



HEIDENHAIN

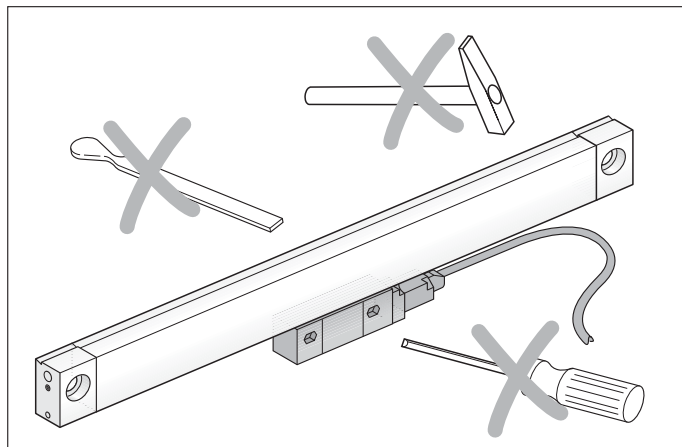
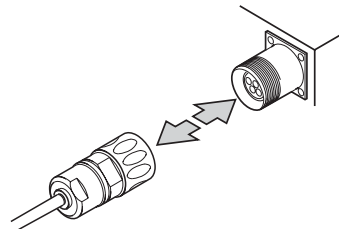
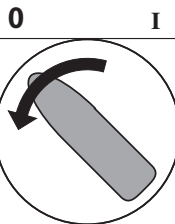
Montageanleitung
Mounting Instructions
Instructions de montage
Istruzioni di montaggio
Instrucciones de montaje

LF 401
LF 481

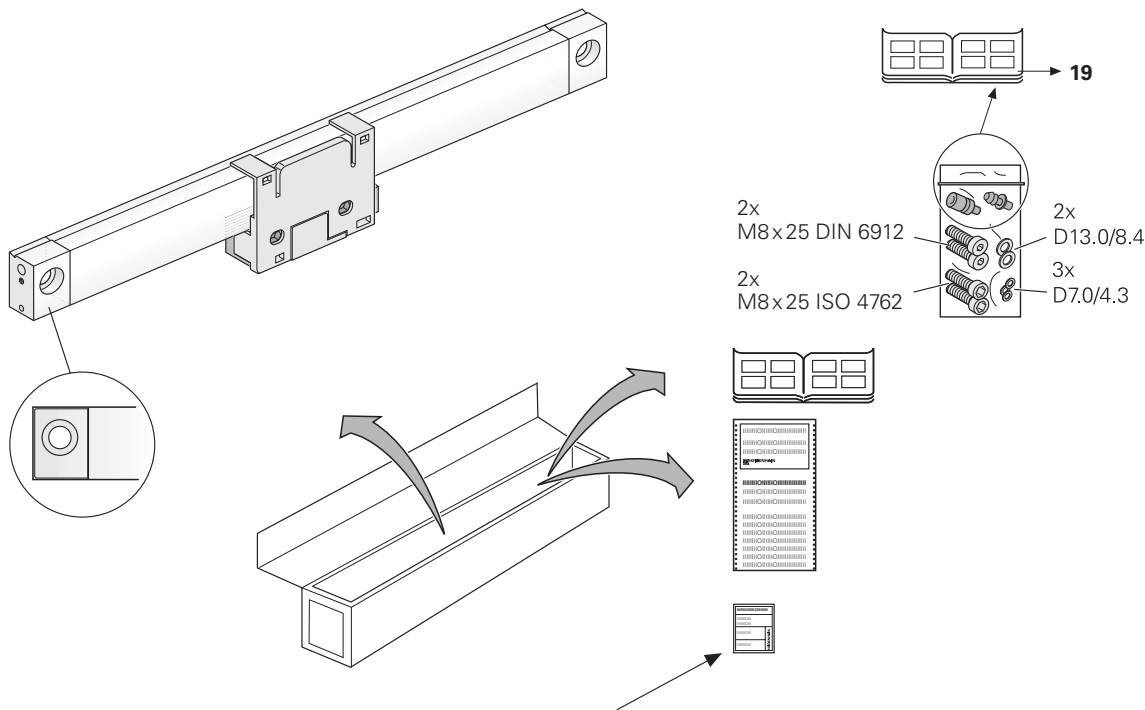
10/2001



DIN EN 100 015 – 1
CECC 00015 – 1



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



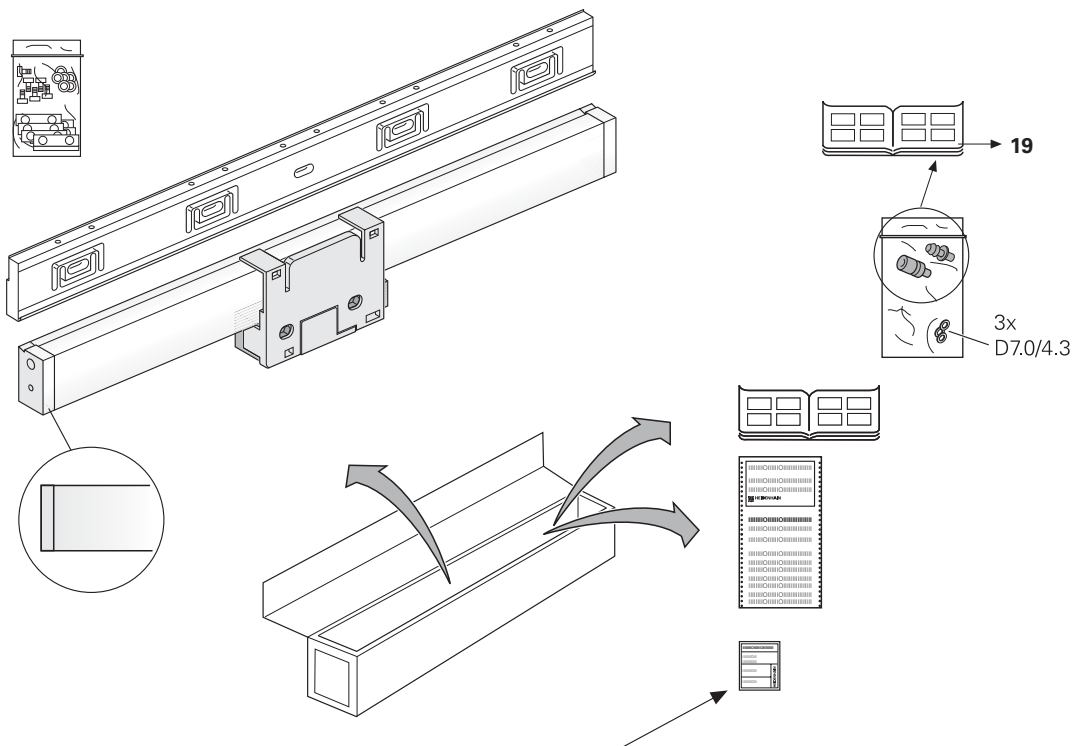
Bei Montage bitte Geräteschild-Aufkleber anbringen (Schaltschrank, Maschinen-Handbuch usw.)

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.)

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

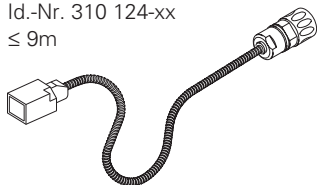
por favor, durante el montaje, colocar el adhesivo del letrero del aparato (armario eléctrico, modo de empleo de la máquina, etc.)

LF 401 (C)

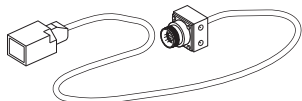
Id.-Nr. 310 125-xx
≤ 9m



Id.-Nr. 310 124-xx
≤ 9m



Id.-Nr. 266 656-xx
0.3m



Id.-Nr. 288 593-xx
≤ 9m

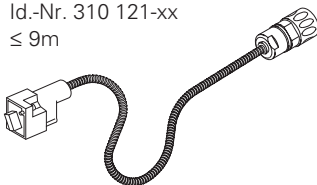


LF 481 (C)

Id.-Nr. 310 122-xx
≤ 9m



Id.-Nr. 310 121-xx
≤ 9m



Id.-Nr. 310 123-xx
3m



Id.-Nr. 310 134-xx
≤ 9m



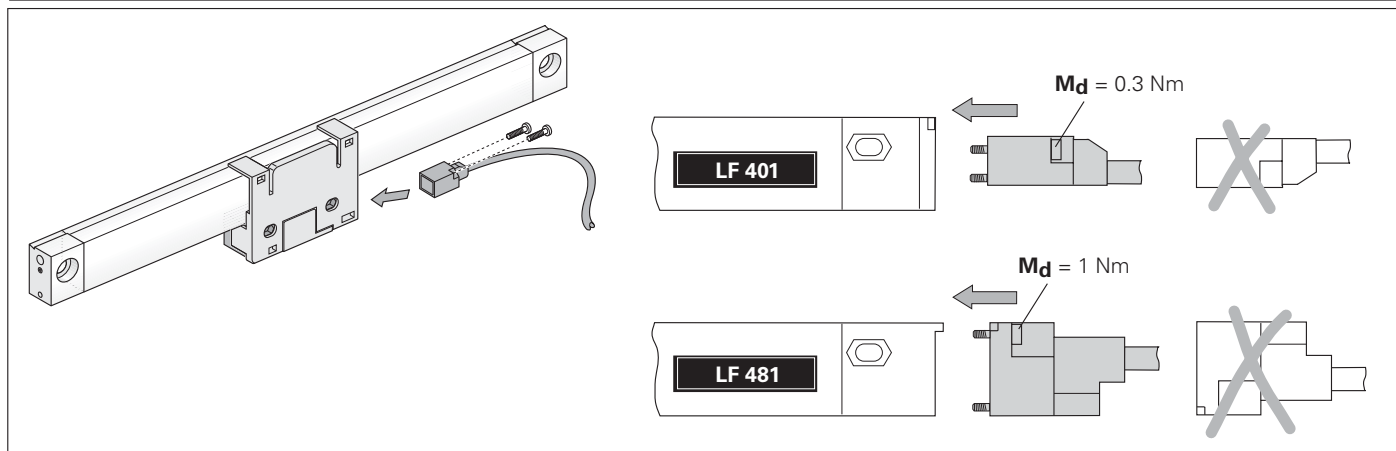
Id.-Nr. 298 430-xx
≤ 9m



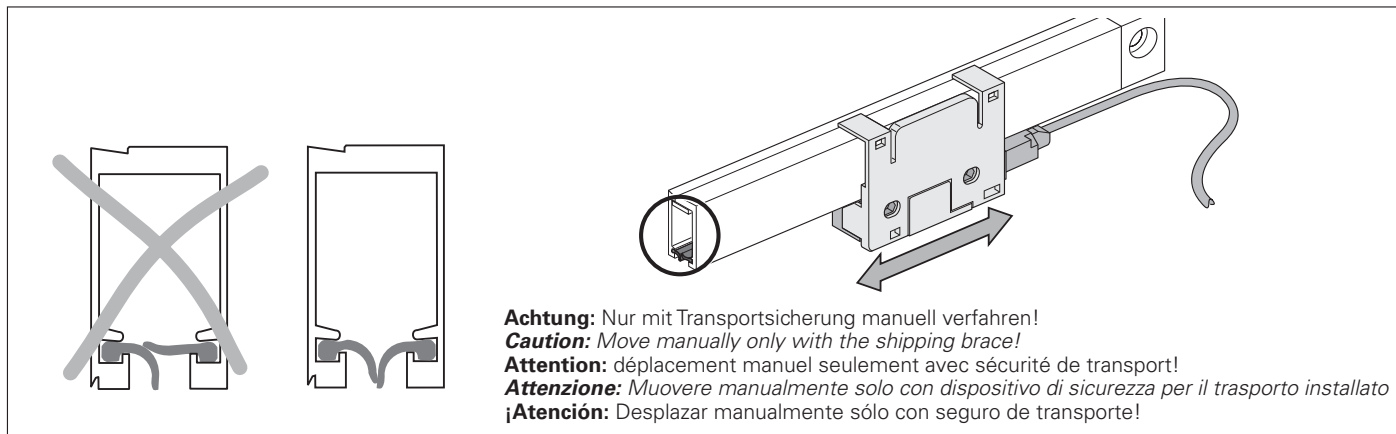
IK 220
TNC

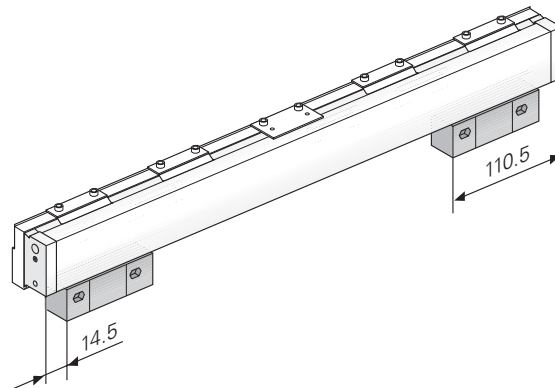
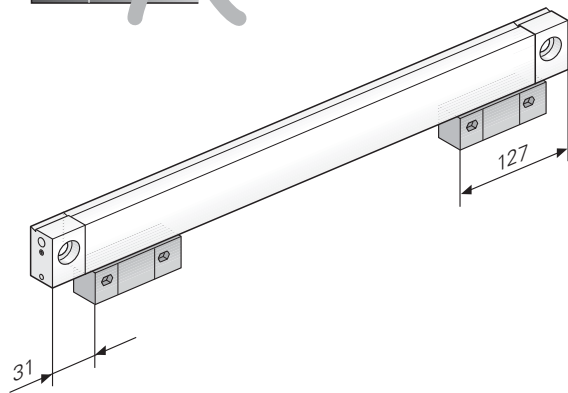
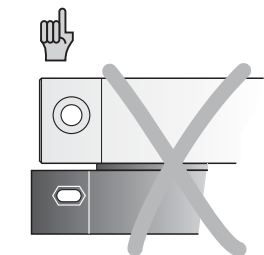


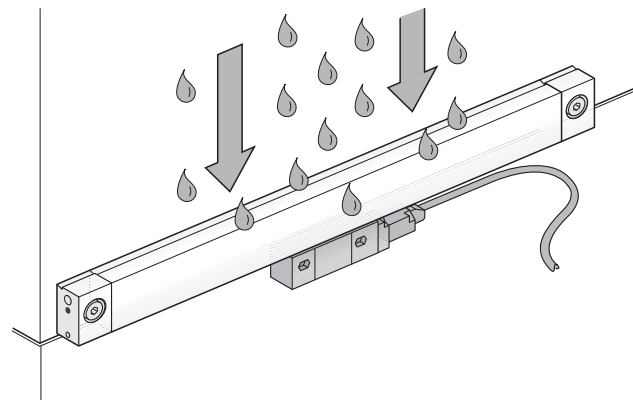
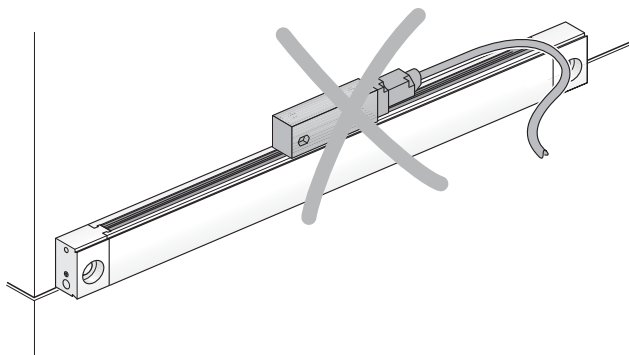
Kabelanschluss · *Cable Connection* · Raccordement du cable · *Cavo di colleganto* · Conexión de cable



Dichtlippen überprüfen · *Inspect Sealing Lips* · Contrôler les lèvres d'étanchéité · *Controllo delle guarnizioni* · Verificar labios



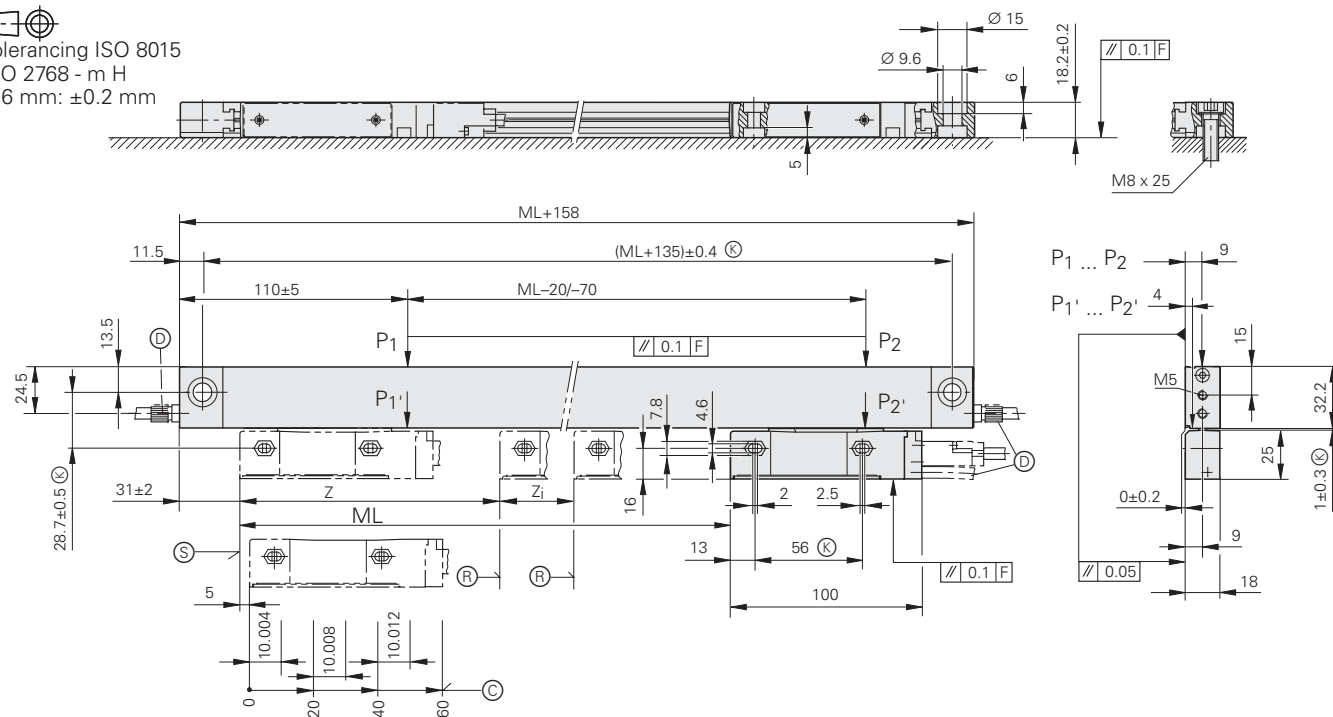




LF 401 (C)



Tolerancing ISO 8015
ISO 2768 - m H
< 6 mm: ± 0.2 mm



ML 50 ... 1000	ML 1120 ... 2020
z = 25	z = 35
z _i = ML - 50	z _i = ML - 70

P = Messpunkte zum Ausrichten
Gauging points for alignment
points de mesure pour dégauchissage
punti di misura per allineamento
puntos medición alineamiento

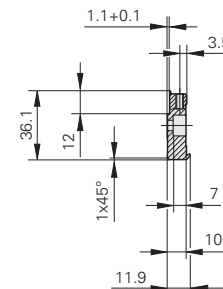
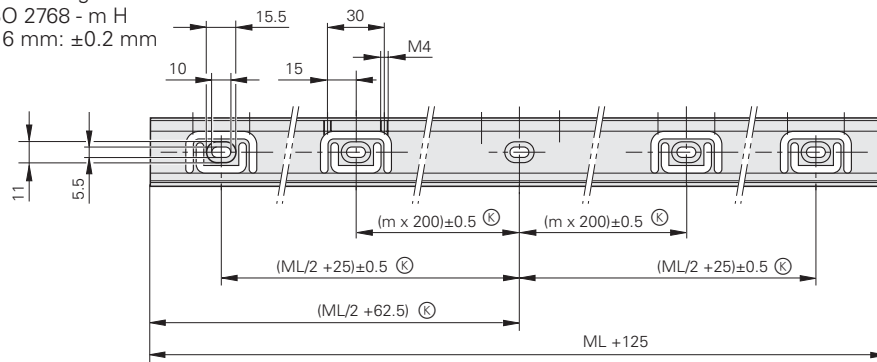
Ⓢ = Beginn der Messlänge ML
Begin. of meas. length ML
début longueur utile ML
inizio lunghezza di misura ML
comienzo longitud útil ML

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

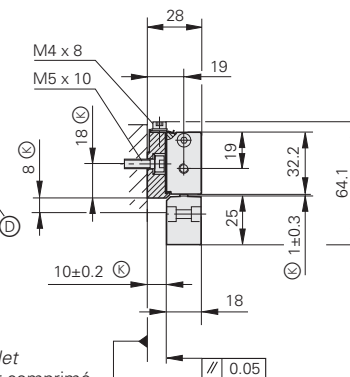
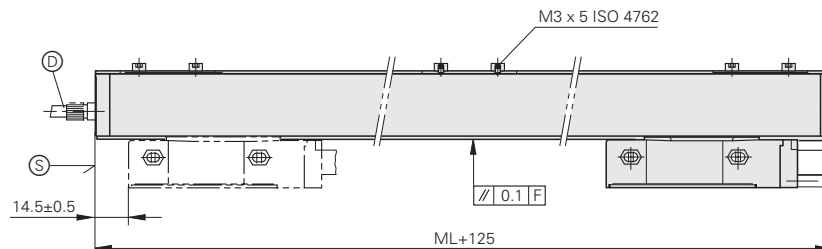
LF 401 (C)



Tolerancing ISO 8015
ISO 2768 - m H
< 6 mm: ± 0.2 mm



ML	m
50 ... 500	0
550 ... 900	1
1000 ... 1320	2
1420 ... 1720	3
1820 ... 2020	4



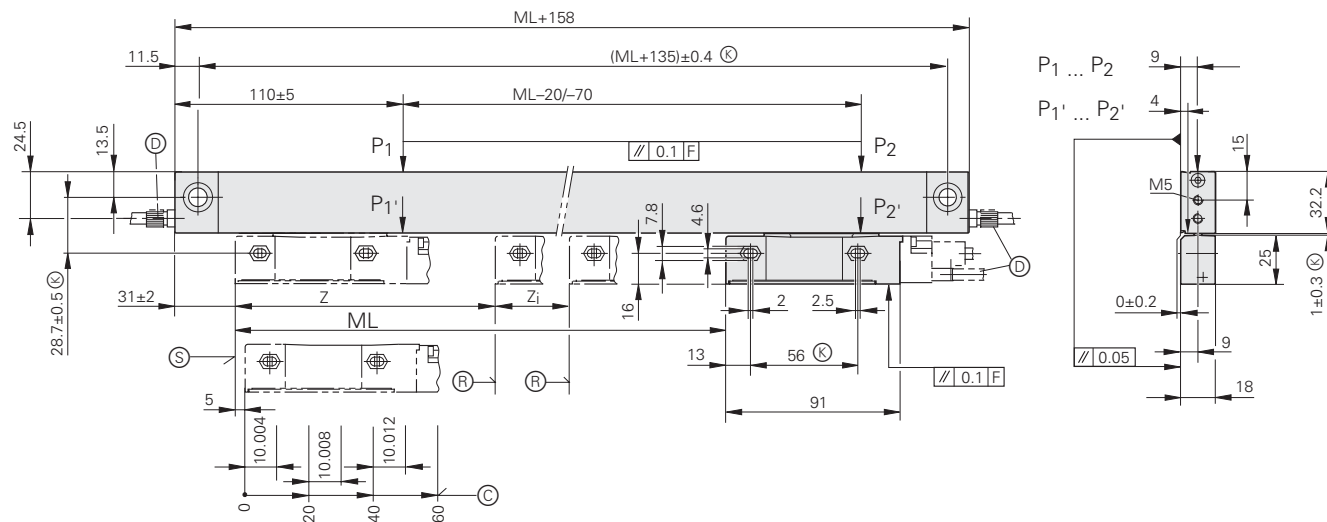
(K) = Kundenseitige Anschlussmaße
Required mating dimensions
conditions requises pour le montage
dimensioni di collegamento lato cliente
cotas de montaje requeridas

F = Maschinenführung
Machine guideway
guidage de la machine
guida della macchina
guía de la máquina

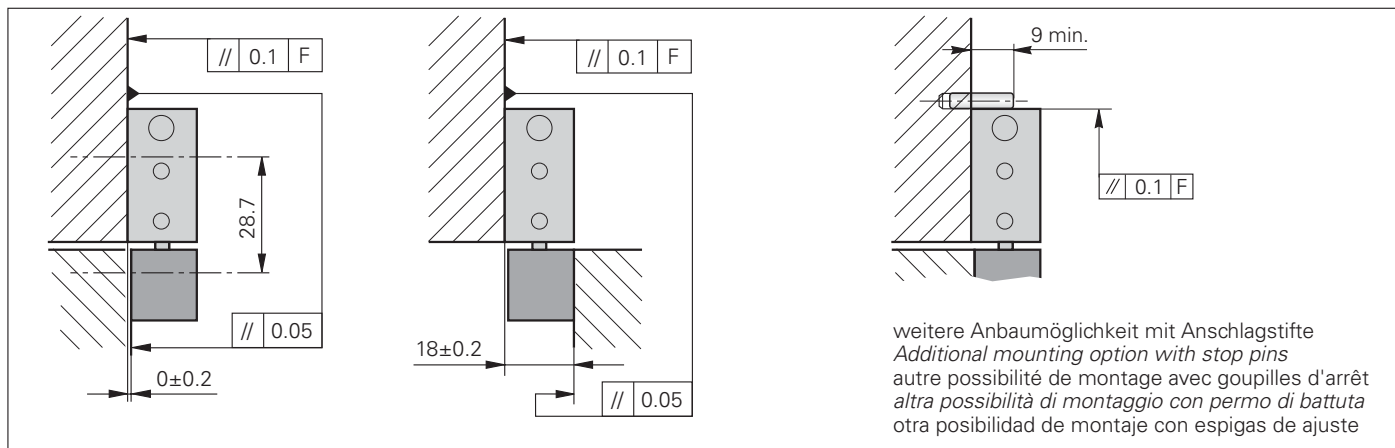
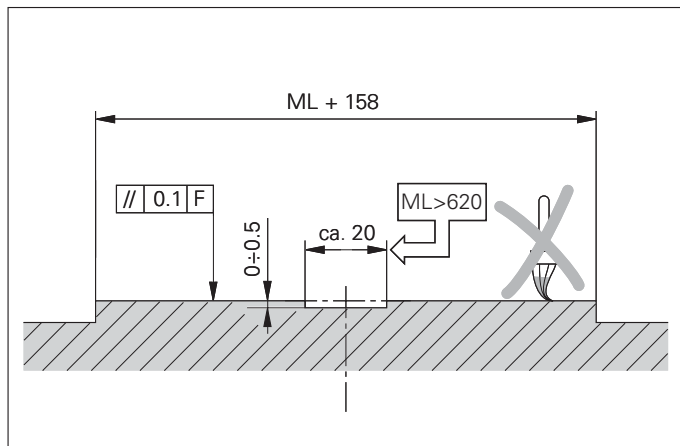
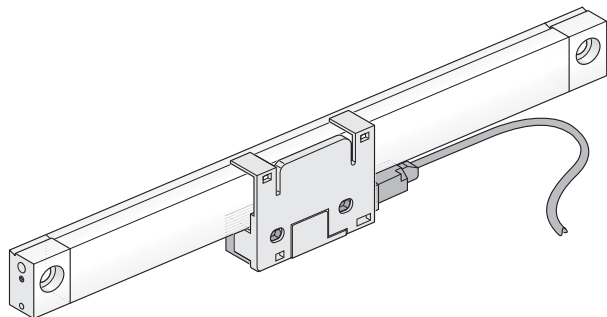
(D) = Druckluftanschluss
Compressed air inlet
raccordement d'air comprimé
ingresso per pressurizzazione
conexión de aire comprimido

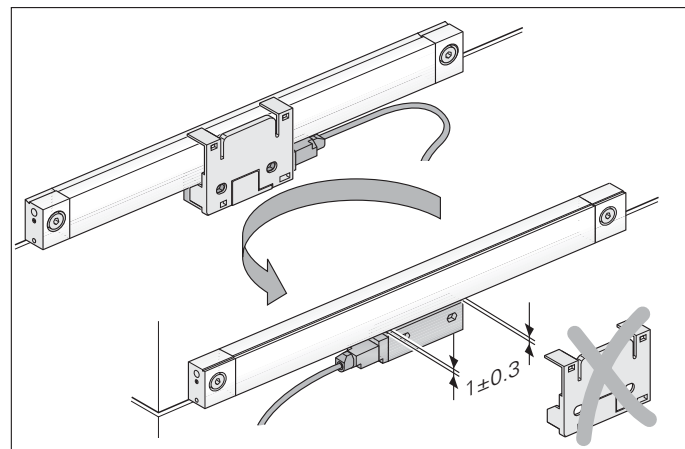
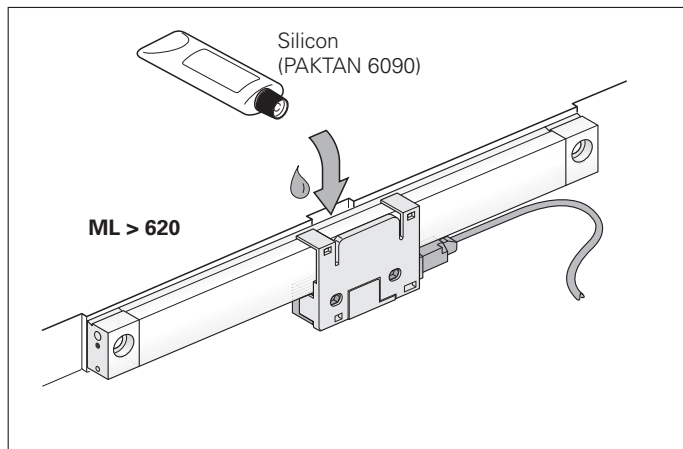
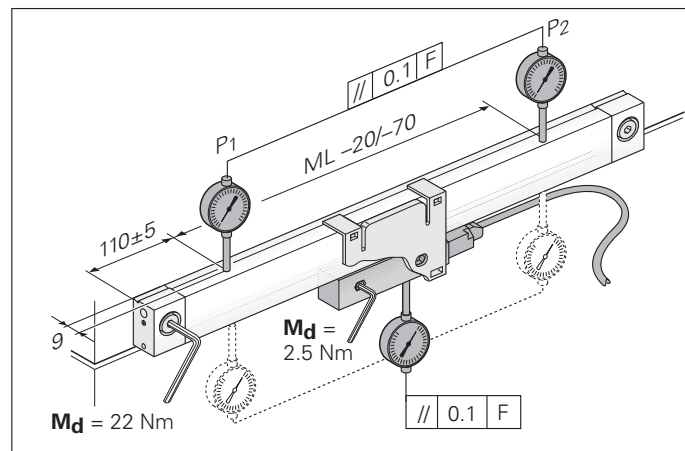
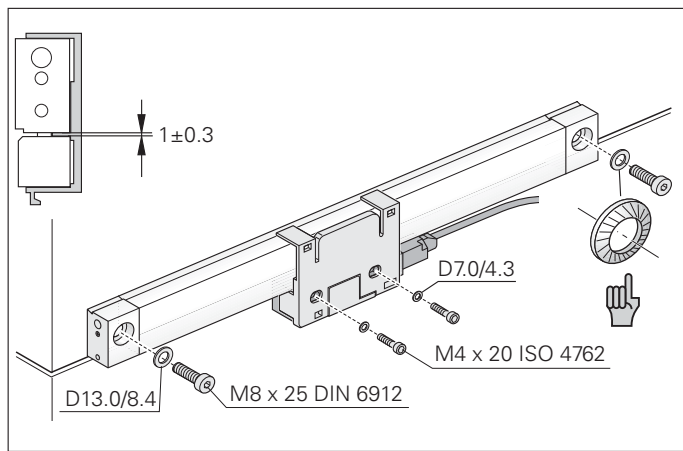
SO 8015
H
2 mm

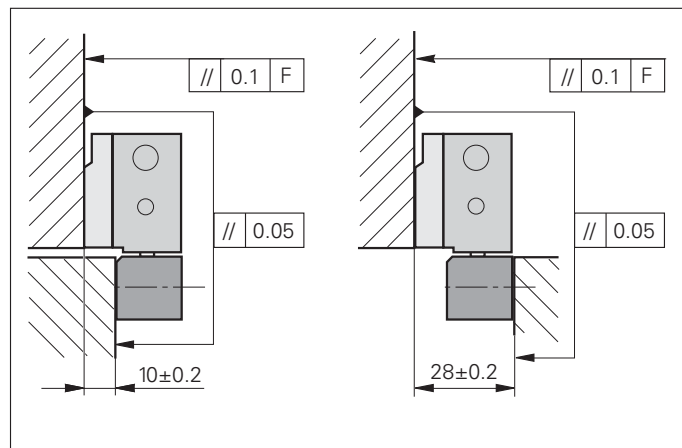
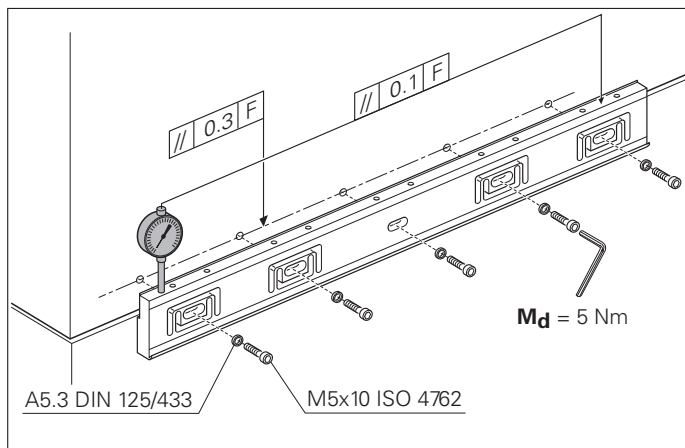
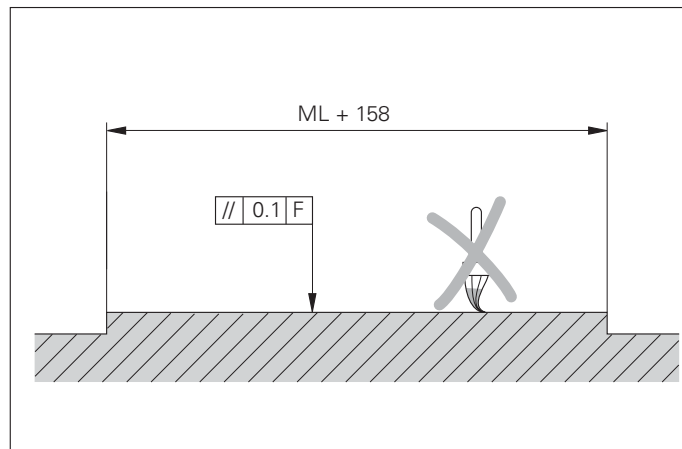
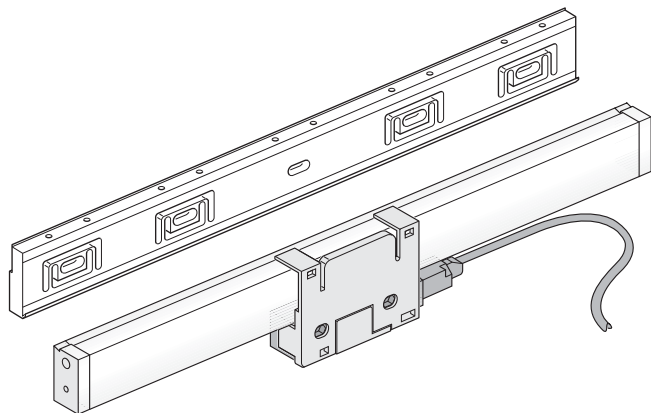
Technical drawing of a shaft assembly. The shaft is shown in cross-section with various dimensions and labels. Key dimensions include: $\varnothing 15$ (outer diameter), $\varnothing 9.6$ (inner diameter), 6 (width of a step), 18.2 ± 0.2 (total length), and 0.1 F (surface finish). A detail view of the M8 x 25 screw is shown on the right.

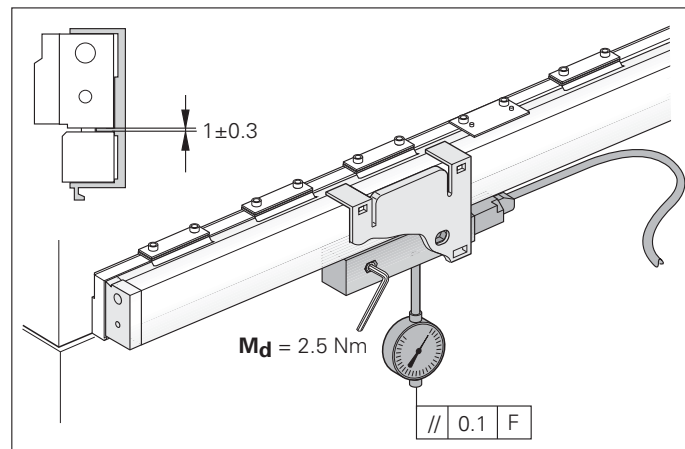
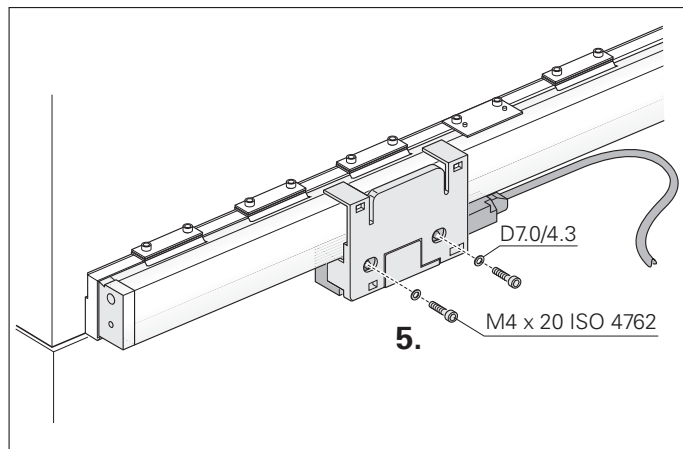
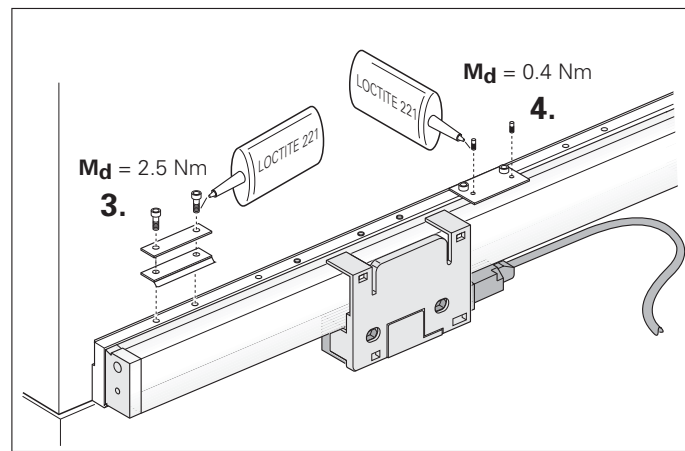
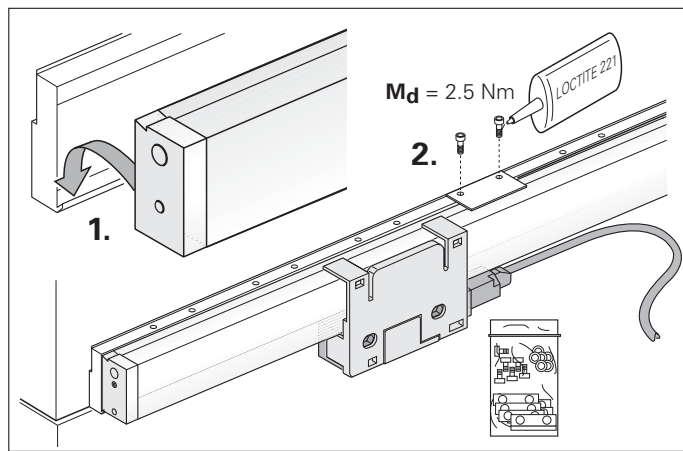


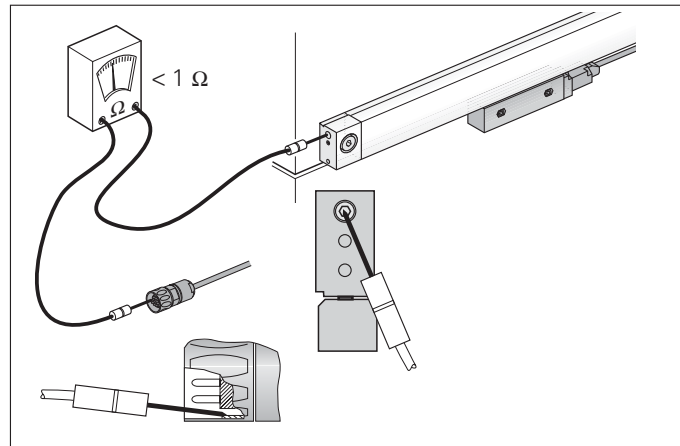
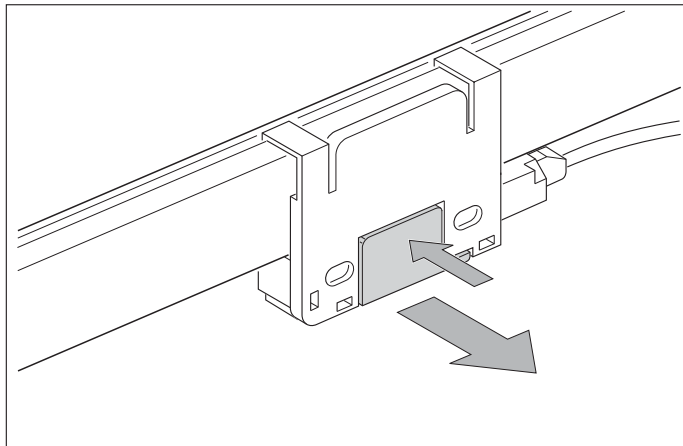
(R) = Referenzmarken-Lage
 (C) *Reference mark*
 marque de référence
indici di riferimento
 marca de referencia











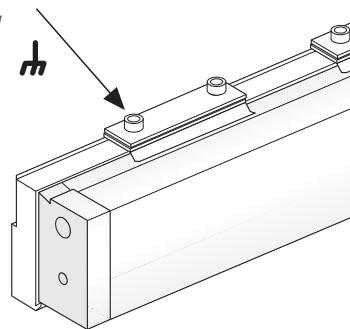
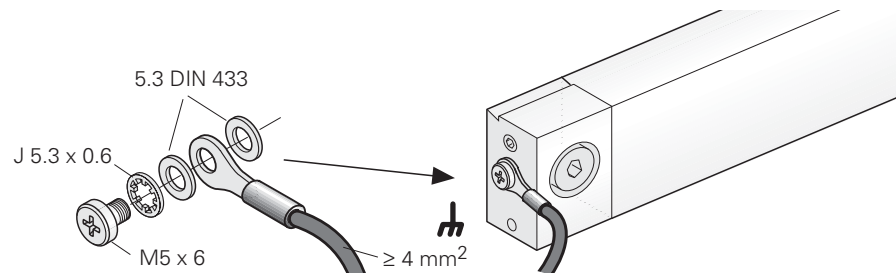
Bei Erdungsproblemen zusätzlich Endstück oder Montageschiene erden!

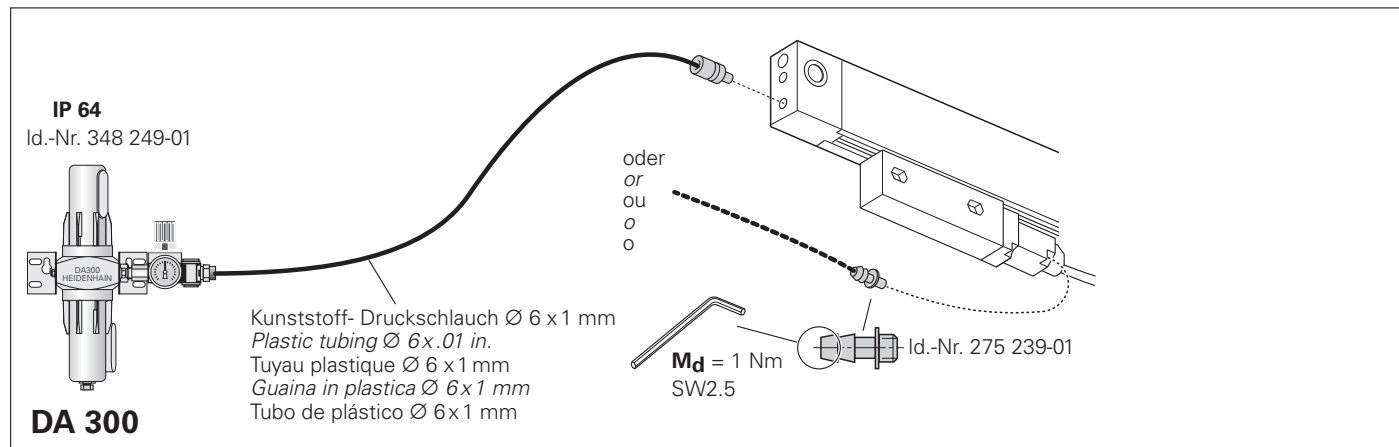
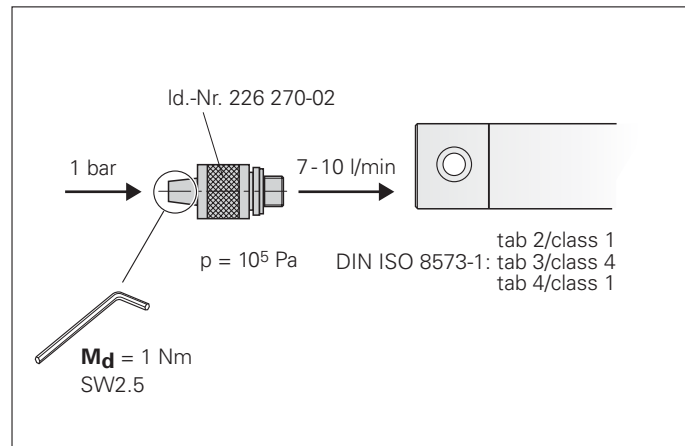
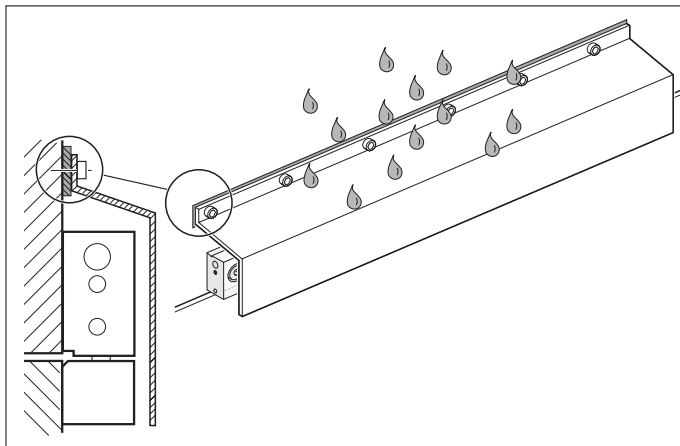
If grounding problems occur, ground also the end piece or mounting spar!

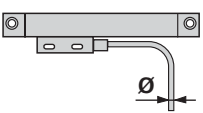
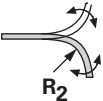
En cas de problèmes de mise à la terre, mettre aussi l'embout ou le rail de montage à la terre!

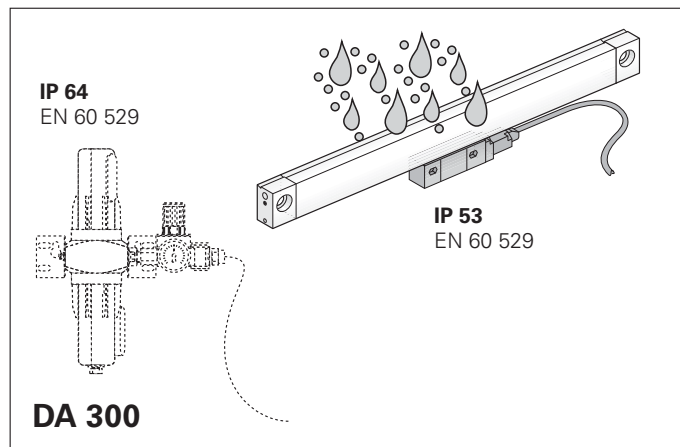
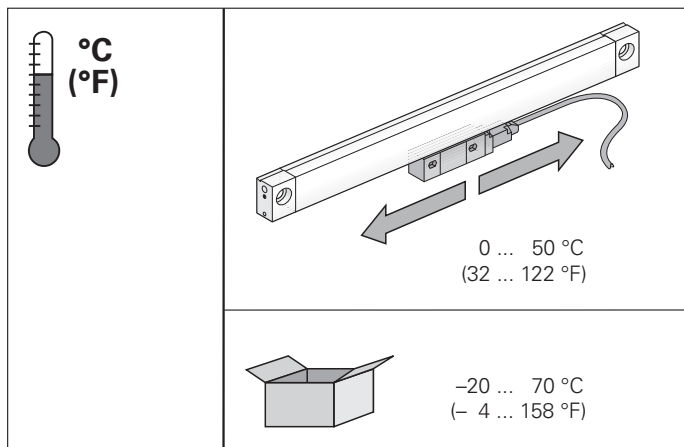
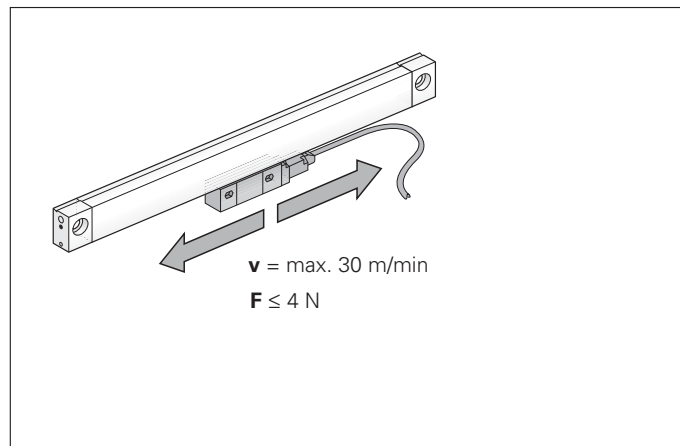
Nel caso di problemi di messa a terra, mettere a terra anche il blocchetto terminale o la guida di montaggio!

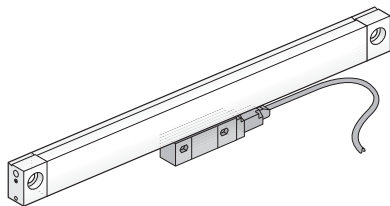
¡En caso de problemas de tierras, poner a tierra adicionalmente la pieza final o la guía de montaje!



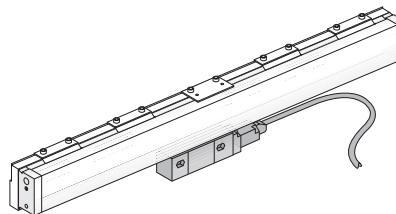


		
Ø 6 mm	$R_1 \geq 20 \text{ mm}$	$R_2 \geq 75 \text{ mm}$
Ø 10 mm	$R_1 \geq 35 \text{ mm}$	$R_2 \geq 75 \text{ mm}$
 Ø 8 mm	$R_1 \geq 40 \text{ mm}$	$R_2 \geq 100 \text{ mm}$



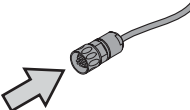


EN 60 068-2-6 (55 ... 2000 Hz): max. 80 m/s²
EN 60 068-2-27 (11 ms): max. 100 m/s²



EN 60 068-2-6 (55 ... 2000 Hz): max. 80 m/s²
EN 60 068-2-27 (11 ms): max. 200 m/s²

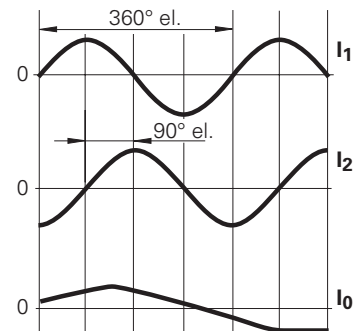
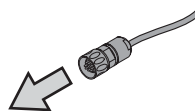
LF 401 (C)


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

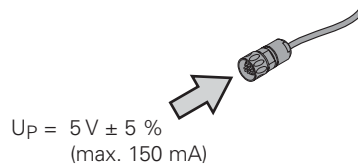


EN 50 178/4.98; 5.2.9.5
 IEC 364-4-41: 1992; 411(PELV/SELV)
 (siehe, *see*, voir, *vedi*, véase
 HEIDENHAIN D 231 929)

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



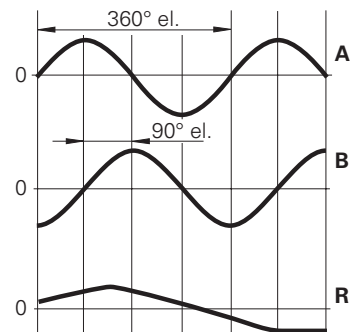
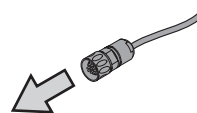
LF 481 (C)



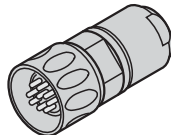
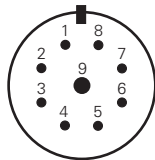
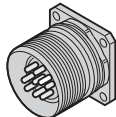
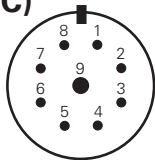
EN 50 178/4.98; 5.2.9.5
IEC 364-4-41: 1992; 411 (PELV/SELV)

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

A: 0.6 ... 1.2 V_{SS}
B: 0.6 ... 1.2 V_{SS}
R: 0.2 ... 0.85 V

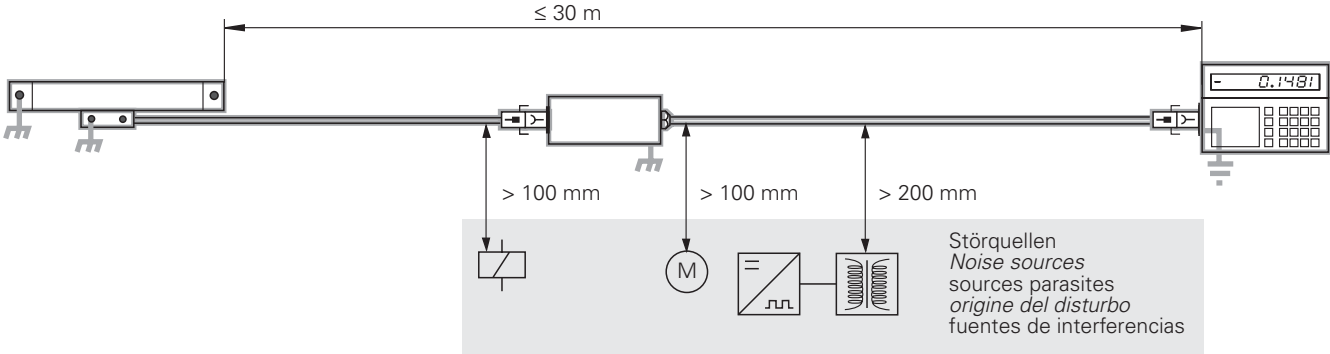


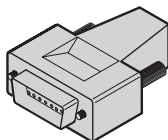
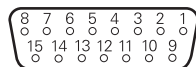
LF 401 (C)



- 1) Außenschirm auf 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		5 V U _P	0 V U _N		2)
+	-	+	-	+	-				
grün <i>green</i> vert <i>verde</i> verde	gelb <i>yellow</i> jaune <i>giallo</i> amarillo	blau <i>blue</i> bleu <i>azzurro</i> azul	rot <i>red</i> rouge <i>rosso</i> rojo	grau <i>gray</i> gris <i>grigio</i> gris	rosa <i>pink</i> rose <i>rosa</i> rosa	braun <i>brown</i> brun <i>marrone</i> marrón	weiß <i>white</i> blanc <i>bianco</i> blanco		weiß/braun <i>white/brown</i> blanc/brun <i>bianco/marrone</i> blanco/marrón



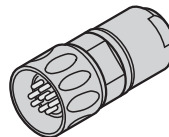
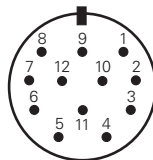
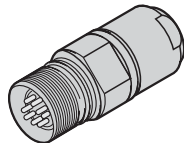
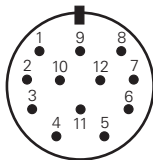


1) Außenschirm auf Gehäuse
External shield on housing
 blindage externe sur boîtier
schermo esterno sulla carcassa
 blindaje externo a carcasa

2) Innenschirm Pin 13
Internal shield pin 13
 blindage interne pin 13
schermo interno pin 13
 blindaje interno pin 13

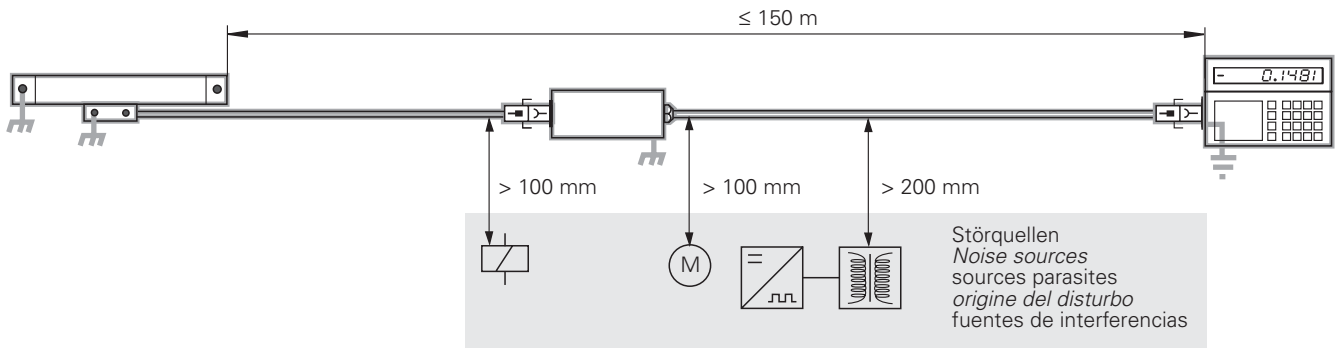
3	4	6	7	10	12	1	2	1)	13
I ₁		I ₂		I ₀		5 V U _P	0 V U _N		2)
+	–	+	–	+	–				
grün <i>green</i> vert <i>verde</i> verde	gelb <i>yellow</i> jaune <i>giallo</i> amarillo	blau <i>blue</i> bleu <i>azzurro</i> azul	rot <i>red</i> rouge <i>rosso</i> rojo	grau <i>gray</i> gris <i>grigio</i> gris	rosa <i>pink</i> rose <i>rosa</i> rosa	braun <i>brown</i> brun <i>marrone</i> marrón	weiß <i>white</i> blanc <i>bianco</i> blanco		weiß/braun <i>white/brown</i> blanc/brun <i>bianco/marrone</i> blanco/marrón

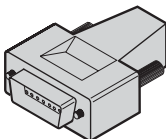
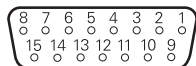
LF 481 (C)



Schirm auf Gehäuse
Shield on housing
blindage sur boîtier
schermo sulla carcassa
blindaje a carcasa

5	6	8	1	3	4	12	10	2	11	7	/
A		B		R		5 V U _P	0 V U _N	5 V sensor	0 V sensor	/	/
+	-	+	-	+	-						
braun <i>brown</i> brun <i>marrone</i> marrón	grün <i>green</i> vert <i>verde</i>	grau <i>gray</i> gris <i>grigio</i> gris	rosa <i>pink</i> rose <i>rosa</i> rosa	rot <i>red</i> rouge <i>rosso</i> rojo	schwarz <i>black</i> noir <i>nero</i> negro	braun/grün <i>brown/green</i> brun/vert <i>marrone/verde</i> marron/verde	weiß/grün <i>white/green</i> blanc/vert <i>bianco/verde</i> blanco/verde	blau <i>blue</i> bleu <i>azzurro</i> azul	weiß <i>white</i> blanc <i>bianco</i> blanco	violett <i>violet</i> violet <i>viola</i> violeta	gelb <i>yellow</i> jaune <i>giallo</i> amarillo





Schirm auf Gehäuse
Shield on housing
 blindage sur boîtier
schermo sulla carcassa
 blindaje a carcasa

3	4	6	7	10	12	1	2	9	11	14	/
A		B		R		5V U _P	0V U _N	5V sensor	0V sensor	/	/
+	–	+	–	+	–						
braun <i>brown</i> brun <i>marrone</i> marrón	grün <i>green</i> vert <i>verde</i> verde	grau <i>gray</i> gris <i>grigio</i> gris	rosa <i>pink</i> rose <i>rosa</i> rosa	rot <i>red</i> rouge <i>rosso</i> rojo	schwarz <i>black</i> noir <i>nero</i> negro	braun/grün <i>brown/green</i> brun/vert <i>marrone/verde</i> marron/verde	weiß/grün <i>white/green</i> blanc/vert <i>bianco/verde</i> blanco/verde	blau <i>blue</i> bleu <i>azzurro</i> azul	weiß <i>white</i> blanc <i>bianco</i> blanco	violett <i>violet</i> violet <i>viola</i> violeta	gelb <i>yellow</i> jaune <i>giallo</i> amarillo

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