DELIXI

CDI-EM60 Series Frequency Inverter

Operation Manual

Product standard: GB/T 12668.2-2002
GB 12668.3-2003

☐ **Before the product is installed and used, please thoroughly read the Manual and keep it well.**

DELIXI HANGZHOU INVERTER CO., LTD.

2.2 Technical specification

Item		Specification
Control	Control mode	V/F control Open-loop vector control (SVC)
	Frequency Resolution	Digital: 0.02% Analog: 0.1%
	V/F curve	Linear, square root, random V/F
	Overload capability	150% rated current 60s; 180% rated current 3s
	Start torque	G type: 0.5Hz/150% (SVC);
	Speed Regulation Range	1:100 (SVC)
	Stable Speed Accuracy	±0.5% (SVC)
	Torque compensation	Manual torque compensation (0.1%-30.0%), automatic torque compensation
Configuration	Control power supply +24V	Max. output current 300mA
	Input terminal	The 4-way Digital Input Terminal (DI1-DI4) can be additionally expanded by 2-way (DI5-DI6) through connecting with the IO expansion card, DI6 can be connected with the high speed impulse input 1-way analog input terminal (VF1) which can be additionally expanded by 1-way (VF2) through connecting with the IO expansion card, and it can be also used as digital input terminal via setting. **Operating instruction: VF1 can serve as the voltage (0V-10V) or current (0/4mA~20mA) input, however, VF2 can only serve as voltage (0V~10V) input.**
	Output terminal	The 1-way Analog Output Terminal FM1 can be additionally expanded by 1-way (FM2) through connecting with the IO expansion card, both the voltage (0V-10V) and current (0mA~20mA) can be output, the 1-way relay outputs T1, below 30V/1A for DC and below 250V/3A for AC.
Operation	Mode of operation	Keyboard, terminal, RS485 communication
	Frequency source	14 main frequency sources, 14 auxiliary frequency sources. They can be combined and switched via multiple modes. The input mode of each frequency source can adopt multiple ways: keyboard potentiometer, external analog, digital reference, impulse reference, Multiplex Directive, simple PLC, communication, arithmetic results, etc.
	Torque source	14 kinds of Torque Sources, including digital reference, external analog, impulse reference, Multiplex Directive, communication, arithmetic results, etc.
	Acceleration and Deceleration Time	4-group straight line (terminal switch can be selected via acceleration and deceleration time), S curve 1 and S curve 2.
	Emergency stop	Interrupt frequency inverter output instantly
	Multiplex Speed	16-phase speed is allowable to set at most and use various combination of multiplex directive terminal to switch
	Simple PLC function	Continuously run 16-phase speed and independently set acceleration and deceleration time and running time
	Jogging Control	Independently set Jogging frequency and jogging acceleration and deceleration time, additionally, set the unit under running state and confirm whether the jogging is preferential
	Rotating Speed Tracking	Frequency inverter starts operation by tracking the load speed
	Fixed-length and fixed-distance control	Realize fixed-length and fixed-distance control function through Impulse Input

5.1 Group P0 - Basic Function

Function code	Function name	Setting scope	Factory value	Modification limit	Reference page
Group P0.0: Basic Group					
P0.0.00	Type of Frequency inverter	1: G type (constant torque load type) 2: P type (air-blower, water pump load type)	Machine type	○	58
P0.0.01	Display mode	0: Primary mode (prefix is "P") 1: User mode (prefix is "U") 2: Check mode (prefix is "C")	0	☆	
P0.0.02	Control mode	0: V/F control 1: Open-loop vector control 2: Reserved	0	★	59
P0.0.03	Option of operation control mode	0: Keyboard control 1: Terminal control 2: Communication control	0	☆	
P0.0.04	Option of A Frequency Source	0: Keyboard Reference (No Power-off Memory) 1: Keyboard Reference (Power-off Memory) 2: Keyboard Potentiometer Reference 3: External Terminal VF1 Reference 4: External Terminal VF2 Reference 5: PULS Impulse Reference (DI6) 6: Multiplex Directive Reference 7: Simple PLC Reference 8: PID Control Reference 9: Communication Reference 10: Operation Result 1 11: Operation Result 2 12: Operation Result 3 13: Operation Result 4	02	★	60
P0.0.05	Keyboard Frequency Reference	000.00~Highest Frequency	050.00	☆	61
P0.0.06	Running Direction	0: Default Direction 1: Negation of Direction 2: Determined by multi-functional input terminal	0	☆	62
P0.0.07	Max. frequency	050.00Hz~320.0Hz	050.00	★	
P0.0.08	Upper limit frequency	Lower limit frequency ~ Max. frequency	050.00	★	
P0.0.09	Lower limit frequency	000.00~Upper limit frequency	000.00	☆	
P0.0.10	Lower frequency operation mode	0: Running at lower limit frequency 1: Stop 2: Zero-speed Running	0	☆	63
P0.0.11	Acceleration time	0000.0~6500.0s	Machine type	☆	
P0.0.12	Deceleration time	0000.0~6500.0s	Machine type	☆	