

Honeywell

NXL Frequency Converters

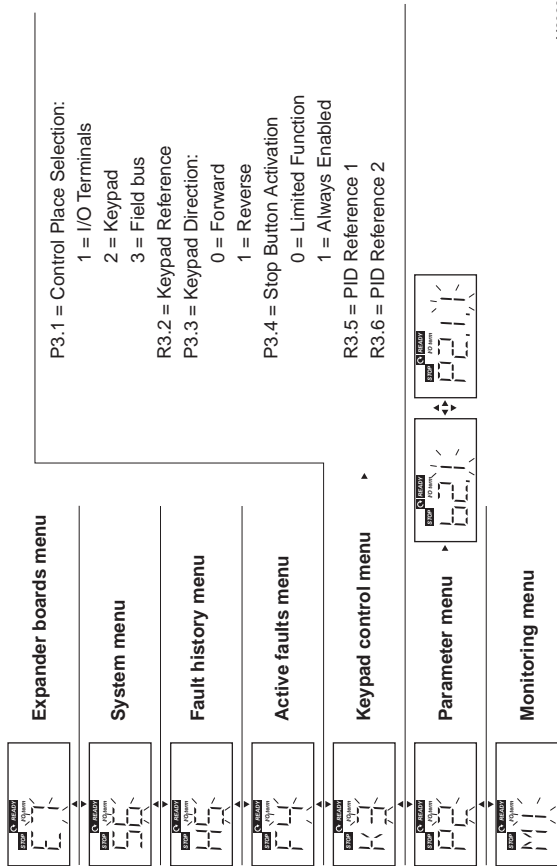
QUICK GUIDE

IMPORTANT

Before commissioning read the safety instructions in chapter 1 of the User's Manual (form 63-2599).



63-2610



TERMINAL	SIGNAL	DESCRIPTION
1	+10V _{ref}	Reference output Voltage for potentiometer, etc.
2	AI1+	Analog input, voltage range 0-10 Vdc. Voltage input frequency reference. Can be programmed as DIN4
3	AI1-	I/O ground Ground for reference and controls
4	AI2+	Analog input, current range 0/4 to 20 mA Current input frequency reference (programmable)
5	AI2-	I/O ground
6	+24V	Control voltage output Voltage for switches, etc. max 0.1A
7	GND	I/O ground Ground for reference and controls
8	DIN1	Start forward (programmable) Contact closed = start forward
9	DIN2	Start reverse (programmable) Contact closed = start reverse
10	DIN3	Multi-step speed selection 1 (programmable) Contact closed = Multi-step speed
11	GND	I/O ground Ground for reference and controls
18	AO1+	Output frequency Analog output Programmable Range 0 to w_0 mA/RL, max. 500 ohms
19	AO1-	
A	RS 485	Serial bus Termination resistor 0/4 to 20 mA
B	RS 485	Serial bus Termination resistor 0/4 to 20 mA
21	RO1	Relay output 1 FAULT Programmable
22	RO1	
23	RO1	

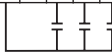


Table 1. Monitoring Values.

Code	Signal name	Unit
V1.1	Output frequency	Hz
V1.2	Frequency reference	Hz
V1.3	Motor speed	rpm
V1.4	Motor current	A
V1.5	Motor torque	%
V1.6	Motor power	%
V1.7	Motor voltage	V
V1.8	DC-link voltage	V
V1.9	Unit temperature	°C
V1.10	Analog input 1	V
V1.11	Analog input 2	mA
V1.12	Analog output current	mA
V1.13	Analog output current 1, expander board	mA
V1.14	Analog output current 2, expander board	mA
V1.15	DIN1, DIN2, DIN3	—
V1.16	DIE1, DIE2, DIE3	—
V1.17	RO1	—
V1.18	ROE1, ROE2, ROE3	—
V1.19	DOE 1	—
V1.20	PID Reference	%
V1.21	PID Actual value	%
V1.22	PID Error value	%
V1.23	PID Output	%

Table 2. Faults and Fault Codes.

Code	Fault
1	Overcurrent
2	Overvoltage
3	Earth fault
5	Charging switch
6	Emergency stop
8	System fault
9	Undervoltage
10	Input line supervision
11	Output phase supervision
13	Frequency converter under-temperature
14	Frequency converter overtemperature
15	Motor stalled
16	Motor overtemperature
17	Motor underload
22, 23	EEPROM checksum fault
25	Microprocessor watchdog fault
29	Thermistor fault
34	Internal bus communication
37	Device change
38	Device added
39	Device removed
40	Device unknown
41	IGBT temperature
42	Brake resistor
50	Analog input $I_{in} < 4$ mA (selected signal range 4 to 20 mA)
51	External fault
52	Keypad communication fault
53	Fieldbus fault
54	Slot fault

Table 3. Basic Parameters.

Code	Parameter	Note
P2.1.1	Min frequency	
P2.1.2	Max frequency	NOTE: If f_{max} > than the motor synchronous speed, check suitability for motor and drive system
P2.1.3	Acceleration time 1	
P2.1.4	Deceleration time 1	
P2.1.5	Current limit	Output current limit [A] of the unit
P2.1.6	Nominal motor voltage	Check the rating plate of the motor
P2.1.7	Nominal motor frequency	Check the rating plate of the motor
P2.1.8	Nominal motor speed	The default applies for a 4-pole motor and a nominal size frequency converter.
P2.1.9	Nominal motor current	Check the rating plate of the motor
P2.1.10	Motor $\cos\phi$	Check the rating plate of the motor
P2.1.11	Start function	0=Ramp 1=Flying start
P2.1.12	Stop function	0=Coasting 1=Ramp 2=Ramp+Run enable coast 3=Coast+Run enable ramp
P2.1.13	U/f optimisation	0=Not used 1=Automatic torque boost
P2.1.14	I/O reference	0=A11 1=A12 2=Keypad reference 3=Fieldbus reference (FBSpeedReference) 4=Motor potentiometer
P2.1.15	A12 signal range	1=0 mA to 20 mA 2=4 mA to 20 mA

Table 3. Basic Parameters. (Continued)

Code	Parameter	Note
P2.1.16	Analog output function	0=Not used 1=Output freq. ($0-f_{max}$) 2=Freq. reference ($0-f_{max}$) 3=Motor speed (0-Motor nom. spd) 4=Output current ($0-I_{nMotor}$) 5=Motor torque ($0-T_{nMotor}$) 6=Motor power ($0-P_{nMotor}$) 7=Motor voltage ($0-U_{nMotor}$) 8=DC-link volt ($0-U_{nMotor}$) 9=PI controller ref. value 10=PI contr. act. value 1 11=PI contr. error value 12=PI controller output
P2.1.17	DIN2 function	0=Not used 1=Start Reverse 2=Reverse 3=Stop pulse 4=External fault, cc 5=External fault, oc 6=Run enable 7=Preset speed 2 8= Motor pot. UP (cc) 9= Disable PID (Direct freq. ref.)
P2.1.18	DIN3 function	0=Not used 1=Reverse 2=External fault, cc 3=External fault, oc 4=Fault reset 5=Run enable 6=Preset speed 1 7=Preset speed 2 8=DC-braking command 9=Motor pot. UP (cc) 10=Motor pot. DOWN (cc) 11=Disable PID (PID control selection) 12=PID Keypad ref. 2 selection

Table 3. Basic Parameters. (Continued)

Code	Parameter	Note
P2.1.19	Preset speed 1	
P2.1.20	Preset speed 2	
P2.1.21	Automatic restart	0=Not used 1=Used
P2.1.22	Parameter conceal	0=All parameters visible 1=Only group b21 visible

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