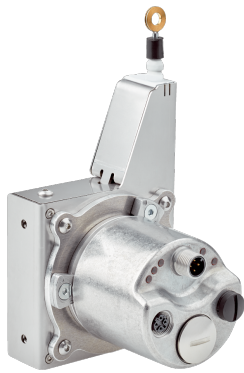


BCV08-I1BM03N200

VarioLine

WIRE DRAW ENCODERS

SICK
Sensor Intelligence.



Ordering information

Type	Part no.
BCV08-I1BM03N200	1133456

Included in delivery: MRA-V080-103D3 (1), AFM60A-S1IB018x12 (1)

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



Detailed technical data

Performance

Measurement range	0 m ... 3 m
Encoder	Absolute encoders
Resolution (wire draw + encoder)	0.0009 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	EtherNet/IP™
Programmable/configurable	✓

Electrical data

Connection type	Male connector, Female connector, 1x, 2x, M12, M12, 4-pin, 4-pin, axial, axial ^{1) 2)}
Supply voltage	10 V DC ... 30 V DC
Power consumption	≤ 3 W (without load)
MTTFd: mean time to dangerous failure	80 years (EN ISO 13849-1) ³⁾

¹⁾ A-coded.

²⁾ D-coded.

³⁾ 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

Weight	0.8 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	AFM60 EtherNet/IP, AFM60A-S1IB018X12, 1055331
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

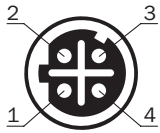
EMC	According to EN 61000-6-2 and EN 61000-6-3
Enclosure rating	IP60, mounted mechanic IP67, Encoder (IEC 60529) ¹⁾
Operating temperature range	-30 °C ... +70 °C

¹⁾ With mating connector fitted.

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

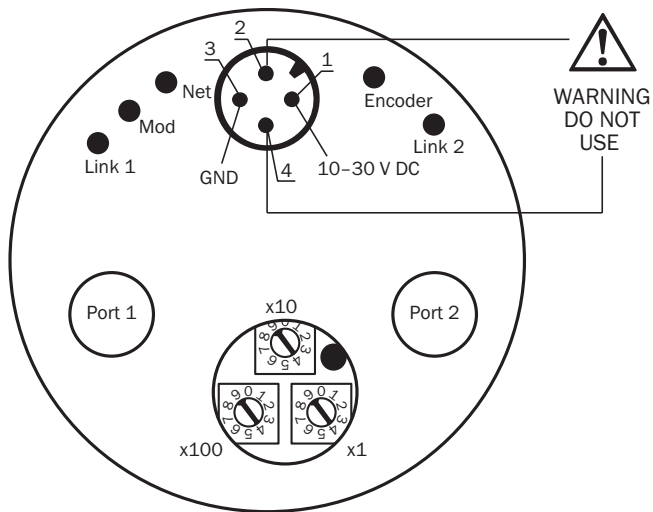
Female connector



Port 1, Port 2

PIN	Signal
1	T x D+
2	R x D+
3	T x D-
4	R x D-

Connection diagram



Recommended accessories


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

	Brief description	Type	Part no.
Others			
	<ul style="list-style-type: none"> Connection type head A: Female connector, M12, 4-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 2 m, 4-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Zones with oils and lubricants, Drag chain operation, Robot 	YF2A14-020UB3XLEAX	2095607

	Brief description	Type	Part no.
	<ul style="list-style-type: none"> Connection type head A: Female connector, M12, 4-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 5 m, 4-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Zones with oils and lubricants, Drag chain operation, Robot 	YF2A14-050UB3XLEAX	2095608
	<ul style="list-style-type: none"> Connection type head A: Female connector, M12, 4-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 10 m, 4-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Zones with oils and lubricants, Drag chain operation, Robot 	YF2A14-100UB3XLEAX	2095609
	<ul style="list-style-type: none"> Connection type head A: Female connector, M12, 4-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 25 m, 4-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Zones with oils and lubricants, Drag chain operation, Robot 	YF2A14-250UB3XLEAX	2095615
	<ul style="list-style-type: none"> Connection type head A: Female connector, M12, 4-pin, angled, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 2 m, 4-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Zones with oils and lubricants, Drag chain operation, Robot 	YG2A14-020UB3XLEAX	2095766
	<ul style="list-style-type: none"> Connection type head A: Female connector, M12, 4-pin, angled, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 5 m, 4-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Zones with oils and lubricants, Drag chain operation, Robot 	YG2A14-050UB3XLEAX	2095767
	<ul style="list-style-type: none"> Connection type head A: Female connector, M12, 4-pin, angled, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 10 m, 4-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Zones with oils and lubricants, Drag chain operation, Robot 	YG2A14-100UB3XLEAX	2095768
	<ul style="list-style-type: none"> Connection type head A: Female connector, M12, 4-pin, angled, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 25 m, 4-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Zones with oils and lubricants, Drag chain operation, Robot 	YG2A14-250UB3XLEAX	2095771
	<ul style="list-style-type: none"> Connection type head A: Male connector, M12, 4-pin, angled, D-coded Connection type head B: Male connector, M12, 4-pin, angled, D-coded Signal type: Ethernet, PROFINET Cable: 2 m, 4-wire, PUR, halogen-free Description: Ethernet, PROFINET, shielded Application: Drag chain operation, Zones with oils and lubricants 	YN2D24-020PN1N2D24	2106168
	<ul style="list-style-type: none"> Connection type head A: Female connector, M12, 4-pin, angled, A-coded Description: Unshielded, Head A: female connector, M12, 4-pin, angled, unshielded, for power supply, for cable diameter 3 mm ... 6.5 mm Head B: - Connection systems: Screw-type terminals Permitted cross-section: ≤ 0.75 mm² 	DOS-1204-W	6007303
	<ul style="list-style-type: none"> Connection type head A: Male connector, M12, 4-pin, straight, D-coded Connection type head B: Male connector, M12, 4-pin, straight, D-coded Signal type: Ethernet Cable: 5 m, 4-wire, CAT5, CAT5e, PUR, halogen-free Description: Ethernet, shielded, 5 m cable, M12 male connector straight to M12 male connector straight 	SSL-1204-G05ME90	6045277

	Brief description	Type	Part no.
	<ul style="list-style-type: none"> Connection type head A: Male connector, M12, 4-pin, straight, D-coded Connection type head B: Male connector, M12, 4-pin, straight, D-coded Signal type: Ethernet Cable: 10 m, 4-wire, CAT5, CAT5e, PUR, halogen-free Description: Ethernet, shielded, 10 m cable, M12 male connector straight to M12 male connector straight 	SSL-1204-G10ME90	6045279
	<ul style="list-style-type: none"> Connection type head A: Male connector, M12, 4-pin, straight, D-coded Connection type head B: Flying leads Signal type: Ethernet Cable: 2 m, 4-wire, CAT5, CAT5e, PUR, halogen-free Description: Ethernet, shielded, M12 male connector D-coded straight to open end 	STL-1204-G02ME90	6045284
	<ul style="list-style-type: none"> Connection type head A: Male connector, M12, 4-pin, straight, D-coded Connection type head B: Flying leads Signal type: Ethernet Cable: 5 m, 4-wire, CAT5, CAT5e, PUR, halogen-free Description: Ethernet, shielded, M12 male connector D-coded straight to open end 	STL-1204-G05ME90	6045285
	<ul style="list-style-type: none"> Connection type head A: Male connector, M12, 4-pin, straight, D-coded Connection type head B: Flying leads Signal type: Ethernet Cable: 10 m, 4-wire, CAT5, CAT5e, PUR, halogen-free Description: Ethernet, shielded, M12 male connector D-coded straight to open end 	STL-1204-G10ME90	6045286
	<ul style="list-style-type: none"> Connection type head A: Male connector, M12, 4-pin, angled, D-coded Connection type head B: Flying leads Signal type: Ethernet Cable: 2 m, 4-wire, CAT5, CAT5e, PUR, halogen-free Description: Ethernet, shielded, M12 male connector D-coded angled to open end 	STL-1204-W02ME90	6047912
	<ul style="list-style-type: none"> Connection type head A: Female connector, M12, 4-pin, straight, D-coded Signal type: Ethernet Cable: CAT5, CAT5e Description: Ethernet, shielded, Head A: female connector, M12, 4-pin, straight, D-coded, shielded, for cable diameter 4 mm ... 8 mm Head B: - Connection systems: IDC quick connection Permitted cross-section: 0.14 mm² ... 0.34 mm² 	DOS-1204-GE	6048153
	<ul style="list-style-type: none"> Connection type head A: Female connector, M12, 4-pin, angled, D-coded Signal type: Ethernet Cable: CAT5, CAT5e Description: Ethernet, shielded, Head A: female connector, M12, 4-pin, angled, D-coded, shielded, for cable diameter 4 mm ... 8 mm Head B: - Connection systems: IDC quick connection Permitted cross-section: 0.14 mm² ... 0.34 mm² 	DOS-1204-WE	6048154
	<ul style="list-style-type: none"> Connection type head A: Male connector, M12, 4-pin, angled, D-coded Connection type head B: Flying leads Signal type: Ethernet Cable: 10 m, 4-wire, CAT5, CAT5e, PUR, halogen-free Description: Ethernet, shielded, M12 male connector D-coded angled to open end 	STL-1204-W10ME90	6047914
	<ul style="list-style-type: none"> Connection type head A: Male connector, M12, 4-pin, angled, D-coded Connection type head B: Flying leads Signal type: Ethernet Cable: 25 m, 4-wire, CAT5, CAT5e, PUR, halogen-free Description: Ethernet, shielded, M12 male connector D-coded angled to open end 	STL-1204-W25ME90	6047915
	<ul style="list-style-type: none"> Connection type head A: Male connector, M12, 4-pin, straight, D-coded Signal type: Ethernet Cable: CAT5, CAT5e Description: Ethernet, shielded, Head A: male connector, M12, 4-pin, straight, D-coded, shielded, for cable diameter 4 mm ... 8 mm Head B: - Connection systems: IDC quick connection Permitted cross-section: 0.14 mm² ... 0.34 mm² 	STE-1204-GE01	6048151

	Brief description	Type	Part no.
	<ul style="list-style-type: none"> Connection type head A: Male connector, M12, 4-pin, angled, D-coded Signal type: Ethernet Cable: CAT5, CAT5e Description: Ethernet, shielded, Head A: male connector, M12, 4-pin, angled, D coded, shielded, for cable diameter 4 mm ... 8 mm Head B: - Connection systems: IDC quick connection Permitted cross-section: 0.14 mm² ... 0.34 mm² 	STE-1204-WE	6048152
	STE-0J08-GE	STE-0J08-GE	6048150
	<ul style="list-style-type: none"> Connection type head A: Male connector, M12, 4-pin, straight, D-coded Connection type head B: Male connector, M12, 4-pin, straight, D-coded Signal type: Ethernet, PROFINET Cable: 2 m, 4-wire, PUR, halogen-free Description: Ethernet, PROFINET, shielded Application: Drag chain operation, Zones with oils and lubricants 	YM2D24-020PN1M2D24	2106159
	<ul style="list-style-type: none"> Connection type head A: Male connector, M12, 4-pin, angled, D-coded Connection type head B: Male connector, RJ45, 4-pin, straight Signal type: Ethernet, PROFINET Cable: 2 m, 4-wire, PUR, halogen-free Description: Ethernet, PROFINET, shielded Application: Drag chain operation, Zones with oils and lubricants 	YN2D24-020PN1MRJA4	2106162
	<ul style="list-style-type: none"> Connection type head A: Male connector, M12, 4-pin, straight, D-coded Connection type head B: Male connector, RJ45, 4-pin, straight Signal type: Ethernet, PROFINET Cable: 10 m, 4-wire, PUR, halogen-free Description: Ethernet, PROFINET, shielded Application: Drag chain operation, Zones with oils and lubricants 	YM2D24-100PN1MRJA4	2106185
	<ul style="list-style-type: none"> Connection type head A: Male connector, M12, 4-pin, straight, D-coded Connection type head B: Male connector, RJ45, 4-pin, straight Signal type: Ethernet, PROFINET Cable: 5 m, 4-wire, PUR, halogen-free Description: Ethernet, PROFINET, shielded Application: Drag chain operation, Zones with oils and lubricants 	YM2D24-050PN1MRJA4	2106184
	<ul style="list-style-type: none"> Connection type head A: Male connector, M12, 4-pin, straight, D-coded Connection type head B: Male connector, RJ45, 8-pin, straight Signal type: Ethernet Cable: 5 m, 4-wire, AWG26, PUR, halogen-free Description: Ethernet, twisted pair, shielded 	YM2D24-050EA1MRJA4	6034415
	<ul style="list-style-type: none"> Connection type head A: Male connector, M12, 4-pin, straight, D-coded Connection type head B: Male connector, RJ45, 4-pin, straight Signal type: Ethernet, PROFINET Cable: 2 m, 4-wire, PUR, halogen-free Description: Ethernet, PROFINET, shielded Application: Drag chain operation, Zones with oils and lubricants 	YM2D24-020PN1MRJA4	2106182
	<ul style="list-style-type: none"> Connection type head A: Male connector, M12, 4-pin, angled, D-coded Connection type head B: Male connector, RJ45, 4-pin, straight Signal type: Ethernet, PROFINET Cable: 10 m, 4-wire, PUR, halogen-free Description: Ethernet, PROFINET, shielded Application: Drag chain operation, Zones with oils and lubricants 	YN2D24-100PN1MRJA4	2106164
	<ul style="list-style-type: none"> Connection type head A: Male connector, M12, 4-pin, angled, D-coded Connection type head B: Male connector, RJ45, 4-pin, straight Signal type: Ethernet, PROFINET Cable: 5 m, 4-wire, PUR, halogen-free Description: Ethernet, PROFINET, shielded Application: Drag chain operation, Zones with oils and lubricants 	YN2D24-050PN1MRJA4	2106163
	<ul style="list-style-type: none"> Connection type head A: Male connector, M12, 4-pin, angled, D-coded Connection type head B: Flying leads Signal type: Ethernet, PROFINET Cable: 5 m, 4-wire, PUR, halogen-free Description: Ethernet, PROFINET, shielded Application: Drag chain operation, Zones with oils and lubricants 	YN2D24-050PN1XLEAX	2106175

	Brief description	Type	Part no.
	<ul style="list-style-type: none">• Connection type head A: Male connector, M12, 4-pin, angled, D-coded• Connection type head B: Male connector, RJ45, 4-pin, straight• Signal type: Ethernet, PROFINET• Cable: 3 m, 4-wire, PUR, halogen-free• Description: Ethernet, PROFINET, shielded• Application: Drag chain operation, Zones with oils and lubricants	YN2D24-030PN1MRJA4	2144265

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