

ONLINE DATA SHEET
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Wire draw encoders
HighLine

BTF13-D1HM0525



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HighLine

Model Name > BTF13-D1HM0525
Part No. > 1034312

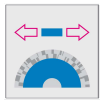




Illustration may differ

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

Measurement range:	0 m ... 5 m
Repeatability:	≤ 1 mm [1)]
Linearity:	≤ ± 2 mm [2)]
Hysteresis:	≤ 2 mm [3)]
Resolution (wire draw + encoder)::	0.04 mm [4) 5)]

1) 3) Value refers to wire draw mechanism 2) 4) 5)

Mechanical data

Mass (including encoder):	3.39 kg
Mass (mechanics):	2.8 kg
Measuring wire diameter:	1.35 mm
Measuring wire material:	Highly flexible stranded steel 1.4401 stainless steel V4A
Housing material, wire draw mechanism:	Aluminum (anodised), plastic
Spring return force:	15 N ... 20 N [1)]
Life of wire draw mechanism:	1 million cycles [2)]

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Actual length of cable extension:	5.2 m
Wire acceleration:	70 m/s²
Operating speed:	4 m/s
Mounted encoder:	ATM60 DeviceNet
Mounted mechanic:	MRA-F130-105D2
Part number mechanic:	6028626
Part number encoder:	1030018
Mass (measuring wire):	7.1 g/m
Length of wire pulled out per revolution:	334.1 mm [3)]
Number of steps per revolution:	8,192

[1)] These values were measred at an ambient temperature of 25 °C. There may be variations at other temperatures. [2) 3)]

Electrical data

Initialization time:	Ca. 12 s [1)]
Supply voltage:	10 V ... 32 V
Power consumption:	2 W
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:	DeviceNet
Connection type:	Bus adaptor with cable screw fixings or connector, radial [1)]
Address setting:	0 ... 63, DIP-switches or protocol
Protocol:	DeviceNet Specification Release 2.0
Bus termination:	Via DIP switches
SET (electronic adjustment):	Via PRESET push button or protocol
Encoder profile:	Generic Profile
Encoder:	Absolute encoders

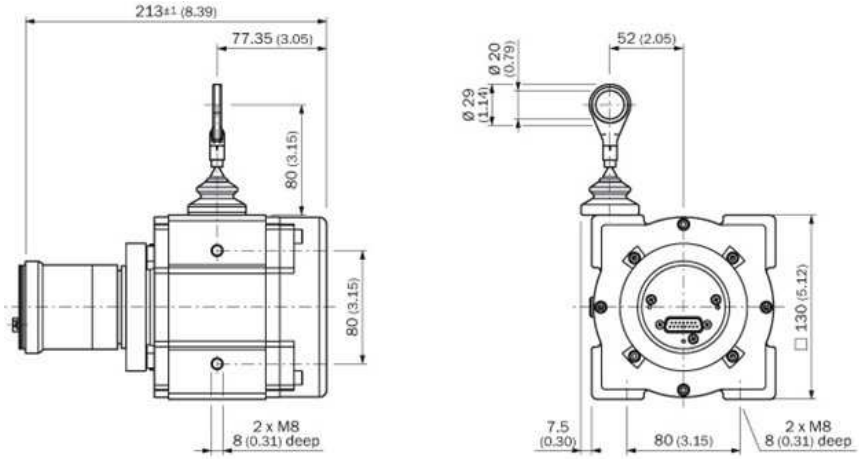
[1)] Please order the bus adaptor seperately

Ambient data

EMC:	(according to EN 61000-6-2 and EN 61000-6-3)
Enclosure rating encoder:	IP 67
Enclosure rating mechanic:	IP 64
Resistance to shocks:	100 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)
Relative humidity/Condensation:	98 % (condensation of the optical scanning not permitted)
Working temperature range (encoder):	-20 °C ... +70 °C
Working temperature range (mechanics):	-30 °C ... +70 °C
Working temperature range (combination):	Wird definiert durch den höheren mininalen und niedrigeren maximalen Wert des Arbeitstemperaturbereichs von Encoder und Mechanik

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Dimensional drawing



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