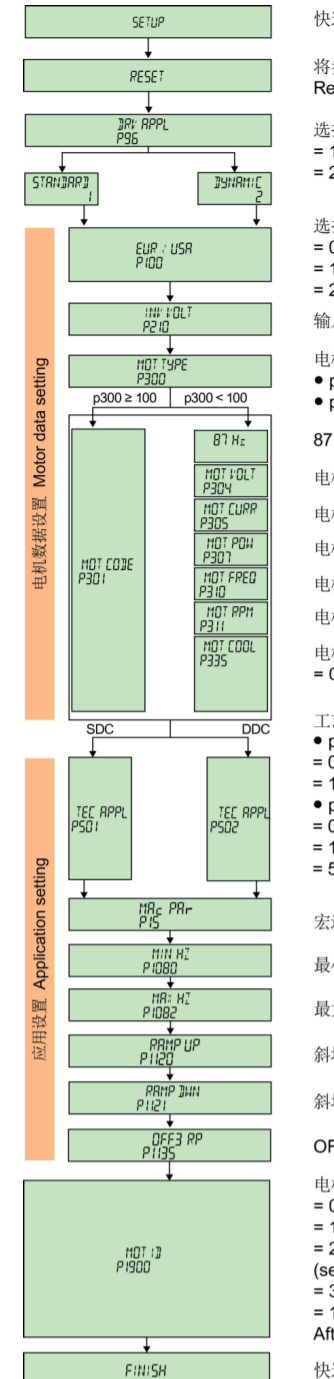


快速调试 Quick commissioning



快速调试开始 Start quick commissioning

将参数复位至默认值 (是/否)
Reset parameter to default (Yes/No)

选择应用等级 Select application class (p98)
= 1: SDC 标准驱动控制 (不推荐额定功率 ≥ 18.5 kW Not recommended for rated power ≥ 18.5 kW)
= 2: DDC 动态驱动控制

选择电机标准 Select motor standard
= 0: kW / 50 Hz: IEC
= 1: hp / 60 Hz: NEMA
= 2: kW / 60 Hz: NEMA

输入电压 Supply voltage

电机类型 Motor type
• p300 ≥ 100: 输入电机代码 Input motor code
• p300 < 100: 输入电机数据 Input motor data (p300 = 1: 异步电机 induction motor)

87 Hz 运行, 仅适用于 IEC 电机 87 Hz operation, for IEC motor only

电机额定电压 Rated motor voltage

电机额定电流 Rated motor current

电机额定功率 Rated motor power

电机额定频率 Rated motor frequency

电机额定转速 Rated motor speed

电机冷却方式 Motor cooling:
= 0: 自然冷却 Natural cooling = 1: 强制风冷 Forced-air cooling

工艺应用 Technological application
• p501 (SDC 标准驱动控制):
= 0: 固定负载 Constant load
= 1: 风机水泵类应用 Pump and fan application
• p502 (DDC 动态驱动控制):
= 0: 标准应用 Standard application
= 1: 需快速启动的应用 Applications with short ramp-up & ramp-down time
= 5: 高启动转矩应用 Applications with a high break loose torque

宏选择 Macro selection

最小转速 Minimum speed

最大转速 Maximum speed

斜坡上升时间 Ramp-up time

斜坡下降时间 Ramp-down time (在 OFF1 指令后生效 effective after OFF1)

斜坡下降时间 Ramp-down time after OFF3

电机数据检测 Motor data identification
= 0: 不检测电机数据 No motor data identification
= 1: 静态和动态电机数据检测 Identify the motor data at standstill and with the motor rotating.
= 2: 静态电机数据检测 (电机不能自由旋转时选择该设置) Identify the motor data at standstill (select this setting if the motor cannot rotate freely).
= 3: 动态电机数据检测 Measure the motor data while the motor is rotating.
= 11/12: 设置同 1/2, 电机数据检测结束后电机加速到当前设定值。Setting same as 1/2. After the motor data identification, the motor accelerates to the current setpoint.

快速调试结束 Complete quick commissioning

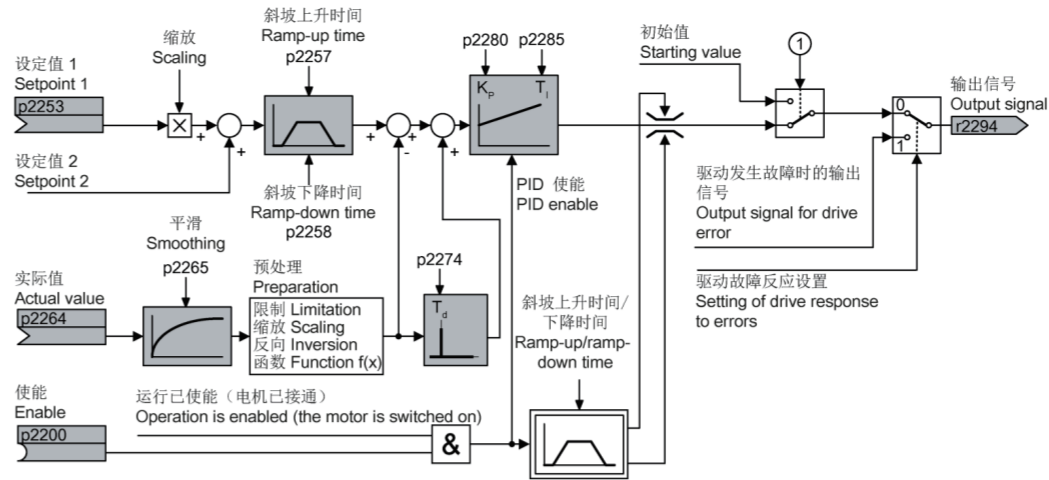
¹ 有关“专家”应用等级的详细信息, 参见操作说明。For information about application class “expert”, see Operating Instructions.
² 有关 1LE0 电机的信息, 参见“1LE0 电机映射表”。For information about 1LE0 motor, see “1LE0 motor mapping table”.
³ 如果选择检测电机数据, 电机会在 JOG 时运行。If motor identification is selected, the motor will rotate when jogging.
⁴ 如果未连接电机, 设 p1900 为 0。Set p1900 to 0 if no motor is connected.

1LE0 电机映射表 1LE0 motor mapping table

电机类型: 1LE0 异步电机 (p0300 = 161) Motor type: 1LE0 induction motor (p0300 = 161)

电机代码 Motor code (p0301)	订货号 Article number	电机代码 Motor code (p0301)	订货号 Article number	电机代码 Motor code (p0301)	订货号 Article number
16100	1LE0003-0DA22-1...	16134	1LE0003-1DD23-3...	16168	1LE0003-3AA53-3...
16101	1LE0003-0DA32-1...	16135	1LE0003-1DD33-3...	16169	1LE0003-3AA63-3...
16102	1LE0003-0DB22-1...	16136	1LE0003-1DD43-3...	16170	1LE0003-3AA73-3...
16103	1LE0003-0DB32-1...	16137	1LE0003-1EA23-3...	16171	1LE0003-3AB03-3...
16104	1LE0003-0DC32-1...	16138	1LE0003-1EB23-3...	16172	1LE0003-3AB23-3...
16105	1LE0003-0EA02-1...	16139	1LE0003-1EB43-3...	16173	1LE0003-3AB53-3...
16106	1LE0003-0EA42-1...	16140	1LE0003-1EC43-3...	16174	1LE0003-3AB63-3...
16107	1LE0003-0EB02-1...	16141	1LE0003-1ED43-3...	16175	1LE0003-3AB73-3...
16108	1LE0003-0EB42-1...	16142	1LE0003-2AA43-3...	16176	1LE0003-3AC03-3...
16109	1LE0003-0EC02-1...	16143	1LE0003-2AA53-3...	16177	1LE0003-3AC23-3...
16110	1LE0003-0EC42-1...	16144	1LE0003-2AB43-3...	16178	1LE0003-3AC53-3...
16111	1LE0003-1AA42-1...	16145	1LE0003-2AC43-3...	16179	1LE0003-3AC63-3...
16112	1LE0003-1AB42-1...	16146	1LE0003-2AC53-3...	16180	1LE0003-3AD03-3...
16113	1LE0003-1AB52-1...	16147	1LE0003-2AD53-3...	16181	1LE0003-3AD23-3...
16114	1LE0003-1AC42-1...	16148	1LE0003-2BA23-3...	16182	1LE0003-3AD53-3...
16115	1LE0003-1BA23-3...	16149	1LE0003-2BB03-3...	16183	1LE0003-3AD63-3...
16116	1LE0003-1BB23-3...	16150	1LE0003-2BB23-3...	16184	1LE0003-3BA23-3...
16117	1LE0003-1BC22-1...	16151	1LE0003-2BC23-3...	16185	1LE0003-3BA33-3...
16118	1LE0003-1CA03-3...	16152	1LE0003-2BD03-3...	16186	1LE0003-3BA53-3...
16119	1LE0003-1CA13-3...	16153	1LE0003-2BD23-3...	16187	1LE0003-3BA63-3...
16120	1LE0003-1CB03-3...	16154	1LE0003-2CA23-3...	16188	1LE0003-3BB23-3...
16121	1LE0003-1CB23-3...	16155	1LE0003-2CB23-3...	16189	1LE0003-3BB33-3...
16122	1LE0003-1CC02-1...	16156	1LE0003-2CC23-3...	16190	1LE0003-3BB53-3...
16123	1LE0003-1CC23-3...	16157	1LE0003-2CD23-3...	16191	1LE0003-3BB63-3...
16124	1LE0003-1CC33-3...	16158	1LE0003-2DA03-3...	16192	1LE0003-3BC23-3...
16125	1LE0003-1CD02-1...	16159	1LE0003-2DA23-3...	16193	1LE0003-3BC33-3...
16126	1LE0003-1CD22-1....	16160	1LE0003-2DB03-3...	16194	1LE0003-3BC43-3...
16127	1LE0003-1DA23-3...	16161	1LE0003-2DB23-3...	16195	1LE0003-3BC53-3...
16128	1LE0003-1DA33-3...	16162	1LE0003-2DC03-3...	16196	1LE0003-3BC63-3...
16129	1LE0003-1DA43-3...	16163	1LE0003-2DC23-3...	16197	1LE0003-3BD23-3...
16130	1LE0003-1DB23-3...	16164	1LE0003-2DD03-3...	16198	1LE0003-3BD33-3...
16131	1LE0003-1DB43-3...	16165	1LE0003-2DD23-3...	16199	1LE0003-3BD53-3...
16132	1LE0003-1DC23-3...	16166	1LE0003-3AA03-3...	17100	1LE0003-3BD63-3...
16133	1LE0003-1DC43-3...	16167	1LE0003-3AA23-3...		

PID 控制参数 PID control parameters



同时满足以下条件时, 变频器才会采用初始值:
 • PID 提供主设定值 (p2251 ≠ 0)
 • PID 的斜坡函数发生器输出端还没有到达初始值。
 The converter uses the starting value when all the following conditions are simultaneously satisfied:
 • The PID supplies the main setpoint (p2251 = 0).
 • The ramp-function generator output of the PID has not yet reached the starting value.

参数 Parameter	描述 Description	范围
p2200[0..n]	BI: PID 使能	BI: PID enable
p2253[0..n]	CI: PID 设定值 1	CI: PID setpoint 1
p2254[0..n]	CI: PID 设定值 2	CI: PID setpoint 2
p2255	PID 设定值 1 比例系数	PID setpoint 1 scaling
p2256	PID 设定值 2 比例系数	PID setpoint 2 scaling
p2257	PID 斜坡上升时间	PID ramp-up time
p2258	PID 斜坡下降时间	PID ramp-down time
p2264[0..n]	CI: PID 实际值	CI: PID actual value
p2265	PID 实际值滤波器时间常数	PID actual value filter time constant
p2269	PID 增益实际值	PID gain actual value
p2274	PID 差分的时间常数	PID differentiation time constant
p2280	PID 比例增益	PID proportional gain
p2285	PID 积分时间	PID integral time
r2294	CO: PID 输出信号	CO: PID output signal

通讯参数 Communication parameters

参数 Parameter	描述 Description	范围
p2000	参考转速/参考频率	Reference speed reference frequency
p2002	参考电流	Reference current
p2010	调试接口波特率	Communication interface baud rate
p2011	设定通讯接口 (USS, RS232) 的波特率。	Sets the baud rate for the commissioning interface (USS, RS232).
p2011	调试接口地址	Communication interface address
p2021	现场总线接口地址	Fieldbus interface address
p2023	现场总线接口 USS PKW 数量	Fieldbus interface USS PKW count
	在 USS 报文的 PKW 部分设置现场总线 16 位字的数量。	Sets the number of 16-bit words in the PKW part of the USS telegram for the fieldbus interface.
	0 PKW 0 字	4 PKW 4 字
	3 PKW 3 字	12 PKW 不定长度
		7 PKW variable

其他变频器及电机特性参数 Other converter and motor feature parameters

参数 Parameter	描述 Description	范围
p0003	访问级别	Access level
	= 3: 专家 Expert	
	= 4: 维修 Service	
p0308[0..n]	电机额定功率因数	Rated motor power factor
p0309[0..n]	电机额定效率	Rated motor efficiency
p0335[0..n]	电机冷却方式	Motor cooling type
0	自然冷却	Natural ventilation
1	外部冷却	Forced cooling
2	水冷	Liquid cooling
128	无风扇	No fan
p0340[0..n]	自动计算电机/闭环控制参数	Automatic calculation motor/control parameters
0	不计算 No calculation	1 全部计算 Complete calculation
2	计算等效电路参数	3 计算闭环控制参数
	Calculation of equivalent circuit diagram parameters	Calculation of closed-loop control parameters
4	计算控制器参数	5 计算工艺限制和阈值
	Calculation of controller parameters	Calculation of technological limits and threshold values
p0604[0..n]	电机温度模型 2/传感器报警阈值	Mot_temp_mod 2/sensor alarm threshold
p0640[0..n]	电流极限	Current limit
p1035[0..n]	BI: 增加电动电位器设定值	BI: Increase motorized potentiometer setpoint
p1036[0..n]	BI: 降低电动电位器设定值	BI: Decrease motorized potentiometer setpoint
p1040[0..n]	电动电位器初始值	Motorized potentiometer starting value
r1050	CO: 电动电位器在斜坡函数发生器后的设定值	CO: Motorized potentiometer setpoint after ramp-function generator
p1055[0..n]	BI: JOG 位 0	BI: Jog bit 0
p1056[0..n]	BI: JOG 位 1	BI: Jog bit 1
p1058[0..n]	JOG 1 转速设定值	Jog 1 speed setpoint
p1059[0..n]	JOG 2 转速设定值	Jog 2 speed setpoint
p1135[0..n]	OFF3 斜坡下降时间	OFF3 ramp-down time
p1310[0..n]	连续电压提升的电流	Starting current (voltage boost) permanent
p1311[0..n]	加速电压提升的电流	Starting current (voltage boost) when accelerating
p1312[0..n]	启动电压提升的电流	Starting current (voltage boost) when starting
p1800[0..n]	脉冲频率设定值	Pulse frequency setpoint
p1900	电机数据检测和旋转检测	Motor data identification and rotating measurement
0	不检测电机数据	1 静态和动态电机数据检测
	No identification	Identify motor data at standstill and with motor rotating
2	静态电机数据检测	3 动态电机数据检测
	Identify motor data at standstill	Identify motor data with motor rotating
11	静态和动态电机数据检测, 切换到运行	12 静态电机数据检测, 切换到运行
	Identify motor data at standstill and with motor rotating, switch to operation	Identify motor data at standstill, switch to operation

变频器及电机监视参数 Converter and motor monitoring parameters

参数 Parameter	描述 Description	范围
r0018	控制单元固件版本	Control Unit firmware version
r021	CO: 经过滤波的转速实际值	CO: Actual speed smoothed
r025	CO: 经过滤波的输出电压	CO: Output voltage smoothed
r026	CO: 经过滤波的直流母线电压	CO: DC link voltage smoothed
r027	CO: 经过滤波的电流实际值	CO: Absolute actual current smoothed
r031	经过滤波的转矩实际值	Actual torque smoothed
r032	CO: 经过滤波的有功功率实际值	CO: Active power actual value smoothed
r035	CO: 电机温度	CO: Motor temperature
r067	CO: 最大输出电流	CO: Output current maximum
r076	CO: 连续电流实际值	CO: Current actual value field-generating
r077	CO: 转矩电流设定值	CO: Current setpoint torque-generating
r079	CO: 转矩设定值	CO: Torque setpoint
r080[0...1]	CO: 扭矩实际值	CO: Torque actual value
r0206[0...4]	功率单元额定功率	Rated power unit power
r0207[0...4]	功率单元额定电流	Rated power unit current
r0208	功率单元的额定输入电压	Rated power unit line supply voltage
r0209[0...4]	功率单元的最大电流	Power unit maximum current
r0752[0...3]	CO: CU 模拟输入 1 电压/电流	CO: CU analog inputs input voltage/current actual
r0755[0...3]	CO: CU 模拟输入 2 电压/电流	CO: CU analog inputs actual value in percent
r0774[0...2]	CU 模拟输出 1 电压/电流	CU analog outputs output voltage/current actual

故障/报警/监控参数 Fault/warning/monitoring parameters

参数 Parameter	描述 Description	范围
r0947[0...63]	故障历史记录	Fault history
r2110[0...63]	报警历史记录	Warning history

选项参数 Option parameters

参数 Parameter	描述 Description	范围
p0230	驱动: 输出滤波器类型	Drive filter type motor side
	有关适用的滤波器选项, 参见 SINAMICS G120XA 变频器《操作说明》2.6 章节“可选组件”。For more information about available filters, see Section 2.6 “Optional components” in the SINAMICS G120XA Operating Instructions.	
0	无滤波器 No filter	1 输出电抗器 Output reactor
2	dV/dt 滤波器 dV/dt filter	3 西门子正弦滤波器 Sine-wave filter Siemens
4	第三方制造商正弦滤波器 Sine-wave filter third-party	

固定频率参数 Fixed frequency parameters

选择模式 Selection mode	描述 Description	范围
p1016	转速固定设定值选择模式	Fixed speed setpoint select mode
= 1	直接选择 在此模式中通过转速固定设定值 p1001 ... p1004 给定设定值。 通过各转速固定设定值相加能得到最多 16 个不同的设定值。	Direct selection In this mode, the setpoint is entered via the fixed speed setpoints p1001 ... p1004. Up to 16 different setpoints are obtained by adding the individual fixed speed setpoints.
= 2	二进制编码选择 在此模式中通过转速固定设定值 p1001 ... p1015 给定设定值。	Binary coded selection In this mode, the setpoint is entered via the fixed speed setpoints p1001 ... p1015.

故障与报警 Faults and alarms

故障列表 Fault list

故障 Fault	描述 Description	故障 Fault	描述 Description
F01030	主控模式主站监控信号出错 Sign-of-life failure for master control	F07901	驱动: 电机转速过快 Drive: Motor overspeed
F01910	现场总线接口设定值超时 Fieldbus interface setpoint timeout	F07902	驱动: 电机失步 Drive: Motor stalled
F03505	模拟量输入端断线 Analog input wire breakage	F07950	电机参数错误 Motor parameter incorrect
F07011	驱动: 电机过电压 Drive: Motor overvoltage	F07990	驱动: 电机数据检测出错 Drive: Incorrect motor data identification
F07080	驱动: 闭环控制参数出错 Drive: Incontrol control parameter	F30001	功率单元: 过电流 Power unit: Overcurrent
F07320	驱动: 自动重启中断 Drive: Automatic restart interrupted	F30002	功率单元: 直流母线过电压 Power unit: DC link voltage overvoltage
F07445	PID 自动优化中断 PID autotuning canceled	F30003	功率单元: 过电压 Power unit: DC link voltage undervoltage
F07801	驱动: 电机过电流 Drive: Motor overcurrent	F30004	功率单元: 散热器过热 Power unit: Heat sink overtemperature
F07802	驱动: 整流单元或者功率单元未就绪 Drive: Infeed or power unit not ready	F30005	功率单元: Pt 过载 Power unit: Overload Pt
F07807	驱动: 检测到短路接地 Drive: Short-circuit/ground fault detected	F30011	功率单元: 主电路中存在断相 Power unit: Line phase failure in main circuit
F07860	外部故障 1 External fault 1	F30017	功率单元: 硬件电流限制响应过于频繁 Power unit: Hardware current limit has responded too often
F07861	外部故障 2 External fault 2	F30021	功率单元: 接地故障 Power unit: Ground fault
F07862	外部故障 3 External fault 3	F30022	功率单元: U-cc 监控 (IGBT U-cc 异常, 最可能为 IGBT 短路) Power unit: Monitoring U_cc
F07900	驱动: 电机堵转 Drive: Motor blocked		

报警列表 Alarm list

报警 Alarm	描述 Description	报警 Alarm	描述 Description
A05006	功率单元: 热模型过热 Power unit: Overtemperature thermal model	A07805	驱动: 功率单元过载 Pt Drive: Power unit overload Pt
A07321	驱动: 自动重启激活 Drive: Automatic restart active	A07910	驱动: 电机过热 Drive: Motor overtemperature
A07400	驱动: 最大直流母线电压控制器生效 Drive: DC link voltage maximum controller active	A07929	驱动: 检测不出电机 Drive: No motor detected
A07401	驱动: 最大直流母线电压控制器关闭 Drive: DC link voltage maximum controller deactivated	A07980	驱动: 旋转检测激活 Drive: Rotating measurement activated
A07402	驱动: 最小直流母线电压控制器生效 Drive: DC link voltage minimum controller active	A07991	驱动: 电机数据检测激活 Drive: Motor data identification activated
A07409	驱动: U/f 控制电流限制控制器生效 Drive: U/f control current limiting controller active	A07994	驱动: 未执行电机数据检测 Drive: motor data identification not performed active
A07444	PID 自动优化激活 PID autotuning is activated	A30016	功率单元: 加载电源关闭 (直流母线电压过低) Power unit: Load supply switched off (DC link voltage too low)

参数列表 Parameters list

模拟量输入和输出相关参数 Analog input and output parameters

参数 Parameter	描述 Description	范围
p0756[0...3]	CU 模拟量输入类型	CU analogue inputs type
0	单极电压输入 (0...+10 V)	Unipolar voltage input (0 to +10 V)
1	单极电压输入带断线监控 (2...10 V)	Unipolar voltage input monitored (2 to 10 V)
2	单极电流输入 (0...20 mA)	Unipolar current input (0 to 20 mA)
3	单极电流输入带断线监控 (4...20 mA)	Unipolar current input monitored (4 to 20 mA)
4	双极电压输入 (-10...+10 V)	Bipolar voltage input (-10 to +10 V)
p0757[0...3]	CU 模拟量输入特性曲线的值 x1	CU analog inputs characteristic value x1
p0758[0...3]	CU 模拟量输入特性曲线的值 y1	CU analog inputs characteristic value y1
p0759[0...3]	CU 模拟量输入特性曲线的值 x2	CU analog inputs characteristic value x2
p0760[0...3]	CU 模拟量输入特性曲线的值 y2	CU analog inputs characteristic value y2
p0761[0...3]	CU 模拟量输入断线监控响应阈值	CU analog inputs wire breakage monitoring response threshold
p0771[0...2]	CU 模拟量输出信号源	CU analog outputs signal source
p0773[