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# **DELTA VFD Drive**

## **Application Note**

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This document describes how to configure a Paradigm operator interface terminal to allow communications with a Delta VFD Drive. The communications protocol supports access to pertinent parameters. Please read this document carefully before attempting to configure communications with these devices.

## Introduction

The EDICT-97 configuration software has been designed to allow the user to enter command group and parameter numbers in a manner that should be familiar to the user of a Delta VFD Drive. The driver allows the exchange of data with the Drive.

## Accessing Data

The Delta VFD Drive communications protocol allows access to a number of parameters over a serial communications link, as follows:

A 4 digit number <ggpp> comprises a two digit code for the parameter group and a two digit number for the desired parameter, and is entered into the operator interface, either in a Comms Block Address field, or as a direct PLC reference. This number is exactly what is displayed on the Drive's digital keypad, without the dash between the number pairs. For example, to display the rated current of the AC drive ( group 0, parameter 1 ) enter 0001 in Comms Blocks, or [0001] as a direct PLC reference.

Read Status registers beginning at register 2100H and Write Command registers beginning at 2000H are also easily accessible. For example, to view the Status of the AC Drive (2101H), select 2101 in Comms Blocks or, [2101] as a direct PLC reference.

## Knowledge of Unit Operation Is Assumed

In all cases, the simple principle of 'pass-through' is maintained: there is no attempt to validate a value in terms of the end use of the unit: both familiarity with the Drive functions and knowledge of system operation are assumed.

## Communications

Default serial communications format is 9600 baud rate, 8 data bits, Even parity, and 1 stop bit. The default Device Address is 0, which is the Delta VFD broadcast address. Please refer to the Group 9 section of the VFD manual.

### RS485 Connection

Paradigm RS485 Port	Delta VFD
Term. 6 (TxA) & Term. 8 (RxA)	4
Term. 7 (TxB) & Term. 9 (RxB)	3
Pin 10 (Comm.)	2

In addition, connect a 1K resistor between 9 and 10 of the Paradigm.