

# Compact, scalable, robust.



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**i550 protec is the new inverter series in the power range from 0.37 ... 75 kW (0.5 ... 100 hp) Its distinguishing features: a slim design, scalable functionality and exceptional user-friendliness.**

The award-winning i550 protec frequency inverter uses the same tried-and-tested technology used in our control cabinet inverters. It only differs in terms of a higher degree of housing protection and an adapted design. If there is not enough space in the control cabinet or the inverter has to be mounted close to the motor in various machine modules, then this versatile and reliable device is the right solution. Thanks to the extension box, a disconnect switch and operating elements can be used.

The requirements of the Ecodesign Directive, Standard EN IEC 61800-9-2, are met.

Application areas: Conveyor drives, traveling drives, winding drives, hoist drives, extruders, packaging machines, pumps, fans, ...

## Highlights

- Decentralized drive with IO-Link interface V1.1
- Integrated diagnostic interface (micro USB) for service purposes
- Versions with or without repair switch, with keypad or WLAN module for easy commissioning
- Optionally available with „Safe Torque Off (STO)“ with SIL 3 (EN IEC 62061/EN IEC 61508) and Performance Level e (EN ISO 13849-1)

# This is how easy it is to integrate i550 protec

## Three set-up methods

Thanks to Lenze's engineering philosophy, the high functionality is still easy to grasp. Parameterization and commissioning are impressive thanks to clear structure and simple dialogs, leading to the desired result quickly and reliably.

- Keypad  
If it's only a matter of setting a few key parameters such as acceleration and deceleration time, this can be done quickly on the keypad.
- SMART Keypad App  
It is easily adapted for simple applications such as conveyor belts using the intuitive smartphone app for Android or iOS-based operating systems.
- EASY Starter  
If functions such as the motor potentiometer or sequence control for a positioning application need to be set, it's best to use the EASY Starter engineering tool.



## Technical data

| i550 protec                |                                                                                                                                                                                                                             |                                                                          |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|
| Mains                      | 1 AC 120 V                                                                                                                                                                                                                  | 0.37 ... 1.1 kW (0.5 ... 1.5 hp)                                         |
|                            | 1 AC 230 V                                                                                                                                                                                                                  | 0.37 ... 2.2 kW (0.5 ... 3 hp)                                           |
|                            | 1/3 AC 230 V                                                                                                                                                                                                                | 0.37 ... 3 kW (0.5 ... 4 hp)                                             |
|                            | 3 AC 230 V                                                                                                                                                                                                                  | 3 ... 45 kW (4 ... 60 hp)                                                |
|                            | 3 AC 400 V/480 V                                                                                                                                                                                                            | 0.37 ... 75 kW (0.5 ... 100 hp)                                          |
|                            | 3 AC 600 V                                                                                                                                                                                                                  | 0.75 ... 45 kW (1 ... 60 hp)                                             |
| Overload behavior          |                                                                                                                                                                                                                             | 150 % for 60 s; 200 % for 3 s                                            |
| Interfaces                 | Digital inputs/digital outputs (5/1), analog inputs/analog outputs (2/1)<br>Relay                                                                                                                                           |                                                                          |
|                            | External 24 V supply<br>PTC/thermal contact input<br>HTL incremental encoder (100 kHz)<br>USB onboard                                                                                                                       |                                                                          |
|                            | CANopen, EtherCAT, EtherNet/IP, Modbus RTU, Modbus TCP, PROFINET, IO-Link                                                                                                                                                   |                                                                          |
|                            | Integrated brake chopper<br>DC-bus connection                                                                                                                                                                               |                                                                          |
| Conformities and approvals |                                                                                                                                                                                                                             | CE, UKCA, cULus, RoHS<br>Energy efficiency (EN IEC 61800-9-2): Class IE2 |
| Functions                  | V/f characteristic control linear/square-law (VFC plus)<br>Sensorless vector control (SLVC)<br>Energy-saving function (VFC eco)<br>Servo control (SC-ASM) with feedback<br>Sensorless vector control for synchronous motors |                                                                          |
|                            | Vector control with feedback<br>V/f characteristic control with feedback                                                                                                                                                    |                                                                          |
|                            | DC-injection braking<br>Brake management for brake control with low rate of wear                                                                                                                                            |                                                                          |
|                            | Dynamic braking through brake resistor                                                                                                                                                                                      |                                                                          |
|                            | S-ramps for smooth acceleration and delay<br>Flying restart circuit, PID controller                                                                                                                                         |                                                                          |
|                            | With and without lockable disconnect switch<br>Pre-punched mounting options for accessories:<br>Start/stop switch, potentiometer for speed adjustment, signal lights in red, green and blue                                 |                                                                          |
| Safety technology          |                                                                                                                                                                                                                             | Safe torque off (STO)                                                    |