

QUICK COMMISSIONING INSTRUCTIONS FOR SIEMENS VSD'S

BY HEVAC CONTROLS PTY LTD, using IOP INTERFACE.



From the main running screen **Rotate** the “OK” knob/button to the left to highlight “wizards” on the display selection bar.... Then proceed as follows.

- 1.) Press “OK” (“basic commissioning” choice will appear highlighted)
- 2.) Press “OK” (“factory reset” option displayed)
- 3.) **Rotate** “OK” knob till reset “YES” is highlighted
- 4.) Press “OK” (resets any existing data) \
- 5.) Press “OK” (CONTROL MODE-accepts default) \
- 6.) Press “OK” (MOTOR DATA- accepts default) \
- 7.) Press “OK” (MOTOR TYPE-accepts default) } = 7 x pressing “OK”
- 8.) Press “OK” (CHARACTERISTICS-accepts default) /
- 9.) Press “OK” (MOTOR CONNECTIONS-continue) /
- 10.) Press “OK” (MOTOR DATA-continue) /

(See handy hint below this list for quick edit method for analog values with multiple decimal places)

- 11.) MOTOR VOLTAGE
Enter motor voltage from motor ID plate by **rotating** “OK” knob
Press “OK”
- 12.) MOTOR CURRENT
Enter motor current from motor ID plate by **rotating** “OK” knob
Press “OK”
- 13.) POWER RATING
Enter motor Kw from motor ID plate by **rotating** “OK” knob
Press “OK”
- 14.) MOTOR Cos Phi
Press “OK” (accepts default)
- 15.) MOTOR SPEED : maximum speed in RPM at 50 Hz
Enter motor RPM from motor ID plate
Press “OK” \
- 16.) Press “OK” (CURRENT LIMIT-accepts default) \
- 17.) Press “OK” (MOTOR I.D-accepts default) \
- 18.) Press “OK” (ENCODER TYPE-accepts default) } = 5 x pressing “OK”
- 19.) Press “OK” (ENCODER PULSES-accepts default) /

- 20.) MACRO SOURCE : (I/P & O/P control program source)
- Rotate "OK"** knob till "**General Purpose Application**" is highlighted
- 21.) **Press "OK"** (loads pre-programmed application as per attached drawing)
- 20.) MINIMUM SPEED : minimum RPM speed the drive will run at, once enabled
Enter speed by **rotating "OK"** knob. (typical value~ 000450.00)
press "OK"
- 21.) RAMP UP : time taken to gradually change to full speed from startup)
Enter time by **rotating "OK"** knob. (typically 10~60 seconds i.e 000010.00s)
press "OK"
- 22.) RAMP DOWN : time taken to gradually change from max. speed to stop
Enter time by **rotating "OK"** knob. (typically 10seconds, i.e 000010.00s)
press "OK" \
- 23.) **Press "OK"** (MOTOR TEMP SENSOR-not applicable) : \
- 23.) **Press "OK"** (SUMMARY OF SETTINGS) : \
- 24.) **Press "OK"** (to save settings to memory) : } = 6 x **pressing "OK"**
- 25.) **Press "OK"** bar graph appears showing progress : /
- 26.) **Press "OK"** (no MOTOR DATA I.D) :/

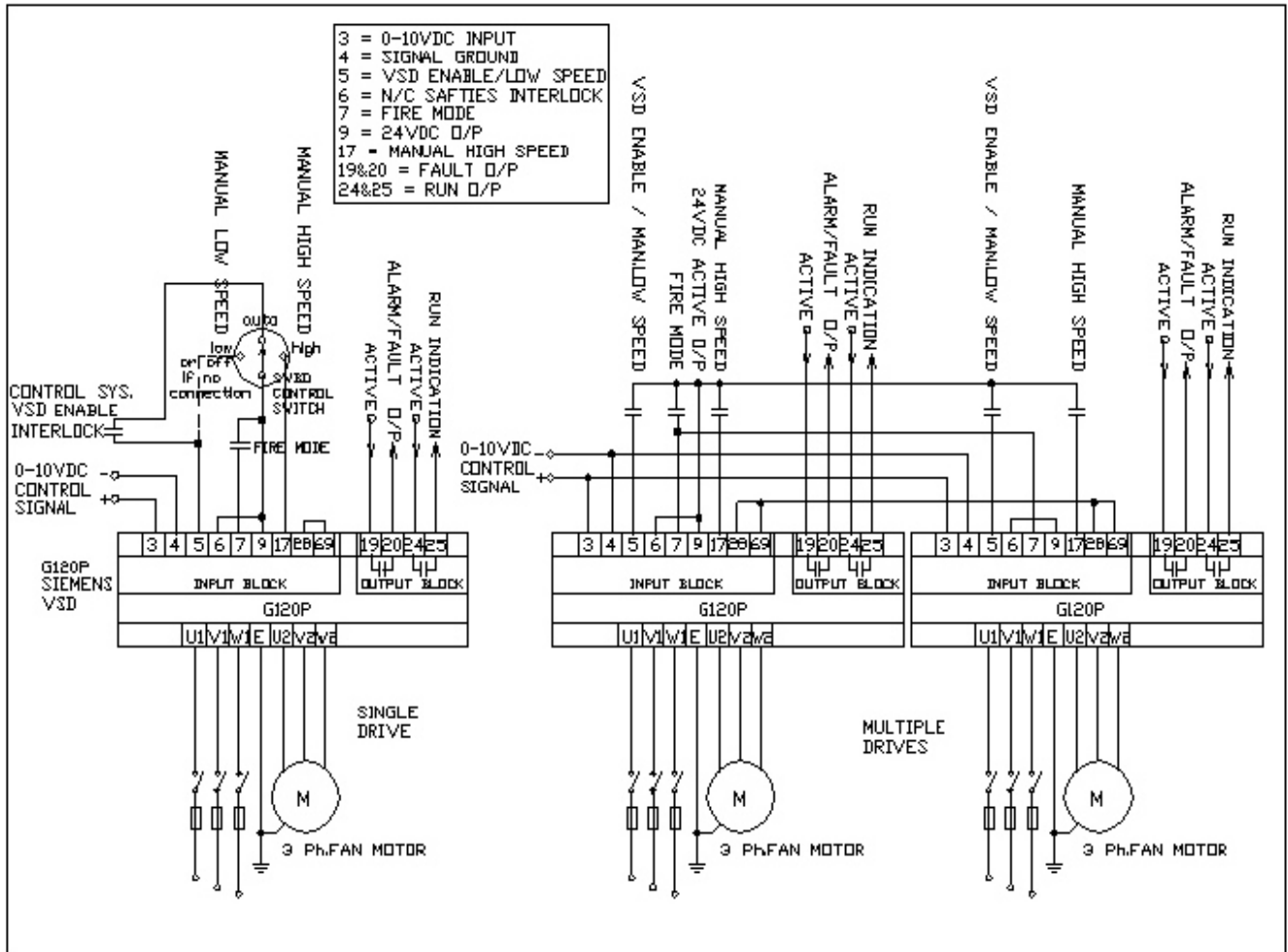
Display is now returned to main operating screen (Showing O/P speed in HZ & current consumption) with commissioning now completed, data saved to memory and VSD ready for automatic operation.

Handy Hints:

For **editing of analog values** with several possible decimal places (like ramp up/down times etc) rather than just **rotating "OK"** knob to increase a value from its lowest decimal place to a larger value (sometimes several decimal places to the left)... **Press & hold** the "OK" button until the display changes to show all possible decimal places, then to accept the current (extreme left) highlighted digit (#) **press "OK"** which moves the highlight one digit to the right, repeat until a decimal place is highlighted requiring editing, then **rotate "OK"** knob up or down until required value is displayed, then **press "OK"** to accept and move to the next digit, repeat till completed. (note pressing "ESC" moves one place back).

The **operating screen** can be reconfigured to display alternative information rather than the defaults of displaying **hertz & current** consumption. Contact Hevac for an instruction sheet for this procedure if required.

SEE ATTACHED DRAWING FOR ALL POSSIBLE WIRING CONNECTIONS RELATIVE TO ABOVE STANDARD PROGRAM .
WIRE RELATIVE INPUTS / OUTPUTS AS SUITABLE PER PROJECT REQUIREMENTS.



EDITING PARTICULAR OPERATING VALUES

THE SIEMENS VSD SAVES ITS OPERATING DATA AND PROGRAM IN A LIST OF USER ADJUSTABLE PARAMETERS. TO ALTER PARTICULAR PARAMETERS USE THE FOLLOWING PROCEDURE

- 1.) From the main running screen, rotate the “OK” knob (/button) to the right to highlight “MENU” on the displays selection bar. ***** note :there is often 2~5 second delay after pressing the “OK” knob so be sure to *pause* after pressing to allow the next screen to appear before pressing any button*****
If u make a mistake pressing the “esc” button takes you back one screen.
- 2.) Press the “OK” knob and rotate right till “PARAMETERS” is highlighted.
- 3.) Press the “OK” knob and rotate right till “SEARCH BY NUMBER” is highlighted.
- 4.) Press the “OK” knob and the main parameter number selection screen is displayed, allow for delay.
- 5.) Press the “OK” knob to accept the current highlighted digit and move one digit to the right, or rotate “OK” knob to alter a digit up or down to required value then press “OK” to except and move to the next digit till completed.

6.) Having now edited the desired parameter number and pressing “OK” on the final right hand digit, a vertical parameter list will appear showing the selected highlighted parameter number and its current user adjustable data value underneath, also neighboring parameters are displayed for easy access to nearby and often associated parameters that may also require editing.

7.) If the data value displayed with the highlighted parameter is correct then pressing the “ESC” button will return you to the main parameter input screen or you can rotate the “OK” knob to a nearby parameter that may also need to be altered.

8.) If the displayed data with the highlighted parameter is not correct then pressing “OK” will display another vertical selection list of other possible values that can be selected for that parameter. Rotate the “OK” knob until the required value is highlighted and press “OK”, then press the “ESC” button which will return you to the previous vertical parameter selection screen to allow editing of other nearby parameters, or press escape to return to the main parameter selection screen to jump to other further away parameters.

9.) Press the “ESC” button repeatedly till the main operating screen is displayed when all parameter editing is finished.

10.) ** After changes have been completed it is recommended to save data from the interface memory to the permanent drive memory otherwise changes may be lost on long power outages. Follow the steps below to transfer changes to permanent drive memory ***.**

a.) From the main screen **rotate** the “OK” knob till “MENU” is highlighted in the screen selection bar and **press** the “OK” knob.

b.) **Rotate** the “OK” knob until “EXTRAS” is highlighted and **press** “OK”.

c.) **Rotate** the “OK” knob until “PARAMETER SETTING” is highlighted and **press** “OK”.

d.) **Rotate** the “OK” knob to “save RAM to ROM and then **press** “OK”

e.) “YES” will then be highlighted, **press** “OK” to continue, and a progress bar will appear during saving process, when finished **press** the “ESC” button to return to the main menu.

f.) It is good practice after saving the program changes, to turn the VSD power off & on by the mains isolator, and then test the drive for correct operation in response to its connected inputs.

COMMON USER ADJUSTABLE PARAMETERS

<u>Parameter</u>	<u>Default value</u>	<u>description</u>
1003	1200 rpm	High speed in rpm (Digital input on terminal 17)...usually max RPM
1015	1500 rpm	Fire mode speed in rpm (triggered by digital input on terminal 7)
1080	450 rpm	Min. speed at VSD enable/Man. Low speed (digital input on terminal 5)
1047	10s	ramp up time
1048	10s	ramp down time

To alter basic motor settings as per motor name plate - redo basic commissioning as described earlier.