



DATA SHEET

## MRA-F080-102D2

Wire draw mechanism for wire draw encoders  
Wire draw mechanism

**SICK** Sensor Intelligence



WIRE DRAW MECHANISM

MRA-F080-102D2

ORDERING INFORMATION

| Type                                                                                                                                                                            | part no. |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| MRA-F080-102D2                                                                                                                                                                  | 6028625  |
| Further device versions and accessories at <a href="http://www.sick.com/Wire_draw_mechanism_for_wire_draw_encoders">www.sick.com/Wire_draw_mechanism_for_wire_draw_encoders</a> |          |

DETAILED TECHNICAL DATA

FEATURES

|                                          |                                                                                                                                                                                         |
|------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product segment                          | Wire draw mechanism                                                                                                                                                                     |
| Product                                  | Wire draw mechanism for wire draw encoders                                                                                                                                              |
| Description                              | HighLine wire draw mechanism for servo flange with 6 mm shaft, measuring range 0 m ... 2 m                                                                                              |
| Items supplied                           | Without encoder                                                                                                                                                                         |
| Included in delivery                     | Mounting kit for servo flange encoder (Ø 60 mm)                                                                                                                                         |
| Measurement range                        | 0 m 2 m                                                                                                                                                                                 |
| Reproducibility                          | ≤ 1 mm                                                                                                                                                                                  |
| Linearity                                | ≤ ± 2 mm                                                                                                                                                                                |
| Hysteresis                               | ≤ 2 mm                                                                                                                                                                                  |
| Measuring wire material                  | Highly flexible stranded steel 1,4401 stainless steel V4A                                                                                                                               |
| Material, spring housing                 | Die-cast zinc                                                                                                                                                                           |
| Housing material, wire draw mechanism    | Aluminum (anodized), aluminum die cast (nickel-plated)                                                                                                                                  |
| Length of wire pulled out per revolution | 200 mm                                                                                                                                                                                  |
| Actual wire draw length                  | 2.2 m                                                                                                                                                                                   |
| Spring return force                      | 6 N 14 N <sup>1)</sup>                                                                                                                                                                  |
| Measuring wire diameter                  | 1.35 mm                                                                                                                                                                                 |
| Wire acceleration                        | 40 m/s <sup>2</sup>                                                                                                                                                                     |
| Operating speed                          | 8 m/s                                                                                                                                                                                   |
| Resolution                               | To calculate the resolution of the system please use following formula:length of wire draw per revolution / steps per revolution = resolution of the combination of wire draw + encoder |
| Ambient operating temperature            | -30 °C ... +70 °C                                                                                                                                                                       |
| Enclosure rating mechanic                | IP64                                                                                                                                                                                    |
| Life of wire draw mechanism              | Typ. 1,000,000 cycles <sup>2) 3)</sup>                                                                                                                                                  |
| Weight                                   | 1.3 kg                                                                                                                                                                                  |

<sup>1)</sup> These values were measured at an ambient temperature of 25 °C. There may be variations at other temperatures.

<sup>2)</sup> Average values, which depend on the application.

<sup>3)</sup> The service life depends on the type of load. This is influenced by environmental conditions, the installation location, the measuring range in use, the traversing speed, and acceleration.

|                         |                            |
|-------------------------|----------------------------|
|                         | 1.3 kg Wire draw mechanism |
| Weight (measuring wire) | 7.1 g/m                    |

<sup>1)</sup> These values were measured at an ambient temperature of 25 °C. There may be variations at other temperatures.

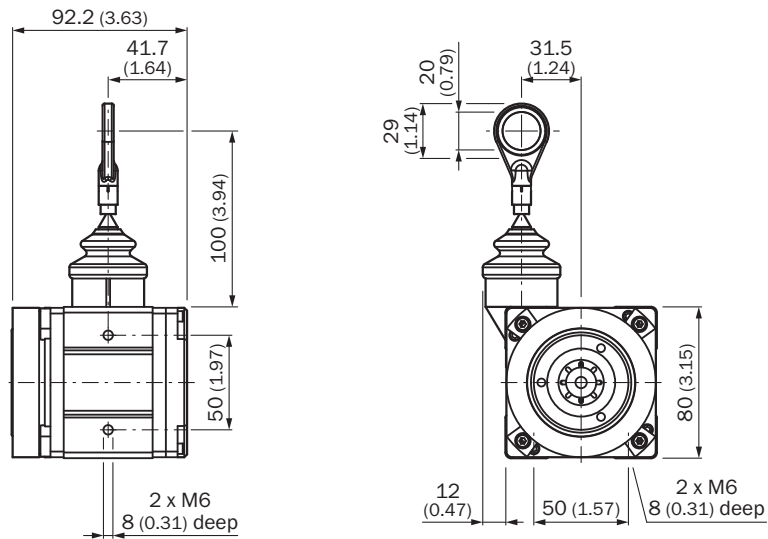
<sup>2)</sup> Average values, which depend on the application.

<sup>3)</sup> The service life depends on the type of load. This is influenced by environmental conditions, the installation location, the measuring range in use, the traversing speed, and acceleration.

## CERTIFICATES

|            |   |
|------------|---|
| China RoHS | ✓ |
|------------|---|

## DIMENSIONAL DRAWING



Dimensions in mm (inch)

Further information as well as suitable accessories, example applications and downloads such as CAD dimensional models, operating instructions and software can be found at [www.sick.com/6028625](http://www.sick.com/6028625)



SICK AG  
WALDKIRCH  
GERMANY  
SICK.COM

# SICK AT A GLANCE

SICK is a leading global technology company for intelligent sensors and integrated solutions in industrial automation. Our technologies set benchmarks, making your industrial processes more efficient, safer and more sustainable – both in logistics and manufacturing operations.

SICK combines sensor intelligence with industry expertise and certified consulting services. We provide the ideal foundation for scalable as well as tailor-made automation solutions and create added value along the entire value chain. Our close partnerships with our customers are more than just a promise: Together, we optimize productivity, improve quality, protect health and safety, and help build a sustainable future. All with empathy and trust.

Since 1946, we have been developing innovative technologies with passion and a pioneering spirit. With a global network in around 40 countries, SICK has a global presence and is always close by. The company's headquarters are located in Waldkirch near Freiburg, Germany. Our customers benefit from our understanding of both local and global requirements, which enables us to deliver tailor-made solutions

**SICK**  
Sensor Intelligence