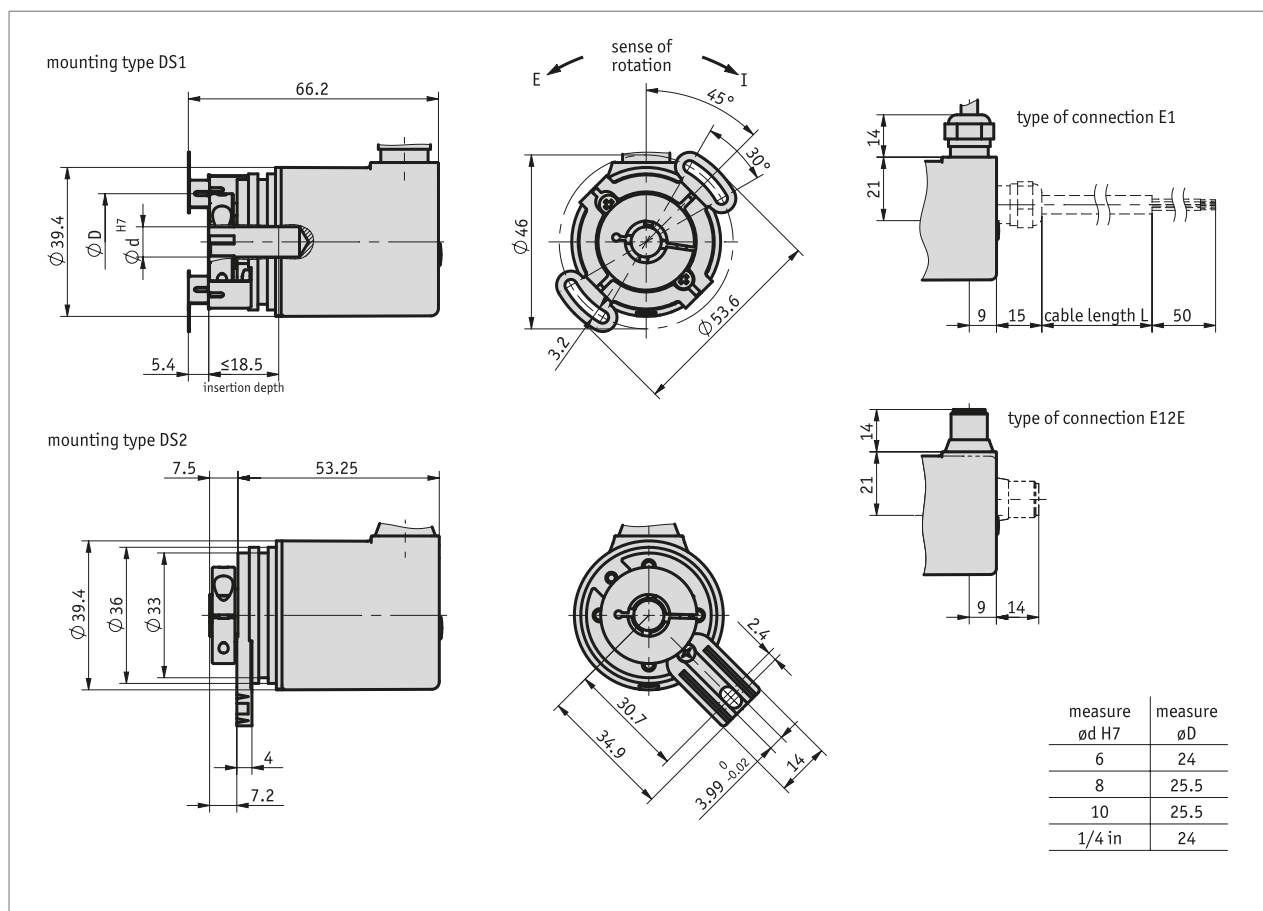


Absolute encoder AH3650M

compact rotary encoder with hollow shaft and analog interface

Profile

- Absolute wear-free magnetic encoder
- Multiturn without gearbox and without battery
- Current or voltage output interfaces
- Extremely compact and very robust design
- IP67 protection class
- Extensive temperature range -40 ... 85° C
- Optimal price-performance ratio



Mechanical data

Feature	Technical data	Additional information
shaft	rustproof stainless steel	
Flange	aluminum	
Housing	zinc die-cast	
Speed	6000 min ⁻¹	with protection class IP65, transient for ≤10 min
	3000 min ⁻¹	with protection class IP65, continuous operation
	4000 min ⁻¹	with protection class IP67, transient for ≤10 min
	2000 min ⁻¹	with protection class IP67, continuous operation
Starting torque	<0.007 Nm at 20 °C	with protection class IP65
	<0.01 Nm at 20 °C	with protection class IP67
Shaft load rating	40 N	radial
	20 N	axial
Cable sheath	PVC	∅6.2 ±0.2 mm
Cable bending radius	60 mm	static
	130 mm	dynamic
Mounting type	stator coupling	mounting type DS1
	spring element	mounting type DS2
Weight	~0.2 kg	

Electrical data

Feature	Technical data	Additional information
Operating voltage	10 ... 30 V DC	at output 0 ... 5 V, reverse polarity protected, power supply unit corresponds to Class 2 (UL 1310)
	15 ... 30 V DC	at output 0 ... 10 V, reverse polarity protected, power supply unit corresponds to Class 2 (UL 1310)
	10 ... 30 V DC	at output 4 ... 20 mA, but UB > Uload +2.0 V, reverse polarity protected, power supply unit corresponds to Class 2 (UL 1310)
Current consumption	≤30 mA	without load
Parameter storage	10 ⁴ cycles	also applies to calibration operations
Inputs	2	limit inputs, high active
Input signal level high	+UB	≥1 s
Status display	two-color LED (red/green)	device status
Output voltage	0 ... 5 V	load ≥500 Ω
	0 ... 10 V	load ≥1000 Ω
Output current	4 ... 20 mA at 24 V DC	load ≤900 Ω
Temperature drift	<100 ppm/K	
Cycle time	1 ms	
Starting time	<1 s	
Settling time	<1 ms	at output 0 ... 5 V and 0 ... 10 V, load = 1000 Ω, 25° C
	<1 ms	at output 4 ... 20 mA, load = 900 Ω, 25° C
Type of connection	1x M12-plug connector (A-coded)	5-pole, 1x pin, E12E connection type
	open cable end	E1 connection type

System data

Feature	Technical data	Additional information
Scanning	magnetic	
Resolution	11 bit	at 0 ... 5 V, analog output FS
	12 bit	at 0 ... 10 V, 4 ... 20 mA, analog output FS
System accuracy	±1 °	
Repeat accuracy	±0.2 °	
Measuring range	≥22.5 °	
	65536 rotation(s)	16 bit, factory setting 16 rotation(s)
Approval	UL	UL 61010-1, File No. E503367

Ambient conditions

Feature	Technical data	Additional information	
Ambient temperature	-40 ... 85 °C		
Storage temperature	-40 ... 85 °C		
Relative humidity	93 %	condensation inadmissible	
EMC	DIN EN 61326-1	immunity requirement of industry	
	DIN EN 61000-4-2, -3, -6, -8	interference resistance / immission	
	DIN EN 61000-4-4, -5	burst / surge	
	DIN EN 61000-6-4	emitted interference / emission	
Safety regulations	DIN EN 55011 class B	radiation emission / radio interference suppression	
	UL 61010-1	indoor use, outdoor use possible, not intended for use involving direct exposure to UV light. Environment dry / wet. Protection class III as per EN 61140. Pollution degree 2 as per EN 61010. Maximum humidity 93% at 40 °C.	
	Protection category	IP65 IP67	EN 60529 (protection type not yet reviewed by UL) EN 60529 (protection type not yet reviewed by UL)
	Shock resistance	2500 m/s ² , 6 ms	EN 60068-2-27
Vibration resistance	300 m/s ² , 10 ... 2000 Hz	EN 60068-2-6	

pin assignment

■ E12E

Signal	PIN
I _{OUT} /U _{OUT}	1
+UB	2
GND	3
"Limit 2"	4
Limit 1	5

■ E1

Signal	Color
I _{OUT} /U _{OUT}	green
+UB	brown
GND	white
"Limit 2"	pink
Limit 1	gray

Order

■ Ordering table

Feature	Ordering data	Spezifikation	Additional information
Interface	A	0/5V	0 ... 5 V voltage output
		0/10V	0 ... 10 V voltage output
		4/20mA	4 ... 20 mA current output
hollow shaft/diameter	B	6	ø6 mm
		8	ø8 mm
		10	ø10 mm
		1/4	ø1/4 in
Mounting type	C	DS1	stator coupling
		DS2	spring element
Protection category	D	IP65	IP65
		IP67	IP67
position of electrical connection	E	A	axial
		R	radial
Type of connection	F	E1	open cable end
		E12E	connector
Cable length	G	...	01.0, 02.0, 03.0, 05.0, 10.0
		OK	without cable

■ Order key

AH3650M - A - 65536 - B - C - D - E - F - G - S

**Scope of delivery:**

AH3650M, Quick Start Guide

**Accessories you can find:**

Cable extension KV05S0
Overview, Mating connector
Mating connector, 5-pole, angle socket
Mating connector, 5-pole, socket

www.siko-global.com
www.siko-global.com
Order key 83006
Order key 84109