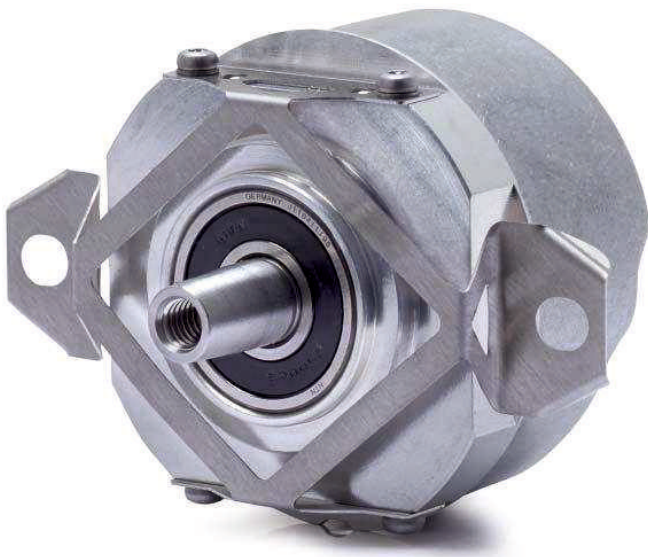# HEIDENHAIN

Product Information

ERN 1387

Rotary Encoders with Plane-Surface Coupling for Elevator Servo Drive Control

HEIDENHAIN

	INCREMENTAL ERN 1387
PART NUMBER	749146-xx
Interface [1]	〜 1 Vpp
Position Values / Revolution	Z1 track [2]
Incremental Signals [1]	〜 1 Vpp
Line Count/system accuacy	2048/±20"
Reference Mark	One
CUTOFF Frequency	≥ 210 kHz
Electrical Connection via PCB Connector	14-Pin
Voltage Supply	DC 5 V ± 0.25V
Current Consumption	≤ 130 mA (without Load)
Stator Coupling	Plane-Surface coupling
Shaft	Taper shaft Ø 9.25 m: taper 1:10
Mech. Permiss. Speed n	≤ 2000 rpm
Staring torque	≤ 0.01 Nm (at 20°C)
Moment of inertia of rotor	2.6 10^{-6} Kgcm²
Permissible axial motion of measured shaft [3]	± 1.5 mm
Radial runout of the measured shaft	0.13 mm
Vibration 55 Hz to 2000 Hz **Shock 6 ms**	≤ 300 m/s² [4] (EN 60 068-2-6) ≤ 2000 m/s² (EN 60 068-2-27)
Operating temperature	-40 °C to + 120 °C
Protection EN 60529	IP 40 when mounted
Mass	≈ 0.25 kg

1) See Interfaces of HEIDENHAIN Encoders brochure
2) One sine and one cosine signal per revolution
3) compensation of mounting tolerances and thermal expansion, not dynamic motion
4) As per standard for room temperature; for operation temperature   Up to 100 °C: ≤ 300m/s²
                                                                          Up to 115 °C or + 120 °C: ≤ 150m/s²
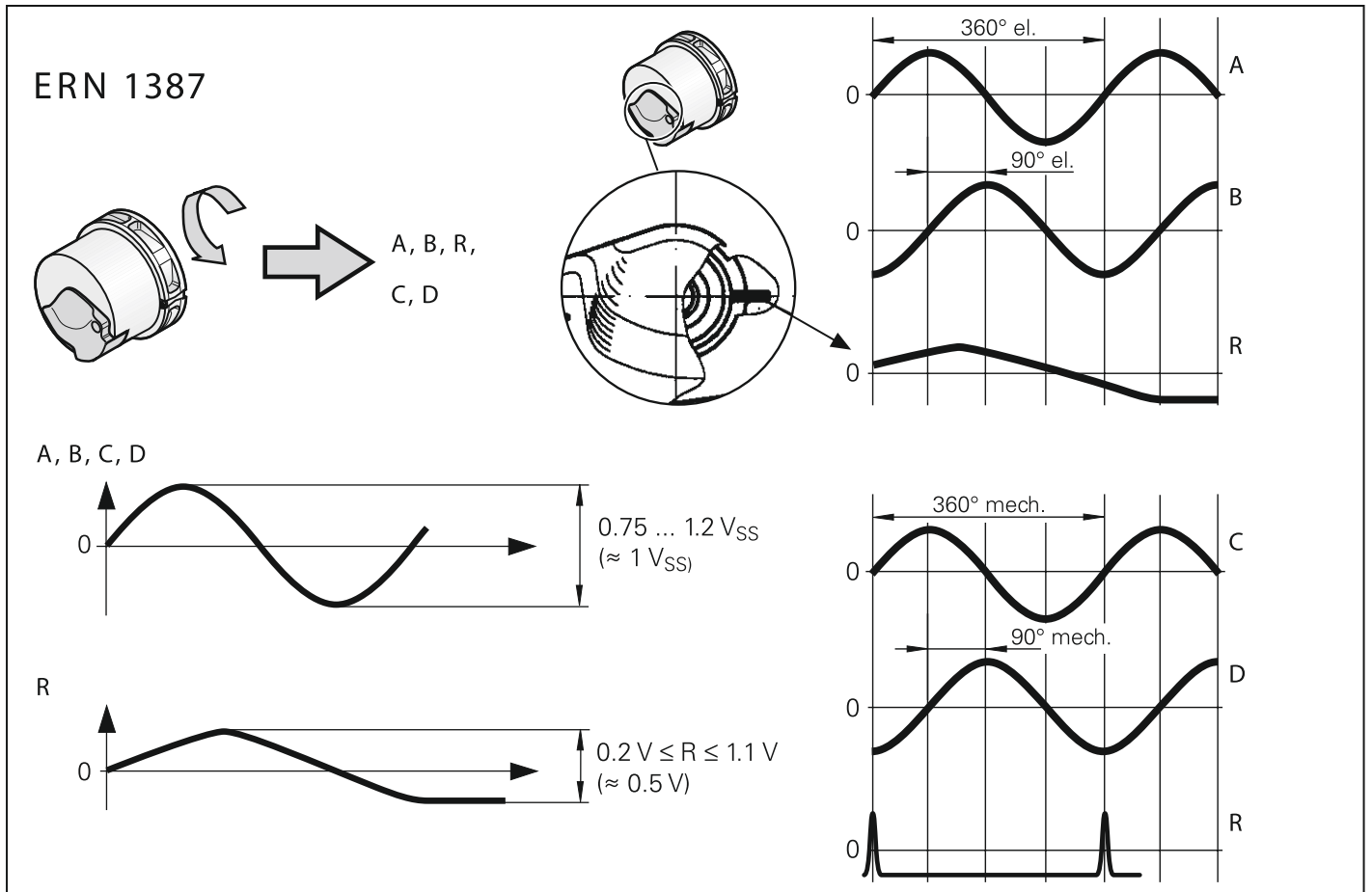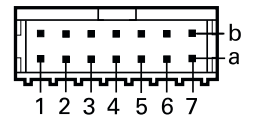
ENCODER HEIDENHAIN ERN 1387

The encoder ERN 1387 is an incremental -type encoder. Incremental signals are sin-cos signals.
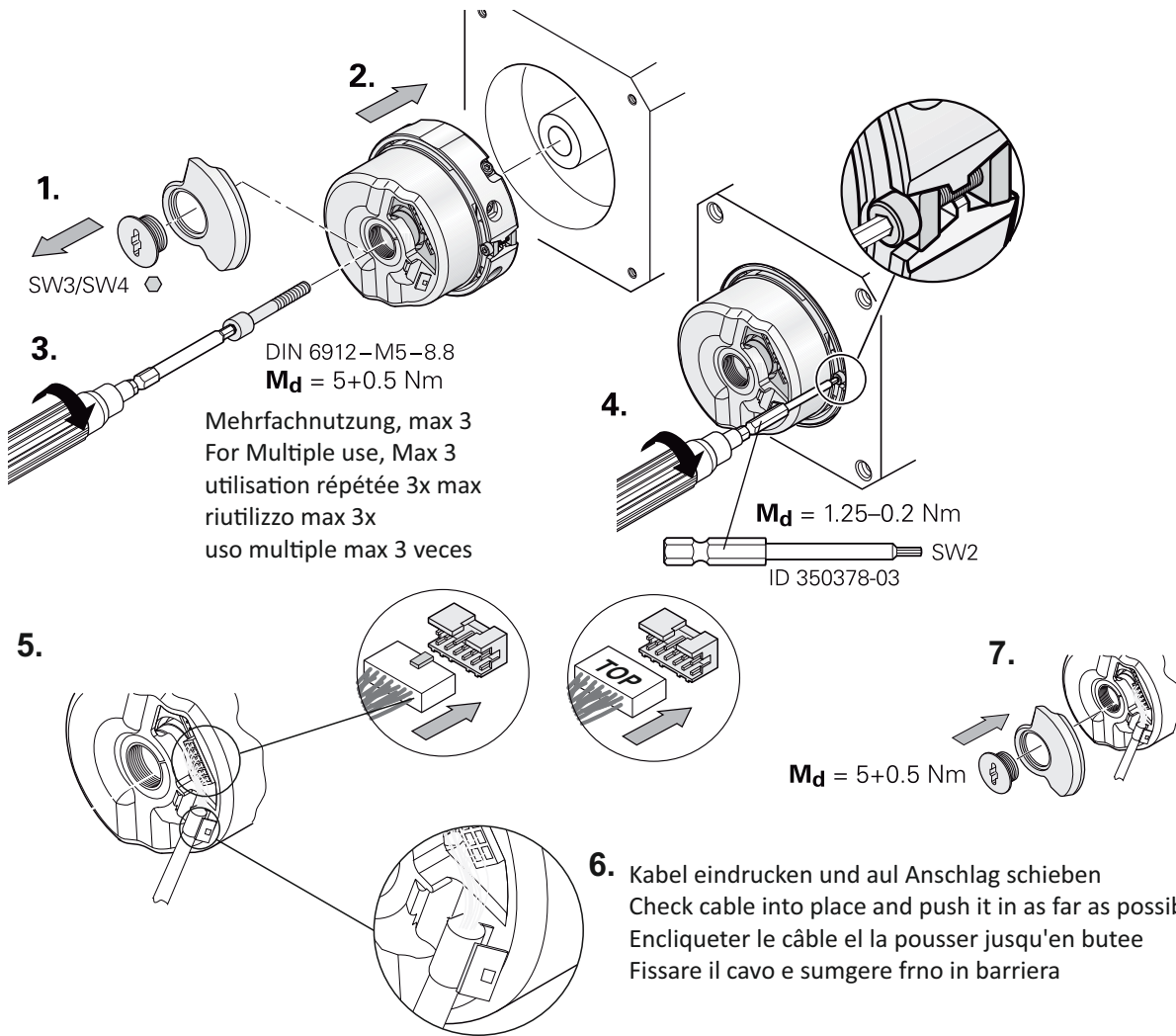
The encoder must be connected to the inverter according to the specification in table 6. cable shield must be connected to housing. The feeding of the sensor is connected inside to the main feeding.

Table 6. Match between connector/color of the wires of pulse generator ERN 1387 with signals transmitted by the inverter

Signal	Encoder pin		Signal	Encoder Pin
Up Sensor	7a		C+	7b
Up	1b		C-	1a
0 V Un	5b		D+	2b
0 V	3a		D-	6a
A+	6b		R+	4b
A-	2a		R-	4a
B+	3b		B-	5a

MOUNTING INSTRUCTIONS

1.

SW3/SW4 ⬡

2.

3.

DIN 6912−M5−8.8
M_d = 5+0.5 Nm

Mehrfachnutzung, max 3
For Multiple use, Max 3
utilisation répétée 3x max
riutilizzo max 3x
uso multiple max 3 veces

4.

M_d = 1.25−0.2 Nm

SW2
ID 350378-03

5.

TOP

7.

M_d = 5+0.5 Nm

6. Kabel eindrucken und aul Anschlag schieben
Check cable into place and push it in as far as possible
Encliqueter le câble el la pousser jusqu'en butee
Fissare il cavo e sumgere frno in barriera

Demontage in umgekehrter Reihenfolge
Disassembly in reverse order
Demontage dans l'ordre inverse
Smontaggio in sequenza inversa
Desmontaje en orden contrario

Zwei Möglichkeiten, zum Ausdrucken während der Demontage des drehgebers
Two ways of pressing the encoder out during dismounting
Deux possibilites de démontage du capteur rotald
Due possibilita di smontaggio dell'encoder
Dos posibilidades de alojar durante el desmontaje del encoder

a)

M5

b)

M5 x 10

M6 x 70

a)

360° .... 720°

b)

M10