

HEIDENHAIN

10/2001

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

LF 401/LF 401 C
LF 481/LF 481 C

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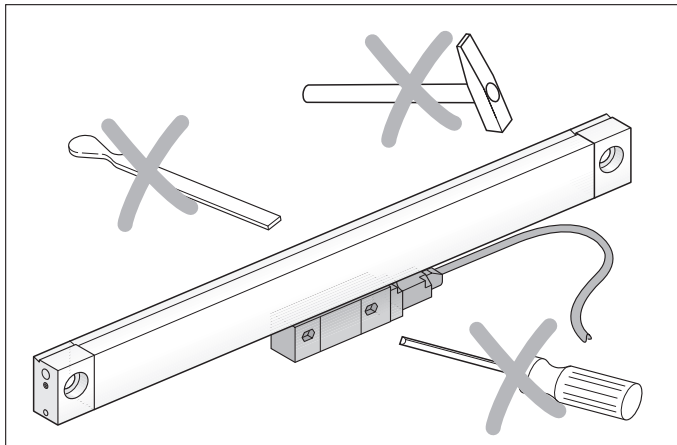
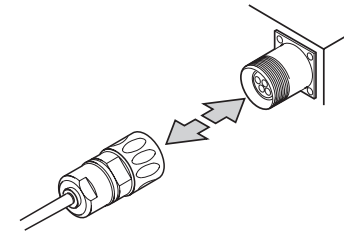
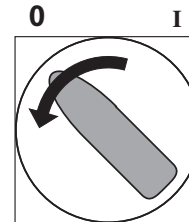
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Warnhinweise · *Warnings* · Recommendations · *Avvertenze* · Advertencias

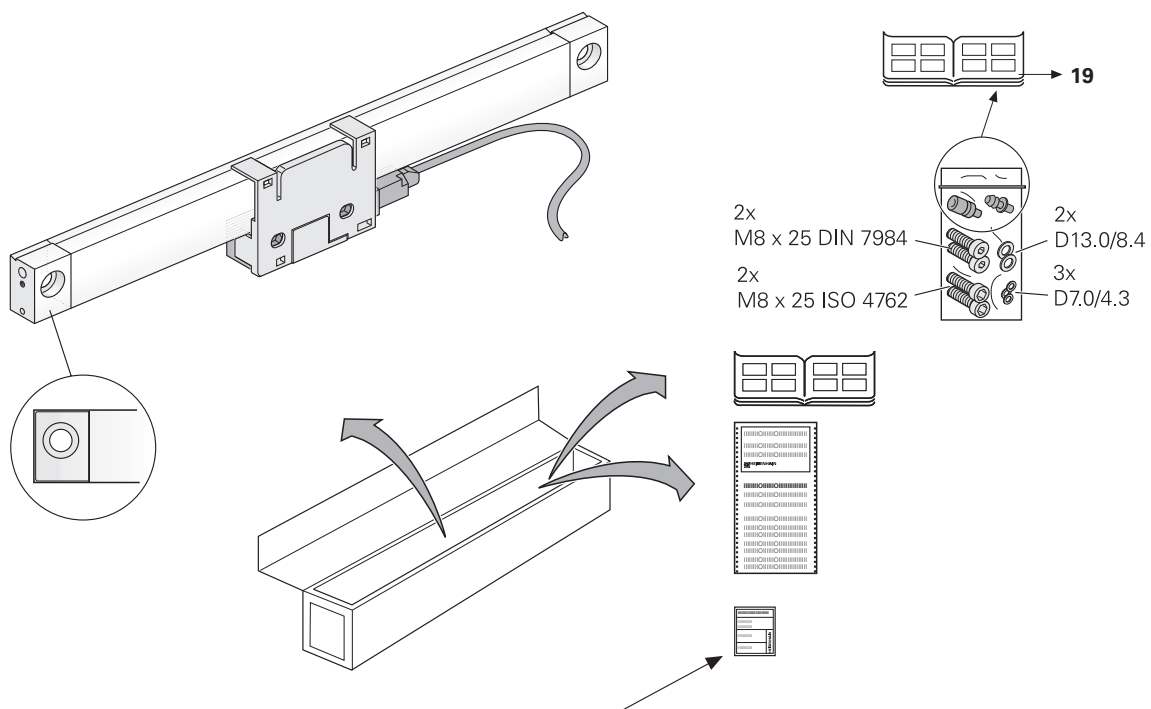


DIN EN 100 015 - 1
CECC 00015 - 1



Maße in mm
Dimensions in mm
cotes en mm
dimensioni in mm
dimensiones en mm

Lieferumfang · Items Supplied · Contenu de la fourniture · Standard di forniture · Elementos suministrados



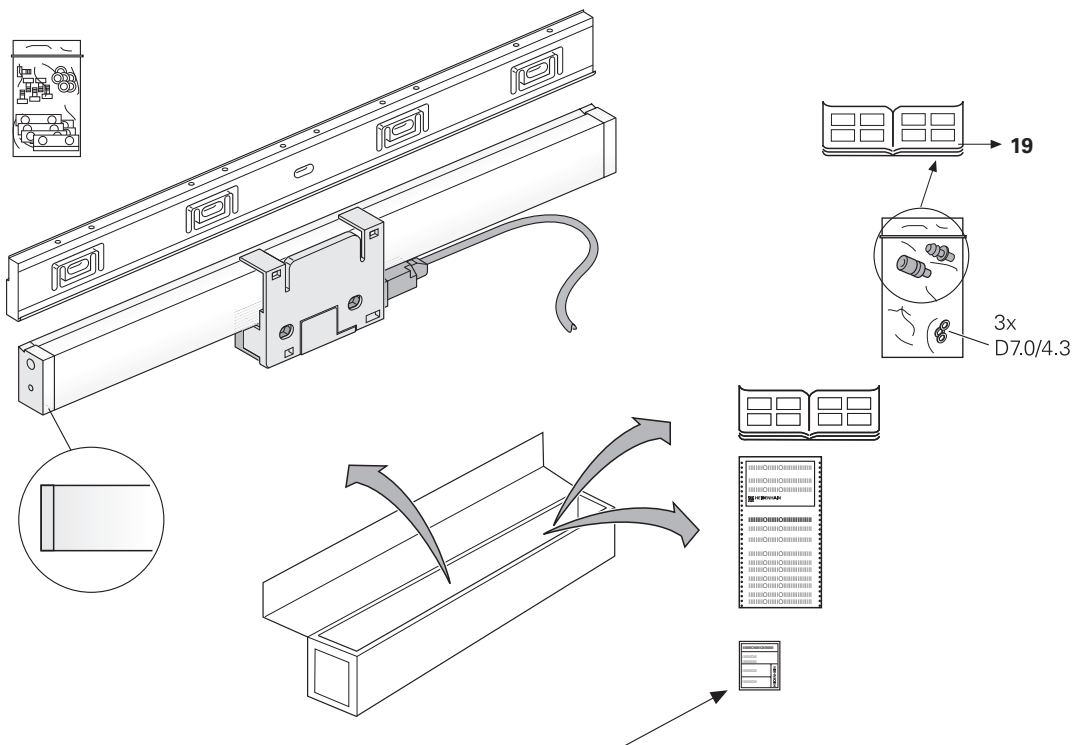
Bei Montage bitte Geräteschild-Aufkleber anbringen (Schaltschrank, Maschinen-Handbuch usw.)

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

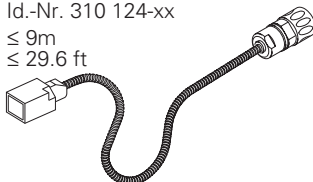
Separat bestellen · *Order Separately* · A commander séparément · *Ordinare a parte* · Para pedir por separado

LF 401 (C)

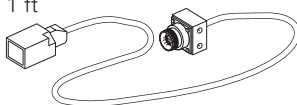
Id.-Nr. 310 125-xx
≤ 9m
≤ 29.6 ft



Id.-Nr. 310 124-xx
≤ 9m
≤ 29.6 ft



Id.-Nr. 266 656-xx
0.3m
1 ft



Id.-Nr. 288 593-xx
≤ 9m
≤ 29.6 ft

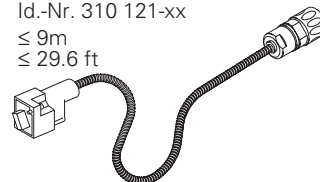


LF 481 (C)

Id.-Nr. 310 122-xx
≤ 9m
≤ 29.6 ft



Id.-Nr. 310 121-xx
≤ 9m
≤ 29.6 ft



Id.-Nr. 310 123-xx
3m
9.9 ft



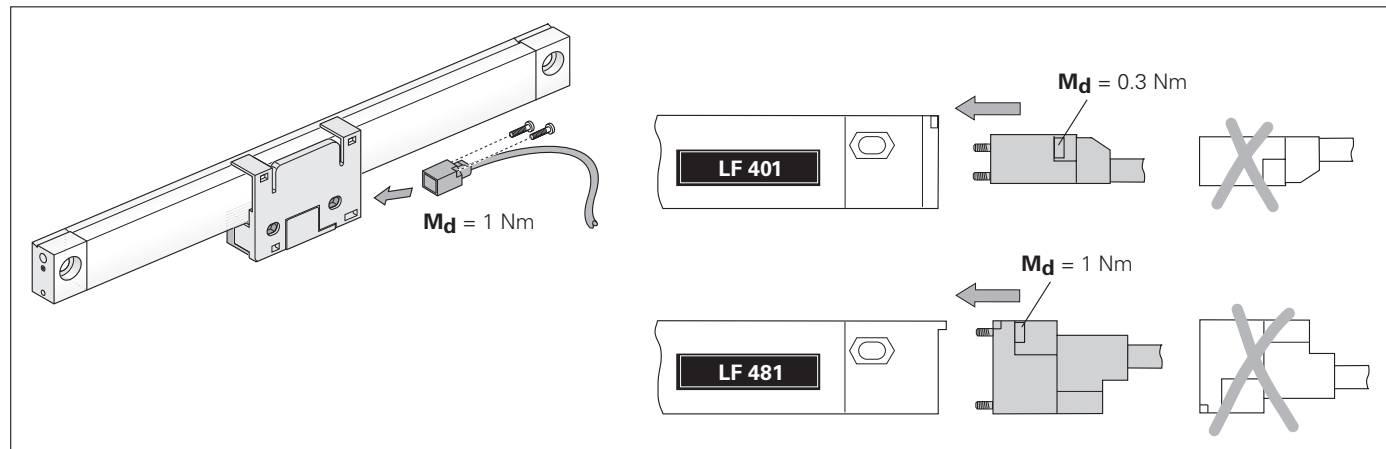
Id.-Nr. 310 134-xx
≤ 9m
≤ 29.6 ft



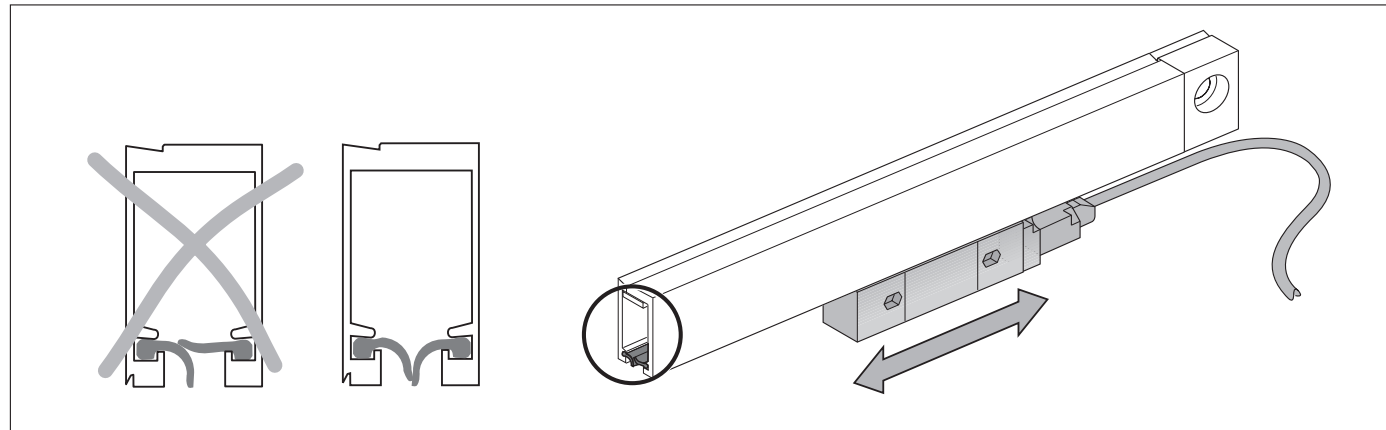
Id.-Nr. 298 430-xx
≤ 9m
≤ 29.6 ft

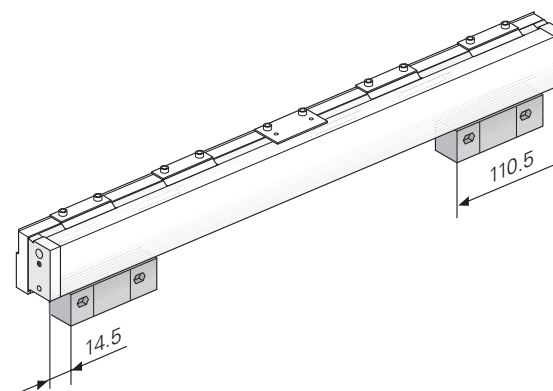
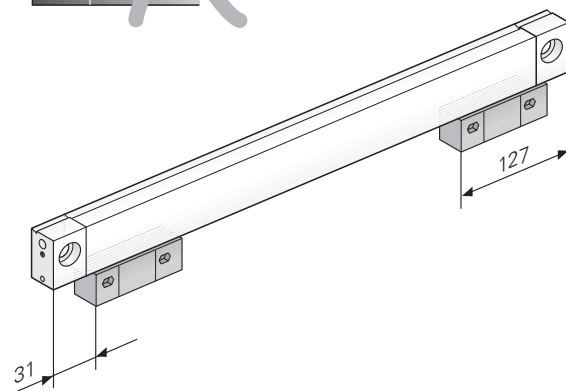
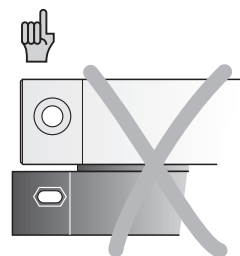


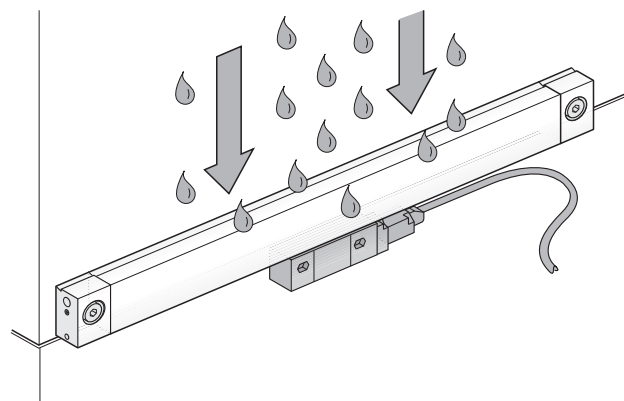
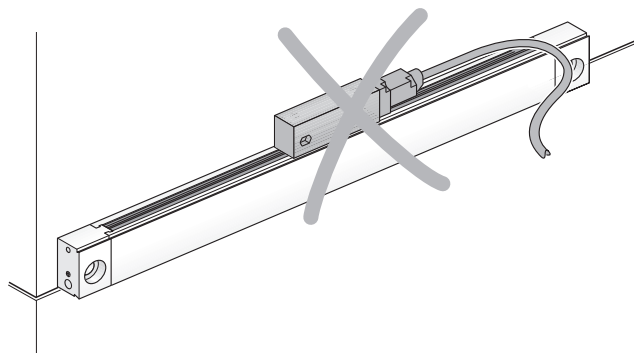
Kabelanschluss · *Cable Connection* · Raccordement du cable · *Cavo di colleganto* · Conexión de cable



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







• **Dimensiones
sin guía de montaje**

mm

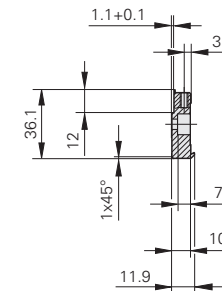
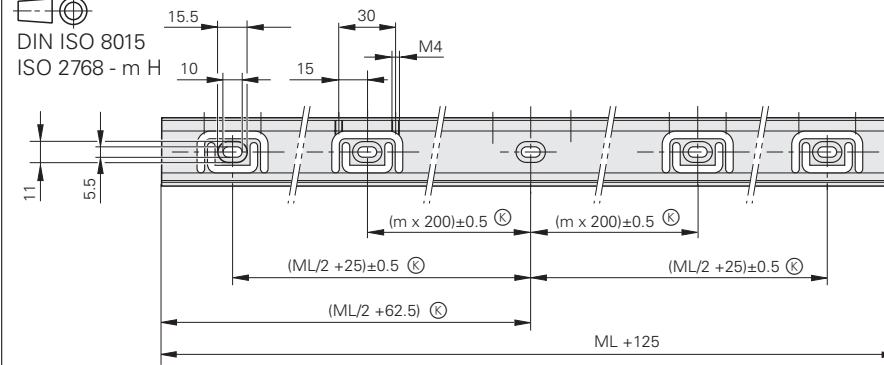
 DIN ISO 8015
 ISO 2768 - m H



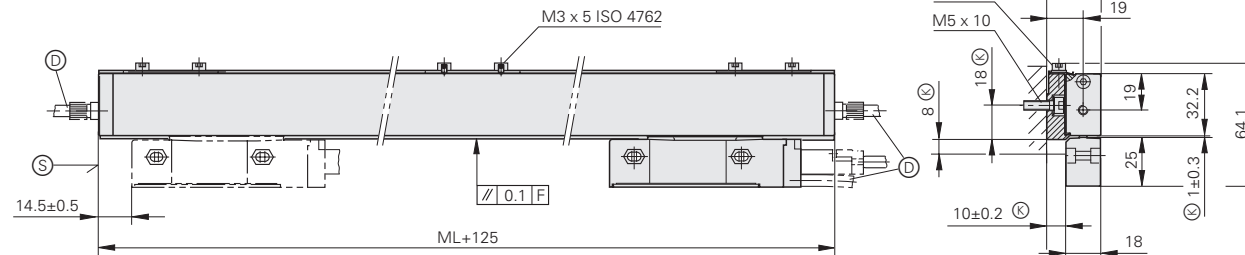
LF 401 (C)

mm

DIN ISO 8015
ISO 2768 - m H



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

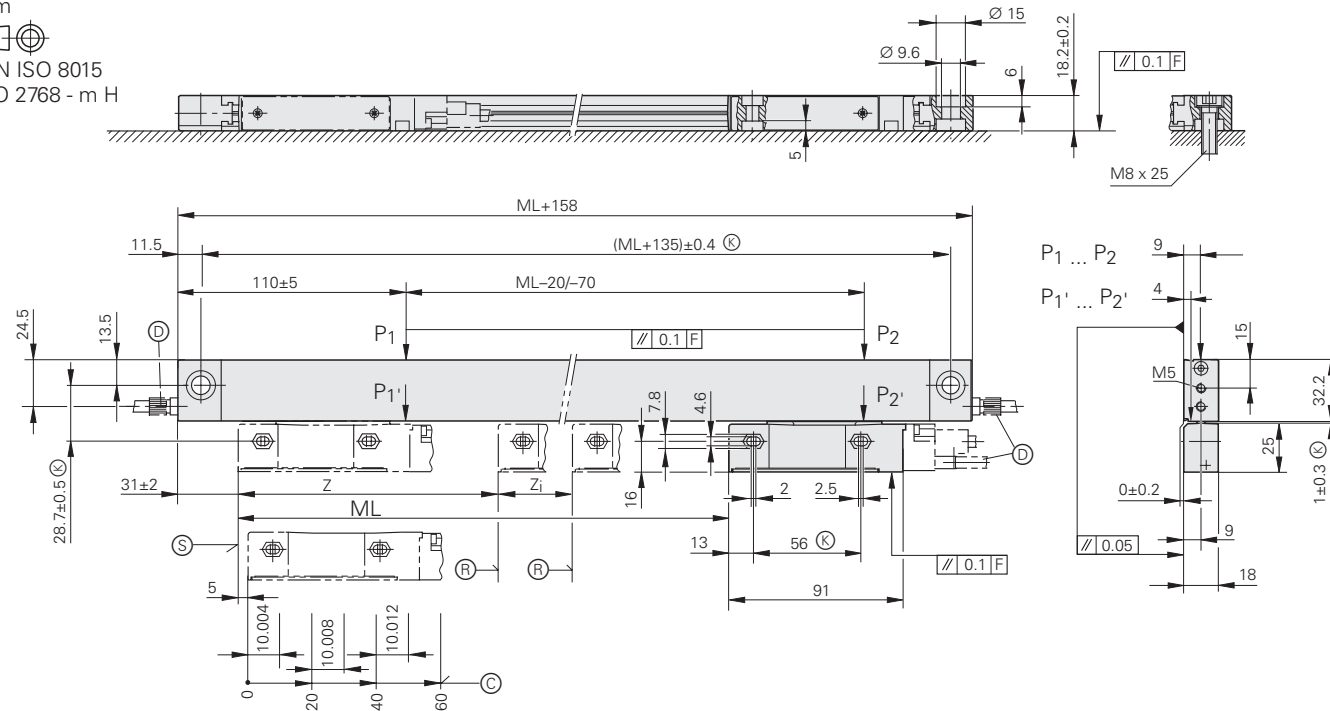
(D) = Druckluftanschluss
Compressed air inlet
raccordement d'air comprimé
ingresso per pressurizzazione
conexión de aire comprimido

Abmessungen ohne Montagesschiene · Dimensions without Mounting Spar · Dimensions sans rail de guidage · Dimensioni senza guida · Dimensiones sin guía de montaje

LF 481 (C)

mm

 DIN ISO 8015
 ISO 2768 - m H



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
 Ⓒ = Referenzmarken-Lage
 Reference mark
 marca de referencia
 Ⓒ = Referenzmarken-Lage
 Reference mark
 marca de referencia

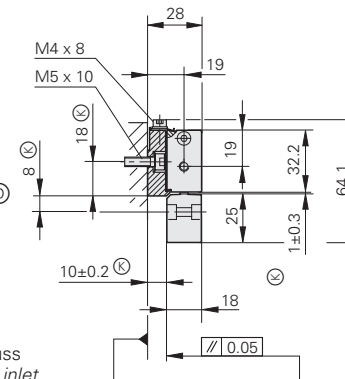
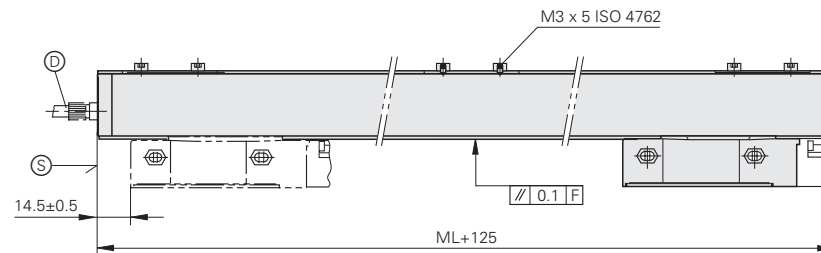
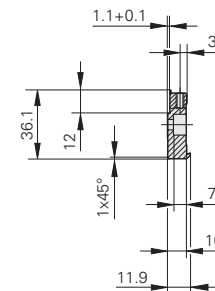
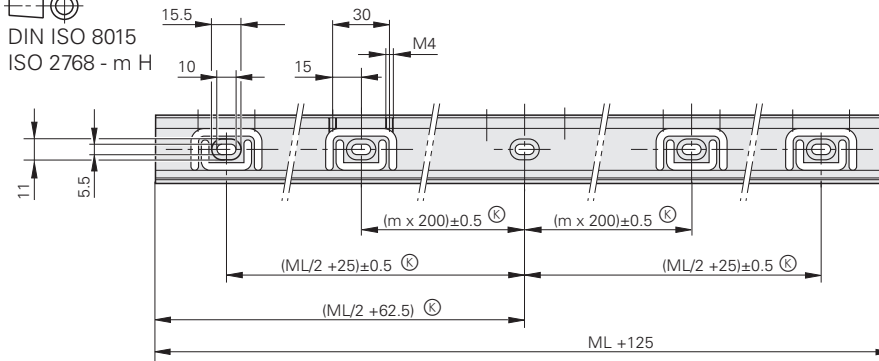
Abmessungen mit Montageschiene · Dimensions with Mounting Spar · Dimensions avec rail de guidage · Dimensioni con guida · Dimensiones con guía de montaje

LF 481 (C)

mm



DIN ISO 8015
ISO 2768 - m H



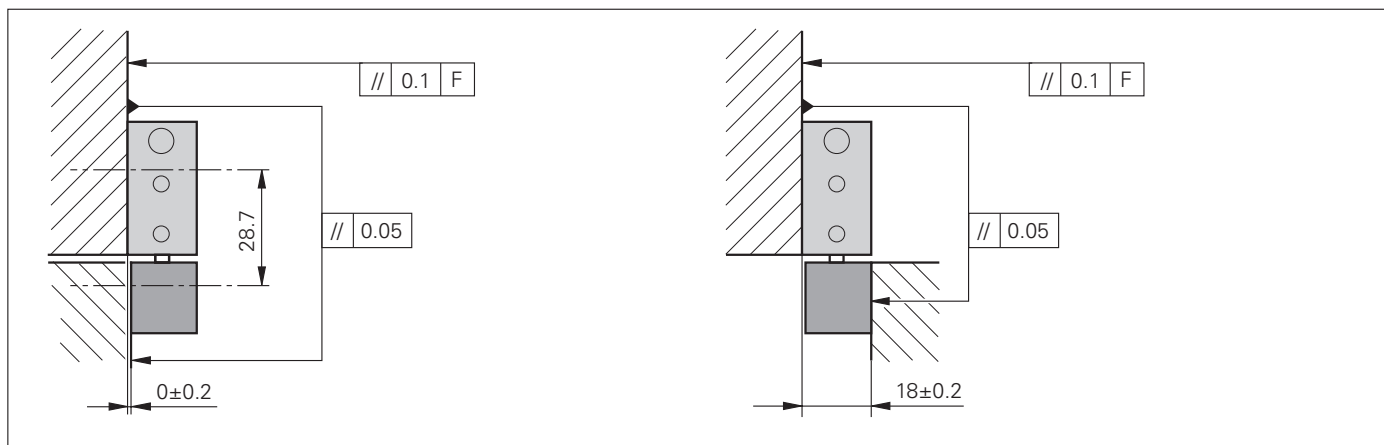
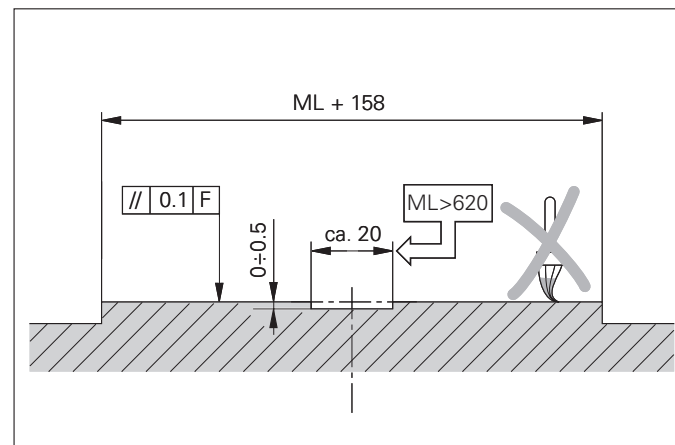
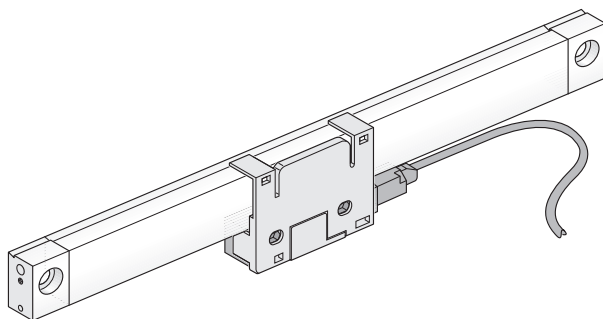
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conditions requises pour le montage
dimensioni di collegamento lato cliente
cotas de montaje requeridas

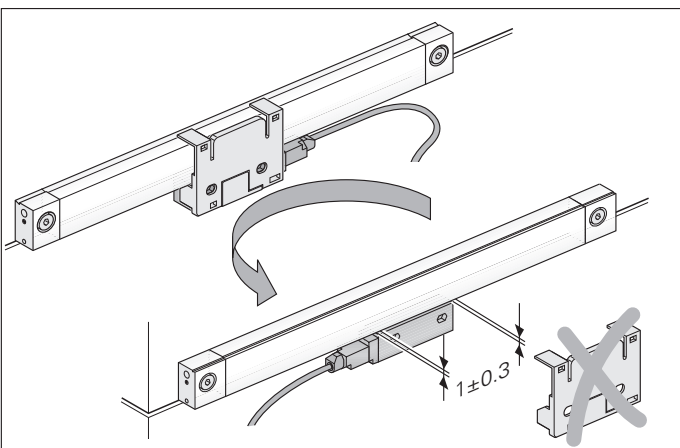
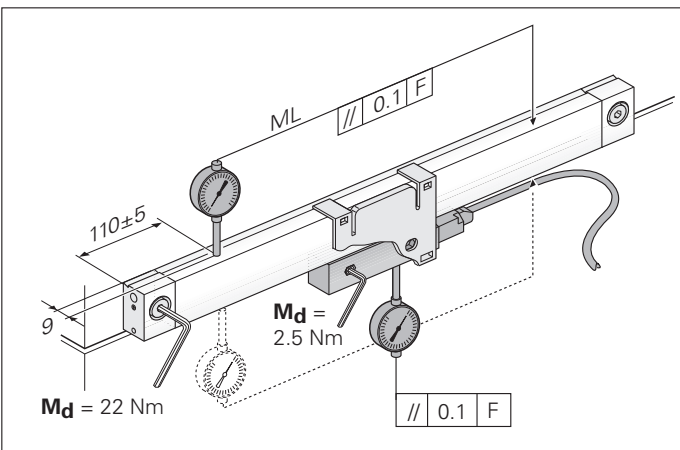
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Machine guideway
guidage de la machine
guida della macchina
guía de la máquina

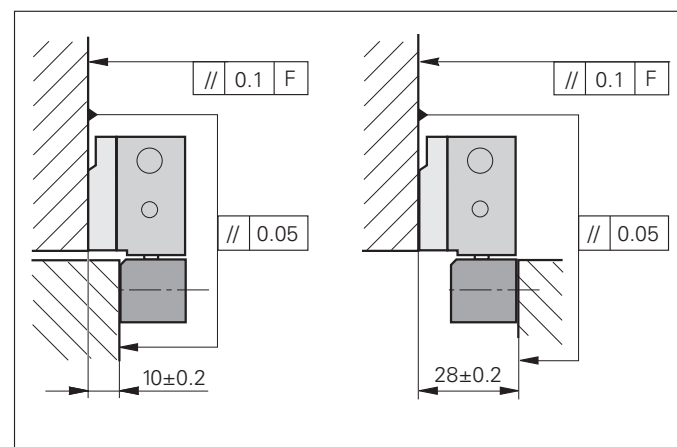
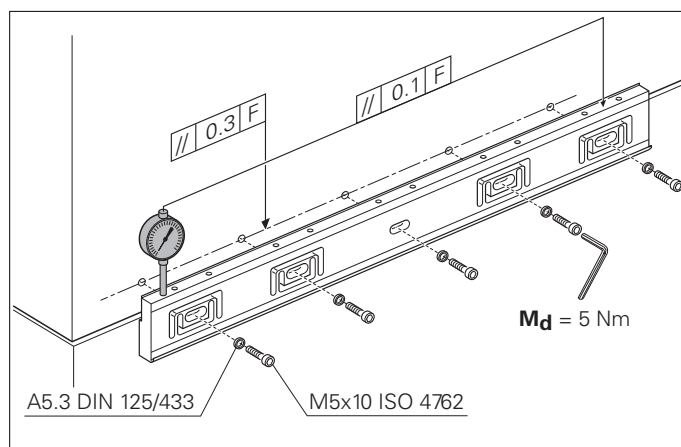
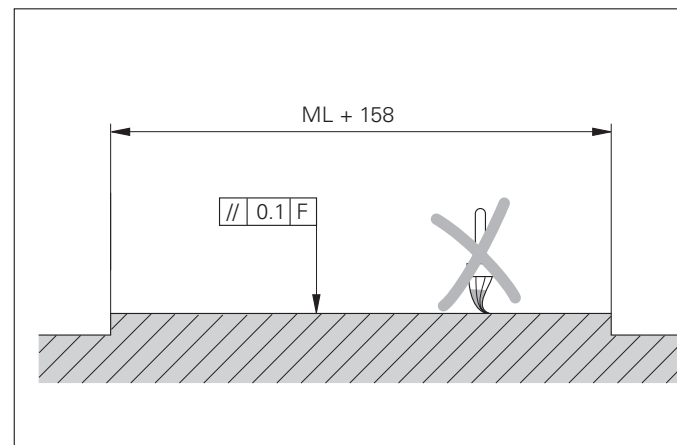
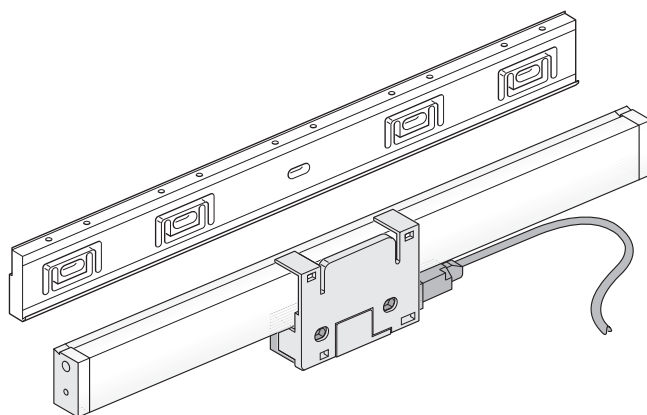
(D) = Druckluftanschluss
Compressed air inlet
raccordement d'air comprimé
ingresso per pressurizzazione
conexión de aire comprimido

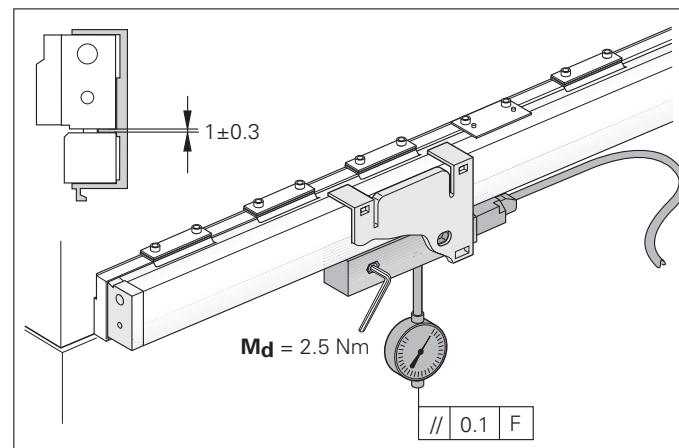
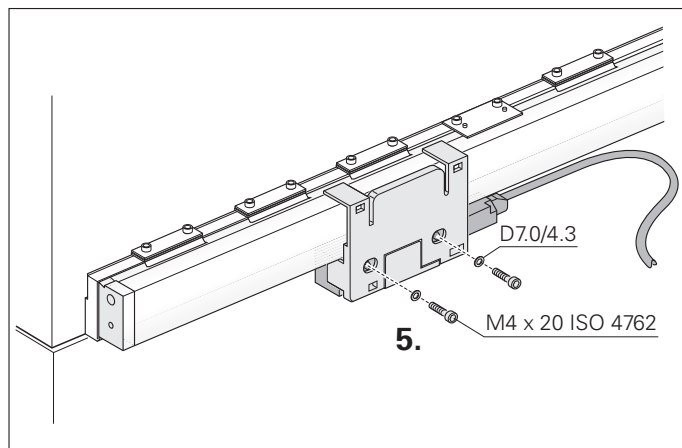
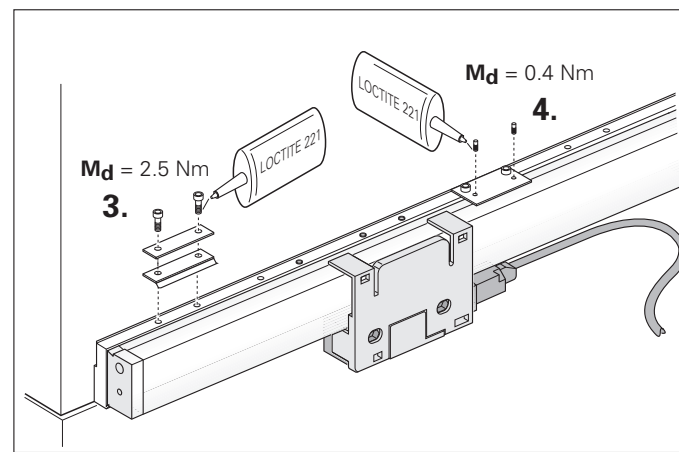
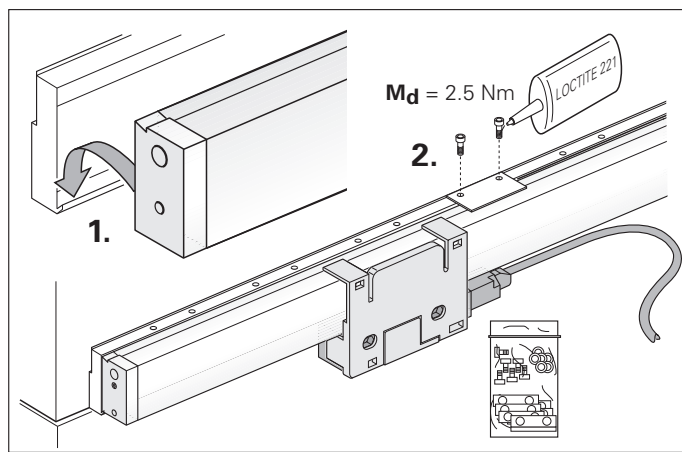
ML	m
50 ... 500	0
550 ... 900	1
1000 ... 1320	2
1420 ... 1720	3
1820 ... 2020	4

Anbau ohne Montageschiene · *Mounting without Mounting Spar* · Montage sans rail de guidage · *Montaggio senza guida* · Instalación sin guía de montaje

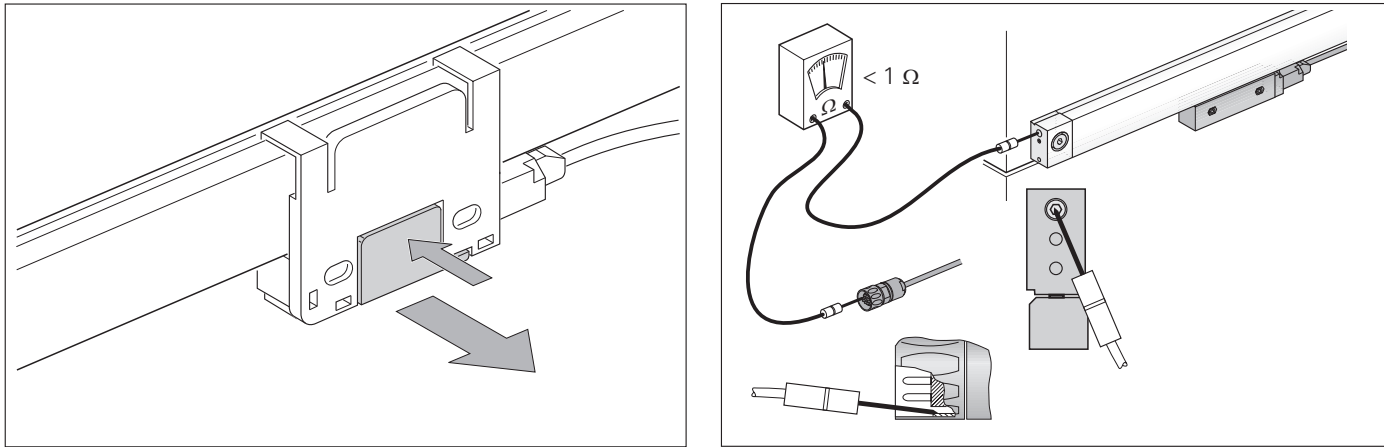




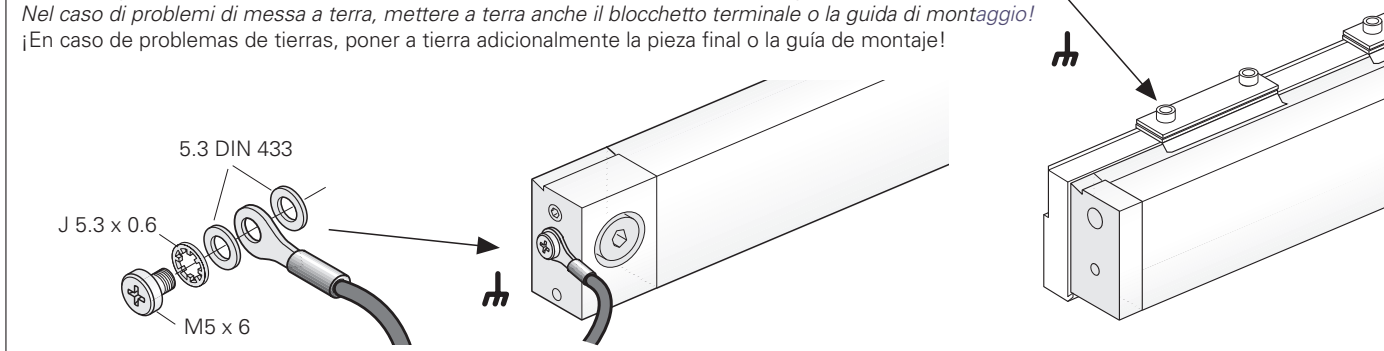




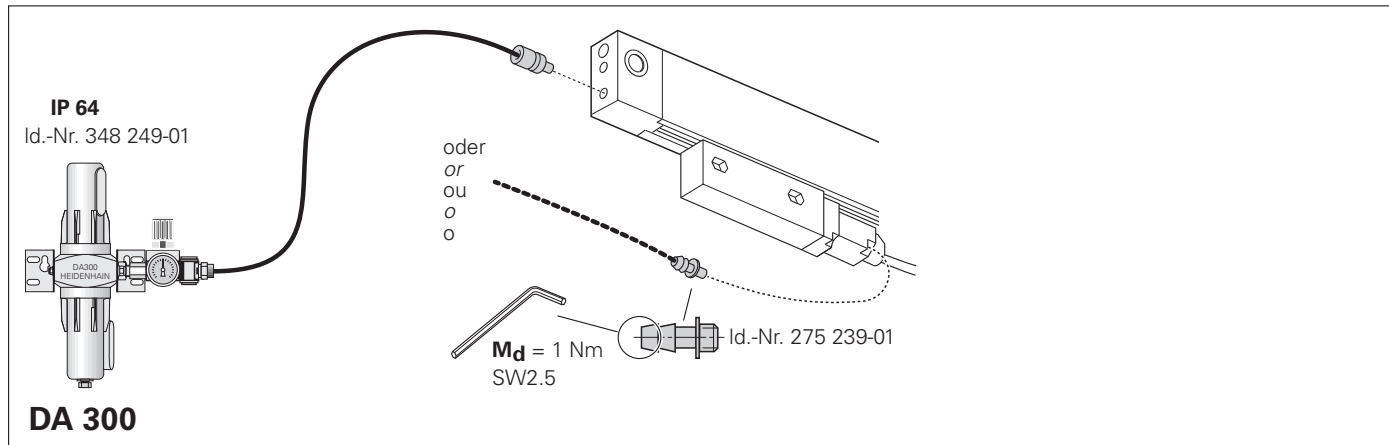
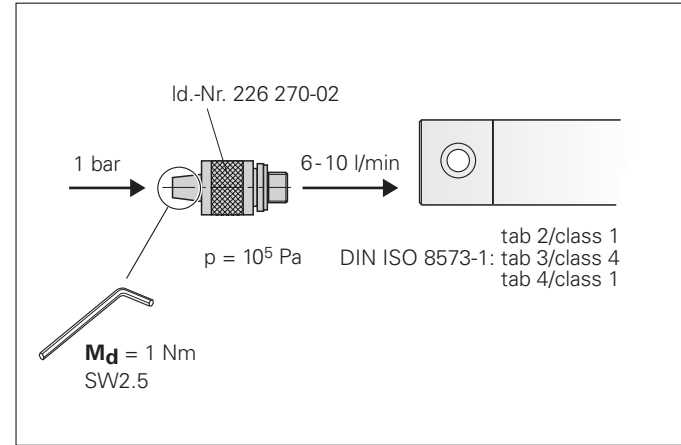
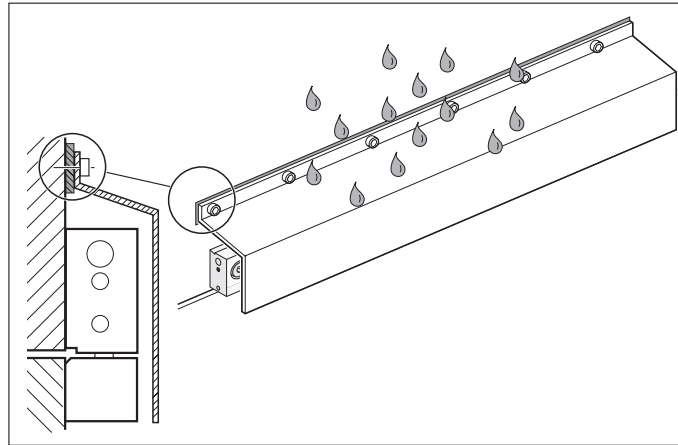
Abschließende Arbeiten · Final Steps · Opérations finales · Operazioni finali · Trabajos finales



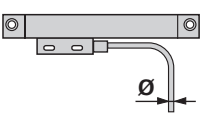
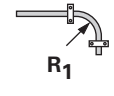
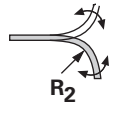
Bei Erdungsproblemen zusätzlich Endstück oder Montageschiene erden!
 If grounding problems occur, ground also the end piece or mounting spar!
 En cas de problèmes de mise à la terre, mettre aussi l'embout ou le rail de montage à la terre!
 Nel caso di problemi di messa a terra, mettere a terra anche 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!

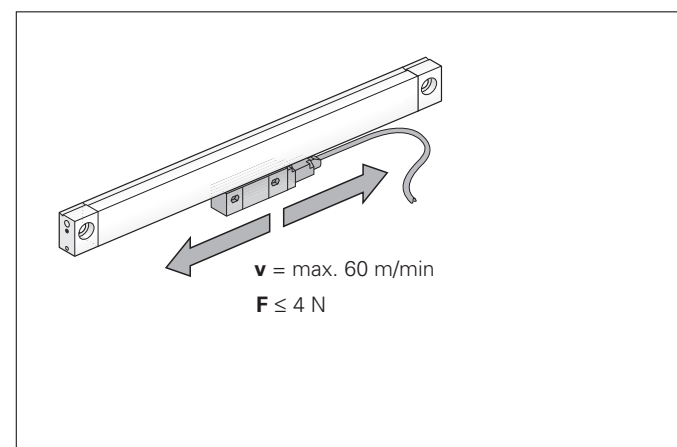


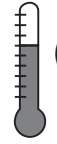
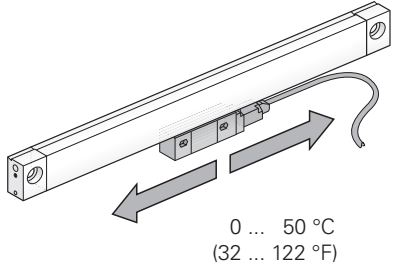
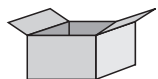
Schutzmaßnahmen · Protective Measures · Mesures préventives · Precauzioni · Medidas de protección

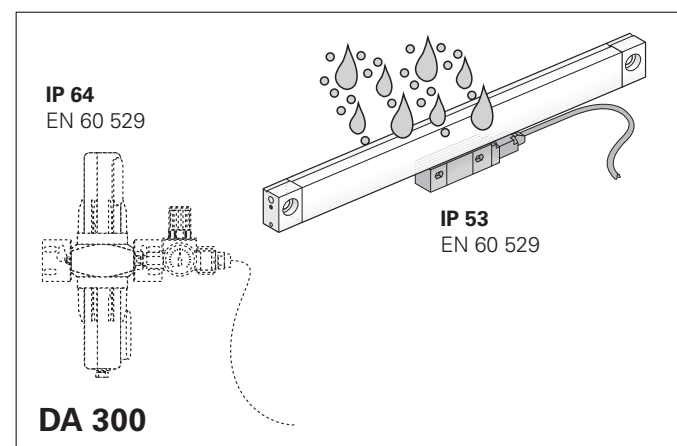


Technische Kennwerte · *Specifications* · Caractéristiques techniques · *Dati tecnici* · Datos técnicos

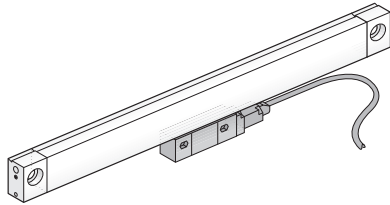
		
Ø 6 mm	$R_1 \geq 20 \text{ mm}$	$R_2 \geq 75 \text{ mm}$
Ø 10 mm	$R_1 \geq 35 \text{ mm}$	$R_2 \geq 75 \text{ mm}$
 Ø 8 mm	$R_1 \geq 40 \text{ mm}$	$R_2 \geq 100 \text{ mm}$



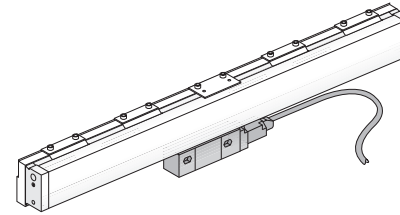
 °C (°F)	 0 ... 50 °C (32 ... 122 °F)
	 -20 ... 70 °C (-4 ... 158 °F)



Vibration/Schock · *Vibration/Shock* · Vibrations/Chocs · *Vibrazioni/Shock* · Vibración/Choque

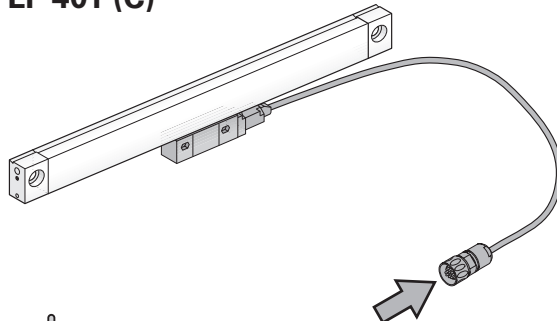


EN 60 068-2-6 (55 ... 2000 Hz): max. 80 m/s²
EN 60 068-2-27 (11 ms): max. 100 m/s²



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

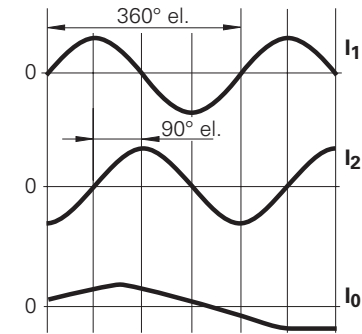
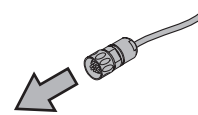
LF 401 (C)



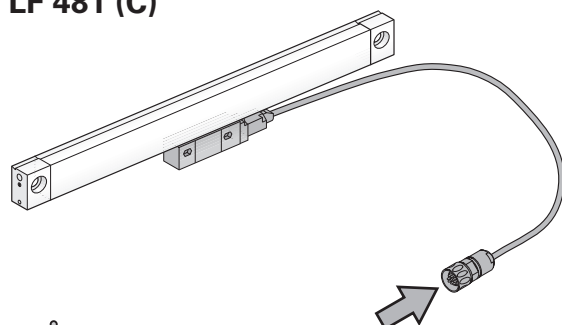
EN 50 178

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

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



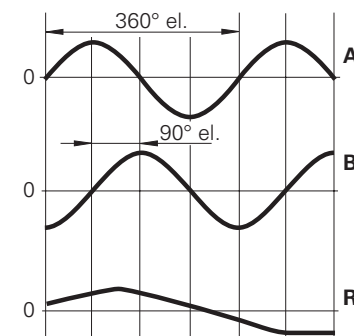
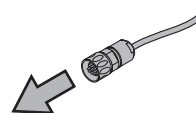
LF 481 (C)



EN 50 178

$U_P = 5\text{ V} \pm 5\%$
(max. 150 mA)

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



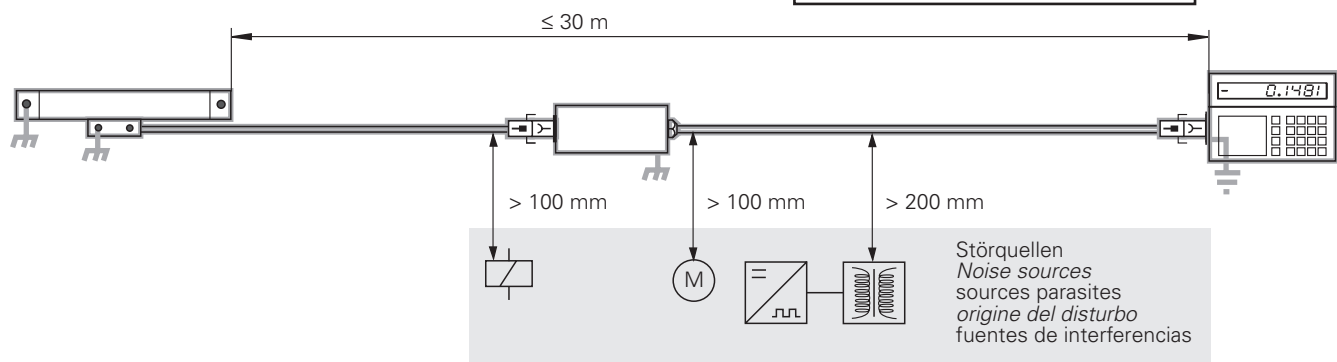
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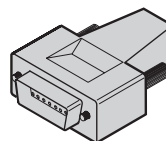
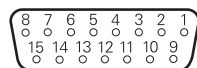
1) Außenschirm auf Gehäuse
External shield on housing
 blindage externe sur boîtier
 schermo esterno sulla carcassa
 blindaje externo a carcasa

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

EN 50 178





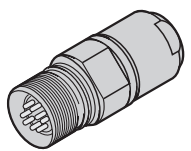
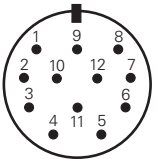
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 blindaje interno pin 9

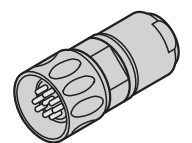
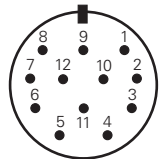
3	4	6	7	10	12	1	2	1)	13
I ₁		I ₂		I ₀		5V U _P	0V U _N		2)
+	-	+	-	+	-				
grün <i>green</i> vert <i>verde</i> verde	gelb <i>yellow</i> jaune <i>giallo</i> amarillo	blau <i>blue</i> bleu <i>azzurro</i> azul	rot <i>red</i> rouge <i>rosso</i> rojo	grau <i>gray</i> gris <i>grigio</i> gris	rosa <i>pink</i> 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
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Elektrischer Anschluss · *Electrical Connection* · Raccordement électrique · *Collegamento elettrico* · Conexión eléctrica

LF 481 (C)



Id.-Nr. 291 698-03



Id.-Nr. 291 697-07

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

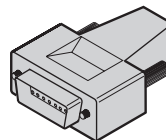
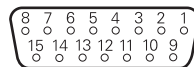
5	6	8	1	3	4	12	10	2	11	7	/
A		B		R		5 V U _P	0 V U _N	5 V sensor	0 V sensor	/	/
+	-	+	-	+	-						
braun <i>brown</i> brun <i>marrone</i> marrón	grün <i>green</i> vert <i>verde</i>	grau <i>gray</i> gris <i>grigio</i> gris	rosa <i>pink</i> rose <i>rosa</i> rosa	rot <i>red</i> rouge <i>rosso</i> rojo	schwarz <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>violeta</i> violeta	gelb <i>yellow</i> jaune <i>giallo</i> amarillo

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≤ 150 m

> 100 mm > 100 mm > 200 mm

Störquellen
Noise sources
sources parasites
origine del disturbo
fuentes de interferencias



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		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> 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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