AFM60E-S4AC004096

SICK AG · AFS/AFM60 SSI

FEATURES

Multiturn absolute encoder with SSI interface, solid shaft and face mount flange design (part no. 1037653).

Technical data

Number of steps per revolution (max. resolution):
4,096 (12 bit)

Number of revolutions:
4,096 (12 bit)

Max. resolution (steps/rev × revolutions):
12 bit × 12 bit (4,096 × 4,096)

Error limit:
±0.2° (per DIN ISO 1319-1, symmetrical position)

Repeatability (standard deviation σr):
0.002° (per DIN ISO 55350-13)

Communication interface:
SSI

Initialization time:
50 ms maximum

Position forming time:
< 1 µs

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Code type:
Gray

Code sequence:
CW/CCW (V/R) parameter adjustable

Clock frequency:
≤ 1 MHz minimum (LOW level 250 ns minimum at Clock+)

SET input:
H-active (L = 0–3 V, H = 4.0–Us V)

CW/CCW input:
L-active (L = 0–1.5 V, H = 2.0–Us V)

Connection type:
Male connector, M12, 8-pin, radial

Mechanical design:
Solid shaft, face mount flange

Shaft diameter:
10 mm

Shaft length:
19 mm

Shaft material:
Stainless steel

Flange material:
Aluminum

Housing material:
Aluminum die cast

Start-up torque:
< 0.5 Ncm at +20 °C

Operating torque:
< 0.3 Ncm at +20 °C

Permissible shaft loading:
80 N radial maximum, 40 N axial maximum

Operating speed:
≤ 9,000 min^{-1} (allow 3.3 K self-heating per 1,000 rpm)

Moment of inertia of the rotor:
6.2 g·cm^2

Bearing lifetime:
3.0 × 10^9 revolutions

Maximum angular acceleration:
≤ 500,000 rad/s^2

Electrical

Supply voltage:
4.5 ... 32 V nominal DC

Power consumption:
≤ 0.7 W maximum (without load)

Reverse polarity protection:
Yes

Environmental

Operating temperature:
0 °C ... +85 °C

Storage temperature:
–40 °C ... +100 °C (without package)

Relative humidity:
90 % maximum (condensation not permitted)

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Protection rating:
IP65 shaft side, IP67 housing side (IEC 60529, with mating connector mounted)

Resistance to shocks:
50 g, 6 ms (EN 60068-2-27)

Resistance to vibration:
20 g, 10 Hz ... 2,000 Hz (EN 60068-2-6)

Physical

Dimensions (H×W×D):
Not available (overall housing envelope values are given only in the dimensional drawing image; per official text table)

Weight:
0.3 kg (based on devices with male connector, per datasheet)

Mounting / Shaft / Flange:
Solid shaft Ø10 mm × 19 mm, face mount flange with 36 mm centering hub, M12 8-pin radial male connector

Lifecycle

Official SICK production status unverified; currently listed on sick.com product page with dedicated datasheet (part no. 1037653) (Last verified:
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