



Wire draw encoders HighLine

PRF13-A1AM2020



Model Name > PRF13-A1AM2020
Part No. > 1034326



Illustration may differ

At a glance

- Incremental 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: - TTL/HTL
- High enclosure rating
- Highly resistant to shock and vibrations

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 inventory costs



Performance

Measuring range:	0 m ... 20 m
Repeatability:	$\pm 0.1 \%$ ¹⁾
Linearity:	$\pm 0.1 \%$ ²⁾
Hysteresis:	$\pm 0.05 \%$ ³⁾
Resolution:	0.2 mm

^{1) 2) 3)} Value refers to wire draw mechanism

Mechanical data

Mass (including encoder):	5.3 kg
Measuring wire diameter:	0.81 mm
Housing material, wire draw mechanism:	Aluminum (anodised), plastic
Drum extent:	332.4 mm
Spring return force:	15 N ... 20 N ¹⁾
Life of wire draw mechanism:	1 million cycles
Actual length of cable extension:	20.2 m
Wire acceleration:	30 m/s ²
Operating speed:	4 m/s

Mounted encoder:	DFS60
Mounted mechanic:	MRA-F130-120D1
Part number mechanic:	6028628
Part number encoder:	1056866

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

Electrical data

Maximum output frequency:	820 kHz
Reference signal, position:	Electronically, gated with A and B
Reference signal, number:	1, electronically, gated with A and B
Maximum load current:	30 mA
Initialization time::	≤ 32 ms, with mechanical zero pulse width ≤ 30 ms ^{1) 2)}
MTTFd: mean time to dangerous failure::	300 a ^{3) 4)}

^{1) 2)} Valid positional data can be read once this time has elapsed. 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. ⁴⁾ The value applies to the mounted encoder

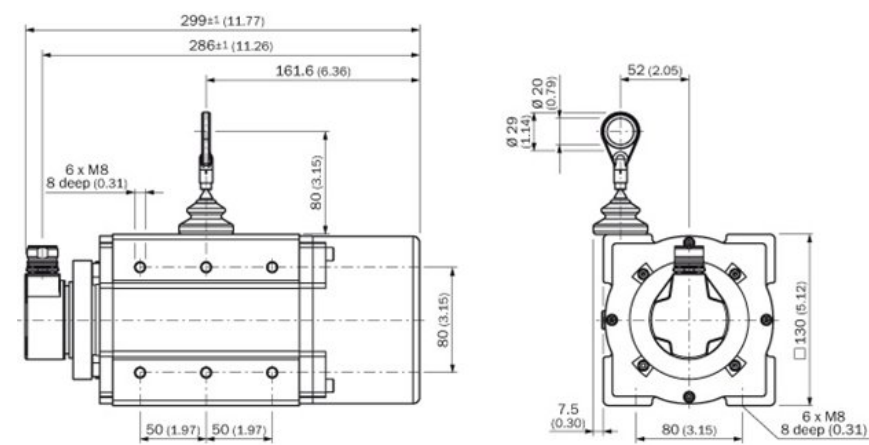
Interfaces

Electrical interface:	4.5 V ... 5.5 V, TTL/RS422
Connection type:	Connector M23, 12-pin, radial

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:	60 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:	-30 °C ... 70 °C
Relative humidity/Condensation:	90 % (condensation of the optical scanning not permitted)

Dimensional drawing



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