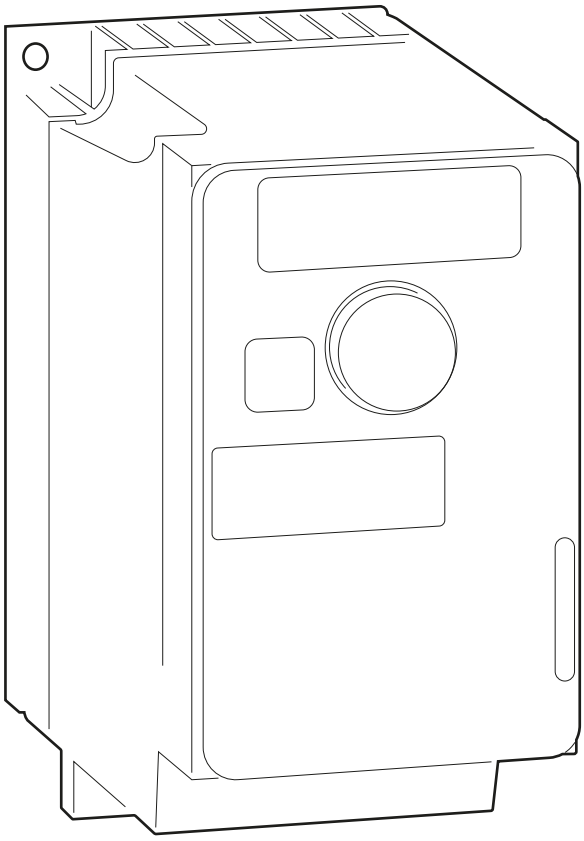
Programming manual

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).

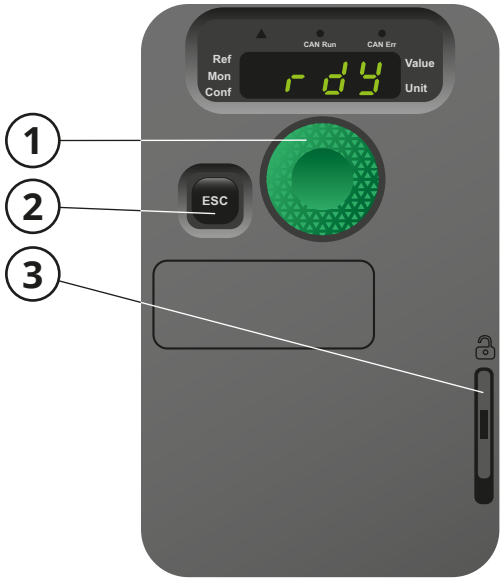


Fig. 1

Parameter choice

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

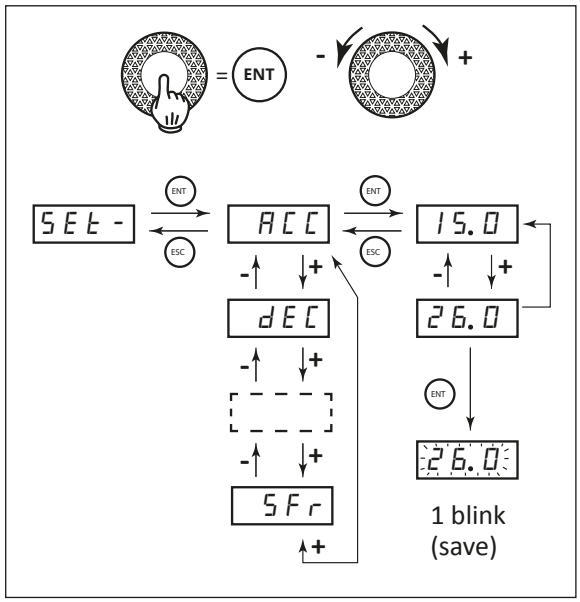


Fig. 2

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).

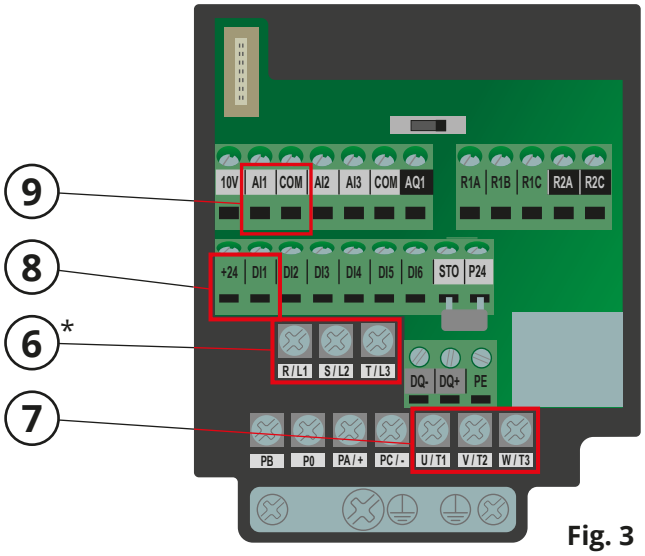
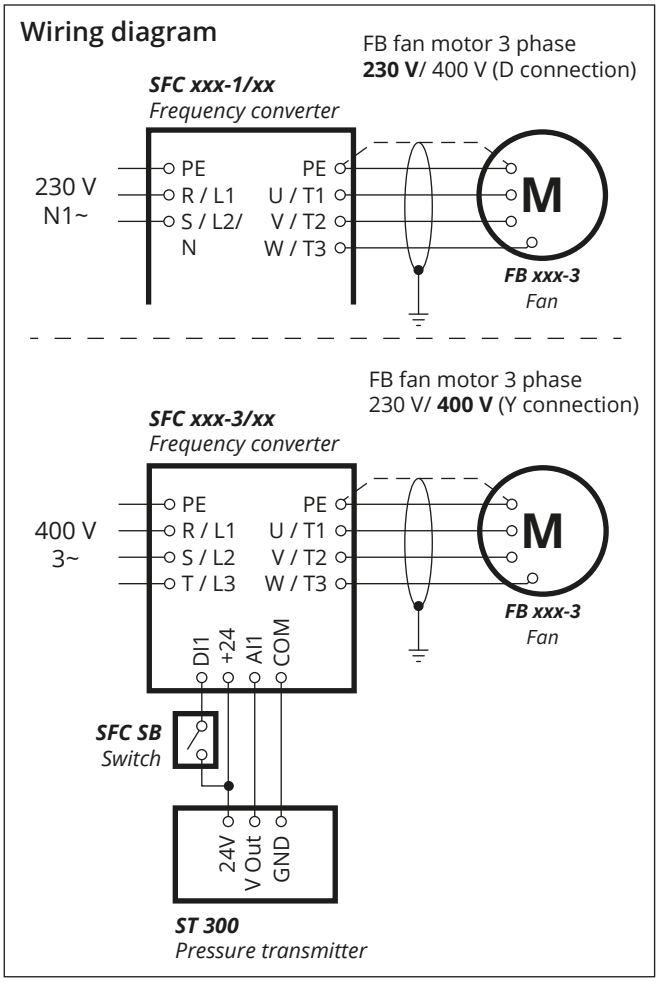


Fig. 3

** 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**
ConF	FULL		Access to configuration	-	-	
drC-	Ctt		Variable torque	Std	UF9	
CtL-	Fr I		Change of reference source	AI1	AI2	
SIn-		bFr	Motor frequency (Hz)	50	Varies	
SIn-		UnS	Nominal motor voltage (V)	-	Varies	
SIn-		FrS	Nominal motor frequency (Hz)	500	Varies	
SIn-		nCr	Nominal motor current (A)	-	Varies	
SIn-		nSP	Nominal motor speed (rpm)	1400	Varies	
SIn-		ACC	Acceleration (s)	3.0	5.0	
SIn-		dEC	Retardation (s)	3.0	5.0	
SIn-		LSP	Min. frequency (Hz)	0.0	15.0	
SIn-		HSP	Max. frequency (Hz)	50.0	50.0	
SIn-		ItH	Thermal motor protection (A) = motor current	-	Varies	
drC-	ASY-	nPC	Motor parameter choice	nPr	CoS	
drC-	ASY-	CoS	Motor's Cos Phi	-	Varies	
drC-		SFr	Switch frequency (kHz)**	4.0	16	
I_O-		tCt	2 wire type	trn	LEL	
FUn-	Stt-	Stt	Stop type	Stt	nSt	
FUn-	PId-	PIF	Regulation feedback	nO	AI1	
FUn-	PId-	PI1	Internal PI reference	nO	YES	
FUn-	PId-	PIF1	Min PID feedback	100	100	
FUn-	PId-	PIF2	Max PID feedback	1000	2000	
FUn-	PId-	PIP2	Max PID reference	900	2000	
FUn-	PId-	rPI	Internal desired value for PI regulator (Pa)	150	***	
FUn-	PId-	rPG	PI proportional amplifier	100	1.85	
FUn-	PId-	rIG	PI integral amplifier	100	0.20	

** 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

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

If the display doesn't show rdY, press **ESC** until it does. Enter menu ConF and select parameter FCS-. Change the value from FCS I to FrY-, confirm with **ENT**. Change ALL JJ to ALL'' by pressing **ENT**. Go back one step in the menu with **ESC** and change from FrY- to GFS. Press **ENT** and change nO 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.

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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