

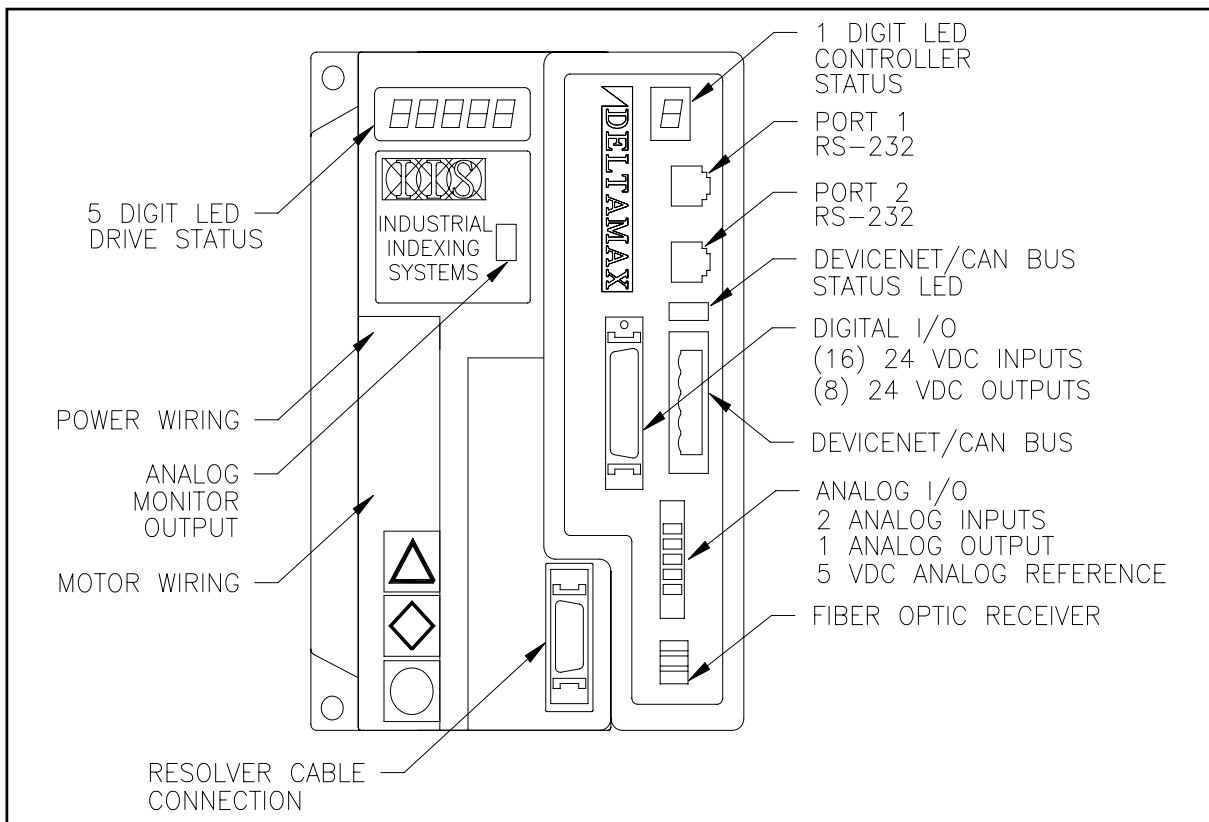
## SECTION 2 - DESCRIPTION

The DeltaMax product consists of a servo motion controller, containing one active axis and one-half axis fiber optic servo follower and a Delta series drive integrated into one package. The application program that operates the controller is created on a PC using the MacroPro II software tools and sent serially to the controller via an RS-232 link.

**NOTE**

**All commands used by the DeltaMax are part of the IIS Macroprogram language. Refer to the separate MacroPro II manual (IB-11B022) for detailed information on the commands and their proper usage.**

The external connections that exist on the DeltaMax are shown in **Figure 2.1**, and consist of 2 RS-232 ports, 16 digital inputs and 8 digital outputs, 2 analog inputs, 1 analog output and a reference, a fiber optic input, and an optional DeviceNet port, as well as motor, resolver, and power connections. The Delta drive also has an analog monitor output, which is capable of representing either speed or torque as a function of voltage relative to +/- 3 vdc.



**Figure 2.1 - DeltaMax Layout**

## 2.1 COMPONENTS

### 2.1.1 STATUS INDICATORS

1. Drive Status Display - This is a 5-digit seven segment display which indicates the current status of the Delta driver. A fault on the drive would be represented by AL - ## which indicates an alarm with an associated two digit number. These alarm codes and their descriptions can be found in [Section 12 - Alarm & Status Codes](#).
2. Controller Status Display - This single seven segment LED with decimal point provides status information of various operating conditions. For further information on this display, see [Section 12 - Alarm & Status Codes](#) in this manual.

### 2.1.2 CONNECTORS

#### NOTE

**For proper pinouts for each connector refer to [Section 5 - DeltaMax Wiring](#).**

1. Port 1 - This 6-pin RJ-11 connector is an RS-232 serial communication port. It uses a custom protocol to communicate with the MacroPro II software tools on a PC. This port also facilitates firmware download.
2. Port 2 - This 6-pin RJ-11 connector is an RS-232 serial communication port. It can be used to communicate with the IIS OPI-50 or similar RS-232 type device. The protocol is selectable through the Macroprogramming language. This port does default to the custom protocol for communicating with the MacroPro II software tools on a PC.
3. Digital I/O - This connector provides access to the onboard I/O. IIS offers two options to this connector; there is the C-719YYY cable with ferreled ends or the C-716006 cable, which terminates at the DINT-300, which provides terminal blocks for I/O wiring.
4. DeviceNet/CAN Bus (optional) - This connector provides DeviceNet or CAN Bus access to controller flags and memory.
5. Analog Input/Output - This connector provides contacts for two analog inputs, one analog output, and a reference voltage. The Macroprogram controls use of these inputs and output channel.
6. Fiber Optic Receiver - This connector is used to receive the positional data from the IIS EFC-XXX encoder to fiber optics converter or the RFC-XXX resolver to fiber optics converter. The data being received is in the form for master angle passing.
7. Resolver Cable Connector - This is a 20-pin mini D connector used for resolver feedback from the motor to the drive.
8. Motor/Power wiring terminals - These are terminal blocks used to wire the incoming AC line voltage as well as the motor cable.
9. Monitor Output - This is a connector, which provides access to an analog output signal. The signal is either defined as a conversion of torque or speed and is selectable through the MacroPro II software tools.