
KEB Frequency Inverter

Application Note

This document describes how to configure a Paradigm operator interface terminal so as to allow communications with a KEB Frequency Inverter. The communications protocol supports access to all parameters and parameter sets. 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 a Parameter Set and a Communications Parameter Address in a manner that should be familiar to a user of a KEB Frequency Inverter.

Accessing Data

Each Parameter in the KEB Frequency Inverter has a communications address. In addition the KEB Frequency Inverter has 8 Parameters Set (0..7). Certain Parameters are programmable, meaning that they exist 8 times in the inverter and can be assigned with different values independent of each other. In order that the parameter in the required set is accessed there is a Bus Parameter Set containing the Parameter Set currently accessible via serial link.

When the user is configuring a Communications Block in EDICT-97, the required parameter is referenced in one of 2 forms:

s.iii
iii

where *s* is the required parameter set and *iii* is the Parameter communications address, entered as a Hexadecimal value in the range 0..7FFF.

The driver will change the Bus Parameter Set prior accessing the parameter. It makes sense therefore to group Parameters from the same Parameter Set in the same Communication Block.

Some parameters are read-only and others may only be written to when the drive is disabled. Attempts to write to these, or to access non-existent parameters will be gracefully ignored, communications will not be failed.

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 parameters and knowledge of system operation are assumed.

Communications

EDICT supports RS232 and RS485 connections with a KEB Frequency Inverter, the connection details being described below:

KEB (9 pole D-Sub male)	Paradigm RS232 port	
3	1	Tx
2	2	Rx
-	3	CTS
-	4	RTS
7	5	0v

In addition a link must be made between connectors 3 (CTS) and 4 (RTS) on the Paradigm Operator Interface.

KEB (9 pole D-Sub male)	Paradigm RS485 port	
5	6	TxA
6	7	TxB
8	8	RxA
9	9	RxB
-	10	0v

In addition a 1k8 resistor must be placed between connectors 9 (RxB) and 10 (0v) on the Paradigm Operator Interface.

The default serial communication parameters are as follows, baud rate of 9600, 7 data bits, even parity, and 1 stop bit.