

Absolute encoders - SSI

Shaft with synchro flange

Single and multiturn encoders 13 bit ST / 12 bit MT (option: 16 bit MT)

AMG 71



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Features

- Encoder multiturn / SSI
- Optical sensing
- Resolution: singleturn 13 bit, multiturn 12 bit
- Multiturn: sensing principle without gears and battery
- With additional incremental signals (sine 1 Vpp)

Optional

- Multiturn 16 bit

Technical data - electrical ratings

Voltage supply	7...30 VDC
Consumption w/o load	≤100 mA
Initializing time	≤200 ms after power on
Interface	SSI
Function	Multiturn
Steps per turn	8192 / 13 bit
Number of turns	4096 / 12 bit, 65536 / 16 bit (option)
Additional output signals	Sine 1 Vpp
Incremental output	2048 pulses (sin/cos)
Spectrum	200 kHz (-3 dB)
Offset sine/cosine amplitude	≤20 mV
Overlaying constant share	≤20 mV
Sensing method	Optical
Code	Gray
Code sequence	CW
Inputs	SSI clock
Interference immunity	DIN EN 61000-6-2
Emitted interference	DIN EN 61000-6-4
Diagnostic functions	LED failure Self-diagnosis Code continuity check
Approval	UL approval / E256710

Technical data - mechanical design

Dimensions (flange)	ø60 mm
Shaft	ø6 mm
Flange	Synchro flange
Protection DIN EN 60529	IP 66
Operating speed	≤5000 rpm (mechanical)
Operating torque typ.	2 Ncm
Rotor moment of inertia	25 gcm ²
Shaft loading	≤50 N axial ≤120 N radial
Materials	Housing: aluminium alloy Shaft: stainless steel
Operating temperature	-20...+85 °C
Resistance	IEC 60068-2-6 Vibration 10 g, 10-2000 Hz IEC 60068-2-27 Shock 100 g, 6 ms
Explosion protection	II3G Ex nA IIC T4 Gc X (gas) II3D Ex tc IIIC T85°C Dc X (dust)
Weight approx.	350 g
Connection	Terminal cover

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Part number

AMG 71 S S2048

Additional incremental
signals

S2048 Sine/cos, 2048 pulses*

Absolute share

13 13 bit singleturn

25 13 bit singleturn + 12 bit multiturn

29 13 bit singleturn + 16 bit multiturn

Interface/interfaces

S SSI

Accessories

Connectors and cables

HEK 8 Sensor cable for encoders

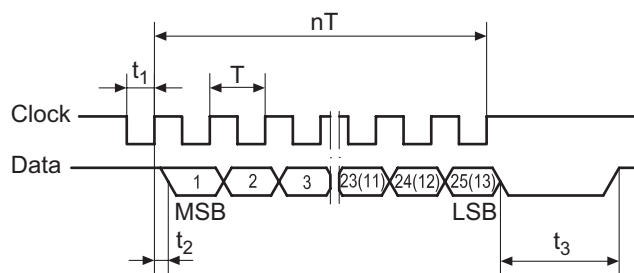
Mounting accessories

K 35 Spring disk coupling for shaft ø6...12 mm

Diagnostic accessories

HENQ 1100 Analyzer for encoders

Data transfer



$T = 1.25 \dots 10 \mu s$

$t_1 = 0.63 \dots 5 \mu s$

$t_2 \leq 0.4 \mu s$

$t_3 = 12 \dots 30 \mu s$

$n = \text{Number of bits}$

Clock frequency 100...800 kHz

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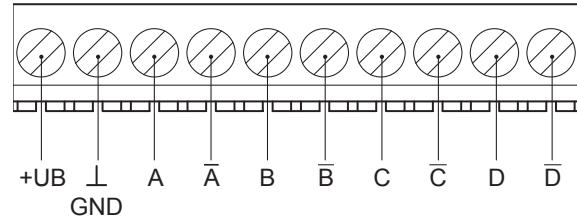
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Terminal significance

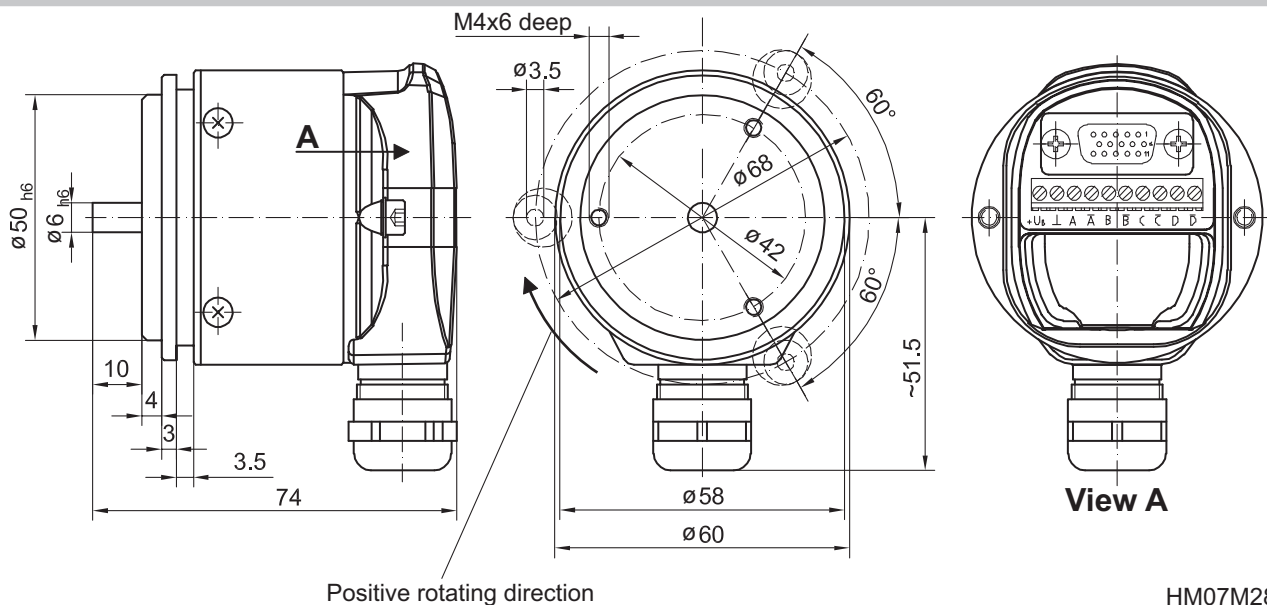
UB	Encoder voltage supply
GND	Encoder ground connection
A	Cosine
$\bar{A}$	Cosine inv.
B	Sine
$\bar{B}$	Sine inv.
C	Clock
$\bar{C}$	Clock
D	Data
$\bar{D}$	Data

Terminal assignment

View A - Connecting terminal inside the terminal cover



Dimensions



HM07M28048

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