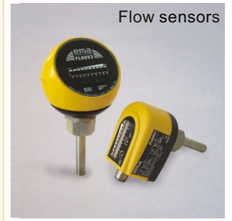
Fluid Series

- Flow Sensors
- Pressure Sensors
- Temperature Sensors
- Flow Meter

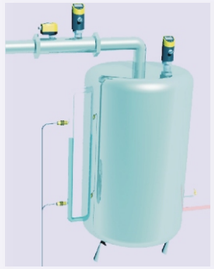
Our products pass CE and EU RoHS identification

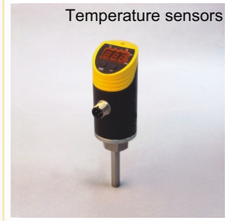
EMA has owned three main series in the category of Fuild Sensors up to now: Temperature, Pressure, and Flow Sensors. These series with similar operating principles due to the similar structures, detecting, MCU processing, output and display units. By the signals sampled via probes,fluid sensors operate the MCU (Multi Control Unit) to convert signals into digital ones which are displayed again as numerical values in a segmented display as 2-color LEDs. According to values set by the user they will be converted to digital or analog signals automatically. Users can control MCUs by using buttons on the housing. As long as the threshold value is reached, signals are generated. These outputs are the same with digital outputs (NPN / PNP outputs, hysteresis, NO / NC, window-function NO / NC); besides, pressure and temperature sensors generate analog signals (0-10V, 4-20mA). This series is completely protected from overload, short-circuit and reverse polarity. Protection rating is IP67.



Flow sensors

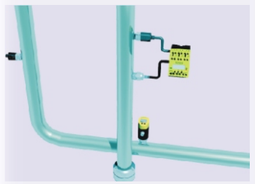
EMA's electronic flow sensors operate in accordance with theory of thermo-diffusion that the sensors are using a physical principle, flowing mediums absorption and heat transportation. There are two thermistors and one heater in the probes. This heat cause an increase in temperature in certain areas, and the increased part is detected by one probe of them. As long as the mediums passes by, the probe can cool down which is again detected by the thermistors. Absorption rate are put into relation to a rate of flow which is indicated on the unit. Flow direction and position of sensor do not matter because the unit works without mechanical parts.





Temperature sensors

ema's temperature sensors detect the operating temperatureby RTD probe and than transmits the data to an examining circuit.After processing, the current operating temperature is dis-played through LED and converted automatically into a digital (NPN, PNP) or an analog (0-10V, 4-20mA) signal.



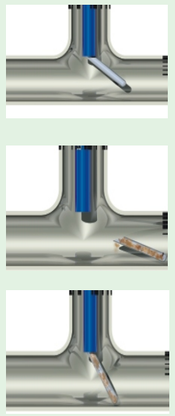
Pressure sensors

When the pressure acts on the interface of the ceramic-diaphragm,the diaphragm is deformed slightly. It is furthermore connected to a Wheatstone bridge through a thick-film-resistor in the back of the diaphragm. Due to the Piezo resistive Effect from voltage dependant resistors, the electric bridge will produce a high-linear voltage signal with a direct ratio to pressure. Then it is converted to a standard voltage signal which is then transmitted to the system. The 3-digit-segment display shows the value of pressure and then the value will be compared to setting points by the user. Finally, this value is converted to signals for switching output(NPN,PNP) or for analog output.

Features

FL series is an electronic device designed for monitoring a certain rate. Without mechanical components, this guarantees a reliable monitoring even in case of complex mediums over a long period. The purpose of FL series is to output a signal when the flow rate reaches the set-up range.Through control-calculation, FL series can proceed to warn or activate the chain of protection system in order to protect the key equipments and to avoid unexpected damage in production.
It can not only successfully reduce the possibility of breakdown and the cost of maintenance, but also keep the countless reliability of operational safety and of economic benefits.FL series is provide stable and steady service and are useable in hazardous areas by adapting to the theory of thermo-diffusion. It can be inserted into the tube or the container and set up the flow rate to an expected value. FL series is an electronic flow sensor meant for modern industry. It is applied widely in highly developed countries and has surpassed traditional flow switches.

Mechanical
Flow Switches



- Detect the flow mediums by the swing amplitude of themechanical paddles or probes.
- No matter of paddles or probes, the detection will be affected by the low sensitivity due to the rusty probes under a long-term working.
- Serious rustiness even causes the break of paddles or probes, and then falling probes may clog up the pipes or damage the machines. It not only makes the mechanical flow switches operate falsely ,but also face the derivational problems on the maintenance of pipe system and of machines.

Smart
Flow Sensors

- Equipped with a mini probe, FL series does not effect the flow of mediums while detecting the flow rate.
- The unit is also useable for applications with a slow rate of flow which causes a slow fade in temperature at the probe. The other way round, fast rates of flow can also be detected very easily up to a maximum rate of flow.
- Using stainless steel for the probe means no rust and more accurate readings.

Flow + Temperature Sensor is the most progressive technique and is created exclusively to satisfy the demands of customers. It perfectly combines temperature sensor and flow sensor in one unit. The LED bar can display indication of the temperature and flow range aswell as output warning signals separately. With features such as high precision, usage of very small space, user-friendly handling and impressive design it can be applied in all industries. Those deal with electricity, sewage disposal, petroleum, chemical engineering,metallurgy, glass, coolant system, machinery production and more.

Application

Features

Pressure sensors are applied to a variety of fields in industrial automation such as water conservancy, hydroelectric industry, intelligent architecture, automation control, aviation, military industry, petroche-mical industry, electric power, shipping, machinerytools, and more.When the pressure acts on the interface of the ceramicdiaphragm, the diaphragm is deformed slightly and then connected as a Wheatstone bridge through the thick film resistor printed in the back of the diaphragm is deformed slightly. It is furthermore connected to a Wheatstone bridge through a thick-film-resistor in the back of the diaphragm. Due to the Piezo Resistive Effect from voltage dependant resistors, the electric bridge will produce a high-linear voltage signal with a direct ratio to pressure. Then it is converted to a standard voltage signal which is then transmitted to the system. The 3-digit-segment display shows the value of pressure and the value will be compared to setting points by the user. Finally, this value is converted to signals for switching output(NPN,PNP) or for analog output.

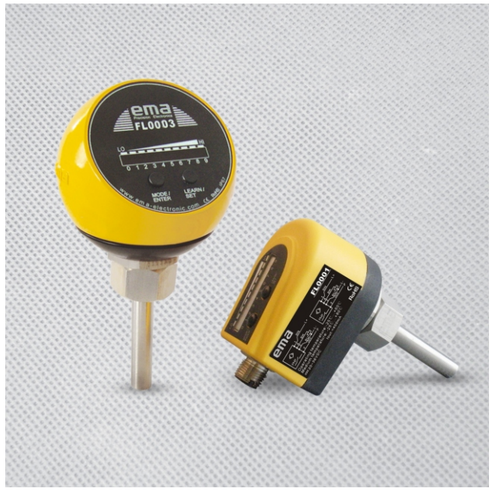
- Monitor temperature of cooling water of mould to increase or decrease the volume of flow of cooling water or to warn.
- Detect pressure of enzymes or other chemicals in containers.
- Detect temperature in liquid waste processing systems.
- Detect temperature of oils in pipes of wind power equipments.

应用

Features

Pressure sensors are applied to a variety of fields in industrial automation such as water conservancy, hydroelectric industry, intelligent architecture, automation control, aviation, military industry, petroche-mical industry, electric power, shipping, machinerytools, and more.When the pressure acts on the interface of the ceramicdiaphragm, the diaphragm is deformed slightly and then connected as a Wheatstone bridge through the thick film resistor printed in the back of the diaphragm is deformed slightly. It is furthermore connected to a Wheatstone bridge through a thick-film-resistor in the back of the diaphragm. Due to the Piezo Resistive Effect from voltage dependant resistors, the electric bridge will produce a high-linear voltage signal with a direct ratio to pressure. Then it is converted to a standard voltage signal which is then transmitted to the system. The 3-digit-segment display shows the value of pressure and the value will be compared to setting points by the user. Finally, this value is converted to signals for switching output(NPN,PNP) or for analog output.

- Measure and control the pressure of gas and of liqulid in the pipeline trans-portation systems.
- Monitor the pressure values of the oils of cutting machines.
- Monitor the pressure in the oiling cylinders, oil circuits, and oil pipes in order to secure the oild circuits and to
  Detect pressure of oils in pipes in wind power equipments.
- Detect pressure of enzymes or other chemicals in containers.
- Monitor pressure of liquids in the containers, and warn while the pressure detected is over that set by users.
- Detect pressure in liquid waste processing systems.
- Measure and control the pressure of gas and of liquids.
- Detect pressure of materials in extracting systems controled by motors.



- Programmable flow sensor. User can set the flow range and the warning signal discretionarily
- Sensible substance: gas, liquid
- Display: LED
- Power protection: overload, short-circuit, reverse polarity
- Operating temperature: -25℃~80℃

IP67 CE Oil RoHS

Accessories:

Type	Socket Order No.						Drawing No.
I L	C	02	I	5	C	12	I:E1I38 L:E1I39
	C: Cable	Length 02: 2M 05: 5M 10: 10M	Connecter I: Straight L: Angled	Core 4: 4 5: 5	Material R: PUR C: PVC F: FEP (Anti-noise)	Socket size 12: M12	See page 224

Order No.	US0001	US0002	US0003	US0007	US0009	US0023
Type	 M18 x 1.5 – M12 x 1	 M18 x 1.5 – G1/4"	 M18 x1.5 – G1/2"	 M18 x1.5 – ∅24mm	 M18 x1.5– M18 x1.5	 M18 x1.5– G1/4"
Drawing No.	E3U01	E3U02	E3U03	E3U07	E3U08	E3U13

产品结构图、附件结构图

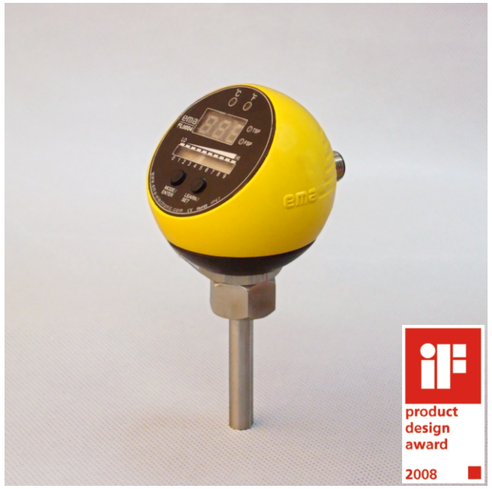
具体尺寸	>>> P.231.233–234 (US0001–US0023)

Order NO.

Order NO.	Thread Type	Thread	Housing Material	Sensible Range Liquid (cm/s)	Sensible Range gas (cm/s)	Output	Operating Voltage (V)	Drawing No.
FL0001	Internal	M18 x 1.5	PBT+GF	3~300	200~3000	PNP NO / NC	20~36 DC	E3F01
FL0002	Internal	M18 x 1.5	PBT+GF	3~300	200~3000	NPN NO / NC	20~36 DC	E3F01
FL0003	Internal	M18 x 1.5	Aluminium Alloy	3~300	200~3000	Relay NO / NC	85~265 AC	E3F02
FL0011	Internal	M18 x 1.5	PBT+GF	3~60	200~800	4~20mA	20~36 DC	E3F01
FL0012	Internal	M18 x 1.5	PBT+GF	3~300	200~3000	Relay NO / NC	20~36 DC	E3F01
FL0013	Internal	G1/2"	PBT+GF	3~300	200~3000	PNP NO / NC	20~36 DC	E3F07
FL0014	Internal	M18 x 1.5	PBT+GF	3~60	200~800	0~10V	20~36 DC	E3F01

Technical parameter:

Probe material: Stainless steel (S316L)
(FL0013:Titanium alloy+PTFE)
Connection: M12 Socket
Pressure rating [bar]: 300
Max. current load [mA]: 400
Voltage drop [V]: < 2.5
Power-on delay time [s] : < 8
Output response time [s] : < 2
4...20mA Output accuracy: ±10%
Medium temperature[℃]: -25...80
Max. temperature gradient of medium [K/min]: 300



- Programmable smart flow + temperature sensor, user can set flow range and warning signal discretionarily
- Visual indication makes the control of this sensor easier
- Sensible substance: gas, liquids
- Display: 7 digits LED digital tube (temperature display)
  3 colours LED×10 (flow display)
- Power protection: overload, short-circuit, reverse polarity
- Medium temperature: -40℃~150℃
- Ambient temperature: -25℃~80℃

IP67 CE Oil RoHS

Accessories:

Type	Socket Order No.						Drawing No.
	C	02	I	5	C	12	I:E1I38
I	C: Cable	Length 02: 2M 05: 5M 10: 10M	Connecter I: Straight L: Angled	Core 4: 4 5: 5	Material R: PUR C: PVC F: FEP (Anti-noise)	Socket size 12: M12	L:E1I39
L							See page 224

Order No.	US0001	US0002	US0003	US0007	US0009	US0023
Type	 M18 x 1.5 – M12 x 1	 M18 x 1.5 – G1/4"	 M18 x1.5 – G1/2"	 M18 x1.5 – ∅24mm	 M18 x1.5– M18 x1.5	 M18 x1.5– G1/4"
Drawing No.	E3U01	E3U02	E3U03	E3U07	E3U08	E3U13

Drawing

Page	>>> P.231.233–234(US0001–US0023)

Order NO.

Order NO.	Thread Type	Thread	Housing Material	Sensible Range Liquid (cm/s)	Sensible Range gas (cm/s)	Output	Operating Voltage (V)	Drawing No.
FL0004	Internal	M18 x 1.5	Aluminium Alloy	3~300	200~3000	2 x PNP NO / NC	20~36 DC	E3F02
FL0005	Internal	M18 x 1.5	Aluminium Alloy	3~300	200~3000	2 x NPN NO / NC	20~36 DC	E3F02

Technical parameter:

Probe material: Stainless steel (S316L)
Connection: M12 Socket
Pressure rating [bar]: 300
Max. current load [mA]: 2×400
Voltage drop [V]: < 2.5
Power-on delay time [s] : < 8
Output response time [s] : < 2
Temperature display accuracy[℃]: ±0.5
Sensing temperature range[℃]: -40...150
Operating temperature [℃]: -25...80

- Setting by potentiometer
- No pressure loses
- Full pass flow tube
- Extremely wide flow range
- Different kinds of flow medium can be measured
- Simple indication, Highly reliable

IP67 CE Oil RoHS

Drawing

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Order NO.

Order NO.	Thread Type	Thread	Housing Material	Sensible Range Liquid (cm/s)	Sensible Range gas (cm/s)	Output	Operating Voltage (V)	Drawing No.
FL1001	External	G1/2"	PBT+GF	3~300	200~3000	PNP NO	20~36 DC	E3F03
FL1002	External	G1/2"	PBT+GF	3~300	200~3000	PNP NC	20~36 DC	E3F03
FL1003	External	G1/2"	PBT+GF	3~300	200~3000	NPN NO	20~36 DC	E3F03
FL1004	External	G1/2"	PBT+GF	3~300	200~3000	NPN NC	20~36 DC	E3F03

Technical parameter:

Probe material: Stainless steel (S316L)
Connection: PVC-Cable/2m; 3x0.34mm^2
Pressure rating [bar]: 300
Max. current load [mA]: 400
Voltage drop [V]: < 2.5
Power-on delay time [s] : < 8
Output response time [s] : < 2
Max. temperature gradient of medium [K/min]: 300
Operating temperature [℃]: -25...80
Liquid SP setting [cm/s]: Adjustable via a potentiometer (Factory setting: 15)
Gas SP setting [cm/s]: Adjustable via a potentiometer (Factory setting: 150)

- Output function: can be converted by dip switches.
- Sensing substance: gas, liquid
- Display: LED
- Power protection: overload, reverse polarity
- Explosion proof classification: ExdⅡCT6

Drawing

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Order NO.

Order NO.	Thread Type	Thread	Housing Material	Sensible Range Liquid (cm/s)	Sensible Range gas (cm/s)	Output	Operating Voltage (V)	Drawing No.
FL2001	Internal	M18×1.5	Aluminium Alloy	3~300	200~3000	PNP/NPN NO/NC	20~36 DC	E3F04

Technical parameter:

Probe material: Stainless steel (S316L)
Connection: Terminal
Pressure rating [bar]: 300
Max. current load [mA]: 400
Voltage drop [V]: < 2.5
Power-on delay time [s] : < 8
Output response time [s] : < 2
Max. temperature gradient of medium [K/min]: 300
Operating temperature [℃]: -25...80
Liquid SP setting [cm/s]:Adjustable via a potentiometer (Factory setting: 15)
Gas SP setting [cm/s]:Adjustable via a potentiometer (Factory setting: 150)

- Simple and concise structure
- Different kinds of start-ups can be selected.
- Corrosion proof acidic and alkali proof
- Can be operated for 10,000 times continuously
- Can be used more than 15,000 hours

IP67 CE RoHS

Drawing

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Order NO.

Order NO.	Min. starting flow (L/min)	Thread	Housing Material	Current	Operating Voltage (V)	Drawing No.
FM0001	0.5	3/4"NPT	PP+GF	2.5A	250 DC	E3F06
FM0002	1	3/4"NPT	PP+GF	2.5A	250 DC	E3F06
FM0003	3	3/4"NPT	PP+GF	2.5A	250 DC	E3F06
FM0004	4.5	3/4"NPT	PP+GF	2.5A	250 DC	E3F06
FM0005	17	3/4"NPT	PP+GF	2.5A	250 DC	E3F06
FM0006	18	3/4"NPT	PP+GF	2.5A	250 DC	E3F06
FM0007	8	3/4"NPT	PP+GF	2.5A	250 DC	E3F06

Technical parameter:

Operating temperature [℃]: -40...100
Max. working voltage [V]: 250AC/DC
Max. current load [A]: 2.5
Drop:Safety drop height [m]:≤6

- Programmable smart pressure sensor, user can set the pressure range and the warning signal discretionarily. Offering 4 units of pressure, Bar, Kg/cm^2 , Mpa, and PSI, to be converted
- Display: LED
- Power protection: overload, short-circuit, reverse polarity
- Delivers high accuracy, high stability and is anticorrosive

IP67 CE Oil RoHS

Accessories:

Type	Socket Order No.						Drawing No.
I	C	02	I	5	C	12	I:E1I38
L							L:E1I39
	C: Cable	Length 02: 2M 05: 5M 10: 10M	Connecter I: Straight L: Angled	Core 4: 4 5: 5	Material R: PUR C: PVC F: FEP (Anti-noise)	Socket size 12: M12	

See page 224

Order No.	US0004	US0005	US0006
Type	 G1/4" – G1/2"	 G1/4" – G1/4"	 G1/4" – M20 x 1.5
Drawing No.	E3U04	E3U05	E3U06

Drawing

Page	>>> P.231.233–234(US0004–US0006)

Order NO.

Order NO.	Thread (Internal)	Dis -play	Sensible Range (bar)	Electric design	Operating Voltage (V)	Output 1	Output 2	Drawing No.
PA1101	G1/4"	7 LED	2	4 Wire	18~36 DC	PNP NO / NC, NPN NO / NC	0~10V, 4~20mA	E3P01
PA1102	G1/4"	7 LED	5	4 Wire	18~36 DC	PNP NO / NC, NPN NO / NC	0~10V, 4~20mA	E3P01
PA1103	G1/4"	7 LED	10	4 Wire	18~36 DC	PNP NO / NC, NPN NO / NC	0~10V, 4~20mA	E3P01
PA1104	G1/4"	7 LED	20	4 Wire	18~36 DC	PNP NO / NC, NPN NO / NC	0~10V, 4~20mA	E3P01
PA1105	G1/4"	7 LED	50	4 Wire	18~36 DC	PNP NO / NC, NPN NO / NC	0~10V, 4~20mA	E3P01
PA1106	G1/4"	7 LED	100	4 Wire	18~36 DC	PNP NO / NC, NPN NO / NC	0~10V, 4~20mA	E3P01
PA1107	G1/4"	7 LED	200	4 Wire	18~36 DC	PNP NO / NC, NPN NO / NC	0~10V, 4~20mA	E3P01
PA1108	G1/4"	7 LED	400	4 Wire	18~36 DC	PNP NO / NC, NPN NO / NC	0~10V, 4~20mA	E3P01
PA1109	G1/4"	7 LED	2	4 Wire	18~36 DC	PNPNO/NC,NPNNO/NC	PNPNO/NC,NPNNO/NC	E3P01
PA1110	G1/4"	7 LED	5	4 Wire	18~36 DC	PNPNO/NC,NPNNO/NC	PNPNO/NC,NPNNO/NC	E3P01
PA1111	G1/4"	7 LED	10	4 Wire	18~36 DC	PNPNO/NC,NPNNO/NC	PNPNO/NC,NPNNO/NC	E3P01
PA1112	G1/4"	7 LED	20	4 Wire	18~36 DC	PNPNO/NC,NPNNO/NC	PNPNO/NC,NPNNO/NC	E3P01
PA1113	G1/4"	7 LED	50	4 Wire	18~36 DC	PNPNO/NC,NPNNO/NC	PNPNO/NC,NPNNO/NC	E3P01
PA1114	G1/4"	7 LED	100	4 Wire	18~36 DC	PNPNO/NC,NPNNO/NC	PNPNO/NC,NPNNO/NC	E3P01
PA1115	G1/4"	7 LED	200	4 Wire	18~36 DC	PNPNO/NC,NPNNO/NC	PNPNO/NC,NPNNO/NC	E3P01
PA1116	G1/4"	7 LED	400	4 Wire	18~36 DC	PNPNO/NC,NPNNO/NC	PNPNO/NC,NPNNO/NC	E3P01
PA1117	G1/4"	7 LED	–1~1	4 Wire	18~36 DC	PNPNO/NC,NPNNO/NC	0~10V,4~20mA	E3P01
PA1118	G1/4"	7 LED	–1~1	4 Wire	18~36 DC	PNPNO/NC,NPNNO/NC	PNPNO/NC,NPNNO/NC	E3P01
PA1119	G1/4"	7 LED	600	4 Wire	18~36 DC	PNPNO/NC,NPNNO/NC	0~10V,4~20mA	E3P01
PA1120	G1/4"	7 LED	600	4 Wire	18~36 DC	PNPNO/NC,NPNNO/NC	PNPNO/NC,NPNNO/NC	E3P01
PA1121	G1/4"	7 LED	250	4 Wire	18~36 DC	PNPNO/NC,NPNNO/NC	0~10V,4~20mA	E3P01
PA1122	G1/4"	7 LED	250	4 Wire	18~36 DC	PNPNO/NC,NPNNO/NC	PNPNO/NC,NPNNO/NC	E3P01

Technical parameter:

Probe material: Stainless steel (S304)
(Can be changed to be S316L as requirement.)
Accuracy[%]: ⩽ ±0.5
Current load [mA]: 300
Voltage drop [V]: < 2
Analog output response time [ms] : < 3
Power-on delay time [s] : 0.3
Medium temperature[°C]: -25...80
Housing Material: Aluminium alloy; Stainless steel(S304), PBT+GF
Pressure component: High-precision Ceramic Sensor

- Adopting aluminum alloy as its housing material, effectively resist the interference of strong electromagnetic.
- Simple structure and practical
- Concise structure
- Power protection: overload, short-circuit, reverse polarity
- High accuracy, high stability, and strong resistance to shock
- Sensible substance: gas, liquid, steam pressure
- Analog output：4~20mA、0~10V

IP67 CE Oil RoHS

Accessories:

Type	Socket Order No.						Drawing No.
	C	02	I	5	C	12	I:E1I38
I	C: Cable	Length 02: 2M 05: 5M 10: 10M	Connecter I: Straight L: Angled	Core 4: 4 5: 5	Material R: PUR C: PVC F: FEP (Anti-noise)	Socket size 12: M12	L:E1I39
L							See page 224

Order No.	US0004	US0005	US0006
Type	 G1/4" – G1/2"	 G1/4" – G1/4"	 G1/4" – M20 x 1.5
Drawing No.	E3U04	E3U05	E3U06

Drawing

Page	>>> P.231.233–234(US0004–US0006)

Order NO.

Order NO.	Thread (Internal)	Housing Material	Sensible Range (bar)	Operating Voltage (V)	Electric design	Output	Program-mable	Drawing No.
PB1101	G1/4"	Aluminium Alloy Stainless Steel	2	8~36 DC	2 Wire	4~20mA	N	E3P02
PB1102	G1/4"	Aluminium Alloy Stainless Steel	2	16~36 DC	3 Wire	0~10V	N	E3P02
PB1103	G1/4"	Aluminium Alloy Stainless Steel	5	8~36 DC	2 Wire	4~20mA	N	E3P02
PB1104	G1/4"	Aluminium Alloy Stainless Steel	5	16~36 DC	3 Wire	0~10V	N	E3P02
PB1105	G1/4"	Aluminium Alloy Stainless Steel	10	8~36 DC	2 Wire	4~20mA	N	E3P02
PB1106	G1/4"	Aluminium Alloy Stainless Steel	10	16~36 DC	3 Wire	0~10V	N	E3P02
PB1107	G1/4"	Aluminium Alloy Stainless Steel	20	8~36 DC	2 Wire	4~20mA	N	E3P02
PB1108	G1/4"	Aluminium Alloy Stainless Steel	20	16~36 DC	3 Wire	0~10V	N	E3P02
PB1109	G1/4"	Aluminium Alloy Stainless Steel	50	8~36 DC	2 Wire	4~20mA	N	E3P02
PB1110	G1/4"	Aluminium Alloy Stainless Steel	50	16~36 DC	3 Wire	0~10V	N	E3P02
PB1111	G1/4"	Aluminium Alloy Stainless Steel	100	8~36 DC	2 Wire	4~20mA	N	E3P02
PB1112	G1/4"	Aluminium Alloy Stainless Steel	100	16~36 DC	3 Wire	0~10V	N	E3P02
PB1113	G1/4"	Aluminium Alloy Stainless Steel	200	8~36 DC	2 Wire	4~20mA	N	E3P02
PB1114	G1/4"	Aluminium Alloy Stainless Steel	200	16~36 DC	3 Wire	0~10V	N	E3P02
PB1115	G1/4"	Aluminium Alloy Stainless Steel	400	8~36 DC	2 Wire	4~20mA	N	E3P02
PB1116	G1/4"	Aluminium Alloy Stainless Steel	400	16~36 DC	3 Wire	0~10V	N	E3P02
PB1117	G1/4"	Aluminium Alloy Stainless Steel	600	8~36 DC	2 Wire	4~20mA	N	E3P02
PB1118	G1/4"	Aluminium Alloy Stainless Steel	600	16~36 DC	3 Wire	0~10V	N	E3P02
PB1119	G1/4"	Aluminium Alloy Stainless Steel	250	8~36 DC	2 Wire	4~20mA	N	E3P02
PB1120	G1/4"	Aluminium Alloy Stainless Steel	250	16~36 DC	3 Wire	0~10V	N	E3P02

Technical parameter:

Probe material: Stainless steel (S304)
(Can be changed to be S316L as requirement.)
Accuracy[%]: ＜±1
Max. temperature coefficient of zero point : 0.1
Max. temperature coefficient of sensing range value: 0.2
Analog output response time [ms] : < 3
Power-on delay time [s] : 0.3
Medium temperature[℃]: -25...80
Housing Material: Aluminium alloy; Stainless steel(S304)
Pressure component: High-precision Ceramic Sensor

Order NO.

Order NO.	Thread (Internal)	Housing Material	Sensible Range (bar)	Operating Voltage (V)	Electric design	Output	Program-mable	Drawing No.
PB1401	M14×1.5	Aluminum Alloy Stainless Steel	2	8~36 DC	2 Wire	4~20mA	N	E3P03
PB1402	M14×1.5	Aluminum Alloy Stainless Steel	2	16~36 DC	3 Wire	0~10V	N	E3P03
PB1403	M14×1.5	Aluminum Alloy Stainless Steel	5	8~36 DC	2 Wire	4~20mA	N	E3P03
PB1404	M14×1.5	Aluminum Alloy Stainless Steel	5	16~36 DC	3 Wire	0~10V	N	E3P03
PB1405	M14×1.5	Aluminum Alloy Stainless Steel	10	8~36 DC	2 Wire	4~20mA	N	E3P03
PB1406	M14×1.5	Aluminum Alloy Stainless Steel	10	16~36 DC	3 Wire	0~10V	N	E3P03
PB1407	M14×1.5	Aluminum Alloy Stainless Steel	20	8~36 DC	2 Wire	4~20mA	N	E3P03
PB1408	M14×1.5	Aluminum Alloy Stainless Steel	20	16~36 DC	3 Wire	0~10V	N	E3P03
PB1409	M14×1.5	Aluminum Alloy Stainless Steel	50	8~36 DC	2 Wire	4~20mA	N	E3P03
PB1410	M14×1.5	Aluminum Alloy Stainless Steel	50	16~36 DC	3 Wire	0~10V	N	E3P03
PB1411	M14×1.5	Aluminum Alloy Stainless Steel	100	8~36 DC	2 Wire	4~20mA	N	E3P03
PB1412	M14×1.5	Aluminum Alloy Stainless Steel	100	16~36 DC	3 Wire	0~10V	N	E3P03
PB1413	M14×1.5	Aluminum Alloy Stainless Steel	200	8~36 DC	2 Wire	4~20mA	N	E3P03
PB1414	M14×1.5	Aluminum Alloy Stainless Steel	200	16~36 DC	3 Wire	0~10V	N	E3P03
PB1415	M14×1.5	Aluminum Alloy Stainless Steel	400	8~36 DC	2 Wire	4~20mA	N	E3P03
PB1416	M14×1.5	Aluminum Alloy Stainless Steel	400	16~36 DC	3 Wire	0~10V	N	E3P03
PB1417	M14×1.5	Aluminum Alloy Stainless Steel	600	8~36 DC	2 Wire	4~20mA	N	E3P03
PB1418	M14×1.5	Aluminum Alloy Stainless Steel	600	16~36 DC	3 Wire	0~10V	N	E3P03
PB1419	M14×1.5	Aluminum Alloy Stainless Steel	250	8~36 DC	2 Wire	4~20mA	N	E3P03
PB1420	M14×1.5	Aluminum Alloy Stainless Steel	250	16~36 DC	3 Wire	0~10V	N	E3P03

Drawing

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Order NO.

Order NO.	Thread (Internal)	Housing Material	Sensible Range (bar)	Operating Voltage (V)	Electric design	Output	Program-mable	Drawing No.
PB2101	G1/4''	Aluminum Alloy Stainless Steel	2	8~36 DC	2 Wire	4~20mA	N	E3P04
PB2102	G1/4''	Aluminum Alloy Stainless Steel	2	16~36 DC	3 Wire	0~10V	N	E3P04
PB2103	G1/4''	Aluminum Alloy Stainless Steel	5	8~36 DC	2 Wire	4~20mA	N	E3P04
PB2104	G1/4''	Aluminum Alloy Stainless Steel	5	16~36 DC	3 Wire	0~10V	N	E3P04
PB2105	G1/4''	Aluminum Alloy Stainless Steel	10	8~36 DC	2 Wire	4~20mA	N	E3P04
PB2106	G1/4''	Aluminum Alloy Stainless Steel	10	16~36 DC	3 Wire	0~10V	N	E3P04
PB2107	G1/4''	Aluminum Alloy Stainless Steel	20	8~36 DC	2 Wire	4~20mA	N	E3P04
PB2108	G1/4''	Aluminum Alloy Stainless Steel	20	16~36 DC	3 Wire	0~10V	N	E3P04
PB2109	G1/4''	Aluminum Alloy Stainless Steel	50	8~36 DC	2 Wire	4~20mA	N	E3P04
PB2110	G1/4''	Aluminum Alloy Stainless Steel	50	16~36 DC	3 Wire	0~10V	N	E3P04
PB2111	G1/4''	Aluminum Alloy Stainless Steel	100	8~36 DC	2 Wire	4~20mA	N	E3P04
PB2112	G1/4''	Aluminum Alloy Stainless Steel	100	16~36 DC	3 Wire	0~10V	N	E3P04
PB2113	G1/4''	Aluminum Alloy Stainless Steel	200	8~36 DC	2 Wire	4~20mA	N	E3P04
PB2114	G1/4''	Aluminum Alloy Stainless Steel	200	16~36 DC	3 Wire	0~10V	N	E3P04
PB2115	G1/4''	Aluminum Alloy Stainless Steel	400	8~36 DC	2 Wire	4~20mA	N	E3P04
PB2116	G1/4''	Aluminum Alloy Stainless Steel	400	16~36 DC	3 Wire	0~10V	N	E3P04
PB2117	G1/4''	Aluminum Alloy Stainless Steel	600	8~36 DC	2 Wire	4~20mA	N	E3P04
PB2118	G1/4''	Aluminum Alloy Stainless Steel	600	16~36 DC	3 Wire	0~10V	N	E3P04
PB2119	G1/4''	Aluminum Alloy Stainless Steel	250	8~36 DC	2 Wire	4~20mA	N	E3P04
PB2120	G1/4''	Aluminum Alloy Stainless Steel	250	16~36 DC	3 Wire	0~10V	N	E3P04

Technical parameter:

Probe material: Stainless steel (S304)
(Can be changed to be S316L as requirement.)
Accuracy[%]: ＜±1
Max. temperature coefficient of zero point : 0.1
Max. temperature coefficient of sensing range value: 0.2
Analog output response time [ms] : < 3
Power-on delay time [s] : 0.3
Medium temperature[℃]: -25...80
Housing Material: Aluminum alloy; Stainless steel(S304)
Pressure component: High-precision Ceramic Sensor

Order NO.

Order NO.	Thread (External)	Housing Material	Sensible Range (bar)	Operating Voltage (V)	Electric design	Output	Program-mable	Drawing No.
PB2501	1/4NPT	Aluminum Alloy Stainless Steel	2	8~36 DC	2 Wire	4~20mA	N	E3P05
PB2502	1/4NPT	Aluminum Alloy Stainless Steel	2	16~36 DC	3 Wire	0~10V	N	E3P05
PB2503	1/4NPT	Aluminum Alloy Stainless Steel	5	8~36 DC	2 Wire	4~20mA	N	E3P05
PB2504	1/4NPT	Aluminum Alloy Stainless Steel	5	16~36 DC	3 Wire	0~10V	N	E3P05
PB2505	1/4NPT	Aluminum Alloy Stainless Steel	10	8~36 DC	2 Wire	4~20mA	N	E3P05
PB2506	1/4NPT	Aluminum Alloy Stainless Steel	10	16~36 DC	3 Wire	0~10V	N	E3P05
PB2507	1/4NPT	Aluminum Alloy Stainless Steel	20	8~36 DC	2 Wire	4~20mA	N	E3P05
PB2508	1/4NPT	Aluminum Alloy Stainless Steel	20	16~36 DC	3 Wire	0~10V	N	E3P05
PB2509	1/4NPT	Aluminum Alloy Stainless Steel	50	8~36 DC	2 Wire	4~20mA	N	E3P05
PB2510	1/4NPT	Aluminum Alloy Stainless Steel	50	16~36 DC	3 Wire	0~10V	N	E3P05
PB2511	1/4NPT	Aluminum Alloy Stainless Steel	100	8~36 DC	2 Wire	4~20mA	N	E3P05
PB2512	1/4NPT	Aluminum Alloy Stainless Steel	100	16~36 DC	3 Wire	0~10V	N	E3P05
PB2513	1/4NPT	Aluminum Alloy Stainless Steel	200	8~36 DC	2 Wire	4~20mA	N	E3P05
PB2514	1/4NPT	Aluminum Alloy Stainless Steel	200	16~36 DC	3 Wire	0~10V	N	E3P05
PB2515	1/4NPT	Aluminum Alloy Stainless Steel	400	8~36 DC	2 Wire	4~20mA	N	E3P05
PB2516	1/4NPT	Aluminum Alloy Stainless Steel	400	16~36 DC	3 Wire	0~10V	N	E3P05
PB2517	1/4NPT	Aluminum Alloy Stainless Steel	600	8~36 DC	2 Wire	4~20mA	N	E3P05
PB2518	1/4NPT	Aluminum Alloy Stainless Steel	600	16~36 DC	3 Wire	0~10V	N	E3P05
PB2519	1/4NPT	Aluminum Alloy Stainless Steel	250	8~36 DC	2 Wire	4~20mA	N	E3P05
PB2520	1/4NPT	Aluminum Alloy Stainless Steel	250	16~36 DC	3 Wire	0~10V	N	E3P05

Drawing

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Order NO.

Order NO.	Thread (External)	Housing Material	Sensible Range (bar)	Operating Voltage (V)	Electric design	Output	Program-mable	Drawing No.
PB2601	M20×1.5	Aluminum Alloy Stainless Steel	2	8~36 DC	2 Wire	4~20mA	N	E3P06
PB2602	M20×1.5	Aluminum Alloy Stainless Steel	2	16~36 DC	3 Wire	0~10V	N	E3P06
PB2603	M20×1.5	Aluminum Alloy Stainless Steel	5	8~36 DC	2 Wire	4~20mA	N	E3P06
PB2604	M20×1.5	Aluminum Alloy Stainless Steel	5	16~36 DC	3 Wire	0~10V	N	E3P06
PB2605	M20×1.5	Aluminum Alloy Stainless Steel	10	8~36 DC	2 Wire	4~20mA	N	E3P06
PB2606	M20×1.5	Aluminum Alloy Stainless Steel	10	16~36 DC	3 Wire	0~10V	N	E3P06
PB2607	M20×1.5	Aluminum Alloy Stainless Steel	20	8~36 DC	2 Wire	4~20mA	N	E3P06
PB2608	M20×1.5	Aluminum Alloy Stainless Steel	20	16~36 DC	3 Wire	0~10V	N	E3P06
PB2609	M20×1.5	Aluminum Alloy Stainless Steel	50	8~36 DC	2 Wire	4~20mA	N	E3P06
PB2610	M20×1.5	Aluminum Alloy Stainless Steel	50	16~36 DC	3 Wire	0~10V	N	E3P06
PB2611	M20×1.5	Aluminum Alloy Stainless Steel	100	8~36 DC	2 Wire	4~20mA	N	E3P06
PB2612	M20×1.5	Aluminum Alloy Stainless Steel	100	16~36 DC	3 Wire	0~10V	N	E3P06
PB2613	M20×1.5	Aluminum Alloy Stainless Steel	200	8~36 DC	2 Wire	4~20mA	N	E3P06
PB2614	M20×1.5	Aluminum Alloy Stainless Steel	200	16~36 DC	3 Wire	0~10V	N	E3P06
PB2615	M20×1.5	Aluminum Alloy Stainless Steel	400	8~36 DC	2 Wire	4~20mA	N	E3P06
PB2616	M20×1.5	Aluminum Alloy Stainless Steel	400	16~36 DC	3 Wire	0~10V	N	E3P06
PB2617	M20×1.5	Aluminum Alloy Stainless Steel	600	8~36 DC	2 Wire	4~20mA	N	E3P06
PB2618	M20×1.5	Aluminum Alloy Stainless Steel	600	16~36 DC	3 Wire	0~10V	N	E3P06
PB2619	M20×1.5	Aluminum Alloy Stainless Steel	250	8~36 DC	2 Wire	4~20mA	N	E3P06
PB2620	M20×1.5	Aluminum Alloy Stainless Steel	250	16~36 DC	3 Wire	0~10V	N	E3P06

Technical parameter:

Probe material: Stainless steel (S304)
(Can be changed to be S316L as requirement.)
Accuracy[%]: ＜±1
Max. temperature coefficient of zero point : 0.1
Max. temperature coefficient of sensing range value: 0.2
Analog output response time [ms] : < 3
Power-on delay time [s] : 0.3
Medium temperature[℃]: -25...80
Housing Material: Aluminum alloy; Stainless steel(S304)
Pressure component: High-precision Ceramic Sensor

- Adopting aluminum alloy as its housing material, effectively resist the interference of strong electromagnetic.
- Simple structure and practical
- Concise structure
- Power protection: overload, short-circuit, reverse polarity
- High accuracy, high stability, and strong resistance to shock
- Sensible substance: gas, liquid, steam pressure
- Output：PNP NPN NO/NC
- Can be adjusted by hand adjustment

IP67 CE Oil RoHS

Accessories:

Type	Socket Order No.						Drawing No.
I	C	02	I	5	C	12	I:E1I38
L	C: Cable	Length 02: 2M 05: 5M 10: 10M	Connecter I: Straight L: Angled	Core 4: 4 5: 5	Material R: PUR C: PVC F: FEP (Anti-noise)	Socket size 12: M12	L:E1I39 See page 224

Order No.	US0004	US0005	US0006
Type	 G1/4" – G1/2"	 G1/4" – G1/4"	 G1/4" – M20 x 1.5
Drawing No.	E3U04	E3U05	E3U06

Order No.	Hand Adjustment Order No.	Drawing No.
UP0001	 Pressure range:2/5/10/20/50/100/200/400 bar Temperature unit:℃,F Connection: M12 Socket Power supply interface:3.5 x 1.35DC Socket	E3U14

Drawing

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Order NO.

Order NO.	Thread (Internal)	Housing Material	Sensible Range (bar)	Operating Voltage (V)	Electric design	Output	Program-mable	Drawing No.
PC1101	G1/4''	Aluminum Alloy Stainless Steel	2	18~36 DC	5 Wire	PNP NO / NC	Y	E3P02
PC1102	G1/4''	Aluminum Alloy Stainless Steel	5	18~36 DC	5 Wire	PNP NO / NC	Y	E3P02
PC1103	G1/4''	Aluminum Alloy Stainless Steel	10	18~36 DC	5 Wire	PNP NO / NC	Y	E3P02
PC1104	G1/4''	Aluminum Alloy Stainless Steel	20	18~36 DC	5 Wire	PNP NO / NC	Y	E3P02
PC1105	G1/4''	Aluminum Alloy Stainless Steel	50	18~36 DC	5 Wire	PNP NO / NC	Y	E3P02
PC1106	G1/4''	Aluminum Alloy Stainless Steel	100	18~36 DC	5 Wire	PNP NO / NC	Y	E3P02
PC1107	G1/4''	Aluminum Alloy Stainless Steel	200	18~36 DC	5 Wire	PNP NO / NC	Y	E3P02
PC1108	G1/4''	Aluminum Alloy Stainless Steel	400	18~36 DC	5 Wire	PNP NO / NC	Y	E3P02
PC1109	G1/4''	Aluminum Alloy Stainless Steel	2	18~36 DC	5 Wire	NPN NO / NC	Y	E3P02
PC1110	G1/4''	Aluminum Alloy Stainless Steel	5	18~36 DC	5 Wire	NPN NO / NC	Y	E3P02
PC1111	G1/4''	Aluminum Alloy Stainless Steel	10	18~36 DC	5 Wire	NPN NO / NC	Y	E3P02
PC1112	G1/4''	Aluminum Alloy Stainless Steel	20	18~36 DC	5 Wire	NPN NO / NC	Y	E3P02
PC1113	G1/4''	Aluminum Alloy Stainless Steel	50	18~36 DC	5 Wire	NPN NO / NC	Y	E3P02
PC1114	G1/4''	Aluminum Alloy Stainless Steel	100	18~36 DC	5 Wire	NPN NO / NC	Y	E3P02
PC1115	G1/4''	Aluminum Alloy Stainless Steel	200	18~36 DC	5 Wire	NPN NO / NC	Y	E3P02
PC1116	G1/4''	Aluminum Alloy Stainless Steel	400	18~36 DC	5 Wire	NPN NO / NC	Y	E3P02
PC1117	G1/4''	Aluminum Alloy Stainless Steel	600	18~36 DC	5 Wire	PNP NO / NC	Y	E3P02
PC1118	G1/4''	Aluminum Alloy Stainless Steel	600	18~36 DC	5 Wire	NPN NO / NC	Y	E3P02
PC1119	G1/4''	Aluminum Alloy Stainless Steel	250	18~36 DC	5 Wire	PNP NO / NC	Y	E3P02
PC1120	G1/4''	Aluminum Alloy Stainless Steel	250	18~36 DC	5 Wire	NPN NO / NC	Y	E3P02

Technical parameter:

Probe material: Stainless steel (S304)
(Can be changed to be S316L as requirement.)
Accuracy[%]: ＜±1
Max. temperature coefficient of zero point : 0.1
Max. temperature coefficient of sensing range value: 0.2
Analog output response time [ms] : < 3
Power-on delay time [s] : 0.3
Medium temperature[℃]: -25...80
Housing Material: Aluminum alloy; Stainless steel(S304)
Pressure component: High-precision Ceramic Sensor

产品订货号

订货号	牙口尺寸（外螺纹）	材质	输出方式 (bar)	工作电压 (V)	电气设计	输 出	可编程	结构图编 号
PC2101	G1/4''	Aluminum Alloy Stainless Steel	2	18~36 DC	5 Wire	PNP NO / NC	Y	E3P04
PC2102	G1/4''	Aluminum Alloy Stainless Steel	5	18~36 DC	5 Wire	PNP NO / NC	Y	E3P04
PC2103	G1/4''	Aluminum Alloy Stainless Steel	10	18~36 DC	5 Wire	PNP NO / NC	Y	E3P04
PC2104	G1/4''	Aluminum Alloy Stainless Steel	20	18~36 DC	5 Wire	PNP NO / NC	Y	E3P04
PC2105	G1/4''	Aluminum Alloy Stainless Steel	50	18~36 DC	5 Wire	PNP NO / NC	Y	E3P04
PC2106	G1/4''	Aluminum Alloy Stainless Steel	100	18~36 DC	5 Wire	PNP NO / NC	Y	E3P04
PC2107	G1/4''	Aluminum Alloy Stainless Steel	200	18~36 DC	5 Wire	PNP NO / NC	Y	E3P04
PC2108	G1/4''	Aluminum Alloy Stainless Steel	400	18~36 DC	5 Wire	PNP NO / NC	Y	E3P04
PC2109	G1/4''	Aluminum Alloy Stainless Steel	2	18~36 DC	5 Wire	NPN NO / NC	Y	E3P04
PC2110	G1/4''	Aluminum Alloy Stainless Steel	5	18~36 DC	5 Wire	NPN NO / NC	Y	E3P04
PC2111	G1/4''	Aluminum Alloy Stainless Steel	10	18~36 DC	5 Wire	NPN NO / NC	Y	E3P04
PC2112	G1/4''	Aluminum Alloy Stainless Steel	20	18~36 DC	5 Wire	NPN NO / NC	Y	E3P04
PC2113	G1/4''	Aluminum Alloy Stainless Steel	50	18~36 DC	5 Wire	NPN NO / NC	Y	E3P04
PC2114	G1/4''	Aluminum Alloy Stainless Steel	100	18~36 DC	5 Wire	NPN NO / NC	Y	E3P04
PC2115	G1/4''	Aluminum Alloy Stainless Steel	200	18~36 DC	5 Wire	NPN NO / NC	Y	E3P04
PC2116	G1/4''	Aluminum Alloy Stainless Steel	400	18~36 DC	5 Wire	NPN NO / NC	Y	E3P04
PC2117	G1/4''	Aluminum Alloy Stainless Steel	600	18~36 DC	5 Wire	PNP NO / NC	Y	E3P04
PC2118	G1/4''	Aluminum Alloy Stainless Steel	600	18~36 DC	5 Wire	NPN NO / NC	Y	E3P04
PC2119	G1/4''	Aluminum Alloy Stainless Steel	250	18~36 DC	5 Wire	PNP NO / NC	Y	E3P04
PC2120	G1/4''	Aluminum Alloy Stainless Steel	250	18~36 DC	5 Wire	NPN NO / NC	Y	E3P04

Drawing

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Technical parameter:

Probe material: Stainless steel (S304)
(Can be changed to be S316L as requirement.)
Accuracy[%]: ＜±1
Max. temperature coefficient of zero point : 0.1
Max. temperature coefficient of sensing range value: 0.2
Analog output response time [ms] : < 3
Power-on delay time [s] : 0.3
Medium temperature[℃]: -25...80
Housing Material: Aluminum alloy; Stainless steel(S304)
Pressure component: High-precision Ceramic Sensor

- Programmable temperature sensors. User can set the temperature range and warning signal discretionarily. offering 2 units of temperature, ℃ and ℉, to be converted
- Visual indication makes the control of this sensor easier
- Sensible substance: gas, liquid
- Sensible temperature: -40℃~150℃
- Display: LED
- Power protection: overload, short-circuit, reverse polarity

IP67 CE oil RoHS

Accessories:

Type	Socket Order No.						Drawing No.
I	C	02	I	5	C	12	I:E1I38
L							L:E1I39
	C: Cable	Length 02: 2M 05: 5M 10: 10M	Connecter I: Straight L: Angled	Core 4: 4 5: 5	Material R: PUR C: PVC F: FEP (Anti-noise)	Socket size 12: M12	See page 224

Order No.	US0001	US0002	US0003	US0007	US0009
Type					
	M18 x 1.5 – M12 x 1	M18 x 1.5 – G1/4"	M18 x1.5 – G1/2"	M18 x1.5 – Ø24mm	M18 x1.5–M18 x1.5
Drawing No.	E3U01	E3U02	E3U03	E3U07	E3U08

Drawing

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Order NO.

Order NO.	Thread Type	Thread	Dis -play	Electric design	Operating Voltage (V)	Output 1	Output 2	Drawing No.
TA1001	Internal	M18 x 1.5	7 LED	4 Wire	18~36 DC	PNP NO / NC, NPN NO / NC	0~10V, 4~20mA	E3T01
TA1002	Internal	M18 x 1.5	7 LED	4 Wire	18~36 DC	PNP NO / NC, NPN NO / NC	PNP NO / NC, NPN NO / NC	E3T01
TA1003	Internal	M18 x 1.5	7 LED	4 Wire	18~36 DC	RELAY NO / NC	--	E3T01

Technical parameter:

Sensing component: PT1000
Pressure resistance [bar]: 300
Voltage drop [V]: ＜2
Power-on delay time [s]: 1.5
Sensing/display circulate time [ms]: 200
NO/NC output accuracy [℃]: ±0.2
Analog output accuracy [℃]: ±(0.2+0.4% measurement interval)
Operation temperature[℃]: -25...80

- Used for long-distance temperature measurement
- Shorten response time, high accuracy, enhance resistant to interference
- Power protection: overload, short-circuit, reverse polarity
- Sensing temperature: -40℃ ~ 150℃ TB series can be installed inside the
- control panel or instrument

IP67 CE Oil RoHS

Accessories:

Type	Socket Order No.						Drawing No.
	C	02	I	5	C	12	I:E1I38
I	C: Cable	Length 02: 2M 05: 5M 10: 10M	Connecter I: Straight L: Angled	Core 4: 4 5: 5	Material R: PUR C: PVC F: FEP (Anti-noise)	Socket size 12: M12	L:E1I39
L							See page 224

Drawing

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Order NO.

TB Series Smart Modular of Temperature Sensors

Order NO.	Thread Type	Thread	Dis -play	Operating Voltage (V)	Output 1	Output 2	Connection	Drawing No.
TB0001	External	G1/2''	7 LED	18~36 DC	PNP NO/NC NPN NO/NC	0~10V, 4~20mA	M12 Socket	E3T02
TB0002	External	G1/2''	7 LED	18~36 DC	PNP NO/NC NPN NO/NC	PNP NO/NC NPN NO/NC	M12 Socket	E3T02

TD Series Probe with Cable

Order NO.	Thread Type	Thread	Dis -play	Probe Material	Probe Length (mm)	Cable Length (M)	Drawing No.
TD0000	External	G1/2''	--	PT1000	45	2	E3T03
TD0001	External	G1/2''	--	PT1000	160	2	E3T03
TD0002	External	G1/2''	--	PT1000	260	2	E3T03
TD0003	External	G1/2''	--	PT1000	360	2	E3T03
TD0100	External	G1/2''	--	PT1000	45	5	E3T03
TD0101	External	G1/2''	--	PT1000	160	5	E3T03
TD0102	External	G1/2''	--	PT1000	260	5	E3T03
TD0103	External	G1/2''	--	PT1000	360	5	E3T03
TD0200	External	G1/2''	--	PT1000	45	10	E3T03
TD0201	External	G1/2''	--	PT1000	160	10	E3T03
TD0202	External	G1/2''	--	PT1000	260	10	E3T03
TD0203	External	G1/2''	--	PT1000	360	10	E3T03

- Concise structure
- High accuracy, high stability, and resistant to interference
- Sensible substance: gas, liquid
- Power protection: overload, short-circuit, reverse polarity
- Sensing temperature: -40℃~+150℃
- Can be adjusted by hand adjustment

IP67 CE Oil RoHS

Accessories:

Type	Socket Order No.						Drawing No.
 I	C	02	I	5	C	12	I:E1I38
 L	C: Cable	Length 02: 2M 05: 5M 10: 10M	Connecter I: Straight L: Angled	Core 4: 4 5: 5	Material R: PUR C: PVC F: FEP (Anti-noise)	Socket size 12: M12	L:E1I39

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Order No.	Hand Adjustment Order No.		Drawing No.
UP0001		Pressure range:2/5/10/20/50/100/200/400 bar Temperature unit:℃,F Connection: M12 Socket Power supply interface:3.5×1.35DC Socket	E3U14

Drawing

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Order NO.

Order NO.	Thread Type	Thread	Dis -play	Electric design	Operating Voltage (V)	Output	Drawing No.
TC0001	External	G1/2''	--	4 Wire	18~36 DC	4~20mA	E3T04
TC0002	External	G1/2''	--	4 Wire	18~36 DC	0~10V	E3T04

Technical parameter:

Sensing component: PT1000
Analog output response time [ms]: 3
Accuracy [℃]: ±0.1
Insulation resistance [MΩ]: >100(500VDC)
Shock resistance [g]: 50
Vibration resistance [g]:20

- Adopting aluminum alloy as its housing material, effectively resist the interference of strong electromagnetic.
- Simple structure and practical
- Concise structure
- Power protection: overload, short-circuit, reverse polarity
- High accuracy, high stability, and strong resistance to shock
- Sensible substance: gas, liquid
- Sensing temperature:-40~150℃
- Can be adjusted by hand adjustment

IP67 CE Oil RoHS

Accessories:

Type	Socket Order No.						Drawing No.
 I	C	02	I	5	C	12	I:E1I38
 L	C: Cable	Length 02: 2M 05: 5M 10: 10M	Connecter I: Straight L: Angled	Core 4: 4 5: 5	Material R: PUR C: PVC F: FEP (Anti-noise)	Socket size 12: M12	L:E1I39

See page 224

Order No.	Hand Adjustment Order No.	Drawing No.
UP0001	 Pressure range:2/5/10/20/50/100/200/400 bar Temperature unit:℃,F Connection: M12 Socket Power supply interface:3.5×1.35DC Socket	E3U14

Drawing

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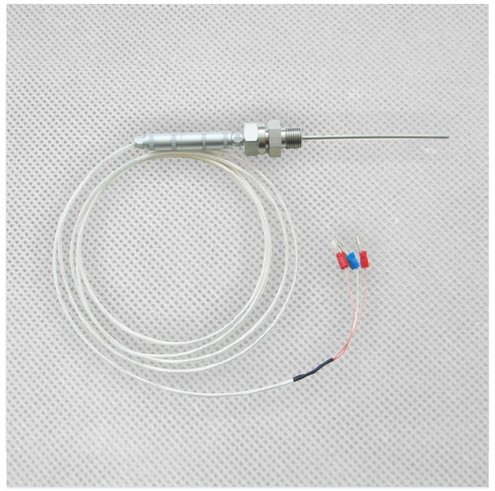
Order NO.

Order NO.	Thread Type	Thread	Dis -play	Electric design	Operating Voltage (V)	Output	Connection	Drawing No.
TE2001	External	G1/4''	--	4 Wire	18~36 DC	PNP NO/NC	M12 Socket	E3T05
TE2002	External	G1/4''	--	4 Wire	18~36 DC	PNP NO/NC	0.5M FEP	E3T06
TE3001	External	M14×1.0	--	4 Wire	18~36 DC	PNP NO/NC	M12 Socket	E3T08
TE4001	External	1/2NPT	--	4 Wire	18~36 DC	PNP NO/NC	M12 Socket	E3T07
TE5001	External	M14×1.5	--	4 Wire	18~36 DC	PNP NO/NC	M12 Socket	E3T08

Technical parameter:

Sensing component: PT1000
Analog output response time [ms]: 3
Accuracy [℃]: ±0.1
Insulation resistance [MΩ]: >100(500VDC)
Shock resistance [g]: 50
Vibration resistance [g]:20



- Tube material of stainless steel, durable.
- Plug-in connector, fixed nuts.
- Different kinds of probes and wires can be selected
- High precision, stability and sensibility
- Elegant design, easily used and practical.
- Sensible temperature: -50~200℃
- Ambient temperature: -40～150℃

IP67 CE Oil RoHS

Drawing

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Order NO.

Order NO.	Thread	Dis -play	Electric design	Probe Length (mm)	Probe Material	Drawing No.
TF6001	M16×1.5	--	3 Wire	110	Stainless Steel S304	E2T09
TF6002	M16×1.5	--	3 Wire	140	Stainless Steel S304	E2T09

Note: Probe size can be customized.

Technical parameter:

Sensing component: PT100, according to DIN EN 60751 standard, degree A
Response time [ms]: 0.1
Accuracy [℃]: ±(0.15+0.002|t|)
Probe diameter [mm]:∅3
Installing thread type: M16×1.5
Wire length [m]: 2 (can be customized)
Probe length [mm]: 110 (can be customized)
Housing Material: Stainless steel (S304), Aluminum alloy

- Reliable and accuracy operation control,
- deviation value under 0.5
- Two directions of flow speed can be displayed percentage and flow speed, in forward and backward directions.
- Empty tube alarm function.
- Measurement accuracy will not be affected by pressure, temperature, density, viscosity etc.
- PNP, NPN, pulse output.
- Support HART.

IP65 CE RoHS

Drawing

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Order NO.
Drawing No.: E3F05

FE	0015	A	1	S	2	1	1
Series No.	Normal Diameter	Power output	Nominal Pressure	Housing Protection	Liner Material	Liner Material	Signal Output

FE	**Flow Meter**
0015	**Normal Diameter** range:15...200mm code=Nominal diameter 0015 = 15mm 0040 = 40mm 0100 = 100mm 0020 = 20mm 0050 = 50mm 0125 = 125mm 0025 = 25mm 0065 = 65mm 0150 = 150mm 0032 = 32mm 0080 = 80mm 0200 = 200mm
A	**Power Output** A: 85 ~ 265V AC ; 45~400 Hz B: 11 ~ 40V DC
1	**Nominal Pressure** 1: 4.0 bar (DN15 ~ DN150) 2: 1.0 bar (DN200) (Special Order No.)
S	**Housing Protection** S:Intergrated style
2	**Liner Material** 1: PTFE 2: Neoprene 3: PU (Other materials can be customized according customers' requirement.)
1	**Electrode material** 1:Stainless Steel 0Crl8Nil2Mo2Ti (Other materials can be customized according customers' requirement.)
1	**Signal Output** 1: HART 2: Modbus 3: Profibus DP