

HFC 3710 series Frequency Converter Product Catalog



Bosch Rexroth (Xi'an) Electric Drives and Controls Co. Ltd.



Company Introduction

Bosch Rexroth (Xi'an) Electric Drives and Controls Co. Ltd. is a wholly-owned subsidiary of Bosch group. Bosch Xi'an Plant is committed to the development of drives and controls industry. Having a strong R&D and management teams with advanced technology and scientific management and excellent staff, we provide innovative, efficient, energy-saving and customized solutions for industrial automation.

As one of the world's leading suppliers of drive and control technologies, Bosch Rexroth ensures efficient, powerful and safe movement in machines and systems of any size. The company bundles global application experience in the market segments of Mobile and Industrial Applications as well as Factory Automation. With its intelligent components, customized system solutions, engineering and services, Bosch Rexroth is creating the necessary environment for fully connected applications. Bosch Rexroth offers its customers hydraulics, electric drive and control technology, gear technology and linear motion and assembly technology, including software and interfaces to the Internet of Things With locations in over 80 countries, around 33,800 associates generated sales revenue of 7.6 billion euros in 2023.

HFC 3710 series Frequency Converter

Powerful, Economic, Easy-to-use, Reliable

High power size frequency converter

3 Phase 380V 400...630 kW



Product Features

Innovation design

- Hook design in air inlet, easy for maintenance and cleaning
- High efficiency cooling, modularized radiator and optimized independent cooling duct design
- Reinforced protection, seal strips at the connection between door and cabinet, filters inside the air inlet

Reliable

- PCBAs are coated with imported German coating materials, anti dust and corrosion
- Built in AC input reactor, DC reactor
- Multiple protecting function
- Complete Safely and EMI test, better immunity to interference
- Optimized grounding design, suitable for different application environment
- Excellent quality from Bosch Production System (BPS)
- High quality service from Rexroth service network

Convenient

- Bigger space at bottom, convenient for cable connection
- Removable fan at top, easy for maintenance
- Support both top lifting or bottom lifting, convenient for transporting
- LCD text display, support multiple parameter display and plug-and-play

Space saving

- Parallel installation supported, modularized design of internal components
- 9 fold extrudate structure, support connection connection with distribution system.
- Standard operation panel door mounting extension

Typical Applications:

Suitable for various big power size fan and pumps

- ▶ Constant pressure water supply
- ▶ Boiler and heating system
- ▶ Oil and power
- ▶ Metallurgy and mining
- ▶ Chemical and pharmaceutical

High efficiency cooling

Dedicated radiators for the cooling of power module, cold air flow in from the air inlet in the back, hot air exhausted by the detachable fan from the top ; cooling of other heat dissipating components by the main circuit cooling duct, filter at air inlet to protect the internal components.



Top & Bottom lifting plan

Flexible lifting plan, crane lifting with rings on top, or fork lifting from bottom with the protection plate removed.



LCD display

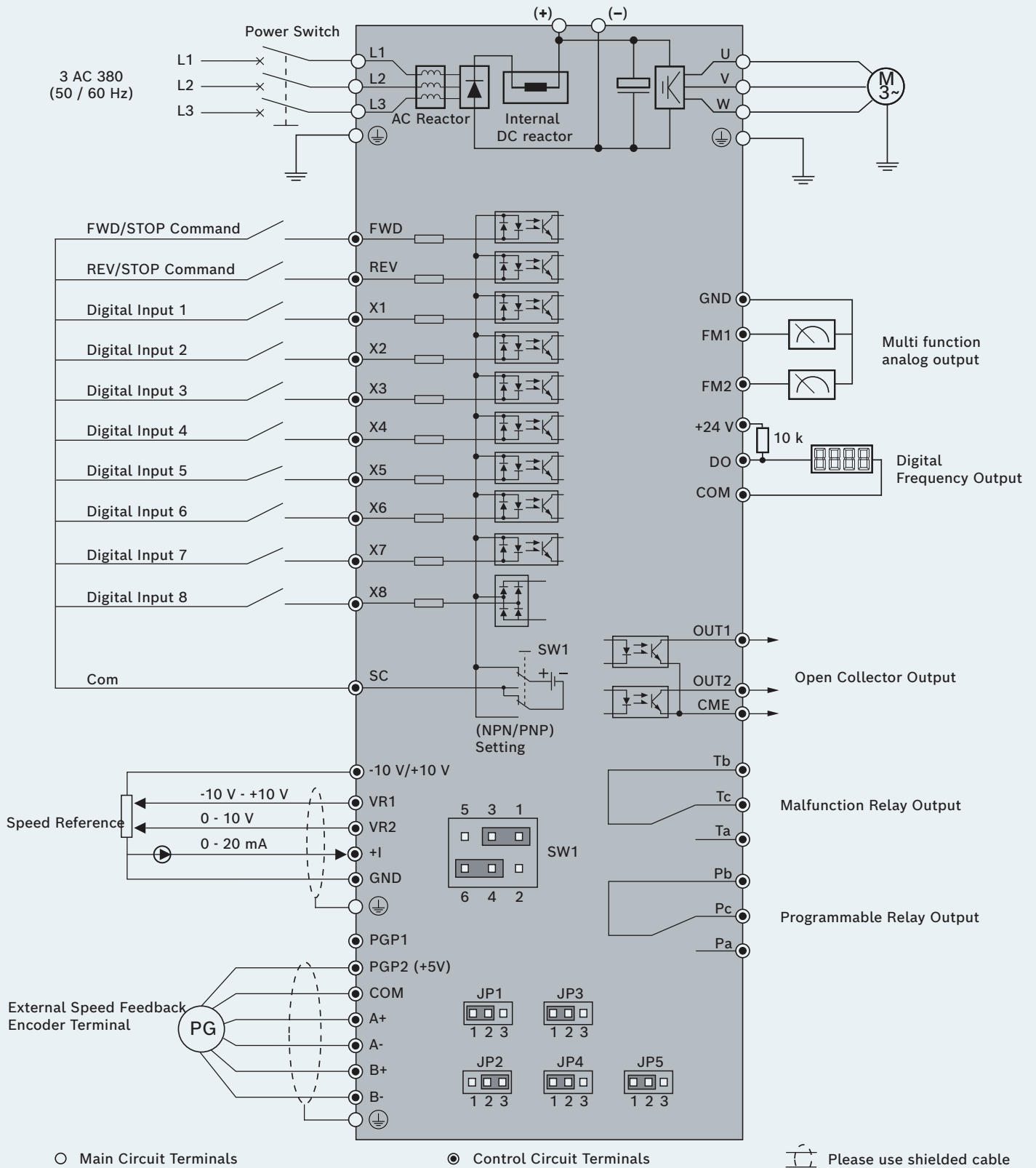
LCD display, multiple parameter can be monitored in one screen, plug-and-play supported; integrated cabinet door mounting adapter supports max. 15m remote control.



Technical Specification

Input	Power Supply Voltage	3 Phase
	Power Supply Frequency	50/60 Hz (±5 %)
Output	Output Frequency Range	0...400 Hz
	Overload Capacity	Rated Current * 120% / 1 min. , Rated Current * 150% / 2s
Control	Control Method	V/F control
	Frequency Setting Accuracy	Analogue Setting: 0.05%, Digital Setting: 0.01%
	Multi Speed Segment Operation	16 segments operation controlled by integrated simple PLC function or control terminals
	Carrier Frequency	1.0...3.0kHz, auto adjustment according to load characteristic
	Brake Control	DC bus terminal for external brake chopper connection
		AC brake: start frequency 0...10Hz, duration 0...20s, brake current 0...15% rated current
	Function	PID control, stall prevention, speed tracing, multi speed segment operation, manual/auto torque boost, main/auxiliary reference, frequency skipping, reverse limitation, slip compensation, frequency increasing/decreasing control, error auto reset
IO terminals	Analog Input	2 way voltage input:-10V...10V; 1 way current input: 0...20mA
	Analog Output	2 way voltage/current switchable output:0...10V/0...20mA
	Digital Input	8 way programmable PNP/NPN terminal, X8 can be used as high speed pulse input, 2 way special input for: FWD/REV run
	Relay Output	2 Way
	Open Collector Output	2 Way
	Encoder	2 Way, Differential input power supply voltage: 8...24V
	Communication	Modbus (Standard)
Protection	Over current, Over voltage, Under voltage, Input/Output Phase Loss, Drive over temperature, Motor Over temperature, Output grounded, Output short circuit	
Accessories	Operation panel, Modbus/Profibus adapter	
Structure	Cooling	Active air cooling
	Operation Panel	LCD display, extension kit for door mounting (max. 15m), parameter copy function
	Protection Class	IP20
Environment	Derating/Maximum mounting height	No derating below 1000m 1000m...4000m: 1%/100m
	Temperature	-10...40 °C (without derating); 40...50 °C (derating)
Mounting	Cabinet mounting, bottom wire connection supported	

Wiring Diagram

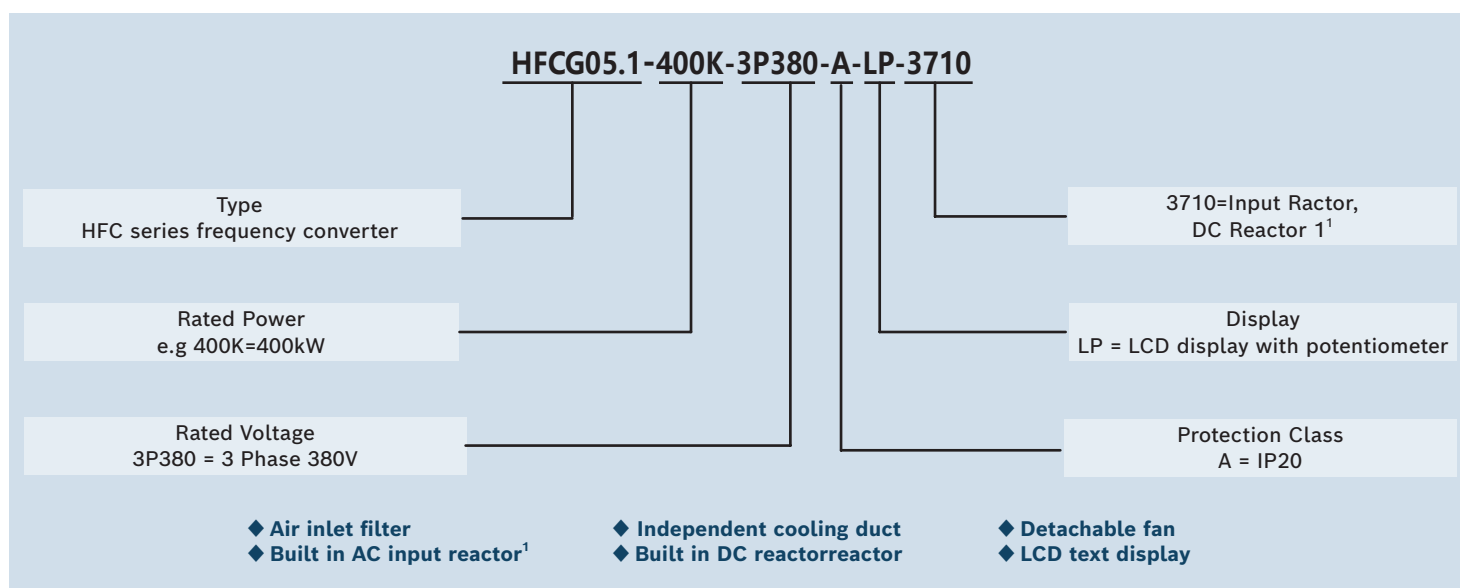


Electrical & Mechanical Parameters



Material Number	Type Code (3 Phase 380V, -15/+10%, 50/60 Hz)	Description	Width (mm) [W]	Height (mm) [H]	Depth (mm) [D]
R912104434	HFCG05.1-400K-3P380-A-LP-3710-01VRS	400 kW, 710 A	900	2000	650
R912104435	HFCG05.1-450K-3P380-A-LP-3710-01VRS	450 kW, 800 A			
R912104436	HFCG05.1-500K-3P380-A-LP-3710-01VRS	500 kW, 880 A			
R912104437	HFCG05.1-560K-3P380-A-LP-3710-01VRS	560 kW, 990 A	1200	2000	650
R912104438	HFCG05.1-630K-3P380-A-LP-3710-01VRS	630 kW, 1100 A			

Typecode



1: Full series with Built in DC reactor, 560kW and 630kW with AC input reactor

For AP region, (Xi' an)
Phone: +86 (29) 86555479 (8:30am-17:10pm / Mon-Fri)
Email: service.fc@boschrexroth.com.cn

Bosch Rexroth (Xi' an) Electric Drives and Controls Co., Ltd.

No. 3999 Shang Ji Road, Cao Tan Ecology Industry Park,
Economic and Technological Development Zone, 710021,
Xi'an, Shaanxi, P.R.C.

Phone: +86(29)86555 100

Fax: +86(29)86555 106

www.boschrexroth.com

info.fc@boschrexroth.com.cn

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