دفترچه راهنمای فارسی اینورترهای ایتیک ETAKE

پارامتر های اولیه راه اندازی اینورتر

	پارامتر	نام پارامتر	مقدار پارامتر
1	F0.01	حالت کنترل موتور	0 : کنترل برداری بدون سنسور سرعت (در این حالت باید پارامترهای موتور شناسایی شود) 2 : کنترل خطی (ولتاژ / فرکانس) پیش فرض از این حالت استفاده گردد
2	F0.02	انتخاب منبع فرمان	0 : فرمان از پنل 1 : فرمان از ترمینال
3	F0.03	منبع انتخاب فرکانش اصلی X	0 : تنظیم دیجیتال (غیرقابل قبول در هنگام قطع برق) 1 : تنظیم دیجیتال (در صورت قطع برق آخرین مقدار ذخیره می شود) 2: ورودی آنالوگ 0 تا 10 ولت 3: ولوم روی نمایشگر 6 : چند مرجعی (MULTI STEP) PLC : 7 PID : 8
4	F0.08	فرکانس پیشفرض	0 تا حداکثر فرکانس (زمانی معتبر است که F0.03 روی 0 یا 1 تنظیم شده باشد)
5	F0.10	حداکثر فرکانس	از 50 تا 1000 هرتز
6	F0.12	فرکانس بیشینه بالا	فرکانس کمینه پایین (F0.14) تا فرکانس حداکثر فرکانس (F0.10)
7	F0.14	فرکانس کمینه پایین	از 0 هرتز تا فرکانس بیشینه بالا (F0.12)
8	F0.15	فرکانس کلید زنی	0.5 تا 16 کیلو هرتز
9	F0.17	زمان شتاب	به ثانیه
10	F0.18	زمان کاهش سرعت	به ثانیه

پارامتر های ترمینال ورودی

	پارامتر	نام پارامتر	مقدار پارامتر
1	F4.00	انتخاب عملکرد DI 1	0 : بدون عملکرد 1 : راستگرد 2 : چپ گرد 3 : کنترل 3 سیمه (فرمان شاسی) 4 : راستگرد سرعت دوم (JOG) که در F8.00 قابل تنظیم است 5 : چپ گرد سرعت دوم (JOG) که در F8.00 قابل تنظیم است 12 : ترمینال چند سرعته، سرعت اول در پارامتر FC.01 13 : ترمینال چند سرعته، سرعت دوم در پارامتر FC.02 14 : ترمینال چند سرعته، سرعت سوم در پارامتر FC.04 15 : ترمینال چند سرعته، سرعت چهارم در پارامتر FC.08
2	F4.01	انتخاب عملکرد DI 2	
3	F4.02	انتخاب عملکرد DI 3	
4	F4.03	انتخاب عملکرد DI 4	
5	F4.04	انتخاب عملکرد DI 5	
6	F4.05	انتخاب عملکرد DI 6	

ترمینال خروجی

	پارامتر	نام پارامتر	مقدار پارامتر
1	F5.02	رله خروجی 1 (T/A , T/B , T/C)	0 : بدون خروجی 1 : اینورتر در حال کار 2 : خروجی خطا (توقف) 3 : تشخیص سطح فرکانس خروجی FTD1 (F8.19 , F8.20) 5 : سرعت صفر هرتز (در حالت توقف خروجی ندارد) 6 : هشدار اضافه بار موتور
2	F5.04	رله خروجی 2 (T/A , T/C)	

	پارامتر	نام پارامتر	مقدار پارامتر
1	FP.01	بازگشت به تنظیمات پیشفرض	01 : بازگشت به تنظیات کارخانه (به استثنا تنظیمات موتور)

راهنمای سیم بندی

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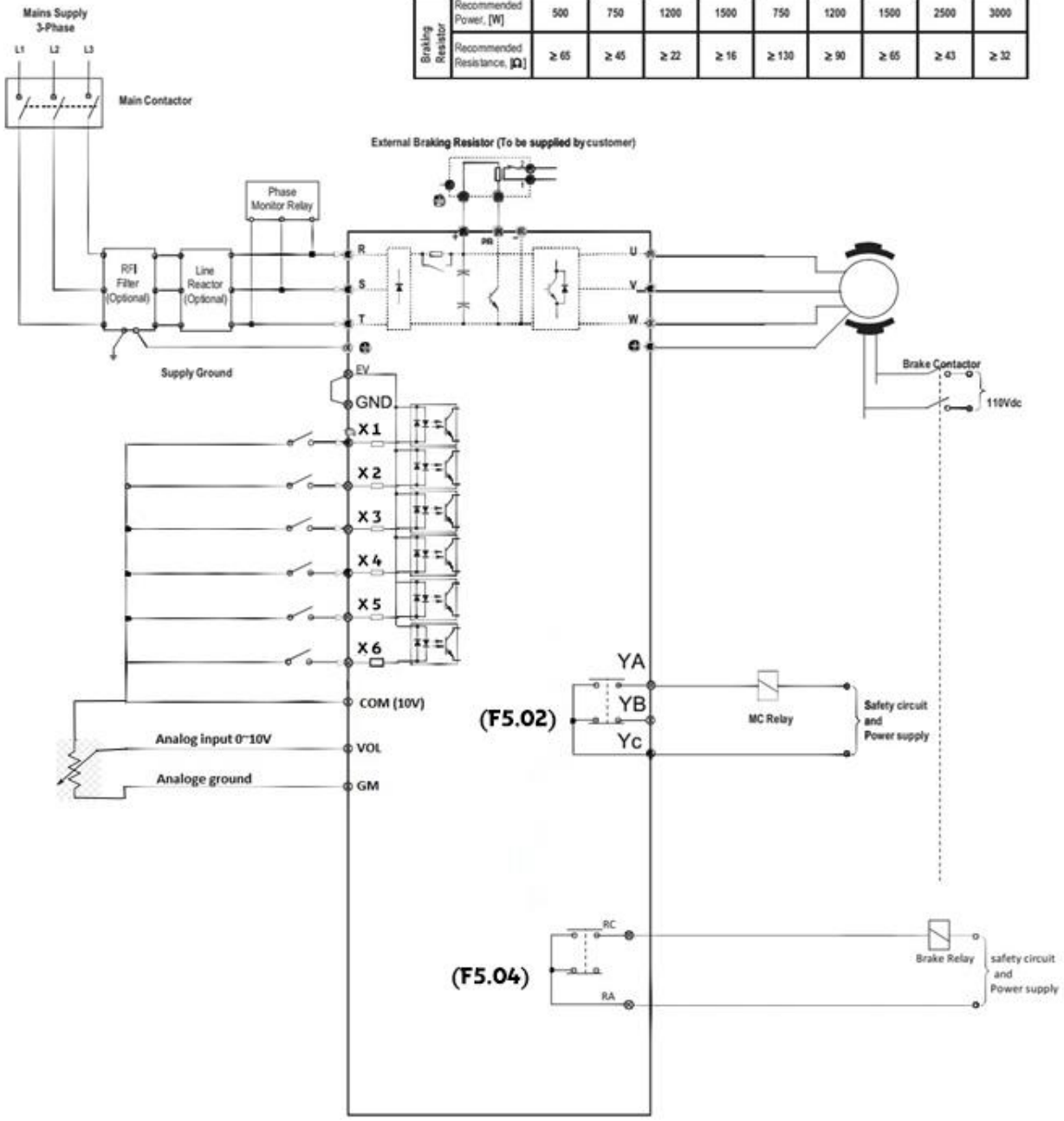
Wiring

Recommended Braking Resistor

Voltage class		220VAC				380/400/415VAC				
Drive Model		2.2kW 2R2-23A	4kw -3R7-23A	5.5kw -5R5-23A	7.5kw -7R5-23A	4kw 3R743A	5.5kw 5R543A	7.5kw 7R543A	11kw 01143A	15kw 01543A
Braking Resistor	Recommended Power, [W]	500	750	1200	1500	750	1200	1500	2500	3000
	Recommended Resistance, [Ω]	≥ 65	≥ 45	≥ 22	≥ 16	≥ 130	≥ 90	≥ 65	≥ 43	≥ 32



پارامترهای موتور

	پارامتر	نام پارامتر	مقدار پارامتر
1	F1.01	توان نامی موتور	0.1 تا 1000 کیلووات
2	F1.02	ولتاژ نامی موتور	1 تا 2000 ولت
3	F1.03	جریان نامی موتور	0.01 تا 655.36 آمپر (قدرت درایو AC <= 55 کیلووات) 0.1 تا 6553.5 آمپر (قدرت درایو AC > 55 کیلووات
4	F1.04	فرکانس نامی موتور	0.01 تا حداکثر فرکانس
5	F1.05	سرعت چرخش نامی موتور	1 تا 65535 دور بر دقیقه (RPM)

	پارامتر	نام پارامتر	مقدار پارامتر
1	F3.01	گشتاور راه اندازی (Torque boost) برای کاربرد هایی که در فرکانس های پایین نیاز به گشتاور دارند. مقدار تنظیمی بیشتر از 9 توصیه نمی شود.	0.1% تا 10٪

Fault Name	Display	Possible Causes	Solutions
Inverter unit protection	Err01	1: The output circuit is grounded or short circuited. 2: The connecting cable of the motor is too long. 3: The module overheats. 4: The internal connections become loose. 5:The main control board is faulty. 6: The drive board is faulty. 7: The inverter module is faulty.	1: Eliminate external faults. 2: Install a reactor or an output filter. 3: Check the air filter and the cooling fan. 4: Connect all cables properly. 5: Contact the agent or ETAKE.
Overcurrent during acceleration	Err02	1: The output circuit is grounded or short circuited. 2: Motor auto-tuning is not performed. 3: The acceleration time is too short. 4: Manual torque boost or V/F curve is not appropriate. 5: The voltage is too low. 6: The startup operation is performed on the rotating motor. 7: A sudden load is added during acceleration. 8: The AC drive model is of too small power class.	1: Eliminate external faults. 2: Perform the motor auto-tuning. 3: Increase the acceleration time. 4: Adjust the manual torque boost or V/F curve. 5: Adjust the voltage to normal range. 6: Select rotational speed tracking restart or start the motor after it stops. 7: Remove the added load. 8: Select an AC drive of higher power class.
Overcurrent during deceleration	Err03	1: The output circuit is grounded or short circuited. 2: Motor auto-tuning is not performed. 3: The deceleration time is too short. 4: The voltage is too low. 5: A sudden load is added during deceleration. 6: The braking unit and braking resistor are not installed.	1: Eliminate external faults. 2: Perform the motor auto-tuning. 3: Increase the deceleration time. 4: Adjust the voltage to normal range. 5: Remove the added load. 6: Install the braking unit and braking resistor.

Fault Name	Display	Possible Causes	Solutions
Overcurrent at constant speed	Err04	1: The output circuit is grounded or short circuited. 2: Motor auto-tuning is not performed. 3: The voltage is too low. 4: A sudden load is added during operation. 5: The AC drive model is of too small power class.	1: Eliminate external faults. 2: Perform the motor auto-tuning. 3: Adjust the voltage to normal range. 4: Remove the added load. 5: Select an AC drive of higher power class.
Overvoltage during acceleration	Err05	1: The input voltage is too high. 2: An external force drives the motor during acceleration. 3: The acceleration time is too short. 4: The braking unit and braking resistor are not installed.	1: Adjust the voltage to normal range. 2: Cancel the external force or install a braking resistor. 3: Increase the acceleration time. 4: Install the braking unit and braking resistor.
Overvoltage during deceleration	Err06	1: The input voltage is too high. 2: An external force drives the motor during deceleration. 3: The deceleration time is too short. 4: The braking unit and braking resistor are not installed.	1: Adjust the voltage to normal range. 2: Cancel the external force or install the braking resistor. 3: Increase the deceleration time. 4: Install the braking unit and braking resistor.
Overvoltage at constant speed	Err07	1: The input voltage is too high. 2: An external force drives the motor during deceleration.	1: Adjust the voltage to normal range. 2: Cancel the external force or install the braking resistor.
Control power supply fault	Err08	The input voltage is not within the allowable range.	Adjust the input voltage to the allowable range.
Undervoltage	Err09	1: Instantaneous power failure occurs on the input power supply. 2: The AC drive's input voltage is not within the allowable range. 3: The bus voltage is abnormal. 4: The rectifier bridge and buffer resistor are faulty. 5: The drive board is faulty. 6: The main control board is faulty.	1: Reset the fault. 2: Adjust the voltage to normal range. 3: Contact the agent or ETAKE.
AC drive overload	Err10	1: The load is too heavy or locked-rotor occurs on the motor. 2: The AC drive model is of too small power class.	1: Reduce the load and check the motor and mechanical condition. 2: Select an AC drive of higher power class.

Fault Name	Display	Possible Causes	Solutions
Motor overload	Err11	1: F9-01 is setimproperly. 2: The load is too heavy or locked-rotor occurs on the motor. 3: The AC drive model is of too small power class.	1: Set F9-01 correctly. 2: Reduce the load and check the motor and the mechanical condition. 3: Select an AC drive of higher power class.
Power input phase loss	Err12	1: The three-phase power input is abnormal. 2: The drive board is faulty. 3: The lightening board is faulty. 4: The main control board is faulty.	1: Eliminate external faults. 2: Contact the agent or ETAKE.
Power output phase loss	Err13	1: The cable connecting the AC drive and the motor is faulty. 2: The AC drive's three-phase outputs are unbalanced when the motor is running. 3: The drive board is faulty. 4: The module is faulty.	1: Eliminate external faults. 2: Check whether the motor three-phase winding is normal. 3: Contact the agent or ETAKE.
Module overheat	Err14	1: The ambient temperature is too high. 2: The air filter is blocked. 3: The fan is damaged. 4: The thermally sensitive resistor of the module is damaged. 5: The inverter module is damaged.	1: Lower the ambient temperature. 2: Clean the air filter. 3: Replace the damaged fan. 4: Replace the damaged thermally sensitive resistor. 5: Replace the inverter module.
External equipment fault	Err15	1: External fault signal is input via DI. 2: External fault signal is input via virtual I/O.	Reset the operation.
Communication fault	Err16	1: The host computer is in abnormal state. 2: The communication cable is faulty. 3: F0-28 is set improperly. 4: The communication parameters in group FD are set improperly.	1: Check the cabling of host computer. 2: Check the communication cabling. 3: Set F0-28 correctly. 4: Set the communication parameters properly.
Contactor fault	Err17	1: The drive board and power supply are faulty. 2: The contactor is faulty.	1: Replace the faulty drive board or power supply board. 2: Replace the faulty contactor.

Fault Name	Display	Possible Causes	Solutions
Current detection fault	Err18	1: The HALL device is faulty. 2: The drive board is faulty.	1: Replace the faulty HALL device. 2: Replace the faulty drive board.
Motor auto-tuning fault	Err19	1: The motor parameters are not set according to the nameplate. 2: The motor auto-tuning times out.	1: Set the motor parameters according to the nameplate properly. 2: Check the cable connecting the AC drive and the motor.
Encoder fault	Err20	1: The encoder type is incorrect. 2: The cable connection of the encoder is incorrect. 3: The encoder is damaged. 4: The PG card is faulty.	1: Set the encoder type correctly based on the actual situation. 2: Eliminate external faults. 3: Replace the damaged encoder. 4: Replace the faulty PG card.
EEPROM read-write fault	Err21	The EEPROM chip is damaged.	Replace the main control board.
AC drive hardware fault	Err22	1: Overvoltage exists. 2: Overcurrent exists.	1: Handle based on overvoltage. 2: Handle based on overcurrent.
Short circuit to ground	Err23	The motor is short circuited to the ground.	Replace the cable or motor.
Accumulative running time reached	Err26	The accumulative running time reaches the setting value.	Clear the record through the parameter initialization function.
User-defined fault 1	Err27	1: The user-defined fault 1 signal is input via DI. 2: User-defined fault 1 signal is input via virtual I/O.	Reset the operation.
User-defined fault 2	Err28	1: The user-defined fault 2 signal is input via DI. 2: The user-defined fault 2 signal is input via virtual I/O.	Reset the operation.
Accumulative power-on time reached	Err29	The accumulative power-on time reaches the setting value.	Clear the record through the parameter initialization function.
Load becoming 0	Err30	The AC drive running current is lower than F9-64.	Check that the load is disconnected or the setting of F9-64 and F9-65 is correct.
PID feedback lost during running	Err31	The PID feedback is lower than the setting of FA-26.	Check the PID feedback signal or set FA-26 to a proper value.

Fault Name	Display	Possible Causes	Solutions
Pulse-by-pulse current limit fault	Err40	1: The load is too heavy or locked-rotor occurs on the motor. 2: The AC drive model is of too small power class.	1: Reduce the load and check the motor and mechanical condition. 2: Select an AC drive of higher power class.
Motor switchover fault during running	Err41	Change the selection of the motor via terminal during running of the AC drive.	Perform motor switchover after the AC drive stops.
Too large speed deviation	Err42	1: The encoder parameters are set incorrectly. 2: The motor auto-tuning is not performed. 3: F9-69 and F9-70 are set incorrectly.	1: Set the encoder parameters properly. 2: Perform the motor auto-tuning. 3: Set F9-69 and F9-70 correctly based on the actual situation.
Motor over-speed	Err43	1: The encoder parameters are set incorrectly. 2: The motor auto-tuning is not performed.3: F9-69 and F9-70 are set incorrectly.	1: Set the encoder parameters properly. 2: Perform the motor auto-tuning. 3: Set F9-69 and F9-70 correctly based on the actual situation.
Motor overheat	Err45	1: The cabling of the temperature sensor becomes loose. 2: The motor temperature is too high.	1: Check the temperature sensor cabling and eliminate the cabling fault. 2: Lower the carrier frequency or adopt other heat radiation measures.
Initial position fault	Err51	The motor parameters are not set based on the actual situation.	Check that the motor parameters are set correctly and whether the setting of rated current is too small.