



Wire draw encoders EcoLine

PFG08-E1AM0371



Model Name > PFG08-E1AM0371
Part No. > 1060981



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



Performance

Measurement range:	0 m ... 3 m
Repeatability:	$\leq 0.2 \text{ mm}$ ¹⁾
Linearity:	$\leq \pm 2 \text{ mm}$ ²⁾
Hysteresis:	$\leq 0.4 \text{ mm}$ ³⁾
Resolution (wire draw + encoder)::	0.014 mm ^{4) 5)}

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

Mechanical data

Mass (including encoder):	550 g
Mass (mechanics):	250 g
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:	5 N ... 6.3 N ¹⁾
Life of wire draw mechanism:	1 million cycles ²⁾
Actual length of cable extension:	3.2 m

Wire acceleration:	10 m/s ²
Operating speed:	4 m/s
Mounted encoder:	DFS60
Mounted mechanic:	MRA-G080-103D3
Part number mechanic:	5322778
Part number encoder:	1037615
Mass (measuring wire):	1.2 g/m
Length of wire pulled out per revolution:	230 mm
Pulses per revolution:	16,384

¹⁾ These values were measured 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

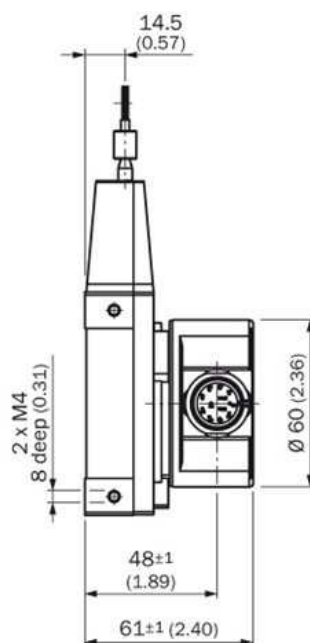
Electrical interface:	HTL/Push pull
Connection type:	Connector M23, 12-pin, radial
Encoder:	Incremental encoders

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 minimalen und niedrigeren maximalen Wert des Arbeitstemperaturbereichs von Encoder und Mechanik

Technical drawing showing the front view of the motor housing assembly. Key dimensions and features include:

- Overall width: 80 (3.15)
- Overall height: 108 (4.25)
- Distance between mounting feet: 67 (2.64)
- Mounting feet diameter: Ø 9 (0.35)
- Mounting feet hole diameter: Ø 12 (0.47)
- Mounting feet hole offset: 36 (1.42)
- Mounting feet hole diameter: Ø 6 (0.24)
- Mounting feet hole offset: 12 (0.47)
- Mounting feet hole diameter: Ø 4.2 (0.17)
- Mounting feet hole offset: 67 (2.64)
- Mounting feet hole diameter: 2 x M4
- Mounting feet hole depth: 8 deep (0.31)



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