



BCV08-J1QM03M200

VarioLine

WIRE DRAW ENCODERS

SICK
Sensor Intelligence.



Ordering information

Type	part no.
BCV08-J1QM03M200	1133458

Included in delivery: AHM36A-S3JC014X12 (1), BEF-FA-020-050-007 (1), MRA-V080-103D3 (1)

Other models and accessories → www.sick.com/VarioLine



Detailed technical data

Safety-related parameters

MTTF_D (mean time to dangerous failure)	270 years (EN ISO 13849-1) ¹⁾
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¹⁾ 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.

Performance

Measurement range	0 m ... 3 m
Encoder	Absolute encoders
Resolution (wire draw + encoder)	0.01 mm ^{1) 2)}
Repeatability	≤ 0.3 mm ³⁾
Linearity	≤ ± 2 mm ³⁾
Hysteresis	≤ 1.2 mm ³⁾

¹⁾ The values shown have been rounded.

²⁾ Example calculation based on the BCV08 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).

³⁾ Value applies to wire draw mechanism.

Interfaces

Communication interface	SAE J1939
Programmable/configurable	✓

Electronics

Connection type	Male connector, M12, 5-pin, universal
Supply voltage	10 V ... 30 V
Power consumption	≤ 1.5 W (without load)

Mechanics

Weight	0.72 kg
Measuring wire material	Stainless steel 1.4401
Measuring wire diameter	0.81 mm
Housing material, wire draw mechanism	Stainless steel 1.4301
Spring return force	8 N ... 10 N ¹⁾
Length of wire pulled out per revolution	230 mm
Life of wire draw mechanism	Typ. 1,000,000 cycles ^{2) 3)}
Actual wire draw length	3.2 m
Operating speed	4 m/s
Mounted encoder	AHM36 SAE J1939, AHM36A-S3JC014X12, 1120251
Mounted mechanic	MRA-V080-103D3, 5347779

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

²⁾ Average values, which depend on the application.

³⁾ 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

EMC	According to EN 61000-6-2 and EN 61000-6-3
Enclosure rating	IP60, mounted mechanic IP66, Encoder (IEC 60529) IP67, Encoder (IEC 60529)
Operating temperature range	-30 °C ... +70 °C

Certificates

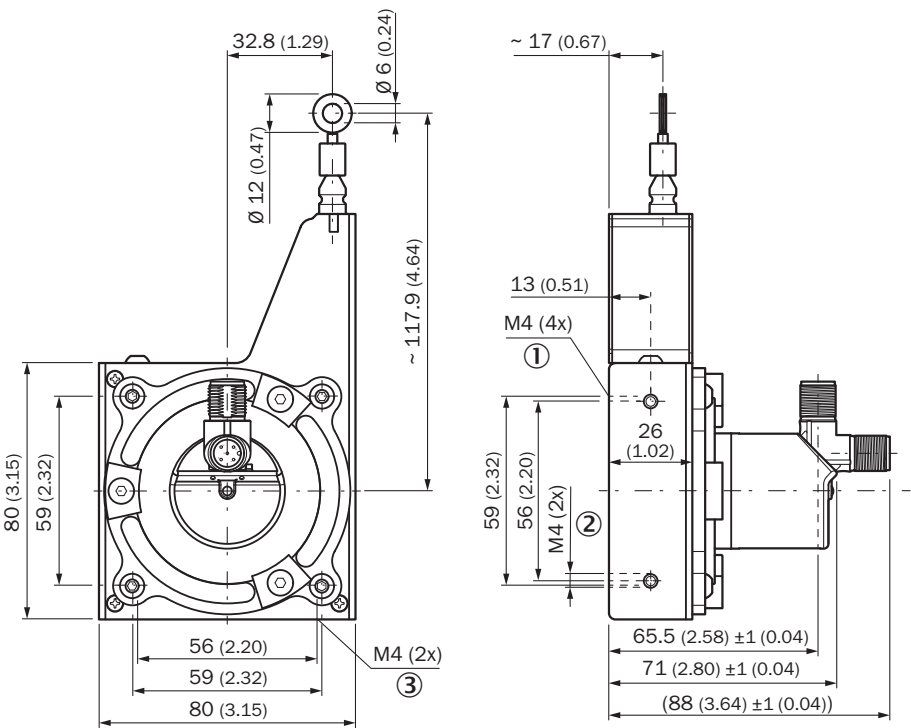
EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China-RoHS	✓

Classifications

ECLASS 5.0	27270590
ECLASS 5.1.4	27270590
ECLASS 6.0	27270590
ECLASS 6.2	27270590
ECLASS 7.0	27270590
ECLASS 8.0	27270590
ECLASS 8.1	27270590
ECLASS 9.0	27270590
ECLASS 10.0	27270613
ECLASS 11.0	27270503
ECLASS 12.0	27270503
ETIM 5.0	EC001486
ETIM 6.0	EC001486

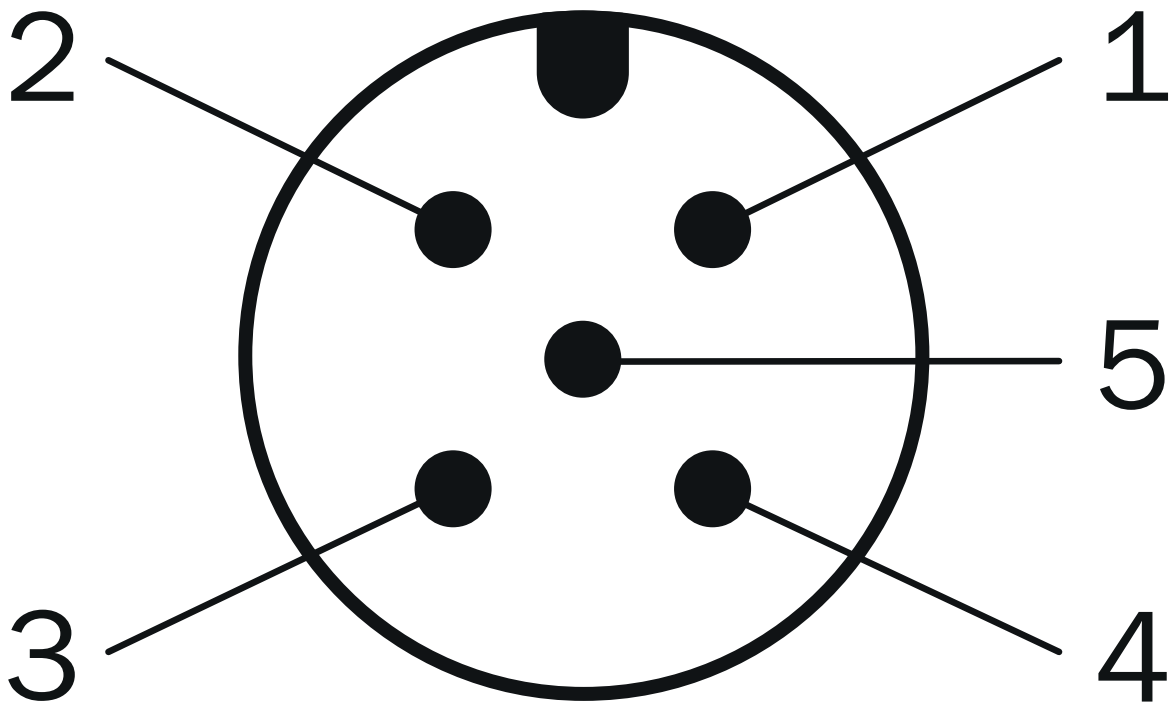
ETIM 7.0	EC001486
ETIM 8.0	EC001486
UNSPSC 16.0901	41112113

Dimensional drawing



Dimensions in mm (inch)

PIN assignment







PIN	Signal	Wire colors (cable connection)	Function
1	CAN Shield	White	Screen
2	VDC	Red	Supply voltageEncoder10 V DC ... 30 V DC
3	GND/CAN GND	Blue	0 V (GND)
4	CAN high	Black	CAN signal
5	CAN low	Pink	CAN signal
Housing	-	-	Screen

Recommended accessories

Other models and accessories → www.sick.com/VarioLine

	Brief description	Type	part no.
connectors and cables			
	<ul style="list-style-type: none"> Connection type head A: Male connector, M12, 5-pin, straight Signal type: CANopen Description: CANopen, unshielded 	CAN male connector	6021167
	<ul style="list-style-type: none"> Connection type head A: Female connector, M12, 5-pin, A-coded Connection type head B: Female connector, M12, 5-pin, A-coded Connection type head C: Male connector, M12, 5-pin, A-coded Description: Unshielded 	DSC-1205T000025MC	6030664
	<ul style="list-style-type: none"> Connection type head A: Female connector, M12, 5-pin, straight, A-coded Connection type head B: Male connector, M12, 5-pin, straight, A-coded Signal type: Fieldbus, CANopen, DeviceNet™ Cable: 2 m, 4-wire, PUR, halogen-free Description: Fieldbus, shieldedCANopenDeviceNet™ Application: Drag chain operation, Zones with oils and lubricants 	YF2A15-020C1B-M2A15	2106279
	<ul style="list-style-type: none"> Connection type head A: Female connector, M12, 5-pin, straight, A-coded Connection type head B: Flying leads Signal type: Fieldbus, CANopen, DeviceNet™ Cable: 2 m, 4-wire, PUR, halogen-free Description: Fieldbus, shieldedCANopenDeviceNet™ Application: Drag chain operation, Zones with oils and lubricants 	YF2A15-020C1BXLEAX	2106283
	<ul style="list-style-type: none"> Connection type head A: Female connector, M12, 5-pin, straight, A-coded Connection type head B: Male connector, M12, 5-pin, straight, A-coded Signal type: Fieldbus, CANopen, DeviceNet™ Cable: 5 m, 4-wire, PUR, halogen-free Description: Fieldbus, shieldedCANopenDeviceNet™ Application: Drag chain operation, Zones with oils and lubricants 	YF2A15-050C1B-M2A15	2106281
	<ul style="list-style-type: none"> Connection type head A: Female connector, M12, 5-pin, straight, A-coded Connection type head B: Flying leads Signal type: Fieldbus, CANopen, DeviceNet™ Cable: 5 m, 4-wire, PUR, halogen-free Description: Fieldbus, shieldedCANopenDeviceNet™ Application: Drag chain operation, Zones with oils and lubricants 	YF2A15-050C1BXLEAX	2106284
	<ul style="list-style-type: none"> Connection type head A: Female connector, M12, 5-pin, straight, A-coded Connection type head B: Male connector, M12, 5-pin, straight, A-coded Signal type: Fieldbus, CANopen, DeviceNet™ Cable: 10 m, 4-wire, PUR, halogen-free Description: Fieldbus, shieldedCANopenDeviceNet™ Application: Drag chain operation, Zones with oils and lubricants 	YF2A15-100C1B-M2A15	2106282
	<ul style="list-style-type: none"> Connection type head A: Female connector, M12, 5-pin, straight, A-coded Connection type head B: Flying leads Signal type: Fieldbus, CANopen, DeviceNet™ Cable: 10 m, 4-wire, PUR, halogen-free Description: Fieldbus, shieldedCANopenDeviceNet™ Application: Drag chain operation, Zones with oils and lubricants 	YF2A15-100C1BXLEAX	2106286
	<ul style="list-style-type: none"> Connection type head A: Flying leads Connection type head B: Flying leads Signal type: CANopen, DeviceNet™ Items supplied: By the meter Cable: 4-wire, twisted pair Description: CANopen, shieldedDeviceNet™ 	LTG-2804-MW	6028328

	Brief description	Type	part no.
	<ul style="list-style-type: none">Note: Wire shield Al-Pt film, overall shield C-screen tin-platedConnection type head A: Female connector, M12, 5-pin, straight, A-codedSignal type: CANopen, DeviceNet™Description: CANopen, shieldedDeviceNet™Connection systems: Screw-type terminalsPermitted cross-section: ≤ 0.75 mm²	DOS-1205-GA	6027534
	<ul style="list-style-type: none">Connection type head A: Male connector, M12, 5-pin, straight, A-codedSignal type: CANopen, DeviceNet™Description: CANopen, shieldedDeviceNet™Connection systems: Screw-type terminalsPermitted cross-section: ≤ 0.75 mm²	STE-1205-GA	6027533
	<ul style="list-style-type: none">Connection type head A: Female connector, M12, 5-pin, A-codedConnection type head B: Female connector, M12, 5-pin, A-codedConnection type head C: Male connector, M12, 5-pin, A-codedCable: 0.5 m, TPUDescription: Shielded	Y-CAN cable	6083185
programming devices			
	<ul style="list-style-type: none">Product segment: Programming devicesProduct family: PGT-12 ProDescription: Hand-held programming device for the programmable SICK AHS/AHM36 CANopen encoders, TMS/TMM61 CANopen inclination sensors, TMS/TMM88 CANopen, TMS/TMM88 Analog, and wire draw encoders with AHS/AHM36 CANopen. Compact dimensions, low weight, and intuitive operation.Items supplied: 1 x PGT-12-Pro standalone programming tool, 4 x 1.5 V (AA) alkaline mignon batteries	PGT-12-Pro	1076313

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.”

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