



# HEIDENHAIN

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

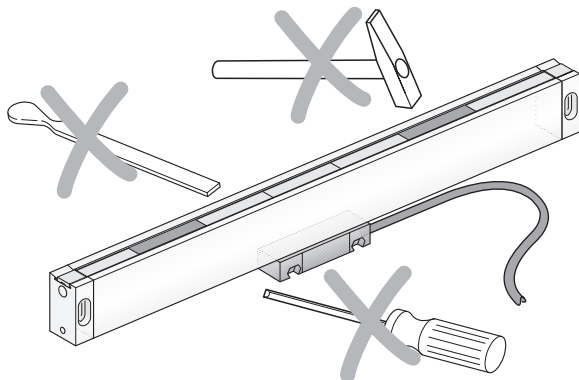
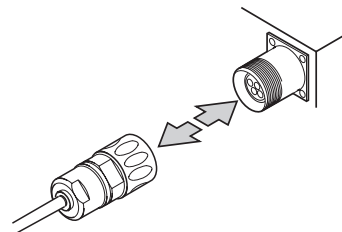
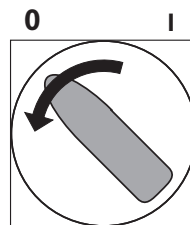
## LS 403

4/2003

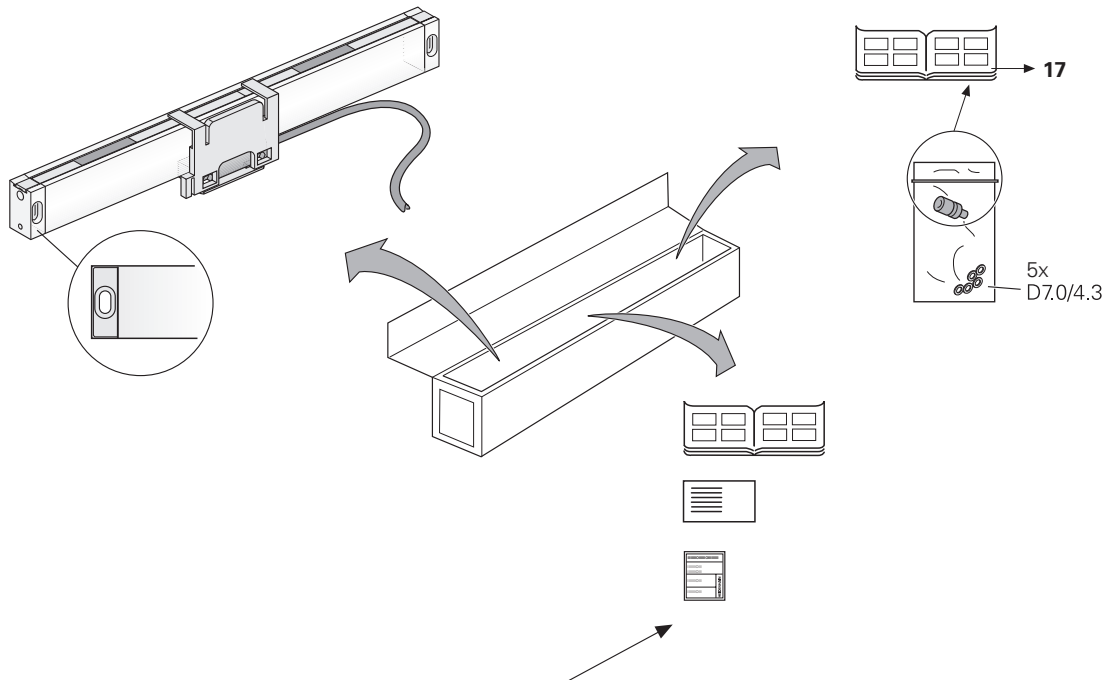




DIN EN 100 015 - 1  
CECC 00015 - 1



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



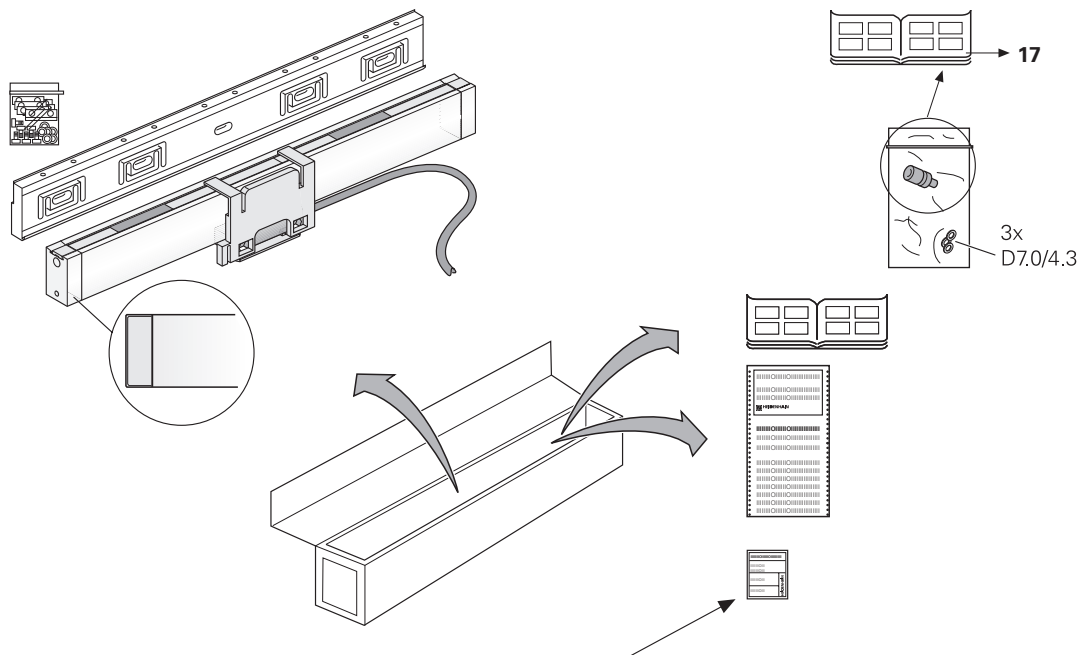
Bei Montage bitte Geräteschild-Aufkleber anbringen (Schaltschrank, Maschinen-Handbuch usw.)

*Apply the encoder ID label to an appropriate surface, e.g. the electrical cabinet or machine manual*

Lors du montage, accoler S.V.P. l'étiquette signalétique de l'appareil (armoire électrique, manuel de la machine, etc.)

*Completato il montaggio, ricordarsi di applicare l'etichetta (manuale della macchina, quadro elettrico)*

Por favor, durante el montaje, colocar el adhesivo del letrero del aparato (armario eléctrico, modo de empleo de la máquina, etc.)



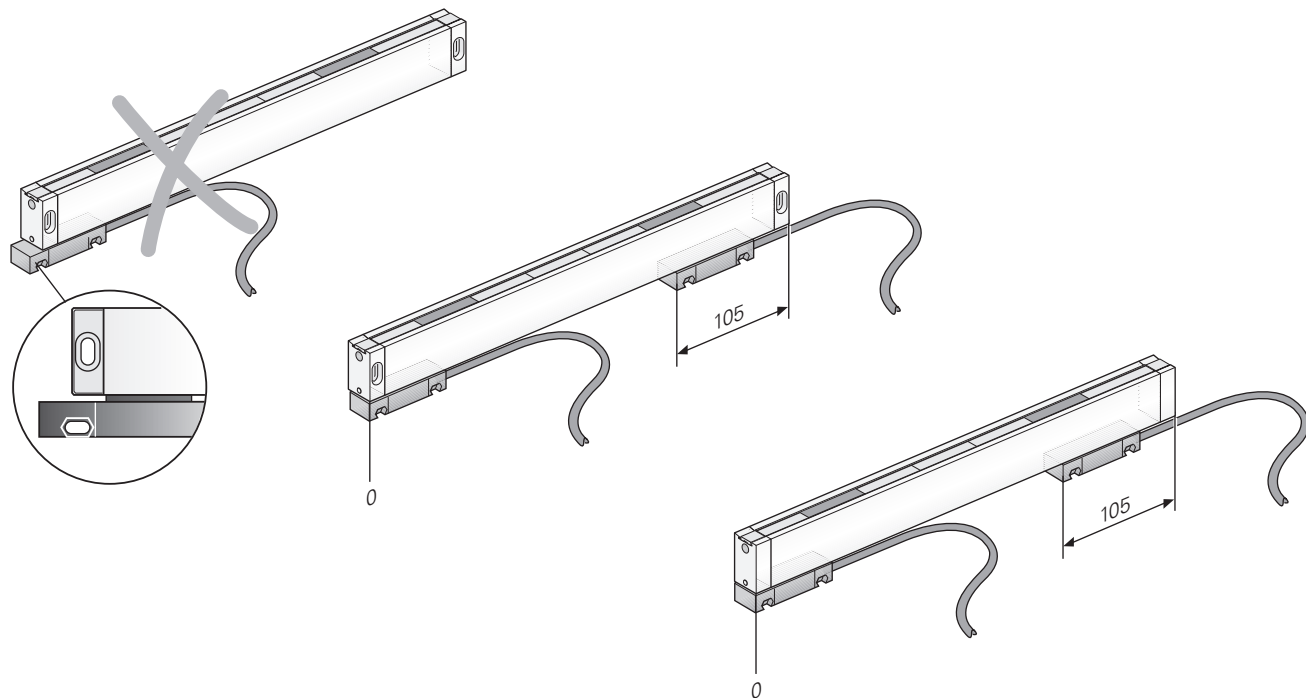
Bei Montage bitte Geräteschild-Aufkleber anbringen (Schaltschrank, Maschinen-Handbuch usw.)

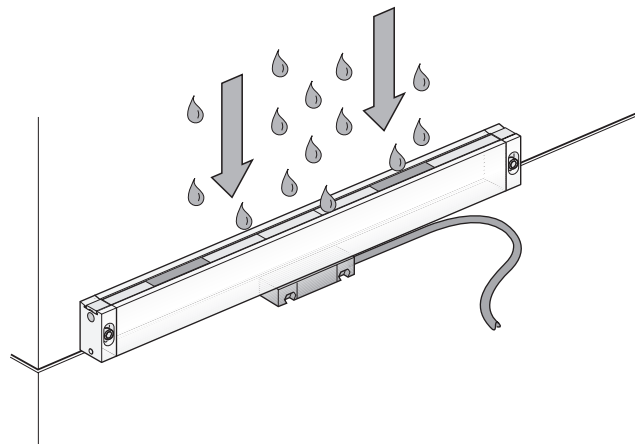
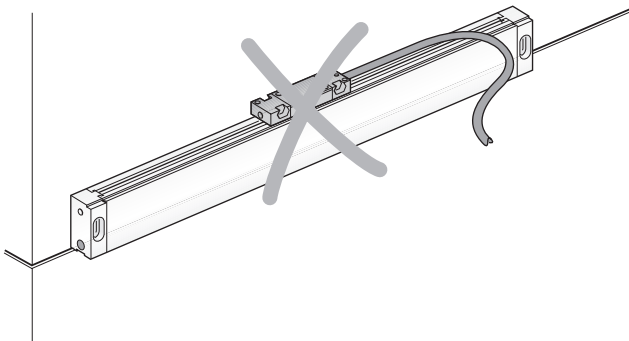
*Apply the encoder ID label to an appropriate surface, e.g. the electrical cabinet or machine manual*

Lors du montage, accoler S.V.P. l'étiquette signalétique de l'appareil (armoire électrique, manuel de la machine, etc.)

*Completato il montaggio, ricordarsi di applicare l'etichetta (manuale della macchina, quadro elettrico)*

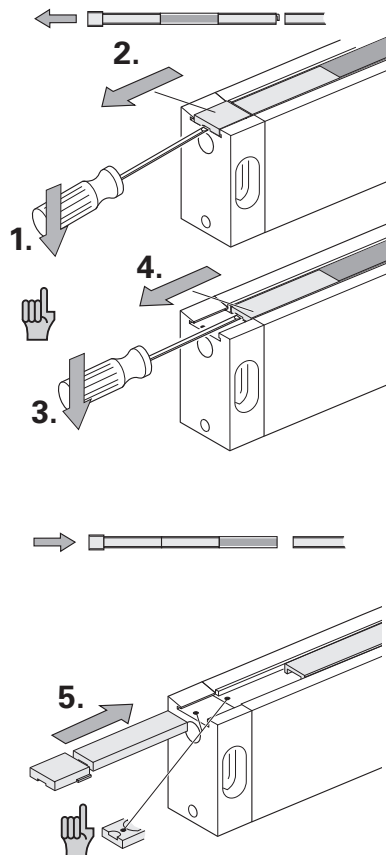
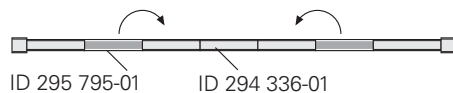
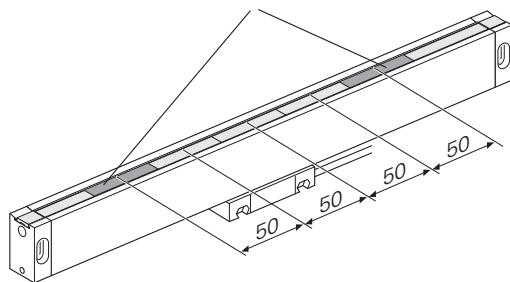
Por favor, durante el montaje, colocar el adhesivo del letrero del aparato (armario eléctrico, modo de empleo de la máquina, etc.)



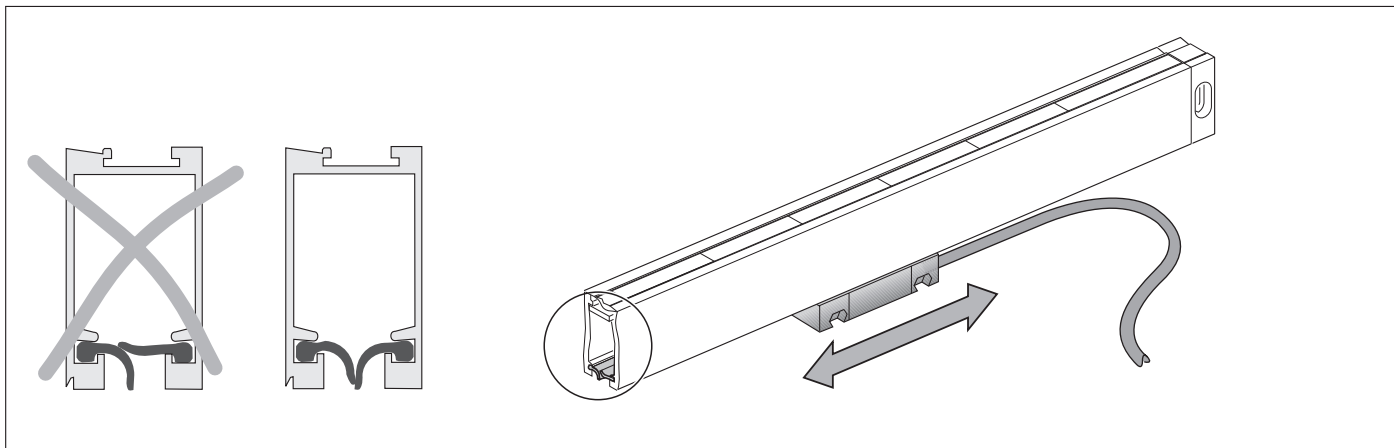


## LS 403

Referenzmarken-Lage  
*Reference mark*  
marque de référence  
*indici di riferimento*  
marca de referencia





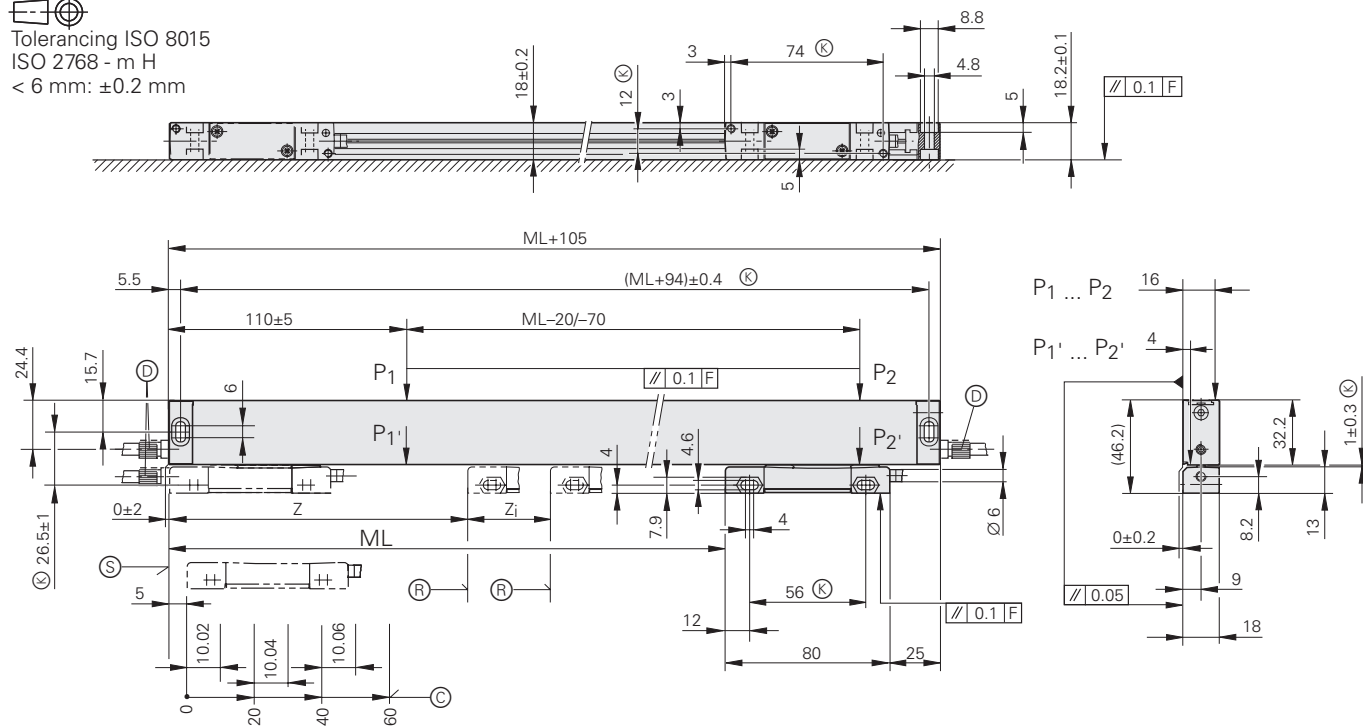




Tolerancing ISO 8015

ISO 2768 - m H

< 6 mm:  $\pm 0.2$  mm



ML 70 ... 1020	ML 1140 ... 2040
Z = 35 mm	Z = 45 mm
Z <sub>i</sub> = ML - 70 mm	Z <sub>i</sub> = ML - 90 mm

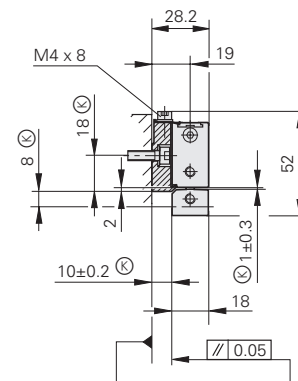
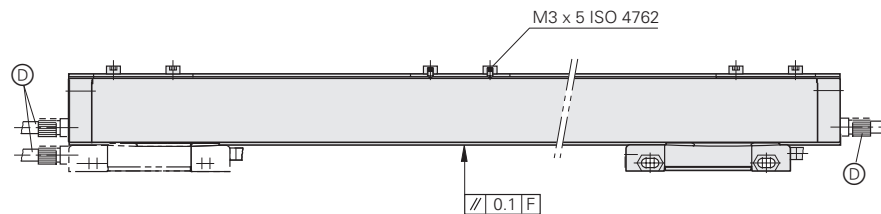
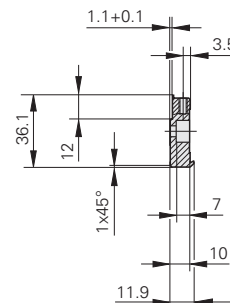
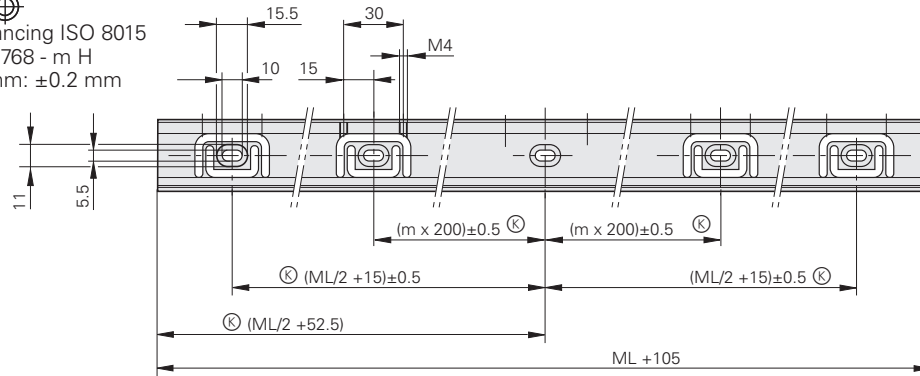
P = Messpunkte zum Ausrichten  
*Gauging points for alignment*  
 Points de mesure pour dé gauchissage  
*Punti di misura per allineamento*  
 Puntos medición alineamiento

⑤ = Beginn der Messlänge ML  
*Begin. of meas. length ML*  
 Début longueur utile ML  
*Inizio lunghezza di misura ML*  
 Comienzo longitud útil ML

(R) = Referenzmarken-Lage  
 (C) *Reference mark*  
 Marque de référence  
*Indici di riferimento*  
 Marca de referencia



Tolerancing ISO 8015  
ISO 2768 - m H  
< 6 mm:  $\pm 0.2$  mm

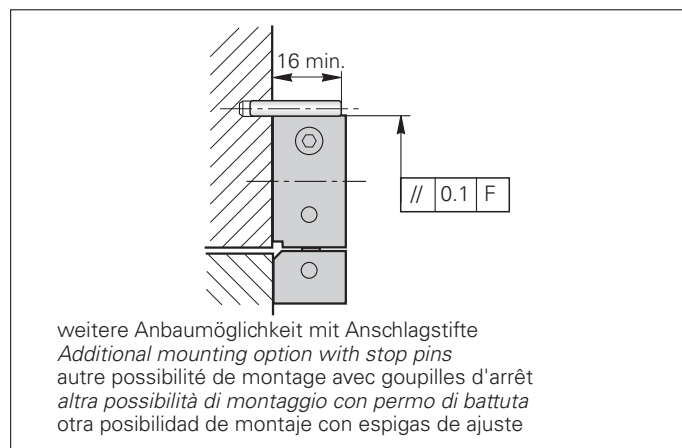
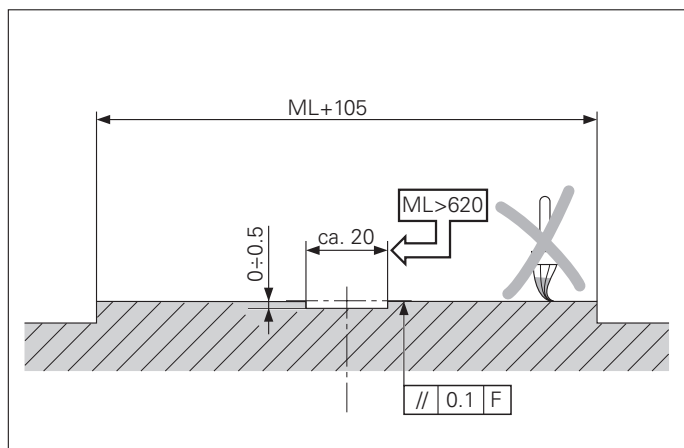
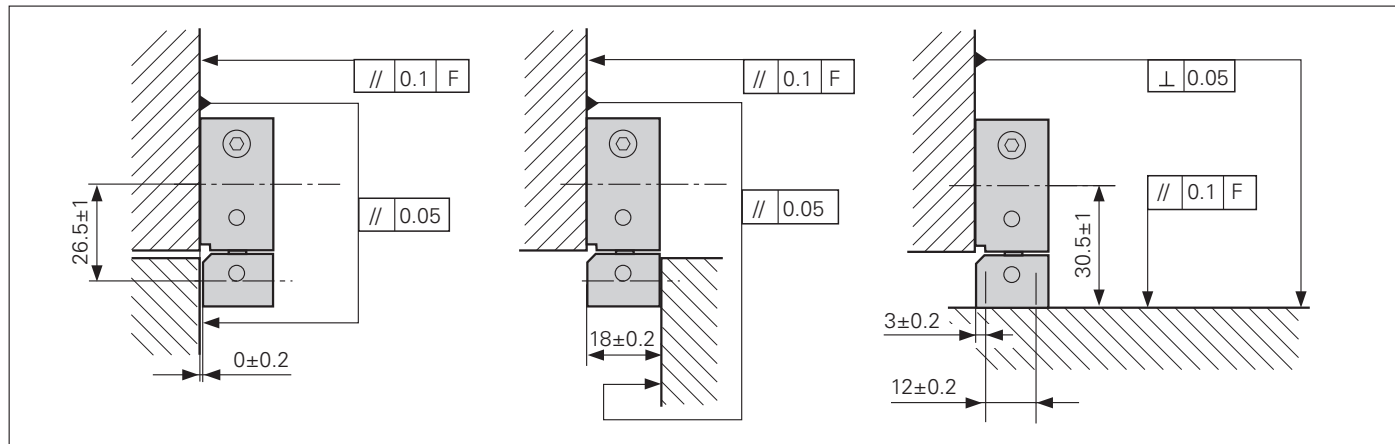


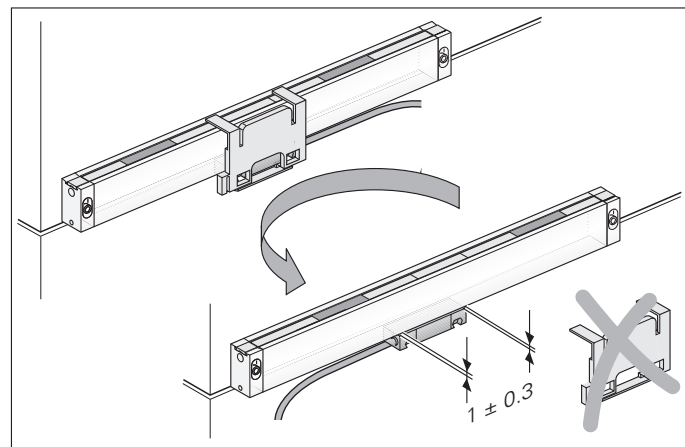
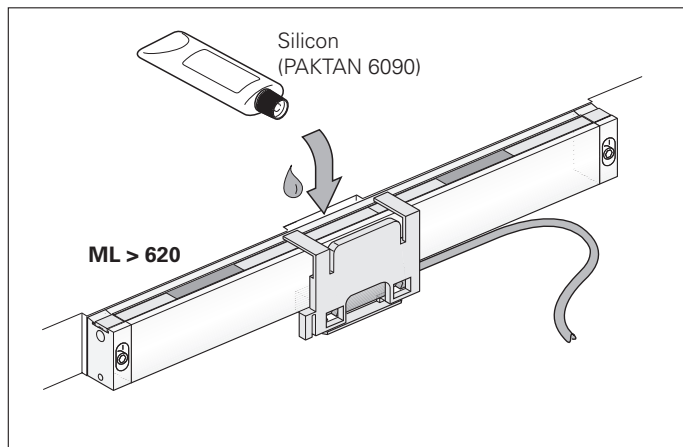
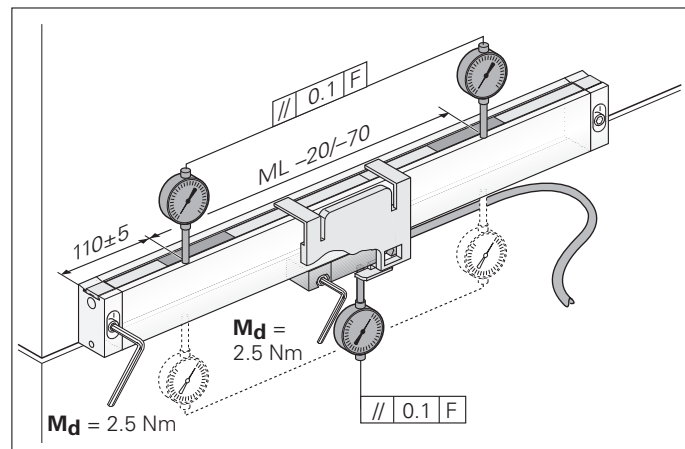
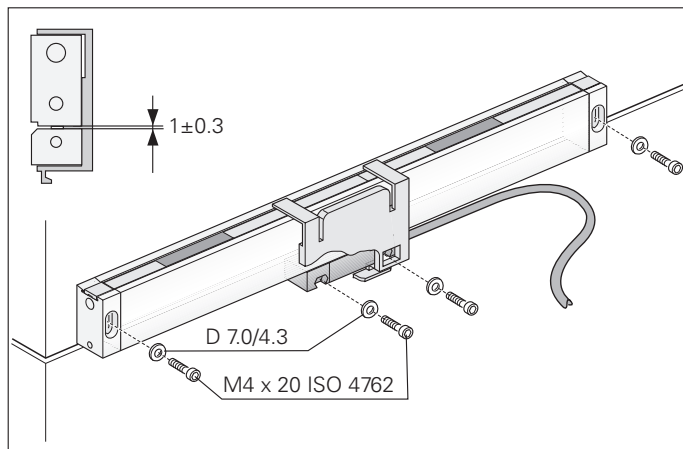
ML	m
70 ... 520	0
570 ... 920	1
1020 ... 1340	2
1440 ... 1740	3
1840 ... 2040	4

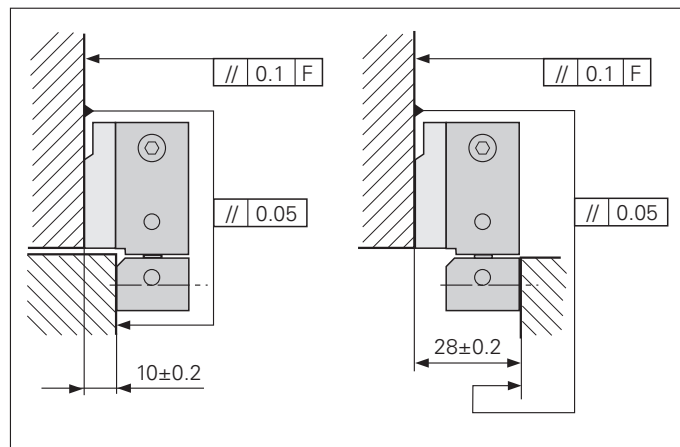
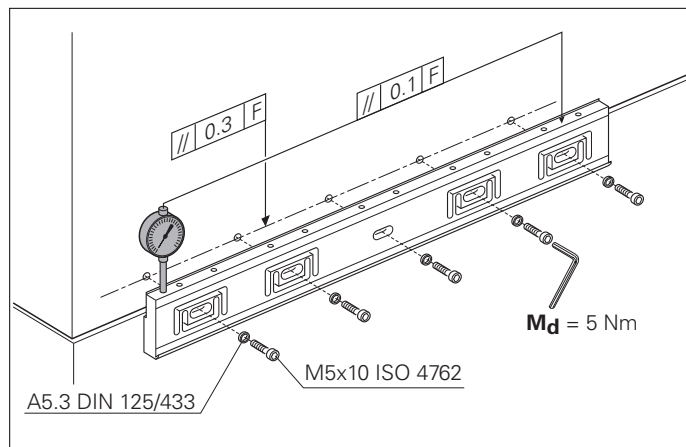
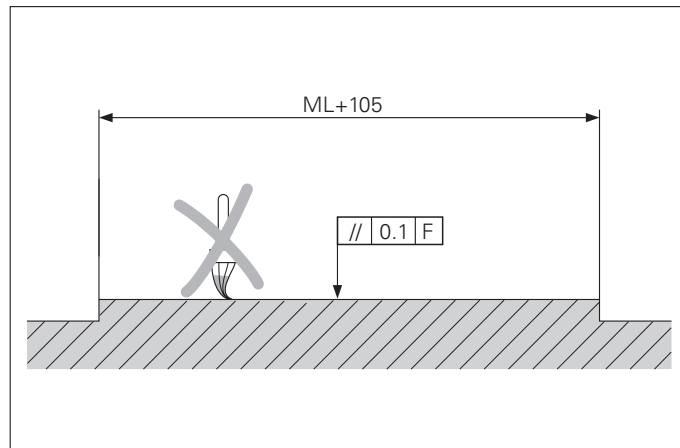
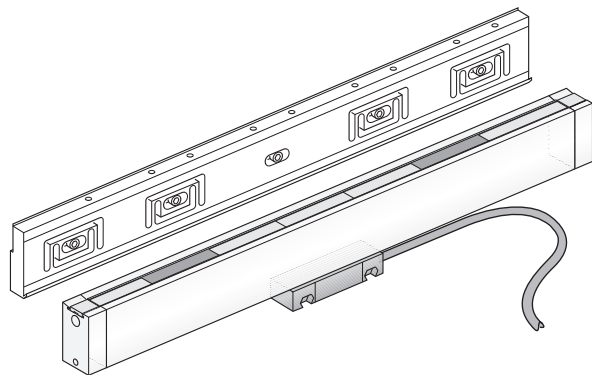
Ⓚ = Kundenseitige Anschlussmaße  
*Required mating dimensions*  
*Conditions requises pour le montage*  
*Dimensioni di collegamento lato cliente*  
*Cotas de montaje requeridas*

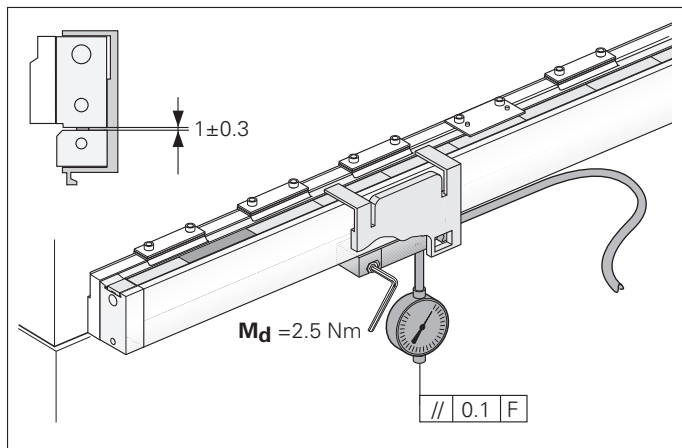
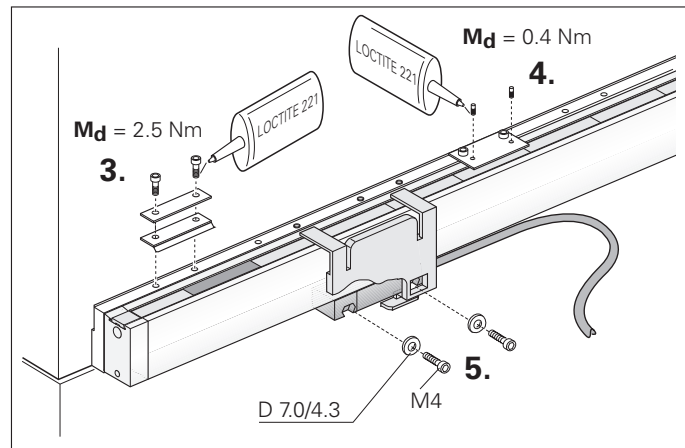
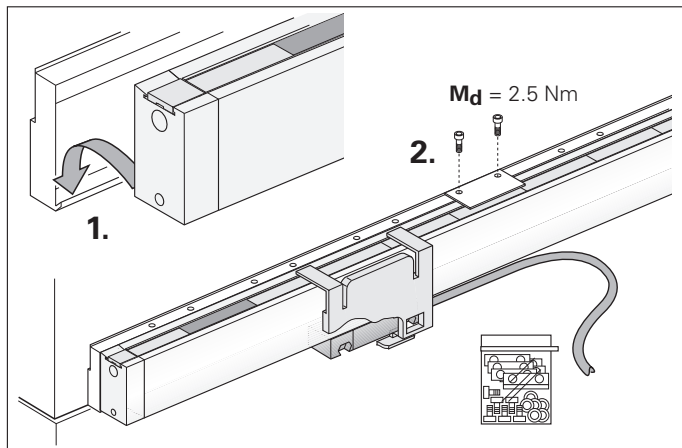
Ⓕ = Maschinenführung  
Machine guideway  
Guidage de la machine  
Guida della macchina  
Guía de la máquina

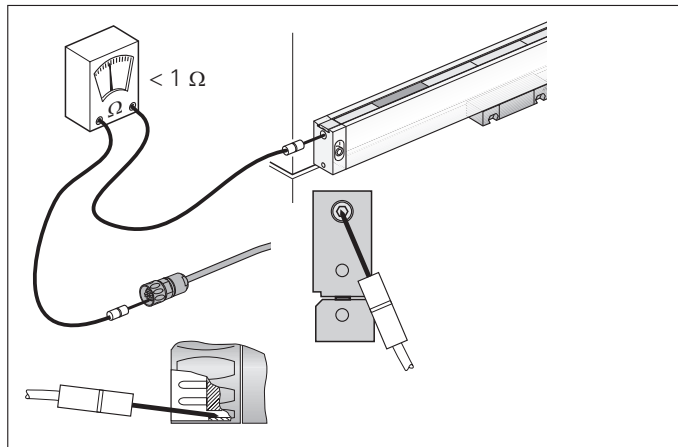
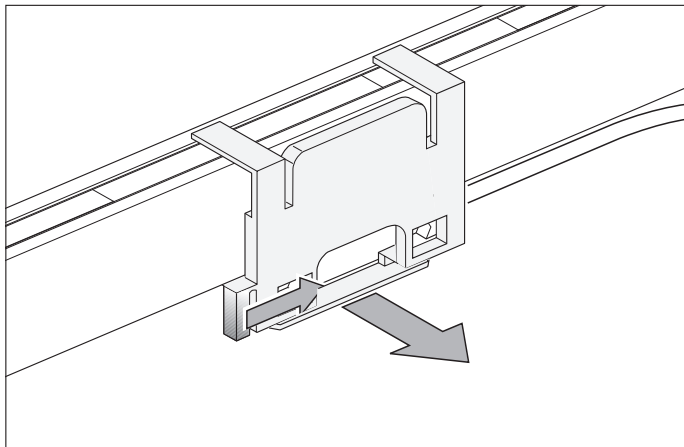
Ⓢ = Druckluftanschluss  
Compressed air inlet  
Raccordement d'air comprimé  
Ingresso per pressurizzazione  
Conexión de aire comprimido



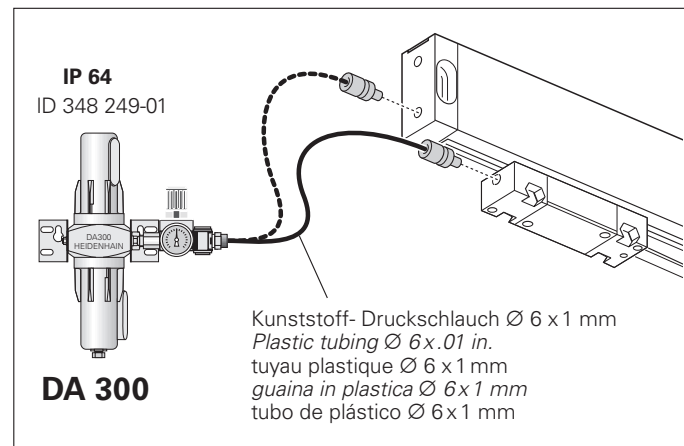
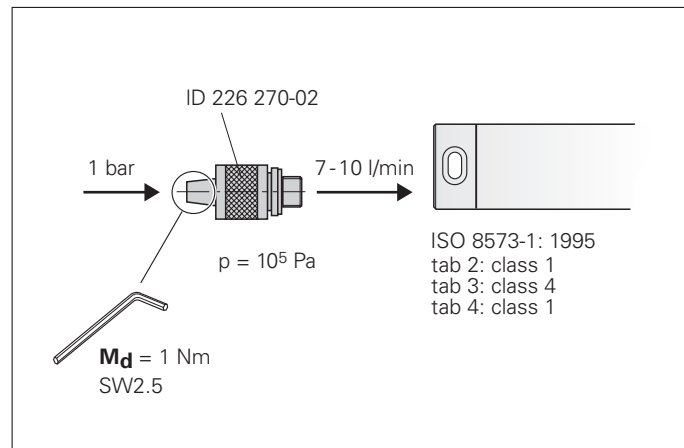
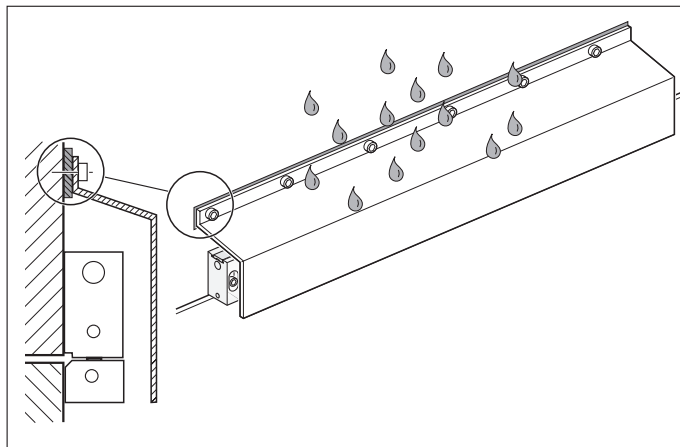


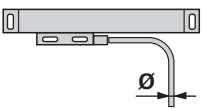

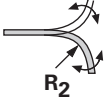



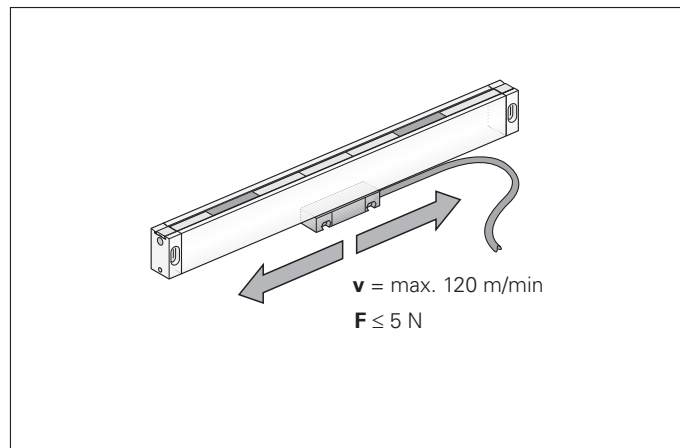


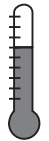
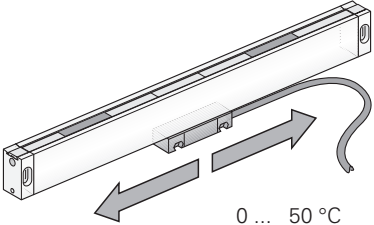
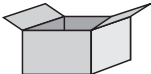


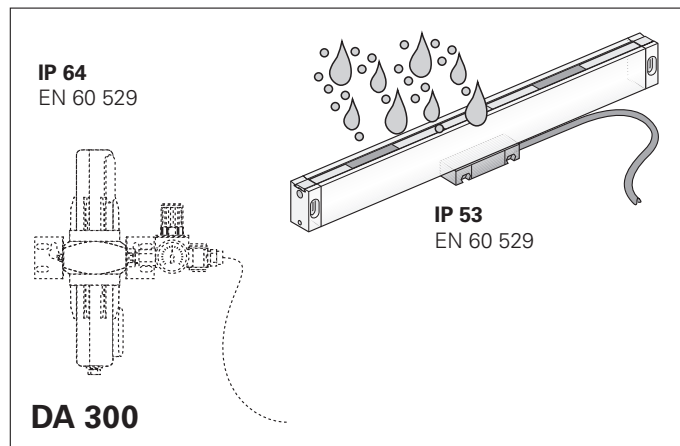


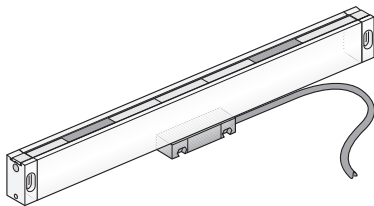


		
Ø 6 mm	$R_1 \geq 20 \text{ mm}$	$R_2 \geq 75 \text{ mm}$
Ø 10 mm	$R_1 \geq 35 \text{ mm}$	$R_2 \geq 75 \text{ mm}$
 Ø 8 mm	$R_1 \geq 40 \text{ mm}$	$R_2 \geq 100 \text{ mm}$

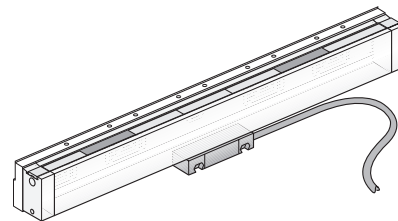


 °C (°F)	 0 ... 50 °C (32 ... 122 °F)
	 -20 ... 70 °C (- 4 ... 158 °F)

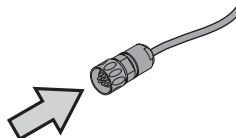




EN 60 068-2-6 (55 ... 2000 Hz): max. 100 m/s<sup>2</sup>  
EN 60 068-2-27 (11 ms): max. 200 m/s<sup>2</sup>



EN 60 068-2-6 (55 ... 2000 Hz): max. 200 m/s<sup>2</sup>  
EN 60 068-2-27 (11 ms): max. 200 m/s<sup>2</sup>

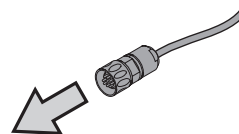


**$U_P = 5\text{ V} \pm 5\%$**   
(max. 100 mA)

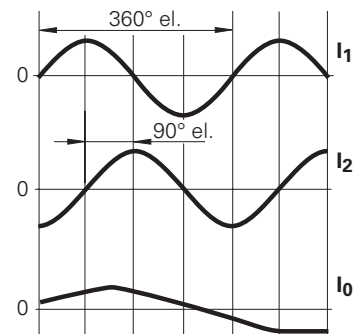


EN 50 178/4.98; 5.2.9.5  
IEC 364-4-41: 1992; 411 (PELV/SELV)

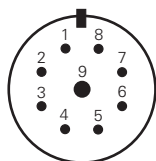
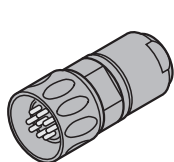
(siehe, see, voir, vedi, véase  
HEIDENHAIN D 231 929)



**$I_1: 7 \dots 16\ \mu\text{A}_{SS}$**   
 **$I_2: 7 \dots 16\ \mu\text{A}_{SS}$**   
 **$I_0: 2 \dots 8\ \mu\text{A}$**



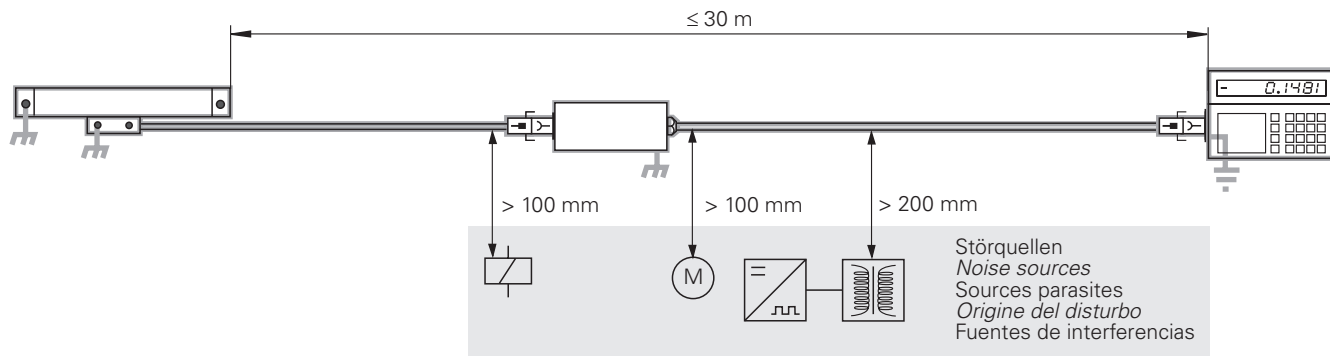
# Elektrischer Anschluss · Electrical Connection · Raccordement électrique · Collegamento elettrico · Conexión eléctrica



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

2) Innenschirm Pin 9  
*Internal shield pin 9*  
 Blindage interne pin 9  
 Schermo interno pin 9  
 Blindaje interno pin 9

1	2	5	6	7	8	3	4	1)	9
$I_1$		$I_2$		$I_0$		5V $U_P$	0V $U_N$		2)
+	-	+	-	+	-				
grün green vert verde verde	gelb yellow jaune giallo amarillo	blau blue bleu azzurro azul	rot red rouge rosso rojo	grau gray gris grigio gris	rosa pink rose rosa rosa	braun brown brun marrone marrón	weiß white blanc bianco blanco		weiß/braun white/brown blanc/brun bianco/marrone blanco/marrón



# 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](mailto: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](mailto:service.ms-support@heidenhain.de)

**TNC support** ☎ +49 (86 69) 31-31 01

E-Mail: [service.nc-support@heidenhain.de](mailto:service.nc-support@heidenhain.de)

**NC programming** ☎ +49 (86 69) 31-31 03

E-Mail: [service.nc-pgm@heidenhain.de](mailto:service.nc-pgm@heidenhain.de)

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

E-Mail: [service.plc@heidenhain.de](mailto:service.plc@heidenhain.de)

**Lathe controls** ☎ +49 (86 69) 31-31 05

E-Mail: [service.lathe-support@heidenhain.de](mailto:service.lathe-support@heidenhain.de)

---

**[www.heidenhain.de](http://www.heidenhain.de)**



Ve 01

311 736-93 · 8 · 8/2007 · E · Printed in Germany

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

