



BANNING
PRESSURE TRANSMITTER
PTM3051S



BANNING

DESCRIPTION

The internal chip of the PTM3051S monocrystalline silicon pressure transmitter adopts the MEMS monocrystalline silicon pressure chip imported from Germany. The sensor signal is converted into a standard signal output by a dedicated signal processing module. After long-term aging and stability screening, the product performance is stable and reliable. It is used in harsh environment and open air conditions., at the same time can be on-site pressure display, zero, full range, etc.

CHARACTERISTICS

- Using German imported MEMS monocrystalline silicon pressure chip.
- Wide range coverage
- Two-wire system, 4 ~ 20mA HART® protocol digital communication.
- Smart LCD screen head with backlight
- Both remote transmission and local zero and span adjustment.
- Full range, high precision and good stability.
- Flameproof shell structure, strong anti-frequency interference.
- No mechanical transmission parts, strong vibration resistance.

PREFORMANCE

Parameter	PTM3051S
Measuring range	0 ~ 6kPa...40MPa
Pressure type	Gauge pressure, sealed pressure
Power output	4 ~ 20mA@HART protocol (18V ~ 36V, generally 24V)
Precision	0.075%FS
Zero temperature drift	± 0.3%FS/55
Sensitivity temperature drift	± 0.5%FS/55
Ambient temperature	-30 ~ 80 ; with liquid crystal head-30 ~ 70
Medium temperature	-40 ~ 104
Storage temperature	-40 ~ 85
Insulation resistance	100M /500VDC(200M /250VDC)
Mechanical vibration	20g (20 ~ 5000Hz)
Impact	100g (11ms)
Overload pressure	See range selection
Long-term stability	± 0.2%FS/year
Protection level	IP65
Explosion-proof grade	Exd II BT6 Gb
Material	Low copper aluminum alloy shell; isolation diaphragm 316L, Hastelloy C, tantalum
Media compatible	Various media compatible with 316L stainless steel
Response time	1ms (up to 90%FS)

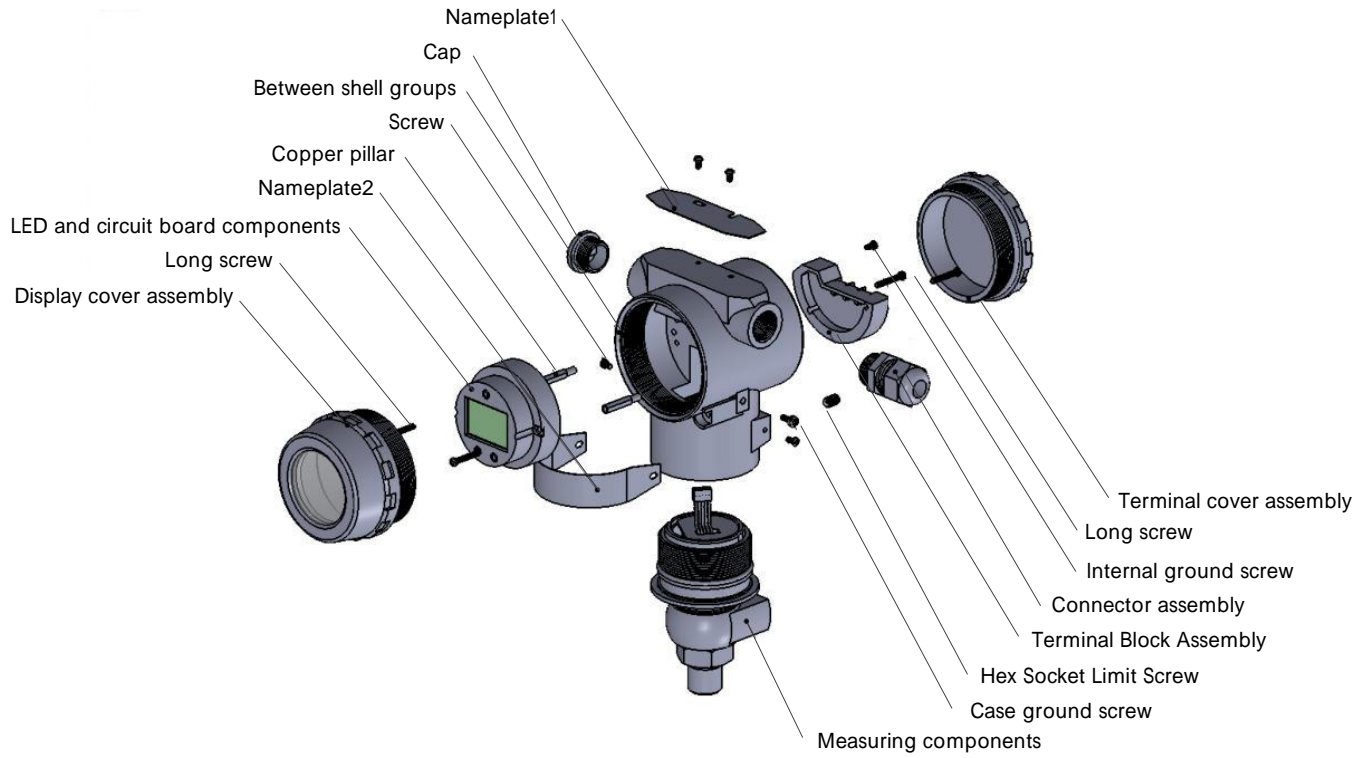
APPLICATION

- Process control fields in industries such as petroleum, chemical, metallurgy, electricity, food, paper, medicine, machinery manufacturing, scientific experiment and aviation military;

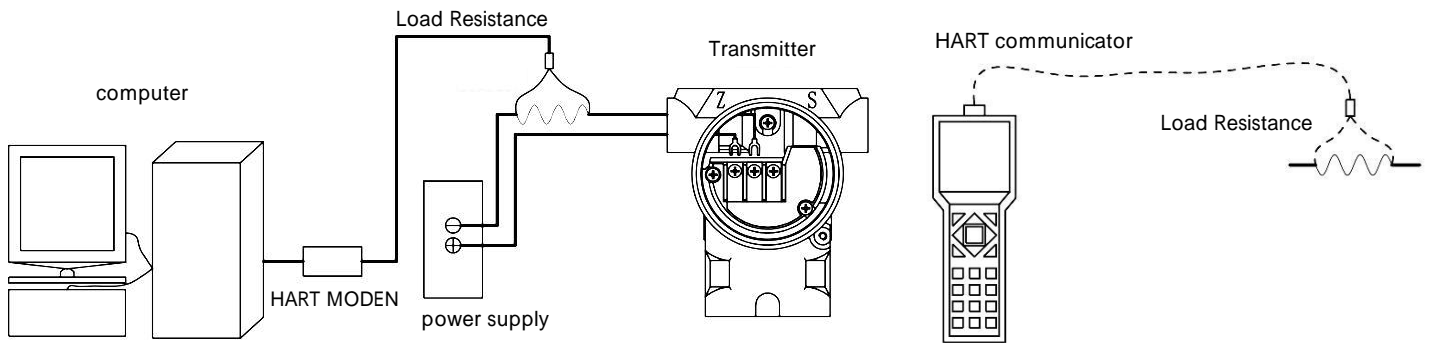
EXTERNAL STRUCTURE

Product Type	Dimensions		Unit: mm
Standard type			
Thread code	C1 : M20 × 1.5-6g	C2 : G1/2	
Dimensions Unit: mm			
Recommended torque	15 ~ 25Nm		15 ~ 25Nm
Thread code	C7 : NPT1/2	C7F : NPT1/2 (Female)	
Recommended torque	15 ~ 25Nm		15 ~ 25Nm

COMPONENT DIAGRAM

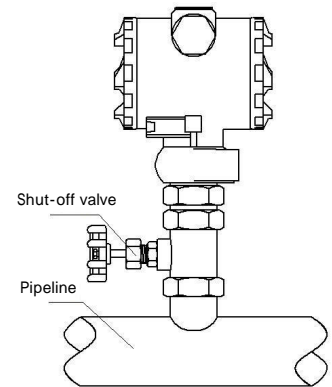


HART COMMUNICATION CONNECTION DIAGRAM



INSTALLATION DIAGRAM

- The product is installed vertically on the site pressure interface;
- When installing in the open air, the transmitter should be placed in a ventilated and dry place as much as possible to avoid direct light and rain, otherwise it will deteriorate the performance or malfunction.
- When the product is installed in the thunder area, please indicate "lightning protection" when ordering. At the same time, it is recommended that users install lightning protection devices on the site and ensure that the product and power supply are reliably grounded to reduce the probability of lightning damage to the transmitter.
- If the transmitter is found to have no or abnormal output after installation, please check:
 - a: Whether the electrical connection is accurate and firm;
 - b: Whether the power supply voltage is too low and the load resistance is too large.

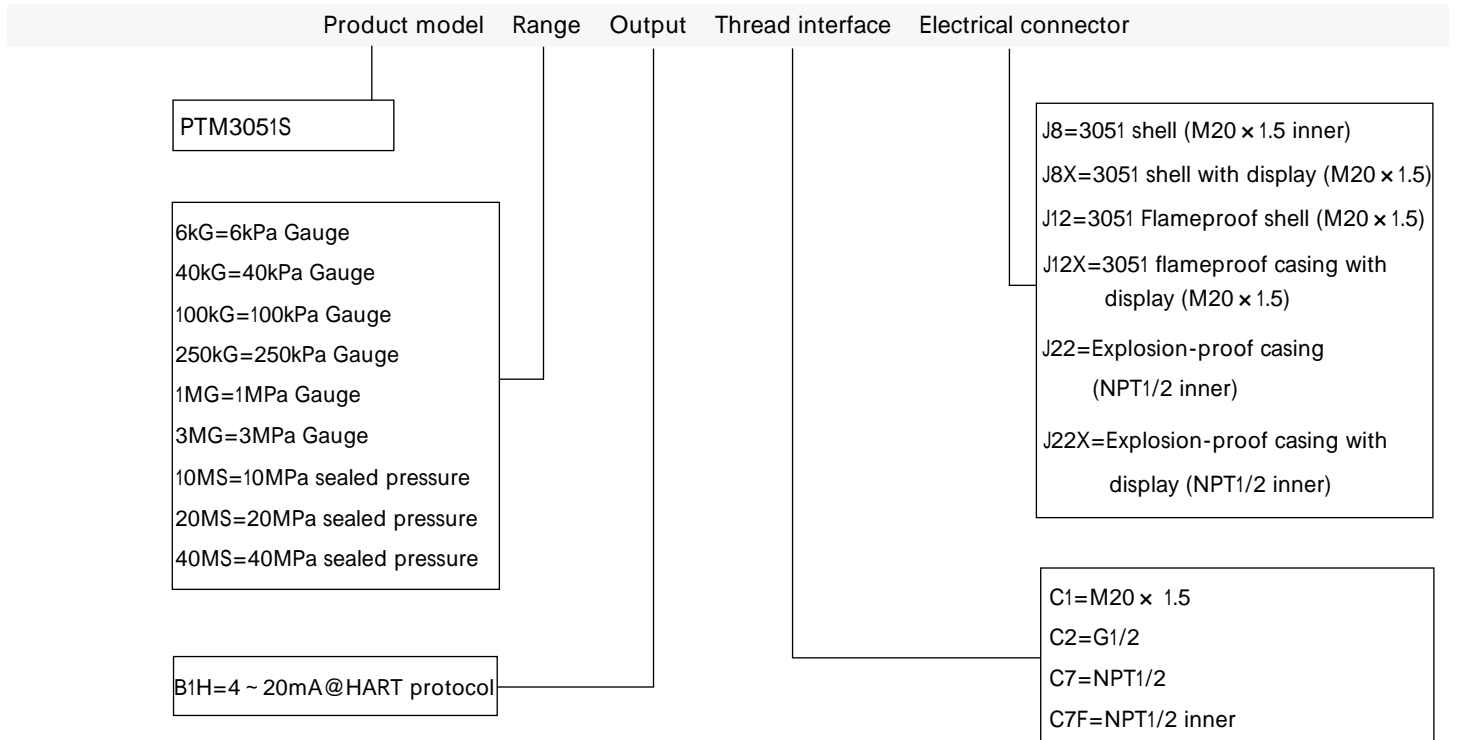


RANGE SELECTION

Range code	Measuring range	Overload pressure
6KG	0 ~ 6kPa	300kPa
35KG	0 ~ 35kPa	1MPa
100KG	0 ~ 100kPa	2MPa
250KG	0 ~ 250kPa	4MPa
1MG	0 ~ 1MPa	6MPa
3MG	0 ~ 3MPa	12MPa
10MS	0 ~ 10MPa	20MPa
20MS	0 ~ 20MPa	40MPa
40MS	0 ~ 40MPa	60MPa

Note: G gauge pressure, S sealed pressure

NOMENCLATURE



FOR EXAMPLE : PTM3051S-40KGB1HC7J12X

Product model: PTM3051S, range: 40kPa gauge pressure, output: 4 ~ 20mA @HART protocol, interface thread: NPT1/2, electrical connection: 3051 flameproof casing with display (M20 x 1.5).

NOTE

- Accessories need to be purchased separately.

DISCLAIMER

Warning

LIFE OR PROPERTY RISK

- Please ensure that this product has been designed as part of whole system and already considered related risks, make sure the product has the correct ratings and is designed based on the entire system. It must not be used when applications related to serious life or property damage risks.

Failure to follow this instruction can result in death or serious injury.

Warning

PERSONAL INJURY

- DO NOT USE these products as safety or emergency stop devices or in any other application where failure of the product could result in personal injury.

Failure to follow this instruction can result in death or serious injury.

Warning

MISUSE OF DOCUMENTATION

- The information presented in this product sheet is for reference only. Do not use this document as a product installation guide.
- Complete installation, operation, and maintenance information is provided in the instructions supplied with each product.

Failure to follow this instruction can result in death or serious injury.

Warranty/Remedy

Banning warrants goods of its manufacture as being free of defective materials and faulty workmanship during the applicable warranty period. Banning's standard product warranty applies unless agreed to otherwise by Banning in writing; please refer to your order acknowledgment or consult your local sales office for specific warranty details. If warranted goods are returned to Banning during the period of coverage, Banning will repair or replace, at its option, without charge those items that Banning, in its sole discretion, finds defective. The foregoing is buyer's sole remedy and is in lieu of all other warranties, expressed or implied, including those of merchantability and fitness for a particular purpose. In no event shall Banning be liable for consequential special, or indirect damages.

While Banning may provide application assistance personally, through our literature and the Banning web site, it is buyer's sole responsibility to determine the suitability of the product in the application.

Specifications may change without notice. The information we supply is believed to be accurate and reliable as of this writing. However, Banning assumes no responsibility for its use.

SALES & SERVICE

Banning serves its clients through a worldwide network of sales offices, agents and distributors. For application assistance specifications, prices or names with the nearest authorized dealer, please contact your sales specialist or contact us directly:

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