



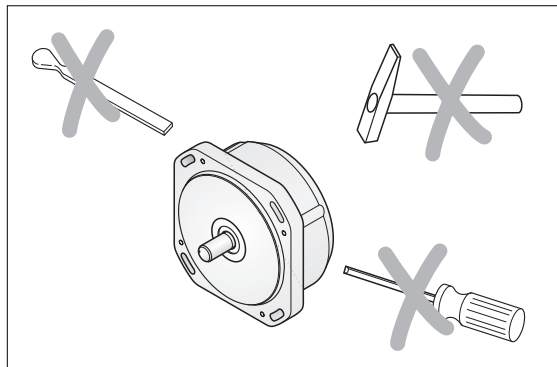
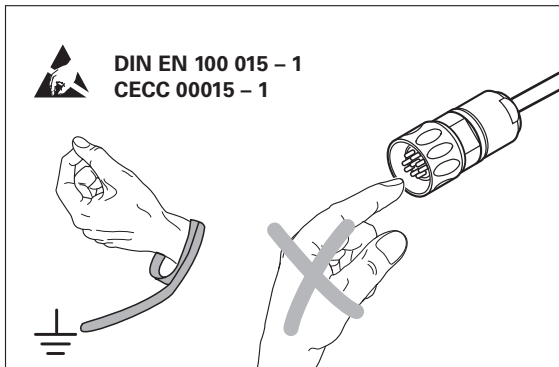
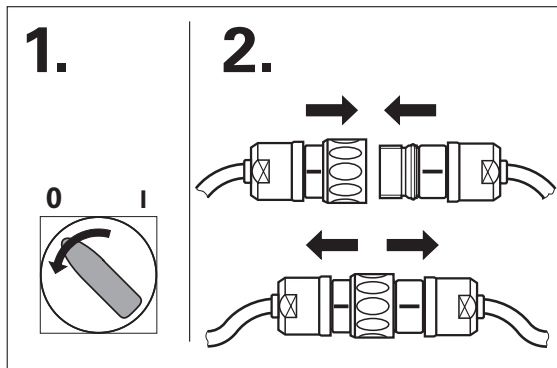
# HEIDENHAIN

Montageanleitung  
*Mounting Instructions*  
Instructions de montage  
*Istruzioni di montaggio*  
Instrucciones de montaje

## ROD 270

5/2006







Der direkte Kontakt von Flüssigkeiten mit Messgerät und Steckverbinder ist zu vermeiden!

*Avoid direct contact of fluids with the encoder and connector!*

Eviter le contact direct de liquides sur le système de mesure et le connecteur!

*Evitare che lo strumento di misura e il connettore vengano a contatto con liquidi*

¡Evitar el contacto directo de líquidos con el sistema de medida y el conector!



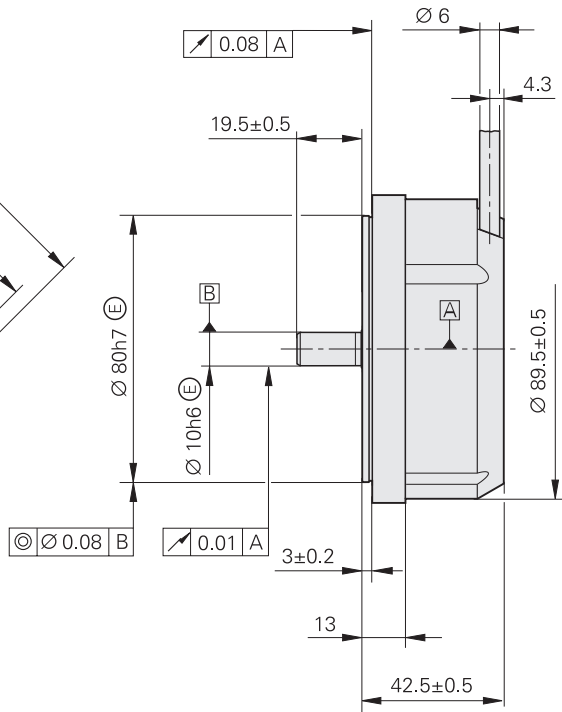
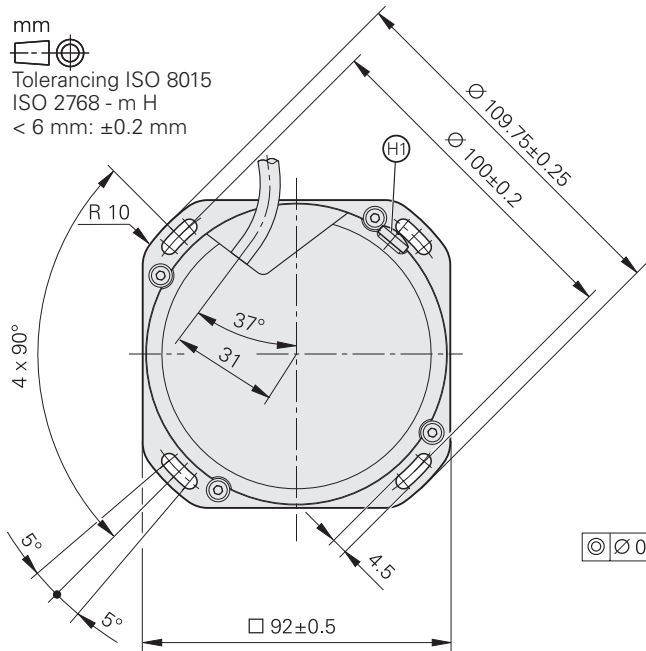
mm



Tolerancing ISO 8015

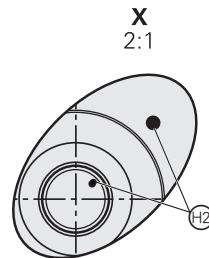
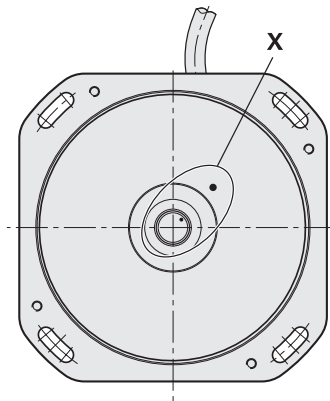
ISO 2768 - m H

< 6 mm:  $\pm 0.2$  mm



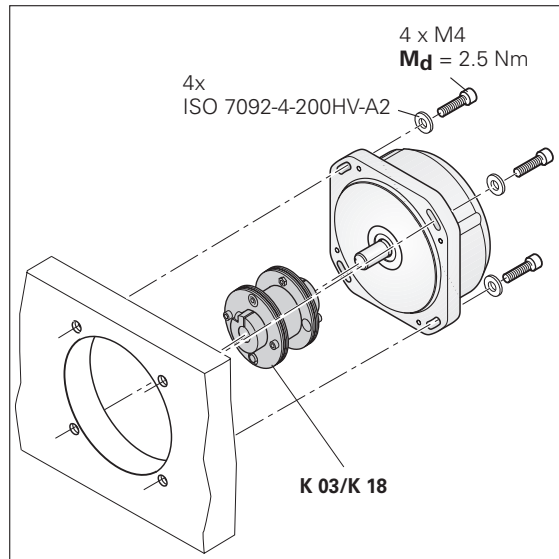
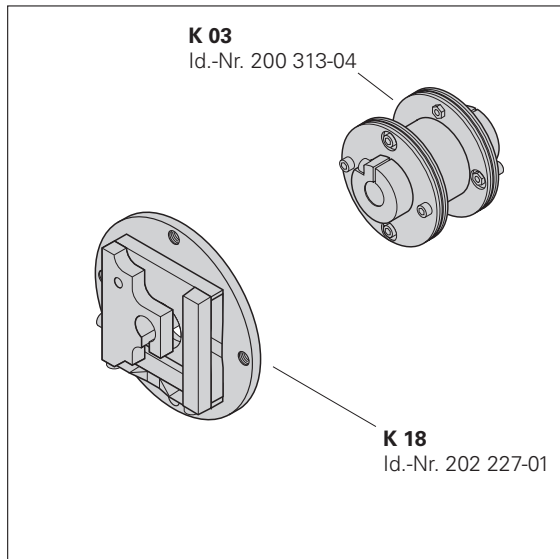
Ⓐ = Lagerung  
*Bearing*  
Roulement  
*Cuscinetto*  
Rodamiento

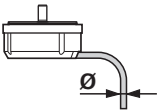


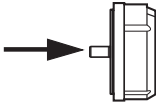


Ⓜ1 = Druckluftanschluss M5  
*Compressed air connection M5*  
Raccordement d'air comprimé M5  
*Connessione aria-compressa M5*  
Conexión de aire comprimido M5

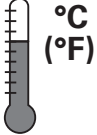
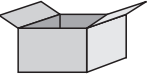
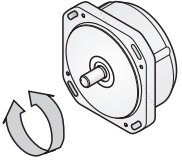


Ⓜ2 = Lage der Referenzmarke: 1 Referenzmarke  $\pm 10^\circ$ , 36 Referenzmarken  $\pm 5^\circ$   
*Position of the reference mark: 1 reference mark  $\pm 10^\circ$ , 36 reference marks  $\pm 5^\circ$*   
Position marque de référence: 1 marque de référence  $\pm 10^\circ$ , 36 marques de référence:  $\pm 5^\circ$   
*Posizione dell'indice di riferimento: 1 indice di riferimento  $\pm 10^\circ$ , 36 indici di riferimento  $\pm 5^\circ$*   
Posición de la marca de referencia: 1 marca de referencia  $\pm 10^\circ$ , 36 marcas de referencia  $\pm 5^\circ$

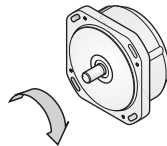
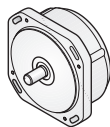
	<p><b>K 03:</b> <math>\lambda \leq 0.3 \text{ mm}</math></p> <p><b>K 03:</b> <math>\alpha \leq 0.5^\circ</math></p> <p><b>K 03:</b> <math>\delta \leq 0.2 \text{ mm}</math></p>	<p><b>K 18:</b> <math>\lambda \leq 0.3 \text{ mm}</math></p> <p><b>K 18:</b> <math>\alpha \leq 0.5^\circ</math></p> <p><b>K 18:</b> <math>\delta \leq 0.2 \text{ mm}</math></p>
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	 <p><math>T \geq -40\text{ °C}</math> (40 °F)</p>	 <p><math>T \geq -10\text{ °C}</math> (14 °F)</p>		<p>max. <b>10 N</b></p>
<p><b>Ø 6 mm</b></p>	<p><math>R_1 \geq 20\text{ mm}</math></p>	<p><math>R_2 \geq 75\text{ mm}</math></p>		<p>max. <b>10 N</b></p>
<p><b>Ø 8 mm</b></p> 	<p><math>R_1 \geq 40\text{ mm}</math></p>	<p><math>R_2 \geq 100\text{ mm}</math></p>		

	 <p>-30 ... 80 °C (-22 ... 176 °F)</p>		<p><b>M<sub>d</sub></b> ≤ 0.01 Nm (20 °C) <b>I</b> = 20 · 10<sup>-6</sup> kgm<sup>2</sup></p>
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$U_p = 5V \pm 10\%$   
(max. 150 mA)

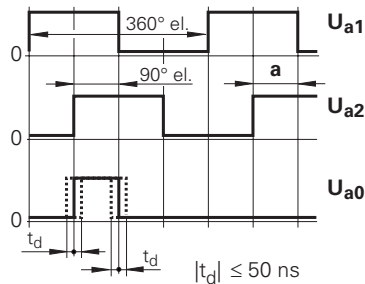


$U_{a1}, U_{a2}, U_{a0}$   
 $\overline{U_{a1}}, \overline{U_{a2}}, \overline{U_{a0}}, \overline{U_{aS}}$

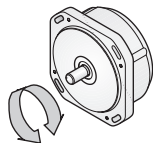


EN 50 178/4.98; 5.2.9.5  
IEC 364-4-41: 1992; 411 (PELV/SELV)

(siehe, see, voir, vedi, véase  
HEIDENHAIN D 231 929)



Z = Strichzahl  
Line count  
Nombre de traits  
Numero di impulsi  
Número de impulsos



fmax. = Abtastfrequenz  
Scanning frequency  
Fréquence de balayage  
Frequenza di scansione  
Frecuencia de captación

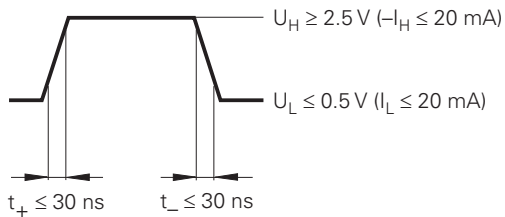
$$n \leq \begin{cases} \frac{f_{\max.}}{Z} \cdot 10^3 \cdot 60 \text{ min}^{-1} \\ 10000 \text{ min}^{-1} \end{cases}$$

	fmax.	a
TTLx5	50 kHz	$\geq 0.96 \mu\text{s}$
TTLx10	100 kHz	$\geq 0.225 \mu\text{s}$

**ROD 270:** 1xU<sub>a0</sub>  
**ROD 270C:** 36xU<sub>a0</sub>



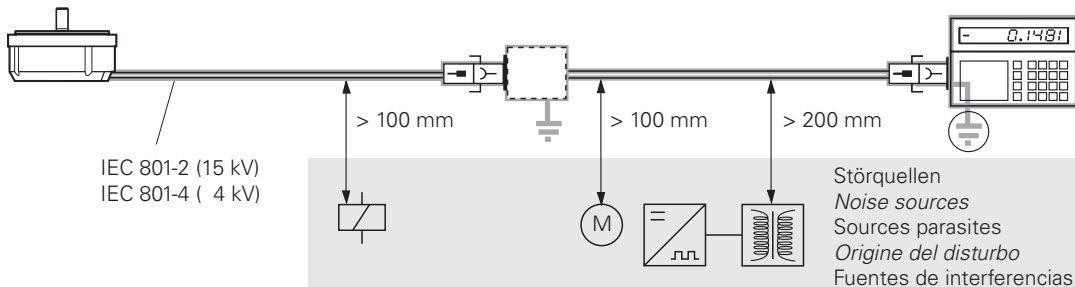
# TTL

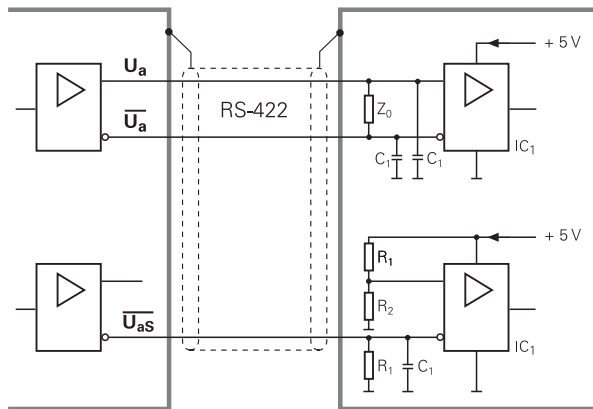
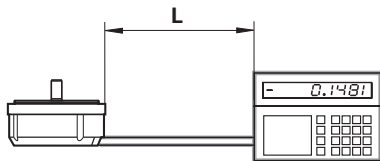


$\overline{U_{aS}}$ : Störungssignal  
*Fault detection signal*  
Signal de perturbation  
*Segnale di malfunzionamento*  
Señal de avería

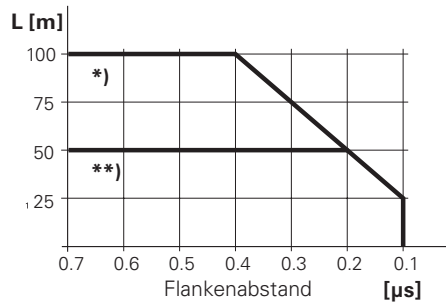
$\overline{U_{aS}} = \text{High}$ : ✓

$\overline{U_{aS}} = \text{Low}$ : ⚠



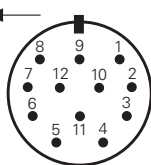


$R_1 = 4.7 \text{ k}\Omega$   
 $R_2 = 1.8 \text{ k}\Omega$   
 $Z_0 = 120 \text{ }\Omega$   
 $C_1 = 220 \text{ pF}$

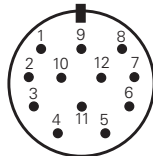
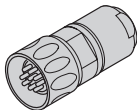


Flankenabstand  
 Edge separation  
 Ecart entre les fronts  
 Distanza tra i fronti  
 Distancia entre flancos

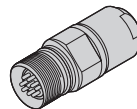
- \*) ohne  
 without  
 sans  
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- \*\*) mit  
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02S12-03



03S12-03

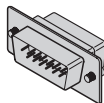
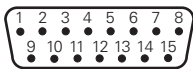


Schirm auf Gehäuse  
Shield on housing  
Blindage sur boîtier  
Schermo sulla carcassa  
Blindaje a carcasa

12	2	10	11	5	6	8	1	3	4	7	/	9
Up	Sensor Up	0V	Sensor 0V	U <sub>a1</sub>	$\overline{U_{a1}}$	U <sub>a2</sub>	$\overline{U_{a2}}$	U <sub>a0</sub>	$\overline{U_{a0}}$	$\overline{U_{aS}}$	/	/
brgn BN/GN	bl BL	wsgn WH/GN	ws WH	br BN	gn GN	gr GY	rs PK	rt RD	sw BK	vio VI	ge YL	/



59S15-52



1) Schirm auf Gehäuse  
Shield on housing  
Blindage sur boîtier  
Schermo sulla carcassa  
Blindaje a carcasa

15	7	8	6	10	9	3	2	5	4	14	12	1, 11, 13
Up	Sensor Up	0V	Sensor 0V	U <sub>a1</sub>	$\overline{U_{a1}}$	U <sub>a2</sub>	$\overline{U_{a2}}$	U <sub>a0</sub>	$\overline{U_{a0}}$	$\overline{U_{aS}}$	1)	/
brgn BN/GN	bl BL	wsgn WH/GN	ws WH	br BN	gn GN	gr GY	rs PK	rt RD	sw BK	vio VI	wsbr WH/BN	/

# HEIDENHAIN

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560 298-91 · 5 · 5/2006 · E · Printed in Germany

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