More Precision

wireSENSOR // Draw-wire displacement sensors
Low-cost draw-wire displacement sensors

Model MK120 (Measuring range 3000, 5000mm)

Model MK120 (Measuring range 7500mm)

- Robust plastic housing
- Customized versions for OEM
- Potentiometer, current and voltage output
<table>
<thead>
<tr>
<th>Model</th>
<th>WPS-3000-MK120</th>
<th>WPS-5000-MK120</th>
<th>WPS-7500-MK120</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output</td>
<td>P, U, I</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Measuring range</td>
<td>3000mm</td>
<td>5000mm</td>
<td>7500mm</td>
</tr>
<tr>
<td>Linearity</td>
<td>&lt;0.15% FSO</td>
<td>&lt;4.5mm</td>
<td>&lt;7.5mm</td>
</tr>
<tr>
<td>Resolution</td>
<td>quasi infinite</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Temperature range</td>
<td>-20 to 80°C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Material</td>
<td></td>
<td>housing plastic PA6</td>
<td>coated polamide stainless steel (ø 0.45mm)</td>
</tr>
<tr>
<td>Wire mounting</td>
<td></td>
<td>wire clip</td>
<td></td>
</tr>
<tr>
<td>Wire acceleration</td>
<td>2.5g</td>
<td>1.5g</td>
<td></td>
</tr>
<tr>
<td>Wire retraction force (min)</td>
<td>5.5N</td>
<td>5N</td>
<td>7N</td>
</tr>
<tr>
<td>Wire extension force (max)</td>
<td>8N</td>
<td>13N</td>
<td></td>
</tr>
<tr>
<td>Electrical connection</td>
<td>integrated cable, radial, 1m</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Protection class</td>
<td></td>
<td>IP 65</td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>0.75kg</td>
<td>0.9kg</td>
<td></td>
</tr>
</tbody>
</table>

FSO = Full Scale Output
Specifications for analog outputs on page 51.
Installation information:

Wire attachment: The free return of the measurement wire is not permissible and it is essential that this is avoided during installation.

Wire exit angle:
When mounting a draw-wire displacement sensor, a straight wire exit (±3° tolerance) must be taken into account. If this tolerance is exceeded, increased material wear on the wire and at the wire aperture must be expected.

<table>
<thead>
<tr>
<th>Accessories:</th>
</tr>
</thead>
<tbody>
<tr>
<td>WE-xxxx-M4</td>
</tr>
<tr>
<td>WE-xxxx-Clip</td>
</tr>
<tr>
<td>TR1-WDS</td>
</tr>
<tr>
<td>TR2-WDS</td>
</tr>
<tr>
<td>GK1-WDS</td>
</tr>
<tr>
<td>MH1-WDS</td>
</tr>
<tr>
<td>MH2-WDS</td>
</tr>
<tr>
<td>MT-60-WDS</td>
</tr>
<tr>
<td>FC8</td>
</tr>
<tr>
<td>FC8/90</td>
</tr>
<tr>
<td>PC 3/8-WDS</td>
</tr>
<tr>
<td>PS 2020</td>
</tr>
<tr>
<td>WDS-MP60</td>
</tr>
</tbody>
</table>
## Output specifications analog

### Output Plug M16

**Potentiometric output (P)**
- **Supply voltage:** max. 32VDC at 1kOhm / 1 Wmax
- **Resistance:** 1kOhm ± 10% (potentiometer)
- **Temperature coefficient:** ±0.0025% FSO/°C

**Voltage output (U)**
- **Supply voltage:** 14 ... 27VDC (non stabilised)
- **Current consumption:** max. 30mA
- **Output voltage:** 0 ... 10VDC
  - Option 0 ... 5 / ±5V
- **Load impedance:** >5kOhm
- **Signal noise:** 0.5mVeff
- **Temperature coefficient:** ±0.005% FSO/°C

**Current Output (I)**
- **Supply voltage:** 14 ... 27VDC (non stabilised)
- **Current consumption:** max. 35mA
- **Output current:** 4 ... 20mA
- **Load:** ≤800Ohm
- **Signal noise:** <1.6 µA<sub>v</sub>
- **Temperature coefficient:** ±0.01% FSO/°C

### Integrated cable

**Potentiometric output (P)**
- **Supply voltage:** max. 32VDC at 1kOhm / 1 Wmax
- **Resistance:** 1kOhm ± 10% (potentiometer)
- **Temperature coefficient:** ±0.0025% FSO/°C

**Voltage output (U)**
- **Supply voltage:** 14 ... 27VDC (non stabilised)
- **Current consumption:** max. 30mA
- **Output voltage:** 0 ... 10VDC
  - Option 0 ... 5 / ±5V
- **Load impedance:** >5kOhm
- **Signal noise:** 0.5mVeff
- **Temperature coefficient:** ±0.005% FSO/°C

**Current Output (I)**
- **Supply voltage:** 14 ... 27VDC (non stabilised)
- **Current consumption:** max. 35mA
- **Output current:** 4 ... 20mA
- **Load:** ≤800Ohm
- **Signal noise:** <1.6 µA<sub>v</sub>
- **Temperature coefficient:** ±0.01% FSO/°C

### Open contacts

**Potentiometric output (P)**
- **Supply voltage:** max. 32VDC at 1kOhm / 1 Wmax
- **Resistance:** 1kOhm ± 10% (potentiometer)
- **Temperature coefficient:** ±0.0025% FSO/°C

**Voltage output (U)**
- **Supply voltage:** 14 ... 27VDC (non stabilised)
- **Current consumption:** max. 30mA
- **Output voltage:** 0 ... 10VDC
  - Option 0 ... 5 / ±5V
- **Load impedance:** >5kOhm
- **Signal noise:** 0.5mVeff
- **Temperature coefficient:** ±0.005% FSO/°C

**Current Output (I)**
- **Supply voltage:** 14 ... 27VDC (non stabilised)
- **Current consumption:** max. 35mA
- **Output current:** 4 ... 20mA
- **Load:** ≤800Ohm
- **Signal noise:** <1.6 µA<sub>v</sub>
- **Temperature coefficient:** ±0.01% FSO/°C
High performance sensors made by Micro-Epsilon

Sensors and systems for displacement and position

Sensors and measurement devices for non-contact temperature measurement

2D/3D profile sensors (laser scanner)

Optical micrometers, fibre optic sensors and fibre optics

Color recognition sensors, LED analyzers and color inline spectrometer

Measurement and inspection systems