



Wire draw encoders HighLine

BTF13-A1AM1020



Model Name > **BTF13-A1AM1020**
Part No. > **1034301**



Illustration may differ

At a glance

- Absolute wire draw encoders
- Modular measuring system with a wide selection of interfaces/measuring lengths
- Measuring lengths: 2 m ... 50 m
- Very rugged system (dirt wiper, integrated brushes), highly shock and vibration resistant
- High-quality winding mechanism and wire input
- Interfaces: - ANALOG, SSI, PROFIBUS, CANopen, DeviceNet, HIPERFACE®
- High enclosure rating
- High resolution possible

Your benefits

- Reliable solution in harsh environments
- Long service life due to rugged industrial housing
- Quick and easy installation without the need for precise linear guidance
- Low integration and maintenance costs
- Customization option reduces storage costs
- No reference run necessary thanks to the absolute measuring principle
- Teach-in function enables fast commissioning



Performance

Measuring range:	0 m ... 10 m
Repeatability:	$\pm 0.1 \%$ ¹⁾
Linearity:	$\pm 0.1 \%$ ²⁾
Hysteresis:	$\pm 0.05 \%$ ³⁾
Resolution:	0.05 mm

1) 2) 3) Value refers to wire draw mechanism

Mechanical data

Mass (including encoder):	4 kg
Mass (mechanics):	3.5 kg
Measuring wire diameter:	1.35 mm
Housing material, wire draw mechanism:	Aluminum (anodised), plastic
Drum extent:	334.1 mm
Spring return force:	10 N ... 20 N ¹⁾
Life of wire draw mechanism:	1 million cycles

Actual length of cable extension:	10.2 m
Wire acceleration:	40 m/s ²
Operating speed:	4 m/s
Mounted encoder:	ATM60 SSI
Mounted mechanic:	MRA-F130-110D2
Part number mechanic:	6028627
Part number encoder:	1034294

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

Electrical data

Initialization time:	Ca. 1,050 ms ¹⁾
Code type:	Gray
MTTFd: mean time to dangerous failure::	150 a ²⁾ ³⁾

¹⁾ Valid positional data can be read once this time has elapsed. ²⁾ 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. ³⁾ The value applies to the mounted encoder

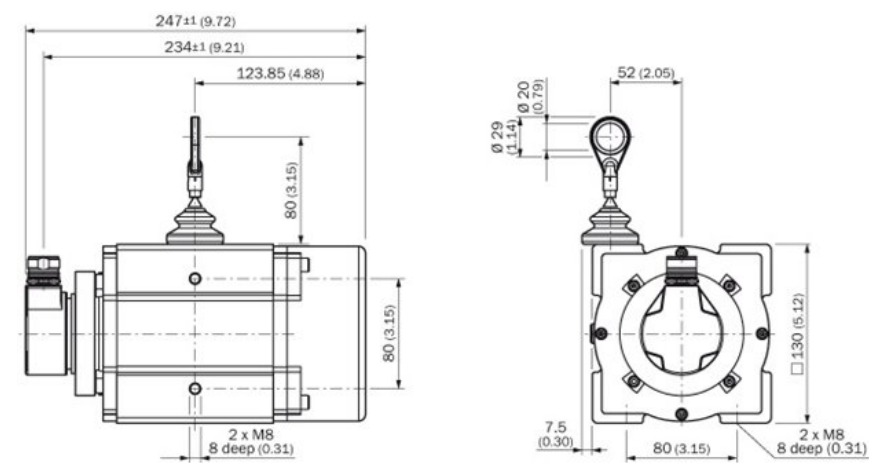
Interfaces

Electrical interface:	SSI
Connection type:	Connector M23, 12-pin, radial
Clock frequency:	1 MHz
SET (electronic adjustment):	Via SET cable

Ambient data

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:	10 g, 6 ms (according to EN 60068-2-27)
Resistance to vibration:	20 g, 10 Hz ... 2,000 Hz (according to EN 60068-2-6)
Working temperature range:	-20 °C ... 70 °C
Relative humidity/Condensation:	90 % (condensation of the optical scanning not permitted)

Dimensional drawing



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