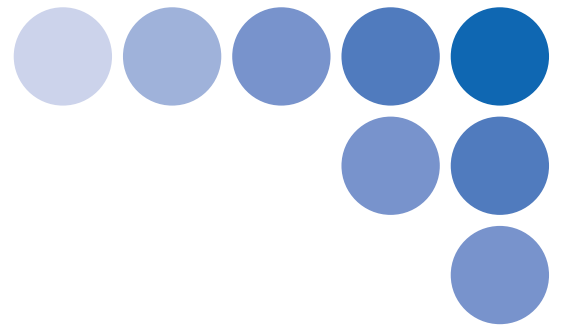


简易型智能变频器
操作简单、结构紧凑

V/F控制的变频器

SYSDRIVE 3G3JZ系列



SYSDRIVE 3G3JZ

简易而不简单，随意而不随便；
同质化的今天，品质在细微处彰显。

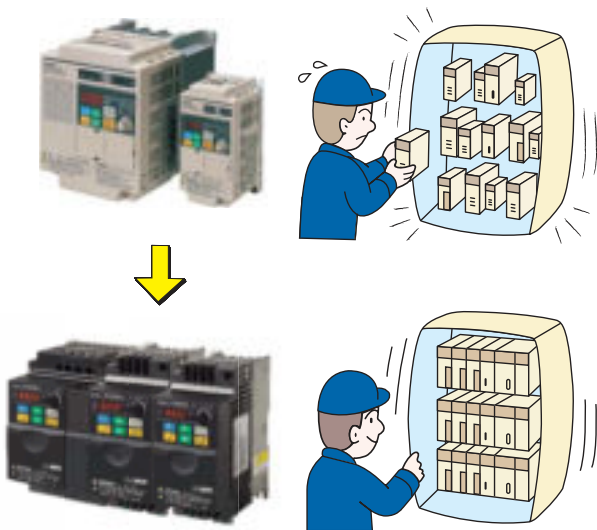


- 标准配置有RS485接口，Modbus总线通信功能
- 3Hz时提供150%以上转矩输出
- 2~15kHz载波频率，能实现静音驱动
- 搭载简易节能功能
- 尺寸紧凑统一，并且可以紧密并排安装
- 控制外部刹车动作的信号输出功能
- 软件设置运行方式，无需接控制线即可进行速度控制



硬件设计合理紧凑，便于安装维护

尺寸小而统一，只有2个尺寸规格高度一致可以并排安装，整齐而美观。



软件设计丰富而人性化，设置参数简便快速

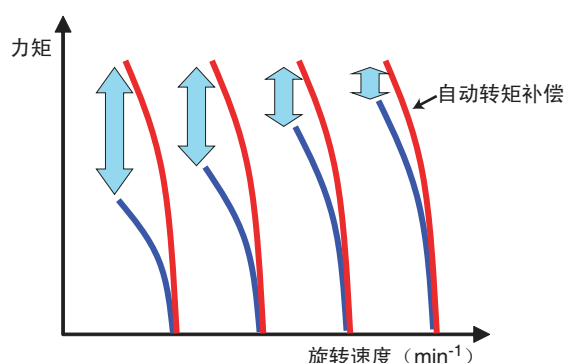
共计150个参数，设置风扇延长寿命的工作模式
高载波频率设计实现静音驱动一触及发，简单
易用。





有较大转矩输出的驱动能力

3G3JZ变频器采用SPWM控制；
具有转矩自动补偿和滑差补偿功能；
1分钟内有150%的过负载能力；
可运行频率范围为0~600Hz。



内置RS485通信接口和Modbus协议， 可以方便的接入控制网络。

内置RS485通信接口，可以方便的接入各种控制系统；
开放式的Modbus协议使用户控制编程熟悉而便捷；
OMRON公司的PLC内置的FunctionBlock功能模块省却了用户编程。



对应全球各种应用规格

3G3JZ变频器秉承OMRON一贯的安全和环保标准，产品已通过欧洲的CE认证，满足EMC电磁兼容要求；并且符合最新的绿色健康指令RoHS。

电压范围：单相200V~240VAC
3相200V~240VAC
3相380V~460VAC

可调整的NPN及PNP多功能输入点。



| | |
|--------------------|----|
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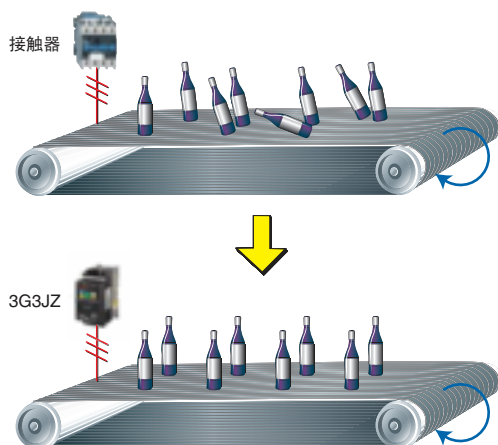
SYSDRIVE 3G3JZ

3G3JZ变频器自身具备丰富的驱动和控制功能，
如果她再和OMRON其它产品组成Compact Solution



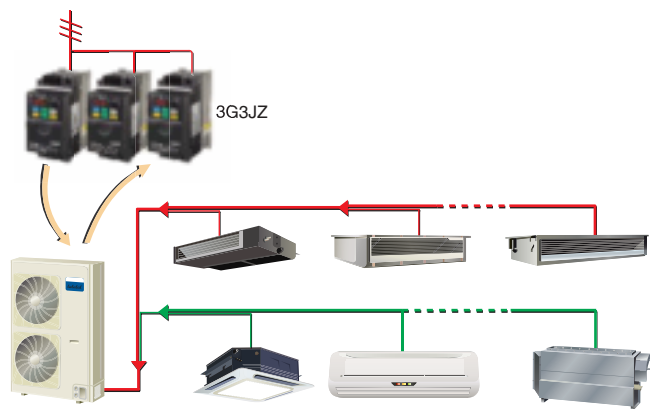
瓶装生产线上的使用

3G3JZ特别适用于生产线速度控制：
软启动/停止，柔性的生产速度控制，线路保护、
安全生产。



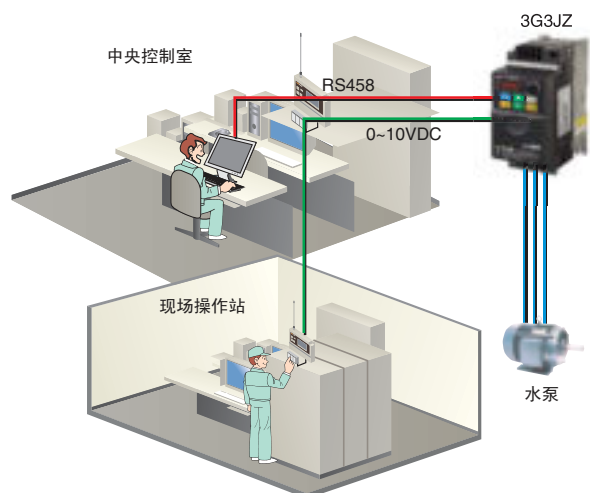
空调机的通风控制

紧凑型的安装设计：Side-by-side
根据要求平滑调节风速：显著的节能



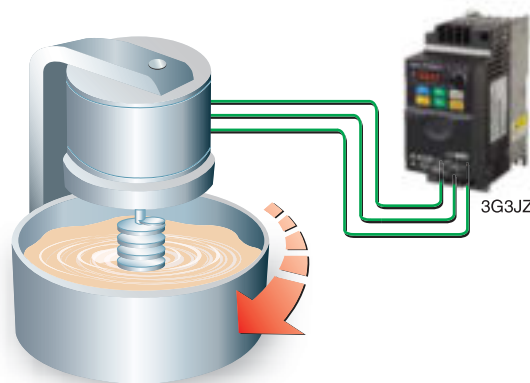
工厂水泵本地操作和远程操作切换

频率指令1和频率指令2可以分别或者共同（相
加减）控制电机转速，轻松实现远程（通信）
和本地（模拟量）控制。



印刷染料搅拌机

转矩自动提升功能和转差补偿功能，使3G3JZ可
以应用于搅拌机、等大力矩负载；600Hz最高频
率可以应用于离心机高速设备。

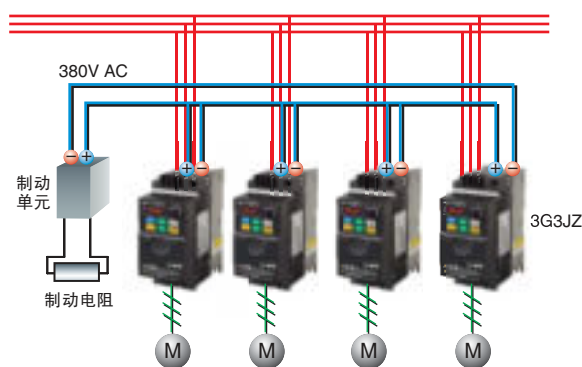


完全可以满足您的基本的速度控制要求，
紧凑解决方案，可以为您提供更高的附加价值。



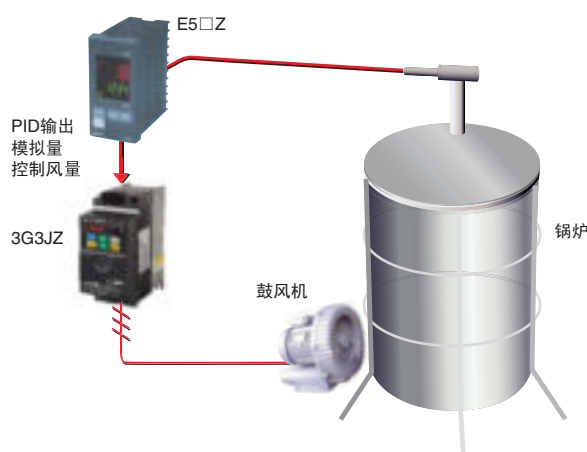
多台变频器统一控制柜安装（喷泉）

在多台变频器应用时，Side-by-side冷却特性节省安装空间；
直流母线共连，节省能量；若需要紧急制动，
可以多台公用一个制动单元。



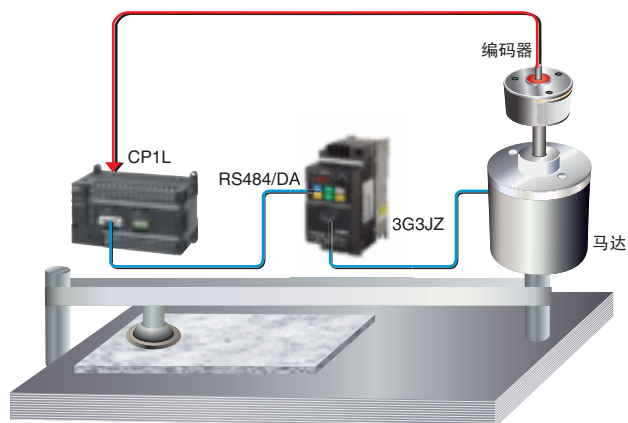
与OMRON温控器组成的控温系统

3G3JZ变频器模拟量输入可以和温控器完美组合成控温系统：
温控器的PID控制变频器转速；变频器内置过电流等电机保护。



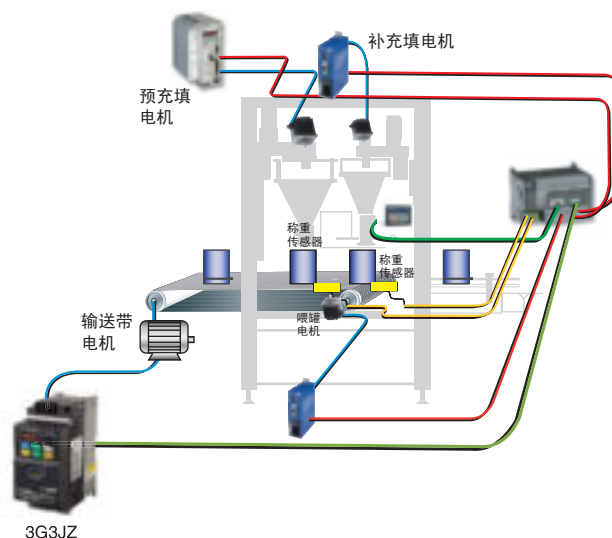
与CP1L控制器共同组建石材打磨系统

3G3JZ变频器具有150%过载能力CP1L控制器与变频器通信，功能块可以简化编程PLC内置的偏差计数器定位准确，往复运动方案的理想选择。



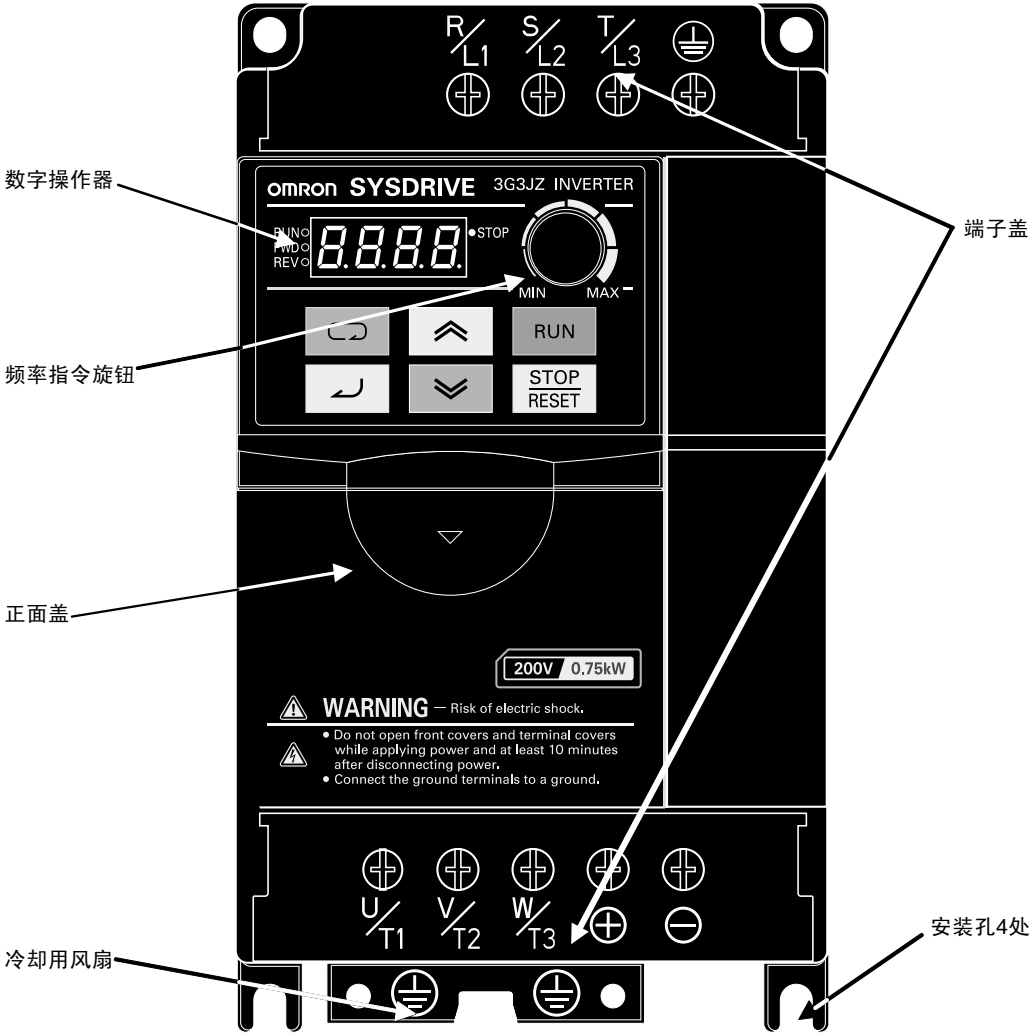
包装自动化整体解决方案

3G3JZ变频器与欧姆龙自动化产品：
伺服系统、PLC、传感器、安全产品等组成的包装整体解决方案。



各部分名称

■ 正面



操作器各部分名称及功能

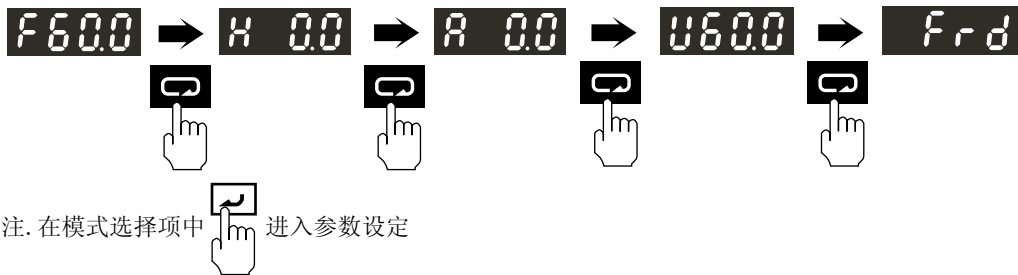
■ 数字操作器各部分名称



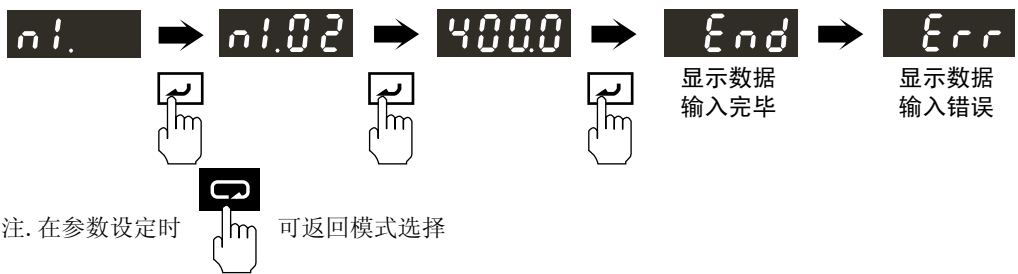
| 键 | 名称 | 功能 |
|---|-------------|--|
| | 数据显部 | 显示频率指令值、输出频率数值及参数常数设定值等相关数据。 |
| | 频率指令旋钮 | 通过旋钮设定频率时使用。 旋钮的设定范围可在0Hz～最高频率之间变动。 |
| | 运转显示 | 运转状态下LED亮灯。运转指令OFF时在减速中闪烁。 |
| | 正转显示 | 正转指令时LED亮灯。从正转移至反转时，LED闪烁。 |
| | 反转显示 | 反转指令时LED亮灯。从反转移至正转时，LED闪烁。 |
| | 停止显示 | 停止状态下LED亮灯。运转中低于最低输出频率时LED闪烁。 |
| | (进位显示) | 在参数等显示中显示5位数值的前4位时亮灯。 |
| | 状态键 | 按顺序切换变频器的监控显示。 在参数常数设定过程中按此键则为跳过功能。 |
| | 输入键 | 在监控显示的状态下按下此键的话进入参数编辑模式。在决定参数No.显示参数设定值时使用。 另外，在确认变更后的参数设定值时按下。 |
| | 减少键 | 减少频率指令、参数常数No.的数值、参数常数的设定值。 |
| | 增加键 | 增加频率指令、参数常数No.的数值、参数常数的设定值。 |
| | RUN键 | 启动变频器（但仅限于用数字操作器选择操作/运转时）。 |
| | STOP/RESET键 | 使变频器停止运转（只在参数n2.01设定为「STOP键有效」时停止） 另外，变频器发生异常时可作为复位键使用。 |

操作器应用示例

模式选择



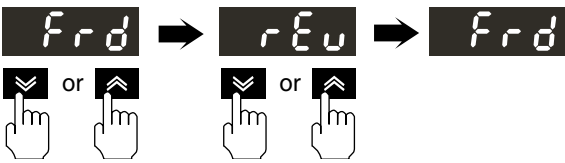
参数设定



参数修改



转向设定



参数列表

为了使3G3JZ的参数设置更方便,现按不同功能分别分成10个组别。各个组别的概要见下表。

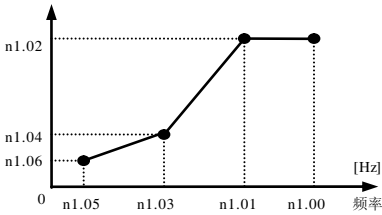
| 参数No. | 名称 | 说明 |
|-------|---------------|---|
| n0 | 环境设定 | 控制模式进行选择等环境设定组别。 禁止更改参数、选择变频器的监控显示项目等也在这个组别里进行设定。 |
| n1 | V/f模式和加减速时间设定 | 设定变频器的基本特性。 设定V/f模式、加减速条件。 |
| n2 | 变频器运转方法设定 | 设定变频器的运转方法。 通过选择频率指令或运转指令决定输入方法。 |
| n3 | 变频器输出功能设定 | 设定变频器的控制回路输出功能。 选择多功能输出或模拟输出功能、以及调整输出值。 |
| n4 | 变频器输入功能设定 | 设定变频器的控制回路输入功能。 选择多功能输入或模拟输入功能、以及调整输入值。 |
| n5 | 多段速频率指令设定 | 设定多段速运转时的频率指令。 可在多功能输入中设定多段速指令并以最大7频率指令切换运转。 设定此时的频率指令。 |
| n6 | 保护功能设定 | 设定•调整电机的保护功能。 设定•调整电机的加热保护功能及失速防止功能。 另外还可确认异常历史记录。 |
| n7 | 电机参数设定 | 设定电机的相关参数。 特别在矢量控制时非常重要，电机的自动调整也在这个组别里进行。请在向电机直接安装热敏运行过热保护时设定。 |
| n8 | 附加功能设定 | 设定变频器运转时的附加功能。 搭载直流制动功能、瞬间停电后的动作、跳跃频率功能、节能功能等。 |
| n9 | RS485通信设定 | 设定变频器的RS485通信。 与可编程逻辑控制器（PLC）通过RS485通信连接后控制变频器时，需设定此组别。 |

参数列表

■ n0: 环境设定

| 参数No. | 名称 | 说明 | 设定范围 | 设定单位 | 出厂设定 | 运转中更改 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------|---------------------|--|--------|------|------|-------|--------------------|---------|-------------------|---------|---|-------------------|---|----------------|---|-------|----|-------------------|---|-------------------|----|----------------|---|----------------|---|------------------|---|--------------------|----|------------------|---|-----------------|----|--------|---|-------------------|--|--|---|----------------|--|--|---|-------------------|--|--|
| n0.00 | 变频器容量监控 ※仅供参考 | 显示使用中的变频器电源规格及容量的监控。 各变频器所适用的规格/容量如下。 | — | 1 | — | — | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | <table><tr><th>显示</th><th>电源规格/容量</th><th>显示</th><th>电源规格/容量</th></tr><tr><td>0</td><td>单相/3相200VAC/0.2kW</td><td>9</td><td>3相400VAC/2.2kW</td></tr><tr><td>1</td><td>(未使用)</td><td>10</td><td>单相/3相200VAC/3.7kW</td></tr><tr><td>2</td><td>单相/3相200VAC/0.4kW</td><td>11</td><td>3相400VAC/3.7kW</td></tr><tr><td>3</td><td>3相400VAC/0.4kW</td><td></td><td></td></tr><tr><td>4</td><td>单相/3相200VAC/0.75kW</td><td></td><td></td></tr><tr><td>5</td><td>3相400VAC/0.75kW</td><td></td><td></td></tr><tr><td>6</td><td>单相/3相200VAC/1.5kW</td><td></td><td></td></tr><tr><td>7</td><td>3相400VAC/1.5kW</td><td></td><td></td></tr><tr><td>8</td><td>单相/3相200VAC/2.2kW</td><td></td><td></td></tr></table> | | | | | 显示 | 电源规格/容量 | 显示 | 电源规格/容量 | 0 | 单相/3相200VAC/0.2kW | 9 | 3相400VAC/2.2kW | 1 | (未使用) | 10 | 单相/3相200VAC/3.7kW | 2 | 单相/3相200VAC/0.4kW | 11 | 3相400VAC/3.7kW | 3 | 3相400VAC/0.4kW | | | 4 | 单相/3相200VAC/0.75kW | | | 5 | 3相400VAC/0.75kW | | | 6 | 单相/3相200VAC/1.5kW | | | 7 | 3相400VAC/1.5kW | | | 8 | 单相/3相200VAC/2.2kW | | |
| | | 显示 | | | | | 电源规格/容量 | 显示 | 电源规格/容量 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 0 | | | | | 单相/3相200VAC/0.2kW | 9 | 3相400VAC/2.2kW | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 1 | | | | | (未使用) | 10 | 单相/3相200VAC/3.7kW | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2 | | | | | 单相/3相200VAC/0.4kW | 11 | 3相400VAC/3.7kW | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | | | | | 3相400VAC/0.4kW | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 4 | | | | | 单相/3相200VAC/0.75kW | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 5 | | | | | 3相400VAC/0.75kW | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 6 | | | | | 单相/3相200VAC/1.5kW | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 7 | | | | | 3相400VAC/1.5kW | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | 单相/3相200VAC/2.2kW | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| n0.02 | 禁止选择变更参数 / 参数初始化 | 禁止参数的变更，另外也可将参数恢复为出厂值。 0：可设定及参照全部参数。 1：仅可设定n0.02。其它所有参数仅可参照。 8：操作键锁定 9：最高频率50Hz时的初始化 10：最高频率60Hz时的初始化 | 0～10 | 1 | 0 | × | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| n0.03 | 选择电源ON时的监 控显示项目 | 设定接通电源时希望最先显示的监控项目。 0：频率指令 1：输出频率 2：输出电流 3：n0.04设定的监控项目 4：FWD(正转) / REV(反转) | 0～4 | 1 | 0 | ○ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| n0.04 | 选择监控显示项目 | 可通过操作显示的5种监控中，有一项监控的显示内容可以变更。 请设定希望显示的监控项目。 | 0～11 | 1 | 4 | ○ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | <table><tr><th>设定</th><th>监控项目</th><th>设定</th><th>电源规格/容量</th></tr><tr><td>0</td><td>用户设定监控</td><td>6</td><td>输出功率（功率因数）</td></tr><tr><td>1</td><td>（未使用）</td><td>7</td><td>输出电力</td></tr><tr><td>2</td><td>（未使用）</td><td>8</td><td>（未使用）</td></tr><tr><td>3</td><td>主回路直流电压</td><td>9</td><td>频率指令(电压)A1端子输入电压</td></tr><tr><td>4</td><td>输出电压指令</td><td>10</td><td>频率指令(电流)A1端子输入电压</td></tr><tr><td>5</td><td>（未使用）</td><td>11</td><td>IGBT温度</td></tr></table> | | | | | 设定 | 监控项目 | 设定 | 电源规格/容量 | 0 | 用户设定监控 | 6 | 输出功率（功率因数） | 1 | （未使用） | 7 | 输出电力 | 2 | （未使用） | 8 | （未使用） | 3 | 主回路直流电压 | 9 | 频率指令(电压)A1端子输入电压 | 4 | 输出电压指令 | 10 | 频率指令(电流)A1端子输入电压 | 5 | （未使用） | 11 | IGBT温度 | | | | | | | | | | | | |
| | | 设定 | | | | | 监控项目 | 设定 | 电源规格/容量 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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■ n1：设定V/f模式和加减速时间

| 参数No. | 名称 | 说明 | 设定范围 | 设定单位 | 出厂设定 | 运转中更改 |
|-------|----------------|---|--------------------------------|--------|------------------------|-------|
| n1.00 | 最高频率(FMAX) | 设定变频器的基本特性也就是V/f模式。 | 50.00~600.0 | 0.01Hz | 50.00※1 | × |
| n1.01 | 最大电压频率(FA) | ●V/f控制模式：设定不同频率的输出电压。 | 0.10~600.0 | 0.01Hz | 50.00※1 | × |
| n1.02 | 最大电压(VMAX) | ●矢量控制模式：由于矢量控制为控制频率和电压，因此参数n1.03, n1.04, n1.06的设定无效。 | 0.1~255.0 (0.1~510.0) ※2 | 0.1V | 200.0 (400.0) ※2 | × |
| n1.03 | 中间输出频率(FB) |  <p>※设定必须满足$n1.05 \leq n1.03 \leq n1.01$。 ※设定$n1.06 \leq n1.04 \leq n1.02$。 ※当$n1.03 = n1.01$时，n1.04设定无效。 ※当$n1.03 = n1.05$时，n1.06设定无效。</p> | 0.10~600.0 | 0.01Hz | 1.5 | × |
| n1.04 | 中间输出频率电压(VC) | | 0.1~255.0 (0.1~510.0) ※2 | 0.1V | 12.0 (24.0) ※2 | × |
| n1.05 | 最低输出频率(FMIN) | | 0.10~600.0 | 0.01Hz | 1.5 | × |
| n1.06 | 最低输出频率电压(VMIN) | | 0.1~255.0 (0.1~510.0) ※2 | 0.1V | 12.0 (24.0) ※2 | × |
| n1.07 | 频率指令上限值 | 设定频率指令的上限值以及下限值。 | 0.1~120 | 0.1% | 110.0 | × |
| n1.08 | 频率指令下限值 | 即使收到超过上限值或下限值的频率指令、变频器仍然只输出上限值或下限值。 最高频率(n1.00)为100%，设定以%为单位。 ※请务必设定 $n1.08 \leq n1.07$ 。 ※当设定频率指令下限值(n1.08)不足最低输出频率(n1.05)时，即使输入不足最低输出频率的频率，变频器也不输出。 | 0.0~100 | 0.1% | 0.0 | × |
| n1.09 | 加速时间1 | 加速时间：从最高频率(n1.00) 0%到100%的时间设定 | 0.1~600.0 | 0.1s | 10.0 | ○ |
| n1.10 | 减速时间1 | 减速时间：从最高频率(n1.00) 100%到0%的时间设定 | | | 10.0 | ○ |
| n1.11 | 加速时间2 | ※实际的加减速时间为以下公式。 [加减速时间设定值]×[频率指令]/[最高频率] | | | 10.0 | ○ |
| n1.12 | 减速时间2 | ※加减速时间1和2，通过将功能输入(n4.05~n4.08)设定为“7(切换加减速时间)”，可进行两者切换。 | | | 10.0 | ○ |
| n1.17 | 加速时的S字特性时间 | 为了减弱对负载的冲击，可在加减速动作里设定S字特性。 请在设定过的加减速时间n1.09~n1.12上增加设定S字特性时间。 | 0.1~10.0 | 0.1s | 0.0 | × |
| n1.18 | 减速时的S字特性时间 | 实际加减速时间则为加减速时间(n1.09~n1.12)的设定值加上S字特性时间(n1.17或n1.18)的设定值。 ※当S字特性时间后的时间为设定为“0.0”时则变为无效。 | | | 0.0 | × |

※1. 出厂时的设定。实行0.02=10「最高频率60Hz时的初始化」时，设定变为60Hz。

※2. ()中的显示值为400VAC型变频器的设定范围和出厂设定。

参数列表

■ n2: 变频器运转方法设定

| 参数No. | 名称 | 说明 | 设定范围 | 设定单位 | 出厂设定 | 运转中更改 |
|-------|---------------------|---|------|------|------|-------|
| n2.00 | 频率指令选择 | 选择向变频器输入频率指令的方法。 0: 操作器的增量/减量键输入有效 1: 操作器的频率指令旋钮有效 2: 频率指令输入A1端子(电压输入0~10V)有效 3: 频率指令输入A1端子(电流输入4~20mA)有效 4: RS485通信发出的频率指令有效 ※在多功能输入(n4.05~n4.08)中使用UP/DOWN指令(设定值10, 11)时设定为n2.00=0。这时操作器的增减键输入同时有效。但以多功能输入的UP/DOWN指令优先。 ※多功能输入(n4.05~n4.08)的多段速指令(设定值01, 02, 03)不受n2.00的设定影响一直有效。 ※A1端子电流/电压输入选择请使用SW开关切换ACI/AVI。 | 0~4 | 1 | 1 | ○ |
| n2.01 | 运行指令选择 | 选择变频器的运转 / 停止指令输入方法。 0: 操作器的RUN / STOP键有效 1: 控制回路端子(2线式或3线式) ※操作器的STOP键也有效。 2: 控制回路端子(2线式或3线式) ※操作器的STOP键无效。 3: RS485通信的运转指令有效 ※操作器的STOP键也有效。 4: RS485通信的运转指令有效 ※操作器的STOP键无效。 ※在多功能输入(n4.05~n4.08)中设定为“18(切换运转指令: 控制端子), 19(切换运转指令: 操作器), 以及20(切换运转指令: 通信)”可以暂时切换运转指令。 | 0~4 | 1 | 0 | ○ |
| n2.02 | 停止方法选择 | 选择停止指令或外部异常输入时的停止方法。 0: 指令停止减速停止 / 外部异常自由滑行至停止 1: 指令停止自由滑行至停止 / 外部异常自由滑行至停止 2: 指令停止减速停止 / 外部异常减速停止 3: 指令停止自由滑行至停止 / 外部异常减速停止 | 0~3 | 1 | 0 | × |
| n2.03 | 载波频率选择 | 设定变频器输出的载波频率。 ※一般情况下无需改变出厂设定。 ※希望减小电机噪音时将设定值调高。 ※为了降低电气噪音的影响, 设定值调低。 ※将载波频率的设定值调高的话, 变频器会发热。因此如设定值超出8kHz, 额定输出电流会下降。 | 2~15 | 1kHz | 8 | × |
| n2.04 | 反转禁止选择 | 选择输入反转指令时的动作。 0: 可反转(可正转) 1: 禁止反转(可正转) 2: 可反转(禁止正转) | 0~2 | 1 | 0 | × |
| n2.05 | 接通电源/切换运转指令后的运转选择 | 接通电源或切换运转指令后, 设定之前输入的运转指令有效 / 无效。 0: 接通电源后有效 / 切换运转指令后无效 1: 接通电源后无效 / 切换运转指令后无效 2: 接通电源后有效 / 切换运转指令后有效 3: 接通电源后无效 / 切换运转指令后有效 ※接通电源或切换运转指令后如果再次输入运转指令的话一定有效。 | 0~3 | 1 | 1 | × |
| n2.06 | 频率指令输入 (A1端子)丧失检出选择 | 设定频率指令输入的指令丧失时的动作。 频率指令输入在电流输入下, 当输入电流在n4.15以下(频率指令输入A1端子最小电流值)时检测出丧失 0: 减速至0Hz(照指令动作) 1: 检测出频率指令输入信号异常, 提示为“AErr”(自由滑行停止) 2: 频率指令输入信号异常, 但运转继续(按丧失前的指令动作) ※检测出频率指令输入信号异常提示为“AErr”时, 在消除原因(解除闪烁)后变更为请复位。 ※频率指令输入设定变更为0~20mA、或电压输入时, 丧失检测功能无效。 | 0~2 | 1 | 0 | × |

参数列表

| 参数No. | 名称 | 说明 | 设定范围 | 设定单位 | 出厂设定 | 运转中更改 |
|-------|----------------|---|-------|------|------|-------|
| n2.09 | 第二频率指令的选择 | <p>选择第二频率指令频率的输入方法。</p> <p>※第二频率指令的使用方法设定请在第二频率指令动作选择(n2.10)设定下进行。</p> <p>※使用多功能输入(n4.05~n4.08)的“22(第二频率指令)”可切换频率指令的输入。</p> <p>0: 操作器的增量/减量键输入有效</p> <p>1: 操作器的频率指令旋钮有效</p> <p>2: 频率指令输入A1端子(电压输入0~10V)有效</p> <p>3: 频率指令输入A1端子(电流输入4~20mA)有效</p> <p>4: RS485通信发出的频率指令有效</p> <p>※在多功能输入(n4.05~n4.08)中使用UP/DOWN指令(设定值10, 11)时, 请设定n2.09=0。操作器的增/减键输入仍然有效。但多功能输入UP/DOWN优先。</p> <p>※多功能输入(n4.05~n4.08)的多段速指令(设定值1, 2, 3)不受n2.09的设定影响一直有效。</p> <p>※频率指令输入电流/电压选择请使用SW 开关选择ACI/AVI。</p> | 0~4 | 1 | 2 | ○ |
| n2.10 | 第二频率指令的动作选择 | <p>选择第二频率指令的动作方法。</p> <p>0: 无效 实际频率指令=频率指令(n2.00)</p> <p>1: 有效 实际频率指令=频率指令(n2.00)+第二频率指令(n2.09)</p> <p>2: 有效 实际频率指令=频率指令(n2.00)-第二频率指令(n2.09)</p> | 00~02 | 1 | 0 | ○ |
| n2.13 | 操作器通信的频率指令记忆选择 | <p>选择是否记忆操作器和通信发出的频率指令值。</p> <p>0: 记忆操作器频率指令 / 记忆通信的频率指令</p> <p>1: 记忆操作器频率指令 / 不记忆通信的频率指令</p> <p>2: 不记忆操作器频率指令 / 记忆通信的频率指令</p> <p>※设定为不记忆时, 接通电源后频率指令将“0.00”起动。</p> | 0~2 | 1 | 0 | × |

参数列表

■ n3: 变频器输出功能设定

| 参数No. | 名称 | 说明 | 设定范围 | 设定单位 | 出厂设定 | 运转中更改 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------|--------------------------|--|------------|--------|------|-------|--------------|--|----|---|---------|--------------|---|-----|-----------------------|---|------|-------------------|---|------|--|---|--------|--|---|-------|----------------------|---|--------|---|---|--------|-----------------------------|---|------|----------|---|------|------------------------|----|----------|---------------------|----|--------------|-------------------------------|----|---------|-------------------------|----|-------|---|----|-----|---------|----|-----|---------|----|------|---|----|------|----------|----|---------|---|-------|--------|--|------------|--------|------|---|-------|-----------|--|-----|---|---|---|-------|----------------------|---|-------|----|-----|---|-------|----------|---|-----|---|---|---|-------|-----------|--|------------|--------|------|---|-------|-----------|--|------------|--------|------|---|
| n3.00 | 多功能输出1功能选择(输出端子MA/MB-MC) | 请选择多功能输出端子的功能。 | 0~21 | 1 | 8 | × | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | <table><tr><th>设定</th><th>功能名</th><th>说明</th></tr><tr><td>0</td><td>多功能输出无效</td><td>不使用多功能输出时设定。</td></tr><tr><td>1</td><td>运转中</td><td>ON: 运转中(运转输入中/变频器输出中)</td></tr><tr><td>2</td><td>频率一致</td><td>ON: 频率一致(与频率指令一致)</td></tr><tr><td>3</td><td>零速中1</td><td>ON: 零速中(最低输出频率未满足的状态) ※运转指令为OFF, 如不是输出状态, 将会OFF</td></tr><tr><td>4</td><td>过转矩检出中</td><td>ON: 符合以下的参数条件时输出 • 过转矩检出功能选择(n6.03) • 过转矩检出水平(n6.04) • 过转矩检出时间(n6.05)</td></tr><tr><td>5</td><td>基极封锁中</td><td>ON: 基极封锁中(基极封锁指令输入中)</td></tr><tr><td>6</td><td>低电压检出中</td><td>ON: 低电压检出中(检测出主回路低电压UV时) ※主回路直流电压200V AC型为 198V DC/400V AC型为396V DC时输出</td></tr><tr><td>7</td><td>运转指令输入</td><td>ON: 控制回路端子 OFF: 控制回路端子以外</td></tr><tr><td>8</td><td>异常输出</td><td>ON: 异常输出</td></tr><tr><td>9</td><td>频率检出</td><td>ON: 输出频率≥频率检出电平(n3.02)</td></tr><tr><td>12</td><td>减速中失速防止中</td><td>ON: 减速中失速防止中(n6.00)</td></tr><tr><td>13</td><td>加速中/运转中失速防止中</td><td>ON: 加速中/运转中失速防止中(n6.01/n6.02)</td></tr><tr><td>14</td><td>变频器加热预告</td><td>ON: 变频器加热预告(散热片温度85℃以上)</td></tr><tr><td>15</td><td>过电压预告</td><td>ON: 过电压预告(主回路电压超过预告电压) ※预告电压: 主回路直流电压为: 200VAC型为374V/400VAC型为747V</td></tr><tr><td>17</td><td>正转中</td><td>ON: 反转中</td></tr><tr><td>18</td><td>反转中</td><td>ON: 反转中</td></tr><tr><td>19</td><td>零速中2</td><td>ON: 零速中(低于最低输出频率的状态) ※运行指令停止时输出仍然继续。</td></tr><tr><td>20</td><td>警告输出</td><td>ON: 警告输出</td></tr><tr><td>21</td><td>外部制动器输出</td><td>ON: 外部制动器开放 ※控制时间在外部制动器开放频率(n3.11)和外部制动器动作频率(n3.12)中设定</td></tr><tr><td>n3.02</td><td>频率检出电平</td><td>设定希望检出的频率。 ※请在多功能输出(n3.00)中设定“9(频率检出)”。</td><td>0.00~600.0</td><td>0.01Hz</td><td>0.00</td><td>×</td></tr><tr><td>n3.03</td><td>多功能模拟输出选择</td><td>选择多功能模拟输出中输出的监控项目。 0: 输出频率(0~10V/0~最高频率n1.00) 1: 输出电流(0~10V/0~变频器额定输出电流的250%) ※多功能模拟输出的输出电压请到多功能模拟输出增益(n3.04)中调整。</td><td>0,1</td><td>1</td><td>0</td><td>○</td></tr><tr><td>n3.04</td><td>多功能模拟输出增益(输出端子AM-AC)</td><td>为了在多功能模拟输出中调整输出电压, 请设定输出电压的增益。 设定为100%时, 请按下列公式输出。 n3.03=0: 输出频率(0~10V/0~最高频率n1.00) n3.03=1: 输出电流(0~10V/0~变频器额定输出电流的250%) ※设定为50%的话, 相同状态下输出5V。</td><td>1~200</td><td>1%</td><td>100</td><td>○</td></tr><tr><td>n3.08</td><td>冷却风扇动作选择</td><td>请设定冷却风扇的动作。 0: 电源输入时保持风扇旋转 1: 变频器运转时风扇旋转(停止后1分钟内风扇仍旋转) 2: 变频器运转时风扇旋转(停止时风扇停止旋转) 3: 根据IGBT温度条件风扇旋转(60℃以上运行, 40℃以下停止)</td><td>0~3</td><td>1</td><td>1</td><td>×</td></tr><tr><td>n3.11</td><td>外部制动器开放频率</td><td>此功能可设定外部制动器的动作时机的控制信号。以变频器的输出频率设定外部制动器开放/外部制动器动作的时机。</td><td>0.00~20.00</td><td>0.01Hz</td><td>0.00</td><td>×</td></tr><tr><td>n3.12</td><td>外部制动器动作频率</td><td>※请在多功能输出(n3.00)中设定“21(外部制动器输出)”连接外部制动器。 ※垂直轴中为了防止掉下, 设定时请把制动器的动作状态和变频器的输出状态数Hz设为重叠。</td><td>0.00~20.00</td><td>0.01Hz</td><td>0.00</td><td>×</td></tr></table> | | | | | 设定 | 功能名 | 说明 | 0 | 多功能输出无效 | 不使用多功能输出时设定。 | 1 | 运转中 | ON: 运转中(运转输入中/变频器输出中) | 2 | 频率一致 | ON: 频率一致(与频率指令一致) | 3 | 零速中1 | ON: 零速中(最低输出频率未满足的状态) ※运转指令为OFF, 如不是输出状态, 将会OFF | 4 | 过转矩检出中 | ON: 符合以下的参数条件时输出 • 过转矩检出功能选择(n6.03) • 过转矩检出水平(n6.04) • 过转矩检出时间(n6.05) | 5 | 基极封锁中 | ON: 基极封锁中(基极封锁指令输入中) | 6 | 低电压检出中 | ON: 低电压检出中(检测出主回路低电压UV时) ※主回路直流电压200V AC型为 198V DC/400V AC型为396V DC时输出 | 7 | 运转指令输入 | ON: 控制回路端子 OFF: 控制回路端子以外 | 8 | 异常输出 | ON: 异常输出 | 9 | 频率检出 | ON: 输出频率≥频率检出电平(n3.02) | 12 | 减速中失速防止中 | ON: 减速中失速防止中(n6.00) | 13 | 加速中/运转中失速防止中 | ON: 加速中/运转中失速防止中(n6.01/n6.02) | 14 | 变频器加热预告 | ON: 变频器加热预告(散热片温度85℃以上) | 15 | 过电压预告 | ON: 过电压预告(主回路电压超过预告电压) ※预告电压: 主回路直流电压为: 200VAC型为374V/400VAC型为747V | 17 | 正转中 | ON: 反转中 | 18 | 反转中 | ON: 反转中 | 19 | 零速中2 | ON: 零速中(低于最低输出频率的状态) ※运行指令停止时输出仍然继续。 | 20 | 警告输出 | ON: 警告输出 | 21 | 外部制动器输出 | ON: 外部制动器开放 ※控制时间在外部制动器开放频率(n3.11)和外部制动器动作频率(n3.12)中设定 | n3.02 | 频率检出电平 | 设定希望检出的频率。 ※请在多功能输出(n3.00)中设定“9(频率检出)”。 | 0.00~600.0 | 0.01Hz | 0.00 | × | n3.03 | 多功能模拟输出选择 | 选择多功能模拟输出中输出的监控项目。 0: 输出频率(0~10V/0~最高频率n1.00) 1: 输出电流(0~10V/0~变频器额定输出电流的250%) ※多功能模拟输出的输出电压请到多功能模拟输出增益(n3.04)中调整。 | 0,1 | 1 | 0 | ○ | n3.04 | 多功能模拟输出增益(输出端子AM-AC) | 为了在多功能模拟输出中调整输出电压, 请设定输出电压的增益。 设定为100%时, 请按下列公式输出。 n3.03=0: 输出频率(0~10V/0~最高频率n1.00) n3.03=1: 输出电流(0~10V/0~变频器额定输出电流的250%) ※设定为50%的话, 相同状态下输出5V。 | 1~200 | 1% | 100 | ○ | n3.08 | 冷却风扇动作选择 | 请设定冷却风扇的动作。 0: 电源输入时保持风扇旋转 1: 变频器运转时风扇旋转(停止后1分钟内风扇仍旋转) 2: 变频器运转时风扇旋转(停止时风扇停止旋转) 3: 根据IGBT温度条件风扇旋转(60℃以上运行, 40℃以下停止) | 0~3 | 1 | 1 | × | n3.11 | 外部制动器开放频率 | 此功能可设定外部制动器的动作时机的控制信号。以变频器的输出频率设定外部制动器开放/外部制动器动作的时机。 | 0.00~20.00 | 0.01Hz | 0.00 | × | n3.12 | 外部制动器动作频率 | ※请在多功能输出(n3.00)中设定“21(外部制动器输出)”连接外部制动器。 ※垂直轴中为了防止掉下, 设定时请把制动器的动作状态和变频器的输出状态数Hz设为重叠。 | 0.00~20.00 | 0.01Hz | 0.00 | × |
| | | 设定 | | | | | 功能名 | 说明 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 0 | | | | | 多功能输出无效 | 不使用多功能输出时设定。 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 1 | | | | | 运转中 | ON: 运转中(运转输入中/变频器输出中) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2 | | | | | 频率一致 | ON: 频率一致(与频率指令一致) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3 | | | | | 零速中1 | ON: 零速中(最低输出频率未满足的状态) ※运转指令为OFF, 如不是输出状态, 将会OFF | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 4 | | | | | 过转矩检出中 | ON: 符合以下的参数条件时输出 • 过转矩检出功能选择(n6.03) • 过转矩检出水平(n6.04) • 过转矩检出时间(n6.05) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 5 | | | | | 基极封锁中 | ON: 基极封锁中(基极封锁指令输入中) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 6 | | | | | 低电压检出中 | ON: 低电压检出中(检测出主回路低电压UV时) ※主回路直流电压200V AC型为 198V DC/400V AC型为396V DC时输出 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 7 | | | | | 运转指令输入 | ON: 控制回路端子 OFF: 控制回路端子以外 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 8 | | | | | 异常输出 | ON: 异常输出 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 9 | | | | | 频率检出 | ON: 输出频率≥频率检出电平(n3.02) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 12 | | | | | 减速中失速防止中 | ON: 减速中失速防止中(n6.00) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 13 | | | | | 加速中/运转中失速防止中 | ON: 加速中/运转中失速防止中(n6.01/n6.02) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 14 | | | | | 变频器加热预告 | ON: 变频器加热预告(散热片温度85℃以上) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 15 | | | | | 过电压预告 | ON: 过电压预告(主回路电压超过预告电压) ※预告电压: 主回路直流电压为: 200VAC型为374V/400VAC型为747V | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 17 | | | | | 正转中 | ON: 反转中 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 18 | | | | | 反转中 | ON: 反转中 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 19 | | | | | 零速中2 | ON: 零速中(低于最低输出频率的状态) ※运行指令停止时输出仍然继续。 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 20 | | | | | 警告输出 | ON: 警告输出 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 21 | 外部制动器输出 | ON: 外部制动器开放 ※控制时间在外部制动器开放频率(n3.11)和外部制动器动作频率(n3.12)中设定 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| n3.02 | 频率检出电平 | 设定希望检出的频率。 ※请在多功能输出(n3.00)中设定“9(频率检出)”。 | 0.00~600.0 | 0.01Hz | 0.00 | × | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| n3.03 | 多功能模拟输出选择 | 选择多功能模拟输出中输出的监控项目。 0: 输出频率(0~10V/0~最高频率n1.00) 1: 输出电流(0~10V/0~变频器额定输出电流的250%) ※多功能模拟输出的输出电压请到多功能模拟输出增益(n3.04)中调整。 | 0,1 | 1 | 0 | ○ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| n3.04 | 多功能模拟输出增益(输出端子AM-AC) | 为了在多功能模拟输出中调整输出电压, 请设定输出电压的增益。 设定为100%时, 请按下列公式输出。 n3.03=0: 输出频率(0~10V/0~最高频率n1.00) n3.03=1: 输出电流(0~10V/0~变频器额定输出电流的250%) ※设定为50%的话, 相同状态下输出5V。 | 1~200 | 1% | 100 | ○ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| n3.08 | 冷却风扇动作选择 | 请设定冷却风扇的动作。 0: 电源输入时保持风扇旋转 1: 变频器运转时风扇旋转(停止后1分钟内风扇仍旋转) 2: 变频器运转时风扇旋转(停止时风扇停止旋转) 3: 根据IGBT温度条件风扇旋转(60℃以上运行, 40℃以下停止) | 0~3 | 1 | 1 | × | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| n3.11 | 外部制动器开放频率 | 此功能可设定外部制动器的动作时机的控制信号。以变频器的输出频率设定外部制动器开放/外部制动器动作的时机。 | 0.00~20.00 | 0.01Hz | 0.00 | × | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| n3.12 | 外部制动器动作频率 | ※请在多功能输出(n3.00)中设定“21(外部制动器输出)”连接外部制动器。 ※垂直轴中为了防止掉下, 设定时请把制动器的动作状态和变频器的输出状态数Hz设为重叠。 | 0.00~20.00 | 0.01Hz | 0.00 | × | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

■ n4：变频器输入功能设定

| 参数No. | 名称 | 说明 | 设定范围 | 设定单位 | 出厂设定 | 运转中更改 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------|-------------------------|--|------|------|------|-------|---------|--------------|----|--------|-------------------------------|----|--------|-----------------------------|----|--------|----|---|------|---------------------|---|---------|--------------------------|---|----------|----------|----|-----------------|---|----|-------------------|---|----|----|----|----|----|------|----|-----|-----|----|--------|-----|----|-----|----|----|------|------------------|----|---------|---------------------------------------|----|--------|------------|----|----------------|--|----|-------------|---|----|------------|--|----|--------|---------------------|------|---|----|---|
| n4.04 | 多功能输入1/2功能选择(输入端子S1/S2) | <p>控制回路端子的运转指令从多功能输入1/2中输入。请配合应用设定输入方法。</p> <p>0: 2线式(正转/停止(S1端子)、反转/停止(S2端子))</p> <p>1: 2线式(运转/停止(S1端子)、正转/反转(S2端子))</p> <p>2: 3线式</p> <p>※在n4.04=3, 设定3线时序的话, 多功能输入3 (n4.05) 的设定无效, 仍以3线式分配。</p>  | 0~2 | 1 | 0 | × | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| n4.05 | 多功能输入3功能选择(输入端子S3) | <p>请选择多功能输入端子3~6的功能。</p> <table><tr><th>设定</th><th>功能名</th><th>说明</th></tr><tr><td>0</td><td>多功能输入无效</td><td>不使用多功能输入时设定。</td></tr><tr><td>1</td><td>多段速指令1</td><td>用来切换频率指令1~15(n5.00~n5.06)的信号。</td></tr><tr><td>2</td><td>多段速指令2</td><td>※详情参照频率指令1~15(n5.00~n5.06)。</td></tr><tr><td>3</td><td>多段速指令3</td><td></td></tr><tr><td>5</td><td>异常复位</td><td>ON: 异常复位(运转指令输入中无效)</td></tr><tr><td>7</td><td>加减速时间切换</td><td>ON: 加减速时间2(n1.11, n1.12)</td></tr><tr><td>9</td><td>外部基极封锁指令</td><td>ON: 阻断输出</td></tr><tr><td>10</td><td>UP指令(UP/DOWN指令)</td><td>增加/减少频率指令的UP/DOWN指令功能。请务必设定UP指令和DOWN指令两方。</td></tr><tr><td>11</td><td>DOWN指令(UP/DOWN指令)</td><td><table><tr><th>状态</th><th>加速</th><th>减速</th><th>保持</th><th>保持</th></tr><tr><td>UP指令</td><td>ON</td><td>OFF</td><td>OFF</td><td>ON</td></tr><tr><td>DOWN指令</td><td>OFF</td><td>ON</td><td>OFF</td><td>ON</td></tr></table><p>※可同时使用UP/DOWN指令和多段速指令1~3。</p><p>※需要在电源OFF时也记忆UP/DOWN指令时的频率的话, 请在(n2.13)设定“0”或“1”。</p></td></tr><tr><td>14</td><td>外部异常</td><td>ON: 外部异常(EF异常检出)</td></tr><tr><td>16</td><td>自由滑行至停止</td><td>ON: 阻断输出自由滑行至停止 ※输入解除后, 从0Hz开始重新开始</td></tr><tr><td>17</td><td>禁止变更参数</td><td>ON: 禁止变更参数</td></tr><tr><td>18</td><td>切换运转指令(控制回路端子)</td><td>ON: 控制回路端子发出的运转指令有效 OFF: 运转指令的选择(n2.01)设定有效</td></tr><tr><td>19</td><td>切换运转指令(操作器)</td><td>ON: 操作器RUN / STOP键有效 OFF: 运转指令的选择(n2.01)设定有效</td></tr><tr><td>20</td><td>切换运转指令(通信)</td><td>ON: 通信发出的运转指令有效 OFF: 运转指令的选择(n2.01)设定有效</td></tr><tr><td>22</td><td>第二频率指令</td><td>ON: 第二频率指令(n2.09)有效</td></tr></table> | 设定 | 功能名 | 说明 | 0 | 多功能输入无效 | 不使用多功能输入时设定。 | 1 | 多段速指令1 | 用来切换频率指令1~15(n5.00~n5.06)的信号。 | 2 | 多段速指令2 | ※详情参照频率指令1~15(n5.00~n5.06)。 | 3 | 多段速指令3 | | 5 | 异常复位 | ON: 异常复位(运转指令输入中无效) | 7 | 加减速时间切换 | ON: 加减速时间2(n1.11, n1.12) | 9 | 外部基极封锁指令 | ON: 阻断输出 | 10 | UP指令(UP/DOWN指令) | 增加/减少频率指令的UP/DOWN指令功能。请务必设定UP指令和DOWN指令两方。 | 11 | DOWN指令(UP/DOWN指令) | <table><tr><th>状态</th><th>加速</th><th>减速</th><th>保持</th><th>保持</th></tr><tr><td>UP指令</td><td>ON</td><td>OFF</td><td>OFF</td><td>ON</td></tr><tr><td>DOWN指令</td><td>OFF</td><td>ON</td><td>OFF</td><td>ON</td></tr></table> <p>※可同时使用UP/DOWN指令和多段速指令1~3。</p> <p>※需要在电源OFF时也记忆UP/DOWN指令时的频率的话, 请在(n2.13)设定“0”或“1”。</p> | 状态 | 加速 | 减速 | 保持 | 保持 | UP指令 | ON | OFF | OFF | ON | DOWN指令 | OFF | ON | OFF | ON | 14 | 外部异常 | ON: 外部异常(EF异常检出) | 16 | 自由滑行至停止 | ON: 阻断输出自由滑行至停止 ※输入解除后, 从0Hz开始重新开始 | 17 | 禁止变更参数 | ON: 禁止变更参数 | 18 | 切换运转指令(控制回路端子) | ON: 控制回路端子发出的运转指令有效 OFF: 运转指令的选择(n2.01)设定有效 | 19 | 切换运转指令(操作器) | ON: 操作器RUN / STOP键有效 OFF: 运转指令的选择(n2.01)设定有效 | 20 | 切换运转指令(通信) | ON: 通信发出的运转指令有效 OFF: 运转指令的选择(n2.01)设定有效 | 22 | 第二频率指令 | ON: 第二频率指令(n2.09)有效 | 0~22 | 1 | 14 | × |
| 设定 | 功能名 | 说明 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0 | 多功能输入无效 | 不使用多功能输入时设定。 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 多段速指令1 | 用来切换频率指令1~15(n5.00~n5.06)的信号。 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | 多段速指令2 | ※详情参照频率指令1~15(n5.00~n5.06)。 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | 多段速指令3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | 异常复位 | ON: 异常复位(运转指令输入中无效) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | 加减速时间切换 | ON: 加减速时间2(n1.11, n1.12) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | 外部基极封锁指令 | ON: 阻断输出 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | UP指令(UP/DOWN指令) | 增加/减少频率指令的UP/DOWN指令功能。请务必设定UP指令和DOWN指令两方。 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11 | DOWN指令(UP/DOWN指令) | <table><tr><th>状态</th><th>加速</th><th>减速</th><th>保持</th><th>保持</th></tr><tr><td>UP指令</td><td>ON</td><td>OFF</td><td>OFF</td><td>ON</td></tr><tr><td>DOWN指令</td><td>OFF</td><td>ON</td><td>OFF</td><td>ON</td></tr></table> <p>※可同时使用UP/DOWN指令和多段速指令1~3。</p> <p>※需要在电源OFF时也记忆UP/DOWN指令时的频率的话, 请在(n2.13)设定“0”或“1”。</p> | 状态 | 加速 | 减速 | 保持 | 保持 | UP指令 | ON | OFF | OFF | ON | DOWN指令 | OFF | ON | OFF | ON | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 状态 | 加速 | 减速 | 保持 | 保持 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| UP指令 | ON | OFF | OFF | ON | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DOWN指令 | OFF | ON | OFF | ON | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 14 | 外部异常 | ON: 外部异常(EF异常检出) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 16 | 自由滑行至停止 | ON: 阻断输出自由滑行至停止 ※输入解除后, 从0Hz开始重新开始 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 17 | 禁止变更参数 | ON: 禁止变更参数 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 18 | 切换运转指令(控制回路端子) | ON: 控制回路端子发出的运转指令有效 OFF: 运转指令的选择(n2.01)设定有效 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 19 | 切换运转指令(操作器) | ON: 操作器RUN / STOP键有效 OFF: 运转指令的选择(n2.01)设定有效 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 20 | 切换运转指令(通信) | ON: 通信发出的运转指令有效 OFF: 运转指令的选择(n2.01)设定有效 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 22 | 第二频率指令 | ON: 第二频率指令(n2.09)有效 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| n4.06 | 多功能输入4功能选择(输入端子S4) | | | | 5 | × | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| n4.07 | 多功能输入5功能选择(输入端子S5) | | | | 1 | × | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| n4.08 | 多功能输入6功能选择(输入端子S6) | | | | 2 | × | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| n4.09 | 多功能输入的a接点/b接点输入选择 | <p>请从a接点(N.O.)或b接点(N.C.)中选择多功能输入的输入方法。</p> <p>将b接点(N.C.)作为1后, 设定2进制变为10进制后的值。</p> <p>设定值“11”=000000001011 →多功能输入1、2、4为b接点(N.C.)输入的设定</p>  | 0~63 | 1 | 0 | × | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

参数列表

| 参数No. | 名称 | 说明 | 设定范围 | 设定单位 | 出厂设定 | 运转中更改 |
|-------|-------------------|--|-----------|--------|-------|-------|
| n4.10 | 输入端子响应时间 | 可设定输入端子的输入响应时间。 通常无需变更设定。在需要防止继电器震颤或电气噪声时将设定值调高。 以每1个单位设定为2ms来进行设定。 | 1~20 | 1(2ms) | 1 | × |
| n4.11 | 频率指令输入A1端子最小电压输入 | 可变更频率指令输入(A1端子)的模拟输入特性。 请按下图设定希望变更的特性。 ※指令值以最高频率指令(n1.00)作为100%，以0.1%为单位设定。 ※A1的电流/电压输入选择使用开关SW，选择ACI/AVI。 ACI：电流输入(4~20mA) AVI：电压输入(0~10V) | 0.0~10.0 | 0.1V | 0.0 | × |
| n4.12 | 频率指令输入A1端子最小电压指令值 | | 0.0~100.0 | 0.1% | 0.0 | × |
| n4.13 | 频率指令输入A1端子最大电压输入 | | 0.0~10.0 | 0.1V | 10.0 | × |
| n4.14 | 频率指令输入A1端子最大电压指令值 | | 0.0~100.0 | 0.1% | 100.0 | × |
| n4.15 | 频率指令输入A1端子最小电流输入 | | 0.0~20.0 | 0.1mA | 4.0 | × |
| n4.16 | 频率指令输入A1端子最小电流指令值 | | 0.0~100.0 | 0.1% | 0.0 | × |
| n4.17 | 频率指令输入A1端子最大电流输入 | | 0.0~20.0 | 0.1mA | 20.0 | × |
| n4.18 | 频率指令输入A1端子最大电流指令值 | | 0.0~100.0 | 0.1% | 100.0 | × |
| n4.27 | 输入端子的内部输入选择 | 将输入端子分配至内部输入，便可将内部输入设定在固定状态。无需配线，在接通电源时以固定状态起动变频器时使用。 | 0~63 | 1 | 00 | × |
| n4.28 | 内部输入的状态选择 | ※在输入端子的内部输入选择(n4.27)中设定分配至内部输入的输入。内部输入设定为1并以2进制转换为10进制后的值的设定。 ※在内部输入的状态选择(n4.28)中设定内部输入的固定状态。输入固定状态(a接点ON)为1并以2进制转换为10进制后的值来设定。 设定值“11”=000000001011 n4.27→多功能输入1、2、4为内部输入设定 n4.28→多功能输入1、2、4为输入固定状态(a接点ON) <div> <div> 11111111 </div> <div> 多功能输入1(S1) 多功能输入2(S2) 多功能输入3(S3) 多功能输入4(S4) 多功能输入5(S5) 多功能输入6(S6) </div> </div> | 0~63 | 1 | 00 | ○ |

■ n5: 多段速频率指令设定

| 参数No. | 名称 | 说明 | | | | | 设定范围 | 设定单位 | 出厂设定 | 运转中更改 |
|-------|-------|--|---------------------|---------------------|---------------------|---------------------|-------------------------------------|--------|-------|-------|
| n5.00 | 频率指令1 | 设定内部频率指令。 ※内部频率指令在多功能输入(n4.05～n4.08)中设定多段速指令(设定值01, 02, 03)后选择。 | | | | | 0.00～600.0 | 0.01Hz | 0.0 | ○ |
| n5.01 | 频率指令2 | | | | | | | | 0.0 | ○ |
| n5.02 | 频率指令3 | | | | | | | | 0.0 | ○ |
| n5.03 | 频率指令4 | 频率指令 | 多段速指令1 (设定值: 01) | 多段速指令2 (设定值: 02) | 多段速指令3 (设定值: 03) | 多段速指令4 (设定值: 04) | | | 0.0 | ○ |
| n5.04 | 频率指令5 | 频率指令的选择(n2.00) | | | | | | | 0.0 | ○ |
| n5.05 | 频率指令6 | | | | | | | | 0.0 | ○ |
| n5.06 | 频率指令7 | 频率指令1 | | | | | | | 0.0 | ○ |
| | | | | | | | | | 频率指令2 | |
| | | 频率指令3 | | | | | | | | |
| | | | | | | | | | 频率指令4 | |
| | | 频率指令5 | | | | | | | | |
| | | | | | | | 频率指令6 | | | |
| | | 频率指令7 | | | | | | | | |
| | | | | | | | ※○表示输入状态(a接点时ON)、×表示未输入状态(a接点为OFF)。 | | | |

■ n6: 保护功能设定

| 参数No. | 名称 | 说明 | 设定范围 | 设定单位 | 出厂设定 | 运转中更改 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------|--------------------|---|--|------|------------------|-------|---|-------|----|-----------------|---|---------------|----|------------------|---|---------|----|-----------------|---|------------|----|---------------|---|-------------|----|---------------|---|------------|----|---------------|---|------------|----|-----------------|---|------------|----|-----------------|---|----------|----|-----------------|---|--------------|----|------------------|----|--------------|--|--|----|---------------|--|--|----|---------|--|--|----|--------------------|--|--|----|-------------|--|--|----|--------------------|--|--|----|-------------------|--|--|----|-------------------|--|--|----|----------------|--|--|---|---|---|---|
| n6.00 | 减速中失速防止动作电平 | 减速时为了防止发生过电压(OV)，设定自动变更减速时间功能的动作电平。以主回路直流电源的电压值设定。通常无需变更设定值。 ※即使使用减速中失速防止功能，仍检出过电压(OV)时，请将设定值调低。 设定值设得过于低的话，会变成无法减速，停止时间变得非常长，这点请注意。 | 0.0, 330.0~410.0 (0.0, 660.0~820.0) ※2 | 0.1V | 390.0 (780.0) ※2 | × | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| n6.01 | 加速中失速防止动作电平 | 加速时为了不进入失速状态，设定自动停止加速功能的动作电平。将变频器额定输出电流作为100%，以%为单位设定。 ※设定“0.0”时，运转中失速防止功能无效。 | 0, 20~250 | 1% | 170 | × | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| n6.02 | 运转中失速防止动作电平 | 运转时为了不进入失速状态，设定自动停止加速功能的动作电平。将变频器额定输出电流作为100%，以%为单位设定。 ※设定为“0.0”时，运转中失速防止功能无效。 | 0, 20~250 | 1% | 170 | × | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| n6.03 | 过转矩检出功能选择 | 选择过转矩检出的有效 / 无效以及检出后的处理。 0: 过转矩检出无效 1: 仅在速度一致时检出 / 检出后仍继续运转(警告检出) 2: 仅在速度一致时检出 / 检出时阻断输出(异常检出) 3: 运转中时常检出 / 检出后仍继续运转 4: 运转中时常检出 / 检出时阻断输出(异常检出) ※超出过转矩检出电平(n6.04)的状态超出过转矩检出时间(n6.05)并持续一段时间内就会检出。 ※检出过转矩后，如果异常检测，显示“OL2”变频器停止；如果警告检测，显示“AOL2”，变频器继续进行。 ※在多功能输出(n3.00)中设定“04(过转矩检出中)”的话，便可向外部输出。 | 0~4 | 1 | 0 | × | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| n6.04 | 过转矩检出电平 | 设定过转矩检出电平。将变频器的额定输出电流作为100%，以%为单位设定。 | 10~200 | 1% | 150 | ○ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| n6.05 | 过转矩检出时间 | 设定过转矩检出的检出时间。 | 0.1~60.0 | 0.1s | 0.1 | × | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| n6.06 | 电机保护功能选择 | 设定合适连接电机的过负载保护特性(电子热敏特性)。 0: 对应通用感应电机的保护动作 1: 对应变频器专用电机的保护动作 2: 电机过负载保护功能无效 ※为了使电子热敏功能正确检出电机过负载(OL1)，请务必设定电机额定电流(n7.00)。 ※当在1台变频器上连接数台电机时，请设定“2”。 | 0~2 | 1 | 0 | × | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| n6.07 | 电机保护动作时间 | 电机过负载检出(OL1)的电子热敏保护时参数请以秒为单位。出厂设定为1分钟150%的耐力。 ※通常无需变更设定。 | 30~600 | 1s | 60 | × | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| n6.08 | 异常历史记录1 (1次前) | 最多可记忆变频器发生的2个异常历史记录。请在分析异常发生原因时使用。异常历史记录以以下编号记忆。 | — | 1 | 0 | × | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| n6.09 | 异常历史记录2 (2次前) | <table><tr><th>No.</th><th>功能名</th><th>No.</th><th>功能名</th></tr><tr><td>0</td><td>(无异常)</td><td>21</td><td>过电压检出回路异常“HPF2”</td></tr><tr><td>1</td><td>过电流(硬性检出)“oc”</td><td>22</td><td>接地短路检出回路异常“HPF3”</td></tr><tr><td>2</td><td>过电压“ov”</td><td>23</td><td>过电流检出回路异常“HPF4”</td></tr><tr><td>3</td><td>散热片过热“oH1”</td><td>24</td><td>U相回路异常“cF3.0”</td></tr><tr><td>4</td><td>电源基板过热“oH2”</td><td>25</td><td>V相回路异常“cF3.1”</td></tr><tr><td>5</td><td>变频器过负载“oL”</td><td>26</td><td>W相回路异常“cF3.2”</td></tr><tr><td>6</td><td>电机过负载“oL1”</td><td>27</td><td>电压控制回路异常“cF3.3”</td></tr><tr><td>7</td><td>过转矩检出“oL2”</td><td>28</td><td>温度检出器1异常“cF3.4”</td></tr><tr><td>8</td><td>外部异常“EF”</td><td>29</td><td>温度检出器2异常“cF3.5”</td></tr><tr><td>9</td><td>加速中电流超过“ocA”</td><td>32</td><td>频率指令输入信号异常“AErr”</td></tr><tr><td>10</td><td>减速中电流超过“ocd”</td><td></td><td></td></tr><tr><td>11</td><td>定常状态电流超过“ocn”</td><td></td><td></td></tr><tr><td>12</td><td>接地“GFF”</td><td></td><td></td></tr><tr><td>13</td><td>主回路低电压“Lv” ※不纪录</td><td></td><td></td></tr><tr><td>14</td><td>输入电源欠相“PHL”</td><td></td><td></td></tr><tr><td>15</td><td>外部基板封锁“bb” ※不纪录</td><td></td><td></td></tr><tr><td>18</td><td>EEPROM写入异常“cF1.0”</td><td></td><td></td></tr><tr><td>19</td><td>EEPROM读取异常“cF2.0”</td><td></td><td></td></tr><tr><td>20</td><td>电源限制回路异常“HPF1”</td><td></td><td></td></tr></table> ※13: 主回路低电压“LV”和15: 外部基板封锁“bb”不写入异常历史记录中。 | No. | 功能名 | No. | 功能名 | 0 | (无异常) | 21 | 过电压检出回路异常“HPF2” | 1 | 过电流(硬性检出)“oc” | 22 | 接地短路检出回路异常“HPF3” | 2 | 过电压“ov” | 23 | 过电流检出回路异常“HPF4” | 3 | 散热片过热“oH1” | 24 | U相回路异常“cF3.0” | 4 | 电源基板过热“oH2” | 25 | V相回路异常“cF3.1” | 5 | 变频器过负载“oL” | 26 | W相回路异常“cF3.2” | 6 | 电机过负载“oL1” | 27 | 电压控制回路异常“cF3.3” | 7 | 过转矩检出“oL2” | 28 | 温度检出器1异常“cF3.4” | 8 | 外部异常“EF” | 29 | 温度检出器2异常“cF3.5” | 9 | 加速中电流超过“ocA” | 32 | 频率指令输入信号异常“AErr” | 10 | 减速中电流超过“ocd” | | | 11 | 定常状态电流超过“ocn” | | | 12 | 接地“GFF” | | | 13 | 主回路低电压“Lv” ※不纪录 | | | 14 | 输入电源欠相“PHL” | | | 15 | 外部基板封锁“bb” ※不纪录 | | | 18 | EEPROM写入异常“cF1.0” | | | 19 | EEPROM读取异常“cF2.0” | | | 20 | 电源限制回路异常“HPF1” | | | — | 1 | 0 | — |
| No. | 功能名 | No. | 功能名 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0 | (无异常) | 21 | 过电压检出回路异常“HPF2” | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 过电流(硬性检出)“oc” | 22 | 接地短路检出回路异常“HPF3” | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | 过电压“ov” | 23 | 过电流检出回路异常“HPF4” | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | 散热片过热“oH1” | 24 | U相回路异常“cF3.0” | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | 电源基板过热“oH2” | 25 | V相回路异常“cF3.1” | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | 变频器过负载“oL” | 26 | W相回路异常“cF3.2” | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | 电机过负载“oL1” | 27 | 电压控制回路异常“cF3.3” | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | 过转矩检出“oL2” | 28 | 温度检出器1异常“cF3.4” | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | 外部异常“EF” | 29 | 温度检出器2异常“cF3.5” | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | 加速中电流超过“ocA” | 32 | 频率指令输入信号异常“AErr” | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | 减速中电流超过“ocd” | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11 | 定常状态电流超过“ocn” | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | 接地“GFF” | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 13 | 主回路低电压“Lv” ※不纪录 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 14 | 输入电源欠相“PHL” | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15 | 外部基板封锁“bb” ※不纪录 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 18 | EEPROM写入异常“cF1.0” | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 19 | EEPROM读取异常“cF2.0” | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 20 | 电源限制回路异常“HPF1” | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

※2. ()中显示的值为400VAC型变频器设定范围和出厂设定。

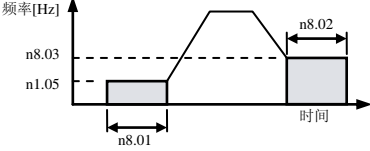
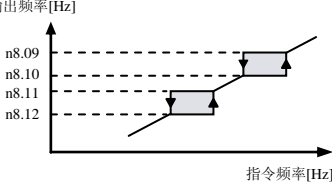
参数列表

■ n7：电机参数设定

| 参数No. | 名称 | 说明 | 设定范围 | 设定单位 | 出厂设定 | 运转中更改 |
|-------|---------|---|-----------|------|------|-------|
| n7.00 | 电机额定电流 | 电机额定电流以A单位进行设定。 电机额定电流在电机过载检出(OL1)的标准电流或矢量控制演算的参数等时使用，请务必设定。 | ※4 | 0.1A | ※5 | ○ |
| n7.01 | 电机无负载电流 | 电机无负载电流以A单位进行设定。 | ※6 | 0.1A | ※7 | ○ |
| n7.02 | 转矩补偿增益 | 请设定转矩补偿功能的增益。 ※通常无需变更出厂设定。当转矩不足时将设定值调高。 ※当在1台的变频器上连接数台电机时，电流会增加过量，此时请设定“0.0”无效。 | 0.0～10.0 | 0.1 | 1.0 | ○ |
| n7.03 | 滑差补偿增益 | 请设定滑差补偿的增益。滑差补偿功能需设定电机额定电流(n7.00)、电机无负载电流(n7.01)。 ※设定“0.0”时此功能无效。 | 0.00～10.0 | 0.01 | 0.00 | ○ |

※4. 设定范围根据变频器的适用容量不同而有所不同，在变频器额定输出电流的约30～120%的范围内。
※5. 出厂设定根据变频器的适用容量不同而有所不同，为变频器额定输出电流的约75%的设定。
※6. 设定范围根据变频器的适用容量不同而有所不同，在变频器额定输出电流的约0～99%的范围内。
※7. 出厂设定根据变频器的适用容量不同而有所不同，为变频器额定输出电流的约40%的设定。

■ n8：附加功能的设定

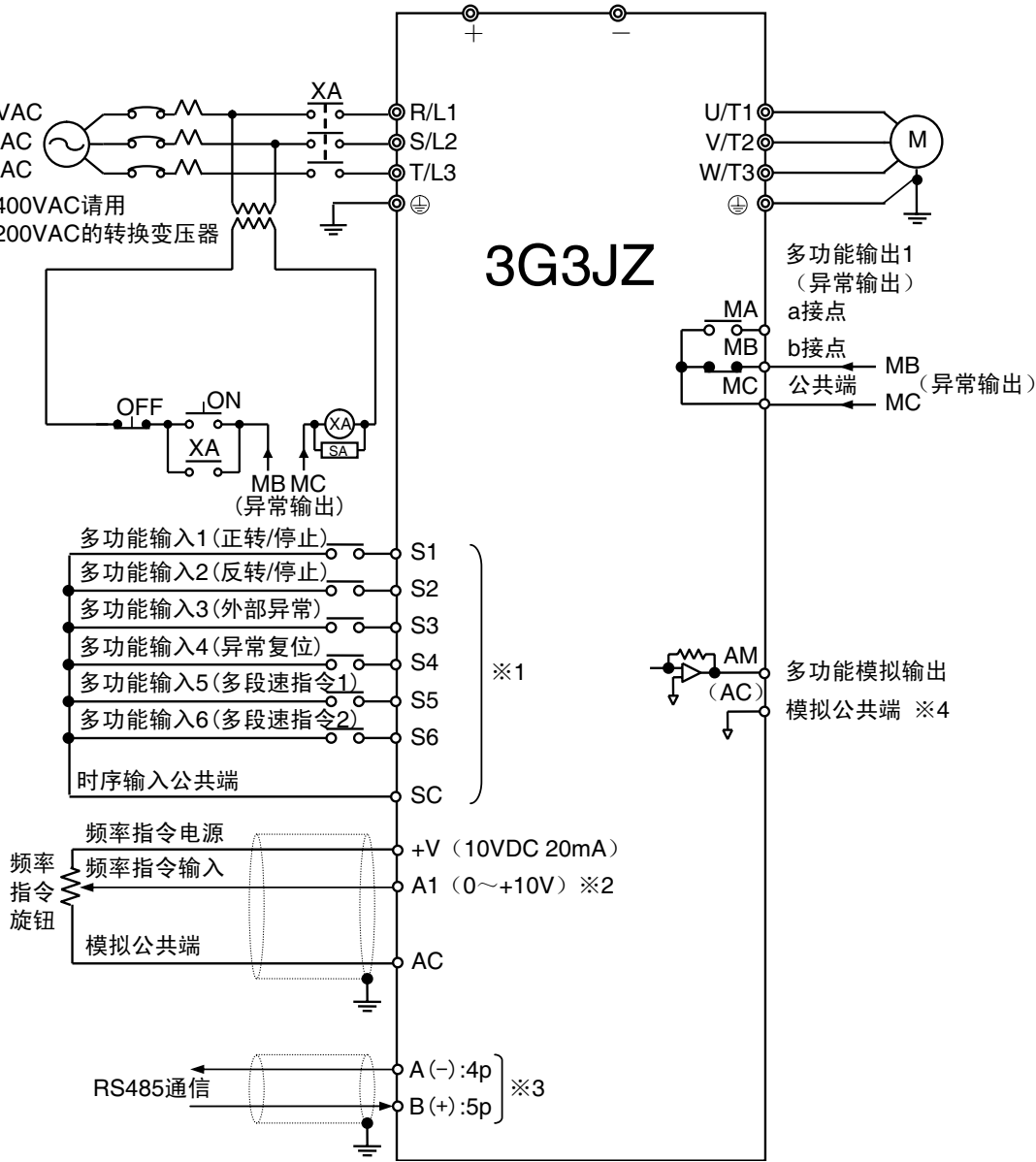
| 参数No. | 名称 | 说明 | 设定范围 | 设定单位 | 出厂设定 | 运转中更改 |
|-------|-------------|--|------------|--------|------|-------|
| n8.00 | 直流制动电流 | 向感应电机附加直流电流，制动电机的功能。直流直流制动电流：将变频器额定输出电流作为100%并以%为单位设定。 | 0～100 | 1% | 50 | × |
| n8.01 | 启动时直流制动时间 | | 0.0～60.0 | 0.1s | 0.0 | × |
| n8.02 | 停止时直流制动时间 | | 0.0～60.0 | 0.1s | 0.5 | × |
| n8.03 | 停止时直流制动开始频率 |  ※启动时直流制动以最低输出频率(n1.05)切换。 ※在想要停止大的惯性负载或希望减速而不使FAN再生时使用。 | 0.00～600.0 | 0.01Hz | 0.00 | × |
| n8.04 | 瞬间停止恢复后运转选择 | 选择发生瞬间停电时的处理方法。 0：不继续运转。 1：继续运转(按频率指令发出的的速度搜索再启动) 2：继续运转(按最低输出频率发出的的速度搜索再启动) ※继续运转时只会持续瞬间停电补偿时间(n8.05)中设定的时间。 | 0～2 | 1 | 0 | × |
| n8.05 | 瞬间停电补偿时间 | 当设定瞬间停电后的处理方法为继续运转时，请设定最大继续时间。 ※当发生超过设定时间的瞬间停电时，将检出“Lv”异常。 ※设定时间过长、变频器内部电源完全降低的话，便不进行速度搜索而成为普通启动。 | 0.1～5.0 | 0.1s | 2.0 | × |
| n8.09 | 跳跃频率1上限 | 为了避免机械的共振频率，可设定跳跃频率。 | 0.00～600.0 | 0.01Hz | 0.00 | × |
| n8.10 | 跳跃频率1下限 | | 0.00～600.0 | 0.01Hz | 0.00 | × |
| n8.11 | 跳跃频率2上限 | | 0.00～600.0 | 0.01Hz | 0.00 | × |
| n8.12 | 跳跃频率2下限 |  ※请务必设定n8.09≥n8.10≥n8.11≥n8.12。 ※设定0.00时无效。 | 0.00～600.0 | 0.01Hz | 0.00 | × |
| n8.15 | 异常重试次数 | 发生过电压(ov)、过电流(oc)时，此功能可通过自动复位再次启动。 请设定再启动的最大次数。 ※再启动时按频率指令发出的速度搜索启动。 | 0～10 | 1 | 0 | × |
| n8.17 | 节能控制选择 | 设定节能控制的有效 / 无效。 0：无效 1：有效 ※通过在符合电机功率状态的自动控制下，控制负载动作需的电力。 | 0, 1 | 1 | 0 | × |

■ n9: RS485通信设定

| 参数No. | 名称 | 说明 | 设定范围 | 设定单位 | 出厂设定 | 运转中更改 |
|-------|-------------------|--|-----------|--------|------|-------|
| n9.00 | RS485通信从站地址 | 请设定通信从站地址(子局编号)。 ※设定0时RS485通信无效。 | 0~254 | 1 | 0 | × |
| n9.01 | RS485通信波特率选择 | 请设定通信波特率(通信速度)。 0: 4800 bps 1: 9600 bps 2: 19200 bps 3: 38400 bps | 0~3 | 1 | 1 | × |
| n9.02 | RS485通信错误检出时的动作选择 | 选择通信错误(CE□)检出时的动作。 0: 显示警告继续运转 1: 显示警告减速停止 2: 显示警告自由滑行至停止 3: 继续运转(无警告显示) | 0~3 | 1 | 2 | × |
| n9.04 | RS485通信等待时间 | 设定从主站(总局)收到要求信号后,返回应答的等待时间。设定时请以2ms作为1。 | 0~200 | 1(2ms) | 0 | × |
| n9.05 | RS485通信超时检出时间 | 设定通信超时的检出时间。 请配合通信程序设定超时的检出时间。 ※设定0.0时通信超时检出无效。 | 0.0~120.0 | 0.1s | 1.0 | × |

标准接线图及接线端子说明

■ 标准连接



※1.控制回路端子显示为初始设定的NPN配线。可通过时序输入方法切换SW的设置变更为PNP输入。
※2.频率指令输入A1初始为电压输入，可通过模拟输入选择方法切换SW和参数设定变更为电流输入。
※3.RS485的配线请用标准Ethernet用连接器配线。
※4.模拟输入和模拟输出共用模拟公共端。模拟量输出为载波频率1KHz的PWM波形，可以直接与模拟量输入连接。

■ 主回路端子的说明

| 端子记号 | 名称 | 内容 |
|------|-------------|---|
| R/L1 | 电源输入端子 ※1 | ·3G3JZ-AB□: 单相200~240VAC |
| S/L2 | | ·3G3JZ-A2□: 3相200~240VAC ※1 |
| T/L3 | | ·3G3JZ-A4□: 3相380~480VAC |
| U/T1 | 马达输出端子 ※2 | 驱动马达的3相电源输出。 ※2 |
| V/T2 | | ·3G3JZ-AB□: 3相200~240VAC |
| W/T3 | | ·3G3JZ-A2□: 单相200~240VAC ·3G3JZ-A3□: 3相380~480VAC |
| + | 直流电源输入端子 ※3 | 直流电源输入端子 |
| - | | |
| ⊕ | 接地端子 | 必须按以下方式接地。 ·3G3JZ-AB□、3G3JZ-A2□: 第3类接地(接地电阻100Ω以下) ·3G3JZ-A4□: 特别第3类接地(接地电阻10Ω以下) ※与马达机柜地线直接配线。 |

※1.单相输入请连接至R/L1, S/L2的两个端子。

※2.输出侧最大电压对应变频器输入电源电压。

■ 控制回路端子的说明

| 记号 | 内容 | 规格 |
|----|----------------------|--|
| 输入 | S1 多功能输入1(正转/停止) | 光耦合器 DC +24V(±10%) 16mA ※1.初期设定时设定于NPN, 因此请用GND公共端配线, 不需要使用外部电源。 ※2.使用外部电源在+侧公共端配线时, 将SW1切换为PNP, 使用DC24V±10%电源。 |
| | S2 多功能输入2(反转/停止) | |
| | S3 多功能输入3(外部异常) | |
| | S4 多功能输入4(异常复位) | |
| | S5 多功能输入5(多段速指令1) | |
| | S6 多功能输入6(多段速指令2) | |
| | SC 时序输入公共端 | |
| | SP 时序电源+24V | |
| | AC 模拟公共端 | |
| | A1 频率指令输入 | |
| 输出 | +V 频率指令电源 | +10VDC 20mA |
| | MA 多功能输出1a常开接点(异常输出) | 继电器输出 |
| | MB 多功能输出1b常闭接点(异常输出) | ·电阻负载时 +24VDC 3A以下/250VAC 3A以下 |
| | MC 多功能输出1公共端 | ·电感负载时 +24VDC 0.5A以下/250VAC 0.5A以下 |
| | AM 多功能模拟输出 | 0~+10VDC(8位) 2mA/20kΩ |
| | (AC) 模拟公共端 ※3 | |

※1.多功能输入1~6、多功能输出1可通过参数设定选择多种功能。

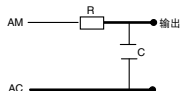
功能栏中记载于()内的功能为出厂时已经设定的功能。

※2.频率指令输入、多功能模拟输出的输出可通过参数设定来变更功能及调整输入/输出电压(电流)的规格。已经记载的规格为出厂时设定的规格。

※3.模拟输入和模拟输出共用模拟公共端。

※4.3G3JZ的模拟量输出为载波频率1KHz的PWM波形, 可以直接与模拟量输入连接。如果需要使用示波器观察波形, 须添加滤波器。

电路图如下, 其中R=100KΩ, C=0.1μF。



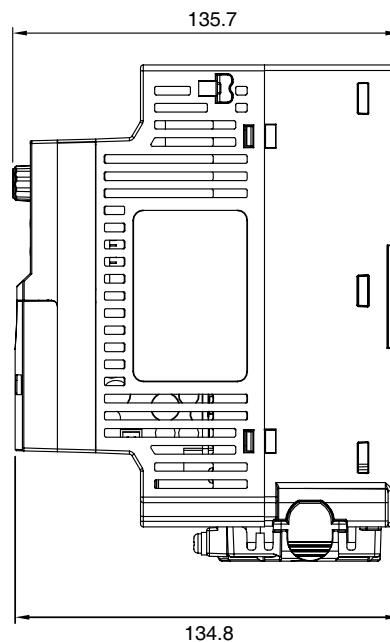
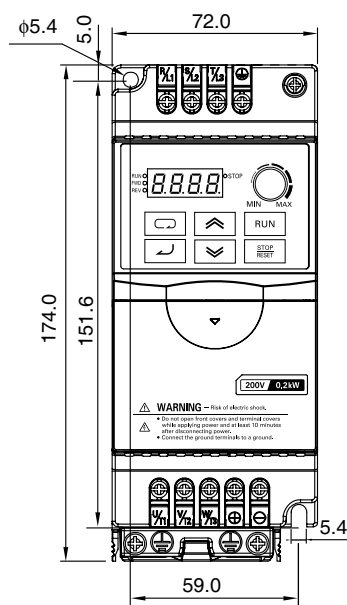
■ RS485通信连接器的说明

| 记号 | 内容 | 规格 |
|-------|-----------------------|-------------------|
| 连接器插脚 | 1p — (未使用) | — |
| | 2p +5V 选项用5VDC电源 | 选项用供给电源, 连接选项时使用。 |
| | 3p SG 选项用GND | ※请不要使用于选项的供给以外。 |
| | 4p A(-) RS485通信收发信数据- | RS485通信的收发信信号。 |
| | 5p B(+) RS485通信收发信数据+ | ※以MODBUS通信协议为基准。 |
| | 6p — (未使用) | — |
| | 7p — (未使用) | — |
| | 8p — (未使用) | — |

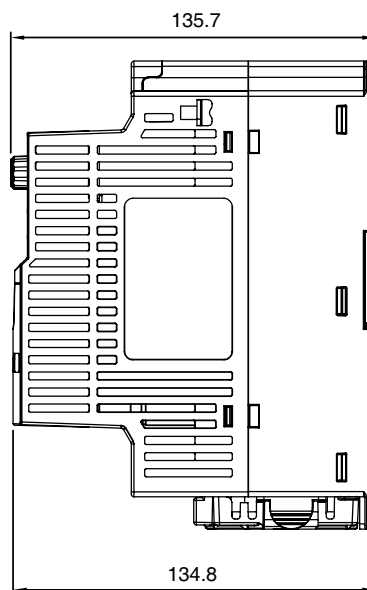
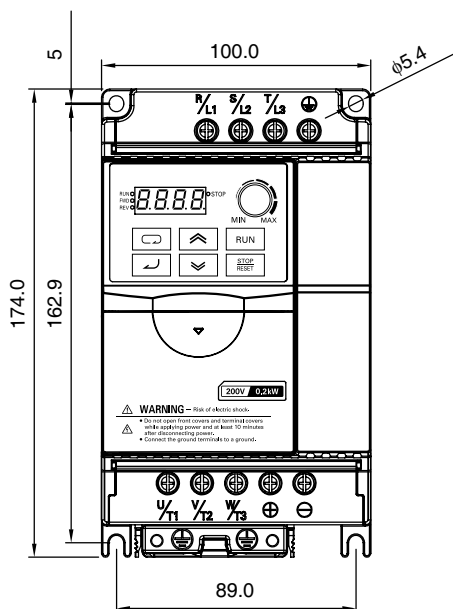
※使用连接器使用Ethernet用连接器。请就近购买Ethernet用电线使用。

- 3G3JZ-AB002~AB007 (0.2~0.75kW) 单相AC200V输入
3G3JZ-A2002~A2015 (0.2~1.5kW) 3相AC200V输入
3G3JZ-A4004~A4015 (0.4~1.5kW) 3相AC400V输入

单位: mm



- 3G3JZ-AB015~AB022 (1.5~2.2kW) 单相AC200V输入
3G3JZ-A2022~A2037 (2.2~3.7kW) 3相AC200V输入
3G3JZ-A4022~A4037 (2.2~3.7kW) 3相AC400V输入



■ 标准规格

200V级变频器

| | | | | | | | |
|--------|--------------|-------------|-----------------------|-----|------|------|------|
| 单相200V | 3G3JZ-AB□□□ | | 002 | 004 | 007 | 015 | 022 |
| | 最大适用电机功率(KW) | | 0.2 | 0.4 | 0.75 | 1.5 | 2.2 |
| | 输出 | 额定输出容量(KVA) | 0.6 | 1.0 | 1.6 | 2.9 | 4.2 |
| | | 额定输出电流(A) | 1.6 | 2.5 | 4.2 | 7.5 | 11.0 |
| | | 最大输出电压(V) | 三相200~240VAC (对应输入电压) | | | | |
| | | 输出频率范围(Hz) | 0.1~600Hz | | | | |
| | | 载波频率(kHz) | 2-15 | | | | |
| | 电源 | 输入电流(A) | 4.9 | 6.5 | 9.7 | 15.7 | 24 |
| | | 额定电压, 频率 | 单相电源200~240V, 50/60Hz | | | | |
| | | 容许输入电压变动范围 | ±10% | | | | |
| | | 容许电源频率变动 | ±5% | | | | |
| | 冷却方式 | | 自然风冷 | | | 强制冷却 | |
| | 重量 (kg) | | 1.1 | 1.1 | 1.1 | 1.9 | 1.9 |

| | | | | | | | | |
|--------|--------------|-------------|-----------------------|-----|------|------|------|------|
| 三相200V | 3G3JZ-A2□□□ | | 002 | 004 | 007 | 015 | 022 | 037 |
| | 最大适用电机功率(KW) | | 0.2 | 0.4 | 0.75 | 1.5 | 2.2 | 3.7 |
| | 输出 | 额定输出容量(KVA) | 0.6 | 1.0 | 1.6 | 2.9 | 4.2 | 6.5 |
| | | 额定输出电流(A) | 1.6 | 2.5 | 4.2 | 7.5 | 11.0 | 17 |
| | | 最大输出电压(V) | 三相200~240VAC (对应输入电压) | | | | | |
| | | 输出频率范围(Hz) | 0.1~600Hz | | | | | |
| | | 载波频率(kHz) | 2-15 | | | | | |
| | 电源 | 输入电流(A) | 1.9 | 2.7 | 5.1 | 9 | 15 | 20.6 |
| | | 额定电压, 频率 | 三相电源200~240V, 50/60Hz | | | | | |
| | | 容许输入电压变动范围 | ±10% | | | | | |
| | | 容许电源频率变动 | ±5% | | | | | |
| | 冷却方式 | | 自然风冷 | | | 强制冷却 | | |
| | 重量 (kg) | | 1.1 | 1.1 | 1.1 | 1.2 | 1.9 | 1.9 |

400V级变频器

| | | | | | | | |
|--------|--------------|-------------|-----------------------|------|-----|------|------|
| 三相400V | 3G3JZ-A4□□□ | | 004 | 007 | 015 | 022 | 037 |
| | 最大适用电机功率(KW) | | 0.4 | 0.75 | 1.5 | 2.2 | 3.7 |
| | 输出 | 额定输出容量(KVA) | 1.2 | 2.0 | 3.3 | 4.4 | 6.8 |
| | | 额定输出电流(A) | 1.5 | 2.5 | 4.2 | 5.5 | 8.2 |
| | | 最大输出电压(V) | 三相380~480VAC (对应输入电压) | | | | |
| | | 输出频率范围(Hz) | 0.1~600Hz | | | | |
| | | 载波频率(kHz) | 2-15 | | | | |
| | 电源 | 输入电流(A) | 1.9 | 3.2 | 4.3 | 7.1 | 11.2 |
| | | 额定电压, 频率 | 三相电源380~480V, 50/60Hz | | | | |
| | | 容许输入电压变动范围 | ±10% | | | | |
| | | 容许电源频率变动 | ±5% | | | | |
| | 冷却方式 | | 自然风冷 | | | 强制冷却 | |
| | 重量 (kg) | | 1.2 | 1.2 | 1.2 | 1.9 | 1.9 |

规格

■ 通用规格

| | | |
|------|------------|---|
| 控制特性 | 控制方式 | 正弦波PWM方式 |
| | 频率设定分辨率 | 数字指令: 0.01Hz (100Hz不到), 0.1Hz (100Hz以上) |
| | 输出频率分辨率 | 0.01Hz (演算分辨率) |
| | 过载耐量 | 额定输出电流的150%运行1分钟 |
| | 外部频率设定信号 | 切换:0~+10VDC(47kΩ)/4~20mA(250Ω)/频率设定旋钮/多段速指令(7段速) |
| | 加减速时间 | 0.00~600.0秒 (加速、减速时间单独设定) |
| | 制动转矩 | 连续约20% |
| | 电压/频率特性 | 任意V/F形式设定 |
| 保护功能 | 电机保护 | 通过电子热敏功能保护 |
| | 瞬时过电流保护 | 在额定输出电流的约240%以上时停止 |
| | 过负载保护 | 在额定输出电流的约150%持续1分钟时停止 |
| | 过电压保护 | 主回路直流电压: 200V型约410VDC/400V型约820VDC以上时停止 |
| | 电压不足保护 | 主回路直流电压: 200V型约200VDC/400V型约400VDC以下时停止 |
| | 瞬时停电补偿(选择) | 立即停止 (约在15ms以上停止) 或运行继续时间设定 (0.1~5.0) |
| | 散热片过热 | 在散热片温度约为90℃时检测 |
| | 接地保护 | 在变频器额定输出电流的约50%时保护 |
| 环境 | 使用场所 | 室内 (无腐蚀性气体和尘埃等) |
| | 使用环境温度 | 盘内安装型: -10℃~+50℃ (紧密安装时: -10℃~+40℃) |
| | 使用环境湿度 | 90%RH以下 (不结露) |
| | 保存温度 | -20℃~+60℃ |
| | 海拔高度 | 1000m以下 |
| | 绝缘电阻 | 5MΩ以上 (请勿进行绝缘电阻试验·耐压试验等) |
| | 耐振动 | 频率不到10~20Hz 9.8m/s ² (1G)以下、20~50Hz 5.9m/s ² (0.6G)以下 |
| 保护构造 | | 盘内安装型 (IP20) |
| 对应规格 | | CE规格对应 |

3G3JZ—A4007

系列名
3G3JZ系列

最大适用电机容量

| | |
|-----|--------|
| 001 | 0.1kW |
| 002 | 0.2kW |
| 004 | 0.4kW |
| 007 | 0.75kW |
| 015 | 1.5kW |
| 022 | 2.2kW |
| 037 | 3.7kW |

电压级别

| | |
|---|-----------------|
| 2 | 三相AC200V（200V级） |
| B | 单相AC200V（200V级） |
| 4 | 三相AC400V（400V级） |

保护构造

| | |
|---|---------------------|
| A | 盘内安装型（IP20以上）/闭锁壁挂型 |
|---|---------------------|

| 额定电压 | 保护构造 | 最大适用马达容量 | 型号 | 额定输出电流 |
|----------|-------------|----------|-------------|--------|
| 单相200VAC | 盘内安装型（IP20） | 0.2kW | 3G3JZ-AB002 | 1.6A |
| | | 0.4kW | 3G3JZ-AB004 | 2.5A |
| | | 0.75kW | 3G3JZ-AB007 | 4.2A |
| | | 1.5kW | 3G3JZ-AB015 | 7.5A |
| | | 2.2kW | 3G3JZ-AB022 | 11.0A |
| | | | | |
| 三相200VAC | 盘内安装型（IP20） | 0.2kW | 3G3JZ-A2002 | 1.6A |
| | | 0.4kW | 3G3JZ-A2004 | 2.5A |
| | | 0.75kW | 3G3JZ-A2007 | 4.2A |
| | | 1.5kW | 3G3JZ-A2015 | 7.5A |
| | | 2.2kW | 3G3JZ-A2022 | 11.0A |
| | | 3.7kW | 3G3JZ-A2037 | 17A |
| 三相400VAC | 盘内安装型（IP20） | 0.4kW | 3G3JZ-A4004 | 1.5A |
| | | 0.75kW | 3G3JZ-A4007 | 2.5A |
| | | 1.5kW | 3G3JZ-A4015 | 4.2A |
| | | 2.2kW | 3G3JZ-A4022 | 5.5A |
| | | 3.7kW | 3G3JZ-A4037 | 8.2A |

参考产品样本订购本公司工业自动化产品（以下简称本公司产品）时，当报价表、合同、规格书没有提及特别说明事项时，适用以下的保证内容、免费事项、适合用途的条件等。

请务必在确认以下内容后进行订货。

1. 保证内容

① 保证期限

本公司产品的保证期限为购买后或在指定地点交货后1年。

② 保证范围

在上述保证期限内由于本公司的责任造成所购商品故障的情况下，本公司负责免费对故障产品进行维修或更换，用户可以在购买处进行更换或要求维修。

但故障是由以下原因引起时，则不属于保证对象范围：

- a) 在本公司产品说明书所述条件・环境・使用方法以外的情况下使用而引起故障
b) 非本公司原因引起的故障
c) 非本公司进行的改造和修理引起故障
d) 进行了本公司记述使用方法以外的使用

e) 货品出厂时，当时的科学水平无法预见可能引起问题时
f) 其它由于天灾、灾害等非本公司负责的因素

同时，上述保证仅指本公司产品本身，由于本公司产品故障所引起的损害排除在保证对象以外。

2. 责任限定

- ① 因本公司产品引起的特别损失、间接损失、及其他相关损失等情况，本公司不承担任何责任。
② 使用可编程设备时，因非本公司人员进行的编程，或者由此所引起的后果，本公司不负担任何责任。

3. 适合用途、条件

- ① 当本公司产品与其他产品组合使用时，客户应事先确认适用规格・导则或者规制等。另外，将本公司产品用于客户的系统、设备、装置时，客户应自己确认其适用性。若不执行上述事项时，本公司将对本公司产品的适用性不承担任何责任。

- ② 用于下述场合时，请与本公司销售人员商谈，确认产品规格书，并应选择额定・性能有一定余地的产品，同时应当考虑各种安全对策，即使发生故障，也能将危险降低到最小程度的安全回路等。

- a) 用于户外、可能有潜在的化学污染或电气故障的用途、或产品图册中未提及的条件/环境下使用时
b) 原子能控制设备、焚烧设备、铁路/航空/车辆设备、医用设备、娱乐设备、安全装置以及必须符合行政机关和个人行业特殊规定的设备

- c) 可能危及人身财产的系统、设备、装置
d) 煤气、自来水、电力的供应系统、24小时连续运转系统等要求高可靠性的设备
e) 其它的，类似上述a)-d)的，要求高度安全性的用途

- ③ 当用户将本公司产品用于与人身财产安全密切相关的场合时，应做到明确系统整体的危险性，为确保安全性应采用特殊的冗余设计，同时按照本公司产品在该系统中的适用目的，做到配套的配电・设置等。

- ④ 本书中述及的应用实例仅作参考之用，实际需要采用时，应确认设备・装置的功能以及安全性等之后，再行使用。

- ⑤ 请务必遵守各项使用注意事项和使用禁止事项，避免发生不正确使用以及由第三者造成的损害。

4. 规格的变更

本书中记载的各项产品规格、以及附属品，由于各种原因，可能会根据需要进行变更。请及时与各销售网点的人员联系，确认实际的规格。

5. 服务范围

本公司的产品价格不包含技术人员的派遣费等服务费用，如有这方面的需求，请与各销售网点的营业担当联系。

6. 价格

本书中的价格只限于参考之用，并非实际销售价格。此价格也不包含税金。

7. 适用范围

上述内容仅限于中国大陆（香港、澳门和台湾地区除外）内的交易，其他地区和海外的交易及使用注意事项请与当地营业担当者接洽。

欧姆龙自动化（中国）统辖集团

欧姆龙（中国）有限公司

欧姆龙自动化（中国）有限公司

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特约店

注：规格随时可能改变，恕不另行通知。最终以产品说明书为准。