E5AC-T

OMRON

Digital Controller

EN INSTRUCTION MANUAL

Thank you for purchasing the OMRON E5AC-T Digital Controller. 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

Refer to the *E5□C-T Digital Controllers User's Manual* (Cat. No. H185) for detailed application procedures.

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.

ACT10 5377466-5A（Side-A）

●Warning Symbols

CAUTION

- Minor injury due to electric shock may occasionally occur. Do not touch the terminals while power is being supplied.
- Electric shock, fire, or malfunction may occasionally occur. Do not allow metal objects, conductors, cuttings from installation work, or moisture to enter the Digital Controller, the Setup Tool ports, or between the pins on the connectors on the Setup Tool cable. Attach the cover to the front-panel Setup Tool port whenever you are not using it to prevent foreign objects from entering the port.
- 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 product is UL listed as Open Type Process Control Equipment. 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) Signal inputs are SELV, limited energy.
  d) Caution: To reduce the risk of fire or electric shock, do not interconnect the outputs of different Class 2 circuits.
- If the output relays are used past their life expectancy, contact fusing or burning may occasionally occur. Always consider the application conditions and use the output relays within their rated load and electrical life expectancy. The life expectancy of output relays varies considerably with the output load and switching conditions.
- Loose screws may occasionally result in fire. Tighten the terminal screws to the specified torque of 0.43 to 0.58 N•m.
- Set the parameters of the product so that they are suitable for the system being controlled. If they are not suitable, unexpected operation may occasionally result in property damage or accidents.
- A malfunction in the Digital Controller may occasionally make control operations impossible or prevent alarm outputs, resulting in property damage. To maintain safety in the event of malfunction of the Digital Controller, take appropriate safety measures, such as installing a monitoring device on a separate line.

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.

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.

(1) 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.

(2) Use/store within the rated temperature and humidity ranges. Provide forced-cooling if required.
(3) To allow heat to escape, do not block the area around the product. Do not block the ventilation holes on the product.
(4) Be sure to wire properly with correct polarity of terminals.
(5) 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 mm^2). (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.
(6) Do not wire the terminals which are not used.
(7) Allow as much space as possible between the controller and devices that generate a powerful high- frequency or surge. Separate the high-voltage or large-current power lines from other lines, and avoid parallel or common wiring with the power lines when you are wiring to the terminals.
(8) Use this product within the rated load and power supply.
(9) Make sure that the rated voltage is attained within two seconds of turning ON the power using a switch or relay contact. If the voltage is applied gradually, the power may not be reset or output malfunctions may occur.
(10) Make sure that the Digital Controller has 30 minutes or more to warm up after turning ON the power before starting actual control operations to ensure the correct temperature display.
(11) A switch or circuit breaker should be provided close to this unit. The switch or circuit breaker should be within easy reach of the operator, and must be marked as a disconnecting means for this unit.
(12) Wipe off any dirt from the Digital Controller with a soft dry cloth. Never use thinners, benzine, alcohol, or any cleaners that contain these or other organic solvents. Deformation or discoloration may occur.
(13) Design system (control panel, etc) considering the 2 second of delay that the controller's output to be set after power ON.
(14) The output will turn OFF when you move to the Initial Setting Level. Take this into consideration when performing control.
(15) The number of non-volatile memory write operations is limited. Therefore, use RAM write mode when frequently overwriting data during communications or other operations.
(16) When disassembling the Temperature Controller for disposal, use suitable tools.
(17) Do not connect cables to both the front-panel Setup Tool port and the top-panel Setup Tool port at the same time. The Digital Controller may be damaged or may malfunction.
(18) Do not exceed the communications distance that is given in the specifications and use the specified communications cable. Refer to the *E5□C-T Digital Controllers User's Manual* (Cat. No.H185) for the communications distance and cable specifications.
(19) Do not turn the power supply to the Digital Controller ON or OFF while the USB-Serial Conversion Cable is connected. The Digital Controller may malfunction.
(20) The terminals can reach temperatures of up to 75°C. Use wires with heat resistance of 75°C min to wire the terminals.

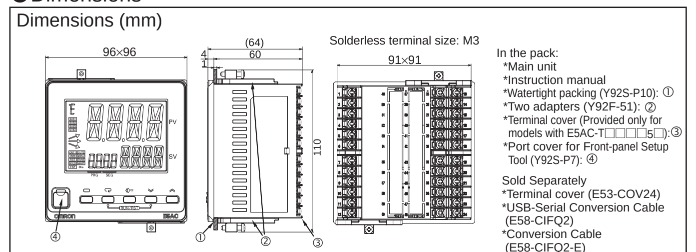
●Specifications

Power supply voltage	100 to 240 VAC, 50/60 Hz or 24 VAC, 50/60 Hz / 24 VDC
Operating voltage range	85 to 110% of the rated voltage
Power consumption	9.0 VA max. (100 to 240 VAC) 5.6 VA max. (24 VAC)/3.4 W max. (24 VDC)
Indication accuracy (Ambient temperature: 23°C)	Thermocouple: (±0.3 % of indication value or ±1°C, whichever is greater) ±1 digit max. Platinum resistance thermometer: (±0.2 % of indication value or ±0.8°C, whichever is greater) ±1 digit max. Analog input: ±0.2 % FS ±1 digit max.
Potentiometer input	Must be between 100 Ω and 10 kΩ for maximum open position
Event input	Output current: approx. 7 mA per contact.
Contact input	ON:1 kΩ max., OFF: 100 kΩ min.
No-contact input	ON: residual voltage 1.5 V max., OFF: leakage current 0.1 mA max.
Control output 1	Relay output :SPST-NO 250VAC, 5A (resistive load) Electrical life of relay: 100,000 operations Voltage output (for driving SSR): 12 VDC ±20%, 40 mA for one control output, 21 mA if there are two control outputs Linear current output: 4 to 20 mA DC, 0 to 20mA DC Load: 500 Ω max.
Control output 2	Relay output: SPST-NO, 250 VAC, 5 A (resistive load) Electrical life of relay: 100,000 operations Voltage output (for driving SSR): 12 VDC ±20%, 21 mA Linear current output: 4 to 20 mA DC or 0 to 20 mA DC with load of 500 Ω max.
Control method	ON/OFF or 2-PID control
Auxiliary outputs	Relay outputs:SPST-NO, 250 VAC, 2 A (resistive load), Electrical life of relay: 100,000 operations
Transfer output	4 to 20 mA DC with load of 500 Ω max. 1 to 5 VDC with load of 1 kΩ min.
Ambient temperature	-10 to 55°C (Avoid freezing or condensation)
Ambient humidity	25 to 85%
Storage temperature	-25 to 65°C (Avoid freezing or condensation)
Altitude	Max. 2,000m
Recommended fuse	T2A, 250 VAC, time-lag, low-breaking capacity
Weight	Approx. 250 g (Digital Controller only)
Degree of protection	Front panel: IP66 Rear case: IP20, Terminal section: IP00
Installation environment	Installation category II, pollution degree 2 (as per IEC61010-1)
Memory protection	Non-volatile memory (No. of write operations: 1,000,000)
Temporary overvoltage	Short term: 1200 V+ power supply voltage Long term: 250 V+ power supply voltage

■Wiring

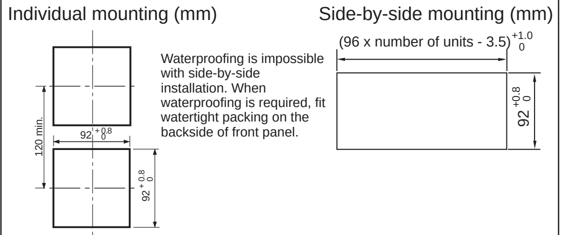
●Dimensions

Dimensions (mm)



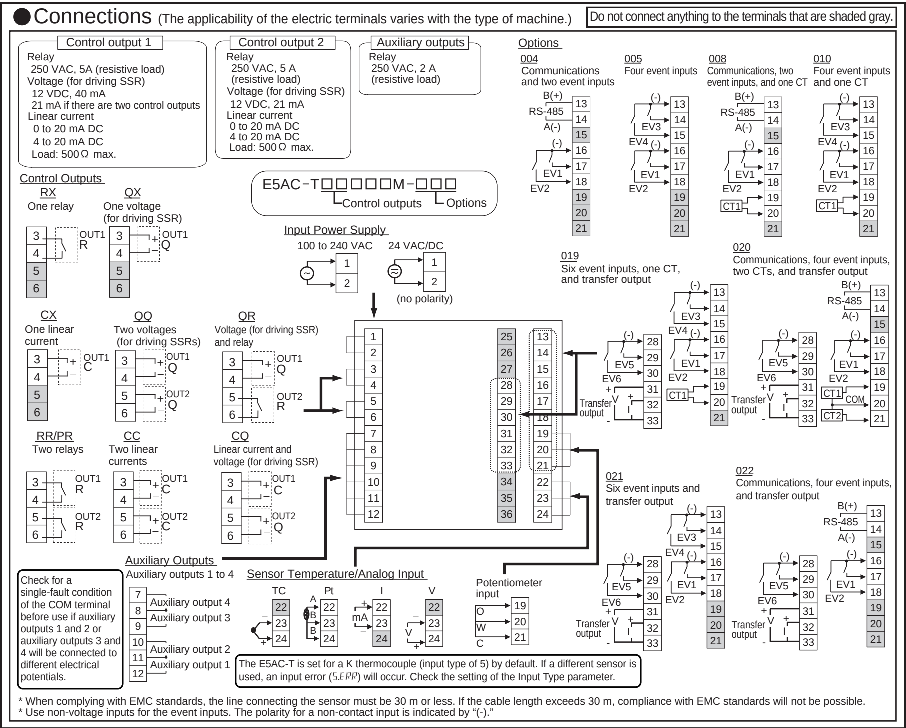
●Installation

Individual mounting (mm) Side-by-side mounting (mm)

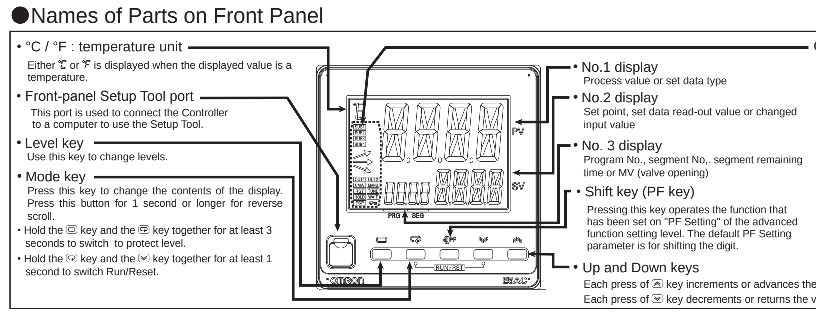


●Connections (The applicability of the electric terminals varies with the type of machine.)

Do not connect anything to the terminals that are shaded gray.



●Names of Parts on Front Panel



■Operation Menu

●Input Type

	Input type	Input	Setting	Setting range °C	Setting range °F
Temperature inputs	Platinum resistance thermometer	Pt100	0	-200 to 850	-300 to 1500
			1	-199.9 to 500.0	-199.9 to 900.0
			2	0.0 to 100.0	0.0 to 210.0
		JPt100	3	-199.9 to 500.0	-199.9 to 900.0
			4	0.0 to 100.0	0.0 to 210.0
	Thermocouple	K	5	-200 to 1300	-300 to 2300
			6	-20.0 to 500.0	0.0 to 900.0
		J	7	-100 to 850	-100 to 1500
			8	-20.0 to 400.0	0.0 to 750.0
		T	9	-200 to 400	-300 to 700
			10	-199.9 to 400.0	-199.9 to 700.0
		E	11	-200 to 600	-300 to 1100
		L	12	-100 to 850	-100 to 1500
		U	13	-200 to 400	-300 to 700
			14	-199.9 to 400.0	-199.9 to 700.0
		N	15	-200 to 1300	-300 to 2300
		R	16	0 to 1700	0 to 3000
		S	17	0 to 1700	0 to 3000
		B	18	100 to 1800	300 to 3200
		W	19	0 to 2300	0 to 3200
		PL II	20	0 to 1300	0 to 2300
	Infrared Thermosensor ES1B	10 to 70°C	21	0 to 90	0 to 190
		60 to 120°C	22	0 to 120	0 to 240
		115 to 165°C	23	0 to 165	0 to 320
		140 to 260°C	24	0 to 260	0 to 500
Analog input	Current input	4 to 20mA	25	Use the following ranges for scaling: -1999 to 9999, -199.9 to 999.9, -19.99 to 99.99, -1.999 to 9.999	
		0 to 20mA	26		
	Voltage input	1 to 5V	27		
		0 to 5V	28		
		0 to 10V	29		

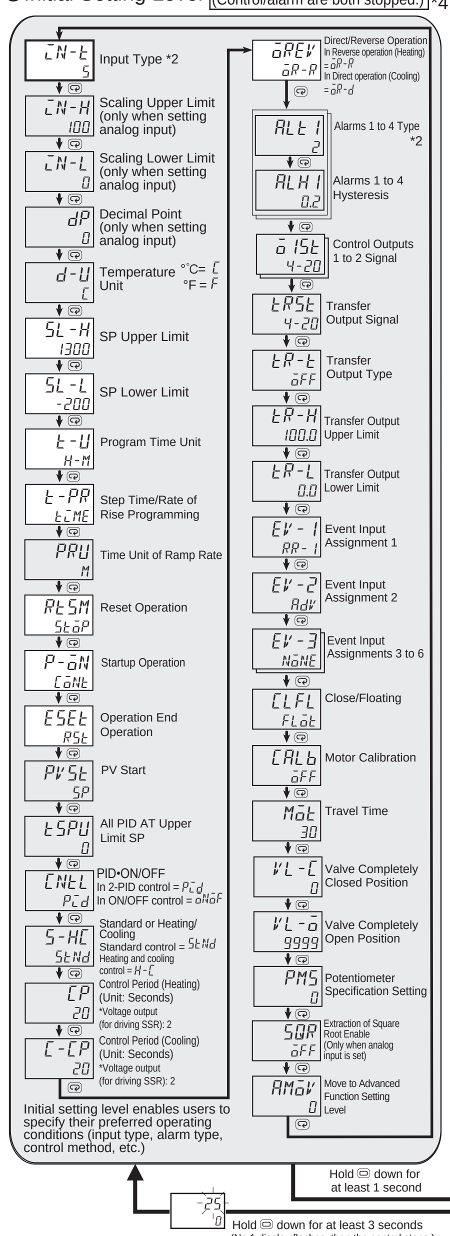
*The default is "5".

●Alarms

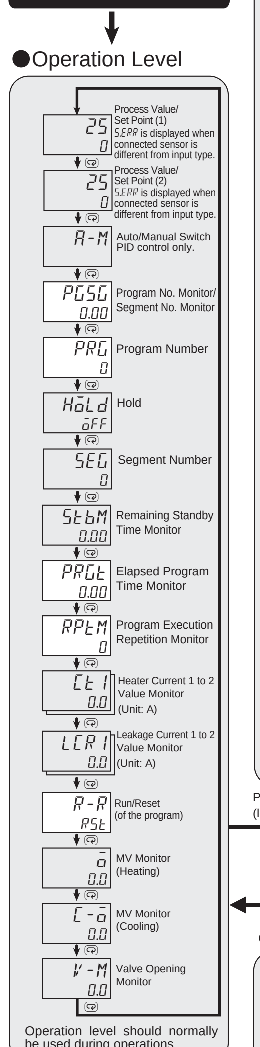
	Setting	Alarm type
	0	No alarm function
*1	1	Deviation upper/lower limit
	2	Deviation upper limit
	3	Deviation lower limit
*1	4	Deviation upper/lower range
*1	5	Deviation upper/lower limit standby sequence ON
	6	Deviation upper limit standby sequence ON
	7	Deviation lower limit standby sequence ON
	8	Absolute value upper limit
	9	Absolute value lower limit
	10	Absolute value upper limit standby sequence ON
	11	Absolute value lower limit standby sequence ON
	12	LBA (only for alarm 1)
	13	PV Change Rate Alarm
	14	SP absolute value upper limit
	15	SP absolute value lower limit
	16	MV absolute value upper limit
	17	MV absolute value lower limit

* The default alarm type is "2".

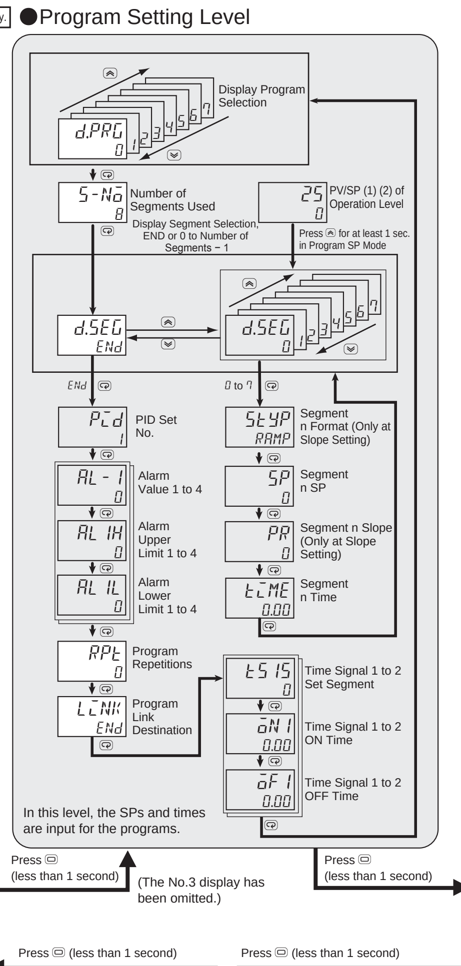
●Initial Setting Level



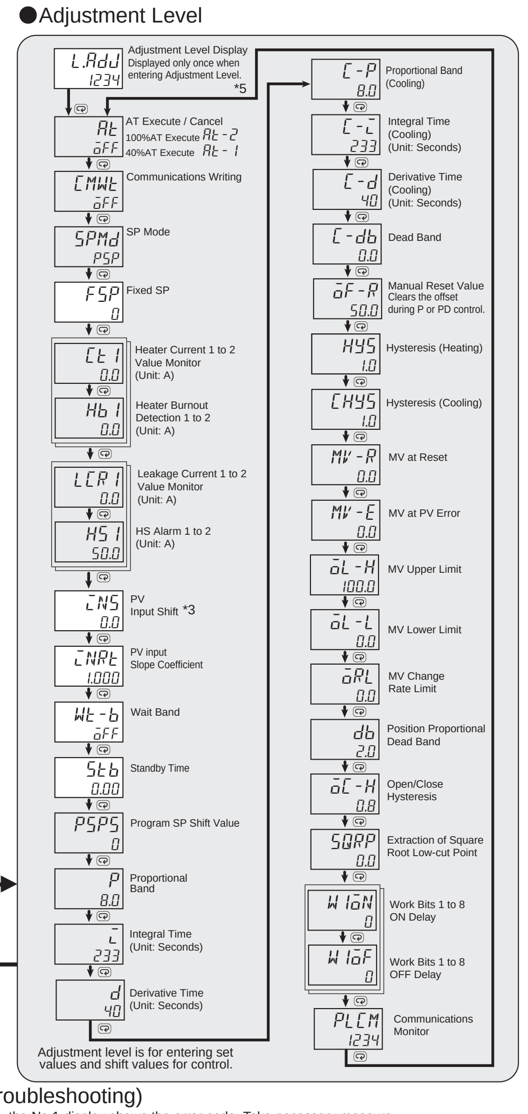
●Operation Level



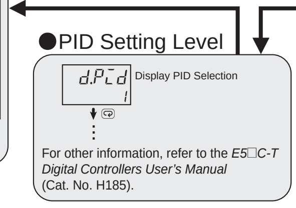
●Program Setting Level



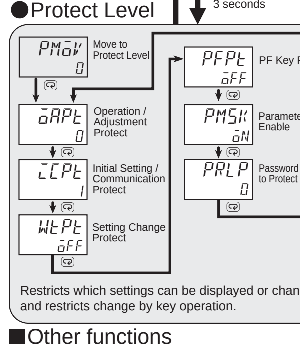
●Adjustment Level



●PID Setting Level



●Protect Level



●Error Display (troubleshooting)

■Other functions

Refer to the *E5□C-T Digital Controllers User's Manual* (Cat. No. H185) for information on the Advanced Function Setting Level, and other functions.
Refer to the *E5□C-T Digital Controllers Communications Manual* (Cat. No. H186) for information on communications.

⚠ Conformance to Safety Standard

Reinforced insulation is provided between input power supply, relay outputs, and between other terminals.
Due to UL listing requirements, use the E54-CT1L or E54-CT3L current transformer with the factory wiring (internal wiring). Use a UL category XOBA or XOBA7 current transformer that is UL Listed for field wiring (external wiring) and not the factory wiring (internal wiring).
Always externally connect the recommended fuse that is specified in the Instruction Manual before you use the Digital Controller.
The protection provided by the Digital Controller may be impaired if the Digital Controller is used in a manner that is not specified by the manufacturer.

⚠ Conformance to EN/IEC Standards

This is a class A product. In residential areas it may cause radio interference, in which case the user may be required to take adequate measures to reduce interference.

A 급 기기 (업무용 방송통신기자재)
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E5AC-T

OMRON

数字式控制器

CHN 使用说明书

感谢您购买欧姆龙E5AC-T数字式控制器。
本说明书描述了产品的功能、性能以及充分发挥产品使用效果的应用方法。
请在使用该产品时注意以下事项：
・使用该产品的人必须具备足够的电气系统知识。
・在使用该产品前应通读并理解本说明书以确保正确的使用。
・妥善保管该说明书以确保在需要时可以随时查阅。

欧姆龙公司

有关详细的应用步骤，请参阅《E5□C-T数字式控制器用户手册》（Cat. No. H188）。

安全注意事项

●警告符号的要点

警告	表示潜在的危险情况，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坏。在使用该产品前应仔细阅读本说明书。

●警告符号

警告

- 通电期间，请勿触摸端子。否则会因触电而导致轻伤。
- 不得让金属物体、导线或安装时产生的切屑或湿气进入控制器、调试工具端口或调试工具电缆连接器的引脚上。否则会导致触电、火灾或机器误动作。在不将封盖用于防止异物进入端口时，请将其安装于前面板调试工具端口上。
- 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度伤害。
- 绝对不要拆卸、改装以及修理该产品或接触任何内部元件。否则会导致轻微触电、火灾或机器误动作。
- 注意一火灾或触电的危险
  a) 该产品为UL列表的开放型过程控制设备，必须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) 信号输入为SELV（安全低压电源），回路受限。
  d) 注意：为了减少火灾或触电的危险，请勿将不同的2类回路的输出互联。
- 如果输出继电器超过了预期的使用寿命，有时会发生触点熔化或燃烧。始终要注意输出继电器的应用环境，并在额定负载及预期寿命以内使用。输出继电器的预期寿命随着输出负载以及开关条件的变化而变化。
- 松动的螺丝可能导致火灾。请以指定的0.43～0.58 N・m的指定扭矩拧紧螺丝。
- 请设定适合系统控制用的产品参数。如果设定不当，可能会因意外操作而造成财产损失或事故。
- 控制器误动作很可能造成控制操作失效或阻止报警输出，导致财产损失。为了在控制器发生误动作时确保安全，应采取适当的安全措施，如使用单独的线路安装监控设备。

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事项内容。

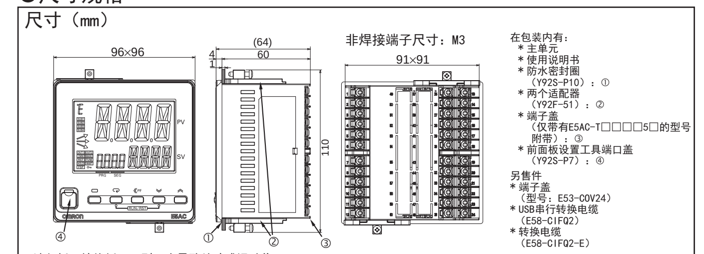
安全注意事项

●规格

■接线

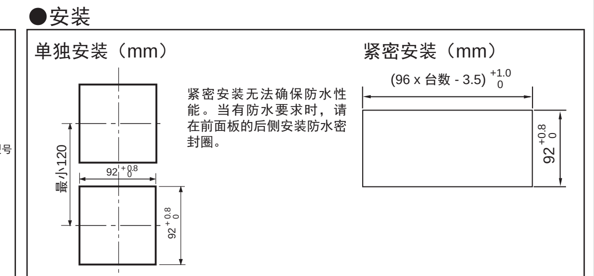
●尺寸规格

尺寸（mm）

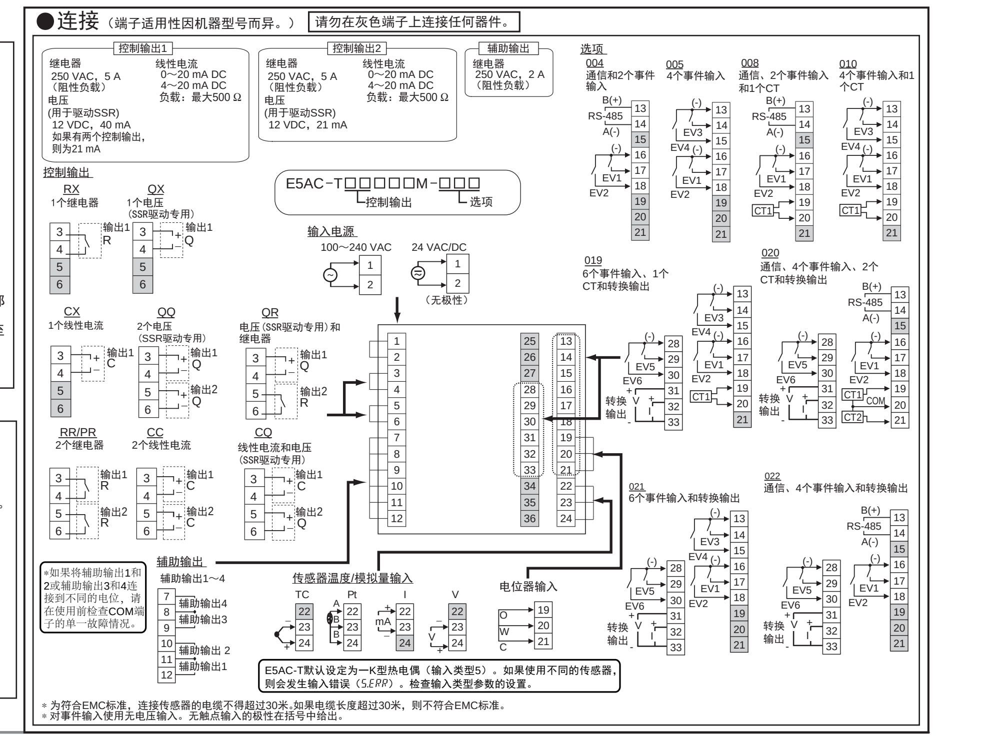


●安装

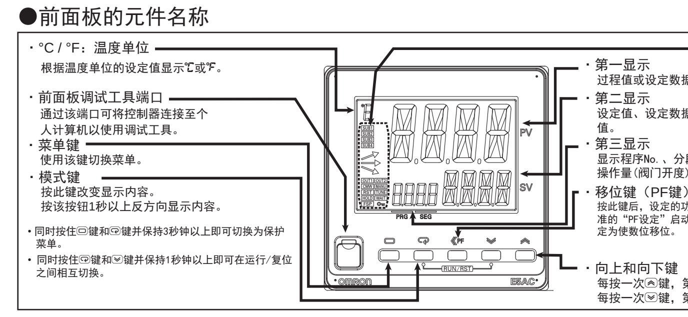
单独安装（mm） 紧密安装（mm）



●连接



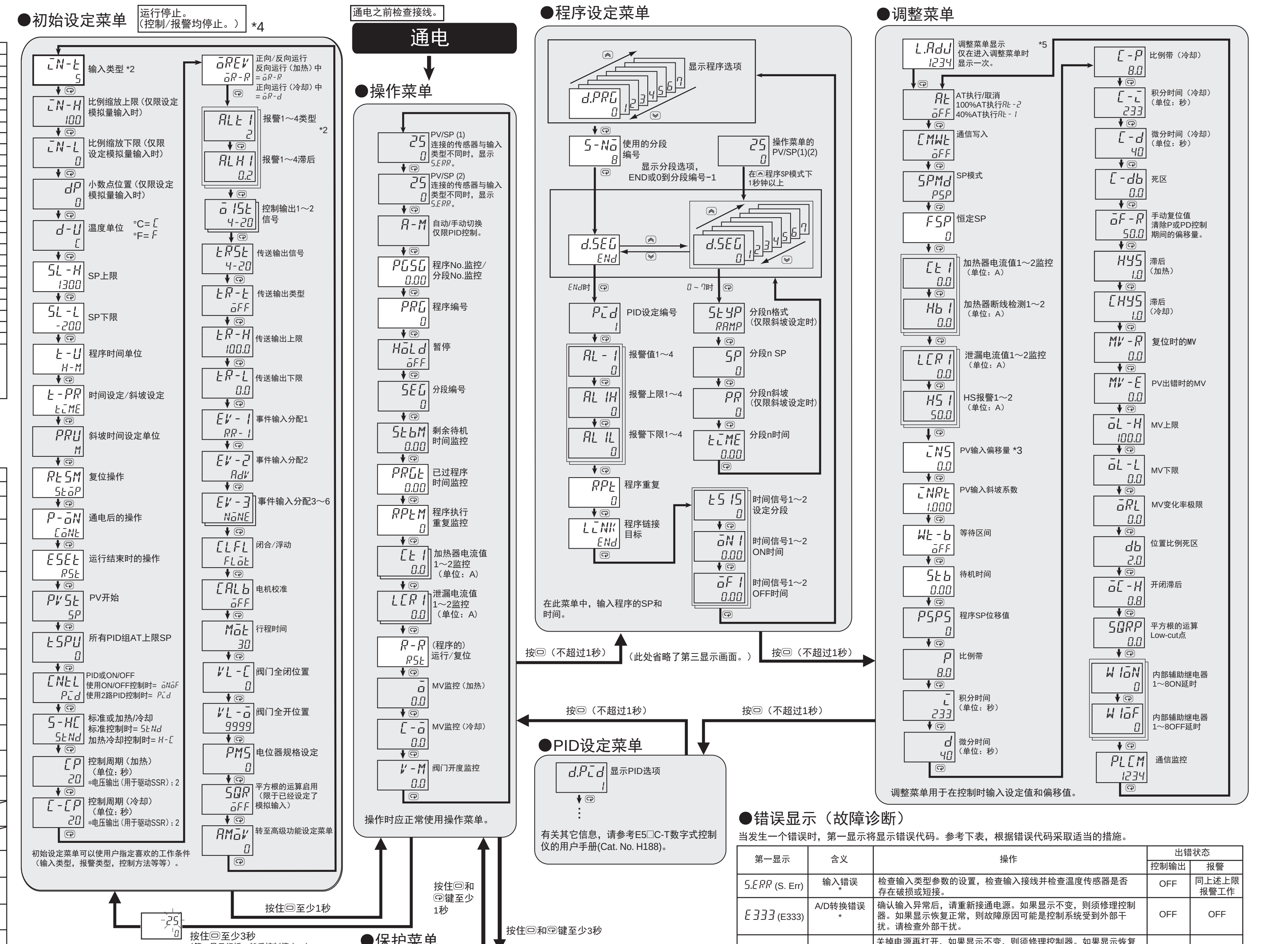
●前面板的元件名称



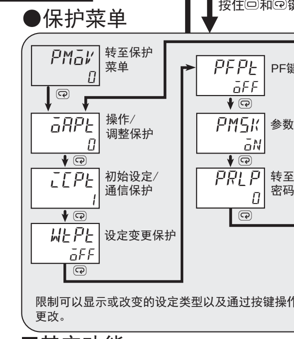
■操作菜单

●输入类型

●报警



●保护菜单



●错误显示（故障诊断）

■其它功能

⚠ 符合安全标准

⚠ 符合EN/IEC标准

■联系方式

欧姆龙自动化（中国）有限公司
技术咨询热线 400-820-4535
网址：http://www.fa.omron.com.cn

形 E5AC-T

OMRON

デジタル調節計

JPN 取扱説明書

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・この取扱説明書をよくお読みになり、十分にご理解のうえ、正しくご使用ください。
・この取扱説明書はいつでも参照できるよう大切に保管ください。

オムロン株式会社

5377466-5A（Side-B）

●警告表示

⚠ 注意

感電により軽度の傷害が稀に起こる恐れがあります。通電中は端子に触らないでください。

軽度の感電、発火、機器の故障が稀に起こる恐れがあります。製品の内部や設定ツール用ポート内部、設定ツール用ケーブルのコネクタ部のピン間に金属、導線、取り付け加工中の切粉、または水分などが入らないようにしてください。また、前面設定ツール用ポートを使用されないときは、上記の異物が入らないようにカバーを確実に閉めてください。

爆発により稀に軽度の傷害の恐れがあります。引火性、爆発性ガスのある所では使用しないでください。

軽度の感電、発火、機器の故障が稀に起こる恐れがあります。分解、改造、修理したり、内部に触らないでください。

注意 火災や感電の危険
a) 当機は、オープンタイプのプロセスコントローラとしてUL Listingの認証を受けていますので、必ず外へ火の出ない構造の盤内でご使用ください。
b) 2つ以上の遮断スイッチをご使用の場合、修理点検前に、全てのスイッチをOFFし製品を無通電状態にしてください。
c) 信号入力はSELV、制限回路です。
d) 注意：火災や感電の危機を低減する為、異なるClass 2回路の出力を内部で接続しないでください。

寿命を超えた状態で使用すると接点溶着や焼損が稀に起こる恐れがあります。必ず実使用条件を考慮し、定格負荷、電気的寿命回数内でご使用ください。出力リレーの寿命は、開閉容量、開閉条件により大きく異なります。

ねじがゆるむと発火が稀に起こる恐れがあります。端子ねじは規定トルク0.43–0.58 N·mで締めてください。

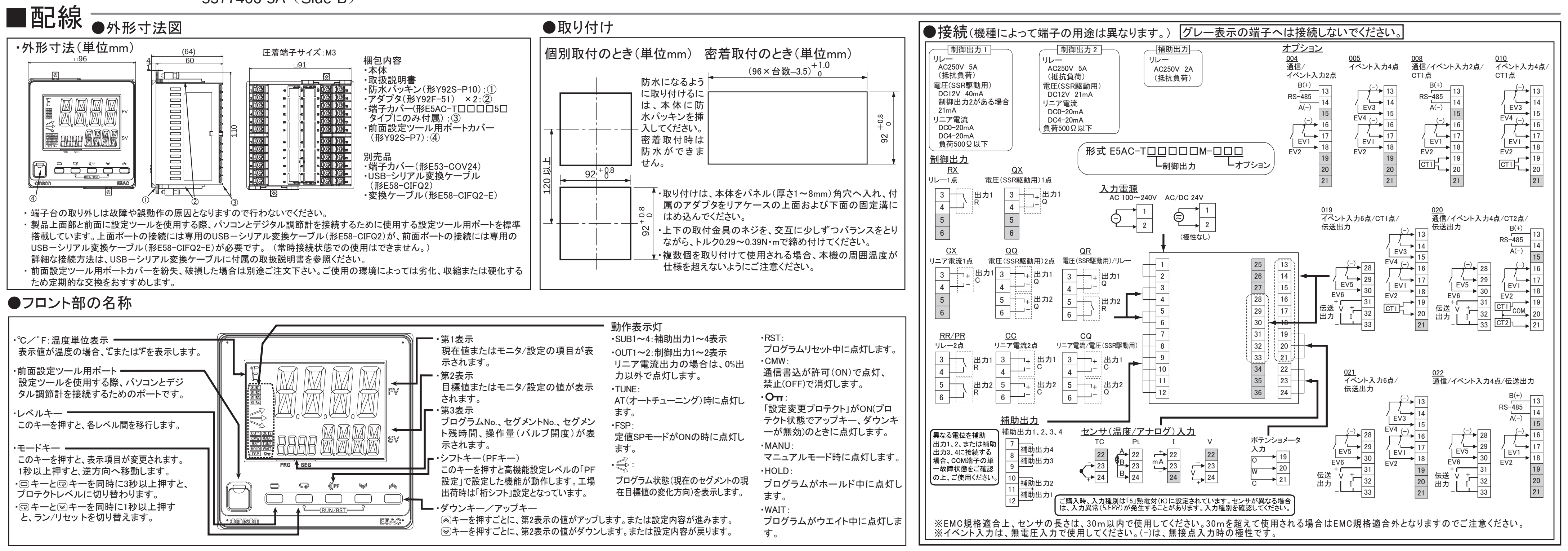
設定内容と制御対象の内容が異なる場合には、意図しない動作により稀に、装置の破損や事故の原因となります。デジタル調節計の各種設定値は、制御対象に合わせて正しく設定してください。

デジタル調節計の故障により制御不能や警報出力が出なくなると本機へ接続されている設備、機器等への物的損害が稀に起こる恐れがあります。本機の故障時にも安全なように、別系統で監視機器を取り付けるなどの安全対策を行ってください。

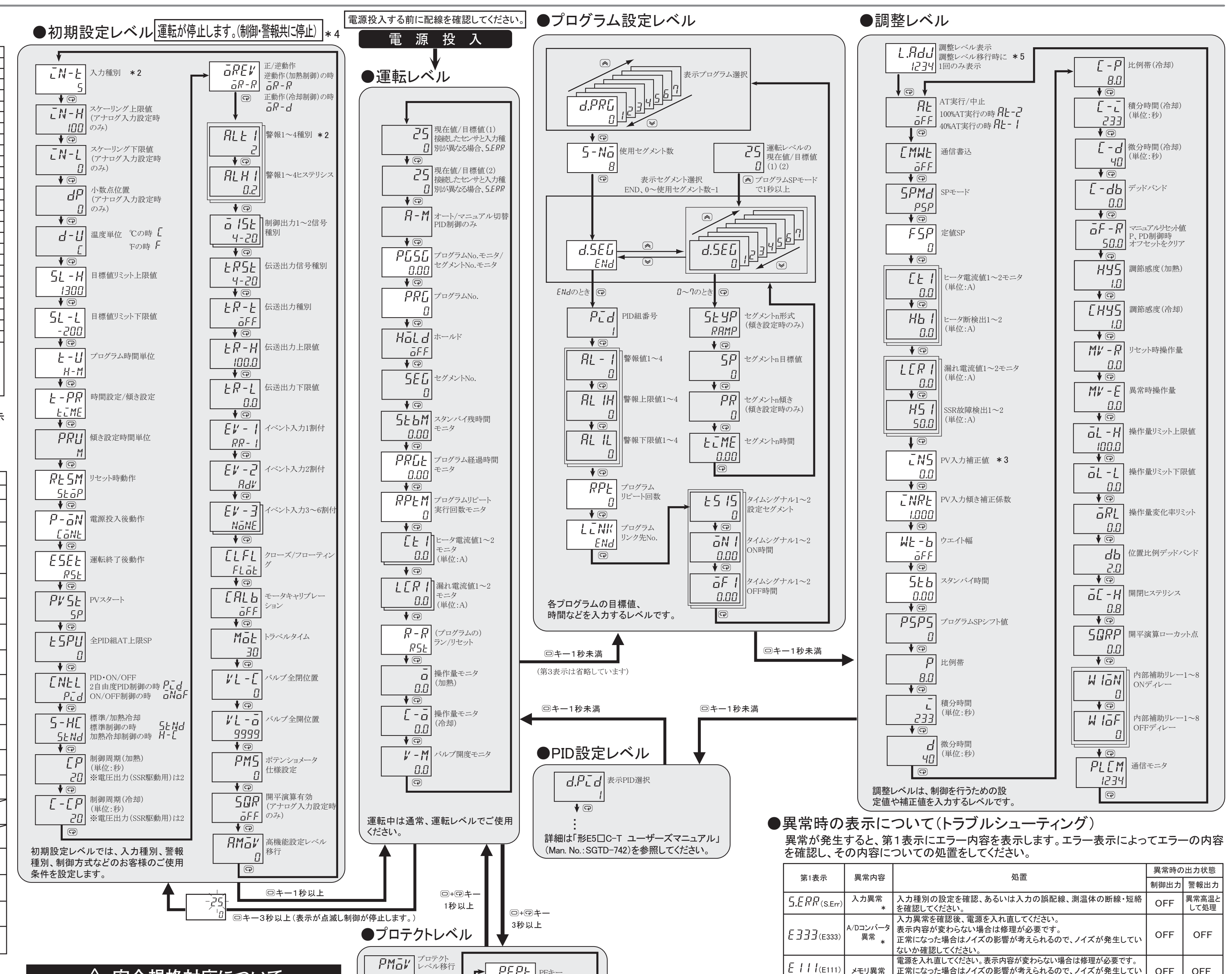
ご承諾事項

当社商品は、一般工業製品向けの汎用品として設計製造されています。従いまして、次に掲げる用途での使用を意図しておらず、お客様が当社商品をこれらの用途に使用される際には、当社は当社商品に対して一切保証をいたしません。ただし、次に掲げる用途であっても当社の意図した商品用途の場合や特別の合意がある場合は除きます。
a) 高い安全性が必要とされる用途（例：原子力制御設備、燃焼設備、航空・宇宙設備、鉄道設備、昇降設備、娯楽設備、医用機器、安全装置、その他生命・身体に危険が及びうる用途）
b) 高い信頼性が必要な用途（例：ガス・水道・電気等の供給システム、24時間連続運転システム、決済システムほか権利・財産を取扱う用途など）
c) 厳しい条件または環境での用途（例：屋外に設置する設備、化学的汚染を被る設備、電磁的妨害を被る設備、振動・衝撃を受ける設備など）
d) カタログ等に記載のない条件や環境での用途
＊ (a)から(d)に記載されている他、本カタログ等記載の商品は自動車（二輪車含む。以下同じ）向けではありません。自動車に搭載する用途には利用しないで下さい。自動車搭載用商品については当社営業担当者にご相談ください。
＊ 上記は適合用途の条件の一部です。当社のベスト、総合カタログ、データシート等最新版のカタログ、マニュアルに記載の保証・免責事項の内容をよく読んでご使用ください。

■配線 / ●取り付け



■操作メニュー



E5AC-T

OMRON

디지털 온도조절기

KOR 취급 설명서

오므론 제품을 구입해 주셔서 감사합니다. 이 취급 설명서에서는 이 제품을 사용하는데 필요한 기능, 성능, 사용 방법 등의 정보를 기재하고 있습니다. 이 제품을 사용 하실때는 아래의 같은 사항을 지켜 주십시오.
• 이 제품은 전기 지식을 가진 전문가가 취급하여 주십시오.
• 이 취급 설명서를 충분히 이해한 후 올바르게 사용하여 주십시오.
• 이 취급 설명서는 언제라도 참고할 수 있도록 잘 보관하여 주십시오.

OMRON Corporation

●경고 표시

안전상의 요점

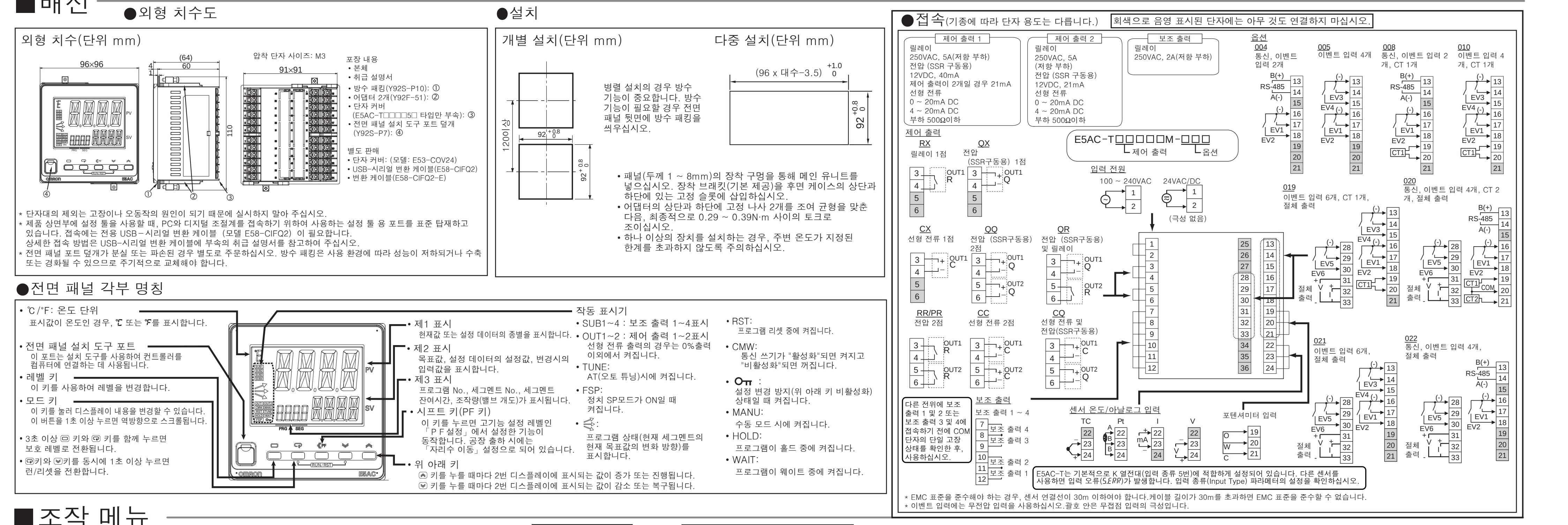
제품의 동작 불량, 오동작 또는 성능·기능에의 악영향을 막기 위해 다음 사항을 지켜 주십시오. 불편 사항이 드물게 일어나는 일이 있습니다. 제품을 사양에 맞게 사용하십시오.
(1) 옥내 전용 기기는 옥내에서만 사용하여 주십시오. 단, 아래와 같은 환경에서는 사용하지 말아 주십시오.
 • 가열 기기로부터 복사열을 직접 받는 장소
 • 물이 있는 곳, 기름이 있는 장소
 • 직사 광선이 있는 장소
 • 온도 변화가 격렬한 장소
 • 결빙, 결로의 우려가 있는 장소
 • 진동, 충격의 영향이 큰 장소
 • 먼지, 부식성가스 (특히 유황화작용 가스, 암모니아가스 등)가 있는 장소
(2) 주위 온도 및 습도는 사양 범위내에서 사용 및 보존하여 주십시오. 필요시 강제 냉각해 주십시오.
(3) 방열을 방해하지 않도록 온도 조절기의 주변을 막지 말아 주십시오. 온도 조절기 본체의 통풍구는 막지 말아 주십시오.
(4) 단자의 극성을 확인하여 올바르게 배선하여 주십시오.
(5) 배선용 압착 단자는 지정 사이즈(M3, 폭 5.8 mm이하)의 것을 사용하여 주십시오. 접속의 배선재는 같은 종류로 AWG24(단면적 0.205 mm²) –AWG18(단면적 0.8231 mm²) 단선을 사용하여 주십시오.(전선 피복 : 6~8 mm) 1 단자에의 배선은 같은 크기와 같은 종류의 선으로 2개까지, 압착 단자는 2매까지의 접속하여 주십시오.
(6) 사용하지 않는 단자에는 아무것도 접속 하지 말아 주십시오.
(7) 강한 고주파를 발생하는 기기나 서지를 발생하는 기기로부터 가능한 한 멀리 설치하여 주십시오. 배선은 고전압, 대전류의 동력선과는 분리 해 배선하여 주십시오. 또, 동력선과 평행 배선이나 동일 배선을 피해 주십시오.
(8) 전원 전압 및 부하는 사양, 정격의 범위내에서 사용하여 주십시오.
(9) 전원 전압은 2초 이내에 정격 전압에 이르도록 스위치, 릴레이등의 접점을 개입시켜 단번에 인가해 주십시오. 서서히 전압을 인가하면 전원을 리셋 하지 못하거나 출력의 오동작이 발생하는 일이 있습니다.
(10) 온도 조절기에 전원 투입 후 올바른 온도를 표시할 때까지 30분 걸립니다.(실제로 제어를 시작하는 시간전에 전원을 투입하여 주십시오)
(11) 작업자가 즉시 전원을 OFF 할 수 있도록 스위치 또는 서킷 브레이커를 설치하고 적절하게 표시하여 주십시오.
(12) 세척할 때 페인트 시너 또는 유사한 화학물질을 마십시오. 표준 등급 알코올을 사용하십시오.
(13) 전원을 투입하고 온도 조절기의 출력이 확정될때까지 2초 걸립니다. 이 시간을 고려(제어반등의)해 설계해 주십시오.
(14) 초기설정 시 이동하는 모드에 따라 출력이 OFF 될 수 있기 때문에 이 사항을 고려하여 제어 해 주십시오.
(15) 비휘발성 메모리의 쓰기 작업 횟수는 제한적입니다. 통신 등 데이터를 빈번히 고쳐 쓰는 경우는 RAM 모드로 사용하여 주십시오.
(16) 폐기를 위해 디지털 컨트롤러를 분해하는 경우 적절한 공구를 사용하십시오.
(17) 전면 패널 설치 도구 포트와 상단 패널 설치 도구 포트 모두에 동시에 케이블을 연결하지 마십시오. 디지털 컨트롤러가 손상되거나 고장이 발생할 수 있습니다.
(18) 사양에 명시된 통신 거리가 초과되지 않도록 하고, 지정된 통신 케이블을 사용하십시오. 통신 거리 및 케이블 사양에 대한 내용은 E5□C-T Digital Controllers User's Manual (Cat. No.: H185)를 참조하십시오.
(19) USB-시리얼 변환 케이블이 연결된 상태에서 디지털 컨트롤러의 전원을 켜거나 끄지 마십시오. 디지털 컨트롤러에 고장이 생길 수 있습니다.
(20) 최대 단자 온도는 75℃이므로 주의해 주십시오.단자 연결에는 최소 75°C의 내열성을 가진 전선을 사용하십시오.

●사양

전원 전압	100-240VAC 50/60Hz 또는 24VAC 50/60Hz/24VDC
허용 전압 변동 범위	정격 전압의 85 ~ 110%
소비 전력	최대 9.0VA (100 ~ 240VAC) 최대 5.6VA (24VAC)/최대 3.4W (24VDC)
지시 정도 (주변 온도: 23℃)	열전대: (지시값의±0.3% 또는 ±1℃의 큰 쪽) ±1 디지트 이하 백금측온저항체: (지시값의±0.2%또는 ±0.8℃중 큰 쪽) ±1 디지트 이하 아날로그 입력:±0.2% FS ± 1 디지트 이하
이벤트 입력	유출 전류:약 7 mA(1 접점 당)
유접점	ON:1kΩ이하, OFF:100kΩ이상
무접점	ON:잔류전압 1.5 V이하, OFF:누설 전류 0.1 mA이하
포텐셔미터 입력	최대 개도시 100Ω~10kΩ의 범위 내
제어 출력 1	릴레이 출력: SPST-NO, 250VAC 5A (저항 부하) 릴레이 전기적 수명 10만회 전압 출력(SSR 구동용) 12VDC±20% 제어 출력 1개의 경우 40mA 제어 출력이 2개일 경우 21mA 선형 전류 출력: 4 ~ 20mA DC, 0 ~ 20mA DC 부하 500Ω이하
제어 출력 2	릴레이 출력: SPST-NO, 250VAC, 5A(저항 부하) 릴레이 전기적 수명 10만회 전압 출력(SSR 구동용) 12VDC±20%, 21mA 선형 전류 출력: 4 ~ 20mA DC, 0 ~ 20mA DC 부하 500Ω이하
제어 방식	2 자유도 PID 또는 ON/OFF
보조 출력	릴레이 출력: SPST-NO, 250VAC, 2A (저항 부하) 릴레이 전기적 수명 10만회
절체 출력	4 ~ 20mA DC 부하 500Ω이하 1 ~ 5VDC 부하 1kΩ이상
사용 주위 온도	–10 ~ 55℃ (단, 결빙 또는 결로하지 않을 것)
사용 주위 습도	25 ~ 85%
보존 온도	–25 ~ 65℃ (단, 결빙 또는 결로하지 않을 것)
고도	2,000m이하
추천 퓨즈	T2A, 250 VAC, 타임 러그 저차단 용량
질량	약 250 g(본체만)
보호 구조	전면:IP66, 후면 케이스:IP20, 단자부:IP00
설치 환경	설치 카테고리II, 오염도 2(IEC61010-1에 의함)
메모리 보호	불휘발성 메모리(횟수:100만회)
일시 과전압	단시간 과전압 : 1200V+ (전원전압) 장시간 과전압 : 250V+ (전원전압)

■배선 / ●접속(기종에 따라 단자 용도는 다릅니다.)

회색으로 음영 표시된 단자에는 아무 것도 연결하지 마십시오.



■조작 메뉴