### 3½/4½ MODEL COMPOSITIONS

<table>
<thead>
<tr>
<th>PART</th>
<th>TYPE</th>
<th>RANGE</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>SM5D</td>
<td>3½/4½ Series digital meter</td>
<td>Standard SM5D (5 models)</td>
<td>3½/4½ Series digital meter</td>
</tr>
</tbody>
</table>

### DC VOLTMETER

<table>
<thead>
<tr>
<th>PART</th>
<th>TYPE</th>
<th>RANGE</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>SM5D</td>
<td>3½/4½ Series digital meter</td>
<td>Standard SM5D (5 models)</td>
<td>3½/4½ Series digital meter</td>
</tr>
</tbody>
</table>

### 4½/5½ MODEL COMPOSITIONS

<table>
<thead>
<tr>
<th>PART</th>
<th>TYPE</th>
<th>RANGE</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>SM5D</td>
<td>4½/5½ Series digital meter</td>
<td>Standard SM5D (5 models)</td>
<td>4½/5½ Series digital meter</td>
</tr>
</tbody>
</table>

### TECHNICAL REFERENCE

### DC VOLTMETER

- **Input mode**: Measuring voltage/amperes signal
- **Power supply**: DC 5V (500VDC~7-12VDC~30VDC)
- **Power consumption**: 70mA max. (DC 5V Power supply)
- **Display method**: 7 Segment LED display
- **Display range**: ±1999.9% (±19999DCV)
- **Sampling time**: Approx. 2.5 times/sec.
- **Response time**: Approx. 2 sec. (max.)
- **A/D converter**: Dual slope integral method
- **Display accuracy**: ±2.0% of ±20% (±2% of ±20%)
- **Overflow indication**: “+” or “−” for (f/3.3)
- **Max. allowable input**: 150% for Input F.S.
- **Dielectric resistance**: min. 100MΩ (at 500VDC)
- **Insulation strength**: AC 2000V/50/60Hz for 1 Minute
- **Ambient humidity**: 0~50°C, 35%~85%RH
- **Overload indication**: “+” or “−” for (f/3.3)
- **Sampling rate**: Approx. 2.5 times/sec.
- **Response time**: Approx. 2 sec. (max.)
- **A/D converter**: Dual slope integral method
- **Display accuracy**: ±2.0% of ±20% (±2% of ±20%)
- **Overflow indication**: “+” or “−” for (f/3.3)
- **Max. allowable input**: 150% for Input F.S.
- **Dielectric resistance**: min. 100MΩ (at 500VDC)
- **Insulation strength**: AC 2000V/50/60Hz for 1 Minute
- **Ambient humidity**: 0~50°C, 35%~85%RH

### AC VOLTMETER

- **Input mode**: Measuring voltage/amperes signal
- **Power supply**: DC 5V (500VDC~7-12VDC~30VDC)
- **Power consumption**: 70mA max. (DC 5V Power supply)
- **Display method**: 7 Segment LED display
- **Display range**: ±1999.9% (±19999DCV)
- **Sampling time**: Approx. 2.5 times/sec.
- **Response time**: Approx. 2 sec. (max.)
- **A/D converter**: Dual slope integral method
- **Display accuracy**: ±2.0% of ±20% (±2% of ±20%)
- **Overflow indication**: “+” or “−” for (f/3.3)
- **Max. allowable input**: 150% for Input F.S.
- **Dielectric resistance**: min. 100MΩ (at 500VDC)
- **Insulation strength**: AC 2000V/50/60Hz for 1 Minute
- **Ambient humidity**: 0~50°C, 35%~85%RH

### BUILT-IN PRECISE C.T AC AMPERE METER

<table>
<thead>
<tr>
<th>PART</th>
<th>TYPE</th>
<th>RANGE</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>SM5D</td>
<td>3½/4½ Series digital meter</td>
<td>Standard SM5D (5 models)</td>
<td>3½/4½ Series digital meter</td>
</tr>
</tbody>
</table>

### DC AMMETER

- **Input mode**: Measuring voltage/amperes signal
- **Power supply**: DC 5V (500VDC~7-12VDC~30VDC)
- **Power consumption**: 70mA max. (DC 5V Power supply)
- **Display method**: 7 Segment LED display
- **Display range**: ±1999.9% (±19999DCV)
- **Sampling time**: Approx. 2.5 times/sec.
- **Response time**: Approx. 2 sec. (max.)
- **A/D converter**: Dual slope integral method
- **Display accuracy**: ±2.0% of ±20% (±2% of ±20%)
- **Overflow indication**: “+” or “−” for (f/3.3)
- **Max. allowable input**: 150% for Input F.S.
- **Dielectric resistance**: min. 100MΩ (at 500VDC)
- **Insulation strength**: AC 2000V/50/60Hz for 1 Minute
- **Ambient humidity**: 0~50°C, 35%~85%RH
- **Overflow indication**: “+” or “−” for (f/3.3)
- **Max. allowable input**: 150% for Input F.S.
- **Dielectric resistance**: min. 100MΩ (at 500VDC)
- **Insulation strength**: AC 2000V/50/60Hz for 1 Minute
- **Ambient humidity**: 0~50°C, 35%~85%RH

### 3½ MODEL COMPOSITIONS

<table>
<thead>
<tr>
<th>PART</th>
<th>TYPE</th>
<th>RANGE</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>SM5D</td>
<td>3½ Series digital meter</td>
<td>Standard SM5D (5 models)</td>
<td>3½ Series digital meter</td>
</tr>
</tbody>
</table>

### 4½ MODEL COMPOSITIONS

<table>
<thead>
<tr>
<th>PART</th>
<th>TYPE</th>
<th>RANGE</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>SM5D</td>
<td>4½ Series digital meter</td>
<td>Standard SM5D (5 models)</td>
<td>4½ Series digital meter</td>
</tr>
</tbody>
</table>

### TECHNICAL REFERENCE

- **Input mode**: Measuring voltage/amperes signal
- **Power supply**: DC 5V (500VDC~7-12VDC~30VDC)
- **Power consumption**: 70mA max. (DC 5V Power supply)
- **Display method**: 7 Segment LED display
- **Display range**: ±1999.9% (±19999DCV)
- **Sampling time**: Approx. 2.5 times/sec.
- **Response time**: Approx. 2 sec. (max.)
- **A/D converter**: Dual slope integral method
- **Display accuracy**: ±2.0% of ±20% (±2% of ±20%)
- **Overflow indication**: “+” or “−” for (f/3.3)
- **Max. allowable input**: 150% for Input F.S.
- **Dielectric resistance**: min. 100MΩ (at 500VDC)
- **Insulation strength**: AC 2000V/50/60Hz for 1 Minute
- **Ambient humidity**: 0~50°C, 35%~85%RH
**CONNECTIONS**

- Voltage/Ampere/Resistance input
- Built-in C.T meter

<table>
<thead>
<tr>
<th>IN+</th>
<th>IN-</th>
<th>COM</th>
<th>VCC</th>
<th>POWER</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>COM</td>
<td>VCC</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>COM</td>
<td>VCC</td>
</tr>
</tbody>
</table>

- Thermocouple input

<table>
<thead>
<tr>
<th>IN+</th>
<th>IN-</th>
<th>COM</th>
<th>VCC</th>
<th>POWER</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>PT100</td>
</tr>
</tbody>
</table>

- PT100 input

**●**

- The connection drawing does not correspond to the drawing on the product, please according to the drawing on the product.

**CAUTIONS**

1. When the DC power supply is connected to the non-isolation voltmeter and the ampere meter use together, it can only be used to measure a same DC power source or two non-isolation DC power supplies, otherwise it is possible to damage the meter.
2. When the non-isolation voltmeter and the ampere meter use together is used to measure a same DC power supply, it is recommended to eliminate the input signal and power source's potential difference as far as possible to avoid display unstable, groups non-isolation ammeters can not use a same DC power supply.
3. When the meter's power source is connected, please first check the power source's polarity and the voltage to avoid damage to the meter.
4. It is more effective to use twisted-pair shielded cable to avoid interference head stream, installing high-frequency filtration electric capacity.

**MAIN FEATURES**

1. NPN and PNP signal input channel.
2. The length of the line speed meter can set prescale value and decimal point position.
3. Preset the speed can chose 30KHz/2000Hz.
4. Frequency/Tacho meter max. input rate 10KHz (high type 100KHz).
5. Timer can choose various time range and time method.
6. EEPROM automatic data storage when power off (option item).
7. Power voltage DC 5V (Options: DC 7-12V/DC 7-24V).

**COUNTER&TIMER&FREQUENCY**

- TACHO LINE SPEED METERS

**ENTRY PARAMETER**

- Input mode: Test various impulse signal
- Power supply: DC 5V ±5% (Option: 7-12V/7~30DC/V)
- Power consumption: 70mA (DC 5V Power supply)
- Display method: 4 digit display, 14.2mm display, 10mm digit display
- Display range: 9999 (4Digit) & 999999 (6Digit)

**COUNTER/LINE LENGTH METER COMPOSITIONS**

<table>
<thead>
<tr>
<th>NAME</th>
<th>SM4D</th>
<th>SM6D</th>
</tr>
</thead>
<tbody>
<tr>
<td>①</td>
<td>4 digit series digital meter</td>
<td>6 digit series digital meter</td>
</tr>
<tr>
<td>②</td>
<td>Standard DC 5V power supply</td>
<td>Standard DC 5V power supply</td>
</tr>
<tr>
<td>③</td>
<td>H DC 7-12V power supply</td>
<td>F DC 7-24V power supply</td>
</tr>
<tr>
<td>④</td>
<td>T1 Basic function</td>
<td>T2 With Memory function</td>
</tr>
<tr>
<td>⑤</td>
<td>PNP signal input</td>
<td>PNP signal input</td>
</tr>
</tbody>
</table>

**TACHO/LINE SPEED FREQUENCY METER**

<table>
<thead>
<tr>
<th>NAME</th>
<th>SM4D</th>
<th>SM6D</th>
</tr>
</thead>
<tbody>
<tr>
<td>①</td>
<td>4 digit series digital meter</td>
<td>6 digit series digital meter</td>
</tr>
<tr>
<td>②</td>
<td>Standard DC 5V power supply</td>
<td>Standard DC 5V power supply</td>
</tr>
<tr>
<td>③</td>
<td>H DC 7-12V power supply</td>
<td>F DC 7-24V power supply</td>
</tr>
<tr>
<td>④</td>
<td>T2 Tachometer Frequency</td>
<td>T2 Tachometer Frequency</td>
</tr>
<tr>
<td>⑤</td>
<td>PNP signal input</td>
<td>PNP signal input</td>
</tr>
<tr>
<td>⑥</td>
<td>Standard Model</td>
<td>High Frequency Model</td>
</tr>
</tbody>
</table>

**AC POWER FREQUENCY METER FUNCTIONS**

- AC power frequency meter input voltage 60~300V, and measure power frequency: 0~9999Hz. The meter is based on input signal adjust the decimal point position automatically.

**CONNECTIONS**

- Counter/Lenghth meter/Timer input connections

**DIMENSIONS**

- The meter's actual length surpasses the outer covering length, different models has different length.

**MAIN PRODUCTS**

- Counter/Lenghth meter
- Tacho Line speed meter
- Timer/ pulse width meter
- Volt/Ampere/Ohm meter
- Watt/Watt factor meter
- Inspecting meter
- Proximity sensor
- Photoelectric sensor
- Encoder Numeric sensor
- Solid state relay
- Parameter display meter

SHENLAN Corporation

Website: http://www.szshenlan.com.cn
E-mail: shenlan@szshenlan.com.cn

SHENLAN Corporation

Website: http://www.szshenlan.com.cn
E-mail: shenlan@szshenlan.com.cn