INSTRUCTION MANUAL

MigaMonitor

MIGATRONIC

MigaMonitor

Instruction manual

Introduction

MigaMonitor is a software program, which makes it possible to store welding data and present those on a computer. The program is designed for Migatronic welding equipment and can operate together with FLEX 4000/5000 and SIGMA 300/400/500. The system exchanges data via the Migatronic CAN-bus system and takes advantage of the very precise measuring system in digitally controlled welding equipment. The MigaMonitor kit consists of the following items:

18600101 PC-kit MigaMonitor
- CD with the MigaMonitor software and drivers.
- 50113464 Instruction manual for MigaMonitor
- Interface cable

The program can be installed in either a Laptop or on a Desktop PC. The PC shall be equipped with at CAN-bus interface card as specified below.

System requirements:

The Migamonitor software can operate on Windows 2000 or Windows XP.
The PC used for connection to the welding equipment shall be equipped with a CAN-bus card from the below mentioned supplier. CAN-bus card from other suppliers will not work together with the program.

Specification for the CAN-bus interface card:

|	Manufactur	Item no	Description
Laptop:	National Instruments,	777499-01,	PCMCIA-CAN, 1-PORT
Disktop:	National Instruments,	777357-01,	PCI-CAN, 1-PORT, 9-PIN DSUB
Website:	www.ni.com		

Installation:

Installation of the CAN-bus card must not be carried through before the software has been installed on the PC. The software, which is supplied with the CAN-bus card from National Instruments, shall not be used. All necessary software for the MigaMonitor system can be found on the MigaMonitor CD.

Insert the MigaMonitor CD into the PC and start the installation with the command: setup. Follow the instructions on the screen. Switch of the PC when the installation of the software is completed and mount the CAN-bus card into the PC following the instruction from National instruments.
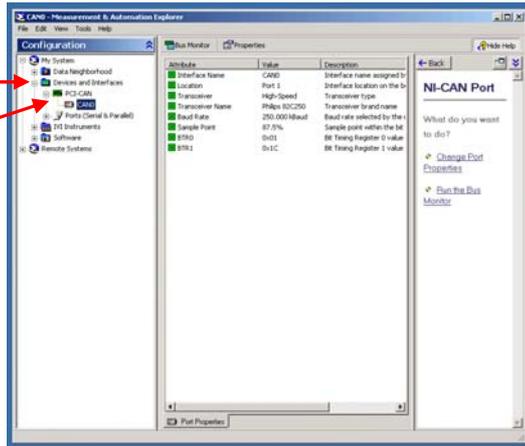
Configuration of the CAN-bus card.
Start the program "Measurement & Automation" from the Windows "Start" bottom and the "Programs" menu.
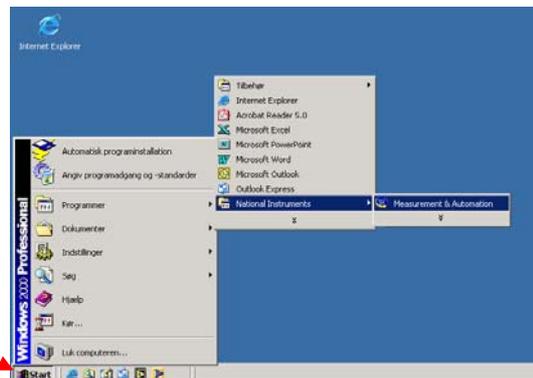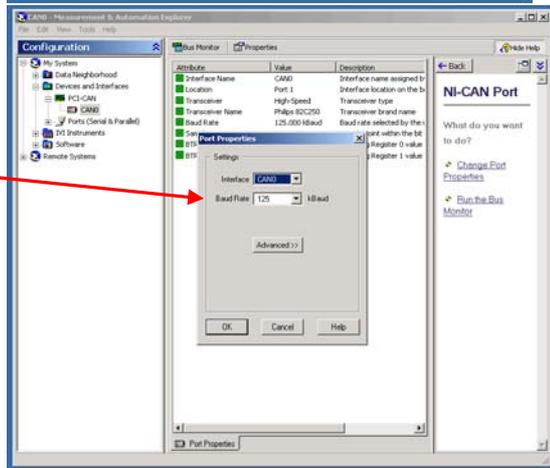
From the start screen of "Measurement & Automation", click on "Devices and Interfaces" and PCI-CAN in "Configuration".
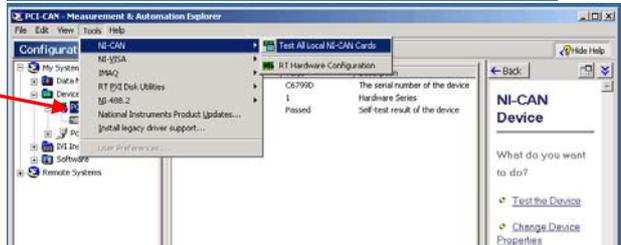
Right-click on CAN0 and select "Properties"

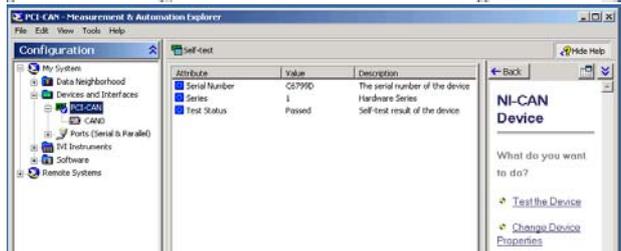Select the correct Baud Rate according to the current welding equipment:

Flex 4000 : 125 kbaud
Flex 5000 : 125 kbaud
Sigma 300 : 250 kbaud
Sigma 400 : 250 kbaud
Sigma 500 : 250 kbaud

CAN card test:
Right-click on "PCI-CAN" and click on "self-test"

The following screen will be displayed after the CAN-card has passed the test

Now the installation procedure of the hardware is completed.

Configuration of the MigaMonitor software
When the MigaMonitor is started for the first time a special configuration menu will be displayed.
Fill in the registration name (company name) and registration code (Key) supplied together with the software.
Select equipment type and fill in "Connection to power source". The PC does not need a CAN-bus card if it is used only for analysis of welding data and print out. Finalise by pushing the registration bottom.
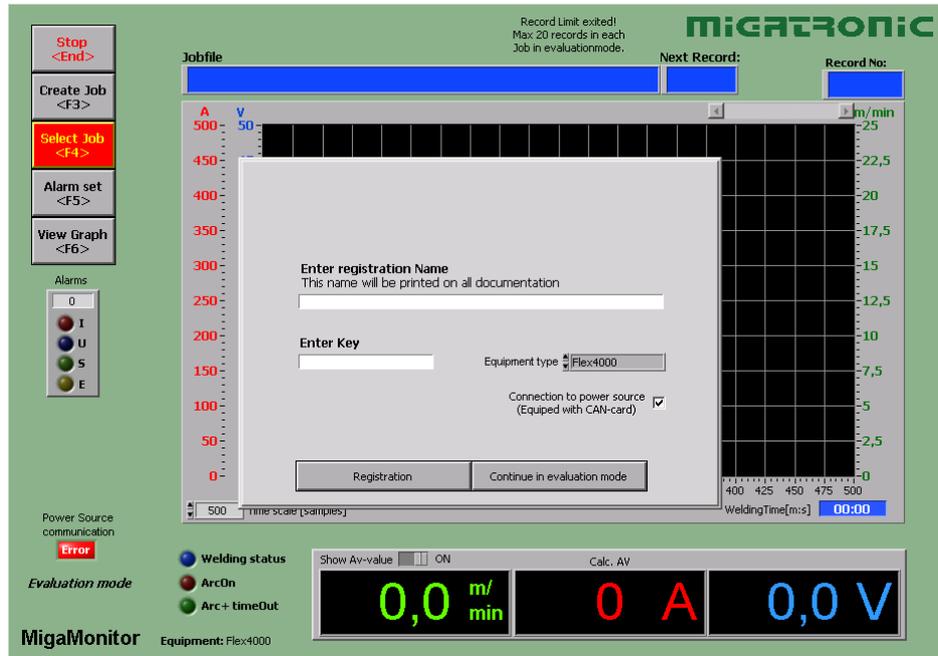

If a Key has not been supplied together with the program you can continue in evaluation mode. In this mode the number of records in each welding job are limited to 20 and printout function are blocked.

A valid code can be obtained by contacting your Migatronic dealer.

The program must be restarted before it is ready for use.

Use of the program

At the beginning of the program, the following picture will be displayed on the screen:
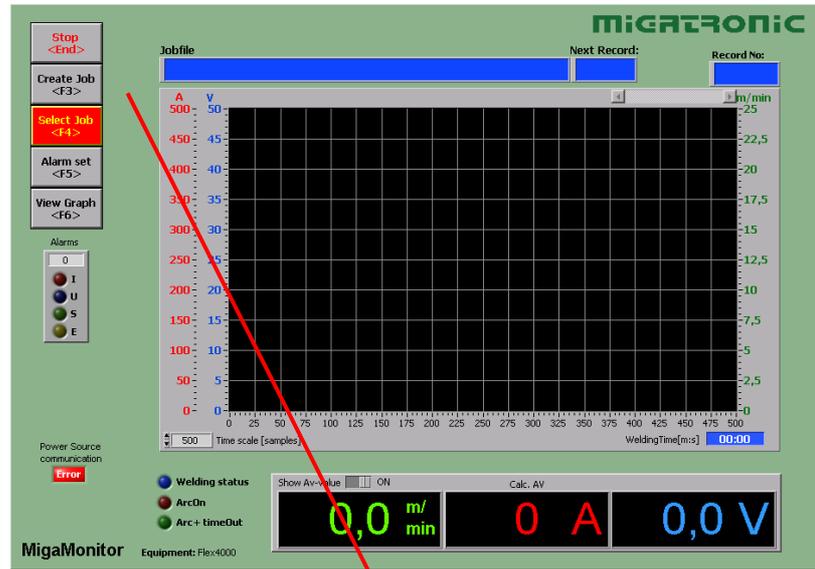

Create Job

It's necessary to create a welding job before you can store welding data on the harddisk on your PC. Push <F3> and follow the instruction on the screen. Pushing Save/<F8> saves when the data are filed in the job. It's also possible to reload a job and use this as a template for creating a new job.

Change of default directory.

By this function it is possible to change the default directory used for storing welding data.
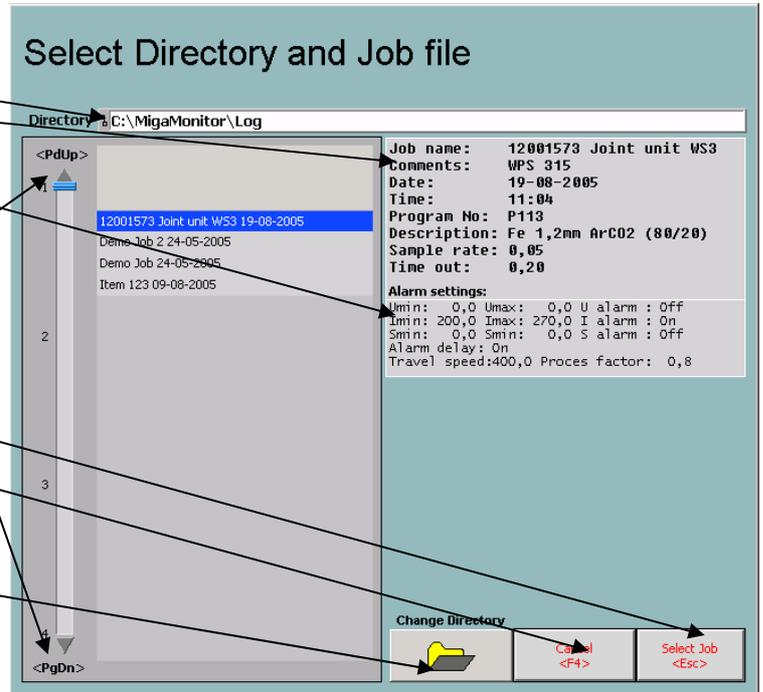- Go to the next directory.
- Go to rod directory
- Create a new directory
- Select this directory as default.
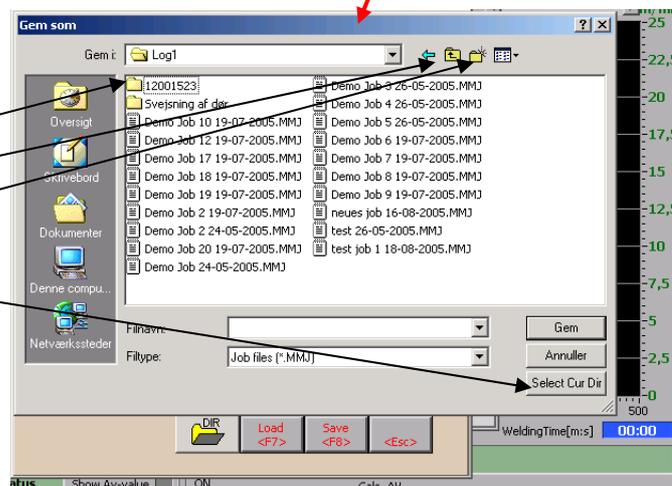
Select Job

In this function, the welding job, in which the records are saved, is selected.
Push the bottom "Select Job/<F4>" on the main screen.

- Current directory

- The current job specification

- Alarm settings in current welding job

- Step up and down.

- Select the welding job

- Cancel – return without any changes

- Change current directory
  and create new directories.

Select Directory and Job file

Directory C:\MigaMonitor\Log

<PdUp>

12001573 Joint unit WS3 19-08-2005
Demo Job 2 24-05-2005
Demo Job 24-05-2005
Item 123 09-08-2005

2

3

4

<PgDn>

```
Job name:    12001573 Joint unit WS3
Comments:    WPS 315
Date:        19-08-2005
Time:        11:04
Program No:  P113
Description: Fe 1,2mm ArCO2 (80/20)
Sample rate: 0,05
Time out:    0,20

Alarm settings:
Umin:   0,0 Umax:   0,0 U alarm : Off
Imin: 200,0 Imax: 270,0 I alarm : On
Smin:   0,0 Smin:   0,0 S alarm : Off
Alarm delay: On
Travel speed:400,0 Proces factor:  0,8
```

Change Directory

| | Cancel <F4> | Select Job <Esc> |

Alarm settings
Alarm settings are associated to each welding job.
Alarm limits for maximum and minimum value of
welding Current, Voltage and Wire feed speed can
be adjusted.
Eg: If the expected welding current is 235 A the
minimum limit can be adjusted to 200 A and the
maximum limit can be adjusted to 270 A and the
bottom is set to "ON".
Result: On all records in this job, there will be
markings if the limits are exceeded. The number of
samples with exceeded limits will be shown.
Alarm delay
During welding start the alarm can be disabled.
Alarm delay is the time from start of welding to the
time where the alarm is enabled.

Alarms and travel speed setting in actual Job-file

Job-file
12001573 Joint unit WS3 19-08-2005

	Umin	Umax	
Voltage	0,0	0,0	OFF
	Imin	Imax	
Current	200,0	270,0	ON
	S min	S max	
Wire speed	0,0	0,0	OFF

Alarm delay [s] 1,0

Travel speed [mm/min] 400,0

Proces factor 0,80

<Enter>

<Esc>
Cancel

Travel speed and **Process factor** is used for calculation of the heat input, shown on the graph.
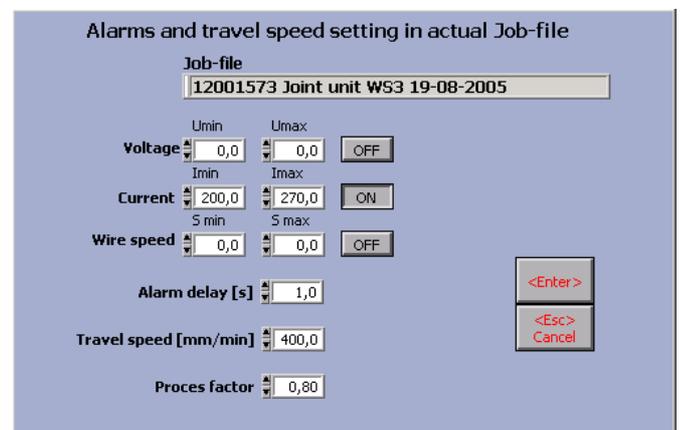
Recording of welding data

The program is ready for storage of welding data when the welding job is selected and data are stored on the harddisk. The following data is shown on the screen during recording.

Current record number

Next record number

Number of alarms during last record
Current alarm
Voltage alarm
Wire feed alarm

Alarm marking on graph
(Alarms during alarm delay is not counted)

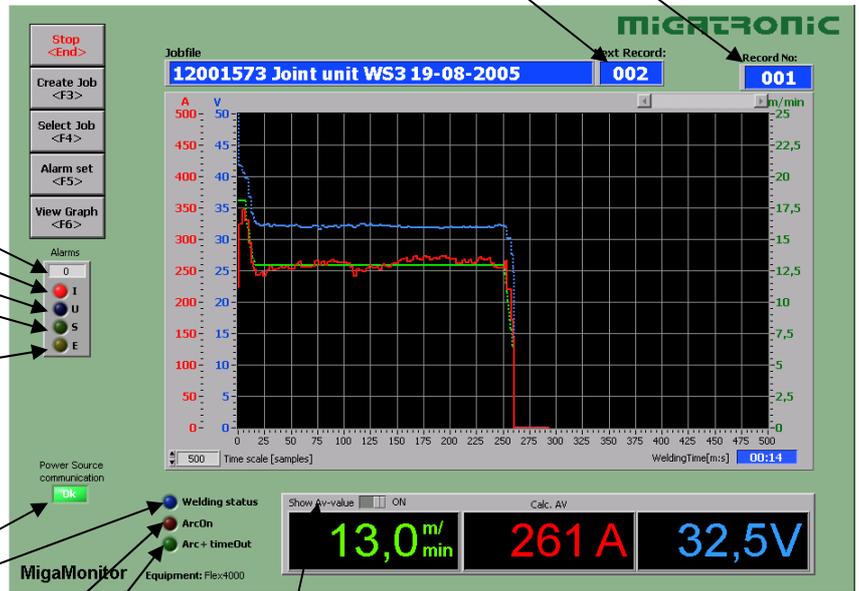Green indicates that communication to the power source is working as intended

Voltage on torch

Arc established

Arc established or post timer running

Activate calculated average value during last welding record

Reading of wire speed, welding current and welding voltage. Colours are equal to the graphs.

View Graph
Push on View Graph/F6 from the main screen activates this screen which is used for navigation of the records.

Select the graph, <5> and <F6>.

Select the directory

Select the job
<PdUp> and <PdDn>

View Graph
Pushing <F3> and <F4> recalls the highlighted graph. The same bottoms are used to return to this screen from the graphs, <F3> is used for stepping return and <F4> for stepping forward.
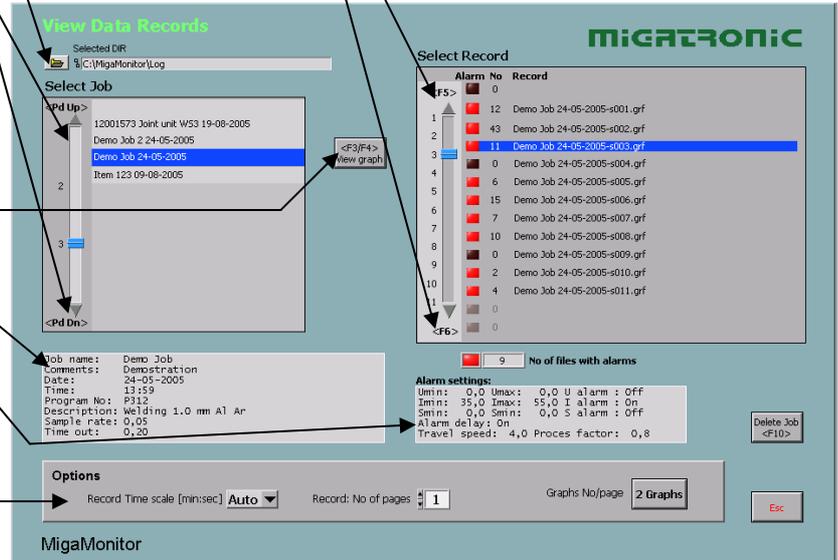
Job data

Alarm settings

Options
Record time scale: choose between Auto or exact settings.
No of pages: No of pages used for the current graph.
Graph No/page: no of graphs on each page.

View Data Records

Selected DIR
C:\MigaMonitor\Log

Select Job

<Pd Up>

12001573 Joint unit WS3 19-08-2005
Demo Job 2 24-05-2005
Demo Job 24-05-2005
Item 123 09-08-2005

<Pd Dn>

<F3/F4> View graph

Select Record

Alarm	No	Record
	0	
	12	Demo Job 24-05-2005-s001.grf
	43	Demo Job 24-05-2005-s002.grf
	11	Demo Job 24-05-2005-s003.grf
	0	Demo Job 24-05-2005-s004.grf
	6	Demo Job 24-05-2005-s005.grf
	15	Demo Job 24-05-2005-s006.grf
	7	Demo Job 24-05-2005-s007.grf
	10	Demo Job 24-05-2005-s008.grf
	0	Demo Job 24-05-2005-s009.grf
	2	Demo Job 24-05-2005-s010.grf
	4	Demo Job 24-05-2005-s011.grf
	0	
	0	

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Job name: Demo Job
Comments: Demostration
Date: 24-05-2005
Time: 13:59
Program No: P312
Description: Welding 1.0 mm Al Ar
Sample rate: 0,05
Time out: 0,20

9   No of files with alarms

Alarm settings:
Umin: 0,0 Umax: 0,0 U alarm : Off
Imin: 35,0 Imax: 55,0 I alarm : On
Smin: 0,0 Smin: 0,0 S alarm : Off
Alarm delay: On
Travel speed: 4,0 Proces factor: 0,8

Delete Job <F10>

Options

Record Time scale [min:sec] Auto ▼   Record: No of pages 1   Graphs No/page 2 Graphs

Esc

MigaMonitor

Graph
Printing graph: push Ctrl+P or select Print window on menu.

Return, push <Esc>, <F3> or <F4>.
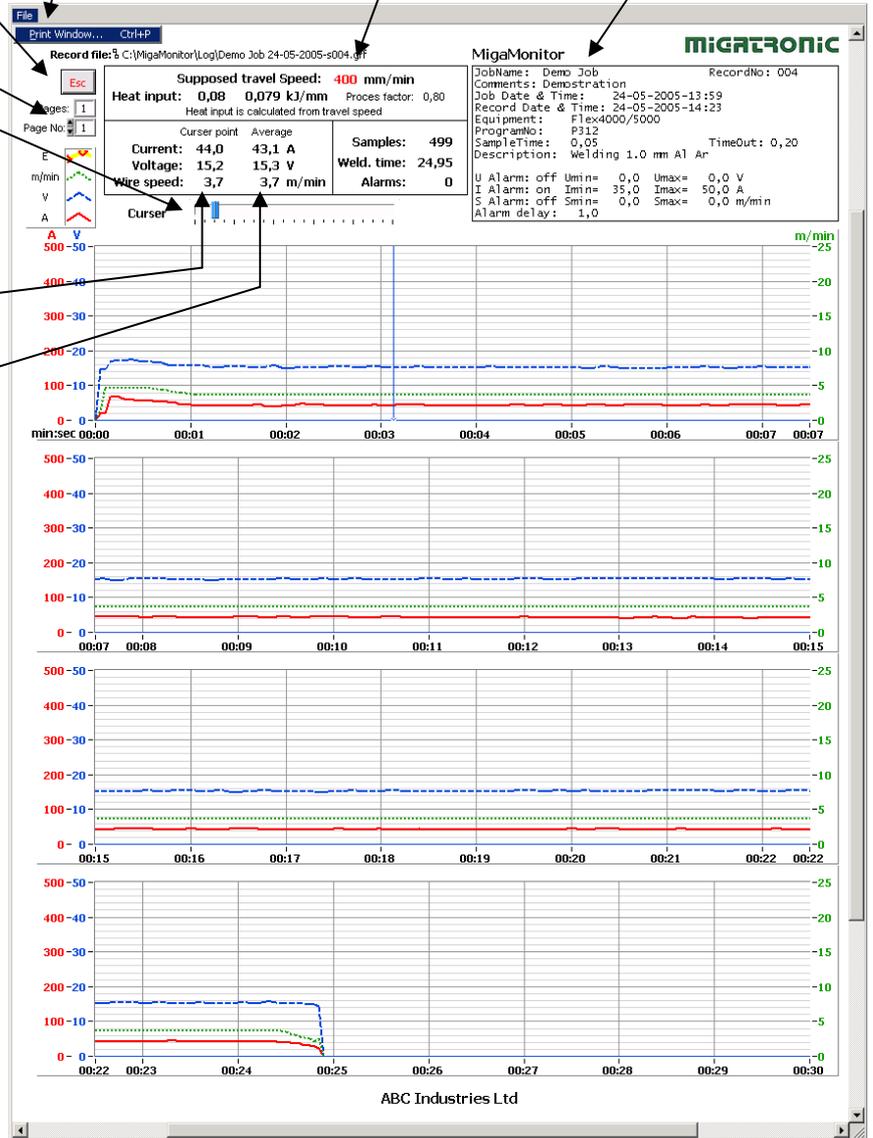
Select page no

Move cursor <F5> and <F6>.

Cursor column

Average column

Setting of supposed travel speed
(Only this value can be changed).

Record information

Set-up screen

Push <Ctrl> + <F1> activate the set-up screen.

This function can be protected by a set-up password. By default there is no password protection.

Control mode
PC equipped with a CAN card or not.

Equipment type
If SIGMA 300/400/500 is selected the baud-rate on the CAN-card shall be changed. This is done in the measurement and automation program as shown on page 3.

Path
C:\MigaMonitor\Log

User
ABC Industries Ltd

Key
2H4Q60LQ9OKCUNAJ

Control Mode
Computer not equiped with CAN-card (off-line)

Equipment type
Flex4000

Remember to set the Baud-rate in the hardware setup in National Instrument - Measurement & Automation Explore
Flex: 125k
Sigma: 250k

Setup Password
US2Q4C6R

Changes in settings will take place after restart of the program.

Cancel
Esc

Enter

MIGATRONIC

QUALITY SYSTEM CERTIFICATION

DNV·GL

ISO 9001

DNV GL BUSINESS ASSURANCE DENMARK A/S