

(ZH) 自动转换开关设备 20A - 160A (4P)
(EN) Automatic Transfer Switching Equipment 20A - 160A (4P)

HIC4xxT



基本操作

收到本产品并拆开包装后检查以下各项:

- 包装和内含物完好无损。
- 产品编号与订单相符。
- 内含物应包括:
 - 1 HIC4xxT
 - 1 个紧急手柄延长杆
 - 1 套端子快速入门说明书

附件

- 桥接排 125A 或 160A。
- 电压检测与电源进线并接端子。
- 端子护罩。
- 辅助触点模块。

本《快速入门》专为受过安装和调试此产品培训的人员提供。欲了解更多详细信息,请参阅海格网页。
www.hager.com。

本产品必须始终由具备专业资质的人员进行安装及调试。本产品应该由受过培训并得到授权的人员进行维修保养。当产品内可能具有或可能将会具有直接通过电力网或间接通过外部回路获得的电压时,请不要操作连接到产品的任何控制或电源电缆。始终使用合适的电压检测装置来确定无电压。

注意不要让金属物品掉落到机柜中(有发生电弧的危险)。

不遵守良好的工程规范以及遵循这些安全说明可能会导致用户和其他人严重伤害或死亡。

Preliminary operations

Check the following upon delivery and after removal of the packaging:

- Packaging and contents are in good condition.
- The product reference corresponds to the order.
- Contents should include:
 - 1 HIC4xxT
 - 1 Emergency handle extension rod
 - 1 Set of terminals Quick Start instruction sheet

Accessories

- Bridging bars 125A or 160A.
- Voltage sensing and power supply tap.
- Terminal shrouds.
- Auxilliary contact blocks.

This Quick Start is intended for personnel trained in the installation and commissioning of this product. For further details refer to the product instruction manual available on www.hager.com.

This product must always be installed and commissioned by qualified and approved personnel.

Maintenance and servicing operations should be performed by trained and authorised personnel.

Do not handle any control or power cables connected to the product when voltage may be, or may become present on the product, directly through the mains or indirectly through external circuits.

Always use an appropriate voltage detection device to confirm the absence of voltage.

Ensure that no metal objects are allowed to fall in the cabinet (risk of electrical arcing).

Failure to observe good engineering practises as well as to follow these safety instructions may expose the user and others to serious injury or death.

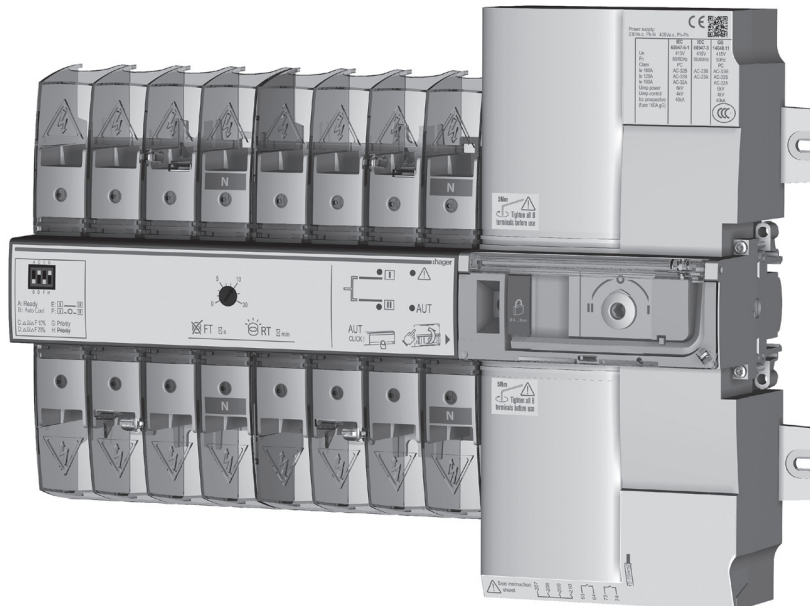


触电、烧伤或人身伤害和/或设备损坏的危险。设备损坏风险 如果产品坠落或遭受任何形式的损坏,建议更换整个产品。



Risk of electrocution, burns or injury to persons and/or damage to equipment. Risk of damaging the device. In case the product is dropped or damaged in any way it is recommended to replace the complete product.

安装调试步骤 / Installation and Commissioning



步骤 / Step 6B

紧急手动操作 /
Emergency Manual
Operation

步骤 / Step 6C

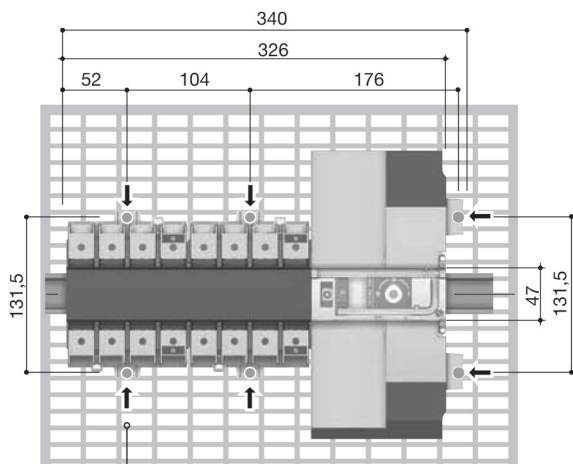
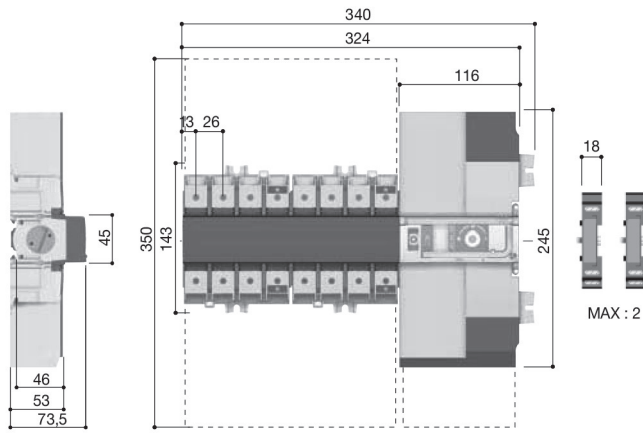
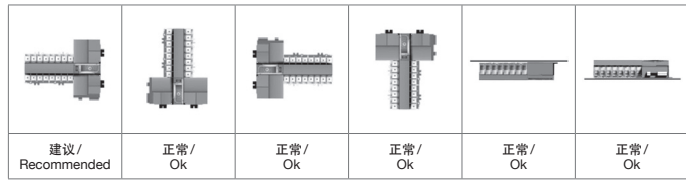
挂锁 / Padlocking

1 安装/Installation



确保将产品安装在平坦的硬质表面。 /
Ensure that the product is installed on a flat rigid surface

建议的方向/Recommended orientation



6个安装支架 6x M6 螺钉 - 2,5 Nm /
6 mounting brackets 6x M6 screw - 2,5 Nm

挂锁配置/Padlocking configuration

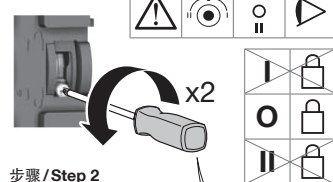


HIC4xxT 随附配置到 O 位置的挂锁装置。 /
The HIC4xxT is delivered with padlocking configured to the O position.



若要在所有的位置 (I-O-II) 中使用挂锁，请在安装前如下配置 HIC4xxT。(螺钉位于产品背面) /
To allow padlocking in all positions (I-O-II), configure the HIC4xxT as follows before installation. (Screw is located at the back of the product).

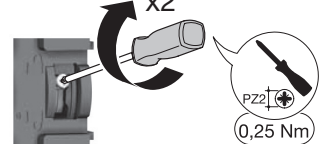
步骤 / Step 1



步骤 / Step 2



步骤 / Step 3

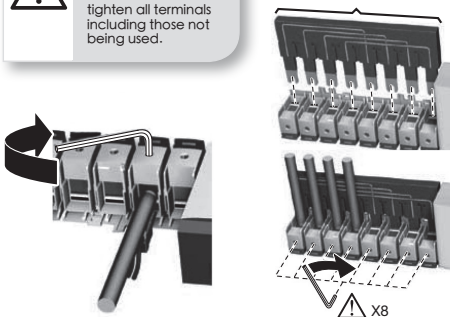


2 电源端子连接/Power Terminal Connections

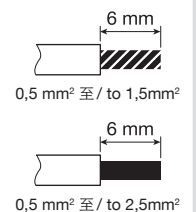
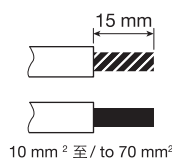
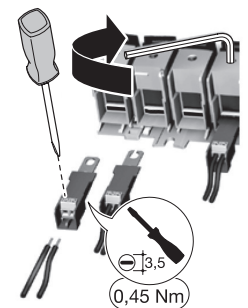


必需拧紧所有的端子，包括那些未使用的。 /
It is essential to tighten all terminals including those not being used.

负荷侧桥接排 /
Load side bridging bar
125A: HZI400
160A: HZI401



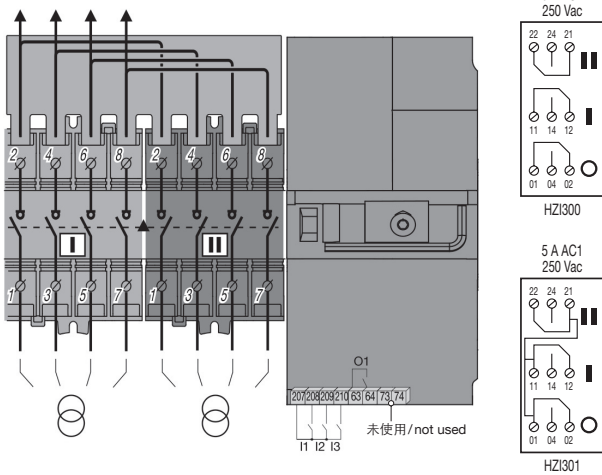
电压分接头提供 2x ≤ 1.5 mm² 接头。可将它们安装到电源供应侧的任何端子。如果配备桥接排，请不要在负荷侧使用。 /
Voltage taps provide 2x ≤ 1.5 mm² connections. They can be fitted in any terminals on the source supply side. Do not use on the load side when equipped with a bridging bar



电源供应侧/Source supply side

3 控制/辅助电源端子和接线 CONTROL/AUX POWER Terminals and wiring

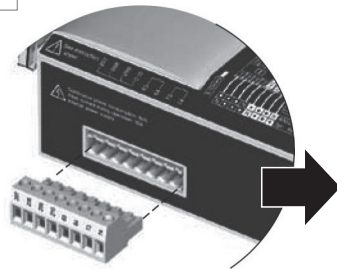
负载 /LOAD



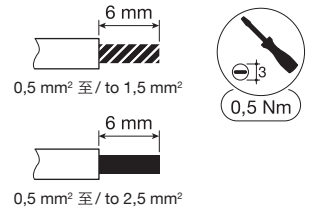
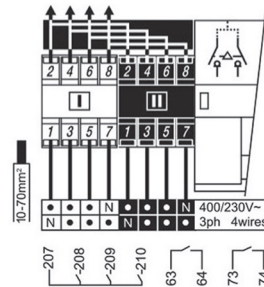
类型/Type	端子编号/Terminal no.	描述/Description	特性/Characteristics	建议电缆截面积/Recommended connection cross-section
输入/Inputs	207	公共端/Common	不要连接到任何电源/ Do not connect to any power supply	0,5 至 2,5 mm ² (刚性) 0,5 至 1,5 mm ² (综合)/ 0,5 至 2,5 mm ² (rigid) 0,5 至 1,5 mm ² (stranded)
	208	位置 O 指令/ Position O order		
	209	打开SI优先级。 Open SI priority。 闭合SI优先级。 Closed S2 priority		
	210	禁止ATS/ Inhibition ATS		
输出/Outputs	63/64	打开: SI 和 S2 不可用。 Open: SI and S2 NOT available 闭合: SI 或 S2 可用/ Closed: SI or S2 available	干触点/ Dry potential free contact 230 Vac 0,5 A AC1 24 Vdc 2 A DC1	
	73/74	未使用/Not used		
	11/12/14	位置/Position I	干触点/ Dry potential free contact 250 Vac 5 A AC1 24 Vdc 2 A DC1	
辅助触点装置/ Auxiliary contacts unit.	21/22/24	位置/Position II		
	01/02/04	位置/Position O		



确保产品处于手动模式 (前盖打开)。
Ensure that the product is in Manual Mode (front cover open).

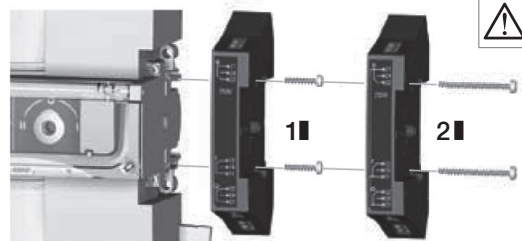


负载 /LOAD



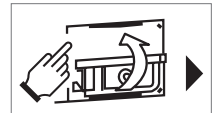
参考指导书 - /
See instruction sheet

辅助触点: 安装辅助触点: HZI300 或 HZI301 安装辅助触点之前先把开关打到 O 位置一个辅助触点模块包括: 用于每个位置 (I-O-II) 的一个NO/NC转换触点。使用模块随附的长螺钉安装。
Auxiliary contacts: Fitting of auxiliary contacts: HZI300 or HZI301 To fit an AC, the switch must first be put in position O. An auxiliary contact module comprises: one NO/NC changeover contact for each position (I-O-II). To install use the long screws supplied with the module.



20 mm 螺钉用
1 个模块 - /
Use 20 mm screws
for 1 module
35 mm 螺钉用
于 2 个模块
Use 35 mm screws
for 2 modules

4 步骤 / Check



在手动模式下, 检查接线 是否正确并可
开启产品电源。/
Whilst in manual mode, check the wiring
and if ok power up the product.

5 规划 / Programming (前盖打开进入手动模式 / Manual operation)

自动配置电网电压和频率。/ Auto conf. of the network voltage and frequency

设置模式 A-B / Setting mode A-B

A: 就绪 / Ready
B: Auto Conf (自动配置) / Auto Conf (Auto-configuration)

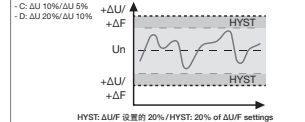
- 将拨码开关 A-B 置于位置 B。 (所有 ed 灯应闪烁) 。 / Put dipswitch A-B to position B. (All Led's should be blinking).
- 当 LED 固定亮起, 表示电网配置准备就绪。 / When the LED's become a steady light ON, configuration of the network is ready
- 将拨码开关 A-B 放回位置 A。 / Put dipswitch A-B back to A.



A: Ready E: B: Auto Conf F: C: ΔU/ΔF:10% G: Priority D: ΔU/ΔF:20% H: Priority

设置拨码开关 C-D, E-F, G-H 阈值 C-D / Set dip switches C-D, E-F, G-H

阈值 C-D / Thresholds C-D



在 O 位置停止由 E-F / Stop in O position E-F

E: 不在 O 位置停止 / No stop in O position
F: 在 O 位置停止 2 次 / 2s stop in O position

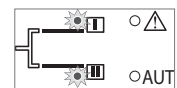
优先级 G-H / Priority G-H

G: 带优先级 / With priority
H: 不带优先级 / Without priority

开关转换计时 (无需打开前盖) / "Failure and Return Timer" FT: 0-30 / RT: 0-30 分钟 / Set potentiometer for priority supply "Failure and Return Timer" FT: 0-30 sec / RT: 0-30 min.



电源可用性 LED / Source availability LED's



来源 / Source		
亮起 / LED ON	电源 1 可用 Source 1 available	电源 2 可用 Source 2 available
熄灭 / LED OFF	电源 1 不可用 Source 1 not available	电源 2 不可用 Source 2 not available
LED blinking	一个计时器正在倒计时 - a timer is counting down	

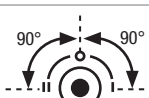
6A 自动操作 / Automatic operation



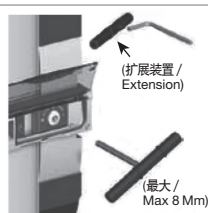
如图所示, 关闭前盖, 将产品置于自动模式。 / Close the front cover as shown to put the product into automatic mode.

6B 手动操作 / Manual operation

如图所示, 打开前盖, 将产品置于手动模式。 / Open the front cover as shown to put into manual mode.



可以使用扩展装置 随附的手柄来简化操作。 / To simplify operation use the handle with the extension provided.

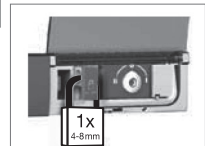


6C 挂锁模式 / Padlocking mode

若要执行挂锁功能, 请将产品置于手动模式。 / In order to padlock put the product in manual mode.



拉锁定机制并插入挂锁, 如图所示。 / Pull the locking mechanism and insert a padlock as shown.



故障现象 Problem	排除措施 Action to be performed	结果 Expected results
1 产品断电, LED 指示灯熄灭 Product is off, i.e. no LEDs are ON.	检查是否有 176-288V 的电压加载在主副电源上面的端子 1 和 7 之间。 Check for 176-288VAC across terminals 1 and 7 on switch I and II.	合上前盖, AUT LED 指示灯亮起 The AUT LED is ON with manual operation cover closed.
2 电源 1 可用, LED 灯熄灭 SOURCE 1 availability LED is OFF.	电压和频率自动配置: <ul style="list-style-type: none"> 步骤 1: 打开前盖 步骤 2: 对应拨码开关拨置 B 步骤 3: 当所有的 LED 灯亮起, 对应拨码开关拨置 A 步骤 4: 合上前盖 Voltage and frequency auto configuration: <ul style="list-style-type: none"> Step 1: open manual operation cover. Step 2: set dip switch A-B to position B. Step 3: when all LEDs are on, return dip switch A-B to position A Step 4: re-close the cover. 检查电压和频率的阈值(对应拨码 C-D) 设置到最大水平, 适用的话, 然后再减小。 Check the value of the voltage and frequency thresholds (dip switch C-D). Set to maximum level and reduce later if applicable. 检查下列参数: <ul style="list-style-type: none"> 电网类型: 必须是 3 相+零线 (或变压器) 标称电压: 必须是在 176V 到 288V 之间 标称频率: 必须是在 45Hz 到 65Hz 之间 Check the following parameters: <ul style="list-style-type: none"> network type: Must be a 3 phase network + neutral (or transformer), nominal voltage: Must be between 176 and 288 Vac, nominal frequency: Must be between 45 and 65 Hz. 	电源 1 的 LED 灯亮起 SOURCE 1 LED is ON.
3 电源 2 可用, LED 灯熄灭 SOURCE 2 availability LED is OFF.	电压和频率自动配置: <ul style="list-style-type: none"> 步骤 1: 打开前盖 步骤 2: 对应拨码开关拨置 B 步骤 3: 当所有的 LED 灯亮起, 对应拨码开关拨置 A 步骤 4: 合上前盖 Voltage and frequency auto configuration: <ul style="list-style-type: none"> Step 1: open manual operation cover. Step 2: set dip switch A-B to position B, Step 3: when all LEDs are on, return dip switch A-B to position A, Step 4: re-close the cover. 检查电压和频率的阈值(对应拨码 C-D) 设置到最大水平, 适用的话, 然后再减小。 Check the value of the voltage and frequency thresholds (dip switch C-D). Set to maximum level and reduce later if applicable. 检查下列参数: <ul style="list-style-type: none"> 电网类型: 必须是 3 相+零线 (或变压器) 标称电压: 必须是在 176V 到 288V 之间 标称频率: 必须是在 45Hz 到 65Hz 之间 Check the following parameters: <ul style="list-style-type: none"> network type: Must be a 3 phase network + neutral (or transformer), nominal voltage: Must be between 176 and 288 Vac, nominal frequency: Must be between 45 and 65 Hz. 	电源 2 的 LED 灯亮起 SOURCE 2 LED is ON.
4 主电源失电后, 开关仍然是断开状态, LED 灯熄灭 Switch remains off after loss of Priority source ; i.e. no LEDs are ON.	检查加载在副电源端子 1 和 7 之间的电压是否在 176-288V 之间 Check for 176-288VAC across power terminals 1 and 7 on switch II.	前盖合上后, AUT LED 灯亮起 The AUT LED is ON with manual operation cover closed.
5 主电源失电后, 开关不转换 The switch does not transfer after loss of priority source.	检查开关是否处于手动操作模式: <ul style="list-style-type: none"> 自动模式为: 前盖闭合 手动模式为: 前盖打开 Check that the product is not in manual mode: <ul style="list-style-type: none"> Automatic mode = Cover closed Manual mode = Cover open. 检查自动转换操作是否被端子 207-210 的控制命令所抑制 Check that automatic operation has not been inhibited by an external order (terminals 207-210). 检查备用电源是否是可用的, 通过相应的 LED 灯亮是否起来判断。如果没有亮起, 请遵照 LED 灯没亮的指示进行检查。检查自动转换操作是否被端子 207-210 的控制命令所抑制 Check that the backup source is seen as available ; appropriate source availability LED is ON. If it is not ON refer to above actions for "SOURCE x availability LED is OFF". Check that automatic operation has not been inhibited by an external order (terminals 207-210). 检查故障转换延时计时器的配置, 通常可设置的范围是 0 到 30 秒。如果进行了设置, 故障转换将会在计数后进行转换 Check FT (Main Failure Timer) configuration, which can be configured between 0 and 30s. The changeover will only take place at the end of FT.	AUT LED 指示灯亮起 The AUT LED is ON.
6 当主电源恢复后, 开关没有切换回主电源 供电的位置 The switch does not return to its priority position after the priority source has been restored.	检查开关是否处于手动操作模式: <ul style="list-style-type: none"> 自动模式为: 前盖闭合 手动模式为: 前盖打开 Check that the product is not in manual mode: <ul style="list-style-type: none"> Automatic mode = Cover closed, Manual mode = Cover open. 检查自动转换操作是否被端子 207-210 的控制命令所抑制 Check that automatic operation has not been inhibited by an external order (terminals 207-210). 检查备用电源是否是可用的, 通过相应的 LED 灯亮是否起来判断。如果没有亮起, 请遵照 LED 灯没亮的指示进行检查。 Check that the priority source is seen as available ; appropriate source availability LED is ON. If it is not ON refer to above actions for "SOURCE x availability LED is OFF". 检查故障转换延时计时器的配置, 通常可设置的范围是 0 到 30 分钟。如果进行了设置, 故障转换将会在计数后进行转换 Check RT (Main Return Timer) configuration which can be configured between 0 and 30min. The changeover will only take place at the end of RT.	AUT LED 指示灯亮起 The AUT LED is ON.
		AUT 和备用电源 LED 指示灯亮起 The AUT and the backup SOURCE LEDs are ON.
		当计时器计时完成后, 开关将切换到 Off 位置, 然后转换到备用电源 When FT reaches zero the switch will operate to position 0 before finally transferring to its backup position.
		AUT 和主电源 LED 指示灯亮起 The AUT and the priority SOURCE LEDs are ON.
		当计时器计时完成后, 开关将切换到 Off 位置, 然后转换到主电源 When RT reaches zero the switch will operate to position 0 before finally transferring to its priority position.