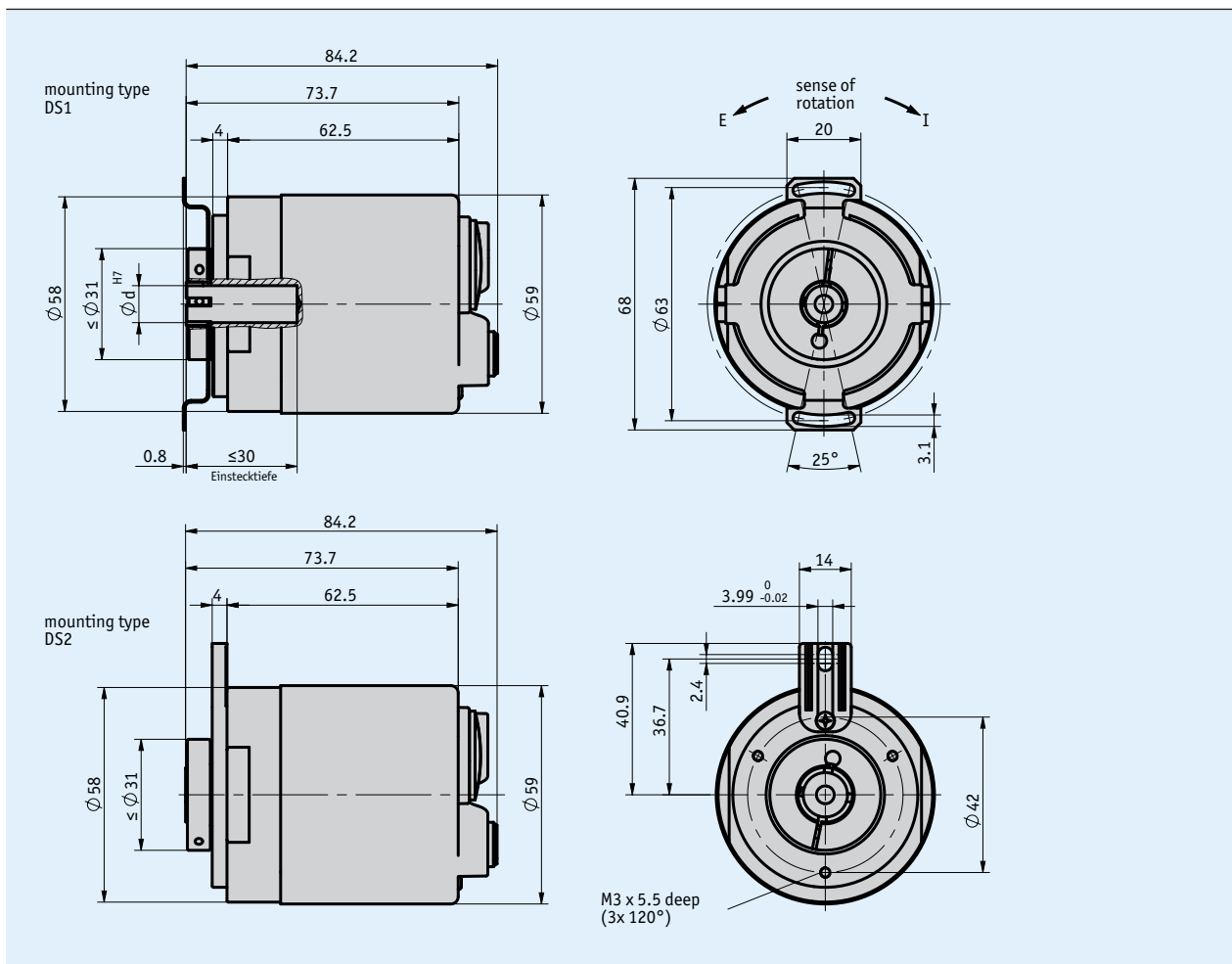


Profile

- Absolute optical encoder
- High-precision and up to 19 bit single-turn resolution
- PROFINET IO, EtherNet/IP interfaces
- Robust bearing construction as well as high shock and vibration resistance
- 100% magnetic insensitivity
- Fast commissioning and high system availability
- Industry 4.0 ready



Mechanical data

Feature	Technical data	Additional information
Shaft	rustproof stainless steel	
Flange	aluminum	
Housing	aluminum	
Speed	≤9000 rpm	transient for ≤10 min., at EPN PROFINET IO
	≤6000 rpm	continuous operation, at EPN PROFINET IO
Moment of inertia	≤6 x 10 ⁻⁶ kgm ²	
Starting torque	<0.01 Nm at 20 °C	
Shaft load rating	80 N	radial
	40 N	axial
Mounting type	stator coupling	mounting type DS1
	spring element	mounting type DS2
Weight	~0.45 kg	

Electrical data

■ PROFINET IO interface

Feature	Technical data	Additional information
Operating voltage	10 ... 30 V DC	reverse polarity protected, the power-supply unit corresponds to Class 2 (UL 1310)
Current consumption	≤250 mA	without load
Parameter storage	10 ¹⁰ cycles	also applies to calibration operations
Status display	5 LEDs	device status/bus status
Interface	PROFINET IO	profile version 4.2, PROFIdrive version 4.2, RT class 3 (IRT), conformance class C, application class 6, encoder class 4, netload class II
Type of connection	1x M12 connector (A-coded)	4-pole, 1x pin
	2x M12 connector (D-coded)	4-pole, 2x sockets

System data

Feature	Technical data	Additional information
Scanning	optical	
Resolution	19 bit	at EPN PROFINET IO scalable, default: 8192 (13 bit)
System accuracy	±0.0194° at 23 °C ±2 °C	
	±0.0139° at 23 °C ±2 °C	typical
Repeat accuracy	1 LSB	
Measuring range	16777216 revolution(s)	24 bit, at EPN PROFINET IO, default: 4096 (12 bit), scalable only via overall resolution
Approval	UL	UL 61010-1, File No. E503367

Ambient conditions

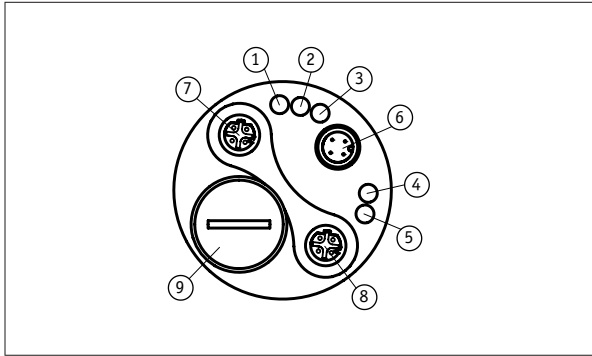
Feature	Technical data	Additional information
Ambient temperature	-40 ... 80 °C	
Storage temperature	-40 ... 80 °C	
Relative humidity	95 %	condensation inadmissible
EMC	DIN EN 61326-1	immunity requirement of industry
	DIN EN 61000-4-2, -3, -6, -8	interference resistance / immission
	DIN EN 61000-4-4	burst
	DIN EN 55011 Class A	radiation emission / radio interference suppression
Safety regulations	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	EN 60529 (protection type not yet reviewed by UL)
	IP67	EN 60529 (protection type not yet reviewed by UL)
Shock resistance	2500 m/s ² , 6 ms	EN 60068-2-27
Vibration resistance	100 m/s ² , 55 ... 2000 Hz	EN 60068-2-6

Pin assignment

Interface

Signal	PIN
Tx+	1
Rx+	2
Tx-	3
Rx-	4

connections



Industry 4.0

In most cases, data exchange with the absolute rotary encoder is limited to the exchange of process data. In addition to the process data, intelligent industrial Ethernet rotary encoders provide additional information that can be evaluated for condition monitoring up to predictive maintenance:

operating voltage

Signal	PIN
+UB	1
nc	2
GND	3
nc	4

	PROFINET IO
1	LED: link 2
2	LED: bus error
3	LED: collection error
4	LED: ENC
5	LED: link 1
6	power
7	link 2
8	link 1
9	-

Process Data	Smart Value	Smart Function
Actual position	Temperature	Condition monitoring
Speed	Limit speed	Application overload
	Operation hours counter	Operating time
	Electronic type label	Asset management
		Web server (EPN, EIP)

Order

Ordering table

Feature	Ordering data	Specification	Additional information
Number of revolutions	1	singleturn	
	16777216	24 bit, multiturn	only with ProfiNET
Hollow shaft/diameter	10	∅10 mm	
	12	∅12 mm	
	14	∅14 mm	
	15	∅15 mm	
	3/8	∅3/8 in	
	1/2	∅1/2 in	
Mounting type	DS1	stator coupling	
	DS2	spring element	
Protection category	IP65	IP65	
	IP67	IP67	

Order key



Scope of delivery: Quick Start Guide, WH5850

Accessories:

Cable extension KV04S2	www.siko-global.com
Mating Connector Overview	www.siko-global.com
Mating connector, operating voltage, 4-pole, socket	Order key 83526
Mating connector, operating voltage, 4-pole, angle socket	Order key 83091
Mating connector, port 1 + port 2, 4-pole, pin	Order key 87601
Mating connector, port 1 + port 2, 4-pole, angular pin	Order key 87600