

Pressure transmitter

# Supmea

## Headquarters

5th floor, Building 4, Singapore Hangzhou Science Technology Park, No. 6 street,  
Hangzhou Economic Development Area, Hangzhou 310018, China

## Singapore

2 Venture Drive #11-30 Vision Exchange Singapore

✉ [info@supmea.com](mailto:info@supmea.com)

🌐 [www.supmea.com](http://www.supmea.com)

Supmea Automation Co., Ltd.

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## **Preface**

- Thank you for purchasing our product.
- This manual is about the various functions of the product, wiring methods, setting methods, operating methods, troubleshooting methods, etc.
- Please read this manual carefully before operation, use this product correctly to avoid unnecessary losses due to incorrect operation.
- After you finish reading, please keep it in a place where it can be easily accessed at any time for reference during operation.

## **Note**

- Modification of this manual' s contents will not be notified as a result of some factors, such as function upgrading.
- We try our best to guarantee that the manual content is accurate, if you find something wrong or incorrect, please contact us.
- The content of this manual is strictly prohibited from reprinting or copying.

## **Version**

U-PD500-MYEN1

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## Safety Precautions

In order to use this product safely, be sure to follow the safety precautions described.

### About this manual

- Please submit this manual to the operator for reading.
- Please read the operation manual carefully before applying the instrument. On the precondition of full understanding.
- This manual only describes the functions of the product. The company does not guarantee that the product will be suitable for a particular use by the user.

### Precautions for protection, safety and modification of this product

- To ensure safe use of this product and the systems it controls, Please read carefully the operation manual and understand the correct application methods before putting into operation, to avoid unnecessary losses due to operation mistakes. If the instrument is operated in other ways not described in the manual, the protections that the instrument give may be destroyed, and the failures and accidents incurred due to violation of precautions shall not be borne by our company.
- When installing lightning protection devices for this product and its control system, or designing and installing separate safety protection circuits for this product and its control system, it needs to be implemented by other devices.
- If you need to replace parts of the product, please use the model specifications specified by the company.
- This product is not intended for use in systems that are directly related to personal safety. Such as nuclear power equipment, equipment using radioactivity, railway systems, aviation equipment, marine equipment, aviation equipment and medical equipment. If applied, it is the responsibility

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of the user to use additional equipment or systems to ensure personal safety.

- Do not modify this product. The following safety signs are used in this manual:



Hazard, if not taken with appropriate precautions, will result in serious personal injury, product damage or major property damage.



Warning: Pay special attention to the important information linked to product or particular part in the operation manual.



- Confirm if the supply voltage is consistent with the rated voltage before operation.
- Do not use the instrument in a flammable and combustible or steam area.
- To prevent from electric shock, operation mistake, a good grounding protection must be made.
- Thunder prevention engineering facilities must be well managed: the shared grounding network shall be grounded at is-electric level, shielded, wires shall be located rationally, SPD surge protector shall be applied properly.
- Some inner parts may carry high voltage. Do not open the square panel in the front except our company personnel or maintenance personnel acknowledged by our company, to avoid electric shock.
- Cut off electric powers before making any checks, to avoid electric shock.
- Check the condition of the terminal screws regularly. If it is loose, please tighten it before use.
- It is not allowed to disassemble, process, modify or repair the product without authorization, otherwise it may cause abnormal operation, electric shock or fire accident.
- Wipe the product with a dry cotton cloth. Do not use alcohol, benzene

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or other organic solvents. Prevent all kinds of liquid from splashing on the product. If the product falls into the water, please cut off the power immediately, otherwise there will be leakage, electric shock or even a fire accident.

- Please check the grounding protection status regularly. Do not operate if you think that the protection measures such as grounding protection and fuses are not perfect.
- Ventilation holes on the product housing must be kept clear to avoid malfunctions due to high temperatures, abnormal operation, shortened life and fire.
- Please strictly follow the instructions in this manual, otherwise the product's protective device may be damaged.



- Do not use the instrument if it is found damaged or deformed at opening of package.
- Prevent dust, wire end, iron fines or other objects from entering the instrument during installation, otherwise, it will cause abnormal movement or failure.
- During operation, to modify configuration, signal output, startup, stop, operation safety shall be fully considered. Operation mistakes may lead to failure and even destruction of the instrument and controlled equipment.
- Each part of the instrument has a certain lifetime, which must be maintained and repaired on a regular basis for long-time use.
- The product shall be scrapped as industrial wastes, to prevent environment pollution.
- When not using this product, be sure to turn off the power switch.
- If you find smoke from the product, smell odor, abnormal noise, etc., please turn off the power switch immediately and contact the company in time.

## Disclaimer

- The company does not make any guarantees for the terms outside the scope of this product warranty.
- This company is not responsible for damage to the instrument or loss of parts or unpredictable damage caused directly or indirectly by improper operation of the user.

## Package contents

Serial number	Item Name	Quantity
1	Pressure transmitter	1
2	Manual	1
3	Certificate	1

After opening the box, please confirm the package contents before starting the operation. If you find that the model and quantity are incorrect or there is physical damage in appearance, please contact us.

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## **Chapter 1 Introduction**

The integrated temperature and pressure transmitter is a transmitter that integrates pressure and temperature measurement. High-reliability silicon piezoresistive pressure sensors, thermal resistances, etc. are selected as core components. After temperature compensation, digital circuit correction and signal conditioning, standard industrial signals are output. Products are carefully designed, component screening, process verification and curing, cyclic loading and aging, environmental simulation testing and other processes to ensure that each product is stable and reliable.

The integrated temperature and pressure transmitter is widely used in various pressure measurement due to its excellent accuracy and reliability. Especially in coal mine, oil field, chemical industry, environmental protection, medicine, water affairs and other industries

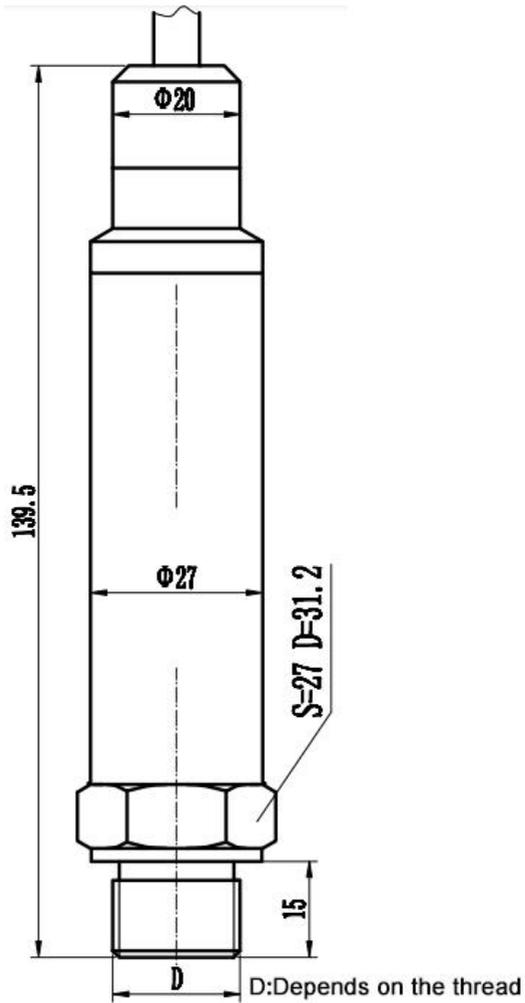
## **Chapter 2 Features**

- Temperature and pressure 2 in 1
- High stability and low offset.
- Various structures are available.
- Strong versatility

## Chapter 3 Parameters

Details	Parameters
Measuring range	Pressure 0~600kPa...60MPa
	Temperature (0~+80) °C
Overload pressure	≤1.5 times full scale
Pressure type	G (Gauge pressure)
Accuracy	Pressure 0.5%
	Temperature 2.5%
Long term stability	±0.2%FS/year
Zero temperature drift	±0.03%FS/°C
Sensitivity temperature drift	±0.03%FS/°C
Compensated temperature	(-10~60) °C
Medium temperature	(-30~65) °C
Power supply	(12~30) VDC
Output signal	(4~20) mA
Load Resistance	Current type: ≤ (U-12) /0.02 (Ω)
Ingress protection	IP68

## Chapter 4 Constructions



## **Chapter 5 Electrical Connections**

Current output: Red wire: Power positive (VCC)

Green line: pressure signal current output (P lout)

Yellow line: temperature signal current output (T lout)

Black wire: shielded ground wire (PE)

Note: This instrument is a two-wire current output transmitter, and PE is a shielded ground wire.

## **Chapter 6 Precautions**

- (1) When installing the product, please pay attention to thread protection to prevent bump damage.
- (2) The cable is made of PVC by default. If you have special requirements, please specify when ordering.
- (3) Gauge pressure products with a pressure range of less than 3MPa are equipped with ventilation holes or ventilation cables, and it is necessary to prevent the ventilation holes from being blocked.

## **Chapter 7 Warranty & After-sales Service**

We promise to the customer that the hardware accessories provided during the supply of the instrument have no defects in material and manufacturing process. From the date of the purchase, if the user's notice of such defects is received during the warranty period, the company will unconditionally maintain or replace the defective products without charge, and all non customized products are guaranteed to be returned and replaced within 7 days.

Disclaimers:

- During the warranty period, product faults caused by the following reasons are not in the scope of Three Guarantees service
- Product faults caused by improper use by customers.
- Product faults caused by disassembling, repairing and refitting the product.

After-sales service commitment:

- We promise to deal with the customer's technical questions within 2 hours.
- For the instruments returned to the factory for maintenance, we promise to issue the test results within 3 working days and the maintenance results within 7 working days after receiving them.