



HEIDENHAIN

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

ECN 223 F Fanuc02
Fanuc Serial Interface
(High resolution type A)

3/2006

Allgemeine Warnhinweise
General warning notes
Consignes générales de recommandation
Avvertenze
Advertencias generales



Abmessungen und Anbau Hohlwelle Ø 20 mm
Dimensions and mounting for hollow shaft Ø 20 mm
Dimensions et montage arbre creux Ø 20 mm
Dimensioni e montaggio albero cavo Ø 20 mm
Dimensiones y montaje de eje hueco Ø 20 mm



Stirnseitige Wellenankopplung
Shaft coupling on end face
Accouplement sur l'arbre par la face frontale
Accoppiamento albero frontale
Acoplamiento frontal del eje



Abmessungen und Anbau Hohlwelle Ø 50 mm
Dimensions and mounting for hollow shaft Ø 50 mm
Dimensions et montage arbre creux Ø 50 mm
Dimensioni e montaggio albero cavo Ø 50 mm
Dimensiones y montaje de eje hueco Ø 50 mm

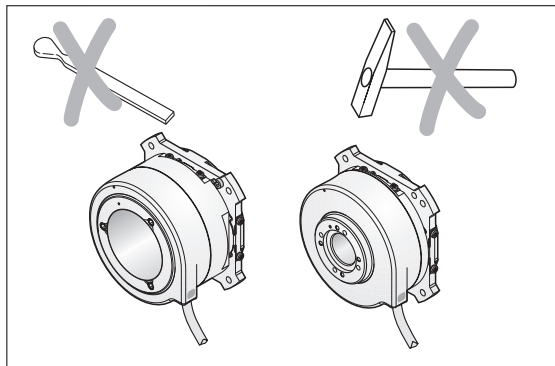
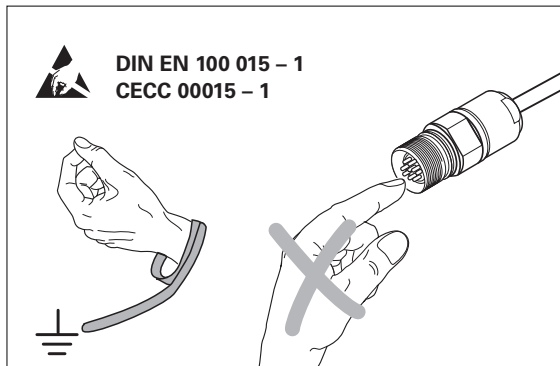
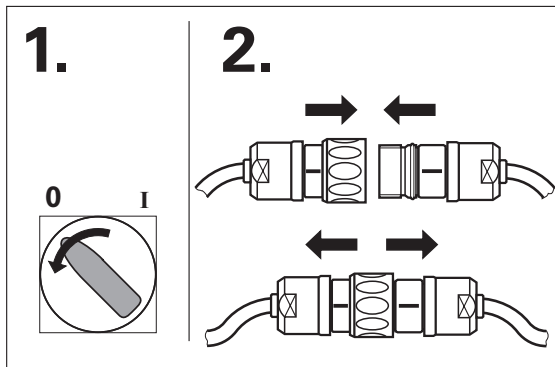
14, 16 ←  → **15, 17**

Elektrische und Technische Kennwerte
Electrical data and technical specifications
Caractéristiques électriques et techniques
Dati elettrici e tecnici
Datos eléctricos y técnicos

18, 20 ←  → **19, 21**



Maße in mm
Dimensions in mm
Cotes en mm
Dimensioni in mm
Dimensiones en mm





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!



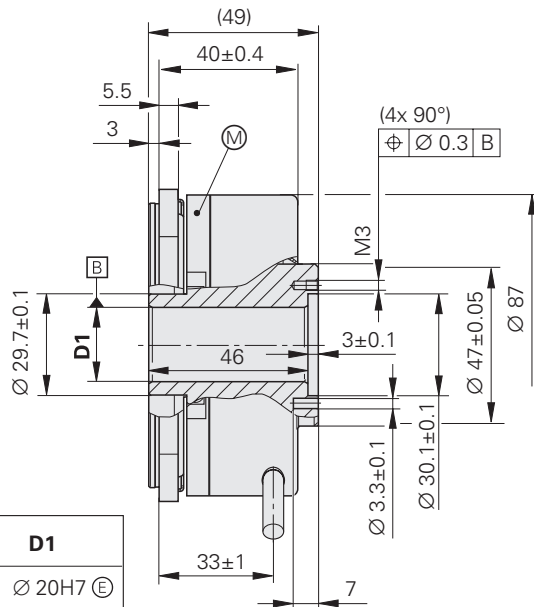
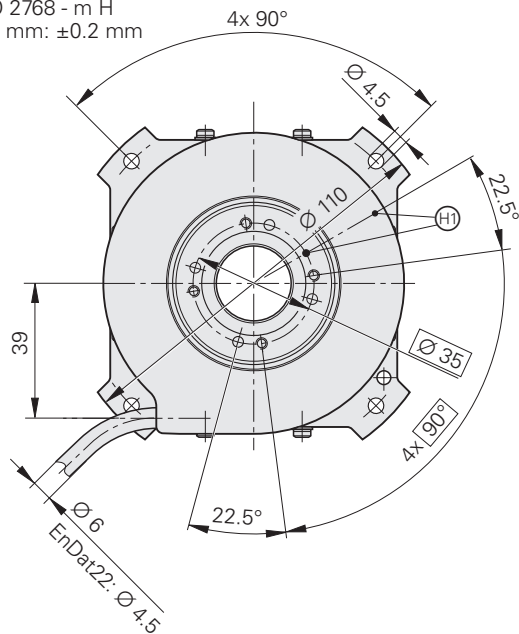
mm



Tolerancing ISO 8015

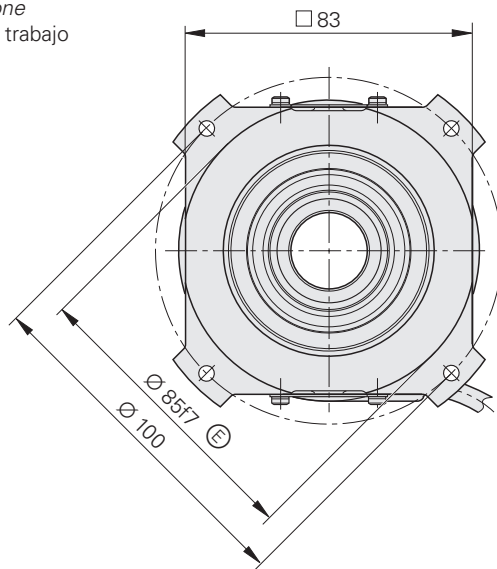
ISO 2768 - m H

< 6 mm: ± 0.2 mm

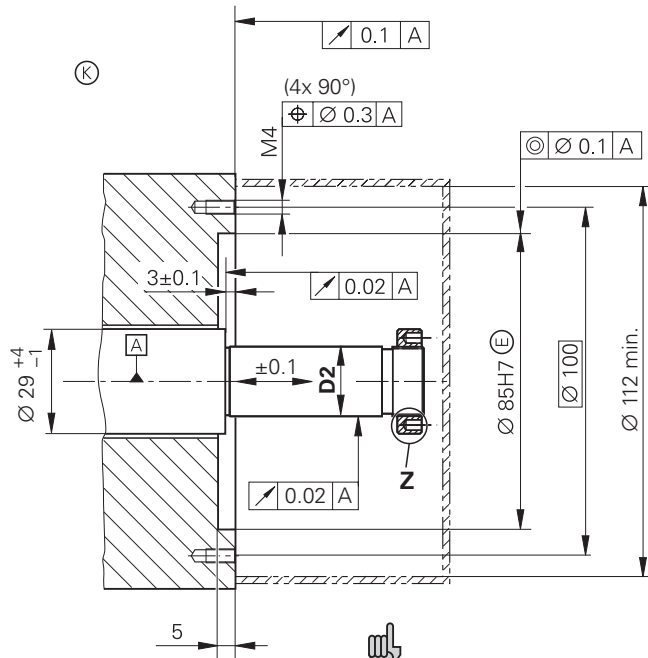


Ⓜ = Meßpunkt Arbeitstemperatur
Operating temperature measuring point
Température de travail point de mesure
Temperatura di lavoro punto di misurazione
Punto de medición de la temperatura de trabajo

Ⓜ₁ = Nullposition $\pm 15^\circ$
Zero position $\pm 15^\circ$
Position zéro $\pm 15^\circ$
Punto di zero $\pm 15^\circ$
Posición cero $\pm 15^\circ$



mm
 Tolerancing ISO 8015
 ISO 2768 - m H

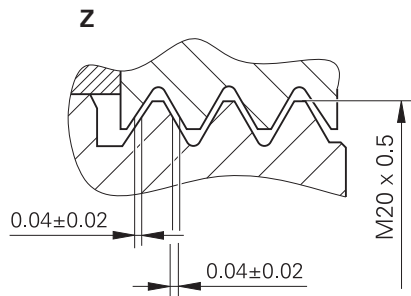


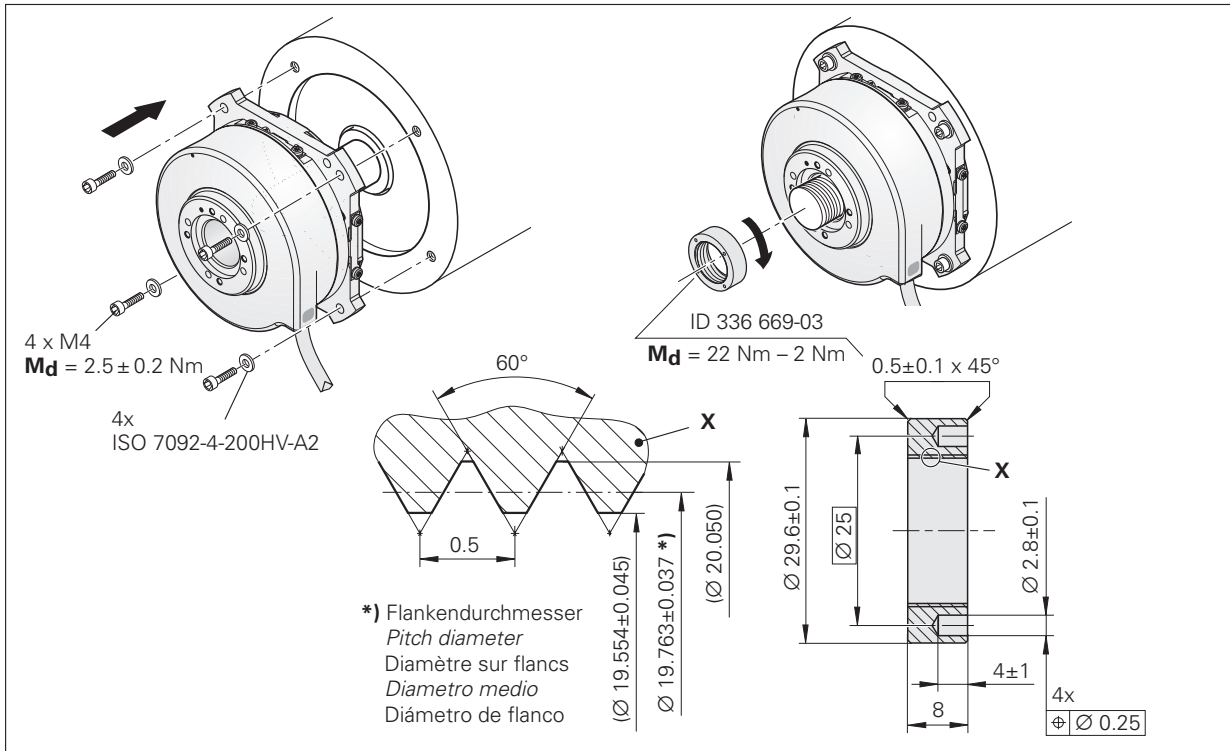
EN 60 529

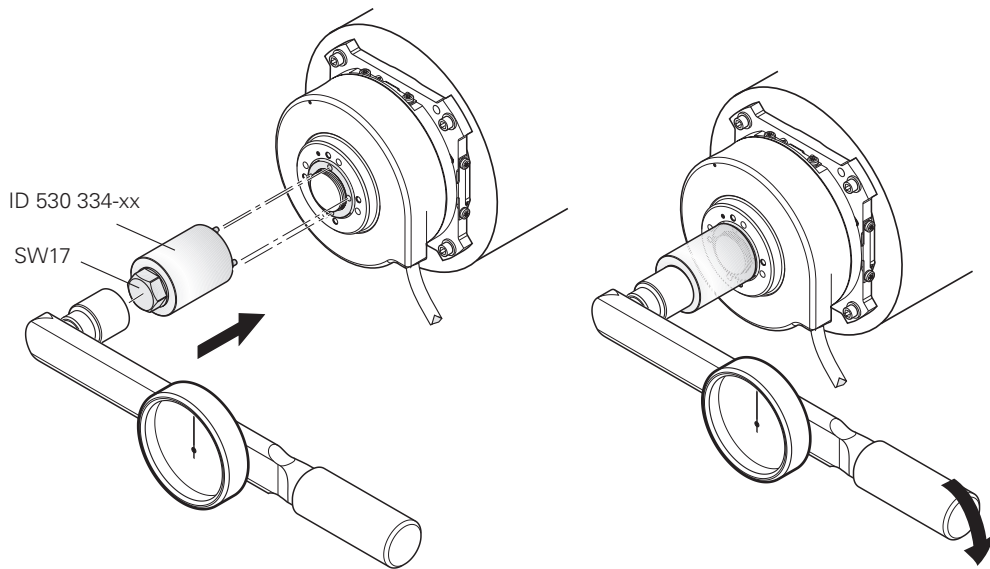
D2
$\varnothing 20g7$ (E)
$\varnothing 22g7$ (E)

Ⓚ = Kundenseitige Anschlussmaße
Required mating dimensions
Conditions requises pour le montage
Quote per il montaggio
Cotas de montaje requeridas

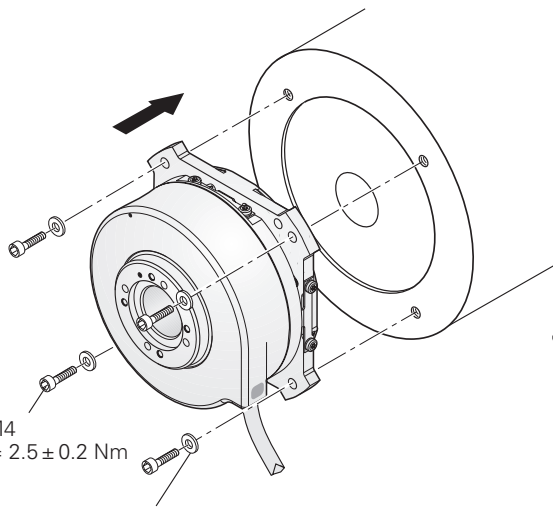
Ⓐ = Lagerung
Bearing
Roulement
Cuscinetto
Rodamiento





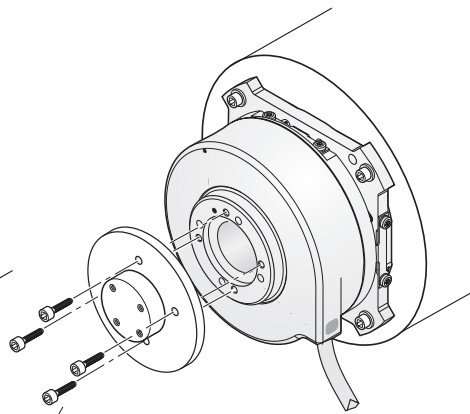


M_d = 22 Nm – 2 Nm



4 x M4
 $M_d = 2.5 \pm 0.2 \text{ Nm}$

4x
ISO 7092-4-200HV-A2



4 x M3
 $M_d = 1 \pm 0.1 \text{ Nm}$

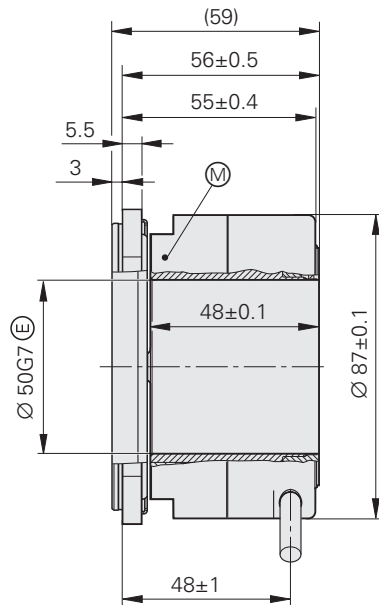
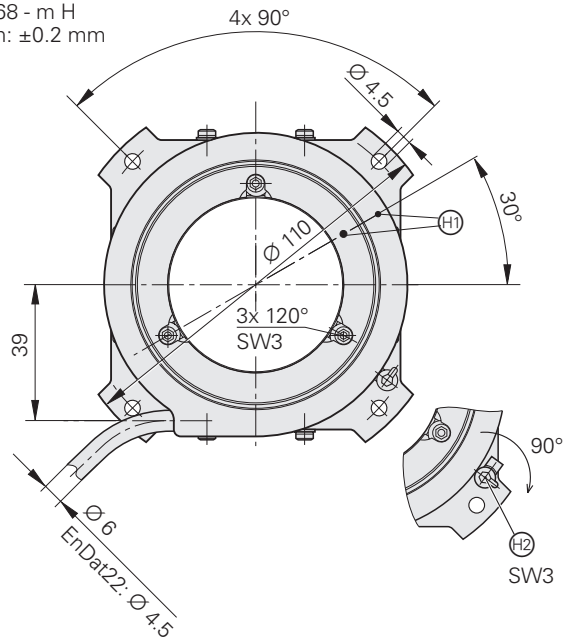
mm



Tolerancing ISO 8015

ISO 2768 - m H

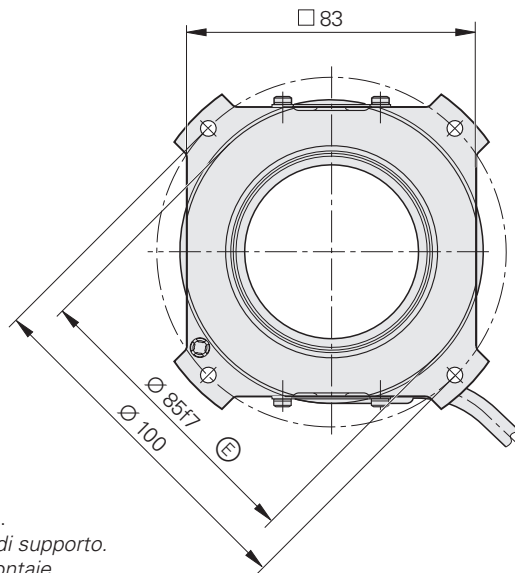
< 6 mm: ±0.2 mm



Ⓜ = Meßpunkt Arbeitstemperatur
Operating temperature measuring point
Température de travail point de mesure
Temperatura di lavoro punto di misurazione
Punto de medición de la temperatura de trabajo

Ⓜ1 = Nullposition $\pm 15^\circ$
Zero position $\pm 15^\circ$
Position zéro $\pm 15^\circ$
Punto di zero $\pm 15^\circ$
Posición cero $\pm 15^\circ$

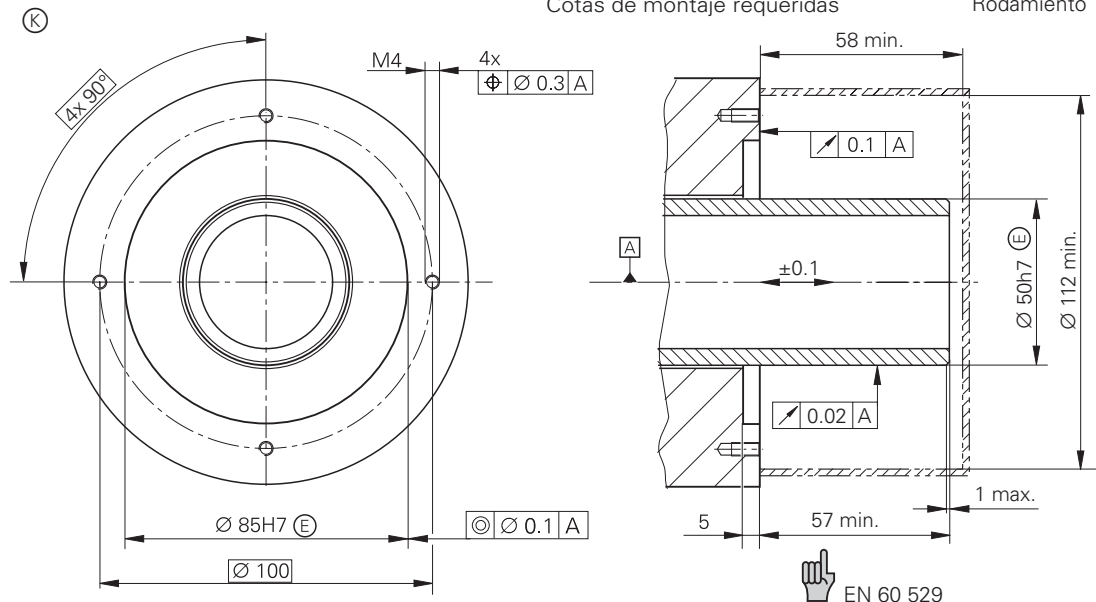
Ⓜ2 = Vor Inbetriebnahme Montagehilfe freidrehen.
Release the mounting aid before initial operation.
Avant la mise en service, dégager l'outil de montage.
Prima della messa in servizio svincolare i dispositivi di supporto.
Antes de la puesta en marcha, liberar la ayuda de montaje.



mm
Tolerancing ISO 8015
ISO 2768 - m H

Ⓚ = Kundenseitige Anschlussmaße
Required mating dimensions
Conditions requises pour le montage
Quote per il montaggio
Cotas de montaje requeridas

ⓐ = Lagerung
Bearing
Roulement
Cuscinetto
Rodamiento



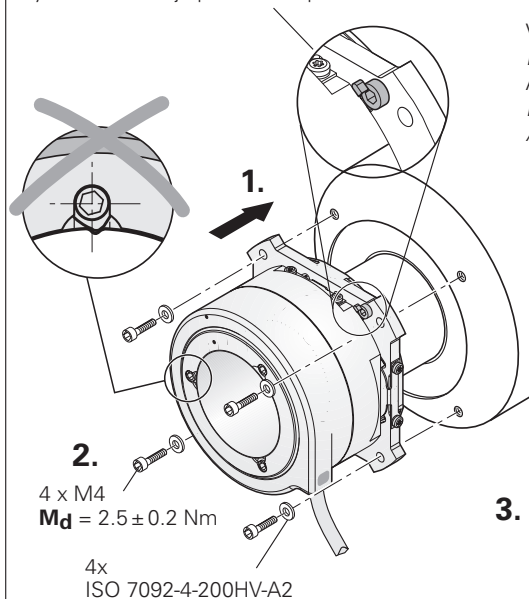
Montagehilfe zur Einhaltung des Montagemaßes 2.5 ± 0.3 mm.

Mounting aid ensures compliance with mounting dimension 2.5 ± 0.3 mm.

Outil de montage pour respecter la cote de montage de 2.5 ± 0.3 mm.

Dispositivi di supporto per il rispetto delle dimensioni di montaggio 2.5 ± 0.3 mm.

Ayuda de montaje para el cumplimiento de la cota de montaje 2.5 ± 0.3 mm.



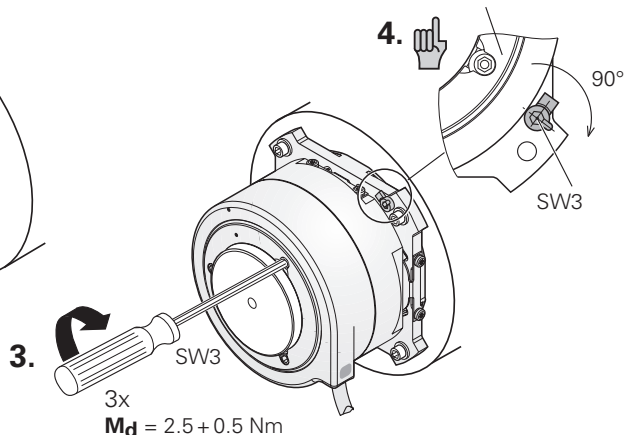
Vor Inbetriebnahme Montagehilfe freidrehen.

Release the mounting aid before initial operation.

Avant la mise en service, dégager l'outil de montage.

Prima della messa in servizio svincolare i dispositivi di supporto.

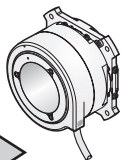
Antes de la puesta en marcha, liberar la ayuda de montaje.



$U_p = 3.6V \dots 5.25V$

(max. 200 mA)

am Gerät, *at encoder*, sur l'appareil, *integrato*, en el aparato.



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)



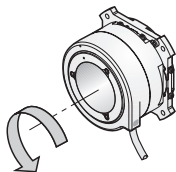
RS-485



Request



Request



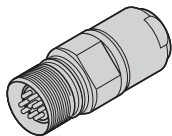
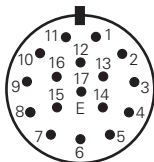
RS-485



DATA



DATA



- 1) Außenschirm auf Gehäuse
External shield on housing
 Blindage externe sur boîtier
Schermo esterno sulla carcassa
 Blindaje externo a carcasa

7	1	10	4	14	17	8	9	1)
Up	Sensor Up	0V	Sensor 0V	Serial Data	Serial Data	Request	Request	
●————●	●————●	●————●	●————●					
br/gn BN/GN	bl BL	ws/gn WH/GN	ws WH	gr GY	rs PK	vio VI	ge YL	

Die Sensorleitung ist intern mit der Versorgungsleitung verbunden.

The sensor line is connected internally with the power supply.

La ligne de palpeur est reliée de manière interne à la ligne d'alimentation.

La linea del sensore è collegata internamente con la linea di alimentazione.

La línea de sensor está unida internamente con la línea de alimentación.

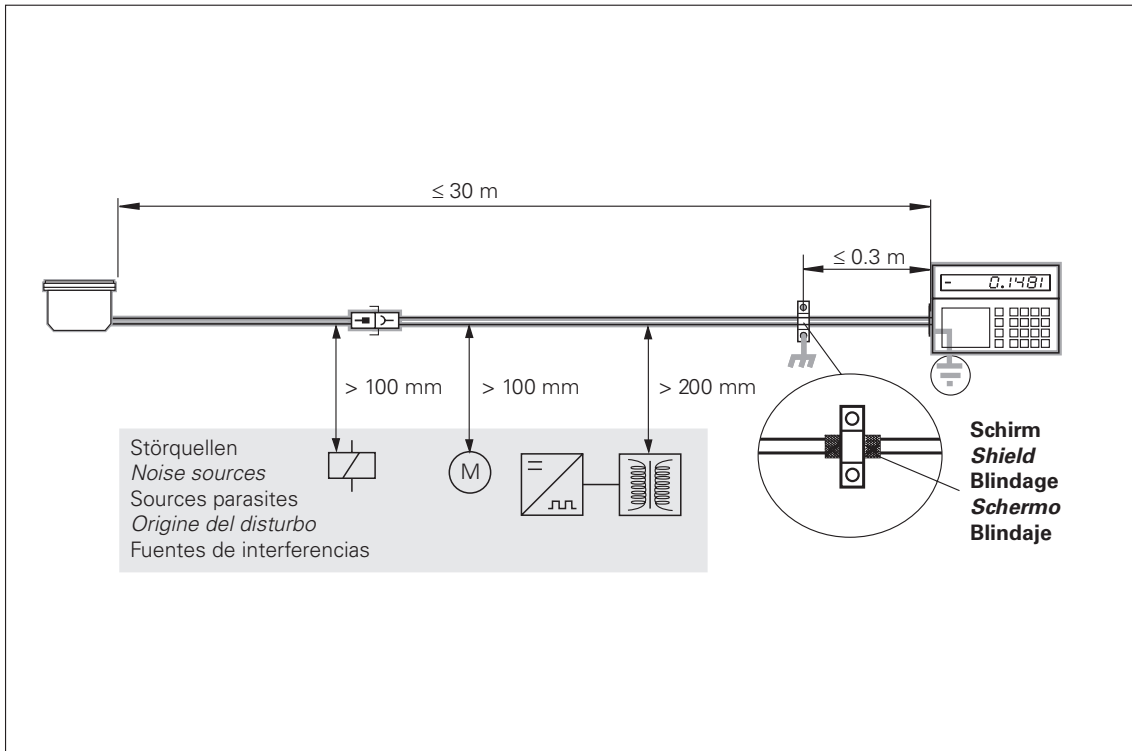
Nichtverwendete Pins oder Litzen dürfen nicht belegt werden!

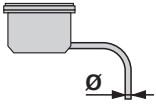
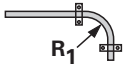
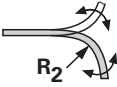

Vacant pins or wires must not be used!

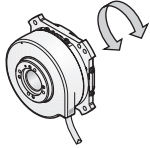
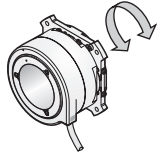
Les plots ou fils non utilisés ne doivent pas être raccordés!

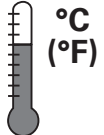
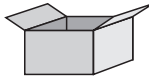
I pin o i fili inutilizzati non devono essere occupati!

¡No conectar los pins o hilos no utilizados!



	 <p>$T \geq -40\text{ °C}$ (-40 °F)</p>	 <p>$T \geq -10\text{ °C}$ (14 °F)</p>
<p>Ø 4.5 mm</p>	<p>$R_1 \geq 10\text{ mm}$</p>	<p>$R_2 \geq 50\text{ mm}$</p>
<p>Ø 6 mm</p>	<p>$R_1 \geq 20\text{ mm}$</p>	<p>$R_1 \geq 75\text{ mm}$</p>
<p>Ø 8 mm</p> 	<p>$R_1 \geq 40\text{ mm}$</p>	<p>$R_2 \geq 100\text{ mm}$</p>

	<p>$M_d \leq 0.10\text{ Nm (20 °C)}$ $I = 138 \cdot 10^{-6}\text{ kgm}^2$</p>
	<p>$M_d \leq 0.15\text{ Nm (20 °C)}$ $I = 215 \cdot 10^{-6}\text{ kgm}^2$</p>

	 <p>-30 ... 80 °C (-22 ... 176 °F)</p>
-----------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------

HEIDENHAIN

DR. JOHANNES HEIDENHAIN GmbH

Dr.-Johannes-Heidenhain-Straße 5

83301 Traunreut, Germany

☎ +49 (86 69) 31-0

FAX +49 (86 69) 50 61

E-Mail: info@heidenhain.de

Technical support FAX +49 (86 69) 32-10 00

Measuring systems ☎ +49 (86 69) 31-31 04

E-Mail: service.ms-support@heidenhain.de

TNC support ☎ +49 (86 69) 31-31 01

E-Mail: service.nc-support@heidenhain.de

NC programming ☎ +49 (86 69) 31-31 03

E-Mail: service.nc-pgm@heidenhain.de

PLC programming ☎ +49 (86 69) 31-31 02

E-Mail: service.plc@heidenhain.de

Lathe controls ☎ +49 (86 69) 31-31 05

E-Mail: service.lathe-support@heidenhain.de

www.heidenhain.de



Ve 00

575 788-91 · 3 · 10/2007 · H · Printed in Germany

Änderungen vorbehalten · *Subject to change without notice* · Sous réserve de modifications · *Con riserva di modifiche* · Sujeto a modificaciones

