

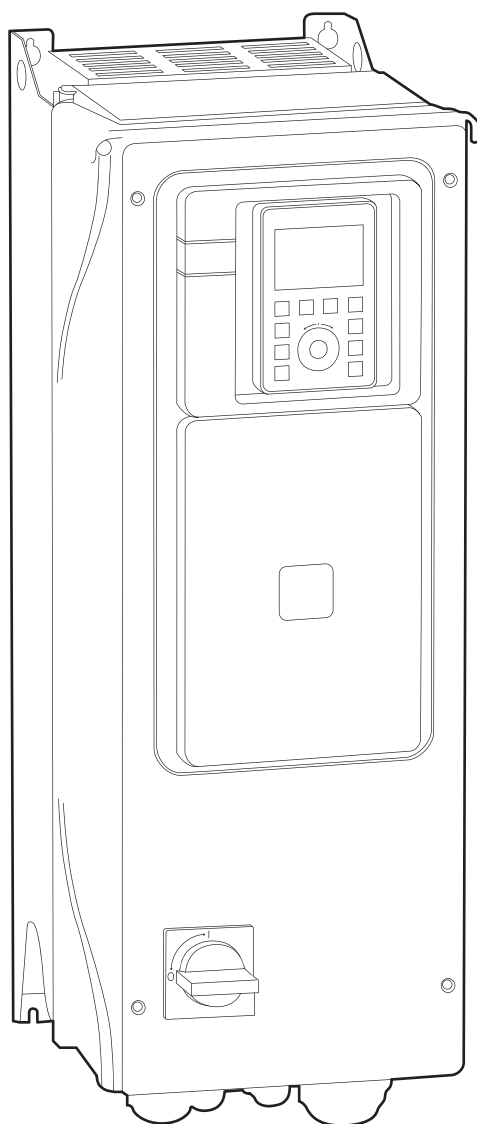


Programming manual

SFC

ST 300

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 four FUNCTION keys (1) selects what is graphically at the bottom of the display. The ESC key (2) exits menu or parameter, or ignores the parameter or displayed value. The LOCAL key (3) switches between remote/local control*. The STOP/RESET key (4) enables a detected error to be restored*. The HOME key (5) is used together with the ESC key to unlock the display. The INFO key (6) shows information about, for example, menu, submenu and parameters. The RUN key (7) starts the engine in "local" mode*. The Navigator keys (8) is used for menu selections and to confirm information.



Fig. 1

Parameter choice

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

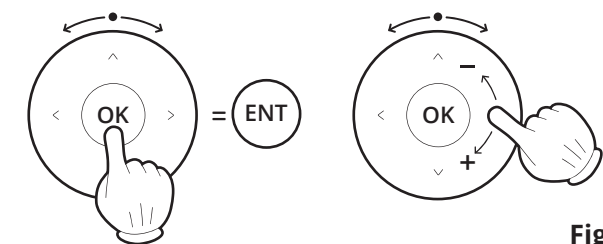


Fig. 2

Electrical wiring

The supply cable is connected to a safety switch (9). Start signal connected between DI1 and 24V at terminal (10)**. Control signal from pressure sensor is connected between COM, AI1 and 24V at terminal (10, 11)**. The supply cable for the fan motor is connected to terminal (12).

** See blue marking on terminal block.

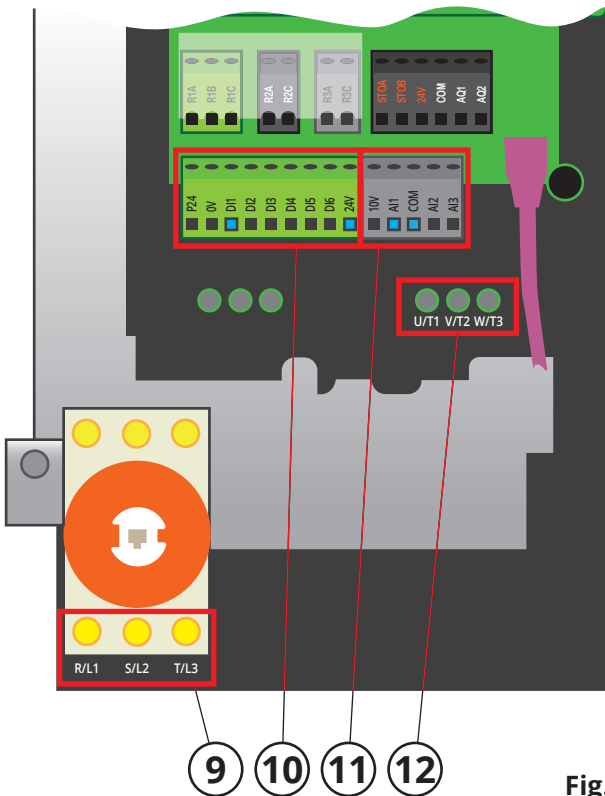
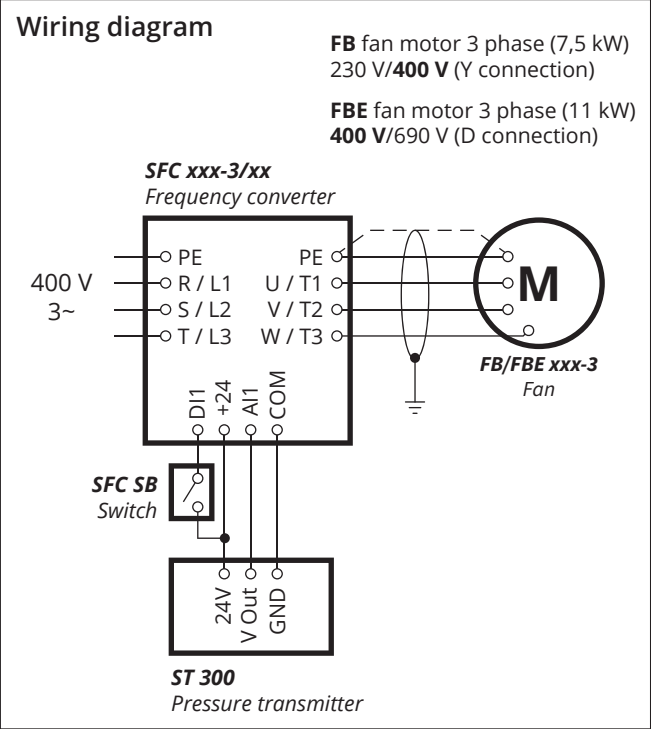


Fig. 3



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 (10) 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 "Internal PDIF Ref" 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
Language	-	-	-	-	English	
Accesslevel	-	-	-	-	Expert	
5. Compl. sett.	5.2 Motor parameters	Motor data	Basic Frequency	50Hz IEC	50Hz IEC	
5. Compl. sett.	5.2 Motor parameters	Motor data	Nom Motor Power	? kW	? kW	
5. Compl. sett.	5.2 Motor parameters	Motor data	Nom Motor Voltage	? V	? V	
5. Compl. sett.	5.2 Motor parameters	Motor data	Nom Motor Current	? A	? A	
5. Compl. sett.	5.2 Motor parameters	Motor data	Nom Motor Speed	1400 rpm	? rpm	
5. Compl. sett.	5.2 Motor parameters	Switching frequency	-	4.0kHz	4-16kHz***	
5. Compl. sett.	5.5 Command and Refere..	Ref Freq 1 Config	-	AI1	AI2	
5. Compl. sett.	5.5 Command and Refere..	2-wire type	-	Transition	Level	
5. Compl. sett.	5.5 Command and Refere..	HMI cmd.	-	Disabled	Bumpless	
5. Compl. sett.	5.9 Generic functions	Speed Limits	Low Speed	0.0Hz	15.0Hz	
5. Compl. sett.	5.9 Generic functions	Speed Limits	High Speed	50.0Hz	50.0Hz	
5. Compl. sett.	5.9 Generic functions	Ramp	Acceleration	10.0s	25.0s	
5. Compl. sett.	5.9 Generic functions	Ramp	Deceleration	10.0s	25.0s	
5. Compl. sett.	5.9 Generic functions	Stop configuration	Type of stop	On Ramp	Freew. Stop	
5. Compl. sett.	5.9 Generic functions	PID controller/Feed	PID feedback	Not Conf.	AI1	
5. Compl. sett.	5.9 Generic functions	PID controller/Feed	Min PID feedback	100	100	
5. Compl. sett.	5.9 Generic functions	PID controller/Feed	Max PID feedback	1000	3000	
5. Compl. sett.	5.9 Generic functions	PID controller/Ref	Intern PID Ref	No	Yes	
5. Compl. sett.	5.9 Generic functions	PID controller/Ref	Max PID Process	900	3000	
5. Compl. sett.	5.9 Generic functions	PID controller/Ref	Internal PID Ref	150	1500	
5. Compl. sett.	5.9 Generic functions	PID controller/Settings	PID Prop. Gain	1.00	1.85	
5. Compl. sett.	5.9 Generic functions	PID controller/Settings	PID Intgl. Gain	1.00	0.20	
5. Compl. sett.	5.12 Error/Warning handling	-	Catch on fly	No	Yes allways	
5. Compl. sett.	5.12 Error/Warning handling	-	Catch on fly mode	Calculated	Meassured	

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

Default reset

When resetting to the factory settings, please proceed as below:

DEFAULT RESET GUIDE			
Menu	Sub menu	Parameter	Recommended value
7. File manag.	7.2 Factory settings	Parameter group list	All
7. File manag.	7.2 Factory settings	Go to Factory Settings	Ok

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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