

Module type temperature controller

ML-E

INSTRUCTION MANUAL

Thank you for purchasing HANYOUNG product.
Please check whether the product is the exactly same as you ordered.
Before using the product, please read this instruction manual carefully.
Please keep this manual where you can view at any time

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※ There is an explanation about "part names and specification" in the manual.
Please refer to the ML-D4 Manual for the specific explanation about "Installation and wiring". Also, refer to ML-D4's Manual in the website for a detailed information about way of use www.hynux.com

Checking products

Check the following items

Main body	4 parts for 6 pin terminal	1 part for 5 pin terminal

Safety information

Before using the product, please read the safety information thoroughly and use it properly.
Alerts declared in the manual are classified to Danger, Warning and Caution by their criticality

	DANGER indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury
	WARNING indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury
	CAUTION indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury

Warning

- If the user uses the product with methods other than specified by the manufacturer, it will bring the bodily injuries or property damages.
- If you are concerned about serious accident due to the malfunction of products, please install safety circuit outside

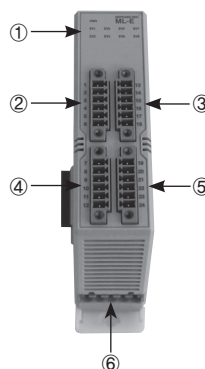
CAUTION

- For the safety and protection about the product and the system connected to it, please follow the manual and use it.
- We do not have responsibility for all the safety and damages caused by using the products without following the manual or careless use or etc.
- For the safety and protection about the product and the system connected to it, you must install a separate circuit outside the product when you are required.
- Do not disassemble, repair and remodel it as you pleases. It can cause electric shock, fire and malfunction.
- Do not give a shock to the product. It can cause a damage and malfunction of the production
- We do not have a responsibility and guarantee about the product for any of the contents other than the terms of our company's quality assurance.
- When an user or others are harmed by deflection which is unexpected by our company or natural disaster while using the product, we do not have any responsibility for the loss or indirect damage or etc.
- The guarantee period is 1 year from the date of purchasing the product. When we found out a malfunction of the product since you use it normally by the manual, we would repair it for free.
- The cost of repair after the guarantee period will be expensed according to our company's standard
- The costs of the repair for malfunction during the guarantee period are expensed as follows.
 - Malfunction by user's mistake
 - Malfunction by natural disasters
 - Malfunction by moving after the product is installed
 - Malfunction by a change of the product randomly or damage
 - Malfunction by disorder of power supply due to unstable power supply
- Please contact our company's sales team or distributor when you need A/S for malfunction or etc.

Before using

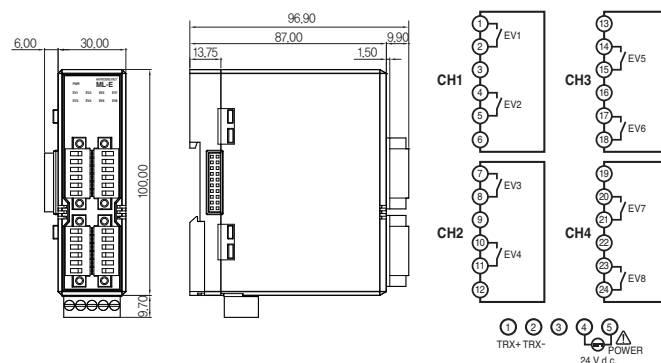
ML-E is not operating itself. Connect to ML-D and ML-M first and it is used for contact output only when the event is appeared depending on the event setting.
Please be aware to take a look at the manuals of ML-D or ML-M before using ML-E.

Part names and function



NO	Names	Function
①	LED status display	Power, LED contact output display
②	CH 1 Part	Contact output part
③	CH 2 Part	
④	CH 3 Part	
⑤	CH 4 Part	
⑥	Power and communication part	RS485 communication and 24 V DC input part

Dimension and connection diagram



Power and communication interface

※ There is no communication function for ML-E.
But, when making a module after connecting to ML-D, it provides a same function as connecting to ML-D even though power line and communication line are connected to ML-E.



〈An example of proper way of use〉 〈An example of wrong way of use〉

Specification

• Output

Contact output (relay)	1a × 8 contact 250 V AC 3 A, 30 V DC 3 A
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• Power supply specification

Power supply voltage	24 V DC
Voltage regulation	±10 % of Power supply voltage
Electric energy consumption	Below 3 W
Ambient temperature	0 ~ 50 °C
Ambient humidity	35 ~ 85 % RH (But, not dew condensation)
System requirements	Not in a poisonous gas, Not in a magnetic field or in a place where a dust is occurred.
Storage temperature	-25 ~ 65 °C
Weight	Approx. 200 g (Excludes the packing box)