

BTF13-HXAM-S02 PAKET BTF13 + SRM50

HighLine

WIRE DRAW ENCODERS

SICK
Sensor Intelligence.

Illustration may differ

Ordering information

Type	Part no.
BTF13-HXAM-S02 PAKET BTF13 + SRM50	1036246

Included in delivery: SRM50-HXA0-K22 (1), MRA-F130-120D1 (1)

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

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



Detailed technical data

Features

Special device	✓
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Performance

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Measurement range	0 m ... 20 m
Encoder	Motor feedback systems rotary HIPERFACE®
Resolution (wire draw + encoder)	0.32 mm ^{1) 2)}
Repeatability	≤ 2 mm ³⁾
Linearity	≤ ± 2 mm ³⁾
Hysteresis	≤ 5 mm ³⁾

¹⁾ The values shown have been rounded.

²⁾ Example calculation based on the BTF08 with PROFINET: 200 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

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Communication interface	HIPERFACE®
Programmable/configurable	✓

Electrical data

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Connection type	Male connector, M23, 12-pin, radial
Supply voltage	7 V DC ... 12 V DC
Operating current	≤ 80 mA (without load)

Mechanical data

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Weight	5.7 kg
Measuring wire material	Highly flexible stranded steel 1,4401 stainless steel V4A
Weight (measuring wire)	2.6 g/m
Housing material, wire draw mechanism	Aluminum (anodised), plastic
Spring return force	10 N ... 20 N ¹⁾
Length of wire pulled out per revolution	332.4 mm
Life of wire draw mechanism	Typ. 1,000,000 cycles ^{2) 3)}
Actual wire draw length	20.2 m
Wire acceleration	30 m/s ²
Operating speed	6 m/s
Mounted encoder	SRM50, SRM50-HXA0-K22, 1037104
Mounted mechanic	MRA-F130-120D1, 6028628

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

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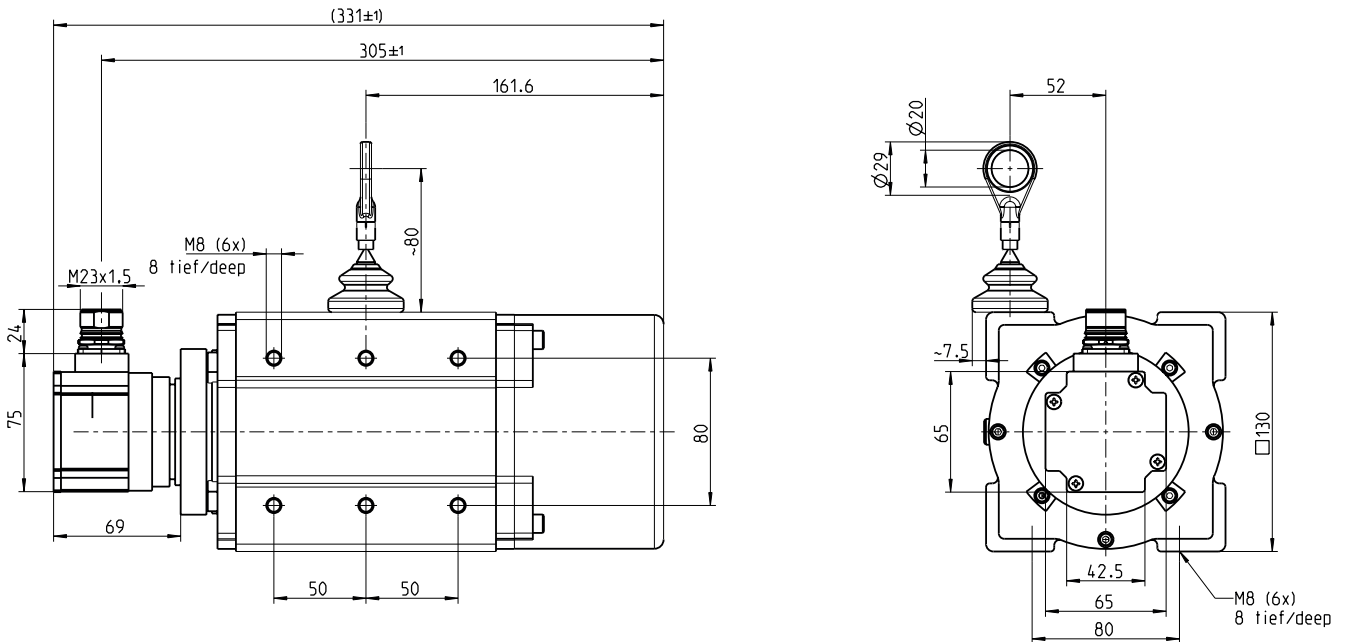
EMC	According to EN 61000-6-2 and EN 61000-6-3 ¹⁾
Enclosure rating	IP64
Operating temperature range	-30 °C ... +70 °C

¹⁾ The EMC according to the standards quoted is achieved when the motor feedback system is mounted in an electrically conductive housing, which is connected to the central earthing point of the motor controller via a cable screen. The GND-(0 V) connection of the supply voltage is also grounded here. If other shielding concepts are used, users must perform their own tests.

Classifications

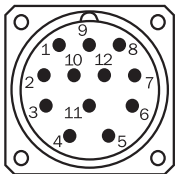
ECl@ss 5.0	27270590
ECl@ss 5.1.4	27270590
ECl@ss 6.0	27270590
ECl@ss 6.2	27270590
ECl@ss 7.0	27270590
ECl@ss 8.0	27270590
ECl@ss 8.1	27270590
ECl@ss 9.0	27270590
ECl@ss 10.0	27270613
ECl@ss 11.0	27270503
ETIM 5.0	EC001486
ETIM 6.0	EC001486
ETIM 7.0	EC001486
UNSPSC 16.0901	41112113

Dimensional drawing (Dimensions in mm (inch))



PIN assignment



View of the M23 male connector plug-in face



PIN	Signal	Explanation
1	REFCOS	Process data channel
2	Data +	Parameter channel RS 485
3	N.C.	Not assigned
4	N.C.	Not assigned
5	+ SIN	Process data channel
6	REFSIN	Process data channel
7	Data -	Parameter channel RS 485
8	+ COS	Process data channel
9	N.C.	Not assigned
10	GND	Ground connection
11	N.C.	Not assigned
12	U _S	Supply voltage
Housing	Screen	Screen connected to encoder housing

Recommended accessories

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

	Brief description	Type	Part no.
Other mounting accessories			
	Joint ball for later insertion in wire end ring with 20 mm diameter. The use of this joint ball enables movement in multiple levels of freedom.	Joint protection for wire rope BTF/PRF/MRA	5318683
	Additional brush attachment for wire draw mechanism MRA-F130 (5 m, 10 m, 20 m and 30 m from HighLine series)	MRA-F130-B	6038562
	Wire draw deflection pulley for wire draw mechanism MRA-F130 (5m, 10m, 20m and 30m from HighLine series)	MRA-F130-R	6028631
Spare parts			
	Spare mounting set for HighLine wire draw mechanisms for fitting encoders with servo flange	MRA-F-K	6028633
Wire draw mechanism			
	HighLine wire draw mechanism for servo flange with 6 mm shaft, measuring range 0 m ... 20 m	MRA-F130-120D1	6028628
Plug connectors and cables			
	Head A: cable Head B: Flying leads Cable: SSI, TTL, HTL, Incremental, PUR, halogen-free, shielded	LTG-2612-MW	6028516
	Head A: female connector, M23, 12-pin, straight Head B: Flying leads Cable: SSI, RS-422, TTL, HTL, PUR, halogen-free, shielded, 3 m	DOL-2312-G03MMA1	2029201
	Head A: female connector, M23, 12-pin, straight Head B: Flying leads Cable: SSI, RS-422, TTL, HTL, PUR, halogen-free, shielded, 5 m	DOL-2312-G05MMA1	2029202
	Head A: female connector, M23, 12-pin, straight Head B: Flying leads Cable: SSI, RS-422, TTL, HTL, PUR, halogen-free, shielded, 10 m	DOL-2312-G10MMA1	2029203
	Head A: female connector, M23, 12-pin, straight Head B: Flying leads Cable: SSI, RS-422, TTL, HTL, PUR, halogen-free, shielded, 1.5 m	DOL-2312-G1M5MA1	2029200
	Head A: female connector, M23, 12-pin, straight Head B: Flying leads Cable: SSI, RS-422, PUR, halogen-free, shielded, 20 m	DOL-2312-G20MMA1	2029204
	Head A: female connector, M23, 12-pin, straight Head B: Flying leads Cable: Incremental, PUR, shielded, 30 m	DOL-2312-G30MLD1	2062208
	Head A: female connector, M23, 12-pin, straight Head B: Flying leads Cable: SSI, RS-422, PUR, halogen-free, shielded, 30 m	DOL-2312-G30MMA1	2029205
	Head A: female connector, M23, 12-pin, straight Head B: Flying leads Cable: Incremental, PUR, halogen-free, shielded, 30 m	DOL-2312-G30MMD1	2062247

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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