

## CAT 6 Cable and Plug/Connector Assembly Guide

Prepared by  
Paul I Lin and Bob Tilbery  
April 24, 2013

### Step 1: CAT 6's 4-paired Wires and Plug/Connector Identification

For making each cable with two plugs as shown in Figure 1, the following parts are needed:

- Two Flex cable connectors, model number PX0739/P, 6-poles plugs are needed for cable
- One CAT 6 cable with proper length. Each CAT 6 cable consists of the following 4-pair twisted wires, with the following color codes and usages:
  - Pair 1: (used as RS 485 communication line)
    - Blue --- used as DATA + line
    - Blue/White --- used as DATA - line
  - Pair 2: (both wires are used as Power supply Ground wire)
    - Green
    - Green/White
  - Pair 3: (both wires are used as -24V power line)
    - Brown
    - Brown/White
  - Pair 4 (both wires are used together as +24V power line)
    - Orange
    - Orange/White

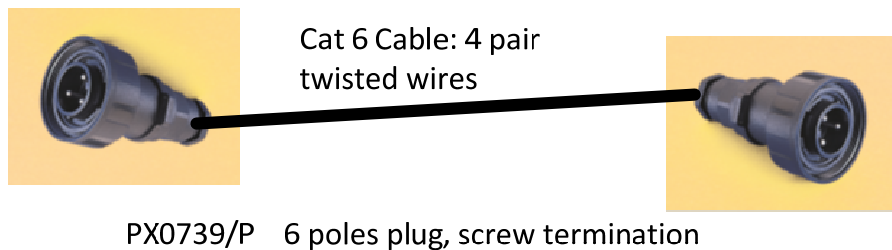


Figure 1. CAT 6 cables with two PX0739/P, 6-poles plug on each end

### Step 2. Preparation of CAT 6 cable wires for connecting to plug.

Each CAT 6 cable's end side should be prepared with the following suggested steps:

- a) Use hobby knife to cut/remove proper length of cable shielding.
- b) Use wire stripper to remove a proper length of wire's insulation shielding.

### Step 3. Preparation of Flex Cable Connectors/Plugs

- Use two Flex cable 6-poles connectors/plugs for each CAT 6 cable.
- Obtain a copy of Flex Cable Connector Data sheet from, Bulgin, <http://bulgin.co.uk/Products/Buccaneer/BuccaneerStandard.html> ; located the information pages that contain PX0739/P 6 poles plug, screw termination; and PX0739/S Socket.
- Read instruction from the data sheet on how to prepare the connector/plug
- Recognize the labeled Pin numbers ranged from 1, 2, 3, 4, 5, 6 as shown in Figure 2 below:

Pins: Contact Nos viewed from rear of panel

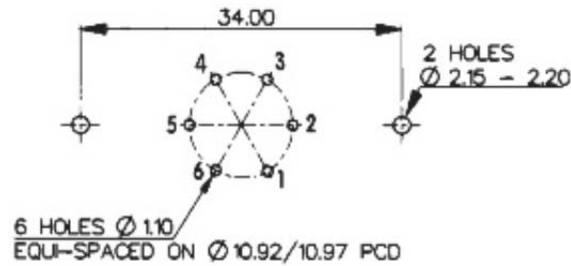


Figure 2. Number labeling of Flex Cable Connector/Plug

### Step 4. Connecting CAT 6 cable wires to two Flex Cable Connectors (Figure 3), for each end:

- Connect CAT 6 cable's Blue colored wire to pin 1.
- Connect CAT 6 cable's Blue/White colored wire to pin 2.
- Connect CAT 6 cable's two wires: Green and Green/White, both to pin 3.
- Connect CAT 6 cable's two wires: Brown and Brown/White, both to pin 4.
- Connect CAT 6 cable's two wires: Orange and Orange/White, both to pin 5.
- Leave pin 6 unconnected.

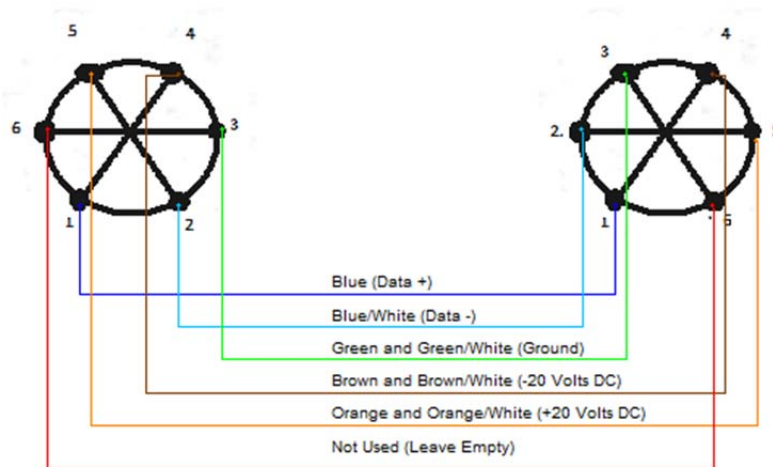


Figure 3. Wiring Diagrams for CAT 6 cable and two Flex Cable Connectors/Plugs