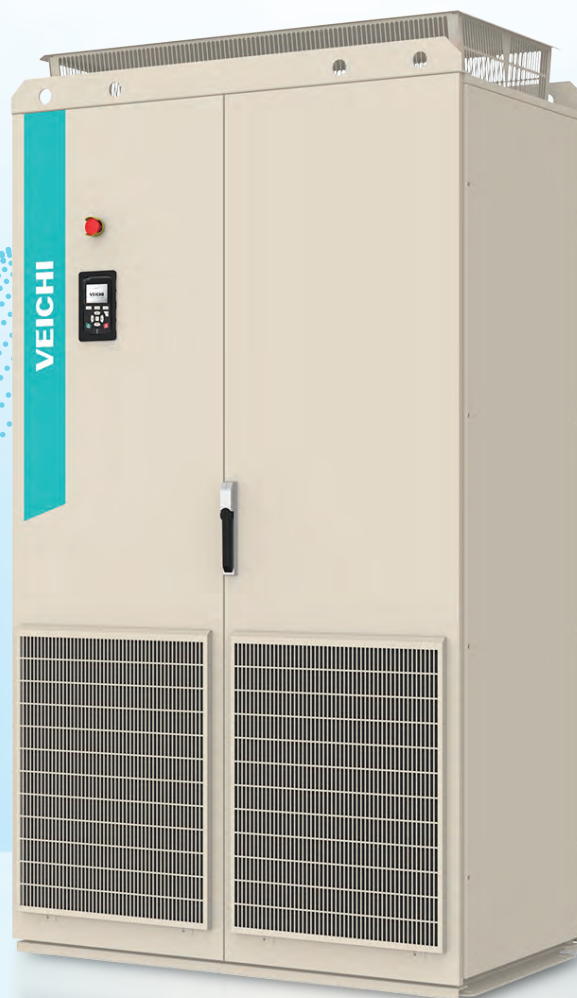


VEICHI

AC830 Series Four-Quadrant AC Drive Cabinet



Stock code : 688698

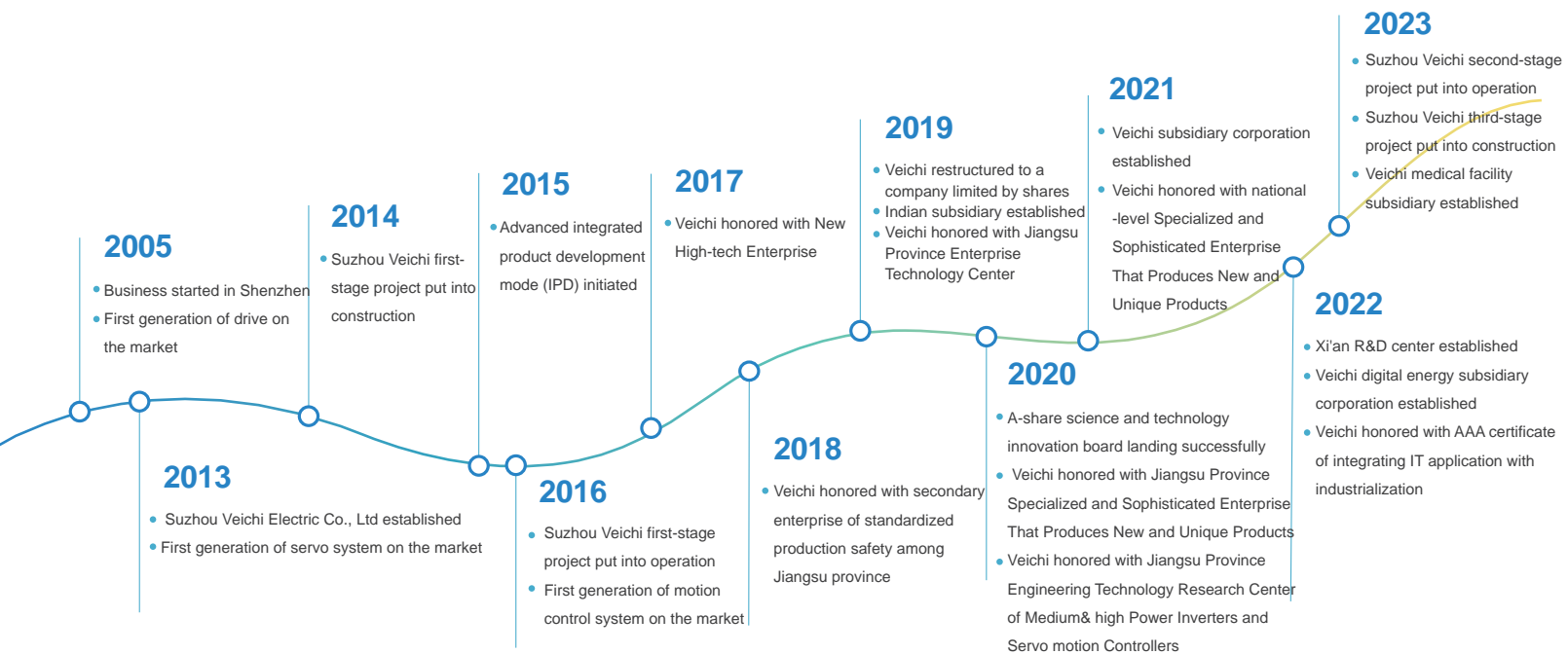
About us

Veichi (stock code: 688698) has always committed to electric drive and industrial control since its foundation. As an all-round company engaged in R & D, manufacturing and sales on high-tech industrial automation products, Veichi has been identified with several honorary titles such as Jiangsu provincial-level Enterprise Technology Center, Jiangsu Private-own Technical Enterprise, Specialized and sophisticated enterprises that produce new and unique products, Jiangsu Engineering Research Center, Jiangsu New and High-tech Enterprise and Suzhou city-level Gazelle Company (High Growth Enterprise) and has obtained the highest level of enterprise credit. Through years of independent research and development, Veichi now has authorized patents totaling 148 by the end of 12, 2022, and among them 36 are for invention. Having established R & D center and manufacturing bases in Suzhou, Shenzhen and Xi'an, added with the wholly-owned subsidiary in India, Veichi now are dealing with customers from several nations and regions and has the full capability to provide safe, competitive and trustworthy products and services to customers from the larger world.

Veichi provides various products including drives from 0.4kW to 5,600kW, servo systems from 50W to 200kW, motion controllers, PLC and HMI, which are applied in all sorts of fields occasions like lifting, mining, rail traffic, machine tools, compressors, plastic equipment, photo-voltaic pumping, construction, robots/mechanical arms, printing and packaging, chemical fibers for textile use, metallurgy, municipal works, petrol work and chemical engineering.

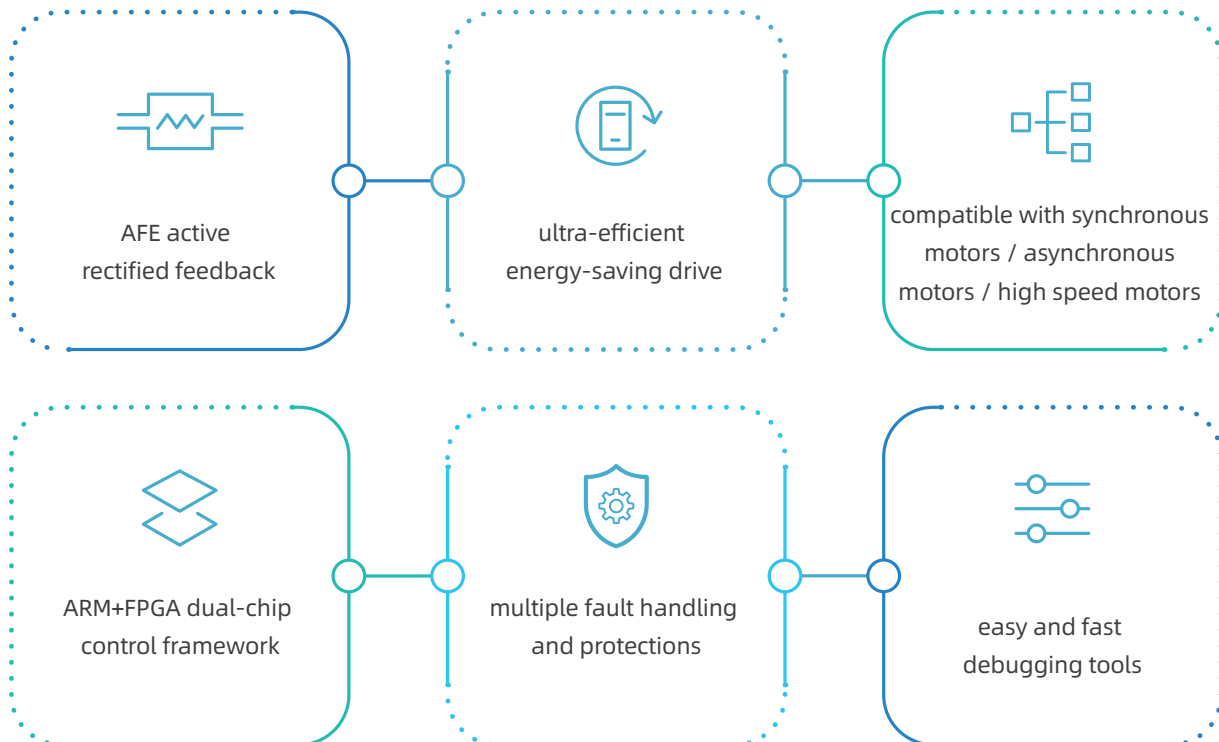
18 service stations and 182 contracted distributors cover 31 provinces on China mainland and Hong Kong, Macao and Taiwan regions, which guarantees a massive and efficient network for sales and services for our customers.

Veichi will continue to abide by the operation philosophy, that is, guided by market demand and driven by technical innovation, enlarge and enhance its core business like drives, servo systems, control systems and SIoT. And Veichi will always be hard at providing quality products and services for customers and further make contributions to the development of electric drives and industrial controls.



Brief Introduction

AC830 series four-quadrant AC drive cabinet, based on an elaborately built technology platform of variable frequency products of Veichi, adopts AFE active rectified feedback to reduce grid-side harmonics content. With rectifier and the AC drive both controlled via IGBT, this cabinet is compatible with the drive control of asynchronous motors, synchronous motors, and high-speed motors.



Product Specifications

Active rectifier single-drive cabinet specifications

| Active rectifier single-drive four-quadrant cabinet model (400V class 380-460Vac) | Heavy overload applications | | Structure type | Dimension (W*D*H mm) |
|---|-----------------------------|-----------|----------------|----------------------|
| | Current(A) | Power(kW) | | |
| AC830-S75-T3-0091 | 91 | 45 | LCL+V3+V3 | 600*670*2150 |
| AC830-S75-T3-0112 | 112 | 55 | LCL+V3+V3 | 600*670*2150 |
| AC830-S75-T3-0150 | 150 | 75 | LCL+V3+V3 | 600*670*2150 |
| AC830-S75-T3-0180 | 180 | 90 | LCL+V6+V6 | 900*670*2150 |
| AC830-S75-T3-0225 | 225 | 110 | LCL+V6+V6 | 900*670*2150 |
| AC830-S75-T3-0263 | 263 | 132 | LCL+V7+V7 | 900*670*2150 |
| AC830-S75-T3-0297 | 297 | 160 | LCL+V7+V7 | 900*670*2150 |
| AC830-S75-T3-0389 | 389 | 200 | LCL+V7+V7 | 900*670*2150 |
| AC830-S75-T3-0450 | 450 | 250 | LCL+V8+V8H | 1200*670*2150 |
| AC830-S75-T3-0503 | 503 | 280 | LCL+V8+V8H | 1200*670*2150 |
| AC830-S75-T3-0569 | 569 | 315 | LCL+V8+V8H | 1200*670*2150 |
| AC830-S75-T3-0675 | 675 | 355 | LCL+V8+V8H | 1200*670*2150 |

Active rectifier single-drive cabinet specifications

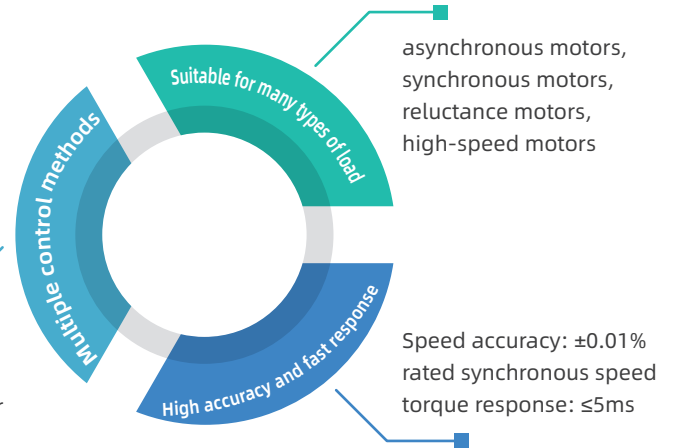
| Active rectifier single-drive four-quadrant cabinet model (690V class 525-690Vac) | Heavy overload applications | | Structure type | Dimension (W*D*H mm) |
|---|-----------------------------|-----------|----------------|----------------------|
| | Current(A) | Power(kW) | | |
| AC830-S75-T6-0046 | 46 | 45 | LCL+V6+V6 | 900*670*2150 |
| AC830-S75-T6-0061 | 61 | 55 | LCL+V6+V6 | 900*670*2150 |
| AC830-S75-T6-0074 | 74 | 75 | LCL+V6+V6 | 900*670*2150 |
| AC830-S75-T6-0094 | 94 | 90 | LCL+V6+V6 | 900*670*2150 |
| AC830-S75-T6-0108 | 108 | 110 | LCL+V6+V6 | 900*670*2150 |
| AC830-S75-T6-0144 | 144 | 132 | LCL+V6+V6 | 900*670*2150 |
| AC830-S75-T6-0162 | 162 | 160 | LCL+V7+V7 | 900*670*2150 |
| AC830-S75-T6-0202 | 202 | 200 | LCL+V7+V7 | 900*670*2150 |
| AC830-S75-T6-0225 | 255 | 250 | LCL+V7+V7 | 900*670*2150 |
| AC830-S75-T6-0308 | 308 | 315 | LCL+V8+V8H | 1200*670*2150 |
| AC830-S75-T6-0398 | 398 | 355 | LCL+V8+V8H | 1200*670*2150 |
| AC830-S75-T6-0450 | 450 | 400 | LCL+V8+V8H | 1200*670*2150 |
| AC830-S75-T6-0488 | 488 | 450 | LCL+V8+V8H | 1200*670*2150 |
| AC830-S75-T6-0541 | 541 | 560 | LCL+V8+V8H | 1200*670*2150 |

Product Features

High-performance control platform

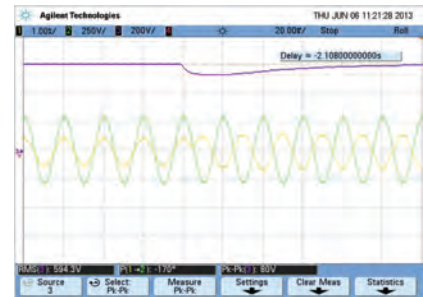
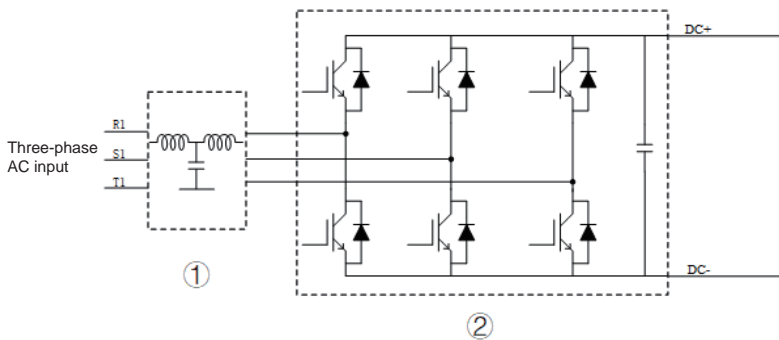
ARM+FPGA dual-chip control framework is adopted, and external signals such as IO, bus and encoder, etc. are all parallel processed by FPGA and thus high-speed and high-precision loop control operation is realized to ensure excellent dynamic response and control accuracy of the drive system.

VF control,
open-loop vector,
closed-loop vector



Advanced four-quadrant feedback capability

The active rectifier four-quadrant AC drive is equipped with LCL PWM filtering unit, which can effectively reduce the harmonic content on the grid side.



Active rectifier four-quadrant feedback current waveform

A variety of expansion modules supported

Users can extend the functions according to their own needs.



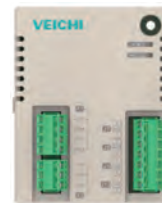
Encoder expansion modules

Incremental TTL
Incremental HTL
UVW encoder
Sine & Cosine
Resolver



Bus expansion modules

Modbus-RTU
Modbus-TCP
CANopen
Profibus DP
Profinet



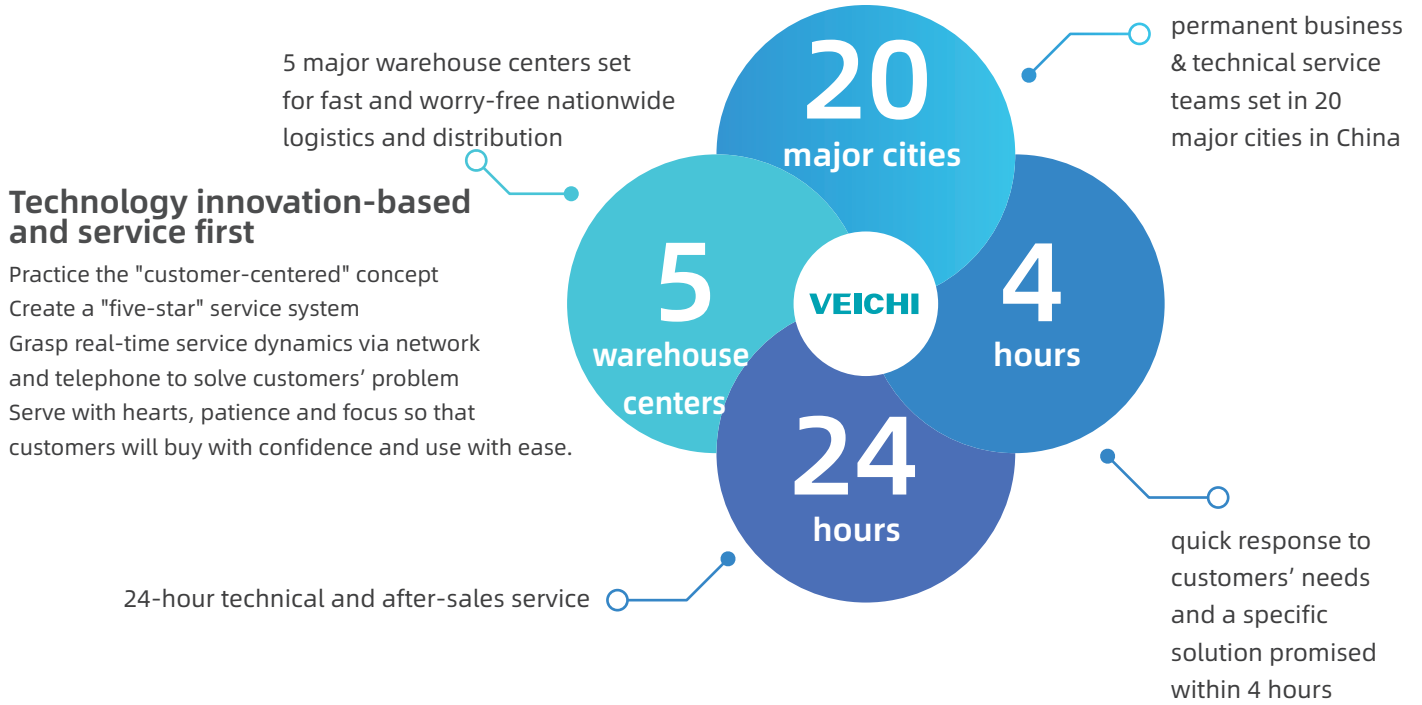
IO expansion modules

2AI/2AO/2DIO/2RO
4DIO/2RO
2AI/2AO

Technical Parameters

| Item | | Specification |
|---------------------------------|-----------------------------------|---|
| Power input | Input voltage | 400V: 380Vac ~ 460Vac, 690V: 525Vac ~ 690Vac |
| | Output voltage | 400V: 0Vac ~ 415Vac, 690V: 0Vac ~ 690Vac |
| Basic performance | Overload capacity | Heavy overload: 150% every 5 minutes allowed for 1 minute |
| | Work efficiency | ≥97% |
| | Grid-side power factor | ≥0.99 (adjustable) |
| | THD (Total Harmonic Content) THDI | 5% (rated power); THDU<5%,(Rsc>20) |
| Control performance | Output frequency | 0Hz ~ 300Hz |
| | Carrier frequency | 400V system: 45kW ~ 75kW, default 3.2kHz 90kW ~ 355kW, default 2kHz 690V system: 45kW ~ 560kW, default 1.5kHz, derate if carrier frequency is increased for use |
| | Control method | Frequency control (V/F), vector control with encoder (FVC), vector control without encoder (SVC) |
| | Speed ratio | V/F control: 1:50 |
| | | SVC control: 1:200 |
| | | FVC control: 1:1000 |
| | Speed accuracy | SVC control: asynchronous motor 5% rated slip, synchronous motor 0.2% rated speed |
| | | FVC control: ±0.01% rated speed |
| | Torque response | SVC control: ≤5ms |
| | | FVC control: ≤5ms |
| Start-up torque | SVC control: 0.5Hz/150% Tn | |
| | FVC control: 0Hz/200% Tn | |
| Functional Features | Protection function | Short circuit, overcurrent, overvoltage, undervoltage, phase loss, overheating, overload, encoder disconnection, etc. |
| | Standard function | V/F control, vector control, automatic voltage adjustment, segment speed and frequency setting, forward and reverse control, differential rotation compensation, torque compensation, PID control |
| Environment requirements | Working temperature | -10°C ~ +40°C, derate to use when the ambient temperature exceeds 40°C. 1% derating for every 1°C temperature rise. Maximum ambient temperature is 50 |
| | Working humidity | 5% -95% RH, no condensation |
| | Storage temperature | -40°C ~ 70°C |
| | Storage humidity | 5% -95% RH, no condensation |
| | Protection grade | Cabinet: IP20 |
| | Noise | ≤85dB(A) |
| | Installation height | Altitude below 1000m: 100% full load (no derating) Altitude above 1000m: 1% derating for every 100m elevation. Maximum altitude is 4000m |
| Mechanical Data | Vibration performance | Standard: Test Fc in IEC 60068-2-6 Sine vibration: 10Hz ~ 57Hz, 0.075mm 57Hz ~ 150Hz, 10m/s ² |
| | Impact performance | Standard: Test Ea in IEC 60068-2-27:2008 Half-sine pulse: 50m/s ² , 30ms |
| | Cooling method | Forced air-cooled AF |

Service and Support



- 01 Pre-sales**
technology promotion, site survey, proposal design, energy saving assessment
- 02 During-sales**
customization, design consultation, installation and commissioning, on-site training
- 03 After-sales**
regular return visits, regular maintenance, timely repairs, application instruction

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Official Website

Version: V2022 NOV

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