

AMG 71

Solid shaft with synchro flange

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

Overview

- Encoder multiturn / SSI
- Optical sensing method
- Resolution: singleturn 13 bit, multiturn 12 bit
- Multiturn sensing with microGen technologie, without gear or battery
- With additional incremental signals (SinCos 1 Vpp)



Technical data

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 revolution	8192 / 13 bit
Number of revolutions	4096 / 12 bit 65536 / 16 bit (option)
Additional outputs	SinCos
Bandwidth	200 kHz (-3 dB)
Difference of SinCos amplitude	≤20 mV
DC offset	≤20 mV
Sensing method	Optical
Code	Gray
Code sequence	CW
Inputs	SSI clock
Incremental output	2048 pulses (SinCos)
Interference immunity	EN 61000-6-2
Emitted interference	EN 61000-6-3
Diagnostic function	LED failure Self-diagnosis Code continuity check

Technical data - electrical ratings

Approval	CE UL approval / E217823
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Technical data - mechanical design

Size (flange)	ø60 mm
Shaft type	ø6 mm solid shaft
Flange	Synchro flange
Protection EN 60529	IP 66
Operating speed	≤5000 rpm (mechanical)
Operating torque typ.	2 Ncm
Rotor moment of inertia	25 gcm ²
Admitted shaft load	≤50 N axial ≤120 N radial
Material	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	II 3 G Ex ec IIC T4 Gc X (gas) II 3 D Ex tc IIIC T85°C Dc X (dust) (only with option ATEX)
Weight approx.	350 g
Connection	Terminal cover

Optional

- Multiturn 16 bit

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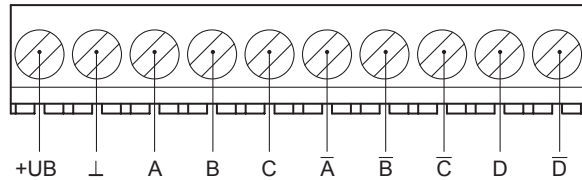
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Terminal assignment

View A (see dimension)

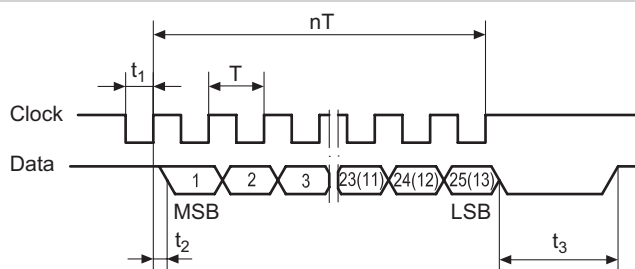
Connecting terminal



Terminal significance

+UB	Voltage supply
⊥	Ground
A	Cosinus
\bar{A}	Cosinus inverted
B	Sinus
\bar{B}	Sinus inverted
C	Clock
\bar{C}	Clock
D	Data
\bar{D}	Data

Data transfer



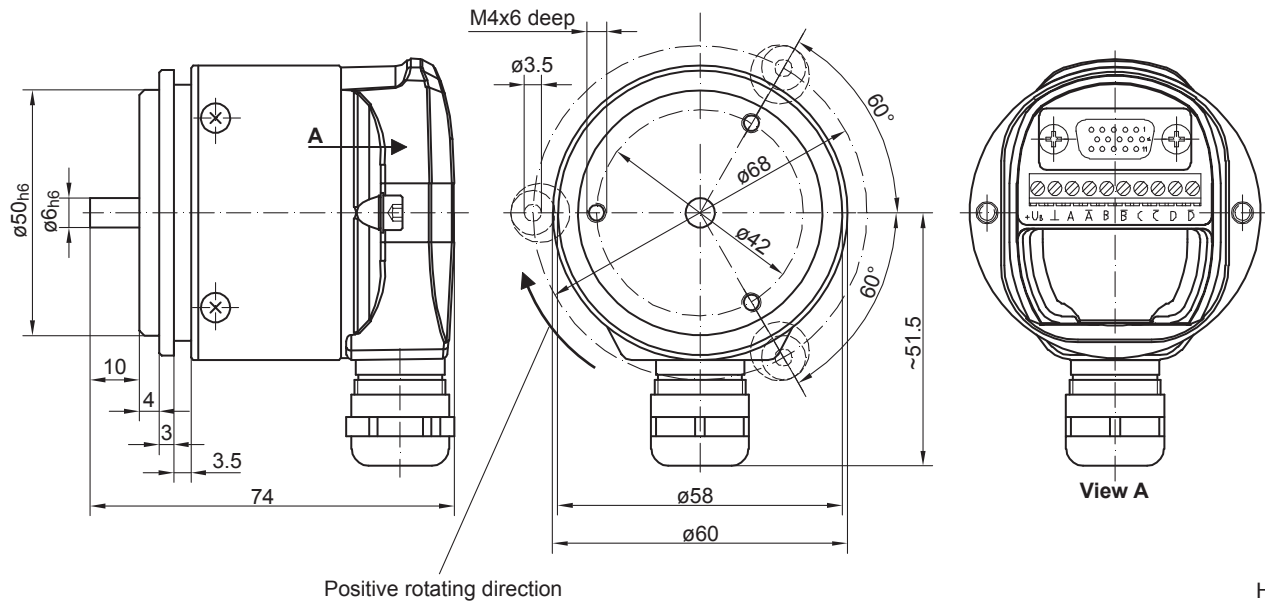
$T =$	1.25...10 μs
$t_1 =$	0.63...5 μs
$t_2 =$	0.4 μs
$t_3 =$	12...30 μs
$n =$	Number of bits
Clock frequency	100...800 kHz

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Dimensions



HM07M28048

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Ordering reference

	AMG71	S	##	S2048
Product	Absolute encoder			
	AMG71			
Interface/interfaces				
	SSI	S		
Absolute share				
	13 bit singleturn			13
	13 bit singleturn + 12 bit multiturn			25
	13 bit singleturn + 16 bit multiturn			29
Additional output				
	SinCos, 2048 pulses			S2048

Accessories

Mounting accessories

Spring disk coupling K 35 (shaft ø6...12 mm)