

# Special Encoder & Sensors

## Encoder assemblies with cable-pull

### Incremental & absolute – cable pulls up to 50 m measuring length



#### Features

- Absolute and incremental encoders with cable-pulls
- Measuring length up to 50 m
- High linearity of typical  $\pm 0.02\%$  of the measuring range
- Complete assemblies of encoder and cable-pull
- Cable made of highly flexible stainless steel cores

#### Technical data - cable-pull

Materials	Housing: Aluminium Cable: Stainless steel, polyamide-coated
Temperature range	-20...+80 °C
Protection per IEC60529	IP 50 (cable-pull)
Service life approx.	5 million strokes

Length	Weight	Distance/rev.	Cable acceleration	Pull-out force	Pull-in force	Cable $\varnothing$	Linearity
3000 mm	1.1 kg	260.09 mm	Max. 70 m/s <sup>2</sup>	Max. 10 N	Min. 5.5 N	0.8 mm	$\pm 0.02\%$
5000 mm	1.4 kg	315.07 mm	Max. 50 m/s <sup>2</sup>	Max. 16 N	Min. 4 N	1.0 mm	$\pm 0.01-0.02\%$
7500 mm	1.7 kg	315.07 mm	Max. 60 m/s <sup>2</sup>	Max. 21 N	Min. 8.5 N	1.0 mm	$\pm 0.01-0.02\%$
10000 mm	2.5 kg	315.07 mm	Max. 30 m/s <sup>2</sup>	Max. 21 N	Min. 5.5 N	1.0 mm	$\pm 0.01-0.02\%$
15000 mm	2.7 kg	315.07 mm	Max. 30 m/s <sup>2</sup>	Max. 25 N	Min. 5 N	1.0 mm	$\pm 0.01-0.02\%$
30000 mm	9.5 kg	500.00 mm	Max. 20 m/s <sup>2</sup>	Max. 22 N	Min. 12 N	0.8 mm	$\pm 0.01\%$
40000 mm	10.5 kg	500.00 mm	Max. 20 m/s <sup>2</sup>	Max. 22 N	Min. 11 N	0.8 mm	$\pm 0.01\%$
50000 mm	11 kg	500,00 mm	Max. 20 m/s <sup>2</sup>	Max. 24 N	Min. 11 N	0.8 mm	$\pm 0.01\%$

Encoders with cable-pulls <3000 mm length upon request.  
Technical encoder data: See encoder product sheet.

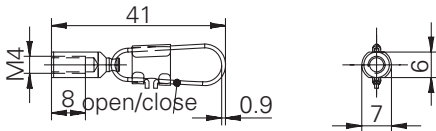
**Ordering part number**

The respective ordering part number of encoder with cable-pull assembly is defined after receipt of order.

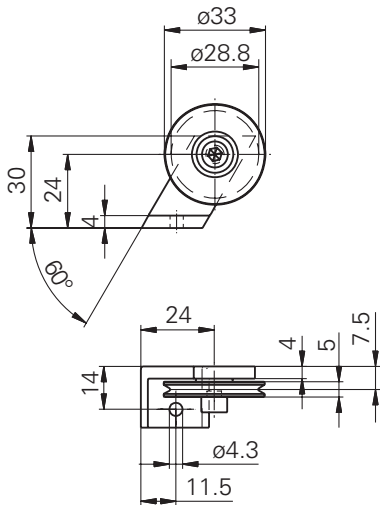
Example: GM401.E26 = encoder GM401.120A102 (SSI, gray code, 12x12 bit, 10...30 VDC) with cable-pull assembly, 15000 mm cable length.

**Accessories**

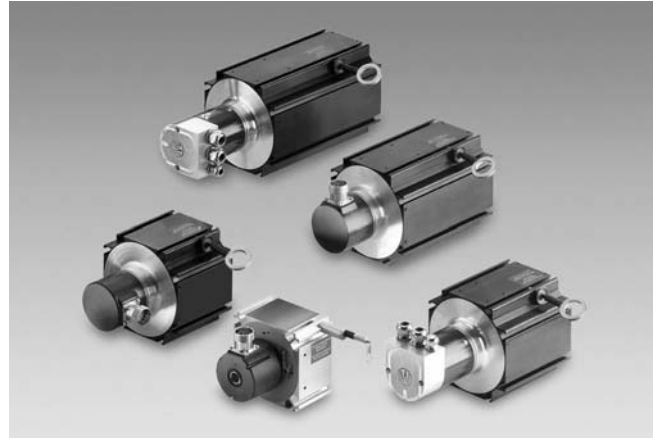
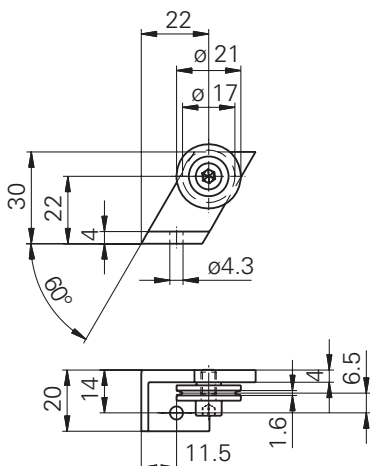
Z 119.060 Snap hook for cable-pulls of 3000 mm length



Z 119.065 Idler for cable thickness 0.8...1 mm



Z 119.067 Idler for cable thickness max. 0.5 mm



**The appropriate encoder for system solutions**

All current encoder designs with 58 mm housing offered in our wide range on absolute and incremental encoders are compatible to the cable-pull of your choice.

**Incremental encoders**

- Impulse numbers up to 80.000
- Rotation speeds up to 10.000 rpm
- Supply voltage 5 VDC or 4.75...30 VDC
- Capable of extreme temperatures -20...+100 °C

**Absolute encoders**

- Single or multiturn
- Resolution up to 36 bit
- Rotation speeds up to 10.000 rpm
- Extremely high mechanical immunity against shock 2000 m/s<sup>2</sup>, vibrations 100 m/s<sup>2</sup>
- Capable of extreme temperatures -20...+85 °C
- Programmable

These absolute encoders can be varied with all current fieldbus interfaces:



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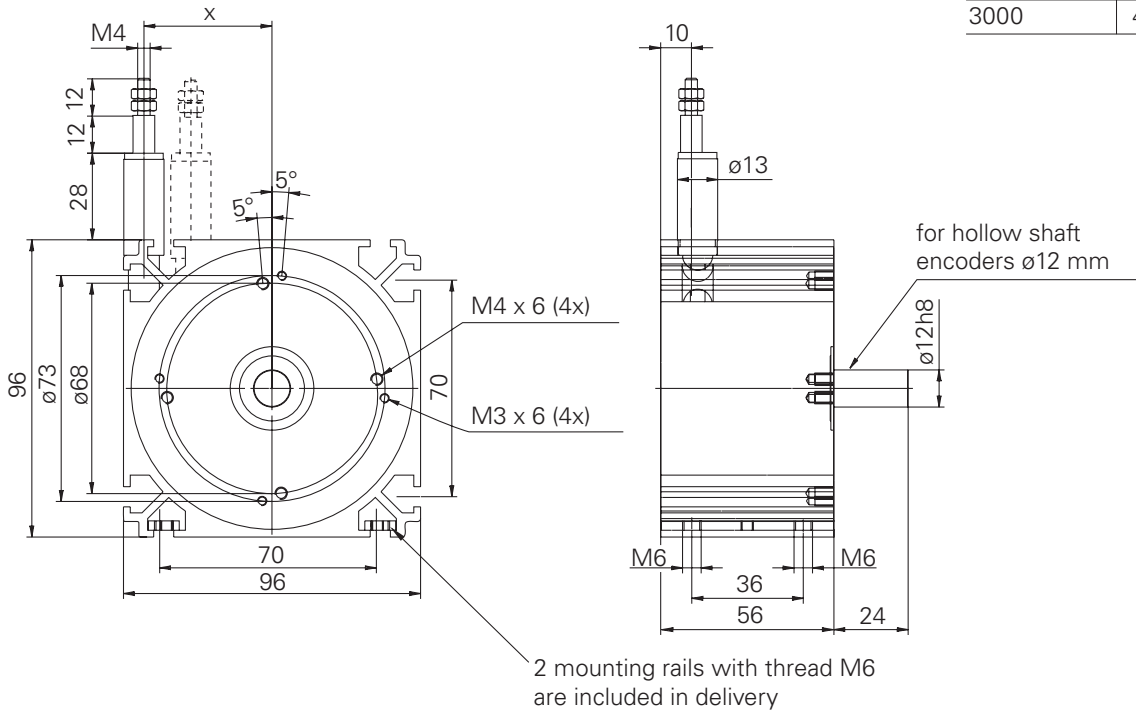
Encoder assemblies with cable-pull

Incremental & absolute – cable-pulls up to 50 m measuring length

## Dimensions

Measuring length 3000 mm

Length	x
3000	41.4



## Dimensions

Measuring length 5000, 7500, 10000 or 15000 mm

Length	A	B
5000	28.5	91
7500	37	112
10000	44.5	155
15000	60.5	187

