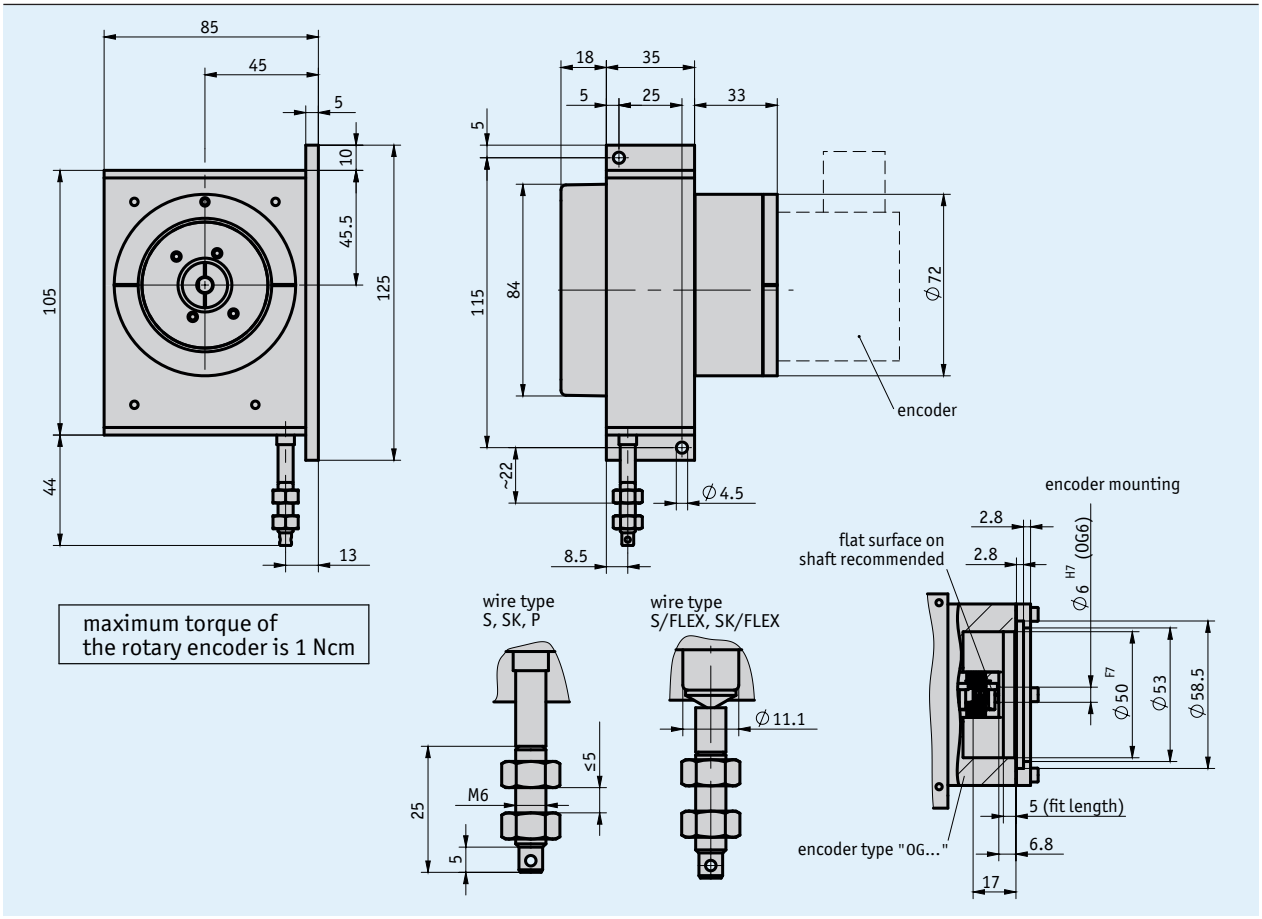
# Wire-actuated encoder SG120
## robust design with 12 m measurement length

### Profile

- Robust design
- Easy mounting
- Measurement lengths up to max. 12000 mm
- Incremental or absolute encoder
- Housing made of aluminum and plastic
- High flexibility thanks to free choice of rotary encoders with 58 mm standard flange
- Various wire types




### Mechanical data

| Feature | Technical data | Additional information |
|---|---|---|
| Housing | aluminum/plastic | |
| Wire design | ø0.54 mm | steel wire |
| | ø0.87 mm | steel wire, plastic coated |
| | ø1.05 mm | para-line plastic rope |
| Extension force | ≥8 N | on the wire |
| Measured distance/ rope drum revolution | 200 mm | |
| Acceleration | ≤23.5 m/s² | |
| Weight | ~0.7 kg | |

## Electric data

Rotary encoders suitable for the SG120 are featured in RotoLine catalogue 2.
Depending on the output signals the following are suitable for:

- Analog outputs such as current or voltage: AV58M
- Incremental outputs: IV5800
- Absolute outputs: WV58MR, WV36M/SSI, WV36M/CAN

The technical specifications for these devices are given in the respective data sheet. A number of transmitter versions of various manufacturers can also be used.

## System data

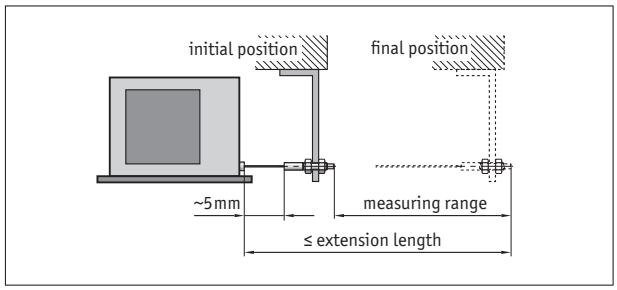
| Feature | Technical data | Additional information |
|---|---|---|
| Repeat accuracy | ±0.15 mm | depending on the direction of approach (1st layer) |
| Measuring range | ≤12000 mm | |
| Travel speed | ≤3000 mm/s | |

## Ambient conditions

| Feature | Technical data | Additional information |
|---|---|---|
| Ambient temperature | -20 ... 80 °C | |
| Protection category | | depending on the rotary encoder installed |

## Hint for mounting

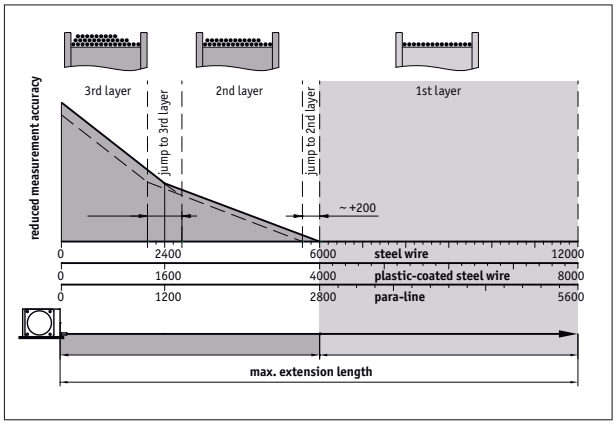
When securing the wire it must be ensured that the wire is straight and vertical in relation to the wire outlet.
Recommendation: Only select the starting position after an unwound length of approx. 5 mm. This prevents the wire hitting the end stop when it is rewound.



symbolic depiction

## Extension length/measuring range

SIKO wire-actuated encoders achieve the maximum measuring accuracy when the entire wire length (measuring range) is only wound onto the drum in one layer. On the SG120 the wire diameter is selected so that when the first drum layer is used, a maximum measuring range of 6000 mm is possible. The larger diameter of the plastic sheathed steel wire and the Paraleine require more space. The result is a correspondingly shorter measuring range. If a lower measuring accuracy is acceptable, two to three layer winding is also possible, and the possible measuring lengths change accordingly.




dimensions refer to millimeters

| Extension lengths SG120 | 1st layer | 2nd and 3rd layers |
|---|---|---|
| Steel wire | 6000 mm | 12000 mm |
| Steel wire, plastic-coated | 4000 mm | 8000 mm |
| Paraline | 2800 mm | 5600 mm |

## Order

### Ordering information

One or more system components are required:

| | |
|---|---|
| Absolute encoder AV58M | www.siko-global.com |
| Incremental encoder IV5800 | www.siko-global.com |
| Absolute encoder WV58MR | www.siko-global.com |
| Absolute encoder WV36M/SSI | www.siko-global.com |
| Absolute encoder WV36M/CAN | www.siko-global.com |

### Ordering table

| Feature | Ordering data | | Specification | Additional information |
|---|---|---|---|---|
| Measuring range | ... | A | 2900 ... 12000 mm, in steps of 100 mm | |
| Wire design | S | B | stainless steel rope | measuring range ≤ 6100 ... 12000 mm |
| | SK | | stainless steel rope, plastic-coated | measuring range ≤ 4100 ... 8000 mm |
| | P | | para-line, non-conducting, signal color | measuring range ≤ 2900 ... 5600 mm |
| | S/FLEX | | stainless steel rope, flexible rope outlet | |
| | SK/FLEX | | stainless steel rope, plastic-coated, flexible rope outlet | |
| Color | N | C | natural, anodized | |
| | | | others on request | |

### Order key

SG120 - [A] - [B] - OG6 - [C]

***Scope of delivery:*** *SG120*

***Accessories:***

| | |
|---|---|
| *Guide roller UR* | *www.siko-global.com* |
| *Wire extension piece SV* | *www.siko-global.com* |