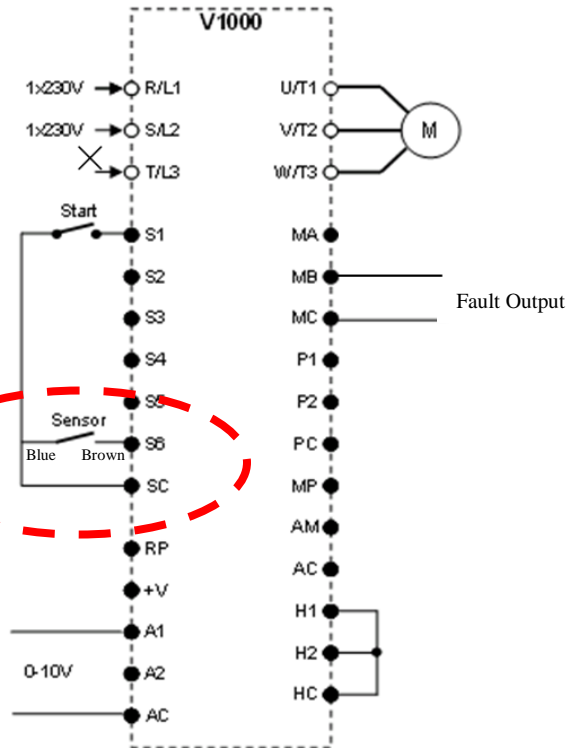


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Wiring Diagram



Start Signal

S1 and SC

Rotation Sensor

S6 «Brown» and SC «Blue»

Alarm signal

MB and MC

Speed reference (0-10V)

A1 and AC

Rotation Guard

Rotation sensor status: First, a red light turns ON, then a yellow (at operation, signal ON). When the sensor loses signal, first the yellow light turns OFF, and then the red light turns OFF. The sensor detects against a metal screw mounted on the heat exchanger.

Parameter Setup

NB! Check parameter E2-01 (Motor Protection) and adjust parameter H3-03 to the desired speed (in %/Hz) of +10V reference signal.

The following parameters are altered at Covent AS:

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Default	Description	Param.	Covent	New	Unit
2220	Initialization (2-Wire, Automatic Reset)	A1-03	2220		-
0	Coast to Stop	b1-03	1		-
0	Run Command at Power Up	b1-17	1		-
0	PID Sleep Function Start Level	b5-15	3		Hz
0	PID Sleep Delay Time	b5-16	5		Sec
10	Acceleration Time	C1-01	15		Sec
10	Deceleration Time	C1-02	15		Sec
1	Torque Compensation Gain	C4-01	0,30		-
200	Input Voltage Setting	E1-01	230		V
50	Max Output Frequency (\geq E1-06)	E1-04	100		Hz
200	Max Output Voltage	E1-05	230		V
2,5	Mid Output Frequency	E1-07	15		Hz
16	Mid Output Frequency Voltage	E1-08	80		V
1,3	Minimum Output Frequency	E1-09	2		Hz
12	Minimum Output Frequency Voltage	E1-10	40		V
-	Motor Rated Current	E2-01			A
E	Terminal MA, MB and MC Function Selection (relay)	H2-01	10E		-
0	Terminal A1 Function Selection	H3-02	30		-
100	Value in % of Maximum Output Frequency Ref. (10V)	H3-03	50		% (Hz)
0	Value in % of Minimum Output Frequency Ref. (0V)	H3-04	1		% (Hz)
0	Motor Overload Protection Selection	L1-01	3		-
0	Momentary Power Loss Operation Selection	L2-01	2		-
0	Number of Auto Restart Attempts	L5-01	2		-
1	User Monitor Selection After Power Up	o1-02	3		-
1	LOCAL/REMOTE-Key Function Selection	o2-01	0		-
1	STOP-Key Function Selection	o2-02	0		-
0	Accumulated Operation Time Selection	o4-02	1		-
0	Function Block Diagram (FBD) Selection	A1-07	1		-
40	Multi-Function Digital Input Terminal S1 Function Selection	H1-01	90		-
4	Defines That the Rotation Sensor is Connected to Input 6	H1-06	95		-
0	Stand Still Detection Time	Q1-01	600		Sec*10
0	Standstill detection level (b5-15)	Q1-02	3		-
0	Speed Reference Stand Still Protection (H3-03)	Q1-03	50		-
0	Detection Setup: 0 Sensor and standstill detection enable 1 Sensor detection disable 2 Standstill detection disable 3 Sensor and Standstill detection disable	Q1-10	3		-
0	Broken Sensor Detection Time	Q3-01	500		Sec
0	Running Time for Standstill Protection	Q3-04	15		Sec
0	Save Parameter for Covent-Initialization (Automatic Reset)	o2-03	1		-
0	Allows Parameter Passing to External Panel	o3-02	1		-
0	Initialization of Covent-Parameters (Automatic Reset)	A1-03	1110		-

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Procedure for programming

Display	Name	Function
	Data Display Area	Displays the frequency reference, parameter number, etc.
	ESC Key	Returns to the previous menu.
	RESET Key	Moves the cursor to the right. Resets a fault.
	RUN Key	Starts the drive in the LOCAL mode. The Run LED • is on, when the drive is operating the motor. • flashes during deceleration to stop or when the frequency reference is 0. • flashes quickly the drive is disabled by a DI, the drive was stopped using a fast stop DI or a run command was active during power up.
	Up Arrow Key	Scrolls up to select parameter numbers, setting values, etc.
	Down Arrow Key	Scrolls down to select parameter numbers, setting values, etc.
	STOP Key	Stops the drive.
	ENTER Key	Selects modes, parameters and is used to store settings.
	LO/RE Selection Key	Switches drive control between the operator (LOCAL) and the control circuit terminals (REMOTE). The LED is on when the drive is in the LOCAL mode (operation from keypad).

1. Access to programming mode:

Press number of times until «Par» is displayed. Then press to enter programming mode.

2. Find the desired parameter group

Use or to scroll between the different parameter groups in the programming menu
A1-... > A2-... > b1-... > b2-... etc.

3. Find the desired parameter number

When the desired parameter group is found, press to scroll between the different parameter numbers in parameter group, e.g. d1-01 where 01 blink. To scroll between parameter numbers (··-01, ··-02, ··-03 etc.) use or .

4. Change the parameter value

When the desired parameter number is found, press to facilitate change of parameter. Use to move the cursor to the desired position (flashing digit). Changes are made by or . To save the changed value, press . «End» appears for a moment if the new value is accepted.

In order to advance/change the second parameter in the same parameter group, use or , and repeat point 4 to change the parameter. If the desired parameter is in another group, press to go up one level (code parameter group flashing) and repeat points 2, 3 and 4.

5. End of programming

After completing the programming, the drive **must** be put in «Drive»-mode.

Press until «F xx.xx» is displayed and it glows in the «DRV»-diode. End with . When A1-07=1, «DRV» will flash.

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Alarm Codes

If the drive detects an error, fault outputs (MA-MB-MC) are activated and the drive will stop the motor after. Below are some common error messages, if other errors occur, see the complete manual.

Error Code	Description	Cause
oC	Overcurrent Converter output current has exceeded 200% of rated current	<ul style="list-style-type: none"> • Short circuit or ground fault on the drive output side • The load is too heavy. • The accel./decel. times are too short. • Wrong motor data or V/f pattern settings. • A magnetic contactor was switched at the output.
GF	Ground fault	Ground leakage current has exceeded 50% of the drives rated output current. <ul style="list-style-type: none"> • Cable or motor insulation is broken. • Excessive stray capacitance at drive output.
PUF	DC bus fuse is defective	<ul style="list-style-type: none"> • Output transistor defective • Short circuit on motor cable or motor
ou	DC Overvoltage	DC bus voltage rose too high. <ul style="list-style-type: none"> • The deceleration time is too short. • Stall prevention is disabled1. • Braking chopper / resistor broken. • Unstable motor control in OLV. • Too high input voltage.
Uu1	Undervoltage	The voltage in the DC bus fell below the undervoltage detection level (L2-05). <ul style="list-style-type: none"> • The power supply failed or one input phase has been lost. • The power supply is too weak.
oH oH1	Heatsink Overheat	<ul style="list-style-type: none"> • Surrounding temperature is too high. • The cooling fan has stopped. • The heatsink is dirty. • The airflow to the heatsink is restricted.
oL1	Motor Overload	<ul style="list-style-type: none"> • The motor load is too heavy. • The motor is operated at low speed with heavy load. • Cycle times of accel./ decel. are too short. • Incorrect motor rated current has been set.
DWEZ	violations of the belt to heat recovers	sensor for the rotation has not given the signal within the time set in Parameter Q3-01 check that the belt is ok Check that the sensor signals, yellow indication when the sensor "flag" passes.
oL2	Drive Overload	<ul style="list-style-type: none"> • The load is too heavy. • The drive capacity is too small. • Too much torque at low speed.

This document is intended as a brief start-up assistance and is subject to typing errors and deficiencies. For complete information see the manual and data sheet.