



YILMAZ AC Drives

Variable Frequency Drives





Founded in 1958, Yilmaz Reduktor quickly became Turkey's leading gearbox manufacturer, aided by consistent product quality, work discipline, strategic planning and consistent vision. Today Yilmaz Reduktor remains Turkey's leading gearbox producer and is rapidly becoming well known throughout the world. Yilmaz Reduktor uses its extensive experience to develop new products, uses the latest available production technology and continually invests in engineering to provide its customers with products that fulfil the expectations of the world market. Our products are used in many industries and our customers regard us as trusted partners.

By the end of 2016, by the establishment of Automation Division, Yilmaz Reduktor has added AC Drive products and enhanced its product & solution portfolio to a complete drive train; drive-motor-gearbox. By the help of completing product synergy, Yilmaz is much better positioned to offer a complete drive solution under one roof and engineering support.



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YILMAZ Drive Family





YB1000 series Micro & Economic

- Micro size, low cost
- Terminals uncovered, easy for wiring
- DIN-rail mounting and wall mounting for installation
- Supports MODBUS via RS485
- Maintenance-free
- V/F control; Built-in PID control, frequency range 0.1~400 Hz

Power range

220V / 0.4 ~ 2.2 kW

380V / 0.75 ~ 110 kW

Technical specification

Item		specification
Control Specifications	Output Frequency Range /Accuracy	0.10Hz~400.00Hz /0.1Hz
	Frequency Setting Resolution	Digital input: 0.1Hz, analog input: 0.1% of max. output frequency
	V/F Control	Setting V/F curve to satisfy various load requirements.
	Torque Control	Auto increase: auto raise torque by loading condition; Manual increase; enable to set 0.0~20.0% of raising torque.
	Multifunctional Input Terminal	Four multi-function input terminals, realizing functions including fifteen section speed control, program running, four-section acceleration/deceleration speed switch, UP/DOWN function and emergency stop and other functions.
	Multifunctional Output Terminal	1 multi-function output terminals for displaying of running, zerospeed, counter, external abnormality, program operation and other information and warnings.
	Acceleration/ deceleration Time Setting	0~999.9s acceleration/deceleration time can be set individually.
Other functions	PID Control	Built-in PID control
	RS485	Standard RS485 communication function (MODBUS)
	Frequency Setting	Analog input: 0 to 10V, 4 to 20mA can be selected; Digital input: Input using the setting dial of the operation panel or RS485 or UP/DOWN. Note: AVI terminals can be used to select an analog voltage input (0-10V) and an analog current input (4-20mA) through the switch J2.
	Multi-speed	Four multifunction input terminals, 15 section speed can be set.
	Automatic voltage regulation	Automatic voltage regulation function can be selected.
	Counter	Built-in 2 group of counters
Warning Function	Overload	150%, 60 S (Constant torque)
	Over Voltage / Under Voltage	Over Voltage Protection can be set. /Under Voltage protection can be set.
	Other Protections	Output shortcircuit, over current, an parameter lock and so on.

YA2000 series Compact Vector Control

- Senseless flux vector control (VC), V/F (Voltage/Frequency) control
- Overload capacity is 150% (100%) of the rated current, 3s for 180% of the rated current
- There are ten auxiliary frequency sources. It can implement fine tuning of auxiliary frequency and frequency synthesis
- Support PM motor (NZ2000 T series)

Power range

220V / 0.25 ~ 5.5 kW
380V / 0.75 ~ 280 kW



Technical specification

Item		specification
Standard functions	Control mode	V/F(Voltage/Frequency) control Senseless flux vector control (VC)
	Maximum frequency	Vector control: 0–300 Hz; V/F control: 0–3200Hz
	Carrier frequency	1.0–16.0 kHz; The carrier frequency is automatically adjusted based on the load features.
	Input frequency resolution	Digital setting: 0.01 Hz Analog setting: 0.025% of maximum frequency
	Startup torque	G type: 0.5 Hz/150% (VC) P type: 0.5 Hz/100% (VC)
	Speed range / stability accuracy	1:100 (VC) / ± 0.2% (VC)
	Torque control accuracy	± 20%
	Overload capacity	G type: 60s for 150% of the rated current, 3s for 180% of the rated current.
	Torque boost	Auto boost Customized boost 0.1%–30.0%
	V/F curve	Line V/F curve Multi-point V/F curve N-power V/F curve (1.2-power, 1.4-power, 1.6-power, 1.8-power, square)

	V/F separation	Two types: complete separation; half separation
	Ramp mode	Straight-line ramp; S-curve ramp Four groups of acceleration/deceleration time with the range of 0.0–6500.0s
Standard functions	DC braking	DC braking frequency: 0.00 Hz to maximum frequency Braking time: 0.0–100.0s; Braking action current value: 0.0%–100.0%
	JOG control	JOG frequency range: 0.00–50.00 Hz JOG acceleration/deceleration time: 0.0–6500.0s
	Onboard multiple preset speeds	It implements up to 16 speeds via the simple PLC function or combination of terminal states
	Onboard PID	It realizes process-controlled closed loop control system easily.
	Auto voltage regulation (AVR)	It can keep constant output voltage automatically when the mains voltage changes.
	Overvoltage/Overcurrent stall control	The current and voltage are limited automatically during the running process so as to avoid frequent tripping due to overvoltage/over current.
	Torque limit and control	It can limit the torque automatically and prevent frequent over current tripping during the running process.
	Power dip ride through	The load feedback energy compensates the voltage reduction so that the AC drive can continue to run for a short time.
	Rapid current limit	It helps to avoid frequent over current faults of the AC drive.
	High performance	Control of asynchronous motor is implemented through the high-performance current vector control technology.
	Timing control	Time range: 0.0–6500.0 minutes
	Communication methods	RS485 (MODBUS-RTU)
	Protection mode	Motor short-circuit detection at power-on, input/output phase loss protection, over current protection, overvoltage protection, under voltage protection, overheat protection and overload protection.
Input and output	Input terminal	6 digital input terminals, one of which supports up to 100 kHz high-speed pulse input. 2 analog input terminals, one of which only supports 0–10 V voltage input and the other supports 0–10 V voltage input or 4–20 mA current input.
	Frequency source	Digital setting, analog voltage setting, analog current setting, pulse setting and serial communication port setting.
	Auxiliary frequency source	There are ten auxiliary frequency sources. It can implement fine tuning of auxiliary frequency and frequency synthesis.
	Running command source	Operation panel/Control terminals/Serial communication port. You can perform switchover between these sources in various ways.
	Output terminal	1 digital output terminal; 1 relay output terminal 1 analog output terminal :that supports 0–20 mA current output or 0–10 V voltage output
Keyboard	LED display	It displays the parameters.
	Key locking and function selection	It can lock the keys partially or completely and define the function range of some keys so as to prevent mis-function.



YE8000 Series - Close Loop Vector Control

- Control Method: V/F control; space vector control (SVC), closed loop vector control
- RS485 MODBUS Communication
- Multi-speed and simple PLC setting; PID setting etc, can achieve the set combinations and mode switching

Power range

220V: 0.75 ~ 3.7 kW

380V: 0.75 ~ 630 kW

Technical specification

Item		specification
Based functions	Control mode	V/F control; Senseless flux vector control (SFVC); Closed-loop vector control (CLVC)
	Maximum frequency	Vector control: 0–320 Hz; V/F control: 0–3200Hz
	Carrier frequency	1.0–16.0 kHz; The carrier frequency is automatically adjusted based on the load features.
	Input frequency resolution	Digital setting: 0.01 Hz / Analog setting: 0.025% of maximum frequency
	Startup torque	G type: 0.5 Hz/150% (SFVC); 0 Hz/180% (CLVC); P type: 0.5 Hz/100%
	Speed range	1:100 (SFVC) / 1:1000 (CLVC)
	Speed stability accuracy	± 0.5% (SFVC) / ± 0.02% (CLVC)
	Torque control accuracy	± 5% (CLVC)
	Overload capacity	G type: 60s for 150% of the rated current, 3s for 180% of the rated current. P type: 60s for 120% of the rated current, 3s for 150% of the rated current.
	Torque boost	Auto boost / Customized boost 0.1%–30.0%
	V/F curve	Straight - line V/F curve; Multi-point V/F curve N-power V/F curve (1.2-power, 1.4-power, 1.6-power, 1.8-power, square)
	V/F separation	two types: complete separation; half separation
	Ramp mode	Straight-line ramp; S-curve ramp; Four groups of acceleration/deceleration time with the range of 0.0–6500.0s
	DC braking	DC braking frequency: 0.00 Hz to maximum frequency Braking time: 0.0–100.0s; Braking action current value: 0.0%–100.0%

	JOG control	JOG frequency range: 0.00–50.00 Hz; JOG acceleration/deceleration time: 0.0–6500.0s
	Onboard multiple preset speeds	It implements up to 16 speeds via the simple PLC function or combination of X terminal states
	Onboard PID	It realizes process-controlled closed loop control system easily.
	Auto voltage regulation (AVR)	It can keep constant output voltage automatically when the mains voltage changes.
	Overvoltage/ Overcurrent stall control	The current and voltage are limited automatically during the running process so as to avoid frequent tripping due to overvoltage/over current.
	Torque limit and control	It can limit the torque automatically and prevent frequent over current tripping during the running process.Torque control can be implemented in the CLVC mode.
Individualized functions	Support for multiple PG card	Support for rotating transformer PG card, differential input PG card, UVW differential input PG card, resolver PG card and OC input PG card
	Power dip ride through	The load feedback energy compensates the voltage reduction so that the AC drive can continue to run for a short time.
	Rapid current limit	It helps to avoid frequent over current faults of the AC drive.
	High performance	Control of asynchronous motor and synchronous motor are implemented through the high-performance current vector control technology.
	Timing control	Time range: 0.0–6500.0 minutes
	Communication methods	MODBUS-RTU, PROFIBUS-DP(optional) , CANlink(optional, CAN (optional)
	Protection mode	Motor short-circuit detection at power-on, input/output phase loss protection, over current protection, overvoltage protection, under voltage protection, overheat protection and overload protection.
Input and output	Input terminal	8 digital input terminals, one of which supports up to 100 kHz high-speed pulse input. 2 analog input terminals, one of which only supports 0–10 V voltage input and the other supports 0–10 V voltage input or 4–20 mA current input.
	Frequency source	Digital setting, analog voltage setting, analog current setting, pulse setting and serial communication port setting.
	Auxiliary frequency source	There are ten auxiliary frequency sources.It can implement fine tuning of auxiliary frequency and frequency synthesis.
	Running command source	Operation panel / Control terminals/Serial communication port. You can perform switchover between these sources in various ways.
	Output terminal	1 high-speed pulse output terminal (open-collector) that supports 0–100 kHz square wave signal output. 1 digital output terminal; 2 relay output terminal; 2 analog output terminal :that supports 0–20 mA current output or 0–10 V voltage output
operation on the operation panel	LED display	It displays the parameters.
	Key locking and function selection	It can lock the keys partially or completely and define the function range of some keys so as to prevent mis-function.
	Optional parts	Rotating transformer PG card, differential input PG card, UVW differential input PG card, resolver PG card and OC input PG card

YC3000 Series – Special for air compressor

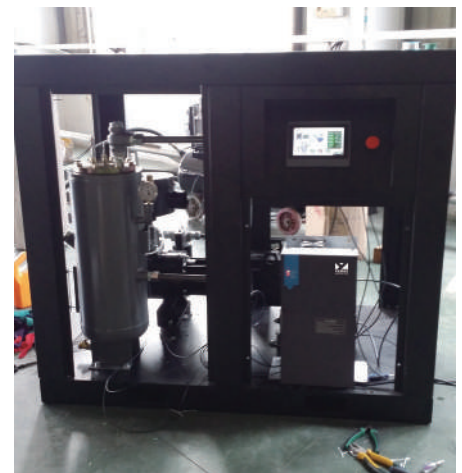


- The inverter uses metal structure, support both floor & wall mounting
- It can embed the appliance of air compressor directly and do not need the electric control cabinet
- Intergrated the inverter, HMI, compressor controller, PTC/PT100 input, phase detector, fan control, fuse and transformer
- The integrative YC3000 inverter can supports both synchronous and asynchronous motor



Features and advantage

- Small size, ease of installation
- Stable operation, decreasing the times of repair
- Avoiding the loss on unnecessary power
- Controlling system of colorful touching screen
- A wider range of working frequency and low noise
- Control of the high-efficient permanent-magnet motor, save the energy



▲ YC3000 series 22kw application

Technical specification

Item		specification
Basic control functions	Control mode	Open loop and vector control V / F control
	Maximum frequency	Open loop and vector control: 0~500Hz V / F control: 0~3200Hz
	Carrier frequency	0.5kHz~16kHz, the carrier frequency is automatically adjusted based on the load features
	Input frequency resolution	Digital setting: 0.01Hz Analog setting: maximum frequency is x 0.025%
	Start-up torque	0.5 Hz/150%
	Speed range	1:100
	Speed stability accuracy	± 0.2% (SFVC)
	Torque control accuracy	±10%
	Overload capacity	60s for 150% of the rated current, 3s for 180% of the rated current.
	Torque boost	Fixed boost; Customized boost 0.1%~30.0%
	V/F curve	Straight-line V/F curve Multi-point V/F curve N-power V/F curve (1.2-power, 1.4-power, 1.6-power, 1.8-power, square)
	V/F separation	Two types: complete separation, half separation
	Ramp mode	Straight-line ramp; S-curve ramp Four groups of acceleration/deceleration time with the range of 0.0~6500.0s
	Communication methods	RS485
	JOG control	JOG frequency range: 0.00~50.00 Hz JOG acceleration/deceleration time: 0.0~6500.0s
	Built-in PID	It realizes process-controlled closed loop control system easily.
	Auto voltage regulation (AVR)	It can keep constant output voltage automatically when the main voltage changes.
	Frequency source	Digital setting
Input and output interfaces	Analog Input	2 pressure sensor: 4 ~ 20mA input; 2 temperature sensor: PT100
	Digital input	5 digital input; 1 PTC circuit protection (compatible with normal digital inputs)
	Digital Output	2 normally open relay output (built 220VAC voltage)
	LED diode display	Standard 3 LED display
Protection		Motor overheating protection (PTC), the power-to-ground short-circuit protection, inverter's protection in over-current, overload, over voltage, under voltage, over temperature, output phase, communication fault, fault current detection, EEPROM write failure and so on..
Fan Drive		15-55kW master drive: 1.5kW 75-160kW master drive: 2.2kW

YP65 Series IP65 inverter



- Mounted directly on the motor or to the wall
- The YP65 allows for use in outdoor applications and indoor environments where atmospheric moisture is present or low pressure water jets are used.

Power range

220V: 0.75 ~ 2.2 kW

380V: 0.75 ~ 22 kW

Technical specification

Item		specification
Input	Rated voltage,Frequency	3 AC 380V / 220V; 50-60 Hz
	Voltage Range	380V: 330V~440V;220V: 170-240V
Output	Voltage Range	380 V: 0~380 V; 220V: 0-220V
	Frequency Range	0.10~400.0 Hz
Control method		V/F control, Space vector control
Indication	Operating status/Alarm definition/interactive guidance; eg, frequency setting, the output frequency / current, DC bus voltage, the temperature and so on.	
Control Specification	Output Frequency range/ Accuracy	0.10~400.00 Hz / 0.01 Hz.
	Frequency Setting Resolution	Digital input: 0.01 Hz. Analog input:0,1% of maximum output frequency
	V/F Control	Setting V/F curve to satisfy various load requirements
	Torque Control	Auto increase:auto rise torque by loading condition;Manual increase:enable to set 0.0~20% of raising torque
	Multifunctional Input Terminal	8 multi-function input terminals,realizing functions including 15section speed control,program running, 4-section acceleration/deceleration speed switch,UP/DOWN function and emergency stop and other functions
	Multifunctional Output Terminal	3 multi-function output terminals for displaying of running,zerospeed,counter,external abnormality,program operation and other information and warnings 8 multifunctiona output terminals, 1 inverter can control 4 circular variable frequency pumps
	Acceleration/deceleration Time Setting	0~6000 s acceleration/deceleration time can be set individually

YP65 series AC VFD

Other functions	PID Control	Built-in PID control
	MODBUS	Standard RS485 communication function
	Frequency Setting	Analog input 0~10V, 0~20mA, can be selected; Digital input: input using the setting dial of the operation panel or RS 485 or UP/DOWN
	Multi-speed	Eight multifunction input terminals, 15 section speed can be set
	Automatic voltage regulation	Automatic voltage regulation function can be selected
	Counter	Built-in 2 group of counters
	Overload	120%, 60second (variable torque)
	Over Voltage	Over voltage protection can be set
	Under Voltage	Under voltage protection can be set
	Other Protections	Overheat, output shortcircuit, over current, and parameter lock and so on.
Environment	Ambient Temperature	-10°C~40°C (non-freezing)
	Ambient Humidity	Max. 95% (non-condensing)
	Altitude	Lower than 1000m.
	Vibration	Max. 0.5 g
Structure	Cooling Mode	Below 3.7 kW no have fan; Above 5.5 kW Forced air cooling
	Protective Structure	IP 65

Applications

The main applications: water pump supply, compressor, fountain, machine tools, powder, ventilating equipment, drives used outdoors, so on.



YMP Series Special for Multi-pumps Water Supply



Features and advantages

YPM series is adopts the advanced control theory to adjust speed and switchover of pumps automatically according to the pressure of pipe net, so as to make the water pressure to be constant. It can control up to 4 water pumps

Power range

380V±15%; 5.5~250 kW

Technical specification

Item		specification
Input	Rated voltage, Frequency	3 AC 380V. 50-60 Hz;
Output	Voltage / Frequency range	380 V: 0~380 V; 0.10~400.0 Hz
Control method		V/F control, Space vector control
Indication		Operating status/Alarm definition/interactive guidance; eg, frequency setting, the output frequency/current, DC bus voltage, the temperature and so on.
Control Specification	Output Frequency range / Accuracy	0.10~400.00 Hz ./ 0.01 Hz.
	Frequency Setting Resolution	Digital input: 0.01 Hz; Analog input: 0.1% of maximum output frequency
	V/F Control	Setting V/F curve to satisfy various load requirements
	Torque Control	Auto increase: auto rise torque by loading condition; Manual increase: enable to set 0.0~20% of raising torque
	Multifunctional Input Terminal	8 multi-function input terminals, realizing functions including fifteen section speed control, program running, four-section acceleration/deceleration speed switch, UP/DOWN function and emergency stop and other functions
	Multifunctional Output Terminal	3 multi-function output terminals for displaying of running, zero speed, counter, external abnormality, program operation and other information and warnings
	Acceleration/deceleration Time Setting	0~6000 s acceleration/deceleration time can be set individually
Other functions	PID Control	Built-in PID control
	MODBUS	Standard RS485 communication function
	Frequency Setting	Analog input 0~10V, 0~20mA, can be selected; Digital input: input using the setting dial of the operation panel or RS 485 or UP/DOWN
	Multi-speed	Eight multifunction input terminals, 15 section speed can be set
	Automatic voltage regulation	Automatic voltage regulation function can be selected
	Counter	Built-in 2 group of counters
	Overload	150%, 60 second (Constant torque); 120%, 60 second (variable torque)
	Over Voltage	Over voltage protection can be set
	Under Voltage	Under voltage protection can be set
	Other Protections	Overheat, output shortcircuit, over current, and parameter lock and so on.

YDD Series - Special for Automatic Door Application

High Performance & Economical



Technical Features

- It has the function for rapid rolling door control
- It can detect the position according to the input of encoder and keep multistage speed control;
- It has the detecting function of door's range;
- It is equipped with RS485 communication;
- The opening size of the roller shutter can be set at any height;
- It can control and adjust the speed of motor efficiently and achieve the quick adjusting like acceleration, deceleration and stop of the quick door;
- It provides absolute position feedback in the way of total excursion and can achieve the quick, accurate and repeated high-precision control.

Power Range

230V - 0.37kW ~ 1.5kW

400V - 0.75kW ~ 2.2kW



Typical cases





YI1000 series Motor Integrated

- IP65 , High Protection Level
- No need for Electrical Cabinet
- Integrated Drive-Train Solution
- Supports MODBUS via RS485 with Option Board
- V/F Control
- Frequency Range 0.5 ~ 400Hz

Power range

220V 1ph, 0.75 ~ 2.2kW

380V 3ph, 0.75 ~ 2.2kW

Technical specification

Item		specification
Control Specifications	Output Frequency Range /Accuracy	0.5 - 400 Hz
	Frequency Setting Resolution	Digital: 0.1Hz, Analog: %0.1 of max. frequency
	V/F Control	V/f curve can be adjusted freely
	Torque Control	Torque boost range 0..20%
	Multifunctional Input Terminal	Standard run/stop/direction/emergency stop Ordering fixed frequency setpoint, MOP (+/-) reference etc.
	Multifunctional Output Terminal	Running, Alarm, Zero Speed etc.
	Acceleration/ deceleration Time Setting	Set between 0.1-99.9 secs.
Other functions	Optional Add-On Boards	Different boards for different interfaces available.
	RS485	Optional
	Frequency Setting	Analog Input: 0 - 10V, 4 - 20mA selectable via switch. External Potentiometer On-board Keypad MOP (+/-) via External Buttons Communication Setting via MODBUS RTU/ASCII (RS485)
	Multi-speed	Total 8 using 3 digital inputs.
	Voltage regulation	Can be adjusted freely according to application demand.
Protection/ Warning Function	Overload	%150 Over-Load for 60 secs. %180 Over-Load for 3 secs.
	Over Voltage / Under Voltage	Protection against over voltage and under voltage.
	Other Protections	Overcurrent, overload etc.

YMS Series Motor Softstarter

YMS series high performance digital soft-starters, compact design, built-in bypass contactor, RS485 MODBUS Communication and Built-in LCD Display for metering, monitoring and diagnostics.

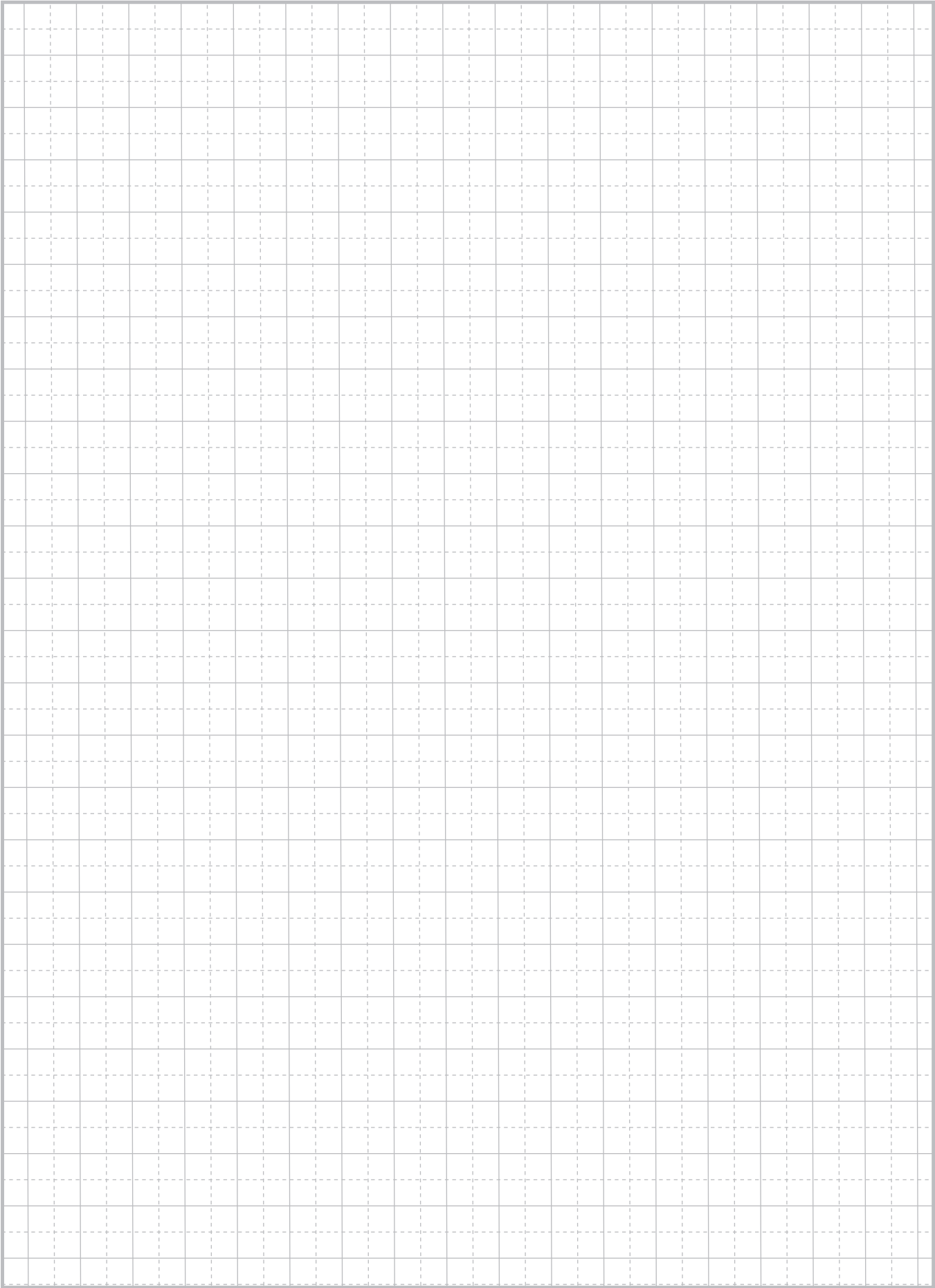
Comprehensive protection functions, high performance and reliability.

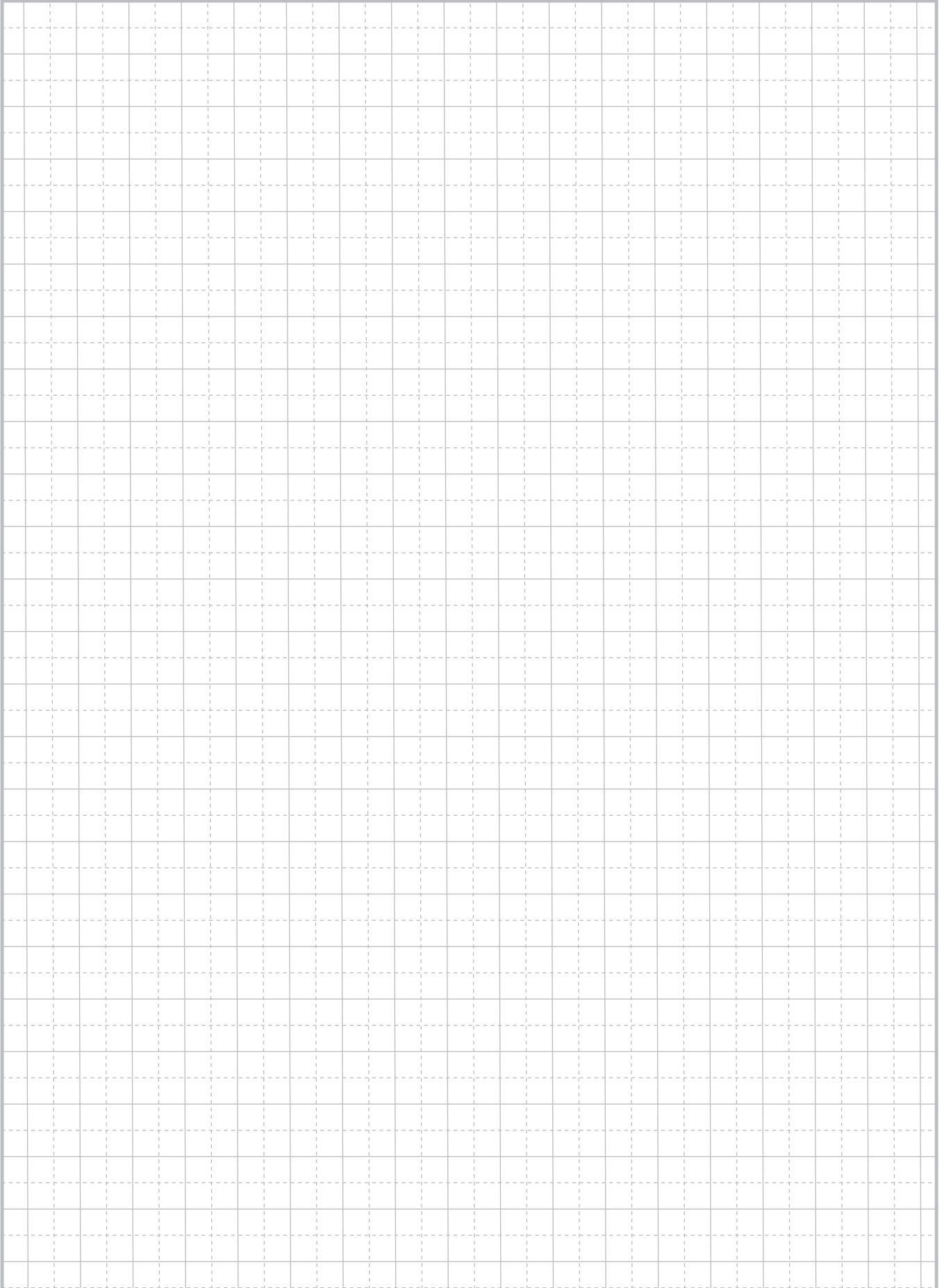


Features and advantages

- Intelligent, digital, compact desing and High reliability.
- Automatic discerns phase sequence and protection function.
- Communications RS485, built in bypass contactor.
- Output signal: Analog.
- Reduce AC motor starting current, reduce electricity distribution capacity to lower investment
- Comprehensive protection functions: over current, over load, over heat and Default Phase of input and output.
- Extend service life of mechanical equipment, reduce equipment maintenance and enhance economic benefitof Electrical chain hoist.









The power
is in your
hands...



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