

EST3140 Pressure Transducer for AC/Refrigerant

- ✓ Sensing Element: Ceramic Piezo-Resistive (Thick Film)
- ✓ Pressure type: Gauge
- ✓ Range: -1-1bar...50bar
- ✓ Accuracy: ±0.5%F.S
- ✓ Stability: 0.5%F.S/Year(typical),
- ✓ Working Temperature: -40-125°C
- ✓ Compensation Temperature: -10-70°C
- ✓ Signal Output: 4~20mA, 0.5~4.5V
- ✓ Power supply: 8~45Vdc, 5V(Ratio)
- ✓ Electrical Connection: Packard
- ✓ Process Connection: 7-16 20UNF
- ✓ OEM: Available



Applications

Compressor | Air conditioning unit | Refrigeration equipment

Product Introduction

EST3140 is Ceramic Thick Film Piezo-resistive on Al₂O₃ 96%, the compact design and easy to install features make it widely used for water-cooled screw units, ground source heat pumps, freezers, chillers, ice machines, etc. Its unique anti-condensation design also plays a pressure protection role for the safe and efficient operation of the equipment.

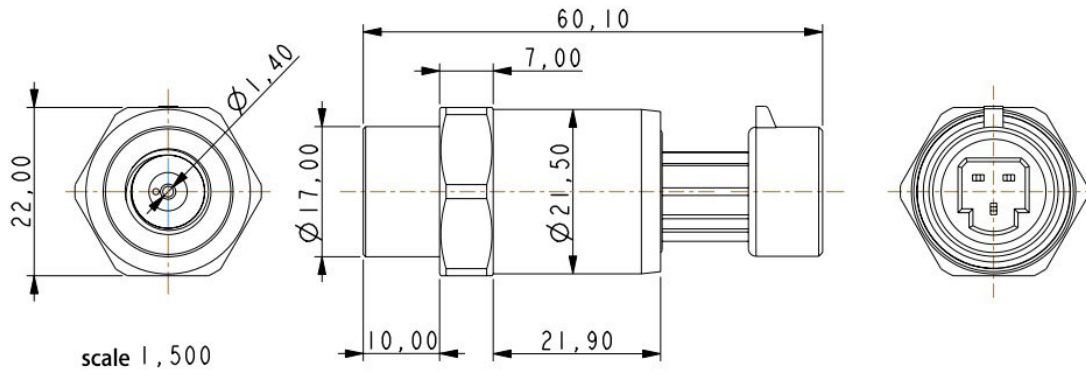
Electrical Connections and Dimensional Drawings

| Electrical Specification | | | |
|---|--------|---|----------------|
| Current Type(2-wire) | 4-20mA | 11V-36VDC | Resistive Load |
| Voltage Type (3-wire) | 0-5V | 6V-36VDC | |
| I2C(4-wire) | I2C | 3.0V-5.5VDC | |
| Load resistance(R): Current type(2-wire); $R \leq (U-11)/0.02-RD$ (U: power voltage; RD: Internal resistance of cable) | | | |
| Current consumption: | | | |
| <ul style="list-style-type: none"> ● Current type(2-wire): < 23mA ● Voltage type (3-wire): <5mA | | <ul style="list-style-type: none"> ● I2C(4-wire): <1.3mA (Optional Low Consumption: <5 μ A) | |
| Accuracy Specification | | | |
| Reference Accuracy (°C.) | 0.5 | | |
| Non-linearity | <=0.4% | | |
| Hysteresis | <=0.1% | | |
| Repeatability | <=0.1% | | |

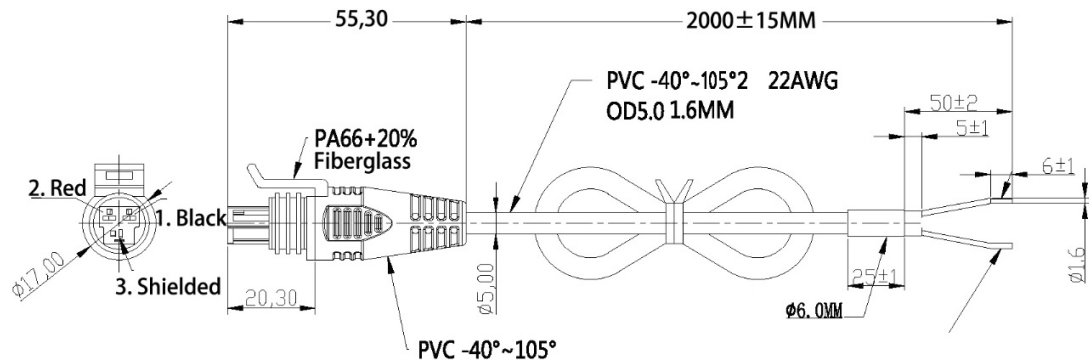
| | | | |
|---|--|-------------------|--|
| Long-term Stability (%FS) | <=0.5% | | |
| | <i>Including Linearity Hysteresis+ Repeatability from zero; Square root output accuracy=1.5X of the linear</i> | | |
| Temperature. Drift @ Zero | <=0.03% | <=0.05% (typical) | |
| Sensitivity. Drift @ Zero | <=0.03% | <=0.05%(typical) | |
| | <i>Reference Temperature: 20~25 ℃; relative humidity: 45%RH~75%RH; Voltage: 24V ±0.24V; 5V ±0.05V</i> | | |
| Environment & Working Conditions | | | |
| Compensation Temperature | -10℃~70℃; -40℃~85℃ (optional) | | |
| Measuring Temperature | -40℃~+85℃ | | |
| Storage Temperature | -40℃~+125℃ | | |
| | <i>Note: The medium under test freezing can cause irreparable damage to the product; when the pressure transmitter is working normally, the medium under test should not solidify.</i> | | |
| Electrical Connection | Packard | | |
| Process Connection | 7/16-20UNF | | |
| Ingress Protection | IP65 (IP67) | | |
| Insulation | >100MΩ @250VDC | | |
| Atmospheric Pressure | 86kPa~106kPa | | |
| Vibration | 10gRMS, (@20Hz~2000Hz) | | |
| Shock | 100g/11ms | | |
| Response time | <1ms (@ 90%FS) | | |
| Life-Span/usage | >10 million load cycles (within the measuring range) | | |

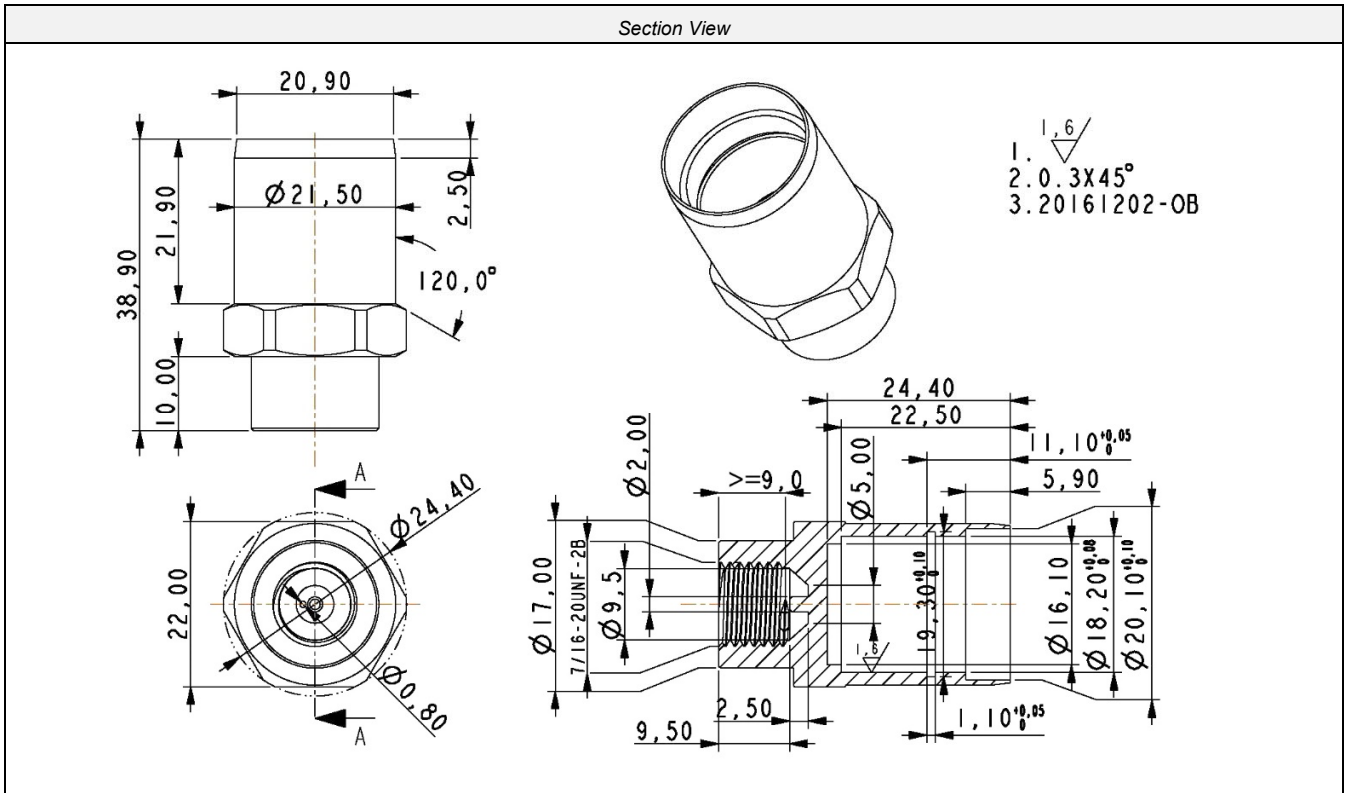
Structure Size Outline Dimension (mm)

The image below shows the typical product structure. For other shapes and structures, please contact us for customization.



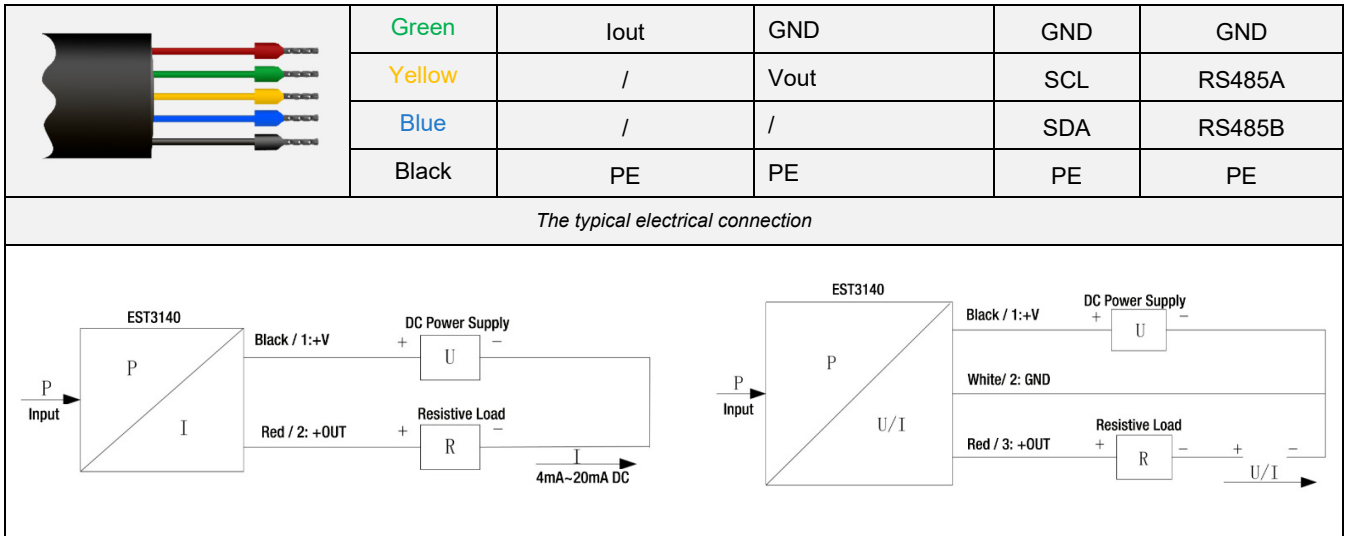
Material & dimension for wires/cable





Electrical Connection

| DIN43650 | Terminals | Current (2-wire) | Voltage (3-wire) | IIC(4-wire) | RS485(4-wire) |
|-------------------------------|-----------|------------------|------------------|-------------|---------------|
| | 1 | Vcc | Vcc | Vcc | Vcc |
| | 2 | Iout | GND | GND | GND |
| | 3 | / | Vout | SCL | RS485A |
| | ⊕ | PE | PE | SDA | RS485B |
| Aviation Plug | Terminals | Current (2-wire) | Voltage (3-wire) | IIC(4-wire) | RS485(4-wire) |
| | 1 | Vcc | Vcc | Vcc | Vcc |
| | 2 | Iout | GND | GND | GND |
| | 3 | PE | Vout | SCL | RS485A |
| | 4 | / | PE | SDA | RS485B |
| Industry Terminals Connection | Terminals | Current (2-wire) | Voltage (3-wire) | IIC(4-wire) | RS485(4-wire) |
| | 1 | PE | PE | SDA | RS485B |
| | 2 | / | Vout | SCL | RS485A |
| | 3 | Iout | GND | GND | GND |
| | 4 | Vcc | Vcc | Vcc | Vcc |
| Direct Cable | Colors | Current (2-wire) | Voltage (3-wire) | IIC(4-wire) | RS485(4-wire) |
| | Red | Vcc | Vcc | Vcc | Vcc |



Ordering Procedure

| | | | | | | | |
|---|--|----------------|--------------|---------------|------------------------|--------------------------|--------------|
| EST3140 | Ceramic Piezoresistive Pressure Transmitter (Thick Film) | | | | | | |
| | Cod | Pressure Type | | | | | |
| | G | Gauge Pressure | | | | | |
| | | Code | Power Supply | | | | |
| | | P1 | 3.0-5.5VDC | | | | |
| | | P2 | 6-36VDC | | | | |
| | | P3 | 11-36VDC | | | | |
| | | P5 | Others | | | | |
| | | | Cod | Output Signal | | | |
| | | | D | I2C | | | |
| | | | C | 4mA~20mA | | | |
| | | | V3 | 0V~5V | | | |
| | | | V4 | 0.5-4.5V | | | |
| | | | | Code | Electrical Connections | | |
| | | | | L2 | Packard | | |
| | | | | | Code | Process Connections | |
| | | | | | 01 | 7/16-20UNF | |
| | | | | | 11 | Others (please indicate) | |
| | | | | | | Code | Cable Length |
| | | | | | | 0.5 | 0.5m |
| | | | | | | 1 | 1m |
| | | | | | | 2 | 2m |
| EST340 | G | P1 | C | L3 | 01 | Fa | |
| <ul style="list-style-type: none"> ➤ When choosing a product, please pay attention to the compatibility between the tested medium and the casing. For media compatibility issues, you can consult our company. ➤ When choosing a digital display product, the working environment temperature range for the display header is -30 ℃ to 60 ℃, and the product power supply should not be less than 15VDC. ➤ Sealing measures are adopted at the interface connection to prevent pressurized liquid leakage, causing pollution or accidents. ➤ When used in flammable and explosive, and other dangerous environments, install safety isolation grills as required, and cable wiring needs to be sealed and reliable. <p style="margin: 0;">Tighten the wiring box cover before powering it to ensure that the inner cavity of the wiring box is isolated from the environment.</p> | | | | | | | |