Reference Card **Inverter i510/i550**

Lenze

Operation of keypad

Example: P420.02

Group 0 – Favorites	
Group 1 – Diagnostics	
Group 2 – Basic setting	
Group 3 – Motor control	
Group 4 – I/O control	
Group 5 – Network setting	
Group 6 – Process controller	
Group 7 – Additional functions	
Group 8 – Sequencer	

Icon	Meaning
⬍	Navigation in the menu Parameter alteration
⏎	Go to Menu/Parameters Confirm Parameter
▷	Quit Menu/Parameters
CTRL	Keypad control
▮	Start motor
R F	Change direction of rotation
⏻	Stop motor

Group 0 – Favorites: Quick access to most important parameters (*)

Procedure during commissioning

1. Load default setting: Set P700.01 = 1
2. Select language: P705.00 1 = English; 2 = German
3. Basic setting V/f characteristic control:

*P208.01 Set mains voltage
*P303.01 Basic voltage = Rated motor voltage
*P303.02 Basic frequency = Rated motor frequency

*P210.00 Minimum frequency [Hz]
*P211.00 Maximum frequency [Hz]
*P220.00 Acceleration time [s]
*P221.00 Deceleration time [s]
*P430.02 Analog input 1 Min frequency value [Hz]
*P430.03 Analog input 1 Max frequency value [Hz]

Control of inverter by means of keypad

Set parameters:
*P200.00 = 1 (Keypad as control source) or
*P201.01 = 1 (Keypad as setpoint source)

CTRL

Operation:

R F	Reverse direction of rotation
⬍	Change frequency setpoint
⏻▮	Start/stop motor

Connection: **I/O terminals**

Terminal	
GND	
AI1	
AI2	
AO1	
10V	
24V	24 VDC, 100 mA supply,
DI1	**Start enabling**

Control of inverter by means of terminals (default)

Set parameters:
*P450.01 Frequency setpoint presets: Freq. preset 1 [Hz]
*P450.02 Frequency setpoint presets: Freq. preset 2 [Hz]
*P450.03 Frequency setpoint presets: Freq. preset 3 [Hz]

Connection:

Terminal	
GND	GND
AI1	**Frequency** setpoint Input range [Hz]: *P430.02 - *P430.03
AI2	
AO1	
10V	10 VDC supply
24V	24 VDC, 100 mA supply
DI1	Start
DI2	Reset error
DI3	Reverse direction of rotation
DI4	Activate preset (Bit 0)
DI5	Activate preset (Bit 1)

Save parameter: ◁ >3 **SET** ⏎ **Flashes = Not saved** ⏎ **On = saved**
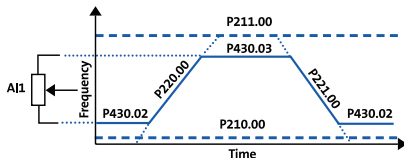
Flexible I/O configuration

			Default setting *P201.01 (configured AI1 as standard setpoint)

Terminal	Description		
24E	Optional external 24 V supply (only i550)		
GND	GND for analog and digital signals		
AI1	Analog input 1	Config.:	*P430.01 (0 ... 10 VDC signal)
AI2	Analog input 2	Range [Hz]:	*P430.02 – *P430.03
AO1	Analog output 1		
10V	10 VDC supply for potentiometer		
24V	24 VDC, 100 mA supply, reference for digital inputs		

Param	Function			
*P400.02	**Start**	DI1	Digital input 1	
*P400.04	**Reset error**	DI2	Digital input 2	bit 1 / bit 0 / Frequency presets
*P400.13	**Reverse direction of rotation**	DI3	Digital input 3	0 / 0 ...
*P400.18	**Active preset (Bit 0)**	DI4	Digital input 4	0 / 1 / Preset 01 (*P450.01)
*P400.19	**Active preset (Bit 1)**	DI5	Digital input 5	1 / 0 / Preset 02 (*P450.02)
*P420.02	DO1 triggered when **Release brake**	DO1	Digital output 1	1 / 1 / Preset 03 (*P450.03)
		GND	GND for analog and digital signals	

Param	Function	Terminal	
*P420.01	set Relay triggered when **Ready for operation set**	NO	Relay NO-contact
		COM	Relay Middle contact
		NC	Relay NC-contact

- **Set standard setpoint source** *P201.01. Run forwards/backwards (static), Start forwards/backwards (edge)
- **Activate quick stop** *P400.03: Bring motor to a standstill in shortest time possible.
- **Jog forwards** *P400.10 (Preset 05) and **Jog backwards** *P400.11 (Preset 06): Initiate status-controlled motor rotation with setpoint possible.
- **Reverse direction of rotation** *P400.13: Invert frequency setpoint.

Diagnostics

P100.00 Output frequency	P125.01 Active control source
P102.00 Frequency setpoint [Hz]	P125.02 Active setpoint source
*P103.00 Current actual value	

RDY	ERR	Status/meaning
off	off	No supply voltage.
1 Hz		Safe torque off (STO) active.
		Safe torque off (STO) active, warning active.
2 Hz		Inverter inhibited.
		Inverter inhibited, no DC-bus voltage.
		Inverter inhibited, warning active.
		Inverter inhibited, error active.
		Inverter enabled and motor rotating or quick stop is active.
		Inverter enabled and motor rotating, warning signalled.
		Inverter enabled, quick stop as response to fault active.

Error message	Cause (W. = Warning, T. = Fault, F. = Error)	Remedy
.2382/.2383	Ixt error/Ixt warning.	Reduce load, adapt ramps.
.3210/.3211	Overvoltage DC bus/ Warning Overvoltage DC bus.	Ramp time too short or motor is running in generator mode.
.3220/.3221	Undervoltage DC bus/ Warning Undervoltage DC bus.	Check supply.
.3222	DC-bus voltage to low for switch-on.	Check supply.
.4310	Motor overtemperature problem (PTC).	Check ambient temperature and motor load.
.6280	Trigger/functions incorrectly connected.	In the case of flexible I/O configuration *P200.01, **Inverter enable** *P400.01 or Start *P400.02 must have been assigned to an I/O. Do not use **Start forwards/backwards** and Run **forwards/backwards** at the same time.
.FF37	Automatic start inhibited.	Remove start enable signal.

Reference Card **Inverter i510/i550**

Lenze

		I	55	AP	175	D	0	0	7	0	1	K	02S

Portfolio segment

Product
55 = i550 protec series

Generation 1, wall mounting

Rated power
137 = 0.37 kW, 0.5 hp   175 = 0.75 kW, 1.0 hp   215 = 1.5 kW, 2.0 hp
155 = 0.55 kW, 0.75 hp   211 = 1.1 kW, 1.5 hp   222 = 2.2 kW, 3.0 hp

Voltage & phase
A = AC 120 V 1/N/PE (no integrated RFI filter)*   D = AC 230 V 1/N/PE, 3/PE (no integrated RFI filter)
B = AC 230 V 1/N/PE   F = AC 400/480 V 3/PE

Product extension
0 = None
1 = Empty extension box (Coming soon!)

Safety technology
0 = No safety technology
A = Integrated safe torque off (STO)

Enclosure/protection
3 = NEMA 1 / IP31
7 = NEMA 4X / IP66

Interference suppression
0 = Without
1 = Integrated RFI filter

Default parameter setting: Region US (60-Hz networks)

Module
0 = Without Diagnostic module   W = WLAN module
K = LCD Keypad module

I/O, fieldbus variations
00S = Standard I/O   03S = Standard I/O + Modbus RTU   0KS = Standard I/O + EtherCAT   0MS = Standard I/O + EtherNet/IP
02S = Standard I/O + CANopen   06S = Standard I/O + IO-Link   0LS = Standard I/O + PROFINET   0WS = Standard I/O + Modbus TCP/IP

*120V Doubler inverters are only available in 0.5, 1.0, and 1.5 hp.

Example:

Product code	Meaning
I55AP175D00701K02S	Inverter i550 decentralized, 1.0 hp, 1/3-phase, 230 V, NEMA 4X enclosure, 60 Hz variant, standard I/O with CANopen network, with LCD keypad module