DANFOSS VLT DRIVE

Application Note

This document was written to provide assistance in configuring a G3 operator interface terminal to allow communications with a Danfoss VLT Drive. The communications protocol supports access to numeric parameters. Please read this document carefully before attempting to configure communications with these devices.

INTRODUCTION

The Crimson configuration software has been designed to allow the user to enter a parameter mnemonic and number in a manner that should be familiar to the user of a Danfoss VLT Drive. The driver allows the exchange of data with the Controller.

ACCESSING DATA

All drive parameters are identified with a 'P' prefix in the EDICT address scheme, i.e. P600 is the drive operating hours. We only address numeric registers, and therefore parameters containing textual information cannot be read or written to.

CONTROL WORD AND BUS REFERENCE ACCESS

Crimson includes a mechanism for sending the Control Word and Bus Reference to the Danfoss drive. The Control Word and Bus Reference are sent upon a write to the Control Word. For proper operation, please adhere to the following guidelines.

1. Tags associated with the Control Word and Bus Reference should be set to Write Only access.
2. Set the Bus Reference to the desired value.
3. When multiple bits will be set in the Control Word, an internal tag may be used for individual bit manipulation.
4. Set the tag assigned to the Control Word to the internal tag or desired value.

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

Communications with the Danfoss VLT Drive is via RS-485. Default serial communications format is 9600 baud rate, 8 data bits, Even parity, and 1 stop bit. The connection details are described in the table below.

G3 RS485 PORT	DANFOSS VLT RS485 PORT
Pins 2	Pin 68 (TX/RX +)
Pins 1	Pin 69 (TX/RX -)
Pin 6 (Comm.)	