

# BCG19-C1HM1015

EcoLine

WIRE DRAW ENCODERS

**SICK**  
Sensor Intelligence.

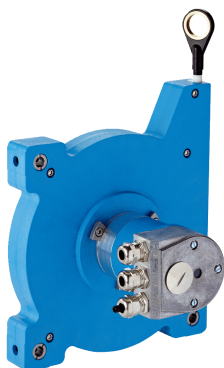


Illustration may differ



### Ordering information

Type	Part no.
BCG19-C1HM1015	1061041

**Included in delivery:** ATM60-C1H13x13 (1), MRA-G190-110D3 (1)

Bus adapter not included with delivery

Product is supplied fully assembled. See individual components for further technical data

Other models and accessories → [www.sick.com/EcoLine](http://www.sick.com/EcoLine)

### Detailed technical data

#### Performance

BCG

<b>Measurement range</b>	0 m ... 10 m
<b>Encoder</b>	Absolute encoders
<b>Resolution (wire draw + encoder)</b>	0.07 mm <sup>1) 2)</sup>
<b>Repeatability</b>	≤ 0.2 mm <sup>3)</sup>
<b>Linearity</b>	≤ ± 2 mm <sup>3)</sup>
<b>Hysteresis</b>	≤ 0.4 mm <sup>3)</sup>

<sup>1)</sup> The values shown have been rounded.

<sup>2)</sup> Example calculation based on the BCG08 with PROFINET: 230 mm (wire draw length per revolution - see Mechanical data): 262,144 (number of steps per revolution) = 0.001 mm (resolution of wire draw + encoder combination).

<sup>3)</sup> Value applies to wire draw mechanism.

#### Interfaces

BCG

<b>Communication interface</b>	CANopen
<b>Programmable/configurable</b>	✓

#### Electrical data

BCG

<b>Connection type</b>	Bus adapter for CANopen <sup>1)</sup>
<b>Supply voltage</b>	10 V ... 32 V
<b>Power consumption</b>	≤ 2 W (without load)
<b>MTTFd: mean time to dangerous failure</b>	150 years (EN ISO 13849-1) <sup>2)</sup>

<sup>1)</sup> Order bus adapter separately.

<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.

## Mechanical data

BCG

<b>Weight</b>	2.49 kg
<b>Measuring wire material</b>	Highly flexible stranded steel 1,4401 stainless steel V4A
<b>Weight (measuring wire)</b>	7.1 g/m
<b>Housing material, wire draw mechanism</b>	Plastic, Noryl
<b>Spring return force</b>	9 N ... 12 N <sup>1)</sup>
<b>Length of wire pulled out per revolution</b>	555 mm
<b>Life of wire draw mechanism</b>	Typ. 1,000,000 cycles <sup>2) 3)</sup>
<b>Actual wire draw length</b>	10.2 m
<b>Wire acceleration</b>	8 m/s <sup>2</sup>
<b>Operating speed</b>	3 m/s
<b>Mounted encoder</b>	ATM60 CANopen, ATM60-C1H13X13, 1030025
<b>Mounted mechanic</b>	MRA-G190-110D3, 5326242

<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.

## Ambient data

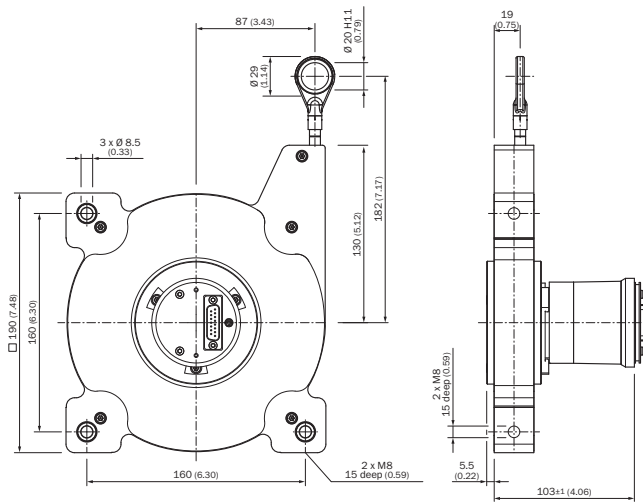
BCG

<b>EMC</b>	According to EN 61000-6-2 and EN 61000-6-3
<b>Enclosure rating</b>	IP50
<b>Operating temperature range</b>	-20 °C ... +70 °C

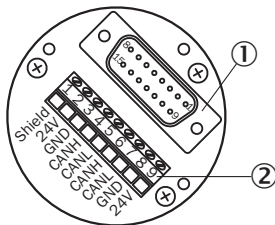
## Classifications

<b>ECl@ss 5.0</b>	27270590
<b>ECl@ss 5.1.4</b>	27270590
<b>ECl@ss 6.0</b>	27270590
<b>ECl@ss 6.2</b>	27270590
<b>ECl@ss 7.0</b>	27270590
<b>ECl@ss 8.0</b>	27270590
<b>ECl@ss 8.1</b>	27270590
<b>ECl@ss 9.0</b>	27270590
<b>ECl@ss 10.0</b>	27270613
<b>ECl@ss 11.0</b>	27270503
<b>ECl@ss 12.0</b>	27270503
<b>ETIM 5.0</b>	EC001486
<b>ETIM 6.0</b>	EC001486
<b>ETIM 7.0</b>	EC001486
<b>ETIM 8.0</b>	EC001486
<b>UNSPSC 16.0901</b>	41112113

### Dimensional drawing (Dimensions in mm (inch))



### PIN assignment










- ① Internal plug connector to encoder
- ② External connection to the bus

Terminal strip	Male device connector	Signal	Explanation
1	1	Shield	Screen
2	2	U <sub>S</sub> (24 V)	Operating voltage 10 ... 32 V
3	3	GND (COM)	0 V (GND)
4	4	CAN <sub>H</sub>	CAN Bus Signal high
5	5	CAN <sub>L</sub>	CAN Bus Signal low
6	-	CAN <sub>H</sub>	CAN Bus Signal high
7	-	CAN <sub>L</sub>	CAN Bus Signal low
8	-	GND (COM)	0 V (GND)
9	-	U <sub>S</sub> (24 V)	Operating voltage 10 ... 32 V

## Recommended accessories

Other models and accessories → [www.sick.com/EcoLine](http://www.sick.com/EcoLine)

	Brief description	Type	Part no.
<b>Bus adapter</b>			
	KR1 bus adapter, 1 x PG	AD-ATM60-KR1CO	2029230
	KR2 bus adapter, 2 x PG	AD-ATM60-KR2CO	2029231
	KR3 bus adapter, 3 x PG	AD-ATM60-KR3CO	2029232
	SR1 bus adapter, 1 x M12, 5-pin	AD-ATM60-SR1CO	2031686
	SR2 bus adapter, 2 x M12, 5-pin	AD-ATM60-SR2CO	2020935
<b>Spare parts</b>			
	Spare mounting set for MRA-G190 (10 m EcoLine)	BEF-MK-MRA-G01	5326294
<b>Wire draw mechanism</b>			
	EcoLine wire draw mechanism for servo flange with 6 mm shaft, measuring range 0 m ... 10 m	MRA-G190-110D3	5326242
<b>Flanges</b>			
	Flange adapter for EcoLine wire draw mechanisms, adaption of face mount flange with centering hub 20 mm to 50 mm servo flange, Aluminum, including 3 countersunk screws M4 x 10	BEF-FA-020-050-007	2073774
<b>Plug connectors and cables</b>			
	Head A: Flying leads Head B: Flying leads Cable: CANopen, DeviceNet™, shielded Wire shield Al-Pt film, overall shield C-screen tin-plated	LTG-2804-MW	6028328
	Head A: female connector, M12, 5-pin, straight Head B: male connector, M12, 5-pin, straight Cable: CANopen, DeviceNet™, PUR, halogen-free, unshielded, 6 m	DSL-1205-G06MK	6028327
	Head A: female connector, M12, 5-pin, straight Cable: CANopen, DeviceNet™, shielded	D0S-1205-GA	6027534
	Head A: male connector, M12, 5-pin, straight, A-coded Cable: CANopen, DeviceNet™, shielded	STE-1205-GA	6027533

## SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is “Sensor Intelligence.”

## WORLDWIDE PRESENCE:

Contacts and other locations –[www.sick.com](http://www.sick.com)