



DSE 890 Configuration Tool

Quickstart Manual

HA471112U001 Issue 4

Compatible with Version 1.4 Software



© Copyright SSD Drives Limited 2006

All rights strictly reserved. No part of this document may be stored in a retrieval system, or transmitted in any form or by any means to persons not employed by a SSD Drives company without written permission from SSD Drives Ltd. Although every effort has been taken to ensure the accuracy of this document it may be necessary, without notice, to make amendments or correct omissions. SSD Drives cannot accept responsibility for damage, injury, or expenses resulting therefrom.

WARRANTY

SSD Drives warrants the goods against defects in design, materials and workmanship for the period of 12 months from the date of delivery on the terms detailed in SSD Drives Standard Conditions of Sale IA058393C. SSD Drives reserves the right to change the content and product specification without notice.



UK

SSD Drives Ltd

New Courtwick Lane
Littlehampton
West Sussex BN17 7RZ
Tel: +44 (0)1903 737000
Fax: +44 (0)1903 737100

FRANCE

SSD Drives SAS

15 Avenue de Norvège
Villebon sur Yvette
F-91953 Courtaboeuf Cedex
Paris
Tel: +33 - 1 69 18 51 51
Fax: +33 - 1 69 18 51 59

U.S.A.

SSD Drives Inc

9225 Forsyth Park Drive
Charlotte
North Carolina 28273
Tel: +1 (704) 588 3246
Fax: +1 (704) 588 3249

CANADA

SSD Drives Inc

4391 Harvester Road
Unit # 1
Burlington,
Ontario 7L 4X1
Tel: +1 (905) 333 7787
Fax: +1 (905) 632 0107

GERMANY

SSD Drives GmbH

Von-Humboldt-Strasse 10
64646 Heppenheim
Tel: +49 (6252) 798200
Fax: +49 (6252) 798205

CHINA

SSD Drives Ltd

Room 1603, Hua Teng Edifice
302# Jin Song San Qu
Chaoyang District,
Beijing 100021
P.R. China

ITALY

SSD Drives SPA

Via Gran Sasso 9
20030 Lentate Sul Seveso
Milano
Tel: +39 (0362) 557308
Fax: +39 (0362) 557312

DENMARK

SSD Drives AB

Enghavevej 11
DK-7100
Vejle
Tel: +45 (0)70 201311
Fax: +45 (0)70 201312

SWEDEN

SSD Drives AB

Montörgaten 7, SE-302 60
Halmstad
Tel: +46 (0)35-17 73 00
Fax: +46 (0)35-10 84 07

10/12/04

Local availability and service support also in:

Argentina • Australia • Austria • Bangladesh • Belgium • Brazil • Chile • Colombia • Costa Rica • Croatia
Cyprus • Czech Republic • Ecuador • Egypt • Greece • Hungary • Iceland • India • Indonesia • Iran • Ireland
Israel • Japan • Jordan • Kenya • Korea • Kuwait • Lithuania • Malaysia • Mexico • Moldova • Morocco Netherlands • New Zealand • Nigeria •
Norway • Peru • Philippines • Poland • Portugal • Romania
Saudi Arabia • Singapore • Slovenia • Slovakia • South Africa • Spain • Sri Lanka • Switzerland
Taiwan • Thailand • Turkey • United Arab Emirates • Ukraine • Vietnam



Contents

	<i>Page</i>
Chapter 1 : Getting Started	1-1
Introduction	1-2
DSE 890 Installation	1-3
Connecting to the Drive	1-3
Launching DSE 890	1-4
Selecting the Comms Port	1-5
What To Do Next	1-5
Chapter 2 : First Configuration	2-1
Creating a Configuration	2-2
Modifying a Configuration	2-3
Editing Blocks	2-4
Editing Links	2-4
Inserting New Function Blocks	2-5
Deleting Function Blocks	2-5
Editing the Motor Control Block	2-6
Connecting Parameters to the Application	2-7
Installing a Configuration	2-8
Autotune	2-8



Contents

The Online Configuration

- Opening the Default Configuration Online
- Opening a New Configuration Online
- Working Online
- Install New Firmware

<i>Page</i>
2-8
2-8
2-8
2-9
2-10



Chapter 1

Getting Started

Introducing the DSE 890 (Drive System Explorer) Configuration Tool for the 890 drive.

Here are the instructions for installing DSE 890, connecting the drive to your PC, and finally launching DSE 890.



The image shows a 3D rendering of a large, blue industrial drive cabinet with multiple doors and control panels. Below the cabinet, the text 'DSE890 DRIVE SYSTEM EXPLORER' is displayed in a stylized font. The background is a bright, blue sky over a body of water.

- ◆ [Introduction](#)
- ◆ [DSE 890 Installation](#)
- ◆ [Connecting to the Drive](#)
- ◆ [Launching DSE 890](#)

Introduction

DSE 890 (Drive System Explorer) is the software tool for the new 890 range of drives available from SSD Drives. It can parameterise, configure and program both the 890CD Common Bus Drive and the 890SD Standalone Drive.

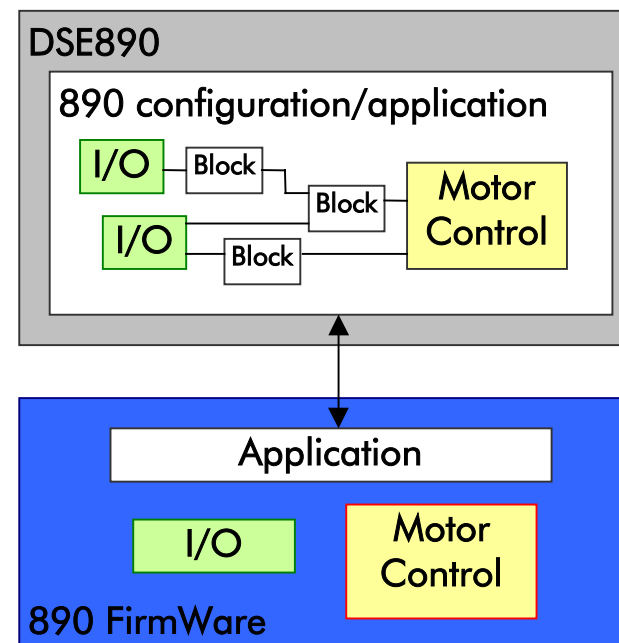
Using straight forward block programming you can very quickly become a confident user of DSE 890. Users of LINK and DSD (Drive System Designer), our two previous products, will appreciate DSE 890's similarity with DSD and familiar features.

However, DSE 890 is new. A major concept is that of having three environments: *Motor Control*, *Application*, and the *I/O Elements*:

Motor Control: this is a fixed environment comprising drive and motor parameters organised into blocks. You can parameterise these blocks, or you can read and write to them by linking their parameters with blocks in the Application environment.

Application: this is the working space, external of the Motor Control environment. In it you can place any number of instances of any block - gone are the days of fixed numbers of blocks.

I/O Elements: this is an environment where all the drive's I/O is gathered. However you do see this I/O bought out in the relevant blocks in the Application environment. Outputs are fixed and Inputs are instantiated.



DSE 890 Installation

DSE 890 is supplied on a CD with the 890 Drive. You can install DSE 890 on any PC with the following specification:

- ◆ Windows XP, Home or Professional Edition
- ◆ 100Mb of free hard disk space

Insert the CD and execute the "setup.exe" file on the disk to install the latest LINK database and DSE 890. Follow the on-screen instructions.

The DSE installation program "setup.exe" will copy the Texas USB driver files into the appropriate Windows directories. When the 890 drive is connected for the first time, Windows will acknowledge that it has found new hardware with the "New Hardware Found" wizard. When prompted for a driver, select the "Install automatically" option and select "OK".

Note Windows will actually prompt with "New Hardware Found" twice.
This is the expected behaviour of Windows.

Connecting to the Drive

Connect to the 890 Drive using a proprietary USB lead: A to mini-B. Connect the PC's USB port to the drive's X10 terminal. For a drive system, you can connect via USB to any drive in the system to gain access to all drives. All drives in the system must be linked via the FireWire Option.

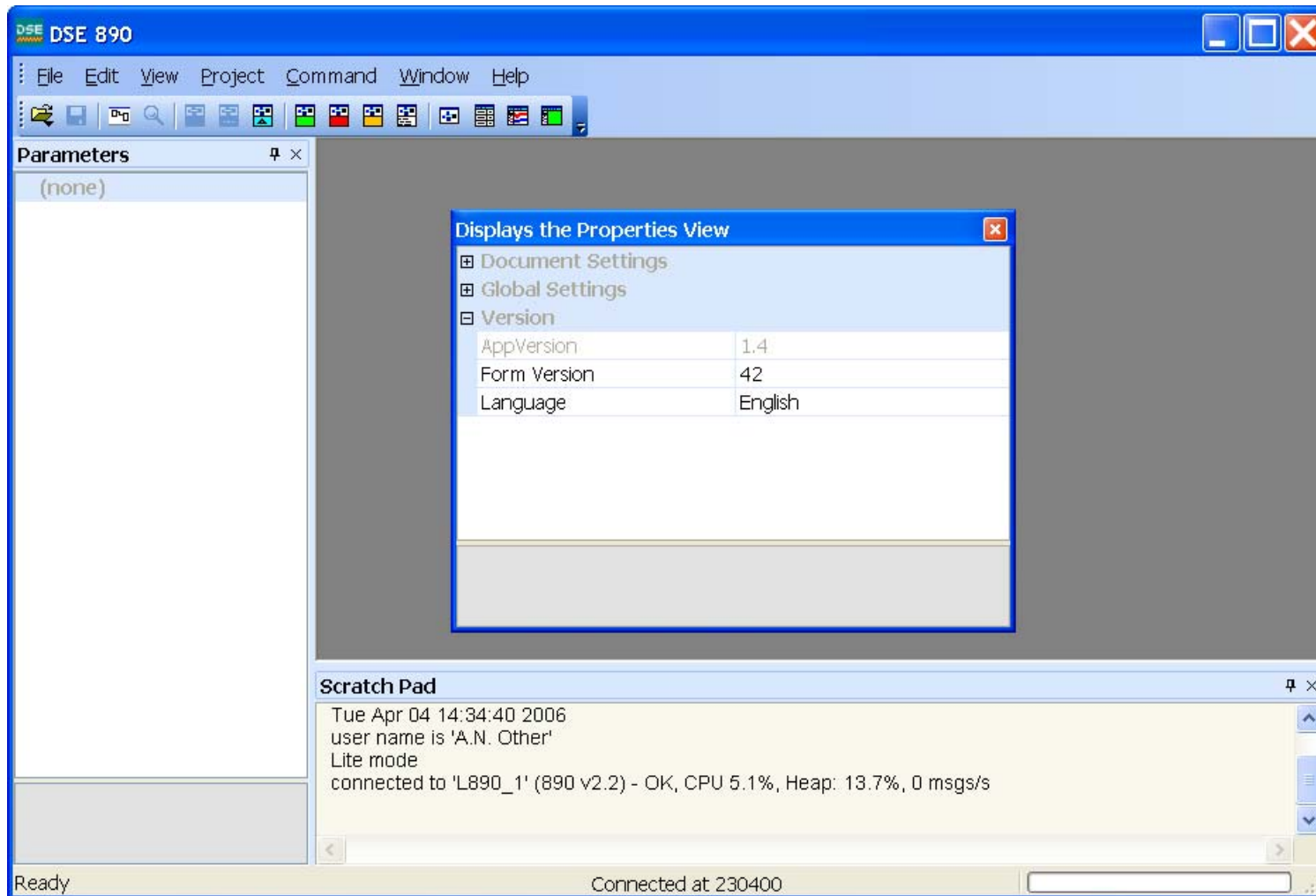
For more information on the FireWire Option please refer to the FireWire Option Technical Manual.

Getting Started

1

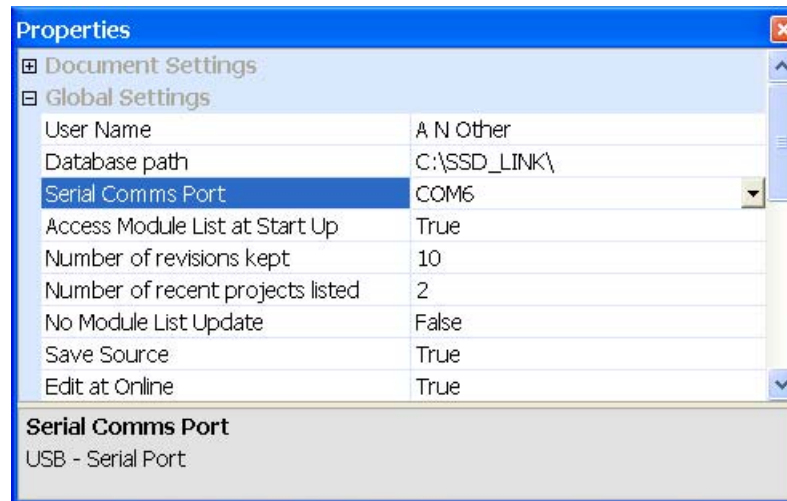
Launching DSE 890

Start DSE 890 by clicking its program icon in Windows. Or, in the Windows' Start Menu click on "All Programs", you will see "SSD Drives", and within is the configuration tool. Click on this to launch DSE 890.



Selecting the Comms Port

When DSE 890 is first launched you will see the Properties box. From the Properties box, open "Global Settings" and select "Serial Comms Port". Now select the port your drive is connected to. If you have selected correctly, the Serial Comms Port description will read "USB-Serial Port". Now you can close the DSE 890 Properties dialog.



What To Do Next

At this point you will have a drive connected to your PC, DSE 890 launched and the comms port configured. Now you are ready to go to the next stages:

- ◆ creating your first configuration (page 2-2), or alternatively
- ◆ opening the pre-installed default configuration on-line (page 2-8).

Both possibilities are described in the next section.



Chapter 2

First Configuration

How to create, modify and install a new configuration as well as going online.

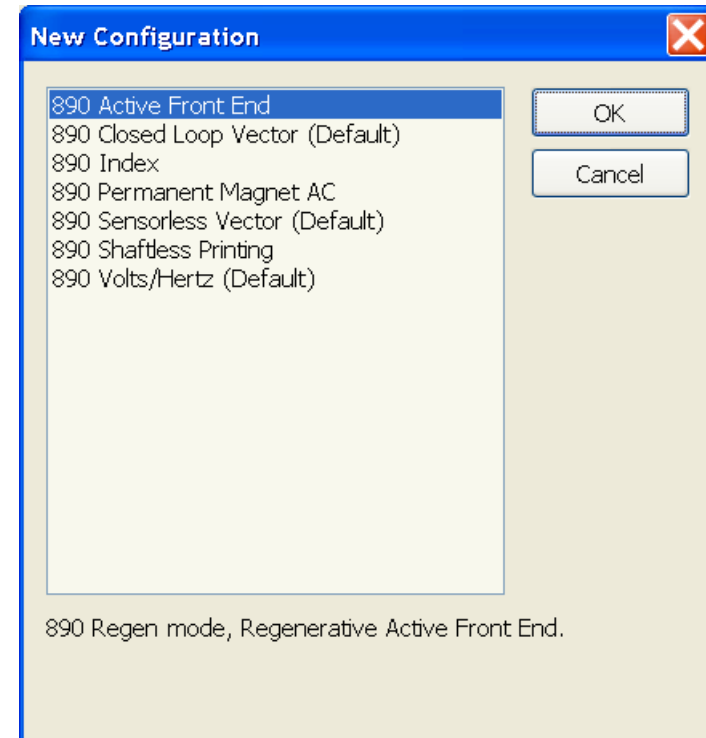


The image shows the DSE890 Drive System Explorer software interface. It features a 3D rendering of a large, blue industrial drive cabinet with multiple bays and control panels. The background is a bright, blue sky with clouds. At the bottom of the image, the text 'DSE890' is written in a large, bold, blue font, with 'DRIVE SYSTEM EXPLORER' in a smaller, white font below it.

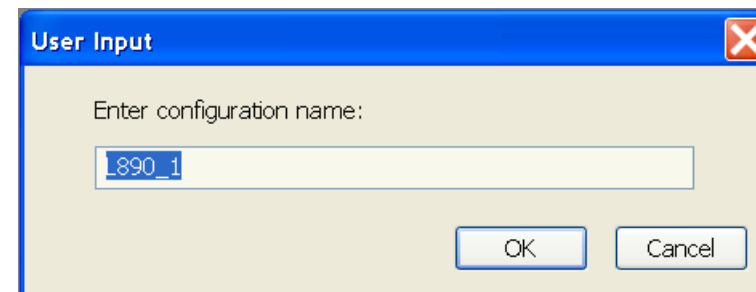
- ◆ [Creating a Configuration](#)
- ◆ [Modifying a Configuration](#)
- ◆ [Installing a Configuration](#)
- ◆ [Import/Export a Configuration](#)
- ◆ [The Online Configuration](#)

Creating a Configuration

1. From the "File" menu, select "New". A Dialog will pop up. Select a configuration, e.g. 890 Volts/Hertz, and click "OK".



2. When prompted, enter a new configuration name, e.g. "L890_1", and click "OK".
3. And here is your first configuration L890_1*.



Save the configuration by clicking on File/Save or the Save icon, or select "Save" from the "File" menu. A standard Windows Save dialog will pop up. You can save the configuration in any directory in your file system. Once saved, the asterisk "*" against the name will disappear.

First Configuration

Modifying a Configuration


A configuration can be modified by editing blocks and links, inserting or deleting blocks.

The screenshot displays the DSE 890 Configuration Tool interface for a project named "DSE 890 - [L890_1*]". The main window shows a wiring diagram for a motor control system. The diagram includes several input blocks (X12, X15, X14) and output blocks (X12, X15, X14) connected to a central "Motor Control" block. The inputs include SET SPEED, REAR INPUT, TRIP INPUT, JOG, START, and STOP. The outputs include SPEED, TORQUE, RUNNING, ZERO SPEED, and HEALTHY. The diagram also shows various control signals like EMERGENCY STOP, EMERGENCY STOP REVERSE, and EMERGENCY STOP. The interface includes a menu bar (File, Edit, View, Project, Block, Command, Insert, Format, Window, Help), a toolbar, and a status bar at the bottom indicating "Ready" and "Connected at 230400". A "Scratch Pad" window at the bottom shows the following text:


```
loading 'C:\SSD_LINK\CONFIGS\NEW890VHzDF.004'  
done.  
loading 'C:\SSD_LINK\CONFIGS\NEW890VHzDF.004'  
done.
```

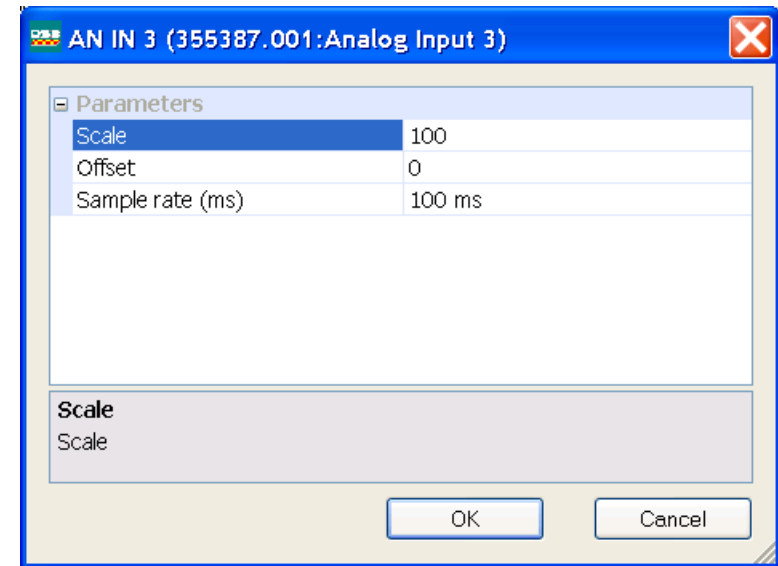
Editing Blocks

You can view the contents of any function block in the configuration by double-clicking the icon for the block. For example, double click on "AN IN 3" will open the analog input function block 3.

Where a parameter can be edited, click on the relevant sub-menu  to display the options (for enumerated and boolean parameters), or edit the displayed numeric value directly on the screen by clicking on the value.

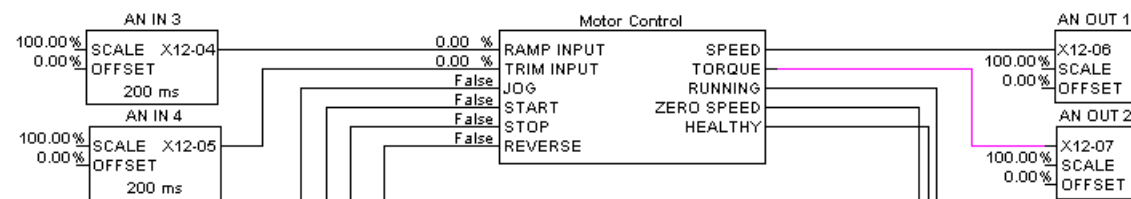
When you have finished editing the block select "OK" to exit the block, otherwise select "Cancel" to exit the block and disregard any changes you may have made.

When you make any changes, save the configuration by clicking on the Save icon , or "File→Save". This will remove the asterisk (*) against the configuration name.



Editing Links

A link transfers the value of an output parameter to an input parameter of another (or the same) block.



First Configuration

Links are made by connecting an output to an input, in that order.

To make a link	Hover the cursor over the output line until an "x" appears. At this point, click and hold the mouse button. Now stretch the red link to the input line. When the link turns green, you have a possible connection. To make the connection, let go of the mouse button.
To delete a link	Click on the line. It will turn purple. Press the Delete key on your keyboard.
To reshape a link line	Click on the line and hold the mouse button. The line will turn purple. Now you can drag any part of the line in any direction.

Inserting New Function Blocks

You can insert any number of new function blocks into the Application. For example:

Click on the Block menu at the top of the screen.

1. Move the cursor down to select "Logic" and select "Counter".
2. Click to attach the block icon to the cursor. Move the icon to where you want on the screen. Click again to release the icon.
3. To insert another of these blocks you can repeat the process, or just Copy and Paste the original using the Edit menu at the top of the page. (The standard Ctrl+C, Ctrl+V and Ctrl+X also apply).

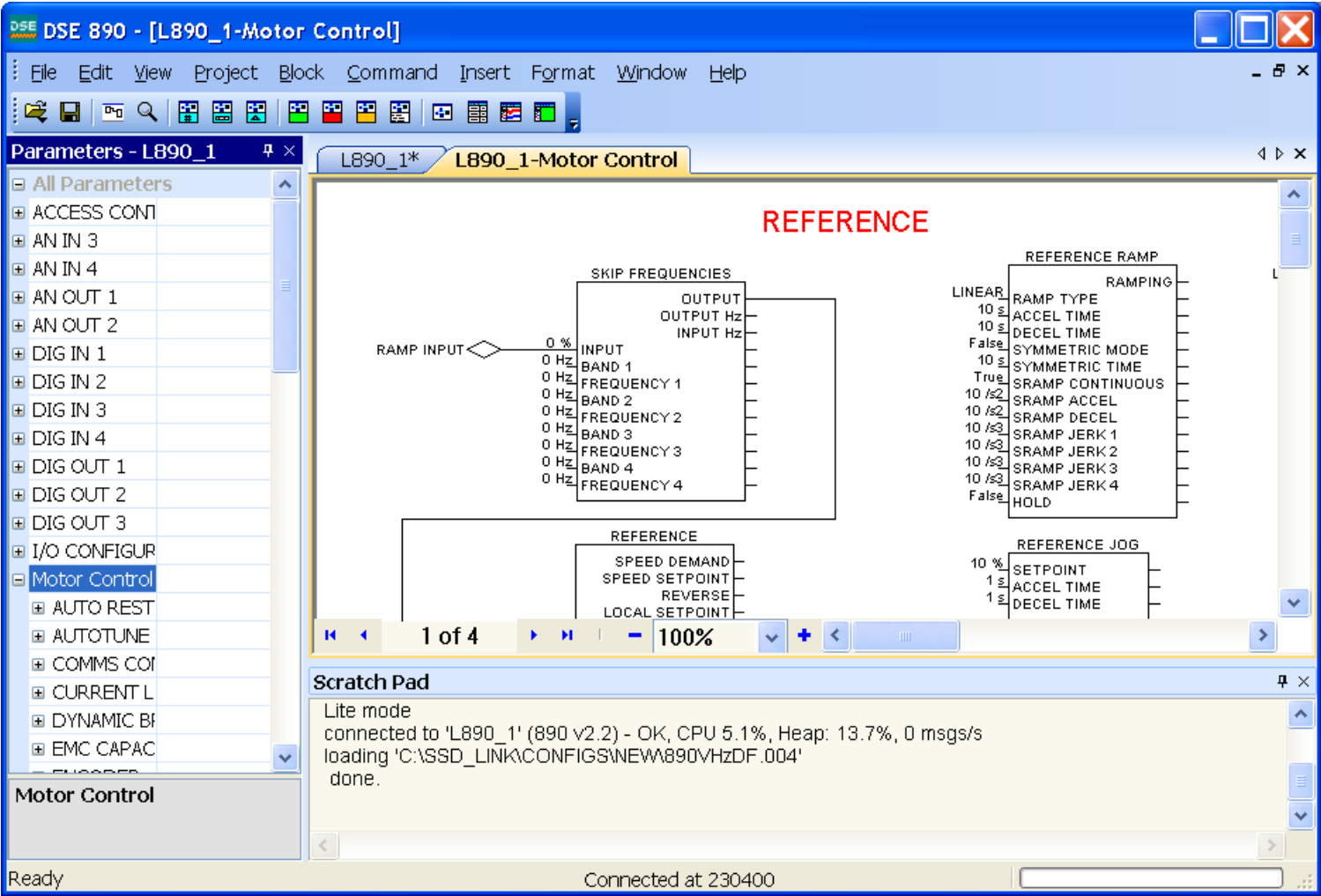
Note *For further details of all function blocks, refer to the 890 Engineering Reference manual, Appendix D. Motor Control Block details are available in DSE 890 by right-clicking a function block in the Motor Control Block pane and selecting "Help".*

Deleting Function Blocks

Select a block and hit the "Delete" key. This will delete the block.

Editing the Motor Control Block

Double-click the Motor Control Block. A new window will display the motor control block diagram.

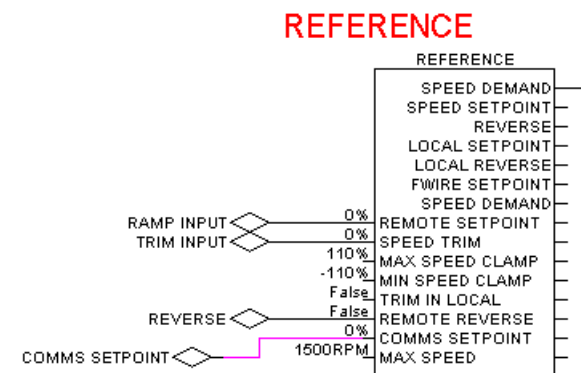


First Configuration

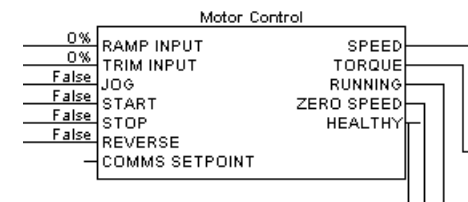
Connecting Parameters to the Application

If a motor control block has to be written to or read from the application, Inputs and Outputs can be added to the Motor Control block diagram, respectively.

For example, to add a new input parameter called "REVERSE", open the Motor Control Block diagram, add a new input from the Block menu, then rename it to "REVERSE" (shown connected to REFERENCE /REMOTE REVERSE).



On exiting, the motor Control Macro the additional input parameter "SETPOINT" will automatically appear on the Motor Control block as shown on the right.

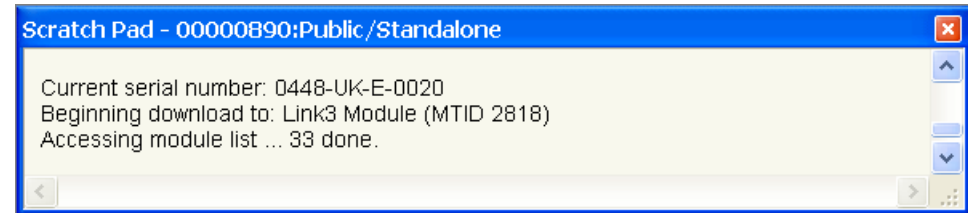


Installing a Configuration

Once you have created your own configuration, you are in a position to install it in the drive. Select "Command→Install At Selected" to install the currently opened configuration into a drive.

The installation will be confirmed by a Scratch Pad message.

Now the configuration is installed into your drive.



Autotune

Now perform an Autotune. The configuration must be closed:

1. Trigger Autotune in the drive (via the MMI) and wait for it to be completed.
2. Select File→Update; this will update the parameters in DSE's copy of the configuration.

This will ensure that your DSE 890 configuration reflects exactly the state of the drive.

The Online Configuration

Opening the Default Configuration Online

If you did not install a configuration in the drive, select " File→Open Online " or simply hit "F9" to open the default, shipping configuration in online mode.

Opening a New Configuration Online

At this point, your configuration should be installed in the drive. Now, select "Command→Go Online" and the configuration will be opened in online mode. Alternatively, you can select "File→Open Online", or simply hit "F9".

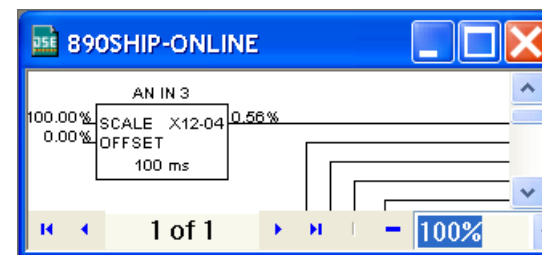
First Configuration

Working Online

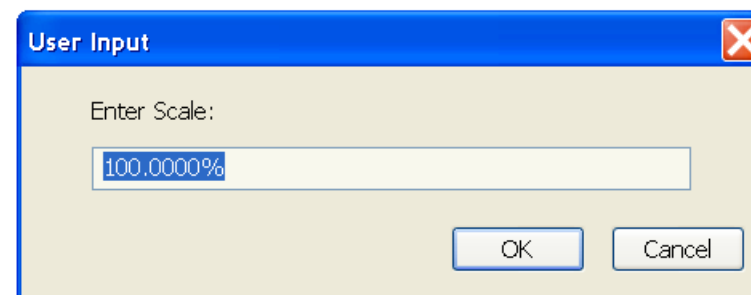
The ONLINE configuration window looks the same as an OFFLINE version, but has some extra features. Note that you cannot remove or add blocks and links in online mode.

When you hover the cursor over the output of a block, the cursor will change to the shape of a "cross". Shift-click puts the parameter into the monitor list. To read the value in the function block and the scratchpad, just click. DSE 890 will get and display the actual value from the drive.

The Scratch pad will become visible and will display the retrieved value. The same happens if you click on an input of a block while holding the "SHIFT" key.

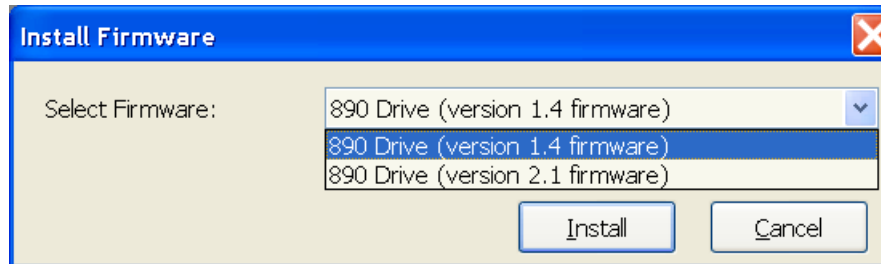


If you want to change an input value of a function block, simply click on the block input while holding down the "CTRL" key. This will bring up a dialog prompting for the value to be set. For instance, clicking on AN IN 3 : SCALE while holding the CTRL key will open the following dialog.



Install New Firmware

In the Command Menu, select "Install Firmware". A dialog will pop up which allows you to select a firmware:



Once selected, press OK and the firmware download will start. It may take a few minutes.

