

VEICHI

CH610 Series

Integrated Crane AC Drive



Stock Code: 688698

About us

VEICHI Electric (stock code: 688698) is a high-tech company focused on electrical drive and industrial control, offering a full range of industrial automation products. With facilities in Suzhou, Shenzhen, Xi'an, and a subsidiary in India, VEICHI serves customers worldwide with reliable and competitive offerings.

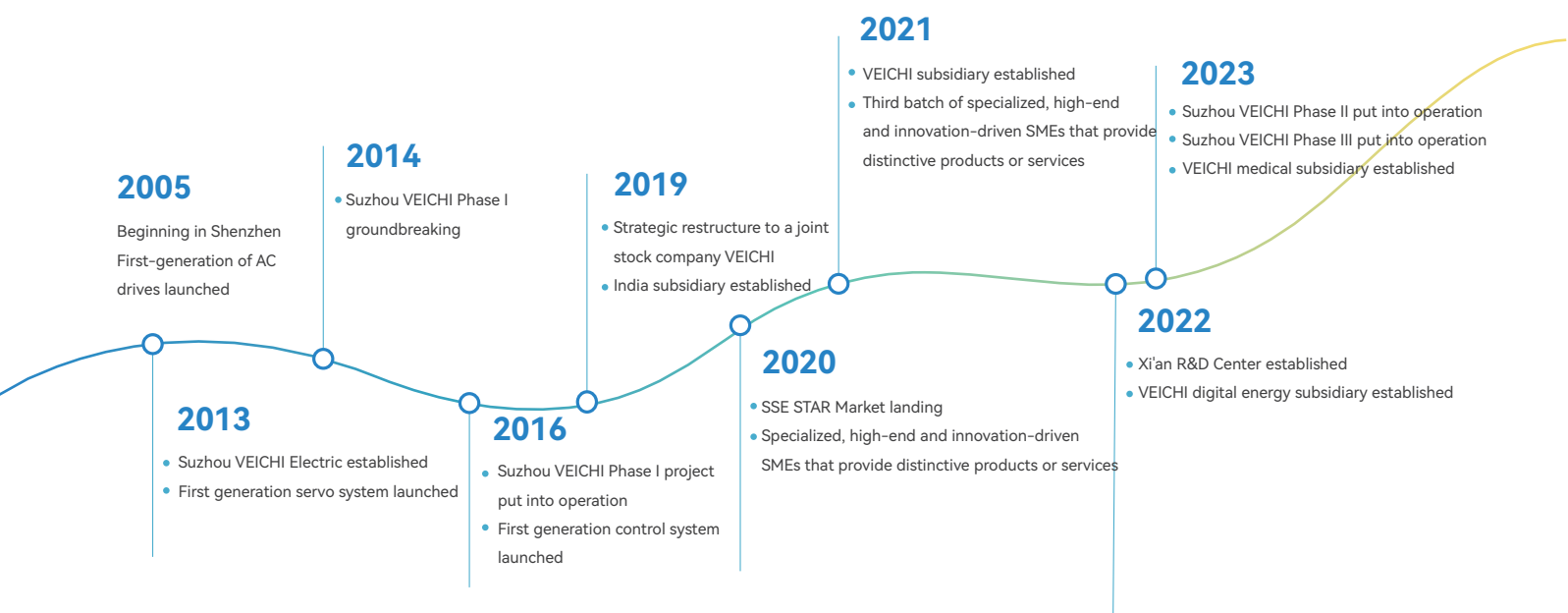
The company boasts an extensive portfolio of products, encompassing AC drives, servo systems, and control systems, which are widely utilized across various sectors such as heavy industry, light industry, and high-end equipment, providing scenario-based solutions that support the digital and intelligent transformation of the manufacturing industry. Moreover, the company is in lockstep with the zeitgeist, expanding its reach into burgeoning fields like robotics, renewable energy, and healthcare with a suite of innovative products, including hollow cup motors, frameless motors, hybrid inverters, and surgical power systems. These cutting-edge offerings significantly enhance the prosperity and advancement of the industries they serve.

Years of R&D efforts have led to mastery in the core technologies of motor control such as vector control of PMSM, V/F control, high-frequency pulse injection control, field-weakening control for higher speed etc, and of silicon carbide application,

motor auto tuning, motor protection and fly track start-up. And it has also successfully cultivated a series of patented technologies with independent intellectual property rights. As of June 30, 2024, a total of 221 patents have been granted, including 51 patents for inventions.

Over the course of 19 years, VEICHI has earned recognition and certifications from national and authoritative bodies like the third batch of specialized, high-end and innovation-driven SMEs that provide distinctive products or services, "high-tech enterprise", "Jiangsu Provincial Engineering Technology Research Center", "Jiangsu Provincial Enterprise Technology Center", and "Jiangsu Industrial Internet Development Demonstration Enterprise (Benchmarking Factory Category)".

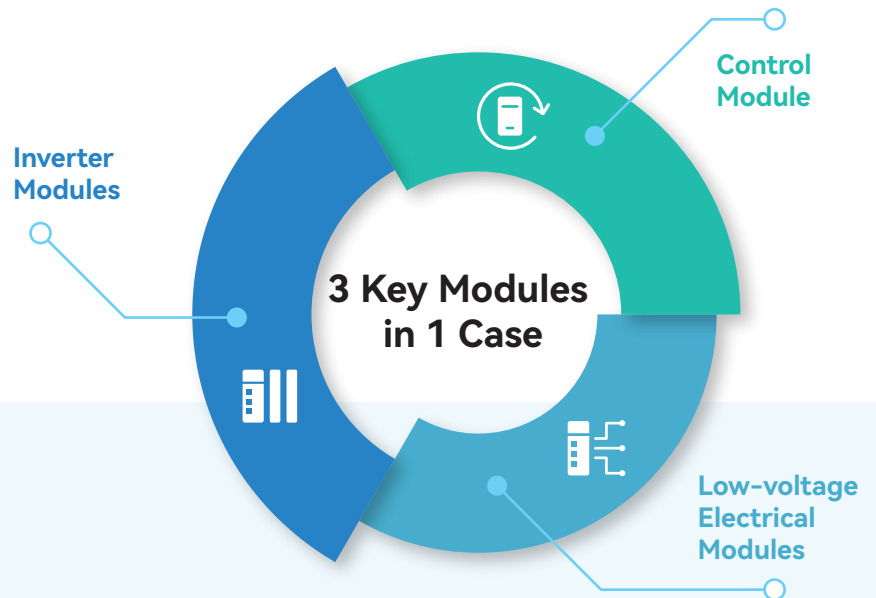
Steadfast in its commitment to the business philosophy of "guided by market demand and driven by technological innovation", VEICHI will fortify its research in key core technologies and enhance product iteration to expand relentlessly across the spectrum of high-performance and quality applications. This strategic focus will enable us to make significant contributions to the evolution of electrical drive and industrial control systems, propelling the industry forward with determination and vigor.



CH610 Integrated Crane AC Drive

CH610 series AC drive is an “all-in-one” integrated product specially designed for cranes. It has three major inverter units, one logic control unit, one weight limiter and other low-voltage electrical appliances inside the housing. Based on years of industrial application experience and advanced driving algorithms, VEICHI provides customers with a complete set of high-performance, safe and reliable system solutions around this product.

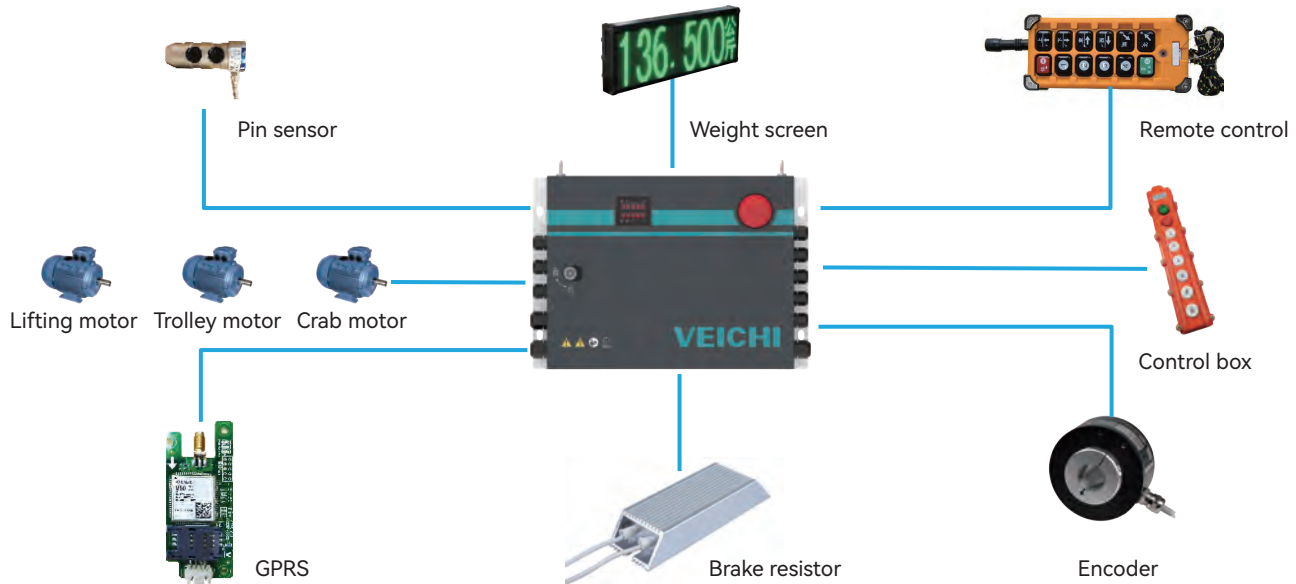
It can be used to drive the general-purpose lifting equipment including winches and hoists.



CH610

Integrated Crane AC Drive

Basic Composition



Rich Functions

Highly integrated and compact design

It is a highly integrated design with components on PCB board to reduce quite a lot cables and wiring, and thus cabinet volume is reduced by 1/3 for higher product consistency and reliability.

Running status prompt

Keypad displays a status code when the unit is restricted or not in conformity to operating conditions for quick maintenance and overhaul.

Simple installation and maintenance

Quick-plug terminals save complicated installation and commissioning.

Overload protection (integrated)

The built-in lifting weight limiter ensures the safe operation of the equipment under the rated load and the LED display ports are reserved for real-time display of the current load.

IOT remote module (optional)

It can realize equipment positioning, remote monitoring, online debugging and maintenance, and equipment access management.

Slow/inching operation

It is suitable for high-precision alignment applications which requires less operator experience.

Energy-saving

The potential energy generated by the equipment is fully utilized in the common DC busbar solution, and only one braking resistor required for the system.

Electronic soft limit protection (in closed loop)

In the event of an upper/lower limit switch failure, the hook is still guaranteed against topping out to minimize the potential safety hazards.

Wide operating voltage

Reliable operation of the equipment is ensured within $\pm 20\%$ of the rated voltage.

Torque output error protection

The motor torque is monitored in real time during operation, and when insufficient motor torque is detected, the brake is immediately applied and the output is blocked to eliminate the potential safety hazards.

Brake failure protection

The system is equipped with double protection functions against brake signal abnormality and sticking and dragging brake.

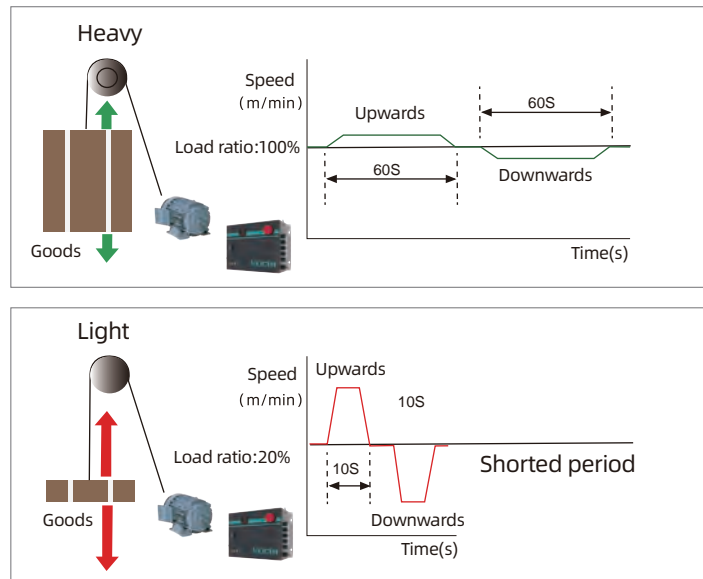
Multiple macros

Built-in parameter groups of lifting, trolley and crab allow the users to choose macros according to the type of equipment mechanism to achieve one-key quick setup.

Efficient Operation

High speed for light loads while low speed for heavy loads

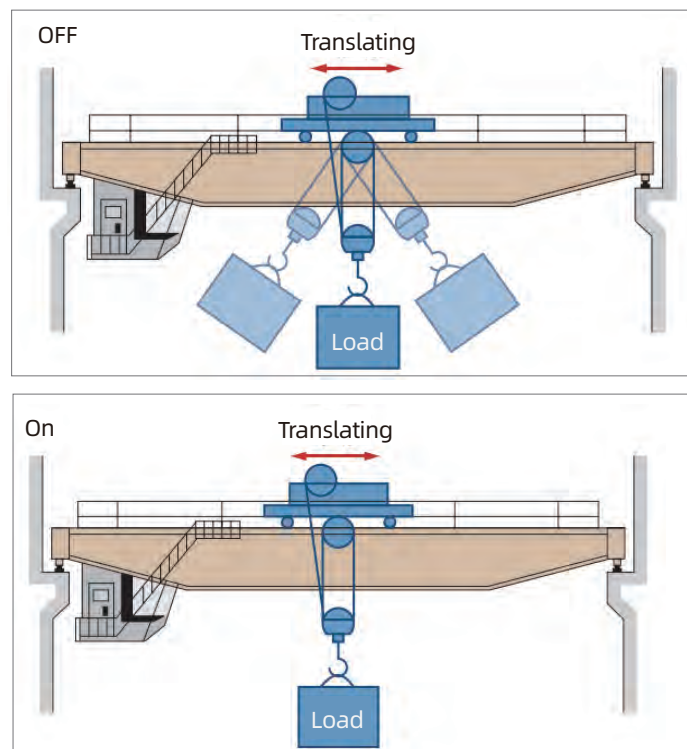
Constant power control(speed changing with load) is built in, so that in operation, the best running speed is calculated according to the current lifting weight, improving the speed by 1-2 times for higher efficiency of crane operation.



Anti-swing control

It is equipped with open/closed loop anti-swing control algorithm and features simple debugging and good adaptability to reduce hook sway caused by inertial shock during trolley/crab operation. And it suppresses the swinging amplitude of the goods when the crane is panning to ensure the efficiency of the material handling, and it improves the safety and stability of the operation

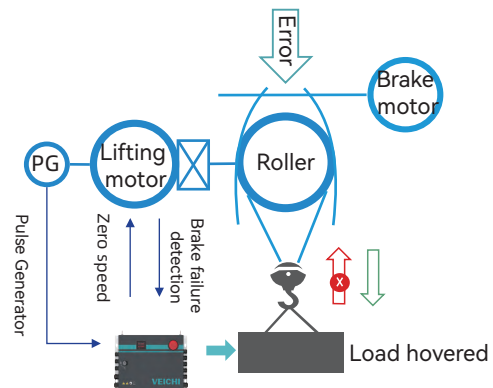
This function can be activated and deactivated using the selector switch.



Trustworthy safety

Zero-servo hovering anti-skidding protection(closed loop)

When there is an imminent risk of skidding due to brake failure, the system issues an alarm and makes the motor to hover or preforms controlled low-speed lowering to guarantee safety to the largest extent.

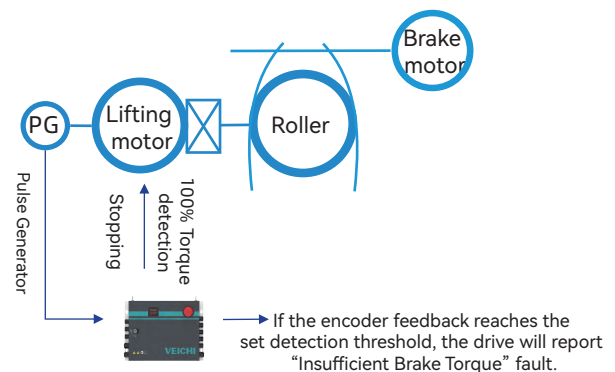


Braking torque detection

It regularly checks whether the brake torque meets the usage requirements, and when the insufficient brake torque is detected, the system will send alarms and stop the operation.

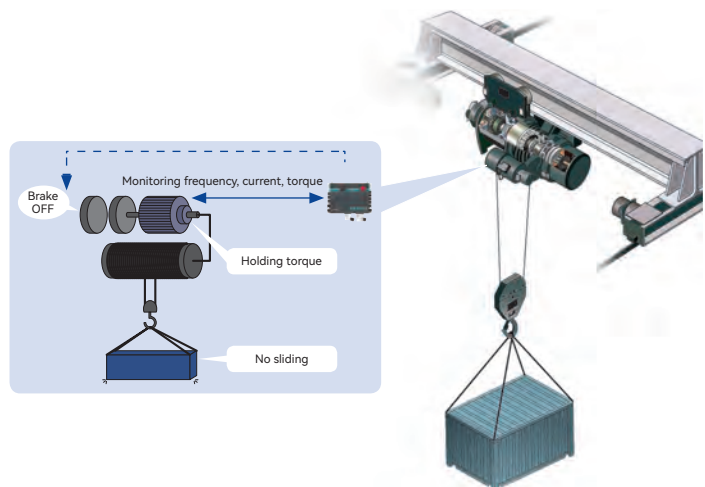
Dragging brake protection

Check the status of the brake contactor while the lifting mechanism is running. If the brake contactor is not engaged, the system will not continue to run to prevent excessive wear on the brake.



Brake control logic

The brake will act only when the two conditions of release/apply frequency and release/apply torque are satisfied at the same time, which ensures smooth starting and stopping without any hook slipping during lifting.



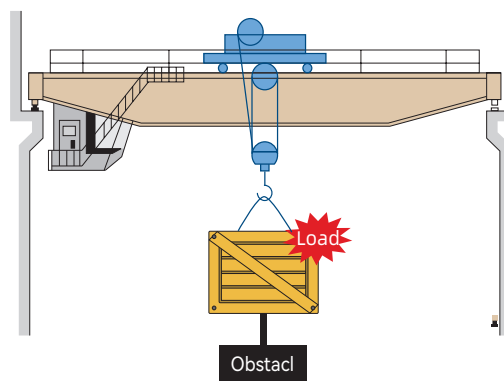
Rope protection

Automatic speed reduction and slow tightening will trigger during high-speed hoisting when the ropes are still slack to inhibit overstretching due to violent tension. And it can reduce mechanical shock damage and extend equipment life.



Anti-sag protection

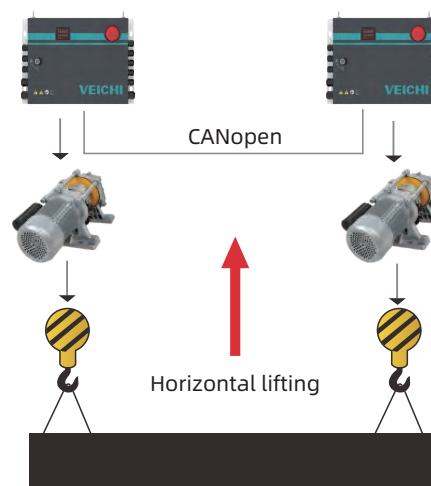
If a sudden increase in load torque is detected during the lifting process (when the load is caught by a foreign object or an obstacle), an alarm is issued and operation is stopped to avoid further operation causing safety accidents.



Sync control

When the two cranes are lifting up at the same time, CANopen bus communication can be used to realize both independent and sync control to ensure that lifting and traveling are performed synchronously.

Flexible and easy operation through sync switches allows safer and more reliable operation.



Naming Rules

CH 610 -7R5/2R2/R75 (XXXX)

CH610

Integrated crane AC drives

Lifting frequency conversion power (kW)

7R5: 7.5kW

Customized code for non-standard products

Letter+number

Crab frequency conversion power (kW)

R75: 0.75kW

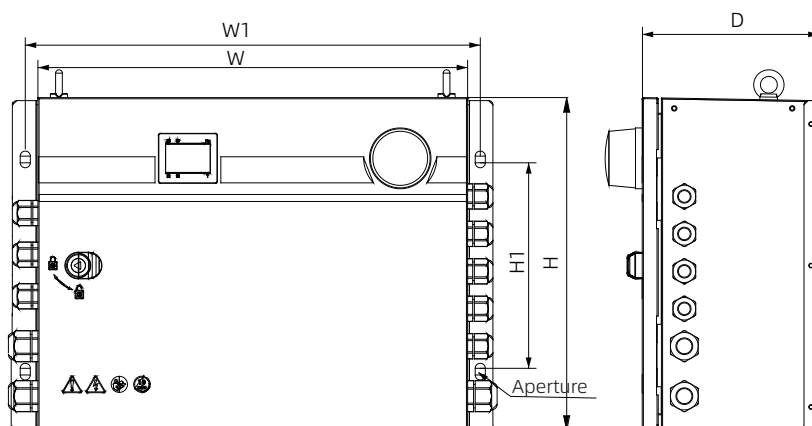
Trolley/secondary hook frequency conversion power (kW)

2R2: 2.2kW

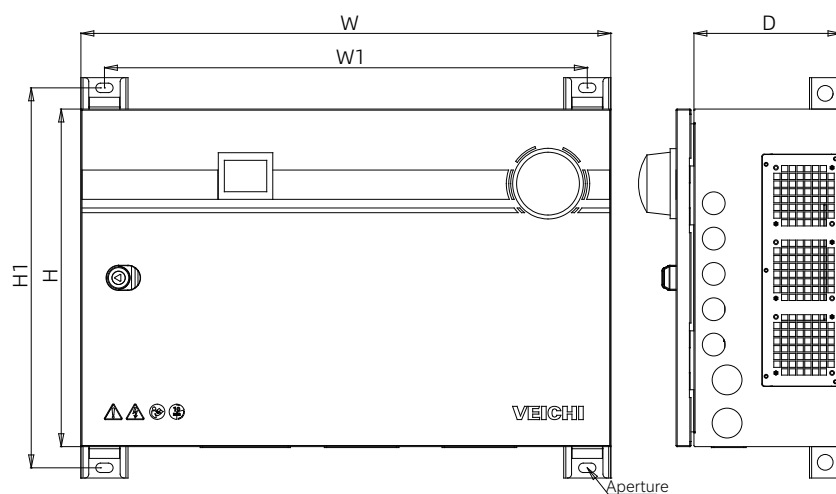
Specification

Specification	Type	Drive Power	Motor Power	Rated Voltage	Rated Current
CH610-7R5/2R2/R75	Lifting mechanism	7.5kW	6kW	Three-phase 380V	17A
	Trolley	2.2kW	2*0.8kW		6A
	Crab	0.75kW	0.7kW		3A
CH610-011/7R5/004	Lifting mechanism	11kW	9kW		25A
	Trolley	7.5kW	2*3kW		17A
	Crab	4kW	2*2kW		10A
CH610-018/5R5/2R2	Lifting mechanism	18.5kW	15kW		38A
	Trolley	5.5kW	2*2.2kW		13A
	Crab	2.2kW	2*0.8kW		6A
CH610-018/7R5/004	Lifting mechanism	18.5kW	15kW		38A
	Trolley	7.5kW	2*3kW		17A
	Crab	4kW	2*2kW		10A
CH610-022/7R5/004	Lifting mechanism	22kW	18kW		45A
	Trolley	7.5kW	2*3kW		17A
	Crab	4kW	2*1.5kW		10A
CH610-030/011/004	Lifting mechanism	30kW	22kW		60A
	Trolley	11kW	9kW		25A
	Crab	4kW	2*1.5kW		10A
CH610-037/015/004	Lifting mechanism	37kW	30kW		75A
	Trolley	15kW	2*7.5kW		32A
	Crab	4kW	2*2kW		10A
CH610-045/015/7R5	Lifting mechanism	45kW	36kW		90A
	Trolley	15kW	2*7.5kW		32A
	Crab	7.5kW	2*3kW		17A
CH610-055/022/7R5	Lifting mechanism	55kW	45kW		110A
	Trolley	22kW	2*11kW		45A
	Crab	7.5kW	2*3kW		17A

Outer Dimensions



Model	Outer Dimensions (mm)			Installation Dimensions (mm)		Aperture
	W	H	D	W1	H1	
CH610-7R5/2R2/R75	480	350	180	510	256	φ9.5
CH610-018/5R5/2R2	510	400	210	540	255	φ12
CH610-011/7R5/004	550	400	210	580	255	φ12
CH610-018/7R5/004						
CH610-022/7R5/004						



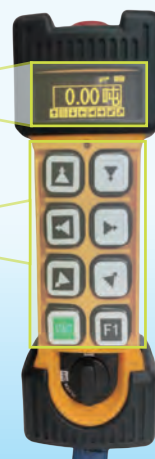
Model	Outer Dimensions(mm)			Installation Dimensions (mm)		Aperture
	W	H	D	W1	H1	
CH610-030/011/004	675	430	210	615	484	φ12
CH610-037/015/004						
CH610-045/015/7R5	780	520	260	720	574	φ12
CH610-055/022/7R5						

LCD remote control (optional)

The remote control transmitter is made of high-strength engineering plastics with all-round protection functions, and the OLED LCD screen offers instant feedback and display of relevant command input and equipment operation data, together they support the CH610 series cranes integrated drive for easy and clear operations.

Display screen
Anti-glare

Key lifespan
≥ 2 million times



Light and fresh transmitter appearance with IP65 housing against dust, high temperature and humidity
Silicone rubber covered edges resistant to shock and harsh environments

Auto frequency management with reliable wireless signal
Transmission multiple anti-interference design with digital hopping technology for non-interference operation in 433MHz~868MHz



8 keys for double-speed control + password lock, encrypted data transmission to eliminate misoperation.
OLED screen with anti-glare function for accurate weight and operating current display
Multi-LED indicators of operating status and limit status for easy troubleshooting

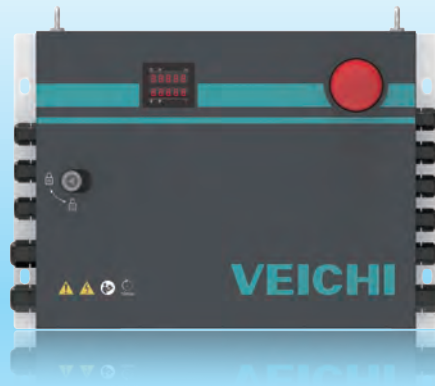
Hidden built-in radio omni-directional smart RF antenna to effectively eliminate wiring failure for better communication performance
Two-way wireless transmission control over 100m to feedback instant and clear status to the operator

Braking Resistor

Drive		Braking Resistor			
Specification	Power	Braking Power	Recommend	Specification	Qty
CH610-7R5/2R2/R75	7.5+2.2+0.75	3kW	≥80Ω	RXLG-3kW-80R	1
CH610-011/7R5/004	11+7.5+4	6kW	≥40Ω	RXLG-3KW-80R	2
CH610-018/5R5/2R2	18+5.5+2.2	9kW	≥20Ω	RXLG-3kW-80R	3
CH610-018/7R5/004	18+7.5+4	9kW	≥20Ω	RXLG-3kW-80R	3
CH610-022/7R5/004	22+7.5+4	11kW	≥18Ω	RXLG-3KW-80R	4
CH610-030/011/004	30+11+4	15kW	≥15Ω	BZR-20/15kW-S1	1
CH610-037/015/004	37+15+4	18kW	≥12Ω	BZR-15/24KW-S1	1
CH610-045/015/7R5	45+15+7.5	21kW	≥10Ω	BZR-10/30KW-S1	1
CH610-055/022/7R5	55+22+7.5	28kW	≥8Ω	BZR-10/30KW-DS	1

CH610 Integrated Crane AC Drive

Three-in-one special controller ,
a special model customized for lifting applications



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Official Website

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