



## Wire draw encoders EcoLine

BCG08-N1BM0399



**Model Name** > **BCG08-N1BM0399**  
**Part No.** > **1061028**



*Illustration may differ*

**At a glance**

- Measuring lengths of 1.25 m, 3 m, 5 m, and 10 m.
- Very small dimension (55 ... 190 mm)
- Modular system: encoder type, measuring length, and interface can be selected
- Programmable encoders: Resolution, interface and measuring range
- Light yet shock-proof and temperature-resistant plastic housing (Noryl)
- Space-saving and cost-effective design
- Analog interface with pushbutton teach at the encoder

**Your benefits**

- Easy to install thanks to pushbutton teach
- Suitable for tight installation spaces as a result of slim, compact design
- High precision due to the elimination of the coupling between the encoder and mechanism
- Wide range of applications thanks to the numerous encoders, interfaces, and measuring lengths
- The absolute analog output allows for the use of a cost-effective interface card
- Options for customization, such as programmability, reduce storage and downtime costs
- Greater vibration resistance thanks to the integration of the spring in the measuring drum



**Performance**

Measurement range:	0 m ... 3 m
Repeatability:	≤ 0.2 mm <sup>1)</sup>
Linearity:	≤ ± 2 mm <sup>2)</sup>
Hysteresis:	≤ 0.4 mm <sup>3)</sup>
Resolution (wire draw + encoder)::	0.001 mm <sup>4) 5)</sup>

<sup>1) 2) 3)</sup> Value refers to wire draw mechanism <sup>4) 5)</sup>

**Mechanical data**

Mass (including encoder):	450 g
Mass (mechanics):	250 g
Measuring wire diameter:	0.55 mm
Measuring wire material:	Highly flexible stranded steel 1.4401 stainless steel V4A
Housing material, wire draw mechanism:	Plastic, Noryl
Spring return force:	Ca. 5 N ... ca. 6.3 N <sup>1)</sup>

Life of wire draw mechanism:	1 million cycles <sup>2)</sup>
Actual length of cable extension:	3.2 m
Wire acceleration:	10 m/s <sup>2</sup>
Operating speed:	4 m/s
Mounted encoder:	AFM60 PROFINET
Mounted mechanic:	MRA-G080-103D3
Part number mechanic:	5322778
Part number encoder:	1059040
Mass (measuring wire):	1.2 g/m
Length of wire pulled out per revolution:	230 mm
Number of steps per revolution:	262,144

<sup>1)</sup> These values were measured at an ambient temperature of 25 °C. There may be variations at other temperatures. <sup>2)</sup>

### Electrical data

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Initialization time:	Ca. 12 s <sup>1)</sup>
Supply voltage:	10 V ... 30 V
Power consumption:	3 W
MTTFd: mean time to dangerous failure::	80 a <sup>2) 3)</sup>

<sup>1)</sup> Valid positional data can be read once this time has elapsed. <sup>2)</sup> This product is a standard product and does not constitute a safety component as defined in the Machinery Directive.

Calculation based on nominal load of components, average ambient temperature 40°C, frequency of use 8760 h/a. All

electronic failures are considered hazardous. For more information, see document no. 8015532. <sup>3)</sup> The value applies to the mounted encoder

### Interfaces

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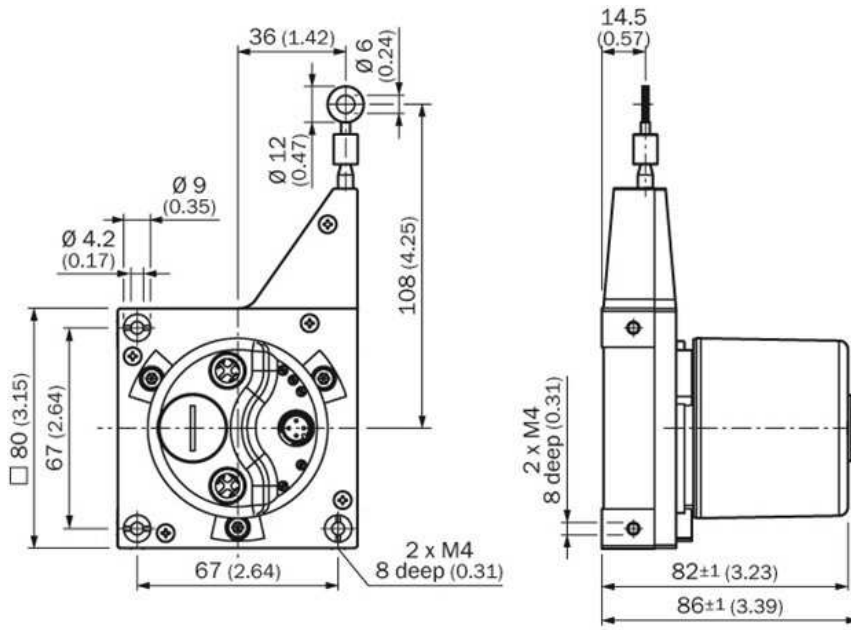
Electrical interface:	PROFINET
Connection type:	Connector 3 x M12, 4-pin, axial
Address setting:	Via DCP
Protocol:	PROFINET IO/ RT Class B
SET (electronic adjustment):	Via PRESET push button or protocol
Encoder profile:	V4.1 class3
Encoder:	Absolute encoders

### Ambient data

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EMC:	(according to EN 61000-6-2 and EN 61000-6-3)
Enclosure rating encoder:	IP 67
Enclosure rating mechanic:	IP 50
Resistance to shocks:	100 g, 6 ms (according to EN 60068-2-27)
Resistance to vibration:	30 g, 10 Hz ... 2,000 Hz (according to EN 60068-2-6)
Relative humidity/Condensation:	90 % (condensation of the optical scanning not permitted)
Working temperature range (encoder):	-30 °C ... +70 °C
Working temperature range (mechanics):	-30 °C ... +70 °C
Working temperature range (combination):	Wird definiert durch den höheren minimalen und niedrigeren maximalen Wert des Arbeitstemperaturbereichs von Encoder und Mechanik

Dimensional drawing



**Australia**

Phone +61 3 9457 0600  
1800 33 48 02 – tollfree  
E-Mail sales@sick.com.au

**Belgium/Luxembourg**

Phone +32 (0)2 466 55 66  
E-Mail info@sick.be

**Brasil**

Phone +55 11 3215-4900  
E-Mail marketing@sick.com.br

**Canada**

Phone +1 905 771 14 44  
E-Mail information@sick.com

**Česká republika**

Phone +420 2 57 91 18 50  
E-Mail sick@sick.cz

**China**

Phone +86 4000 121 000  
E-Mail info.china@sick.net.cn  
Phone +852-2153 6300  
E-Mail ghk@sick.com.hk

**Danmark**

Phone +45 45 82 64 00  
E-Mail sick@sick.dk

**Deutschland**

Phone +49 211 5301-301  
E-Mail info@sick.de

**España**

Phone +34 93 480 31 00  
E-Mail info@sick.es

**France**

Phone +33 1 64 62 35 00  
E-Mail info@sick.fr

**Great Britain**

Phone +44 (0)1727 831121  
E-Mail info@sick.co.uk

**India**

Phone +91-22-4033 8333  
E-Mail info@sick-india.com

**Israel**

Phone +972-4-6881000  
E-Mail info@sick-sensors.com

**Italia**

Phone +39 02 27 43 41  
E-Mail info@sick.it

**Japan**

Phone +81 (0)3 5309 2112  
E-Mail support@sick.jp

**Magyarország**

Phone +36 1 371 2680  
E-Mail office@sick.hu

**Nederland**

Phone +31 (0)30 229 25 44  
E-Mail info@sick.nl

**Norge**

Phone +47 67 81 50 00  
E-Mail sick@sick.no

**Österreich**

Phone +43 (0)22 36 62 28 8-0  
E-Mail office@sick.at

**Polska**

Phone +48 22 837 40 50  
E-Mail info@sick.pl

**România**

Phone +40 356 171 120  
E-Mail office@sick.ro

**Russia**

Phone +7-495-775-05-30  
E-Mail info@sick.ru

**Schweiz**

Phone +41 41 619 29 39  
E-Mail contact@sick.ch

**Singapore**

Phone +65 6744 3732  
E-Mail sales.gsg@sick.com

**Slovenija**

Phone +386 (0)1-47 69 990  
E-Mail office@sick.si

**South Africa**

Phone +27 11 472 3733  
E-Mail info@sickautomation.co.za

**South Korea**

Phone +82 2 786 6321/4  
E-Mail info@sickkorea.net

**Suomi**

Phone +358-9-25 15 800  
E-Mail sick@sick.fi

**Sverige**

Phone +46 10 110 10 00  
E-Mail info@sick.se

**Taiwan**

Phone +886 2 2375-6288  
E-Mail sales@sick.com.tw

**Türkiye**

Phone +90 (216) 528 50 00  
E-Mail info@sick.com.tr

**United Arab Emirates**

Phone +971 (0) 4 88 65 878  
E-Mail info@sick.ae

**USA/México**

Phone +1(952) 941-6780  
1 (800) 325-7425 – tollfree  
E-Mail info@sickusa.com

More representatives and agencies  
at [www.sick.com](http://www.sick.com)