i510 protec
variable frequency drive

Robust and trusted, the **i510 protec** variable frequency drive (VFD) is purpose-built to be mounted outside the control cabinet or close to the motor. A focus on low cost and simple functionality in the power range of 0.5 to 15 hp (0.37 to 11 kW), makes this reliable drive the right solution in various applications.

The same tried-and-tested technology used in our **i510 cabinet** is replicated in the i510 protec. This ensures familiarity and dependability with more housing protection and adapted design.

With its scalable functionality and exceptional user-friendliness, the i510 protec solves many typical challenges beyond machine performance.

Suited for the following applications

- Pump
- Fan
- Conveyor
- Traverse
- Winder
- Extruder
- Packaging

Features and Benefits

- **Minimize costs** with essential features
- **Easy installation** reduces time and effort
- **Low installation cost and improved ROI**
- **Mount outside the cabinet** in suitable environments
  - NEMA 1 (IP20) protection against dust and falling debris
- **Easy commissioning and diagnostics** with keypad, WLAN module or micro USB module

Drives

	i510 protec
	
Design/mounting	Wall
Degree of protection	IP20
	UL Type 1
	NEMA 1

Mains connection/power range

1ph AC 120 V	0.37 ... 1.1 kW
	0.5 ... 1.5 hp
1ph AC 230 V	0.37 ... 4 kW
	0.5 ... 5 hp
3ph AC 230 V	0.37 ... 7.5 kW
	0.5 ... 10 hp
3ph AC 480 V	0.75 ... 11 kW
	1 ... 15 hp
3ph AC 600 V	0.75 ... 11 kW
	1 ... 15 hp

Control connections

Digital inputs	5
Digital outputs	1
Analog inputs	2
Analog outputs	1
Relay	1

Communication

CANopen	Optional
Modbus RTU	Optional

Operation on public supply systems

Device below 1 kW (EN IEC 61000-3-2)	With mains choke
Devices above 1 kW up to 16 A (EN IEC 61000-3-2)	Yes
Devices above 16 A (EN IEC 61000-3-2)	With mains choke

Protective measures

Earth-fault protected	Yes
Short-circuit-proof	Yes
Overvoltage-proof	Yes
Motor stalling protection	Yes
Motor overtemperature	I^2xT

Motor controls

V/f characteristic control	Yes
Vector control for asynchronous motors	Yes
Vector control for synchronous motors	Yes
Vector control for synchronous motors with frequency support at low speeds	Yes

Additional functions for the motor controls

Boost	Yes
Slip compensation	Yes
Oscillation damping	Yes
Torque control	Yes
Skip frequencies	Yes
Stalling protection	Yes
Motor monitoring	Yes

Component control

Fixed frequencies (jog values)	Yes
Motor potentiometer	Yes
Sequence control	Yes
PID controller	Yes
Position counter	Yes
Parameter set changeover	Yes

Energy efficiency

Energy-saving function "VFC-Eco"	Yes

Additional motor functions

Flying restart circuit	Yes
DC-injection brake	Yes
Holding brake control	Yes
Switching frequency setting	Yes

System protection

Access protection	Yes
Temperature monitoring	Yes
Mains failure control	Yes
Operation on a UPS	Yes