



HEIDENHAIN



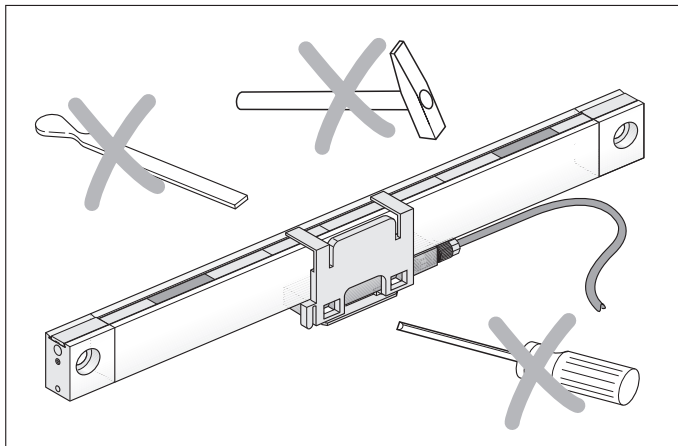
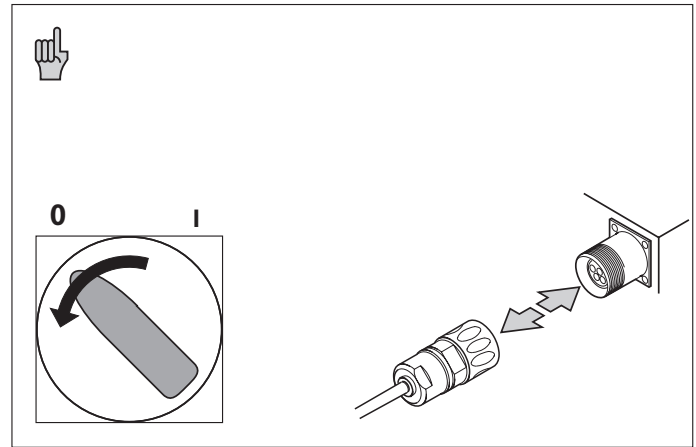
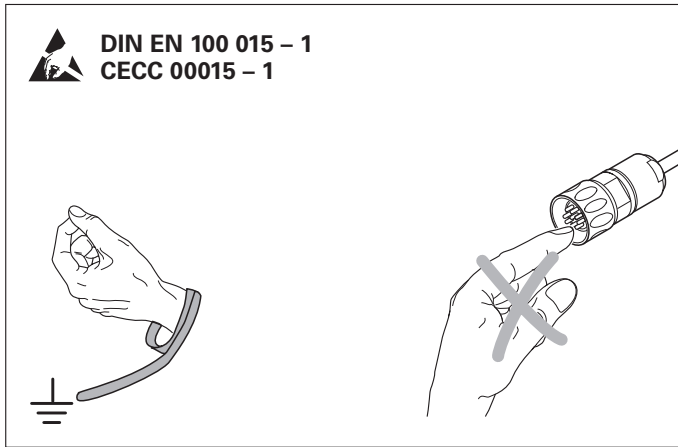
Montageanleitung
Mounting Instructions
Instructions de montage
Istruzioni di montaggio
Instrucciones de montaje

LS 477

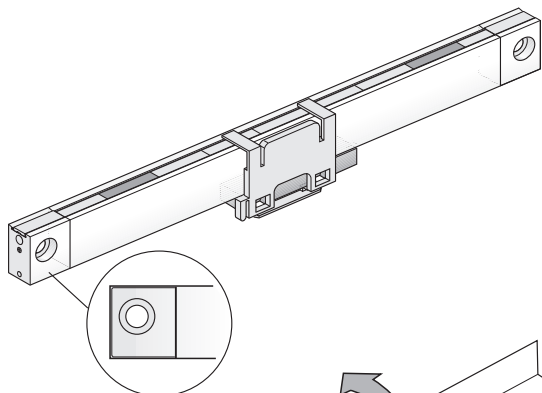
LS 487

7/2004

Warnhinweise · Warnings · Recommendations · Avvertenze · Advertencias



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

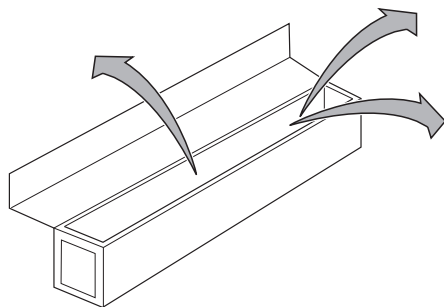


2x
M8x25 DIN 6912

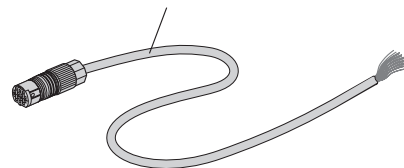
2x
M8x25 ISO 4762

2x
D13.0/8.4

3x
D7.0/4.3



Separat bestellen
Order separately
A commander séparément
Ordinare a parte
Para pedir por separado



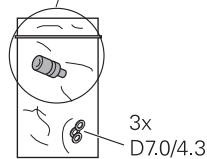
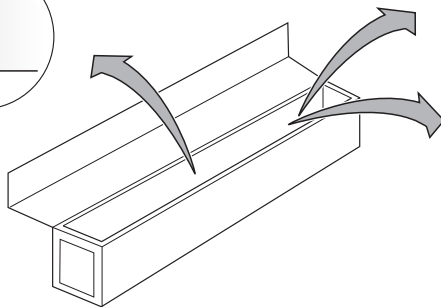
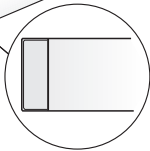
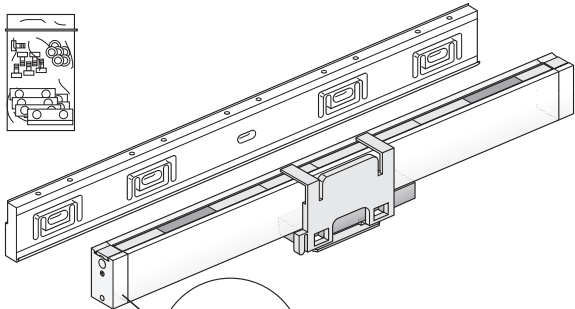
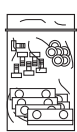
Bei Montage bitte Geräteschild-Aufkleber anbringen (Schaltschrank, Maschinen-Handbuch usw.)

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

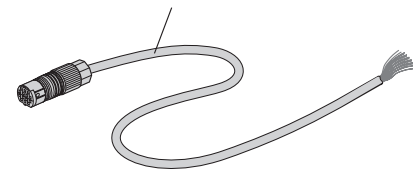
lors du montage, accoler S.V.P. l'étiquette signalétique de l'appareil (armoire électrique, manuel de la machine, etc.)

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.)

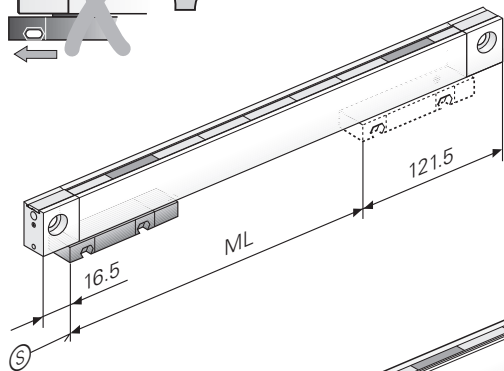
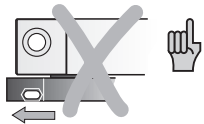


Separat bestellen
Order separately
A commander séparément
Ordinare a parte
Para pedir por separado

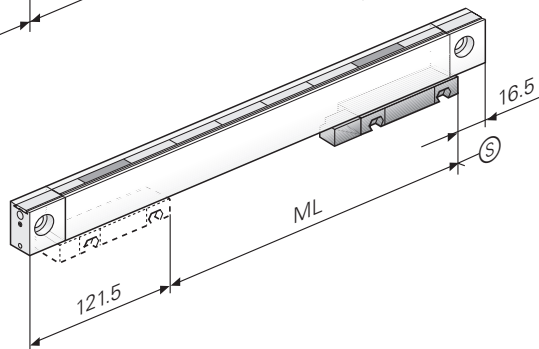


Bei Montage bitte Geräteschild-Aufkleber anbringen (Schaltschrank, Maschinen-Handbuch usw.)
Apply the encoder ID label to an appropriate surface, e.g. the electrical cabinet or machine manual
lors du montage, accoler S.V.P. l'étiquette signalétique de l'appareil (armoire électrique, manuel de la machine, 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.)

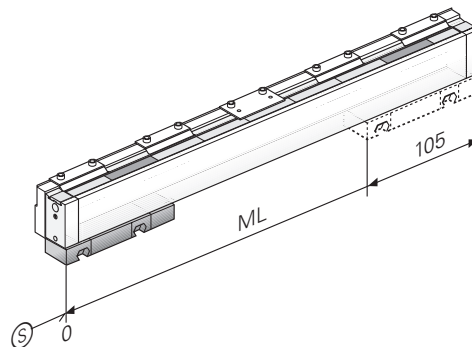
Hinweise zur Montage · *Mounting Procedure* · Procédures pour le montage



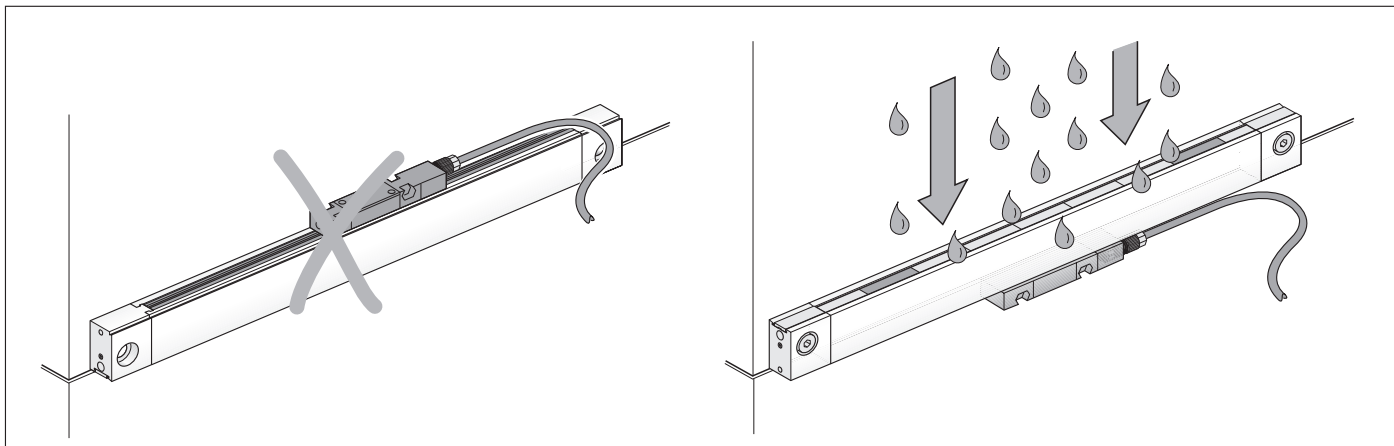
180° gedreht angebaut
Mounted rotated by 180°
Montage avec rotation de 180°
Montaggio ruotato di 180°
Montado girado 180°



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

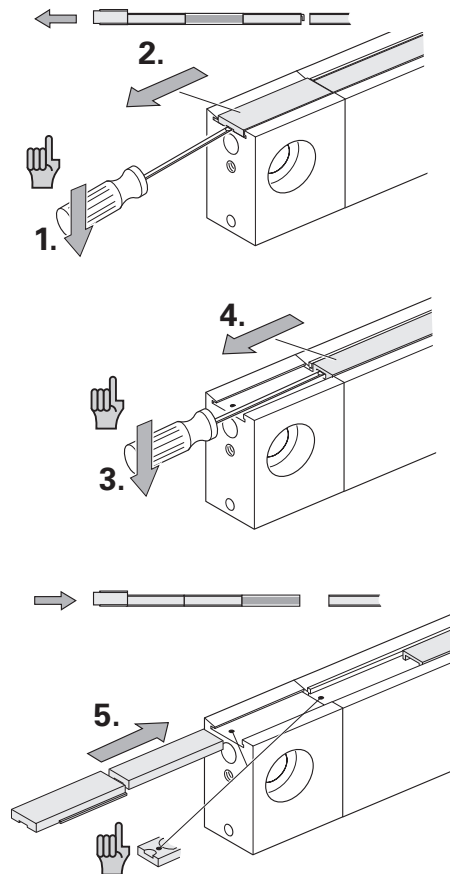
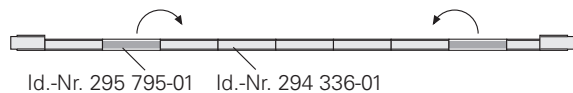
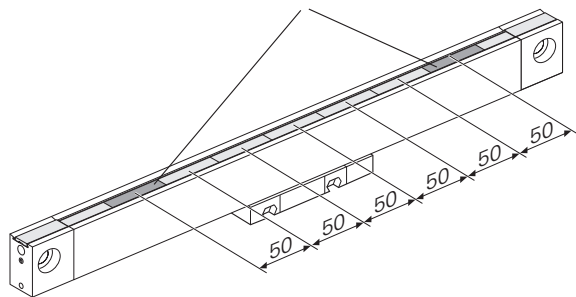


Avvertenze per il montaggio · Indicaciones para el montaje

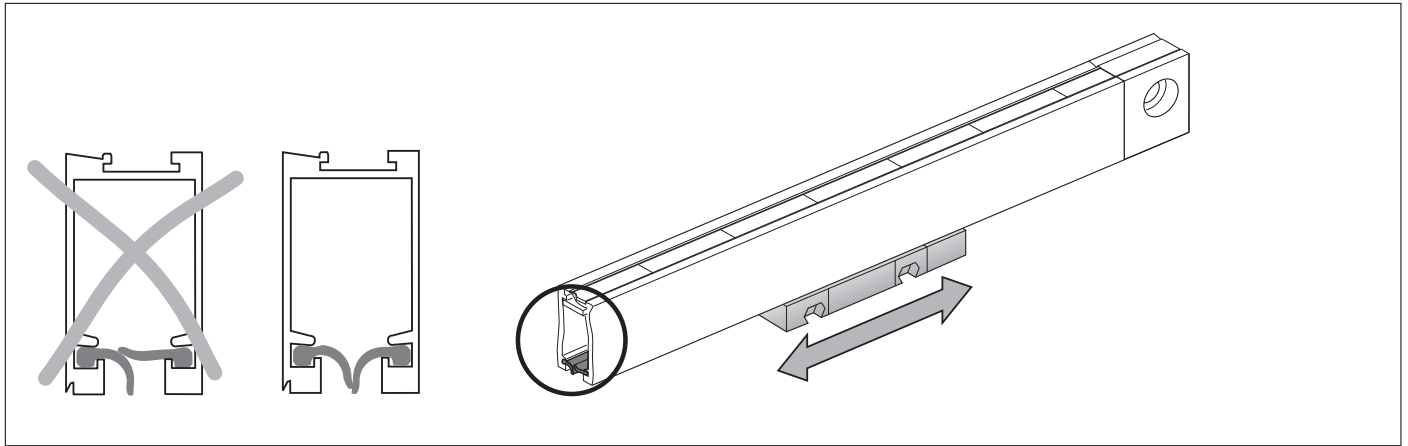


LS 4x7

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



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



Kabelanschluß · Cable Connection · Raccordement du cable · Cavo di colleganto · Conexión de cable

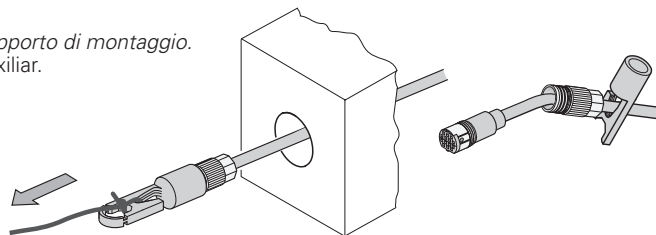
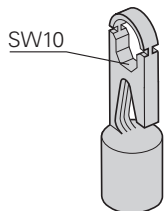
Die Schutzkappe kann als Werkzeug und Hilfsmittel verwendet werden.

The protective cap can be used as a mounting tool.

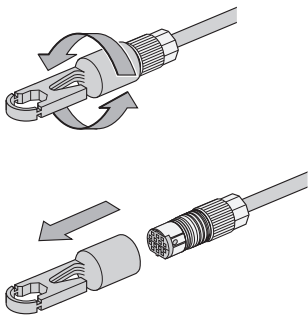
Le capot de protection peut être utilisé comme outil et accessoire.

Il coperchio di protezione può essere utilizzato come utensile e come supporto di montaggio.

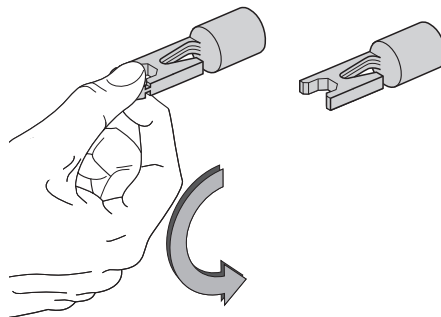
La tapa protectora se puede utilizar como herramienta y como medio auxiliar.



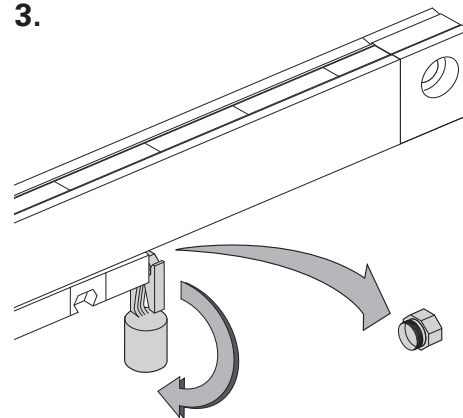
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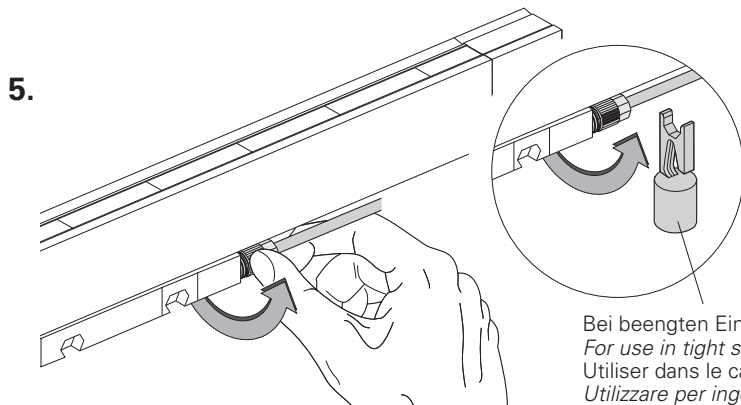
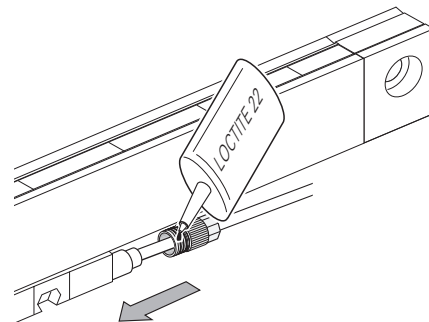
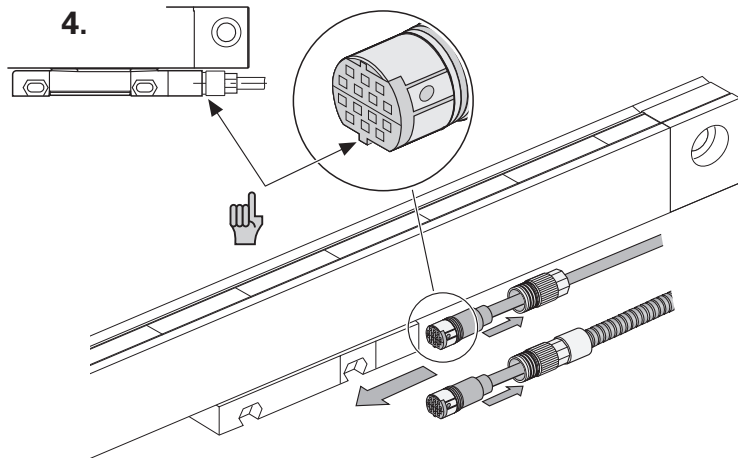


2.

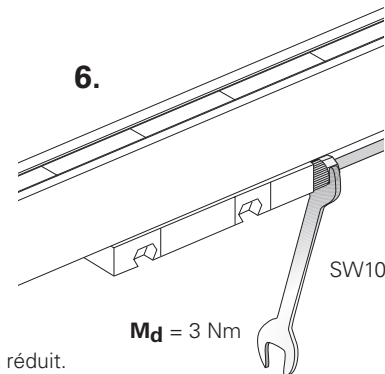


3.





Bei beengten Einbau verwenden.
 For use in tight spaces.
 Utiliser dans le cas d'un encombrement réduit.
 Utilizzare per ingombri limitati.
 Utilizar en espacios de montaje reducidos.



Abmessungen
ohne Montageschiene

· **Dimensions without**
Mounting Spar

· **Dimensions**
sans rail de guidage

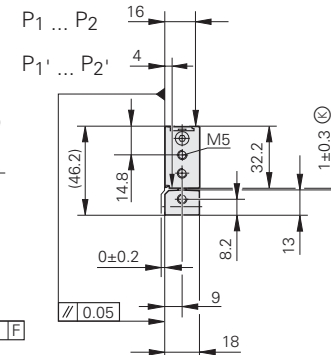
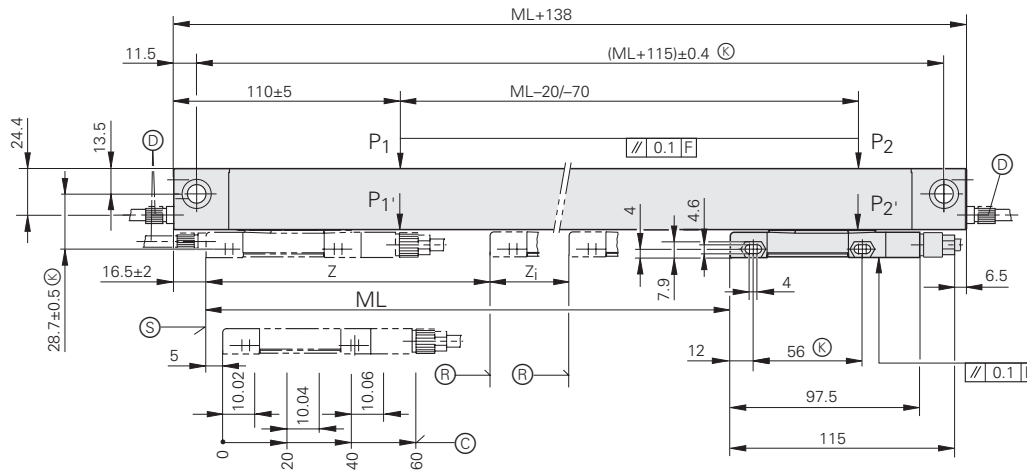
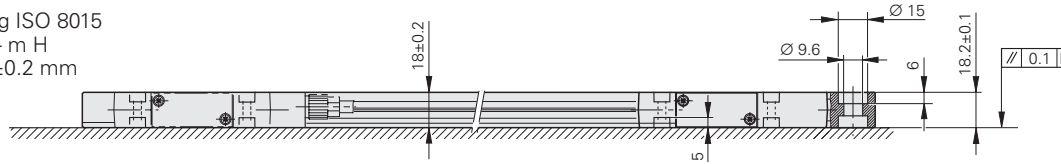
· **Dimensioni**
senza guida

· **Dimensiones**
sin guía de montaje

mm



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



ML 70 ... 1020	ML 1140 ... 1240
z = 35 mm	z = 45 mm
z _i = ML - 70 mm	z _i = ML - 90 mm

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

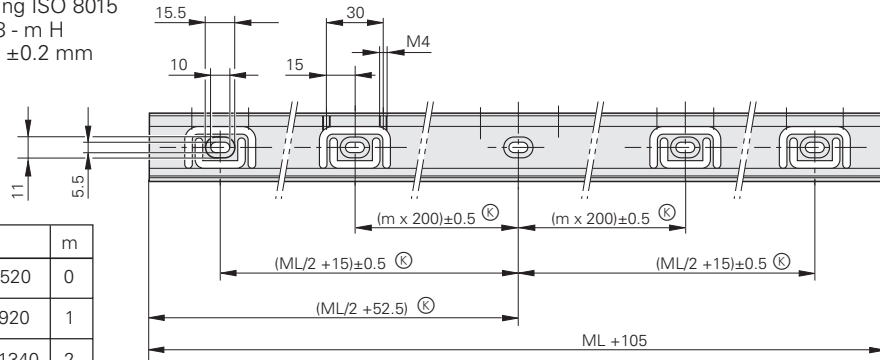
Ⓡ = Referenzmarken-Lage
Reference mark
marque de référence
indici di riferimento
marca de referencia

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

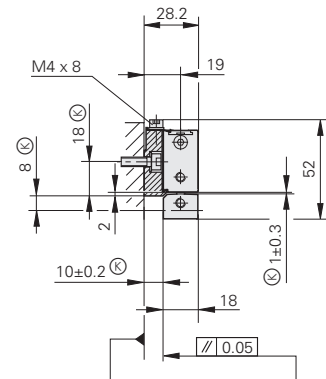
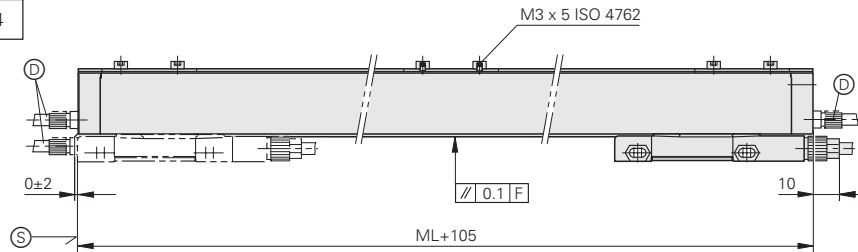
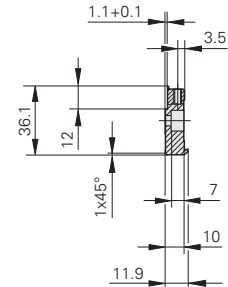
mm



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



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

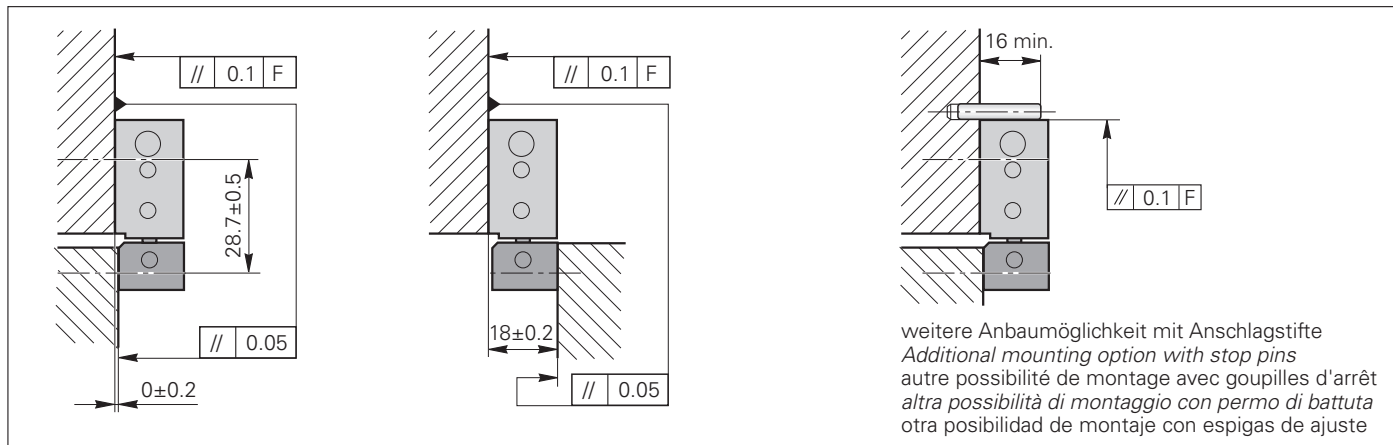
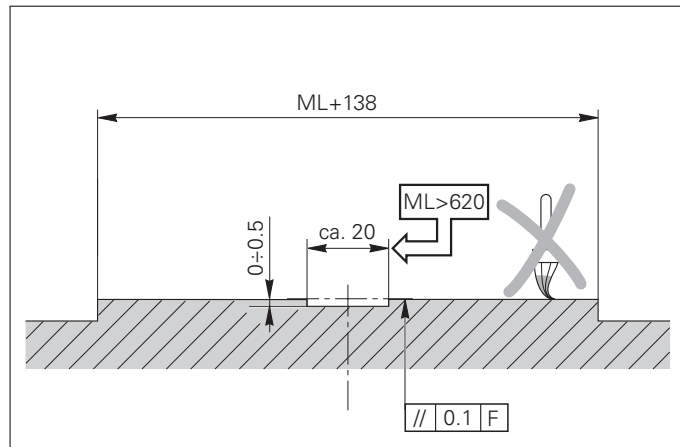
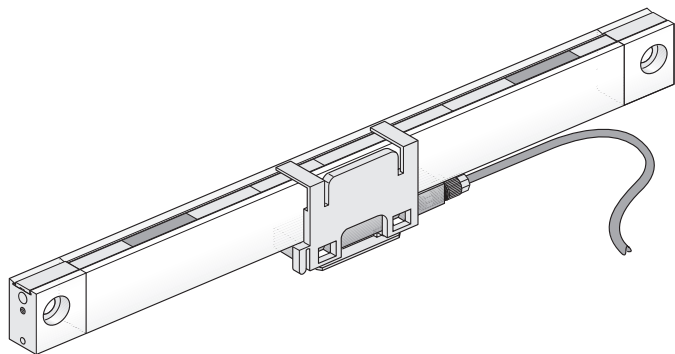


Ⓚ = Kundenseitige Anschlussmaße
 Required mating dimensions
 conditions requises pour le montage
 dimensioni di collegamento lato cliente
 cotas de montaje requeridas

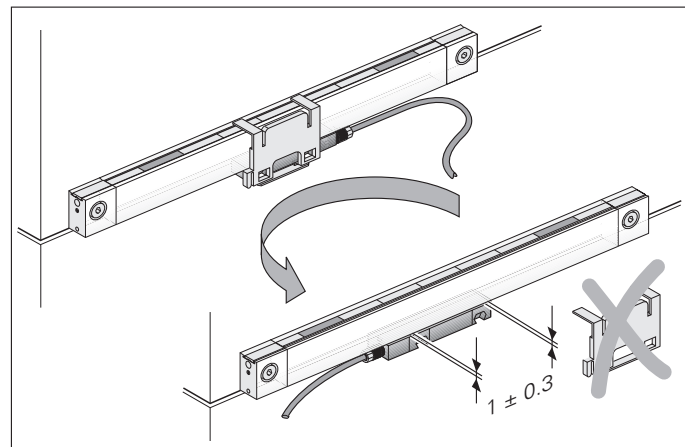
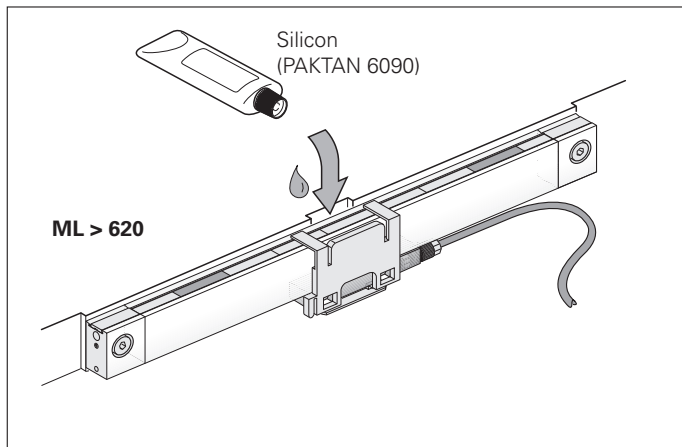
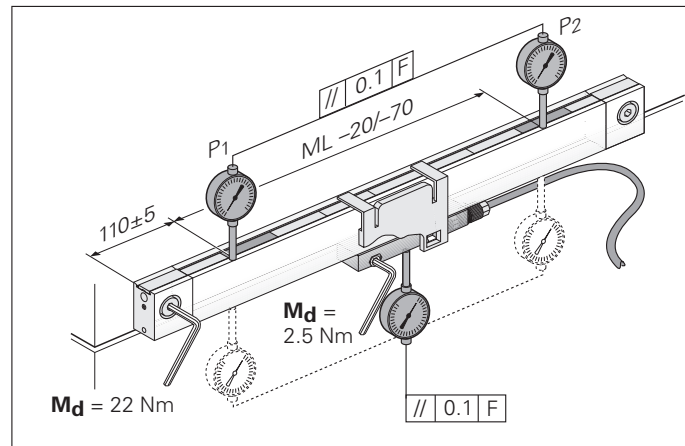
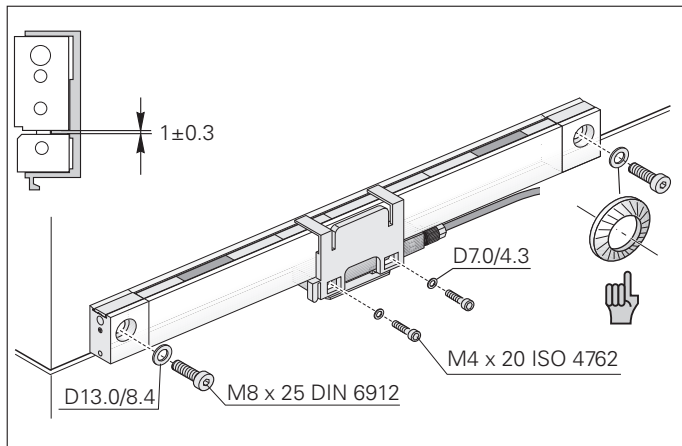
F = Maschinenführung
 Machine guideway
 guidage de la machine
 guida della macchina
 guía de la máquina

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

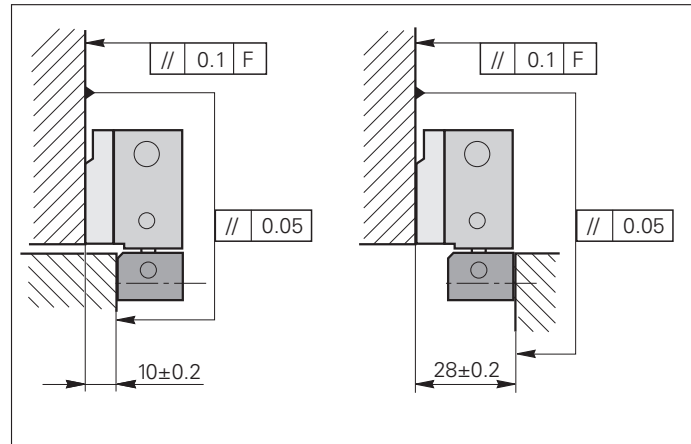
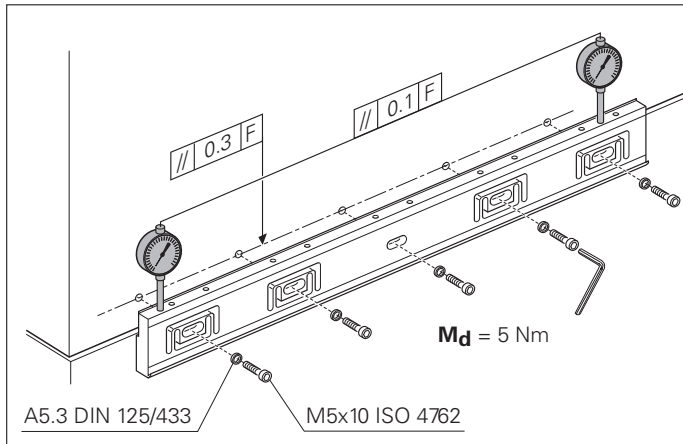
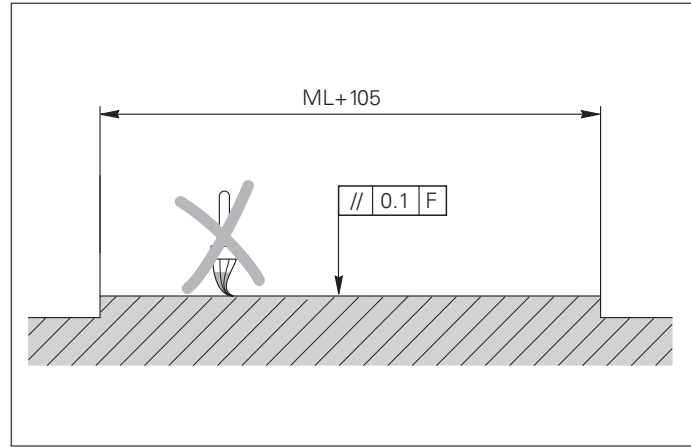
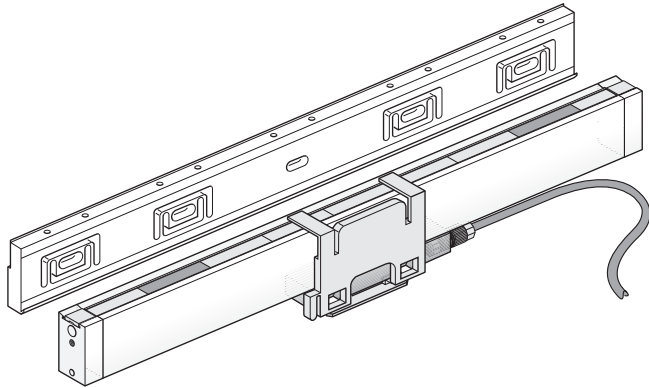
Anbau ohne Montageschiene · Mounting without Mounting Spar · Montage sans rail de guidage



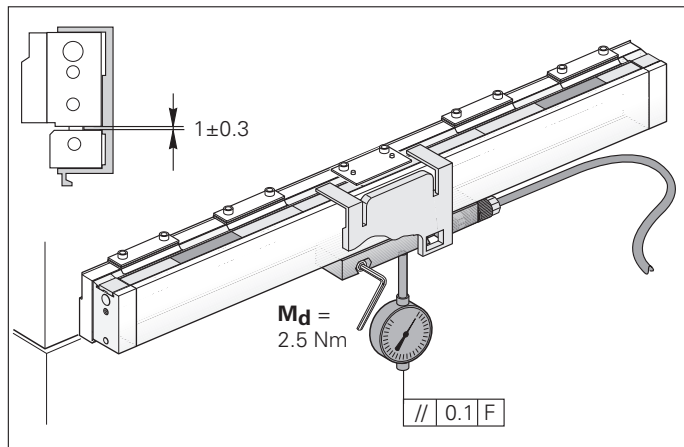
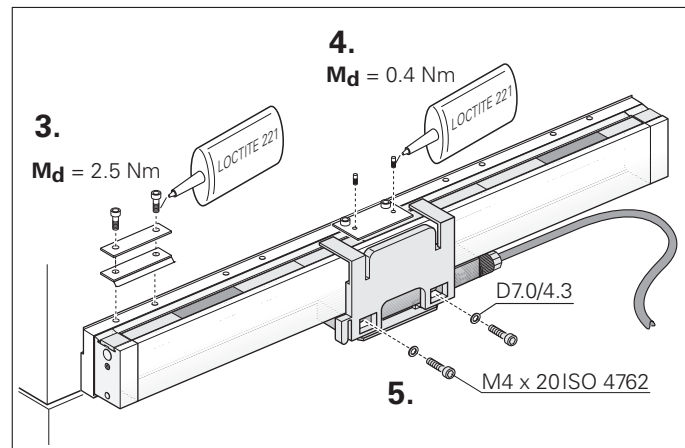
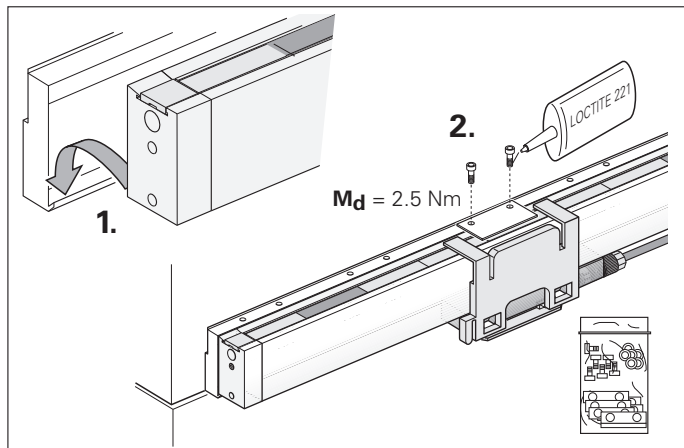
Montaggiosenza guida · Instalación sin guía de montaje



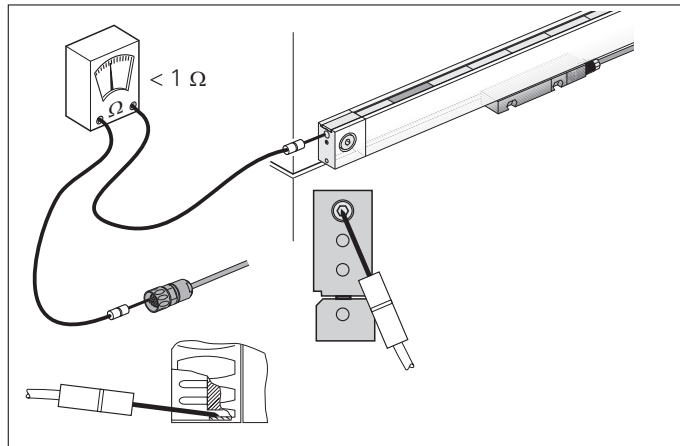
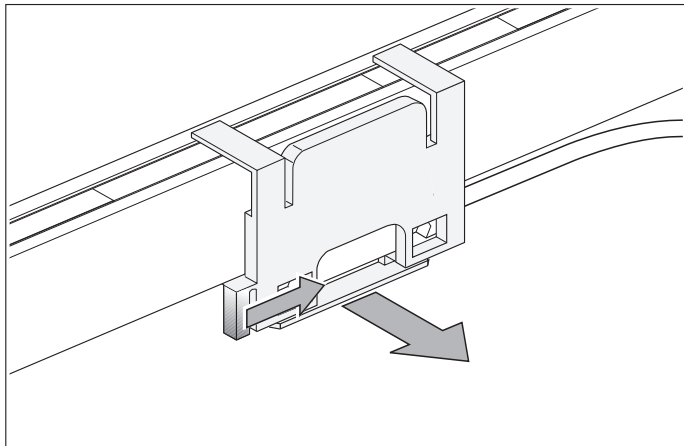
Anbau mit Montageschiene · *Mounting with Mounting Spar* · Montage avec rail de guidage



Montaggio con guida · Instalación con guía de montaje



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



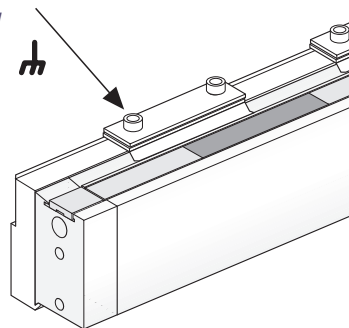
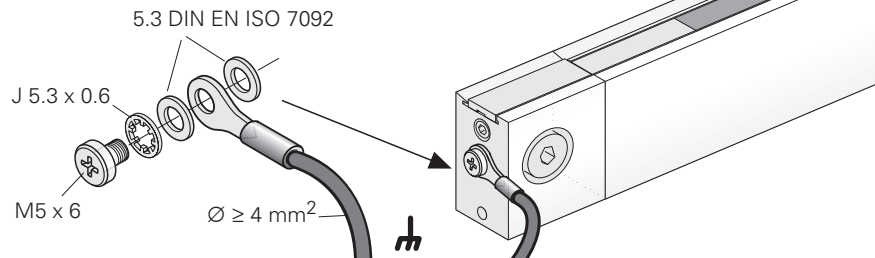
Bei Erdungsproblemen zusätzlich Endstück oder Montageschiene erden!

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

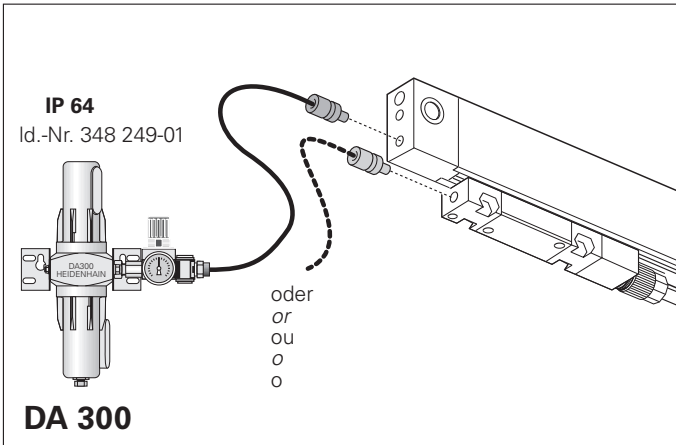
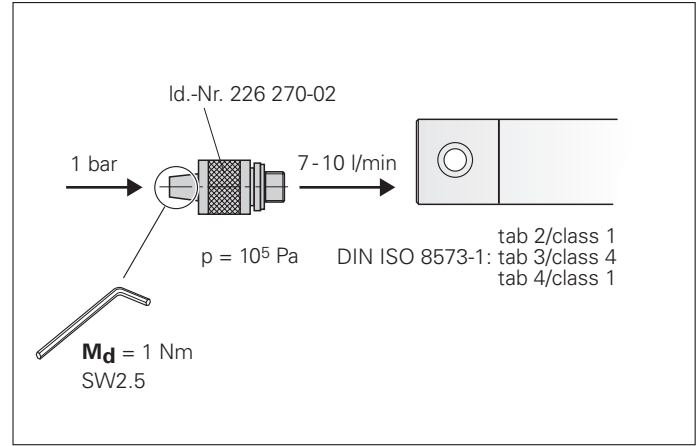
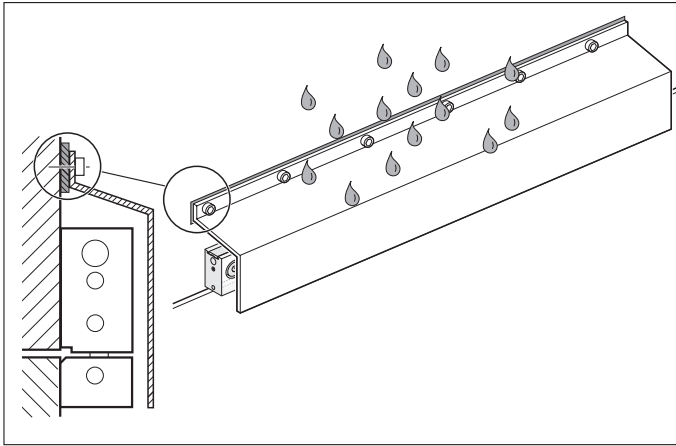
En cas de problèmes de mise à terre, mettre aussi l'embout ou le rail de montage à la terre!

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

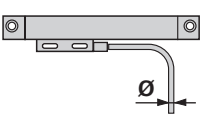

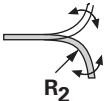

¡En caso de problemas de tierras, poner a tierra adicionalmente la pieza final o la guía de montaje!

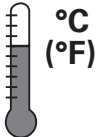
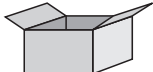


Schutzmaßnahmen · Protective Measures · Mesures préventives · Precauzioni · Medidas de protección

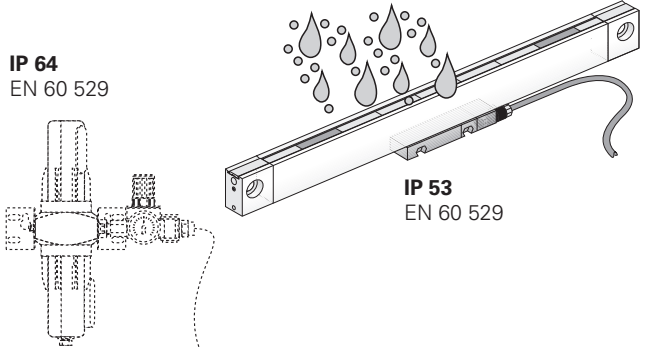


Technische Kennwerte · Specifications · Caractéristiques techniques · Dati tecnici · Datos técnicos

		
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	$R_1 \geq 40 \text{ mm}$	$R_2 \geq 100 \text{ mm}$

	
	-20 ... 70 °C (- 4 ... 158 °F)

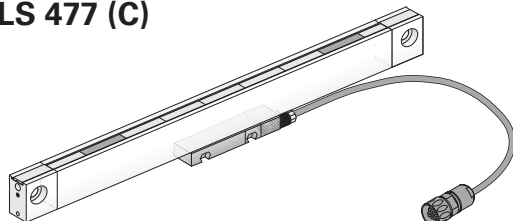
IP 64
EN 60 529



IP 53
EN 60 529

DA 300

LS 477 (C)

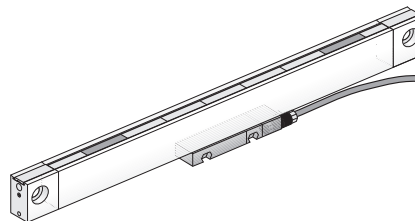


$$U_P = 5V \pm 5\% \\ (\text{max. } 140 \text{ mA})$$

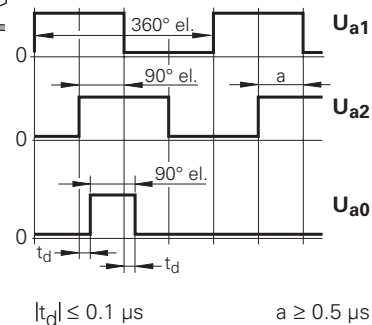


EN 50 178/4.98; 5.2.9.5
IEC 364-4-41: 1992; 411(PELV/SELV)

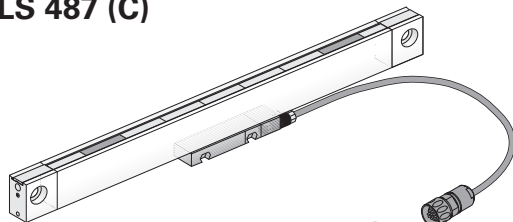
(siehe, see, voir, vedi, véase
HEIDENHAIN D 231 929)



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



LS 487 (C)

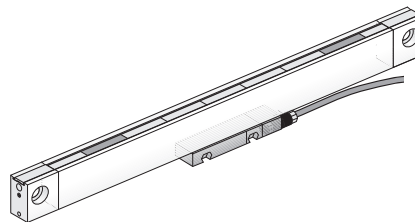


$$U_P = 5V \pm 5\% \\ (\text{max. } 150 \text{ mA})$$

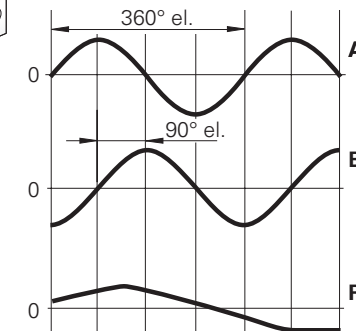


EN 50 178/4.98; 5.2.9.5
IEC 364-4-41: 1992; 411(PELV/SELV)

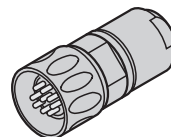
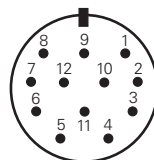
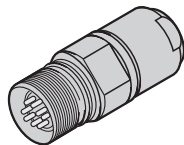
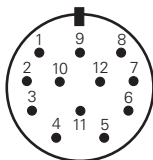
(siehe, see, voir, vedi, véase
HEIDENHAIN D 231 929)



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

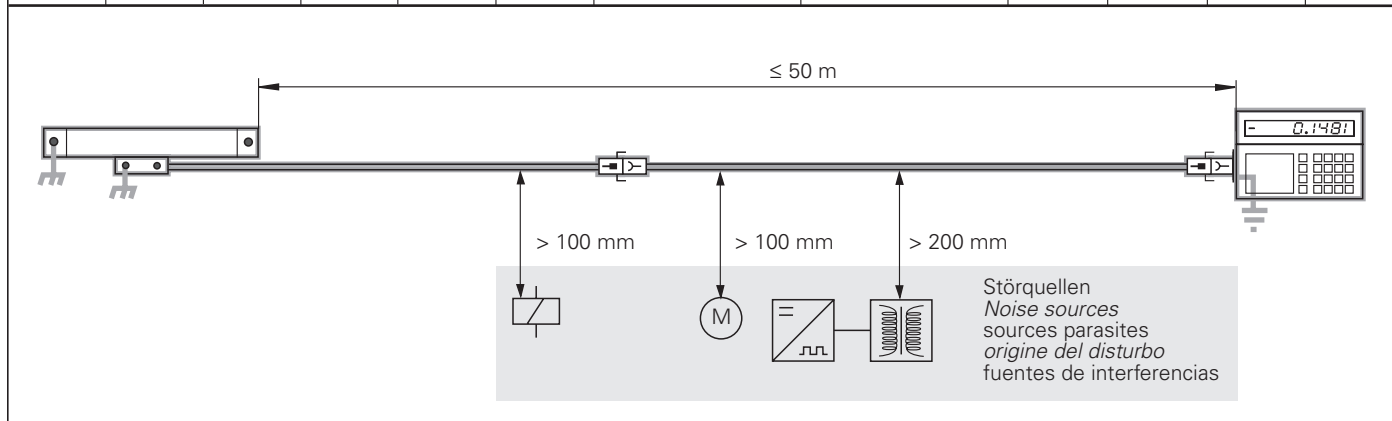


LS 477 (C)

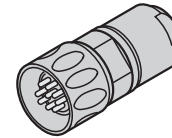
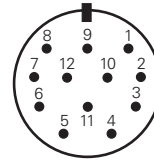
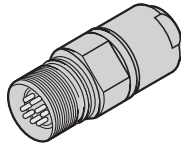
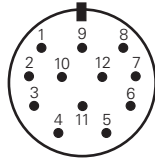


Shield on housing
 blindage sur boîtier
 schermo sulla carcassa
 blindaje a carcasa

5	6	8	1	3	4	12	10	2	11	7	/
U_{a1}	$\overline{U_{a1}}$	U_{a2}	$\overline{U_{a2}}$	U_{a0}	$\overline{U_{a0}}$	5V U_p	0V U_N	5V sensor	0V sensor	$\overline{U_{aS}}$	/
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

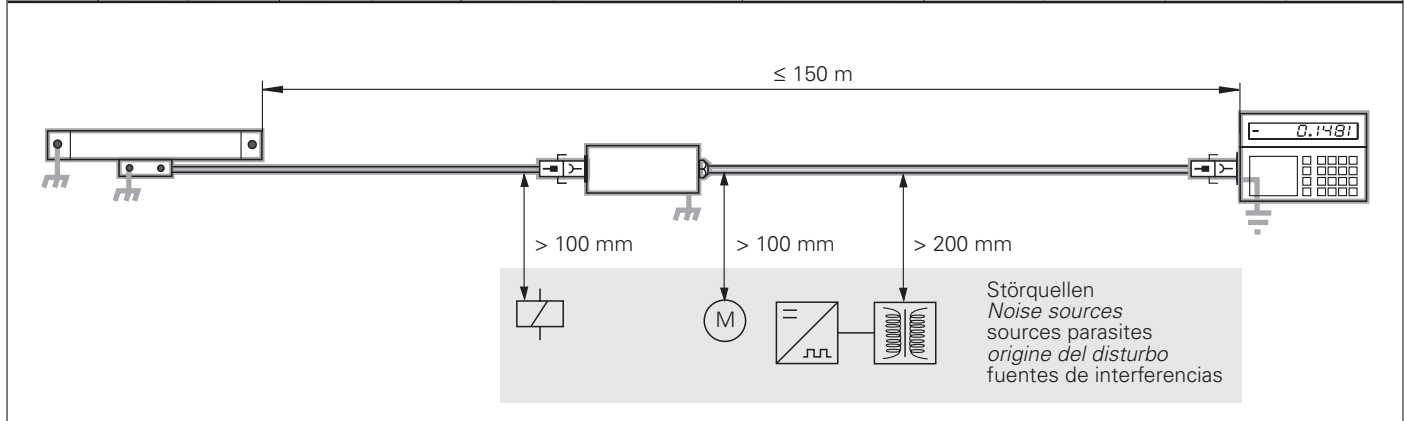


LS 487 (C)



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		5V U _P	0V U _N	5V sensor	0V sensor	/	/
+	-	+	-	+	-						
braun brown brun marrone marrón	grün green vert verde verde	grau gray gris grigio gris	rosa pink rose rosa rosa	rot red rouge rosso rojo	schwarz black noir nero negro	braun/grün brown/green brun/vert marrone/verde marron/verde	weiß/grün white/green blanc/vert bianco/verde blanco/verde	blau blue bleu azzurro azul	weiß white blanc bianco blanco	violett violet violet viola violeta	gelb yellow jaune giallo amarillo



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354 521-92 - 12 - 2/2006 - E - Printed in Germany

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