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Wire draw encoders
EcoLine

PFG19-A1CM1029

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Model Name > PFG19-A1CM1029
Part No. > 1061020

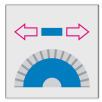

Illustration may differ

At a glance

- Measuring lengths of 1.25 m, 3 m, 5 m, and 10 m
- Very small dimension (55 ... 190 mm)
- Modular system: encoder type, measuring length, and interface can be selected
- Programmable resolution, output voltage, and measuring range
- Light yet shock-proof and temperature-resistant plastic housing (Noryl)
- Space-saving and cost-effective design

Your benefits

- Easy, cost-efficient integration thanks to incremental interface
- Suitable for tight installation spaces as a result of its slim, compact design
- High precision resulting from the elimination of a coupling between the encoder and mechanism
- Wide range of applications thanks to numerous encoders, interfaces, and measuring lengths
- Options for customization, such as programmability, reduce storage and downtime costs
- Greater vibration resistance thanks to the integration of the spring in the measuring drum

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Performance

Measurement range:	0 m ... 10 m
Repeatability:	≤ 0.2 mm [1)]
Linearity:	≤ ± 2 mm [2)]
Hysteresis:	≤ 0.4 mm [3)]
Resolution (wire draw + encoder)::	0.034 mm [4) 5)]

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

Mechanical data

Mass (including encoder):	2.2 kg
Mass (mechanics):	1.9 kg
Measuring wire diameter:	0.55 mm
Measuring wire material:	Highly flexible stranded steel 1.4401 stainless steel V4A
Housing material, wire draw mechanism:	Plastic, Noryl
Spring return force:	9 N ... 12 N [1)]
Life of wire draw mechanism:	1 million cycles [2)]
Actual length of cable extension:	10.2 m

Wire acceleration:	8 m/s²
Operating speed:	4 m/s
Mounted encoder:	DFS60
Mounted mechanic:	MRA-G190-110D3
Part number mechanic:	5326242
Part number encoder:	1037566
Mass (measuring wire):	1.2 g/m
Length of wire pulled out per revolution:	555 mm
Pulses per revolution:	16,384

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

Electrical data

Maximum output frequency:	600 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]
Supply voltage:	4.5 V ... 32 V
Power consumption:	0.7 W
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

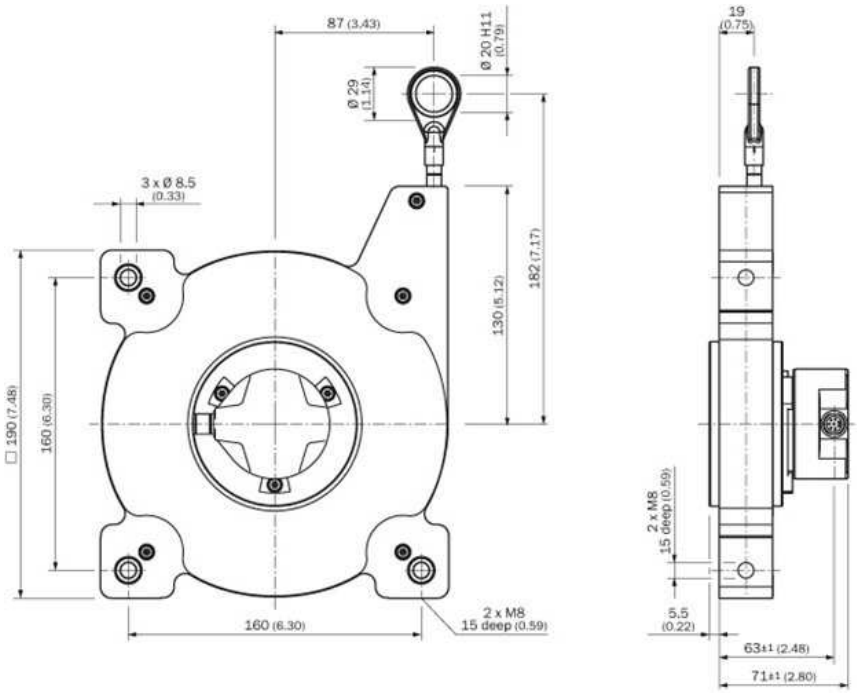
Interfaces

Electrical interface:	4.5 V ... 5.5 V, TTL/RS422
Connection type:	Male connector M12, 8-pin, radial
Encoder:	Incremental encoders

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)
Relative humidity/Condensation:	90 % (condensation of the optical scanning not permitted)
Working temperature range (encoder):	-30 °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

Dimensional drawing



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