

A100E 系列快速使用指南



1 介绍

本指南为合格工作人员提供安装和调试变频器的必要信息。阅读并按照说明安全、专业地使用变频器。如需更多详细说明，请联系您的供应商或扫描右侧二维码获取。



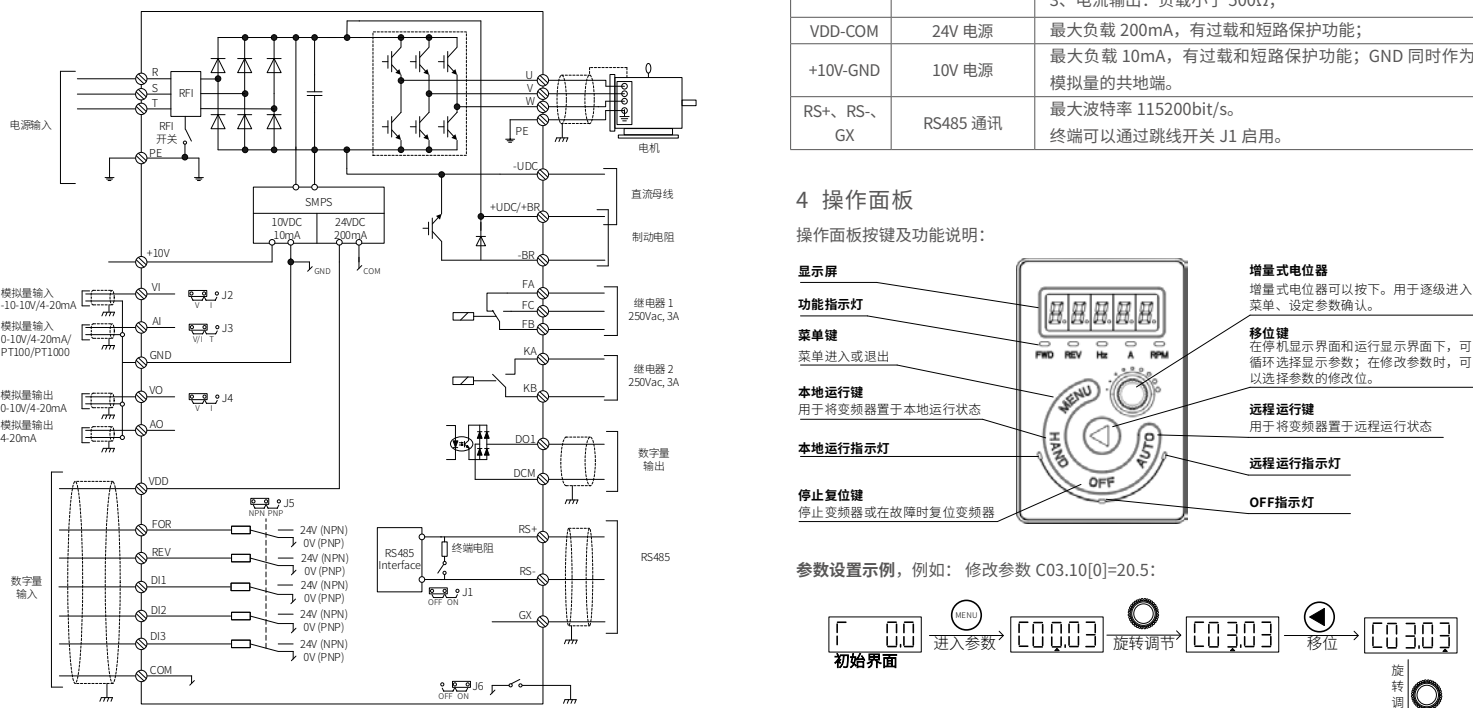
2 变频器尺寸

请特别注意安全说明和警告，以避免死亡、重伤以及设备或财产损失的风险。

危险

- 在安装或操作变频器之前，请先阅读并理解本手册。请由专业人员安装、调试、检修、保养变频器。
- 实施配线前，务必切断电源。
 - 切断交流电源后，变频器内部仍然可能残留电能，在接触输入输出端子前，22kW 及以下变频器至少要等待 4 分钟，30kW 及以上变频器至少要等待 15 分钟，否则有触电危险。
 - 送电中绝不可插拔变频器上的任何连接器，以避免变频器损坏并造成人员伤亡。
 - 变频器接地端请务必正确接地。
 - 主回路端子配线必须正确，R、S、T 为电源输入端子，绝对不可与 U、V、W 混用，否则，送电时会造成变频器的损坏。
 - 若不按照说明操作，则可能会造成严重的人员伤亡。

3 端子与接线



3.1 主回路端子线

端子名	说明	端子名	说明
R, S, T	电源输入端	+BR, -BR	制动电阻连接端子
U, V, W	电源输出端，连接到电动机		接地端子
+UDC, -UDC	直流母线电压正负端		

3.2 控制端子

端子名	说明	规格
FOR, REV DI1, DI2 DI3	数字量输入端子	1、逻辑： PNP: <DC5V 逻辑0; >DC19V 逻辑0; >DC10V 逻辑1; <DC14V 逻辑1; 2、电压：直流 0-24V, 最大 30V; 3、输入阻抗：5kΩ; 4、通过跳线开关 J5 设置数字量输入端子 PNP 或 NPN 模式，默认为：NPN 模式; 5、脉冲输入端子 a) 脉冲输入范围：0.00~100.00kHz;

5.3 参数恢复出厂值



6 故障代码列表

警告	故障	错误	故障名称	处理对策
A.02	E.02	-	断线故障	检查端子 VI 或 AI 接线
A.03	E.03	-	电机失失	1. 检查电机接线 2. 变频器功率和电机功率匹配
A.04	E.04	-	输入缺相	1. 检查并排除外线路中存在的问题 2. 寻求技术支持
A.07	E.07	-	过电压	1. 延长减速时间 2. 加制动电阻 3. 检查负载 4. 取消此外动力或加装制动电阻 5. 检测输入电压 6. 调整和负载、电机相关的参数
A.08	E.08	-	欠电压	1. 复位故障 2. 调整电压到正常范围或开启低压模式 3. 寻求技术支持
A.09	E.09	-	变频器过载	1. 减小 VF 曲线设置过高 2. 减小负载补偿、滑差补偿 3. 降低负载或使用更大功率变频器 4. 按照电机铭牌正确设置
A.10	E.10	-	电机过载 (通过变频器 ETR 功能估算，详见参数 C01.90)	1. 减小 VF 曲线设置过高 2. 减小负载补偿、滑差补偿 3. 按照电机铭牌正确设置 4. 检查电机堵转原因或负载情况 5. 降低负载或使用更大功率电机
-	E.11	-	电机温度过高	1. 请接参数 C01.90 中说明的规格选择温度传感器 2. 检测温度传感器接 3. 请选用变频电机 4. 按电机过载对策处理
A.12	E.12	-	过转矩	1. 延长加速时间 2. 减小 VF 曲线设置过高 3. 减小负载补偿、滑差补偿 4. 调整电压到正常范围 5. 减小负载突变 6. 选择转速追踪启动或等电机停止后再启动 7. 检查电机接线及电机线的绝缘情况 8. 选择更大功率变频器
A.13	E.13*	-	过电流	1. 减小载波频率或更换电缆或减小电缆长度 2. 更换电缆或电机 3. 请选用变频电机 4. 按电机过载对策处理
A.14	E.14*	-	接地故障	1. 检查上位机程序 2. 检查通讯连接 3. 正确设置通讯参数 4. 使用屏蔽线或寻求技术支持
-	E.16*	-	输出短路	1. 检查电机接线、检查电机线及电机的绝缘情况
A.17	E.17	-	通讯控制超时 (详见参数 C08.03 和 C08.04)	1. 检查上位机程序 2. 检查通讯连接 3. 正确设置通讯参数 4. 使用屏蔽线或寻求技术支持
A.20	E.20	-	电源电压过低	检查电网电压
-	E.21	-	欠压过流报警	检查电网电压是否瞬间掉落
A.24	E.24	-	风机故障	1. 清理风机; 2. 更换风机
-	E.25*	-	制动电阻短路	更换制动电阻, 此故障只存在于 22kW 及以下机型
-	E.27	-	制动单元短路	此故障只存在于 22kW 及以下机型
-	E.28	-	制动电阻开路	此故障只存在于 22kW 及以下机型
E.30*	E.31*	E.32*	电机缺相 (详见参数 C04.58)	1. 更换电机 2. 检查电机接线 3. 建议关闭电机缺相保护 4. 请正确设置 C1.24 电机电流
A.36	E.36	-	主电源故障	检查电源
-	E.38*	-	变频器内部故障	寻求技术支持
-	E.44*	-	功率卡 24V 故障	寻求技术支持
-	E.47*	-	VDD 端子电压低	拆除 VDD 上接线, 若问题依然存在, 则为 VDD 端控损坏, 需维修
-	E.51*	-	AMA 故障	正确设置电机参数
-	E.58	-		
A.59	E.59	-	电流极限	正确设置电机参数或按 E13 变频器过电流对策处理
E.63		-	机械制动电流过低	按实际情况正确设置 C02.20
A.69	E.69*	-	IGBT 温度过高	1. 清理风道 2. 更换风扇
A.74	E.74	-	整流桥温度传感器故障	寻求技术支持

警告	故障	错误	故障名称	处理对策
A.75	E.75*	-	整流桥温度高	1. 清理风道 2. 更换风扇
A.76	E.76	-	模块温度传感器故障	寻求技术支持
A.77	E.77	-		
A.78	E.78	-	参数恢复出厂值	按“OFF”复位即可
E.80		-	功率板温度高	1. 清理风道 2. 更换风扇
A.83	E.83	-	按扭禁用	请参阅参数组 C00.4*
Er.84		-	功率板 24V 故障	寻求技术支持
Er.85		-	参数无法修改	该参数无法修改
E.88*		-	参数在当前模式下不可修改	确认变频器是在应用功能运行状态
Er.89		-	变频器定时停止时间到达	请联系设备厂家或海利普
Er.91		-	外部故障	
A.102	E.102	-	偏心故障	
A.107	E.107	-	模拟量输入值过低	请检查接线和 C04.85~C04.87 的参数设定
A.108	E.108	-	模拟量输入值过高	请检查接线和 C04.85~C04.87 的参数设定
Err		-	参数不可更改	查看 C00.60 或在停止状态下修改参数

7 常用功能参数表

参数号	名称	设定范围	单位	出厂值
第 00 组参数：操作 / 显示				
C00.40	HAND 键选择	0: 无效; 1: 有效;	-	1
C00.41	OFF 键选择	0: 无效; 1: 有效; 2: 复位有效;	-	1
C00.42	AUTO 键选择	0: 无效; 1: 有效;	-	1
C00.60	参数锁定	0: 无效; 1: 有效;	-	0
第 01 组参数：负载 / 电动机				
C01.00	运行模式	0: 速度开环; 1: 速度闭环 3: 过程闭环;	-	0
*C01.01	控制模式	0: 多点 V/F; 1: VVC+; 2: 矢量 1; 4: V/F 分离	-	1
*C01.06	运行方向选择	0: 默认方向 (U,V,W 接线) 1: 默认方向相反方向	-	0
*C01.10	电机类型	0: 异步电机 1: 永磁同步电机 SPM (隐极) 2: 非饱和和内嵌式同步电机 (凸极) 3: 饱和和内嵌式同步电机 IPM (凸极)	-	0
*C01.20	电机额定功率	取决于电机数据	kW	*
*C01.22	电机额定电压	50~1000	V	*
*C01.23	电机额定频率	20~400	Hz	*
*C01.24	电机额定电流	取决于电机数据	A	*
*C01.25	电机额定转速	100~9999	rpm	*
C01.26	电机额定转矩	0.1~6553.5	N·m	0
*C01.29	电机自学习	0: 无效 1: 静态完全自学习 2: 静态简易自学习	-	0
*C01.30	定子电阻	取决于电机参数	Ω	*
*C01.31	转子电阻	取决于电机参数	Ω	*
*C01.33	定子漏电感	取决于电机参数	mH	*
*C01.35	电机主电感	取决于电机参数	mH	*
C01.37	同步电机 D 轴电感	取决于电机数据	mH	*
C01.38	同步电机 Q 轴电感	取决于电机数据	mH	*
*C01.39	电机极数	2~100	P	4
*C01.40	1000RPM 时电机 EMF	0~9000	V	*
*C01.42	电机线长度	0~150	m	*
C01.55	V/F 曲线-V	0.0~999.9	V	*
C01.56	V/F 曲线-F	0.0~400.0	Hz	*
C01.60	低速负载补偿	0~199	%	100
C01.61	高速负载补偿	0~199	%	100
C01.62	转差补偿	-400~399	%	*
C01.63	转差补偿时间常数	0.05~5.00	s	0.10
C01.64	共振衰减	0~3000	%	*
C01.65	共振衰减时间常数	0.005~0.050	s	0.005
C01.66	低速时电机最小电流	0~120	%	80

参数号	名称	设定范围	单位	出厂值
C01.70	同步电机启动方式	0: 初始位置检测启动 (IPD) 1: 对磁启动 (Parking)	-	1
C01.71	启动延迟时间	0.0~10.0	s	0.0
C01.72	启动延迟功能	0: 直流支持; 2: 自由旋转	-	2
*C01.73	频率跟踪启动	0: 无效; 1: 有效	-	0
*C01.75	最小启动频率	0.00~50.00	Hz	0.0
C01.80	停止功能	0: 自由停车; 1: 直流失持	-	0
C01.82	停止功能最低启用频率	0.0~400.0	Hz	0.0
C01.89	VF 分离电机模式	0: 频率和电压独立减至 0 1: 电压减为 0 后频率再减	-	0
C01.90	电机热保护动作	0: 无效 1: 变频器报警 (使用热敏电阻) 2: 变频器报警 (使用热敏电阻) 3: 变频器报警 (使用 ETR) 4: 变频器报警 (使用 ETR) 5: 变频器报警 (自冷模式, 使用 ETR) 6: 变频器报警 (自冷模式, 使用 ETR)	-	0
C01.91	电机过载保护时间	1~60	min	2
C01.92	电机过保护系数	100~160	%	150
*C01.93	热敏元件来源	0: 无效; 2: 模拟量端子 AI	-	0
C01.94	电机热保护温度	0~220	°C	130
第 02 组参数：制动功能				
C02.00	直流失持电流	0~150	%	50
C02.01	直流制动电流	0~150	%	50
C02.02	直流制动时间	0.0~60.0	s	10.0
C02.04	直流制动切入频率	0.0~400.0	Hz	0.0
C02.06	同步电机对磁启动电流	0~150	%	80
C02.07	同步电机对磁启动时间	0.1~60.0	s	3.0
C02.08	机械制动速率	0~100	%	100
C02.10	制动功能	0: 无效; 1: 电阻制动; 2: 交流制动	-	0
C02.11	制动电阻值	5~65535	Ω	*
*C02.14	电阻制动门限电压	取决于电网	V	*
C02.15	过压控制门限电压	取决于电网	V	*
C02.16	交流制动最大电流	0~150	%	100
C02.17	过压控制	0: 无效; 2: 模式 1; 3: 模式 2	-	0
C02.18	过压控制积分时间	0.01~0.10	s	0.05
C02.19	过压控制比例增益	0~200	%	100
C02.20	机械制动电流	0.00~1200.00	A	0.00
C02.22	机械制动频率	0.0~400.0	Hz	0.0
第 03 组参数：参考值 / 加减速				
C03.03	最大参考值	0.0~6553.5	-	50.0
C03.07	主参考值计算方式	0: 预置参考值 + 参考值来源 1、2、3 1: 预置参考值优先	-	0
C03.10	预置参考值	-100.00~100.00	%	0.00
C03.11	点动频率	0.0~400.0	Hz	5.0
C03.13	UP/DOWN 步长	0.01~50.00	Hz	0.10
C03.15	参考值来源 1	0: 无效; 1: 端子 VI; 2: 端子 AI;	-	1
C03.16	参考值来源 2	8: 脉冲输入 DI4; 10: 预置参考值 [0];	-	2
C03.17	参考值来源 3	11: 通讯给定; 21: 面板电位器;	-	11
C03.19	Up/Down 记忆选择	0: 不记忆; 1: 停机记忆; 2: 断电记忆	-	0
C03.21	加减速转矩频率	0.0~3276.0	Hz	0.0
C03.22	电压参考值来源	0: 无; 1: 端子 VI; 2: 端子 AI; 8: 脉冲输入; 11: 通讯给定; 14: 数字给定; 21: LCP	-	14
C03.23	本地设定值	0.00%~100.00%	%	0.00
C03.39	加减速时间精度	0: 0.1s; 1: 0.01s;	-	1
C03.40	加减速 1 类型	0: 直线; 2: S 曲线;	-	0
C03.41	加减速 1 加速时间	0.05~655.35	s	*
C03.42	加减速 1 减速时间	0.05~655.35	s	*
C03.80	点动加减速时间	0.05~655.35	s	*
第 04 组参数：极限 / 警告设置				
*C04.10	电机运行方向限制	0: 顺时针; 1: 逆时针; 2: 双向	-	2
*C04.12	电机频率下限	0.0~400.0	Hz	0.0
*C04.14	电机频率上限	0.0~400.0	Hz	65.0
C04.18	电机电流上限	0~300	%	*
*C04.19	最大输出频率	0.0~400.0	Hz	65.0

参数号	名称	设定范围	单位	出厂值
C04.23	电动机功率极限	0~400	%	400
C04.24	发电时功率极限	0~400	%	400
*C04.58	电机缺相检测	0: 关闭; 1: 开启	-	1
C04.61	回避频率起点	0.0~400.0	Hz	0.0
C04.63	回避频率终点	0.0~400.0	Hz	0.0
第 05 组参数: 数字量输入 / 输出				
C05.05	数字量输入端子逻辑功能选择	0~255	-	0
C05.06	数字量输出 / 继电器输出逻辑	0~255	-	0
C05.10	FOR 输入功能选择	0: 无效; 1: 复位; 2: 自由运转停车 (反逻辑); 3: 复位自由运转停车 (反逻辑); 6: 停止 (反逻辑); 8: 启动; 9: 脉冲启动; 10: 反转; 11: 反转运行; 12: 仅顺时针运行; 13: 仅逆时针运行; 14: 点动正转; 15: 预置参考值 Bit0; 16: 预置参考值 Bit1; 17: 预置参考值 Bit2; 18: 预置参考值 Bit3; 19: 冻结参考值; 20: 冻结输出; 21: 加速 (UP); 22: 减速 (DOWN) 24: 主参考值计算切换; 28: 相对增加; 29: 相对减少; 32: 脉冲输入; 34: 加减速 Bit0; 35: 加减速 Bit1; 36: 加减速 Bit2; 37: 脉冲反转; 38: 点动反转; 42: 自由运转停车 (正逻辑); 46: 停止 (正逻辑); 50: 速度控制 / 转矩控制切换; 77: 模拟量频率修改使能; 110: PID 暂停;	-	8
C05.11	REV 输入功能选择	12: 仅顺时针运行; 13: 仅逆时针运行; 14: 点动正转; 15: 预置参考值 Bit0; 16: 预置参考值 Bit1; 17: 预置参考值 Bit2; 18: 预置参考值 Bit3; 19: 冻结参考值; 20: 冻结输出; 21: 加速 (UP); 22: 减速 (DOWN) 24: 主参考值计算切换; 28: 相对增加; 29: 相对减少; 32: 脉冲输入; 34: 加减速 Bit0; 35: 加减速 Bit1; 36: 加减速 Bit2; 37: 脉冲反转; 38: 点动反转; 42: 自由运转停车 (正逻辑); 46: 停止 (正逻辑); 50: 速度控制 / 转矩控制切换; 77: 模拟量频率修改使能; 110: PID 暂停;	-	11
C05.12	DI1 输入功能选择	28: 相对增加; 29: 相对减少; 32: 脉冲输入; 34: 加减速 Bit0; 35: 加减速 Bit1; 36: 加减速 Bit2; 37: 脉冲反转; 38: 点动反转; 42: 自由运转停车 (正逻辑); 46: 停止 (正逻辑); 50: 速度控制 / 转矩控制切换; 77: 模拟量频率修改使能; 110: PID 暂停;	-	15
C05.13	DI2 输入功能选择	32: 脉冲输入; 34: 加减速 Bit0; 35: 加减速 Bit1; 36: 加减速 Bit2; 37: 脉冲反转; 38: 点动反转; 42: 自由运转停车 (正逻辑); 46: 停止 (正逻辑); 50: 速度控制 / 转矩控制切换; 77: 模拟量频率修改使能; 110: PID 暂停;	-	16
C05.14	DI3 输入功能选择	50: 速度控制 / 转矩控制切换; 77: 模拟量频率修改使能; 110: PID 暂停;	-	17
C05.30	DO1 输出功能选择	0: 无效; 1: 准备就绪; 3: 外部控制就绪; 5: 运行; 9: 故障; 10: 警告或故障; 25: 反转; 32: 机械制动; 33: 制动电压到达; 38: 通讯控制; 43: 外部故障; 51: 本地运行状态; 52: 远程运行状态; 55: 反转运行;	-	0
C05.40	继电器输出功能选择	55: 反转运行;	-	9.5
C05.55	DI3 最小输入频率	0.00~99.99	kHz	0.02
C05.56	DI3 最大输入频率	0.01~100.00	kHz	50.00
C05.57	DI3 最小输入对应设定	-200.00~200.00	%	0.00
C05.58	DI3 最大输入对应设定	-200.00~200.00	%	100.00
C05.59	DI3 滤波时间	1~1000	ms	100
C05.60	DO1 脉冲输出功能选择	0: 数字输出; 10: 输出频率; 11: 设定值; 12: 反馈值; 13: 电机电流; ; 16: 输出功率; 17: 电机转速; 18: 输出电压; 20: 总线控制; 21: 脉冲输入; 22: VI 输入值 23: AI 输入值; 26: 直流母线电压; 30: 输出转矩;	-	0
C05.61	脉冲最小输出频率	0.00~C05.62	kHz	0.02
C05.62	脉冲最大输出频率	C05.61~100.00	kHz	50.00
C05.63	脉冲最小输出比例	0.00~200.00	%	0.00
C05.64	脉冲最大输出比例	0.00~200.00	%	100.00
C05.70	编码器分辨率	0~10000		100
第 06 组参数: 模拟量输入 / 输出				
C06.10	VI 最小输入电压	-10.00~C06.11	V	0.07
C06.11	VI 最大输入电压	C06.10~10.00	V	10.00
C06.12	VI 最小输入电流	0.00~C06.13	mA	0.14
C06.13	VI 最大输入电流	C06.12~20.00	mA	20.00
C06.14	VI 最小输入对应设定	-200.00~200.00	%	0.00
C06.15	VI 最大输入对应设定	-200.00~200.00	%	100.00
C06.16	VI 滤波时间	0.000~10.000	s	0.010
C06.19	VI 输入信号类型	0: 电压; 1: 电流; 5: 数字量输入	-	0
C06.20	AI 最小输入电压	0.00~C06.21	V	0.07
C06.21	AI 最大输入电压	C06.20~10.00	V	10.00
C06.22	AI 最小输入电流	0.00~C06.23	mA	0.14
C06.23	AI 最大输入电流	C06.22~20.00	mA	20.00

A100E Series Quick Guide



1 Introduction

This Guide provides necessary information for qualified personnel to install and commission the AC drive. Read and follow the instructions to use the drive safely and professionally. For detailed instructions, please contact your supplier or scan the QR code right to get more.



2 Safety

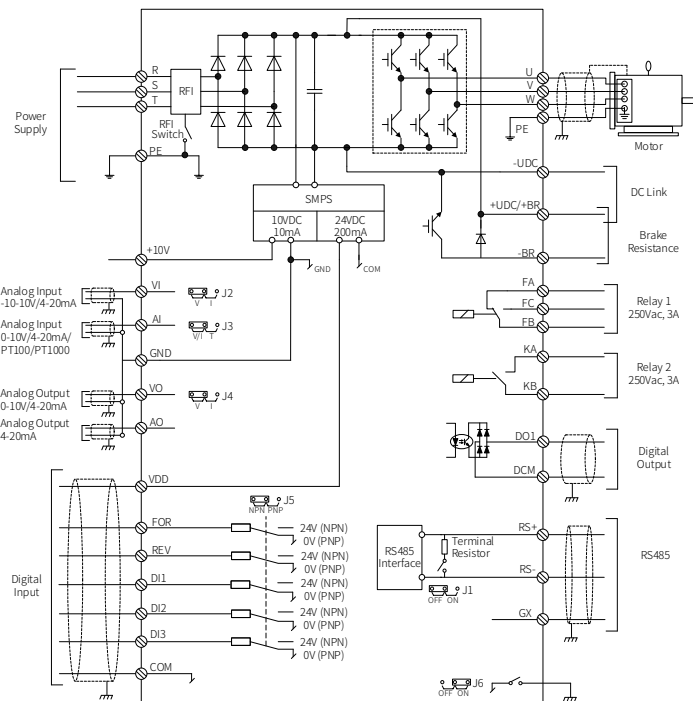
Pay particular attention to the safety instructions and general warnings to avoid the risk of death, serious injury, and equipment or property damage.

⚠ DANGER

Please read and understand this guide before installing or operating the drive. Please install, debug, overhaul and maintain the drive by professionals.

- Be sure to cut off the power supply before wiring.
- Before touching any potentially live parts of the drive, please wait enough time (≤ 22 kW: 4min; ≥ 30 kW: 15min) after discharge the drive. Otherwise, it may expose you to a risk of electrical shock.
- Do not plug the connectors of the drive during the power up to avoid any surge into the main control board due to plugging, which might cause the damage of the drive.
- R, S, T terminals are power input terminals, never mixed with U, V, W terminals. Be sure that the wiring of the main circuit is correct. Otherwise, it will cause damages of the drive when power on.
- The ground terminal must be grounded separately and never connected to N-line.
- Failure to follow instructions could result in serious casualties.

3 Terminals and Wiring



3.1 Main Circuit Terminals

Symbol	Description	Symbol	Description
R, S, T	Power supply	+BR, -BR	Resistance brake terminals
U, V, W	Motor output		Ground terminal
+UDC-, UDC	DC link		

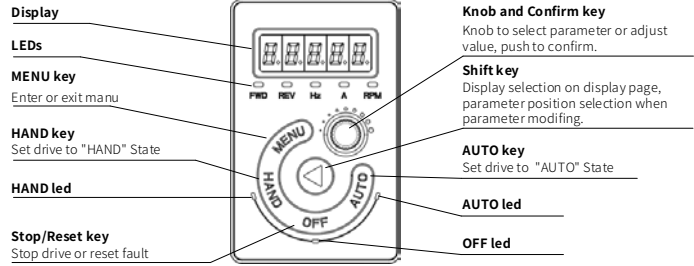
3.2 Control Terminals

Symbol	Function	Description
FOR, REV, DI1, DI2, DI3	Digital input	1.Logic: PNP: <DC5V Logic: 0; >DC19V Logic: 1; >DC10V Logic: 1; <DC14V Logic: 1; 2. Voltage: DC 0-24V, Max ± 30 V; 3. Input resistance: 5k Ω ;

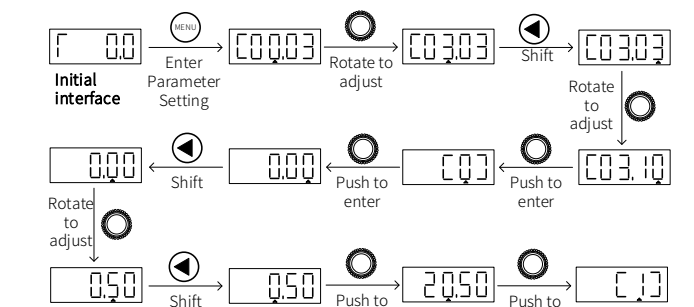
Symbol	Function	Description
		4. Digital input can be selected to NPN or PNP mode by Jump switch J 5.the default is: NPN mode; 6. DI3 support pulse input: a) Pulse input: 0.00-100.00kHz; b) Voltage range: 24V $\pm$ 20%; c) Input duty ratio: 40%-60%;
DO1-DCM	Digital output	1. Open collector output; 2. Output current range: 0-50mA; 3. Max voltage 30V; 4. DO1 as pulse output: a) Pulse range: 0.00-100.00kHz; b) Voltage range: 0-24V; c) Duty ratio: 40%-60%; d) Resistive load >1k Ω , Capacitive Load < 10nF;
FA-FB-FC KA-KB	Relay output	1. Resistive Load: 250VAC 3A/30VDC 3A; 2. Inductive Load: 250VAC 0.2A/24VDC 0.1A (cos ϕ =0.4);
VI	Analog input	VI can be configured to voltage signal or current signal by switch J2: 1. Voltage: support 0-10V, input Impedance about 10k Ω ; 2. Current: support 0-20mA, input Impedance $\leq 200\Omega$;
AI	Analog input	AI can be configured to V/I signal or temperature signal by switch J3: 1. In V/I channel, voltage or current can be configured by parameter. a) Voltage: support 0-10V, input Impedance about 10k Ω ; b) Current: support 0-20mA, input Impedance $\leq 200\Omega$; 2. In temperature channel, PT100/PT1000/PTC130/KTY84 can be selected for motor overheating protection.
VO, AO	Analog output	VO can be selected to the current output or voltage output via J4, default is: voltage output; AO only has current output mode; 1. Output Mode: 0-20mA or 0-10V; 2. Voltage Output: load larger than 500 Ω ; 3. Current Output: load less than 500 Ω ;
VDD-COM	24V Power Supply	Max load 200 mA, with over load and short circuit protection functions.
+10V-GND	10V power supply	Max load 10mA, with over load and short circuit protection functions. GND is the ground of analog signals.
RS+, RS-, GX	RS485 Comm.	Max baud rate: 115200bit/s; The terminal resistance can be enabled by switch J1.

4 Operation Panel

Panel key and function:



Example of parameter setting : modify parameter C03.10[0] to 20.5



5 Application Examples

5.1 Start/Stop in "HAND" State

- Press the "HAND" button on the operation panel to start the drive.
 - Adjusting the frequency by rotating the knob.
 - Press the "OFF" button to stop.
- Note: In "HAND" state, the knob is the only frequency source for drive.
"HAND" state is generally used for debugging.

5.2 Start/Stop by DI in "AUTO" State

Press "AUTO" key after drive power on, start the drive by shorting "FOR" and "COM" or stop by disconnecting the two terminals.

5.3 Factory Reset



6 Fault Code List

Warn.	Alarm	Error	Fault Description	Reason Analysis
A.02	E.02	-	Live Zero Error	Please refer to C06.00 Live Zero Timeout Time.
A.03	E.03	-	Motor Loss	1. Motor cable connection problems; 2. The drive power is greater than the motor power;
A.04	E.04	-	Mains Phase Loss	1. Missing phase on supply side; 2. Too high voltage imbalance.
A.07	E.07	-	Over Voltage	1. The input voltage is too high; 2. An external force drives the motor during acceleration or deceleration; 3. The deceleration time is too short; 4. The braking unit and braking resistor are not installed.
A.08	E.08	-	Under Voltage	1. Instantaneous power failure occurs on the input power supply; 2. The drive's input voltage is not within the allowable range; 3. The rectifier bridge and buffer resistor are faulty.
A.09	E.09	-	Drive Overload	1. The load is too heavy or locked rotor occurs on the motor; 2. The drive model is of too small power class; 3. C01.* is set improperly.
A.10	E.10	-	Motor Overload	1. C01.24 is set improperly; 2. The load is too heavy or locked rotor occurs on the motor; 3. The drive model is of too small power class; 4. C01.* is set improperly.
-	E.11	-	Motor Over Temperature	Thermistor damage, incorrectly installed or motor cooling equipment fails.
A.12	E.12	-	Torque Limit	Torque exceeds the max. torque limit. 1. The acceleration time is too short; 2. Manual torque boost or V/F curve is not appropriate; 3. The input voltage is too low; 4. The startup operation is performed on the rotating motor; 5. A sudden load is added during acceleration/deceleration; 6. The drive model is of too small power class.
A.13	E.13*	-	Over Current	1. The acceleration time is too short; 2. Manual torque boost or V/F curve is not appropriate; 3. The input voltage is too low; 4. The startup operation is performed on the rotating motor; 5. A sudden load is added during acceleration/deceleration; 6. The drive model is of too small power class.
A.14	E.14*	-	Earth fault	Earth fault Discharge from output phases to ground (22kW and below)
-	E.16*	-	Short Circuit	Short circuit in motor or on motor terminals.
A.17	E.17	-	Control Word Timeout	Drive communication timeout, this alarm occurs when C08.04 is set to 1 or 5.
A.20	E.20	-	Low AC Voltage	AC voltage lower than C14.71, LCP display A.20; when over 50% C14.71, LCP display A.20; when over 100% C14.71, LCP display E.20.
-	E.21	-	Over Current caused by Low Voltage	Over current when DC voltage is lower than 384V(380V Model) or 202V(220V Model),
A.24	E.24	-	Fan Fault	Too much dust on the fan or the fan is aged.
-	E.25*	-	Brake resistor short-circuit	Brake resistor is short circuit, leading the brake function invalid.
-	E.27	-	Brake transistor short-circuit	Brake transistor is short circuit leading brake function invalid.
-	E.28	-	Brake Detect	Brake resistor is not connected or working.
-	E.30*	-	Motor phase U missing	Check the phase and motor.
-	E.31*	-	Motor phase V missing	Check the phase and motor.
-	E.32*	-	Motor phase W missing	Check the phase and motor.
A.36	E.36	-	Instantaneous power cut	Power supply is unstable
-	E.38*	-	Internal Fault	Contact the local distributor or Holip Company.
-	E.44*	-	Earth fault	1.Motor cable leakage 2.Motor leakage
-	E.46	-	IGBT driving voltage fault	Normal IGBT driving voltage is 9~+15V, the current voltage is abnormal.
-	E.47*	-	Power board voltage fault	Power board broken

-	E.48*	-	Power board voltage fault	1.24V is overloaded 2.24V output part damage
-	E.50	-	AMA Fault	-
-	E.51	-	AMA check Unom and Inom	Motor voltage and motor current error setting.
-	E.52	-	AMA Low Inom	Motor current is too low, check the settings.
-	E.53	-	AMA Motor is too large	Motor configuration is too large to perform AMA.
-	E.54	-	AMA Motor is too small	Motor configuration is too small, unable to perform AMA.
-	E.55	-	AMA Parameter Error	Motor parameter is out of the range
-	E.56	-	AMA Interrupt	Interrupted by the user when running AMA.
-	E.57	-	AMA Time-out	AMA takes too long to run.
-	E.58	-	AMA Internal Error	Contact Local distributor or Holip Company.
A.59	E.59	-	Current Limit	Current exceeds value set in C04.18.
-	E.63	-	Mechanical Brake Current Low	Actual motor current cannot exceed release brake current set in C02.20 within start delay time.
A.69	E.69	-	IGBT Over Temperature	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 IGBT is damaged; 5. The drive IGBT is damaged.
A.74	E.74	-	Rectifier Temperature Sensor Error	Rectifier Temperature Sensor Error
A.75	E.75	-	Rectifier Temperature High	1. The ambient temperature is too high; 2. The air filter is blocked; 3. The fan is damaged.
A.76	E.76	-	IGBT Temp. Sensor Error U	IGBT Temperature Sensor Error U
A.77	E.77	-	IGBT Temp.Sensor Error V	IGBT Temperature Sensor Error V
A.78	E.78	-	IGBT Temp. Sensor Error W	IGBT Temperature Sensor Error W
-	E.80	-	Parameter Initialization	Make parameter initialized.
A.83	E.83	-	Power Board Over Temperature	1. The ambient temperature is too high; 2. The air filter is blocked; 3. The fan is damaged.
-	-	Er.84	LCP Connection with the drive failed	No communication between LCP and the drive.
-	-	Er.85	Button is disabled	Refer to parameter group C00.4*.
-	E.88*	-	Power Board 24V Fault	1. Cooling fan of drive is broken 2. Power for drive's fan failed
-	-	Er.89	Parameter read-only	Try to write read-only parameter.
-	-	Er.91	Parameter value is invalid in this mode	Invalid parameter value to write.
-	-	-	Drive disabled	Using time of drive reach the maximum value
A.101	-	-	Low Voltage Frequency Limit	See C04.28/C04.29 for more information.
A.102	E.102	-	External Fault 43	External Fault, some terminal DI is set to 43
A.104	-	-	Reach the Setting Power	See C04.23/C04.24 for more information.
A.103	-	-	Off-center fault	
A.107	E.107	-	Analog input value is low	Input value is lower than C04.85
A.108	E.108	-	Analog input value is high	Input value is larger than C04.86
-	-	Err	Unchangeable	Parameter is freed or can't be changed during running.

7 Common Parameters List

Param	Name	Range	Unit	Default
Par. Group 00: Operati-on/Display				
C00.40	HAND Key Option	0: Disable; 1: Enable;	-	1
C00.41	OFF Key Option	0: Disable; 1: Enable; 2: Reset only;	-	1
C00.42	AUTO Key Option	0: Disable; 1: Enable;	-	1
C00.60	Set-up Lock	0: Disable; 1: Enable;	-	0
Par. Group 01: Load/motor				
C01.00	Configuration Mode	0: Speed open loop; 1: Speed closed loop; 3: Process closed-loop; 4: Torque open loop;	-	0
*C01.01	Motor Control Principle	0: V/F; 1: VCC+; 2: Vector control 1; 4: V/F Separation;	-	1
*C01.06	Rotation Drirection	0: Default; 1: Reverse;	-	0
*C01.10	Motor Type	0: Asynchronous motor; 1: SPM; 2: Unsaturated IPM(Salient); 3: IPM(Salient)	-	0
*C01.20	Rated Motor Power	Motor dependant	kW	*

Param	Name	Range	Unit	Default
*C01.22	Rated Motor Voltage	50-1000	V	*
*C01.23	Rated Motor Frequency	20-400	Hz	*
*C01.24	Rated Motor Current	Motor dependant	A	*
*C01.25	Rated Motor Speed	100-9999	rpm	*
C01.26	Rated Motor Torque	0.1-6553.5	N·m	0
*C01.29	Automatic Motor Adaption (AMA)	0: Disable; 1: Static complete AMA; 2: Static easy AMA;	-	0
*C01.30	Stator Resistance (Rs)	Motor dependant	Ω	*
*C01.31	Rotor Resistance(Rr)	Motor dependant	Ω	*
*C01.33	Stator Leakage Reactance (Xl)	Motor dependant	mH	*
*C01.35	Main Reactance (Xh)	Motor dependant	mH	*
C01.37	D-axis Inductance	Motor dependant	mH	*
C01.38	Q-axis Inductance	Motor dependant	mH	*
*C01.39	Motor Poles	2-100	P	4
*C01.40	Back EMF at 1000rpm	0-9000	V	*
*C01.42	Motor Cable Length	0-150	m	*
C01.55	V/F Characteristic-V	0.0-999.9	V	*
C01.56	V/F Characteristic-F	0.0-400.0	Hz	*
C01.60	Low Speed Load Compensation	0-199	%	100
C01.61	High Speed Load Compensation	0-199	%	100
C01.62	Slip Compensation	-400-399	%	*
C01.63	Slip Compensation Time Constant	0.05-5.00	s	0.10
C01.64	Resonance Dampening	0-3000	%	*
C01.65	Resonance Dampening Time constant	0.005-0.050	s	0.005
C01.66	Min. Current at Low Speed	0-120	%	80
C01.70	PM Motor Start Mode	0: IPD; 1: Parking;	-	1
C01.71	Start Delay	0.0-10.0	s	0.0
C01.72	Start Function	0: DC hold; 2: Coast;	-	2
*C01.73	Flying Start	0: Disable; 1: Enable;	-	0
*C01.75	Min. Start Frequency	0.00-50.00	Hz	0.00
C04.61	Stop Mode	0: Coast; 1: DC hold;	-	0
C01.80	Min. Speed for Stop Mode	0.0-400.0	Hz	0.0
C01.89	Stop Mode for V/F Separation	0: Frequency and voltage are reduced to 0 independently; 1: Voltage reduced to 0 firstet, then frequency.	-	0
C01.90	Motor Thermal Protection	0: No protection; 1: Thermistor warning; 2: Thermistor trip; 3: ETR warning; 4: ETR trip; 5: ETR warning (Self-cooling mode); 6: ETR trip (Self-cooling mode);	-	0
C01.91	Motor Overload Delay	1-60	min	2
C01.92	Motor Overload Proportion	100-160	%	150
*C01.93	Thermistor Resource	0: None; 1: Terminal AI;	-	0
C01.94	Motor Overheating Temp	0-220	$^{\circ}$ C	130
Par. Group 02: Brakes				
C02.00	DC Hold Current	0-150	%	50
C02.01	DC Brake Current	0-150	%	50
C02.02	DC Brake Time	0.0-60.0	s	10.0
C02.04	DC Brake Cut in Speed	0.0-400.0	Hz	0.0
C02.06	Parking Current	0-150	%	80
C02.07	Parking Time	0.1-60.0	s	3.0
C02.08	Motor Demagnetization	0-100	%	100
C02.10	Brake Function	0: Off; 1: Resistor brake; 2: AC brake;	-	0
C02.11	Brake Resistor	5-65535	Ω	*
*C02.14	Resistor Brake Threshold Voltage	Grid type dependant	V	*
C02.15	Over-voltage Control Threshold Voltage	Grid type dependant	V	*
C02.16	Max Current for AC Brake	0-150	%	100
C02.17	Over-voltage Control	0: Disabled; 2: Mode 1; 3: Mode 2;	-	0
C02.18	Over-voltage Control Integral Time	0.01-0.10	s	0.05
C02.19	Over-voltage Control Proportional Gain	0-200	%	100
C02.20	Release Brake Current	0.00-1200.00	A	0.00
C02.22	Activate Brake Speed	0.0-400.0	Hz	0.0

Param	Name	Range	Unit	Default
Par. Group 03: Reference/Ramps				
C03.03	Maximum Reference	0.0-6553.5	-	50.0
Param	Name	Range	Unit	Default
C03.07	Main Reference Calculation	0: Preset ref + Ref. source1, 2, 3; 1: Preset reference priority;	-	0
C03.10	Preset Reference	-100.00-100.00	%	0.00
C03.11	Jog Speed	0.0-400.0	Hz	5.0
C03.13	UP/DOWN Value	0.01-50.00	Hz	0.10
C03.15	Reference Source 1	0: Disable; 1: Terminal VI; 2: Terminal	-	1
C03.16	Reference Source 2	AI; 8: Pulse input; 10: Preset ref. [0]; 11:	-	2
C03.17	Reference Source 3	RS485; 21: Knob;	-	11
C03.19	Up/Down Value Store	0: No function; 1: Stop save; 2: Power down save;	-	0
C03.21	Break Frequency	0.0-3276.0	Hz	0.0
C03.22	Voltage Source for V/F Separation	0: No; 1: VI; 2: AI; 8: Pulse input; 11: RS485; 14: Parameter C03.23; 21: LCP;	-	14
C03.23	V/F Separation Voltage	0.00%- 100.00%	%	0.00
C03.39	Accuracy of Ramp Time	0: 0.1s; 1: 0.01s;	-	1
C03.40	Ramp 1 Type	0: Linear; 2: S ramp;	-	0
C03.41	Ramp 1 Ramp Up Time	0.05-655.35	s	*
C03.42	Ramp 1 Ramp Down Time	0.05-655.35	s	*
C03.80	Jog Ramp Time	0.05-655.35	s	*
Par. Group 04: Limits/Warnings				
*C04.10	Motor Speed Direction	0: Clockwise; 1: Reverse; 2: Both directions	-	2
*C04.12	Motor Speed Lower Limit	0.0-400.0	Hz	0.0
*C04.14	Motor Speed Upper Limit	0.0-400.0	Hz	65.0
C04.18	Current Limit	0-300	%	*
*C04.19	Max. Output Frequency	0.0-400.0	Hz	65.0
C04.23	Power Limit Motor Mode	0-400	%	400
C04.24	Power Limit Generator Mode	0-400	%	400
*C04.58	Missing Motor Phase Function	0: Disable; 1: Enable;	-	1
C04.61	Bypass Speed From	0.0-400.0	Hz	0.0
C04.63	Bypass Speed To	0.0-400.0	Hz	0.0
Par. Group 05: Digital In/Out				
C05.05	DI Terminal Logic	0-255	-	0
C05.06	DO/Relay Terminal Logic	0-255	-	0
C05.10	Terminal FOR	0: Disable; 1: Reset; 2: Coast(inverse); 3: Coast and reset(inverse); 6: Stop(inverse); 8: Start; 9: Pulse start; 10: Reverse; 11: Reverse run; 12: Forward run only; 13: Reverse run only; 14: Jog; 15: Preset ref. bit0; 16: Preset ref. bit1; 17: Preset ref. bit2; 18: Preset ref. bit3; 19: Freeze reference; 20: Freeze output; 21: UP; 22: DOWN; 24: Main reference calculation switchover; 28: Catch up; 29: Slow down; 32: Pulse input; 34: Ramp bit0; 35: Ramp bit1; 36: Ramp bit2; 37: Latched Reversing; 38: Jog reversing; 42: Coast; 46: Stop; 50: Speed control/torque control switchover; 110: Process PID pause;	-	8
C05.11	Terminal REV	0: Disable; 1: Reset; 2: Coast(inverse); 3: Coast and reset(inverse); 6: Stop(inverse); 8: Start; 9: Pulse start; 10: Reverse; 11: Reverse run; 12: Forward run only; 13: Reverse run only; 14: Jog; 15: Preset ref. bit0; 16: Preset ref. bit1; 17: Preset ref. bit2; 18: Preset ref. bit3; 19: Freeze reference; 20: Freeze output; 21: UP; 22: DOWN; 24: Main reference calculation switchover; 28: Catch up; 29: Slow down; 32: Pulse input; 34: Ramp bit0; 35: Ramp bit1; 36: Ramp bit2; 37: Latched Reversing; 38: Jog reversing; 42: Coast; 46: Stop; 50: Speed control/torque control switchover; 110: Process PID pause;	-	11
C05.12	Terminal DI1	0: Disable; 1: Reset; 2: Coast(inverse); 3: Coast and reset(inverse); 6: Stop(inverse); 8: Start; 9: Pulse start; 10: Reverse; 11: Reverse run; 12: Forward run only; 13: Reverse run only; 14: Jog; 15: Preset ref. bit0; 16: Preset ref. bit1; 17: Preset ref. bit2; 18: Preset ref. bit3; 19: Freeze reference; 20: Freeze output; 21: UP; 22: DOWN; 24: Main reference calculation switchover; 28: Catch up; 29: Slow down; 32: Pulse input; 34: Ramp bit0; 35: Ramp bit1; 36: Ramp bit2; 37: Latched Reversing; 38: Jog reversing; 42: Coast; 46: Stop; 50: Speed control/torque control switchover; 110: Process PID pause;	-	15
C05.13	Terminal DI2	0: Disable; 1: Reset; 2: Coast(inverse); 3: Coast and reset(inverse); 6: Stop(inverse); 8: Start; 9: Pulse start; 10: Reverse; 11: Reverse run; 12: Forward run only; 13: Reverse run only; 14: Jog; 15: Preset ref. bit0; 16: Preset ref. bit1; 17: Preset ref. bit2; 18: Preset ref. bit3; 19: Freeze reference; 20: Freeze output; 21: UP; 22: DOWN; 24: Main reference calculation switchover; 28: Catch up; 29: Slow down; 32: Pulse input; 34: Ramp bit0; 35: Ramp bit1; 36: Ramp bit2; 37: Latched Reversing; 38: Jog reversing; 42: Coast; 46: Stop; 50: Speed control/torque control switchover; 110: Process PID pause;	-	16
C05.14	Terminal DI3	0: Disable; 1: Reset; 2: Coast(inverse); 3: Coast and reset(inverse); 6: Stop(inverse); 8: Start; 9: Pulse start; 10: Reverse; 11: Reverse run; 12: Forward run only; 13: Reverse run only; 14: Jog; 15: Preset ref. bit0; 16: Preset ref. bit1; 17: Preset ref. bit2; 18: Preset ref. bit3; 19: Freeze reference; 20: Freeze output; 21: UP; 22: DOWN; 24: Main reference calculation switchover; 28: Catch up; 29: Slow down; 32: Pulse input; 34: Ramp bit0; 35: Ramp bit1; 36: Ramp bit2; 37: Latched Reversing; 38: Jog reversing; 42: Coast; 46: Stop; 50: Speed control/torque control switchover; 110: Process PID pause;	-	17
C05.30	Terminal DO1	0: Disable; 1: Drive ready; 3: Remote control ready; 5: Drive running; 9: Alarm; 10: Alarm or warning; 25: Reverse; 32: Mech. Brake control; Achieve brake voltage; 38: RS485 control; 43: External fault; 51: In HAND state; 52: In AUTO state; 55: Reverse running;	-	0
C05.40	Relay	0: Disable; 1: Drive ready; 3: Remote control ready; 5: Drive running; 9: Alarm; 10: Alarm or warning; 25: Reverse; 32: Mech. Brake control; Achieve brake voltage; 38: RS485 control; 43: External fault; 51: In HAND state; 52: In AUTO state; 55: Reverse running;	-	9.5
C05.55	DI3 Low Frequency	0.00-99.99	kHz	50.00
C05.56	DI3 Max Frequency	0.01-100.00	kHz	0.02
C05.57	DI3 Low Ref. Value	-200.00-200.00	%	0.00
C05.58	DI3 High Ref. Value	-200.00-200.00	%	100.00
C05.59	DI3 Filter Time	1-1000	ms	100
C05.60	DO1 Pulse Output	0: Digital output; 10: Output frequency; 11: Reference; 12: Feedback; 13: Output current; 16: Power; 17: Speed; 18: Output voltage; 21: Pulse input; 22: VI input; 23: AI input; 26: DC voltage; 30: Torque output; 38: RS485	-	0