture allowing the wiring to be daisy chained from each node to subsequent nodes. The IDRANet plug is a convenient location to perform this.

Prepare the two cables as illustrated earlier. Prior to fitting into the plug, twist the screen drain wires together as shown below. Fit the appropriate cores from each cable into the same plug connections i.e. both orange/white cores go into the first terminal, both white/orange cores into the second terminal etc. Ensure the order of the colours is correct. If the brown pair is not being used, these should be folded back

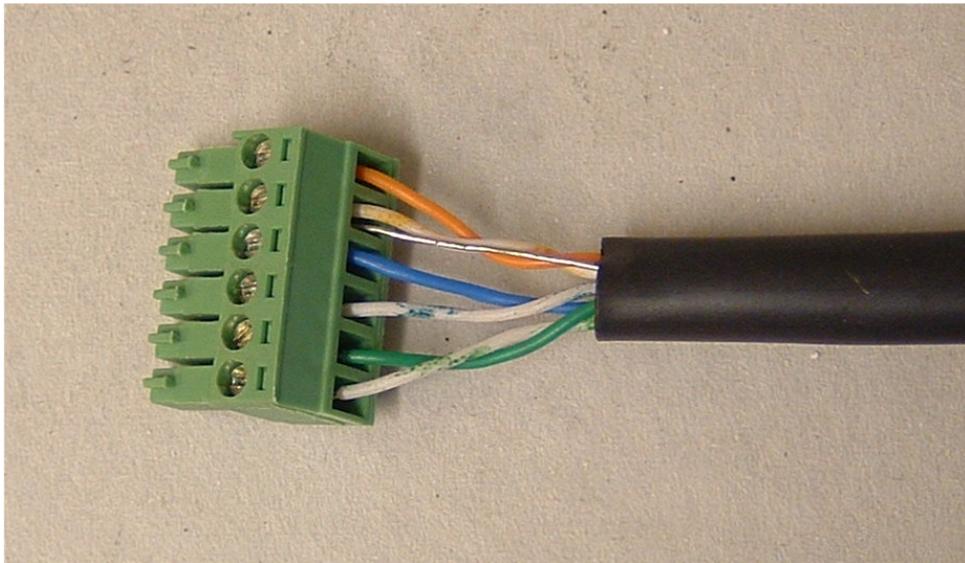


Insulate the screen wire and the brown cores with either insulation tape or heat shrink sleeving. Do not untwist the drain wires as it is important that the sheath continuity is maintained throughout the length of the spur. The termination is now ready for use.



Termination of Cable at Power Supply (Node 0)

If the termination is to be used at the power supply end of the spur, sometimes referred to as node 0 or the power hub, the difference from previous terminations is that the screen drain wire is also connected to the power 0V terminal as illustrated below. This should be used where it will be plugged into the IPS/IPD or MPD units.



Using the Spare Brown Pair To Reduce Voltage Drop

CAT5 cable is rated at 1 Amp maximum per core which is the same as the current capability from an IPS/IPD (power supply) unit. The MPD unit is also rated at 1A per spur (but is fused to a total of only 2A).

However in situations where high current demands (>750mA) are required on a given spur or where very long cable runs are used (e.g. to outbuildings where cable lengths could be in the 100's of metres), then it is possible to double the power bus capacity (half the impedance of the wires) by using the brown twisted pair in parallel with the orange pair. Such doubling of capacity will ensure that the cable is not being run at its limits and will also reduce the voltage drop on the power and ground cores.

It is also advisable to use this doubling up to a location where it is subsequently plugged into a patch board such as a 6WA or 3WA, where further branching would occur. The brown pair is wired across the orange pair as below.

