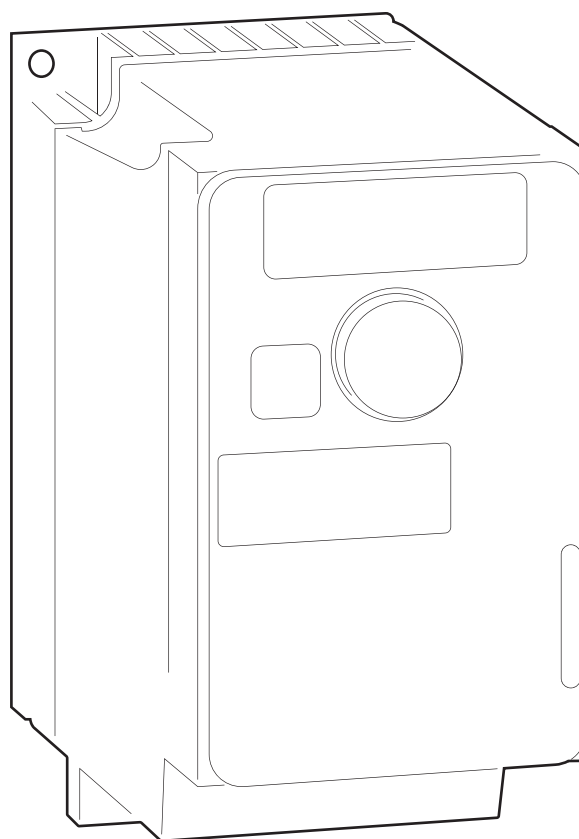




Programming manual

# SFC

**ST 300**  
0,37-7,5 kW



**FUMEX**  
PURE ADVANTAGE

General

This manual is a quick aid for easy programming of the frequency converter together with the pressure transmitter **ST 300** and shall not be seen as a complete product manual.

Function

All programming is executed on the keys at the front display (see **Fig. 1**). The jog dial (1) is used for navigating the menus and to select or confirm information. The ESC key (2) quits a menu/ parameter or clears and reverts the value. The front panel is opened via button (3).

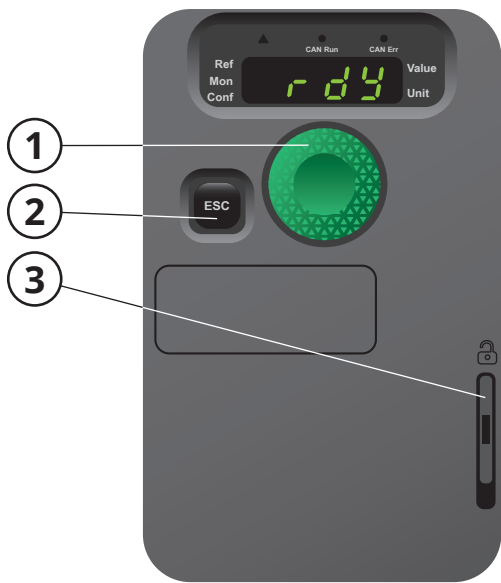


Fig. 1

Parameter choice

For parameter choice, see **Fig. 2**.

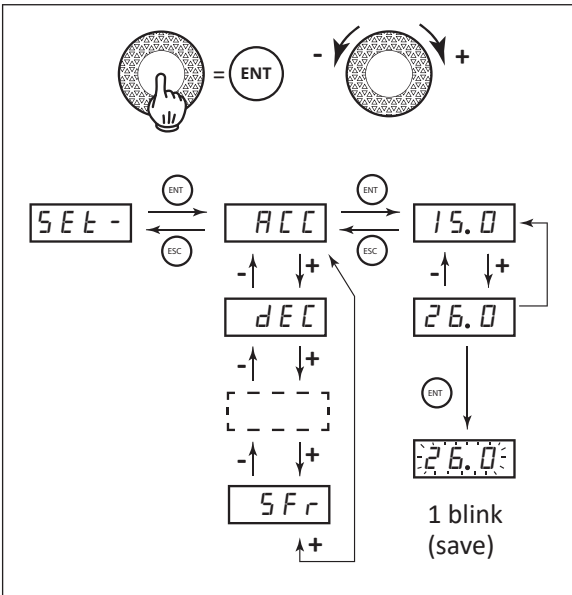


Fig. 2

Electrical wiring

The supply voltage is connected to terminal (6) **Fig 3**. The supply cable for the fan motor is connected to terminal (7). The start signal is wired between DI1 and +24 at terminal (8). The signal from the pressure transmitter is wired between COM, AI1 and +24 at terminal (8, 9).

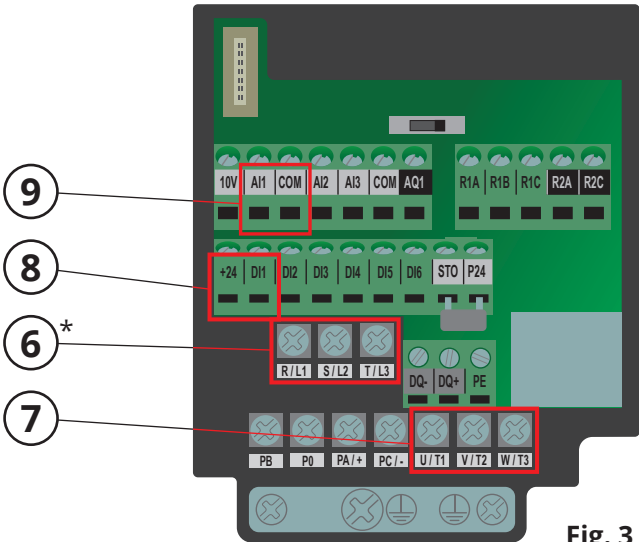
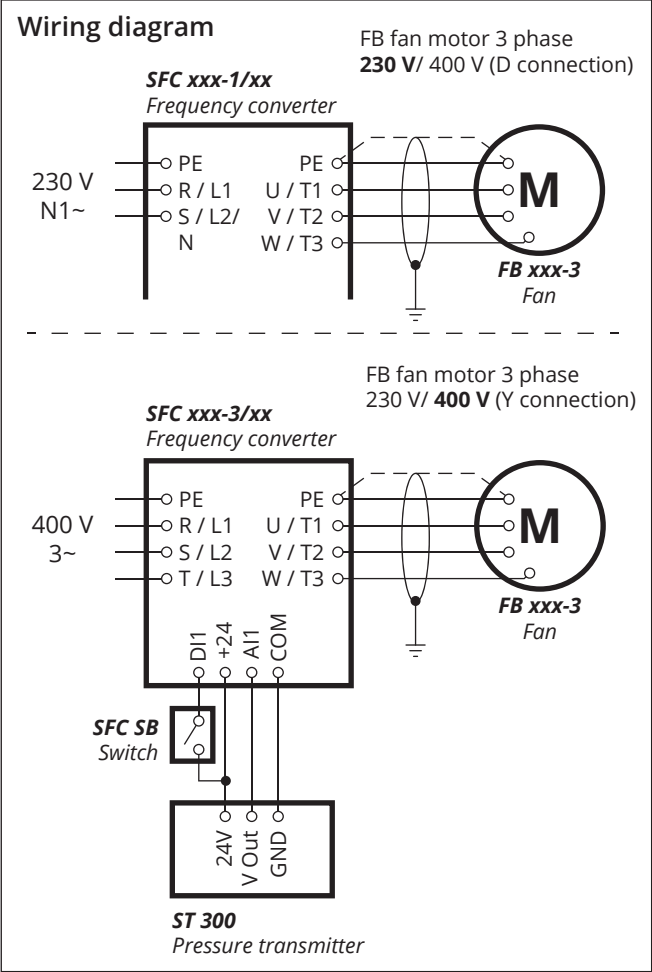


Fig. 3

\* When the supply is 1 phase, the terminals are marked "R/L1" and "S/L2/N".  
When the supply is 3 phase, the terminals are marked "R/L1", "S/L2" and "T/L3".



## Programming

Program all parameters as per the programming guide. Start from the top (and go down) accordingly. During the programming, the fan must not receive any start signal. This means that DI1 and +24 (8) cannot be a closed circuit.

Note! The green parameters can be changed, to optimise current system. The red parameters can be found on the motor. The blue parameter "*rPI*" indicates desired pressure in the exhaust air duct. Please check value on pressure transmitter **ST 300**.

PROGRAMMING GUIDE						
Menu	Sub menu	Parameter	Function	Factory settings	Recommend. value	Chosen value
<i>CONF</i>	<i>FULL</i>	-	Access to configuration	-	-	
<i>drC-</i>	<i>CLL</i>	-	Variable torque	<i>Std</i>	<i>UF9</i>	
<i>CLL-</i>	<i>FrI</i>	-	Change of reference source	<i>RII</i>	<i>RI2</i>	
<i>SI n-</i>	-	<i>bFr</i>	Motor frequency (Hz)	<i>50</i>	<i>Varies</i>	
<i>SI n-</i>	-	<i>UnS</i>	Nominal motor voltage (V)	-	<i>Varies</i>	
<i>SI n-</i>	-	<i>FrS</i>	Nominal motor frequency (Hz)	<i>500</i>	<i>Varies</i>	
<i>SI n-</i>	-	<i>nCr</i>	Nominal motor current (A)	-	<i>Varies</i>	
<i>SI n-</i>	-	<i>nSP</i>	Nominal motor speed (rpm)	<i>1400</i>	<i>Varies</i>	
<i>SI n-</i>	-	<i>ACC</i>	Acceleration (s)	<i>30</i>	<i>50</i>	
<i>SI n-</i>	-	<i>DEC</i>	Retardation (s)	<i>30</i>	<i>50</i>	
<i>SI n-</i>	-	<i>LSP</i>	Min. frequency (Hz)	<i>00</i>	<i>150</i>	
<i>SI n-</i>	-	<i>HSP</i>	Max. frequency (Hz)	<i>500</i>	<i>500</i>	
<i>SI n-</i>	-	<i>IEH</i>	Thermal motor protection (A) = motor current	-	<i>Varies</i>	
<i>drC-</i>	<i>RSY-</i>	<i>IPC</i>	Motor parameter choice	<i>nPr</i>	<i>CO5</i>	
<i>drC-</i>	<i>RSY-</i>	<i>CO5</i>	Motor's Cos Phi	-	<i>Varies</i>	
<i>drC-</i>	-	<i>SFr</i>	Switch frequency (kHz)**	<i>40</i>	<i>16</i>	
<i>I -0-</i>	-	<i>CLL</i>	2 wire type	<i>Ern</i>	<i>LEL</i>	
<i>FUn-</i>	<i>Stt-</i>	<i>Stt</i>	Stop type	<i>Stt</i>	<i>nSt</i>	
<i>FUn-</i>	<i>PId-</i>	<i>PIF</i>	Regulation feedback	<i>n0</i>	<i>RII</i>	
<i>FUn-</i>	<i>PId-</i>	<i>PII</i>	Internal PI reference	<i>n0</i>	<i>YES</i>	
<i>FUn-</i>	<i>PId-</i>	<i>PIF1</i>	Min PID feedback	<i>100</i>	<i>100</i>	
<i>FUn-</i>	<i>PId-</i>	<i>PIF2</i>	Max PID feedback	<i>1000</i>	<i>2000</i>	
<i>FUn-</i>	<i>PId-</i>	<i>PIP2</i>	Max PID reference	<i>900</i>	<i>2000</i>	
<i>FUn-</i>	<i>PId-</i>	<i>rPI</i>	Internal desired value for PI regulator (Pa)	<i>150</i>	<i>***</i>	
<i>FUn-</i>	<i>PId-</i>	<i>rPG</i>	PI proportional amplifier	<i>100</i>	<i>185</i>	
<i>FUn-</i>	<i>PId-</i>	<i>rIG</i>	PI integral amplifier	<i>100</i>	<i>020</i>	
<i>FLt-</i>	<i>FLr-</i>	<i>FLr</i>	Soft restart	<i>n0</i>	<i>YES</i>	

\*\* Only to be changed when there is unusual noise from the motor.

\*\*\* 500 Pa for laboratory extraction, 1500 Pa for industrial and exhaust extraction.

## Default reset

### W3

When frequency converter SFC is adapted for FUMEX W3 filter systems, it must not be reset as the frequency converter is specially programmed. If factory reset is performed, all settings can't be restored.

When resetting to the factory settings, proceed as below:

If the display doesn't show *rdY*, press **ESC** until it does. Enter menu *CONF* and select parameter *FL5-*. Change the value from *FL51* to *FrY-*, confirm with **ENT**. Change *ALLJ* to *ALL''* by pressing **ENT**. Go back one step in the menu with **ESC** and change from *FrY-* to *BF5*. Press **ENT** and change *n0* to *YES* by pressing and holding **ENT** for 5 s.

The frequency converter will now have the initial factory settings and is ready for programming again.

## Settings for W3

### W3

Frequency converter SFC, adapted for FUMEX W3 filter systems, is programmed by FUMEX. Only the reference pressure needs to be set.

### Setting the reference pressure

### W3

For FUMEX W3 filter systems, a reference pressure must be set, which corresponds to the required under pressure for the desired airflow in the system.

Click twice on the jog dial (1, **Fig. 1**) and set the desired reference pressure by turning the jog dial.

## Troubleshooting



Troubleshooting when power is on, should only be performed by an authorised electrician.

Information that makes it easier to identify occurred problems that are easy to solve can be found in the troubleshooting guide. Always go through trouble shooting guide before contacting FUMEX.

TROUBLESHOOTING GUIDE		
Symptom	Probable cause	Recommended measure
1. Programming failure.	DI1 and +24 are closed.	Remove wiring.
	The parameters are not programmed in the correct order.	Program the parameters, as per the programming guide from the top to the bottom.
2. The system does not work.	The wiring is not done as per the wiring diagram.	Check the wiring.
3. Performance loss of the fan.	Wrong rotation direction of the fan.	Check rotation direction.

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# FUMEX

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