Cable-type displacement converter SWH series

for use with absolute and incremental encoders

SUPREME SENSORING

TWK

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- **Very robust construction for mechanical engineering and industrial plant application**
- **For converting linear displacements of up to 3 m into a rotary movement**
- **For mounting onto an absolute or incremental encoder**
- **Compact design**
- **Easy to install and to use**
- **Protection class IP65 (IP54)**

Functional description

The linear movement of a flexible steel cable, which can have a length of up to 3 m, is converted into an rotary movement with the aid of a measuring drum. The measuring drum is connected to the shaft of an encoder. In this way a change in displacement of the measuring cable causes the shaft of the encoder to rotate by a directly proportional amount which can be recorded.

The restoring force of the spring drive holds the measuring cable tight at all times and prevents any sagging which would otherwise induce an error. The cable is wound up precisely and reproducibly wrap for wrap in the helical groove of the drum.

The cable entry is equipped with a nozzle with brush (brush chamber) to protect against dust ingress. In addition, a bellows for protection against water ingress or a deflection roller can be provided as an option.

Form of delivery

Generally encoders and converters are supplied as one unit. Upon request both items are also available as separate units.

As encoders can be used devices of the T-series with digital, incremental and analog interfaces, encoders of the C-series, of the K-series as well as encoders of model DAF with analog interface.

Preferably used are those with the flange model 58 or 50. Lots of other flanges are adaptable.

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Mechanische Daten

■ Measuring ranges:	1, 2, 3 m
■ Circumference of cable drum:	200 mm
■ Mechanical tolerance:	± 0.05 % (related to actual measuring value)
■ Speed of cable ($v_{max.}$):	8.0 m/s (at 20 °C temperature)
■ Acceleration of cable ($a_{max.}$):	40 m/s² (at 20 °C temperature)
■ Force required to draw start / end:	max. 15 N / max. 30 N
■ Cable material:	stainless steel 1.4401, flexible steel wires (7x19 = 133 wires)
■ Cable diameter:	1.3 mm
■ Live span of cable and spring drive:	≥ 10 x 10^6 strokes
■ Housing material:	anodized aluminium
■ Protection class:	housing IP65 cable entry IP54
■ Temperature range:	-20 °C to +70 °C -30 °C (optional)

Order number

SWH	2	B	–	01 *

	01 Basic version for flange model 58
	Accessories (optional):
	B B = bellows at cable entry
	U U = deflection roller
	Measuring range:
	1 1 m
	2 2 m
	3 3 m
	Model:
SWH	Cable-type displacement converter SWH

* Variations from the basic version are indicated with a succeeding, additional number and are documented in our works.

Accessories

■ Deflection roller for cable:	SWF-U + SWH-UFLA
■ Bellows for cable entry:	SWF-BALG + SWH-BAFLA
■ External brush chamber for very dusty environment:	SWF-BÜVO + SWH-BÜVO-RING
■ Cable extension:	SWF-V-X-01 with X = length of extension in meters (decimal number possible)

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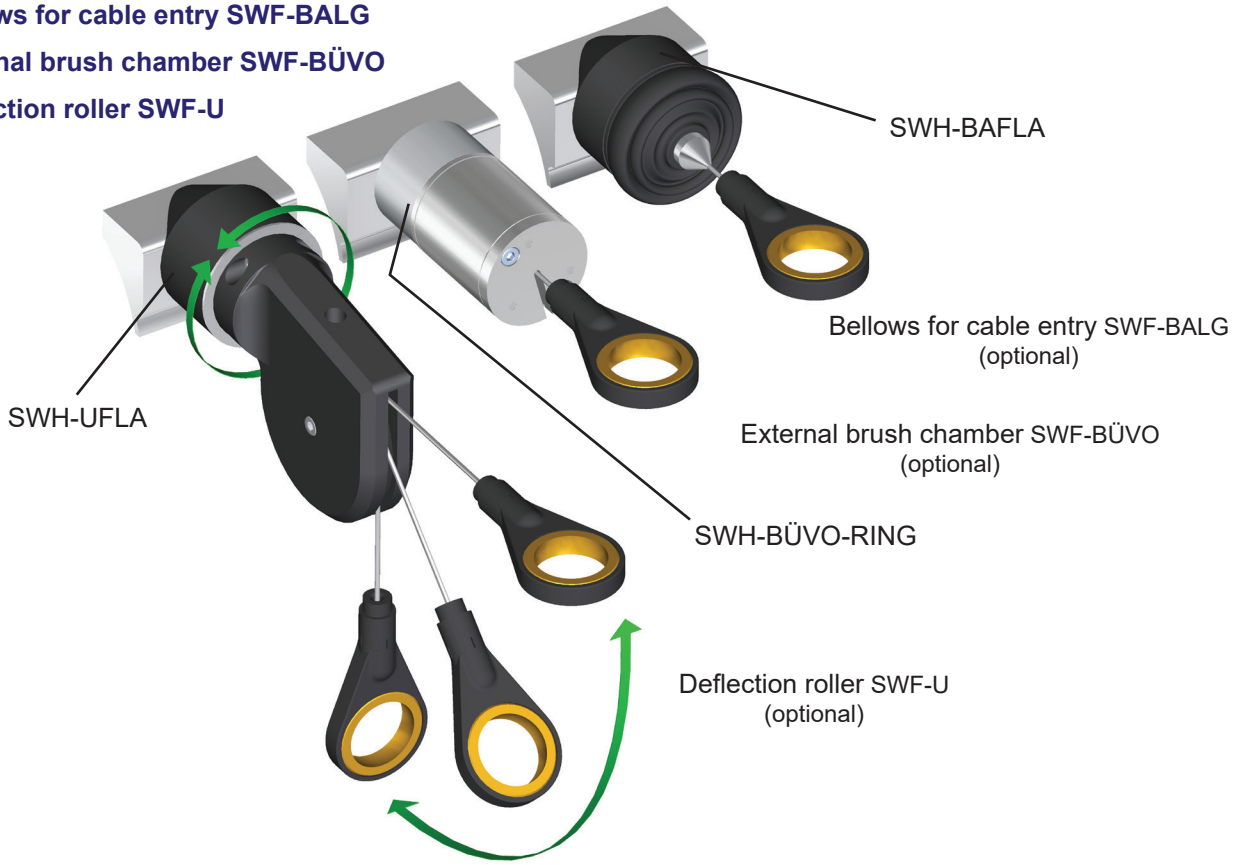
Accessories, Installation drawing

Bellows for cable entry SWF-BALG

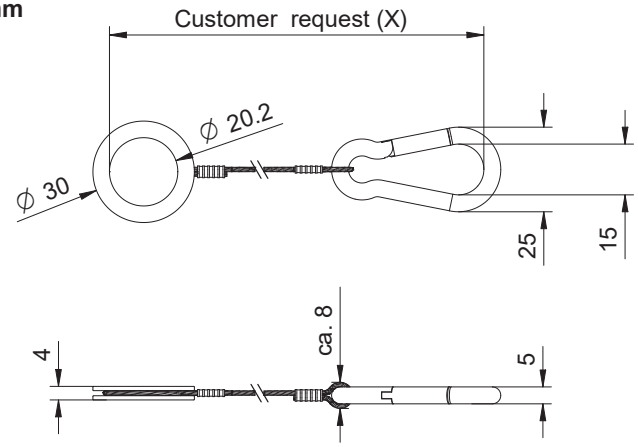
External brush chamber SWF-BÜVO

Deflection roller SWF-U

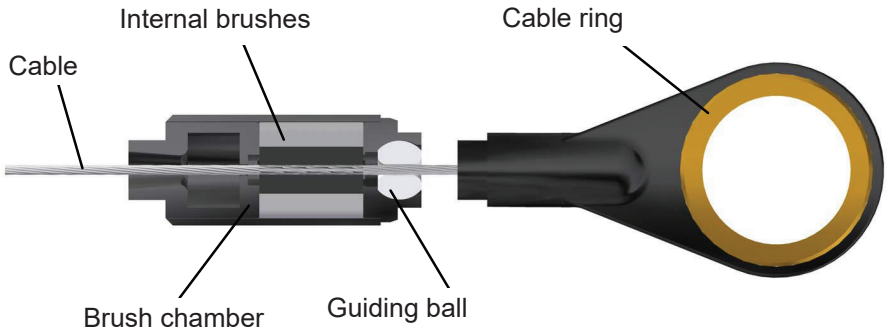


Cable extension SWF-V-X-01

Dimensions in mm



Cable entry - standard version



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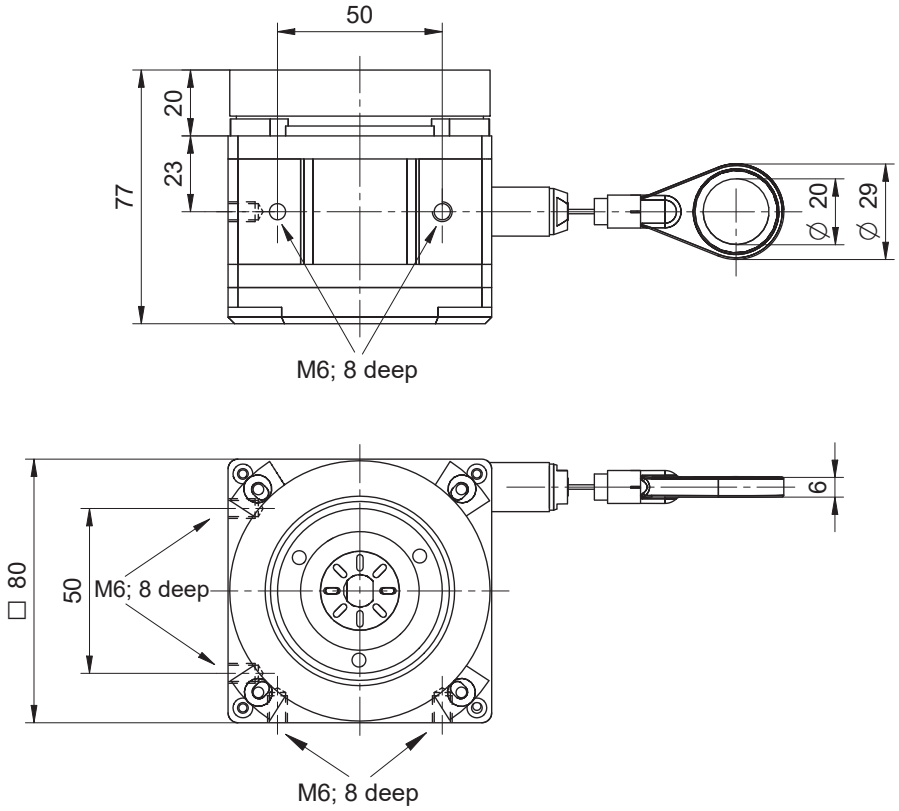
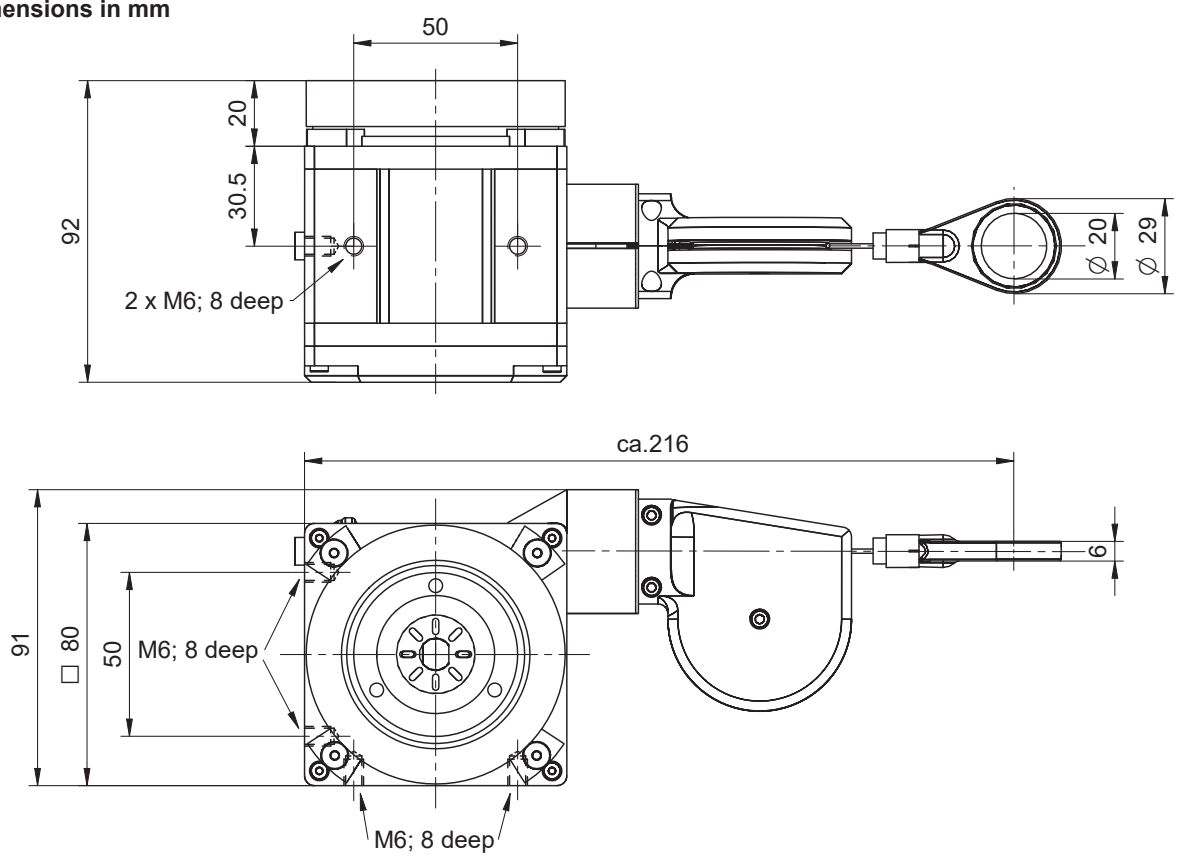
Installation drawing

SWH 1 m with brush chamber (standard)
Dimensions in mm



SWH 2 m with deflection roller
Dimensions in mm



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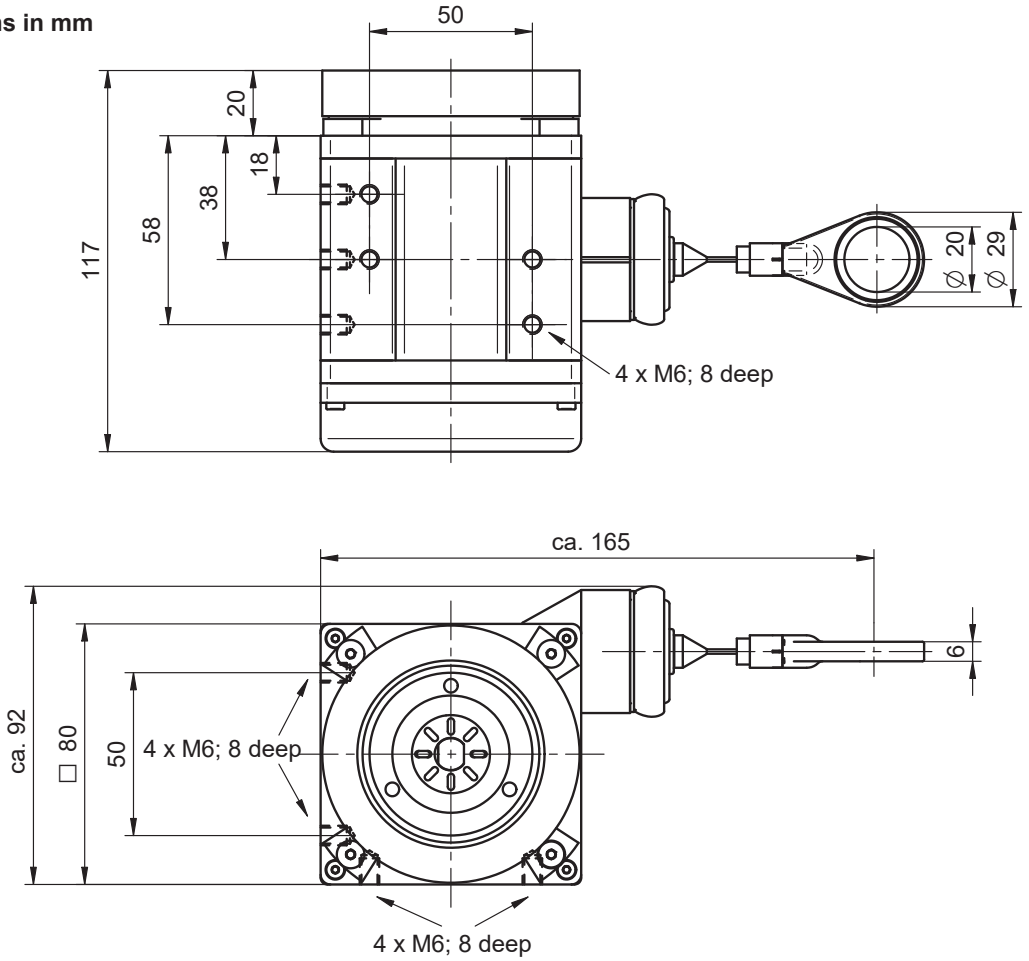
Installation drawing

SWH 3 m with bellows

Dimensions in mm



SWH 1 m with external brush chamber

Dimensions in mm