



Wire draw encoders EcoLine

PFG05-A1KM0160



Model Name > PFG05-A1KM0160
Part No. > 1060972



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

Measuring range:	0 m ... 1.25 m
Repeatability:	$\pm 0.005\%$ ¹⁾
Linearity:	$\pm 0.01\%$ ²⁾
Hysteresis:	$\pm 0.1\%$ ³⁾
Resolution:	0.06 mm

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

Mechanical data

Mass (including encoder):	230 g
Mass (mechanics):	80 g
Measuring wire diameter:	0.45 mm
Housing material, wire draw mechanism:	Plastic, Noryl
Drum extent:	150 mm
Spring return force:	1 N ... 1.4 N ¹⁾
Life of wire draw mechanism:	1 million cycles
Actual length of cable extension:	1.45 m

Wire acceleration:	10 m/s ²
Operating speed:	4 m/s
Mounted encoder:	DBS36
Mounted mechanic:	MRA-G055-101D4
Part number mechanic:	5324019
Part number encoder:	1064245

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

Electrical data

Maximum output frequency:	300 kHz
Reference signal, position:	90 °, electronically, gated with A and B
Reference signal, number:	Electronically, gated with A and B
Maximum load current:	30 mA
Initialization time:	≤ 3 ms ¹⁾
MTTFd: mean time to dangerous failure::	600 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:	4.5 V ... 5.5 V, TTL/RS422
Connection type:	Cable, 8-pin, universal, 1.5 m

Ambient data

EMC:	(according to EN 61000-6-2 and EN 61000-6-4 (class A))
Enclosure rating encoder:	IP 65
Enclosure rating mechanic:	IP 50
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)
Working temperature range:	-30 °C ... 70 °C
Relative humidity/Condensation:	90 % (condensation of the optical scanning not permitted)

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