

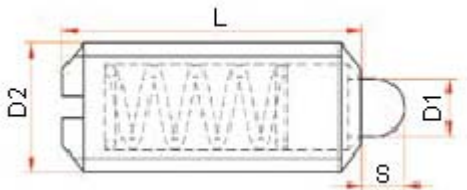
# Wiper

## SP Membrane Sensors



### Features:

- Extremely flat membrane foil potentiometer.
- Can be operated by hand (input) or wiper (tap).
- Simple adjustment to customer design.
- Ultra-thin potentiometer.
- Operated by hand or wiper.
- Easy adaption to customer-specific designs.

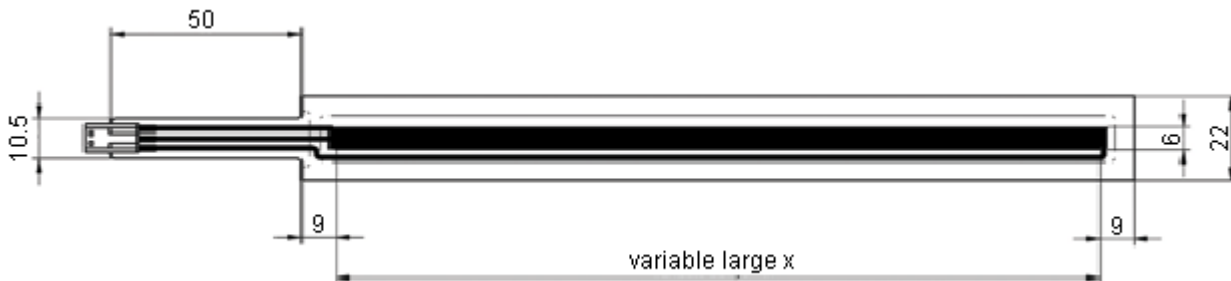


### Dimensions

| D1        | L  | S | D2  | Wiper Force |
|-----------|----|---|-----|-------------|
| M6 x 0.75 | 14 | 2 | 2.7 | 1 to 3N     |

Dimensions : Millimetees

Depending on design.  
The life cycle and accuracy are depending on the wiper design.  
Design and application have influence on the temperature range.



### Composition (in the image from bottom to top)

- Adhesive film, selection according to requirement.
- Basic membrane with potentiometer resistance.
- Spacers between upper and lower membrane.
- Collector membrane as wiper tap for hand or wiper actuation.

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### Electrical Specifications

|                        | Standard                                 | Hybrid    | Magnet                | Options               |
|------------------------|--|-----------|-----------------------|-----------------------|
| Resistance             | 2.5k $\Omega$ per 100mm length $\pm$ 30% |           |                       | >2.5k $\Omega$ /100mm |
| Resistance range       | $\pm$ 30%                                | $\pm$ 30% | $\pm$ 30%             | <30% on request       |
| Independence linearity | $\pm$ 2%                                 | $\pm$ 2%  | $\pm$ 2%              | <2.0% on request      |
| Repeat accuracy        | determined by the wiper                  |           | $\geq$ 10 $\mu$ m (2) | -                     |

### Mechanical Specifications

|   | Standard       | Hybrid         | Magnet         | Options                              |
|---|----------------|----------------|----------------|--------------------------------------|
| Life cycle mechanical activity <sup>(2)</sup> | >1 Mio.        | >3 Mio.        | >20 Mio.       | -                                    |
| Height  | ca. 0.5mm      | ca. 0.7mm      | ca. 1.0mm      | -                                    |
| Wiper force                                   | (1.0 to 3.0) N | (3.0 to 6.0) N | (1.0 to 3.0) N | <1.0N, depends on design             |
| Adhesive foil                                 | Duplo 360      | Duplo 360      | Duplo 360      | Depending on surface and temperature |

### Environmental Specifications

|                          | Standard       | Hybrid         | Magnet         | Options                             |
|--------------------------|----------------|----------------|----------------|-------------------------------------|
| Operating temperature    | -40°C to +55°C | -25°C to +85°C | -25°C to +70°C | bis 115°C on request <sup>(3)</sup> |
| IP rating <sup>(1)</sup> | IP 65          | IP 65          | IP 65          | depends on design                   |

### Connections

|           | Standard   | Hybrid | Magnet | Options   |
|-----------|--|--------|--------|-----------|
| Connector | 3-pole jack connector Duflex (by Berg)<br>(Jack 76785-301LF and housing 67013-003) |        |        | by demand |

### Part Number Table

| Description | Part Number |
|-------------|-------------|
| Wiper       | Wiper 1-3N  |

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