

E5DC-SCT1B OMRON
Push-In Plus Terminal Unit
EN INSTRUCTION MANUAL

Thank you for purchasing an OMRON product. This manual describes the functions, performance, and application methods needed for optimum use of the product. Please observe the following items when using the product.

- This product is designed for use by qualified personnel with a knowledge of electrical systems.
- Before using the product, thoroughly read and understand this manual to ensure correct use.
- Keep this manual in a safe location so that it is available for reference whenever required.

OMRON Corporation
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Safety Precautions

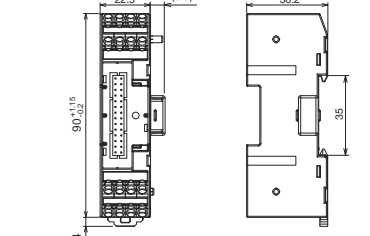
Key to Warning Symbols

CAUTION

Indicates a potentially hazardous situation which, if not avoided, is likely to result in minor or moderate injury or property damage. Read this manual carefully before using the product.

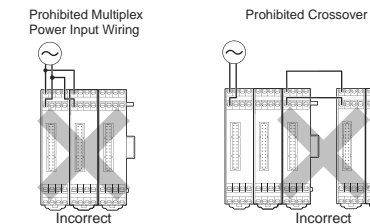
2827079-2B (Side-A)

Dimensions (mm)



Precautions for Correct Use during Linking

Wiring
 When linking the units together, connect the power cable only to the unit at the left end of the linkage block. Incorrect wiring can be shorted inside the unit resulting in damage to the unit. Do not perform crossover wiring between each linkage block, or to another device. This could result in a breakdown or incorrect operation.



Maximum linkable Units
 Up to 16 units can be linked.

Inrush current
 When N units are linked together, the inrush current will be equal to N times that for 1 unit. Be sure to use the external fuse with the appropriate fusing characteristics, and the breaker with the appropriate tripping characteristics to ensure that the fuse does not melt and the breaker is not activated due to the inrush current.

Mounting
 Do not remove the connector cover from connectors that are not to be linked. The connector covers have been mounted on the product during shipment. Do not add or separate the units during power-on. For details on the linkage procedure, refer to the E5□□ Digital Controllers User's Manual (Cat. No. H174).

E5DC-SCT1B OMRON
Push-In Plus端子单元
CHN 使用说明书

感谢您购买欧姆龙产品。本手册描述了产品的功能、性能以及使产品达到最佳使用效果的应用方法。请在使用该产品时注意以下事项：

- 使用该产品的技术人员必须具备足够的电气系统知识。
- 在使用该产品前应仔细阅读本手册以确保正确的使用。
- 妥善保管该手册以确保在需要时可以随时查阅。

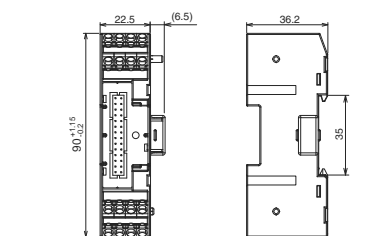
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安全注意事项

警告符号的要点

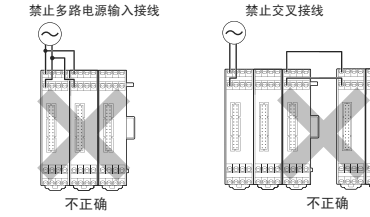
警告
 表示潜在的危險情况，如不加以防止，很可能导致轻度或中度的人身伤害或财产损失。在使用该产品前应仔细阅读本手册。

尺寸 (mm)



联接时的正确使用注意事项

接线
 连接多个单元时，仅将电源线连接到联接块左端的单元。不正确的接线会使单元内部发生短路，造成单元损坏。请勿在各联接块之间或对另一台装置进行交叉接线。否则会造成功能或错误的操作。



最大可联接单元数
 最多可联接 16 个单元

浪涌电流
 连接 N 个单元时，浪涌电流将是单个单元的 N 倍。务必使用具有正确熔断特性的外部保险丝和具有正确跳闸特性的断路器，确保在产生浪涌电流时保险丝不会熔断，断路器不会跳闸。

安装
 不要拆下未联接连接器的连接盖。产品在出厂时已安装有连接盖。请勿在通电时添加或分离单元。有关联接步骤的详细内容，请参阅《E5□□数字式控制器用户手册》(Cat. No. H180)。

另售件
 • DIN 导轨 PFP-100N(100cm)
 PFP-50N(50cm)
 • 终端架 PFP-M
 • 连接盖 E53-COV26

符合安全标准
 如果产品未按本公司指定的方法使用，那么产品具备的保护功能很可能损坏。本产品适用于工业环境。

联系方式
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 欧姆龙(上海)有限公司
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400-820-4535
 网址: http://www.fa.omron.com.cn

Dispose in accordance with applicable regulations.

Warning Symbols

CAUTION

Minor injury due to electric shock may occasionally occur. Do not touch the terminals while power is being supplied.

Minor electric shock, fire, or failure of the Main Unit of the Digital Controller may occasionally occur. Make sure that metal chips generated during installation do not enter into the product.

Do not use the product where subject to flammable or explosive gas. Otherwise, minor injury from explosion may occasionally occur.

Never disassemble, modify, or repair the product or touch any of the internal parts. Minor electric shock, fire, or malfunction may occasionally occur.

CAUTION - Risk of Fire and Electric Shock

a) This is a UL listed product that is combined with the main unit as an open type process controller. It must be mounted in an enclosure that does not allow fire to escape externally.
 b) More than one disconnect switch may be required to de-energize the equipment before servicing.
 c) Use wires with heat resistance of 75°C min to wire the terminals because the maximum terminal temperature is 75°C.

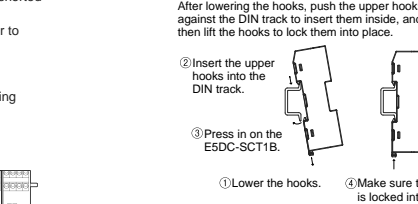
Precautions for Safe Use

Be sure to observe the following precautions to prevent operation failure, malfunction, or adverse effects on the performance and functions of the product. Not doing so may occasionally result in unexpected events. Use the product within specifications.

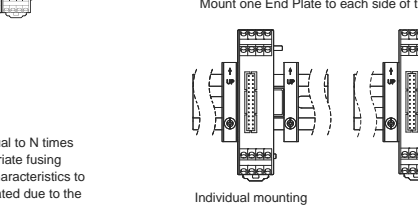
- The product is designed for indoor use only. Do not use the product outdoors. Do not use or store the product in any of the following locations.
 - Places directly subject to heat radiated from heating equipment.
 - Places subject to splashing liquid or oil atmosphere.
 - Places subject to direct sunlight.
 - Places subject to dust or corrosive gas (in particular, sulfide gas and ammonia gas).
 - Places subject to intense temperature change.
 - Places subject to icing and condensation.
 - Places subject to vibration and large shocks.
- Use/store within the rated temperature and humidity ranges. Provide forced-cooling if required.
- To allow heat to escape, do not block the area around the product.
- Use the specified size of crimped terminals (M3, width 5.8 mm or less) for wiring. To connect bare wires to the terminal block, use copper braided or solid wires with a gage of AWG24 to AWG18 (equal to cross-sectional area of 0.205 to 0.8231 mm²). (The stripping length is 6 to 8 mm.) Up to two wires of same size and type, or two crimped terminals can be inserted into a single terminal.
- Do not wire the terminals that are not used.
- Wipe off any dirt from the Digital Controller with a soft dry cloth. Never use thinners, benzene, alcohol, or any cleaners that contain these or other organic solvents. Deformation or discoloration may occur.
- When disassembling the Temperature Controller for disposal, use suitable tools.
- When mounting the Main Unit to the Terminal Unit, check that the hooks of the Main Unit are properly inserted into the Terminal Unit.
- Always turn OFF the power supply before inserting or pulling the Main Unit into or out of the Terminal Unit, and never touch nor apply shock to the terminals or electronic components to touch the case.
- Observe the following precautions when you wire the Digital Controller.
 - Do not wire anything to the release holes.
 - Do not tilt or twist a flat-blade screwdriver while it is inserted into a release hole on the terminal block. The terminal block may be damaged.
 - Insert a flat-blade screwdriver into the release holes at an angle. The terminal block may be damaged if you insert the screwdriver straight in.
 - Do not allow the flat-blade screwdriver to fall out while it is inserted into a release hole.
 - Do not bend a wire past its natural bending radius or pull on it with excessive force. Doing so may cause the wire to break.
 - Do not use crossover wiring to the E5DC-B.

Installation

Mounting the Terminal Unit to the DIN track



Mounting the End Plate



Sold Separately
 • DIN track PFP-100N (100 cm)
 PFP-50N (50 cm)
 • End Plate PFP-M
 • Connector cover E53-COV26

Linking Terminal Units



Conformance to Safety Standard

The protection provided by the Terminal Unit may be impaired if the Terminal Unit is used in a manner that is not specified by the manufacturer.

This is a product for industrial environments.

Dispose in accordance with applicable regulations.

Precautions for Safe Use

Be sure to observe the following precautions to prevent operation failure, malfunction, or adverse effects on the performance and functions of the product. Not doing so may occasionally result in unexpected events. Use the product within specifications.

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 - Do not use crossover wiring to the E5DC-B.

Precautions for Correct Use

1. Connecting Wires to Push-In Plus Terminal Block

Part Names of the Terminal Block

Connecting Wires with Ferrules and Solid Wires
 Insert the solid wire or ferrule straight into the terminal block until the end strikes the terminal block.

If a wire is difficult to connect because it is too thin, use a flat-blade screwdriver in the same way as when connecting stranded wire.

Connecting Stranded Wires
 Use the following procedure to connect the wires to the terminal block.

- Hold a flat-blade screwdriver at an angle and insert it into the release hole. The angle should be between 10° and 15°. If the flat-blade screwdriver is inserted correctly, you will feel the spring in the release hole.
- With the screwdriver still inserted into the release hole, insert the wire into the terminal hole until it strikes the terminal block.
- Remove the flat-blade screwdriver from the release hole.

Checking Connections

- After the insertion, pull gently on the wire to make sure that it will not come off and the wire is securely fastened to the terminal block.
- If you use a ferrule with a conductor length of 10 mm, part of the conductor may be visible after the ferrule is inserted into the terminal block, but the product insulation distance will still be satisfied.



Specifications

Power supply ratings	300 VAC, 50/60 Hz, 3 A
Ambient temperature	-10 to 55°C (with no icing or condensation)
Ambient humidity	25% to 85%
Storage temperature	-25 to 65°C (with no icing or condensation)
Altitude	Max. 2,000 m
Weight	Approx. 40 g
Degree of protection	IP00
Installation environment	Overvoltage category II, pollution degree 2 (according to IEC61010-1)

Suitability for Use

Omron Companies shall not be responsible for conformity with any standards, codes or regulations which apply to the combination of the Product in the Buyer's application or use of the Product.

At Buyer's request, Omron will provide applicable third party certification documents identifying ratings and limitations of use which apply to the Product. This information by itself is not sufficient for a complete determination of the suitability of the Product in combination with the end product, machine, system, or other application or use. Buyer shall be solely responsible for determining appropriateness of the particular product with respect to Buyer's application, product or system. Buyer shall take application responsibility in all cases. NEVER USE THE PRODUCT FOR AN APPLICATION INVOLVING SERIOUS RISK TO LIFE OR PROPERTY WITHOUT ENSURING THAT THE SYSTEM AS A WHOLE HAS BEEN DESIGNED TO ADDRESS THE RISKS, AND THAT THE OMRON PRODUCT(S) IS PROPERLY RATED AND INSTALLED FOR THE INTENDED USE WITHIN THE OVERALL EQUIPMENT OR SYSTEM.

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 Shiokoji Horikawa, Shimogyo-ku, Kyoto 600-8530 JAPAN

警告符号

警告

通电期间，请勿触摸端子。否则可能因触电而导致轻伤。

偶尔可能发生轻度触电、起火、数字式控制器主机故障等危险。请勿使安装加工中的切屑等进入产品中。

请勿将该产品用于有易燃易爆气体的场合。否则有可能因为爆炸而造成轻伤。

绝对不要拆卸、改装以及修理该产品或接触任何内部元件。否则会导致轻度触电、火灾或机器误动作。

注意：火灾或触电的危险

a) 本产品经过UL认证，是可与主单元结合使用的开放型过程控制器。必须将其安装在能够防止火花进出的机壳中。
 b) 在使用两个以上断电开关的情况下，维修前请先断开所有开关，确保本产品处于断电状态。
 c) 由于最大端子温度为75°C，请使用耐用在75°C以上的导线连接端子。

安全使用注意事项

请务必遵守以下注意事项，以避免操作失败、误动作或对产品特性及功能造成不良影响。否则，可能会导致意外事故。请在指定范围内使用本产品。

- 该产品只被设计为室内使用。请勿在室外使用。不要在以下任何地方使用或存放该产品。
 - 直接受加热设备热辐射的地方。
 - 有液体或油类飞溅的地方。
 - 阳光直射的地方。
 - 灰尘较多或有腐蚀性气体（特别是硫化物气体和氨气）的地方。
 - 温度剧烈变化的地方。
 - 结冰和结露的地方。
 - 有震动或大的冲击的地方。
- 在额定温度和湿度范围内使用/存储该产品。必要时应采取强制冷却。
- 为利于散热，不要堵塞该产品周围的空间。
- 请使用规定尺寸（M3，宽度小于或等于5.8 mm）的压接端子进行接线。使用标有AWG24~AWG18（相当于横截面积0.205~0.8231 mm²）的铜绞线或实心电缆连接端子和接线板。（剥线长度为6~8 mm。）一个端子内最多插入两根相同型号尺寸的导线或压接端子。
- 请勿连接未使用的端子。
- 清洁时，请用于的软布擦拭。请勿使用稀释剂、汽油、酒精等含溶剂的药品。否则会导致变形或变色。
- 拆卸控制器进行废弃处理时，请使用适当的工具。
- 将主单元安装于端子单元时，请确认主单元的锁钩已牢固地插入端子单元。
- 设置DIN导轨时，请保持与地面垂直。
- 从端子单元上拆卸主单元时，请务必切断电源后再执行操作，且绝勿用手触摸或碰撞端子、电子元件。插入时请勿使电子元件接触外壳。
- 连接数字式控制器时查看以下注意事项。
 - 请勿在释放孔连接任何导线。
 - 在将平口螺丝刀插入端子台上的释放孔时，请勿倾斜或扭转螺丝刀。否则可能会损坏端子台。
 - 以一定的角度将平口螺丝刀插入接线板的释放孔时，如果笔直插入螺丝刀可能会损坏接线板。
 - 请勿将平口螺丝刀插入接线板的释放孔时冲撞。
 - 请勿过度弯曲或拉扯导线，有可能导致电线断裂。
 - 请勿在E50C-B上使用交叉接线。

正确使用注意事项

1. 连接到Push-In Plus端子台

接线板的元件名称

将带套圈的导线与实心电缆连接
 将实心电缆或套圈直接插入接线板，直至末端接触接线板。

如果导线过细而难以连接，请与连接绞线相同的方式使用平口螺丝刀。

连接绞线
 使用以下步骤将导线连接至接线板。

- 以一定角度将平口螺丝刀并使其插入释放孔。此角度应为10°至15°之间。如果正确插入了平口螺丝刀，您将感觉到释放孔中的弹簧。
- 在将螺丝刀插入释放孔的同时，将导线插入端子孔，直至末端接触接线板。
- 从释放孔中移除平口螺丝刀。

检查连接

- 插入后，轻拉导线，确保其不会脱离且导线牢固固定在接线板上。
- 如果使用导线长度为10 mm的套圈，则部分导线会在将套圈插入端子台后露出，但仍可保证产品绝缘距离。

规格

额定电源	300VAC, 3A
环境温度	-10~55°C (应避免结冰或结露)
环境湿度	RH 25~85%
存储温度	-25~65°C (应避免结冰或结露)
高度	最高2,000米
重量	约40 g
防护等级	IP00
安装环境	过电压类别II, 污染等级(IEC61010-1)

使用时的注意事项

在客户的应用中，欧姆龙不负责产品与任何客户端产品所涉及的规格、规范和标准保持一致性。请务必考虑本产品对于所应用的系统、机器和设备间的适用性。使用时请注意并遵守本产品的禁止事项。

在没有确认整个系统设计时所考虑到的风险，以及没有确认在设备和系统中该欧姆龙产品的额定使用条件和正确安装条件的情况下，禁止将本产品应用于对人身及财产存在严重危险的场合。

详见产品规格书中保证及免责声明内容。

符合安全标准

如果产品未按本公司指定的方法使用，那么产品具备的保护功能很可能损坏。本产品适用于工业环境。

Dispose in accordance with applicable regulations.

