



HEIDENHAIN

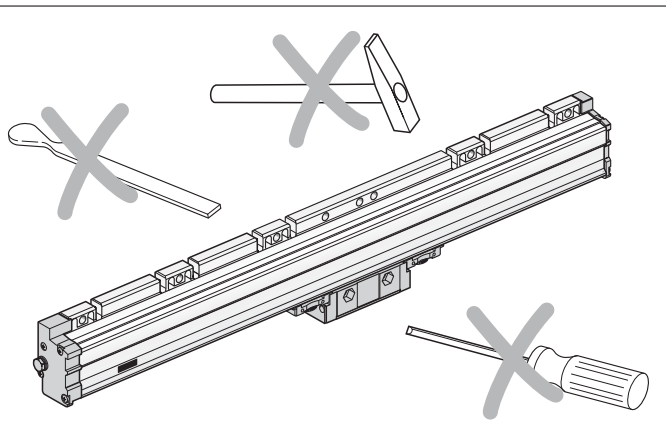
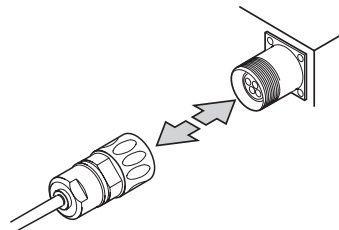
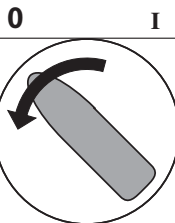
Montageanleitung
Mounting Instructions
Instructions de montage
Istruzioni di montaggio
Instrucciones de montaje

LC 182 

7/2004



DIN EN 100 015 – 1
CECC 00015 – 1



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



Die Inbetriebnahme des LC 182 erfordert eine richtige Parametrierung des Messgerätes (Gefahr von Sach- und Personenschäden). Zur richtigen Parametrierung nehmen Sie bitte Kontakt zum Hersteller der Maschine auf.

*The parameters of the LC 182 must be correctly configured for proper function.
Improper configuration may result in damage to the equipment or even personal injury.
Please contact the machine manufacture for the correct parameter configuration.*

La mise en route du LC 182 nécessite un paramétrage correct du système de mesure (risque matériels et corporels). Pour effectuer le paramétrage correctement, prenez S.V.P. contact avec le constructeur de la machine.

La messa in funzione della LC 182 richiede una corretta parametrizzazione del sistema di misura (rischio di danni alle cose e alle persone). Per una corretta parametrizzazione mettersi in contatto con il costruttore della macchina.

La puesta en marcha de la LC 182 requiere una parametrización correcta del sistema de medida (peligro de daños en cosas y personas). Para la parametrización correcta contacten con el constructor de la máquina.



LC 182 als Ersatzgerät für LC 181

LC 182 as replacement encoder for LC 181

LC 182 en remplacement du LC 181

LC 182 come apparecchio sostitutivo per la LC 181

LC 182 como aparato de repuesto para la LC 181

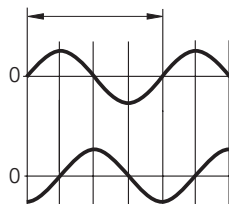
LC 181: Signalperiode 16 μm

Signal period 16 μm

Période de signal 16 μm

Periodo del segnale 16 μm

Periodo de señal 16 μm



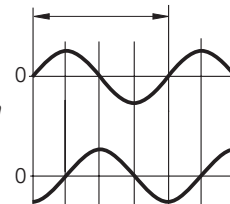
LC 182: Signalperiode 20 μm

Signal period 20 μm

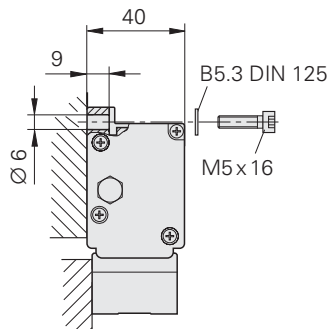
Période de signal 20 μm

Periodo del segnale 20 μm

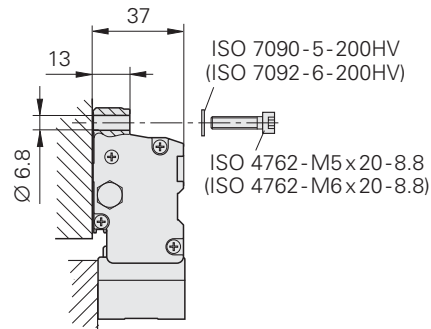
Periodo de señal 20 μm

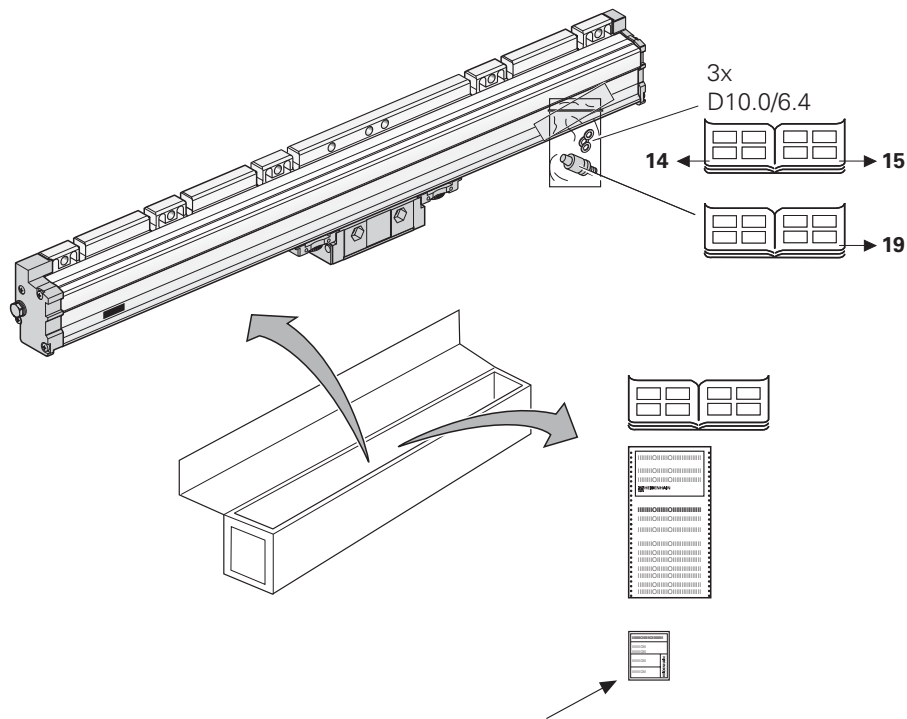


LC 181:



LC 182:





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

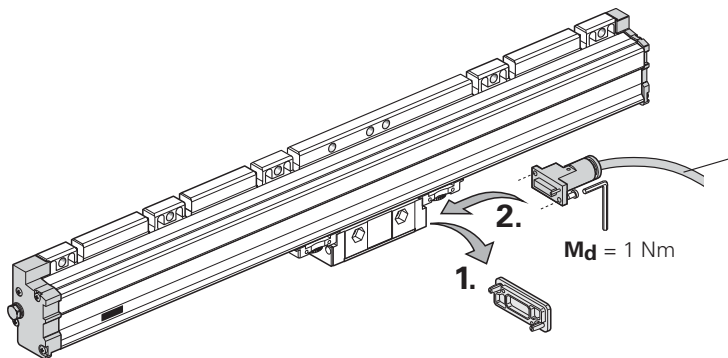
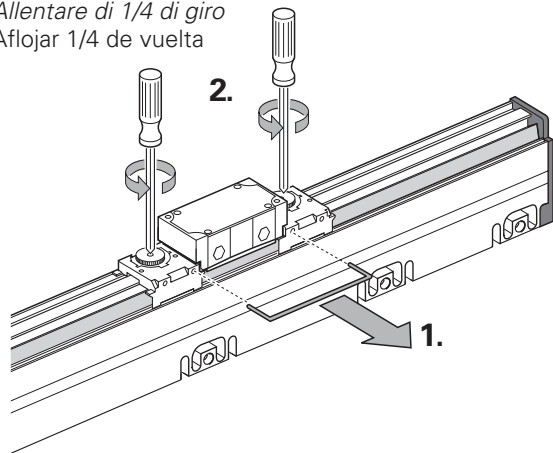
Apply the encoder ID label to an appropriate surface, e.g. the electrical cabinet or machine manual

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

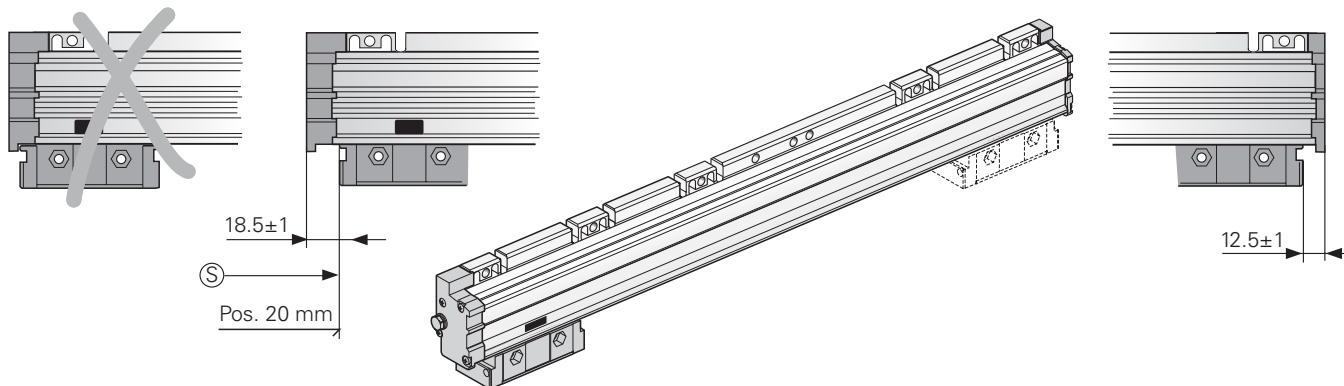
Completato il montaggio, ricordarsi di applicare l'etichetta (manuale della macchina, quadro elettrico)

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

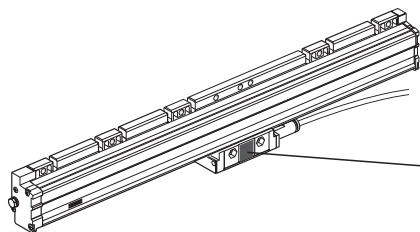
1/4 Umdrehung lösen
 Loosen by 1/4 revolution
 Dévisser de 1/4 de tour
 Allentare di 1/4 di giro
 Aflojar 1/4 de vuelta



Separat bestellen
 Order Separately
 Commander séparément
 Ordinare separatamente
 Pedir por separado

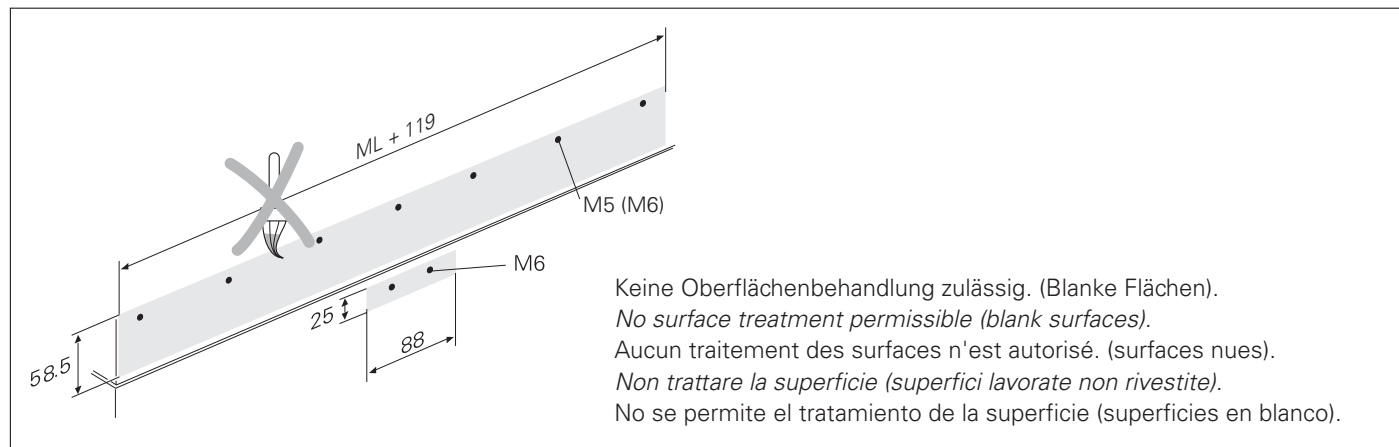
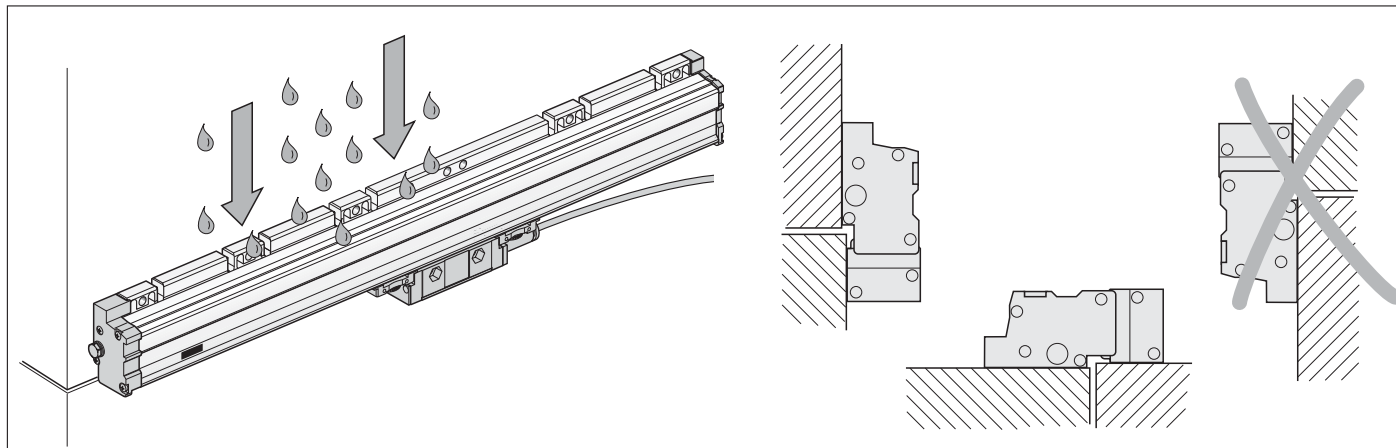


- Ⓢ = Der Absolutwert beim Beginn der Messlängen beträgt 20 mm. Je nach Auflösung errechnet sich der Positionswert.
 At the beginning of the measuring lengths, the absolute value is 20 mm. The calculated position value depends on the resolution.
 La valeur absolue au début des longueurs de mesure est de 20 mm. La valeur de position est calculée en fonction de la résolution.
 All'inizio della corsa utile, il valore assoluto della posizione è di 20 mm. Il calcolo del valore di posizione dipende dalla risoluzione.
 Al comienzo del curso útil, el valor absoluto es de 20 mm de los extremos. El valor de posición se calcula en función de la resolución.

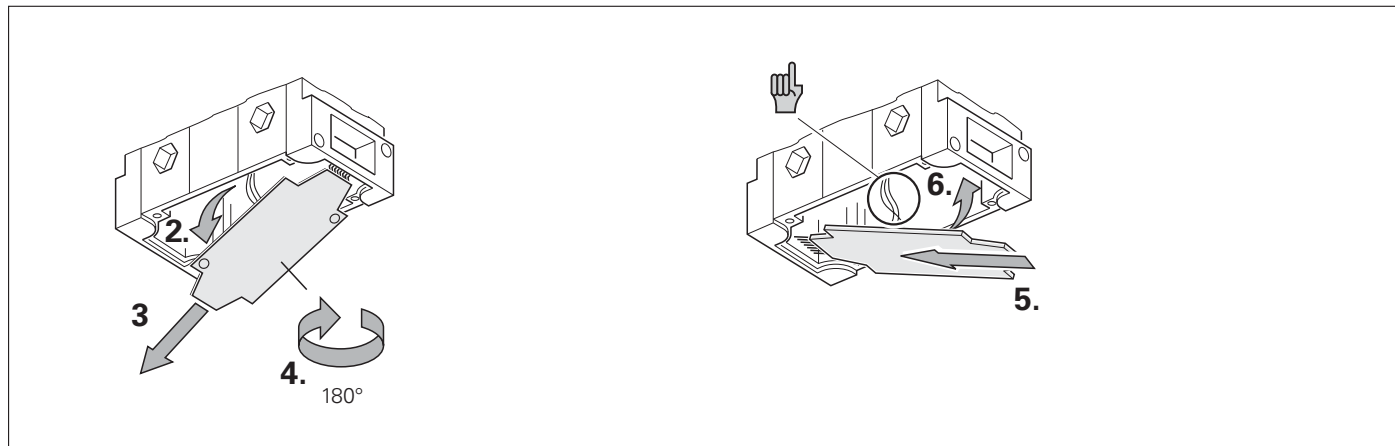
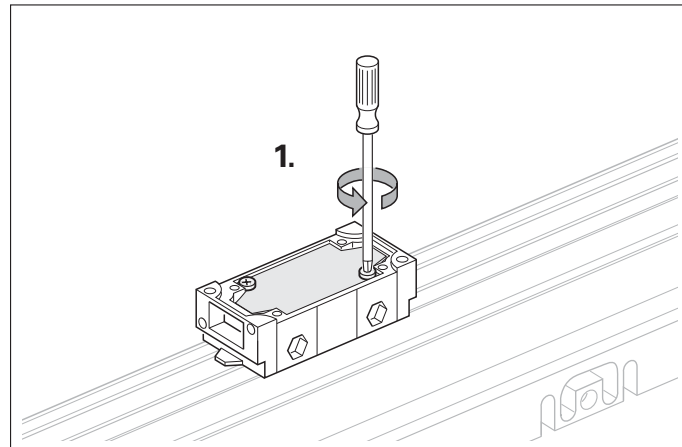
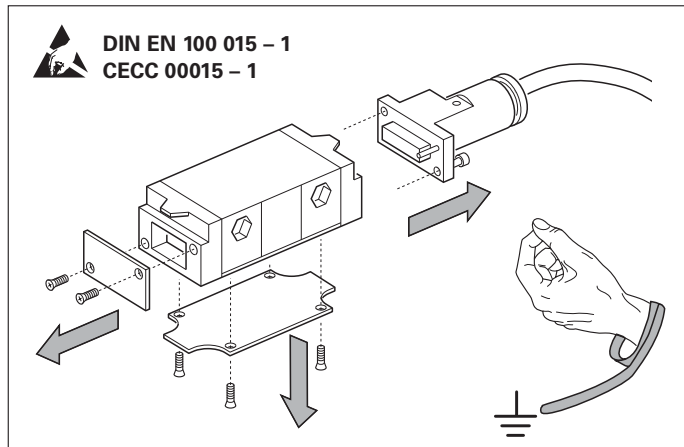


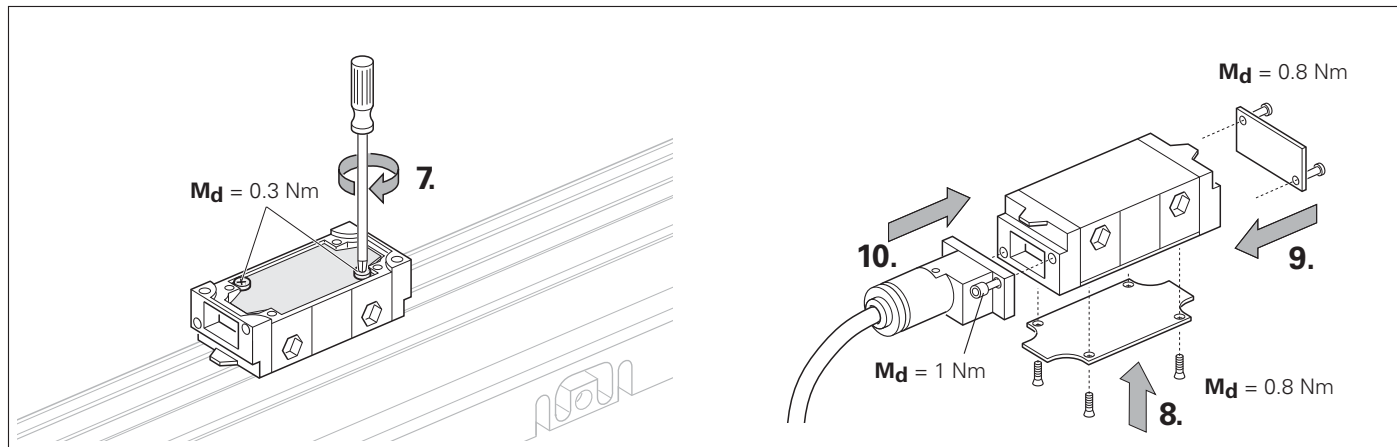
Signalperiode z.B. 20 µm
 Signal period e.g. 20 µm
 Période de signal ex. 20 µm
 Periodo del segnale ad. es. 20 µm
 Periodo de señal p.ej. 20 µm

Avvertenze per il montaggio · Indicaciones para el montaje



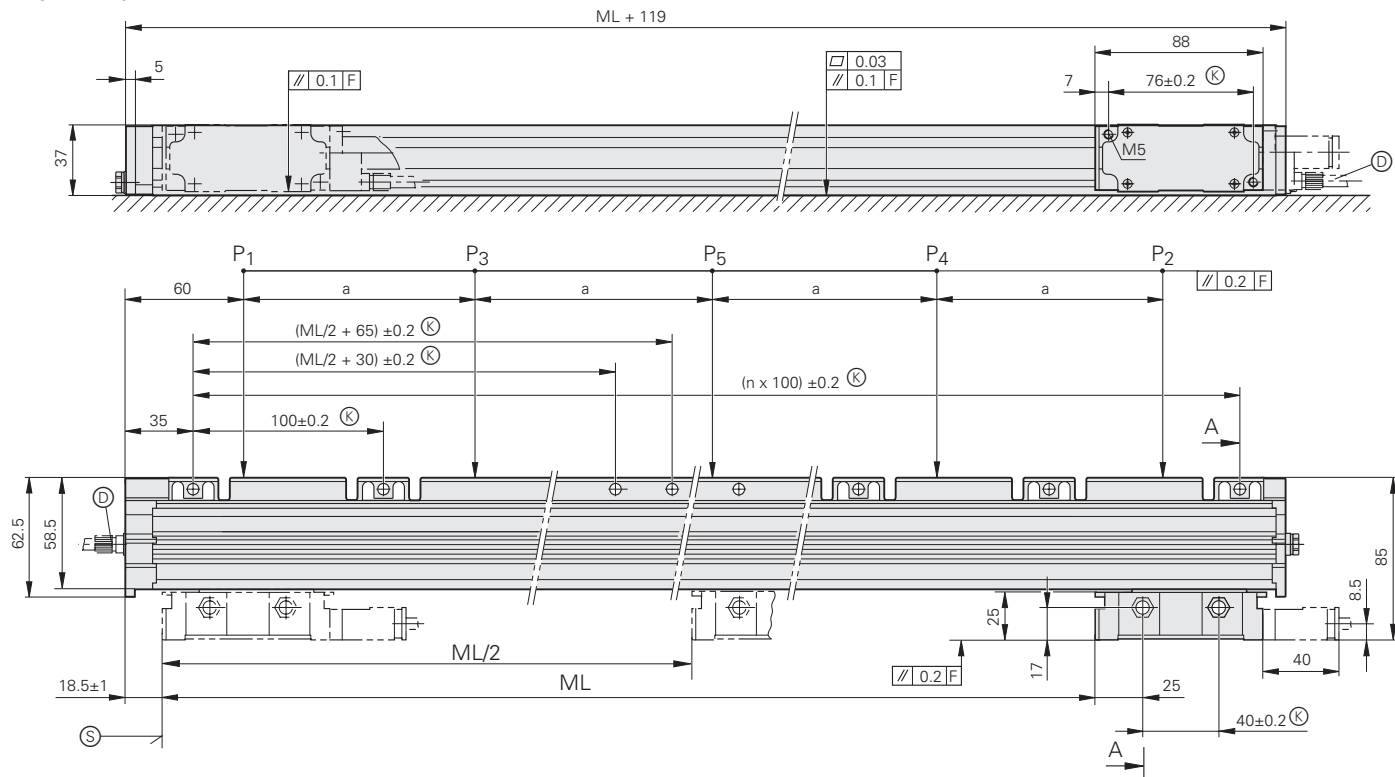
Kabelausgang verlegen · *Changing the Cable Outlet* · Poser la sortie du câble





ISO 2768 - m H

< 6 mm: ± 0.2 mm



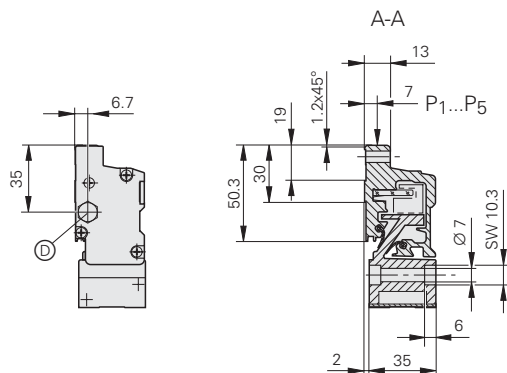
F = Maschinenführung
Machine guideway
guidage de la machine
guida della macchina
guía de la máquina

① = Druckluftanschluss
Compressed air inlet
raccordement d'air comprimé
ingresso per pressurizzazione
conexión de aire comprimido

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

P = Messpunkte zum Ausrichten
Gauging points for alignment
points de mesure pour dé gauchissage
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



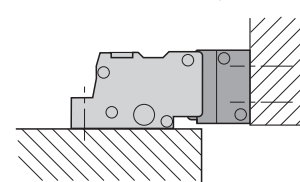
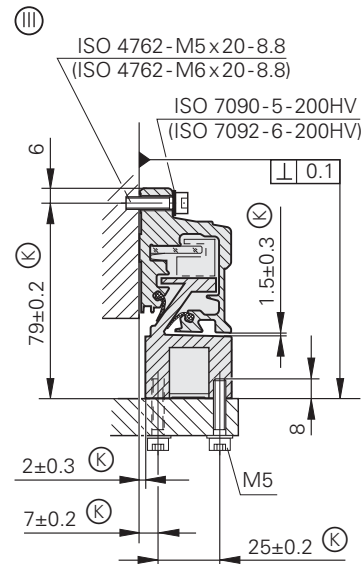
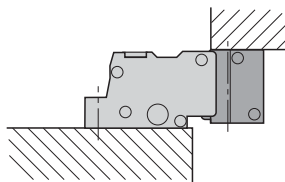
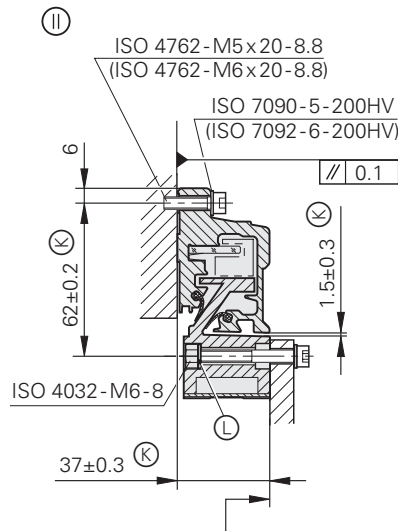
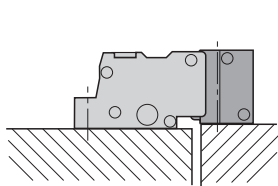
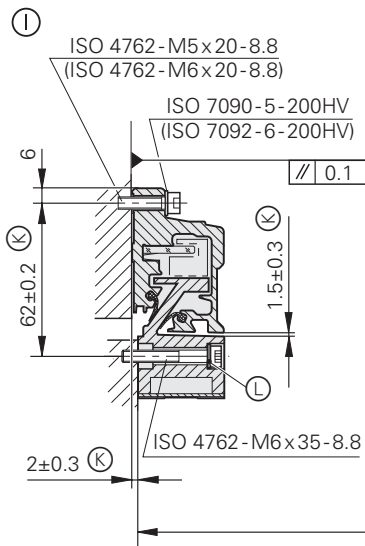
ML	P _n
≤ 840 mm	P ₁ ...P ₂
≤ 1740 mm	P ₁ ...P ₃
≤ 3040 mm	P ₁ ...P ₄
≤ 4240 mm	P ₁ ...P ₅

Anbaumaße · Mounting Dimensions · Cote d'encombrement · Dimensioni di montaggio · Medidas para el montaje

①②③ = Montage-Möglichkeiten
Mounting possibilities
Options de montage
Possibilità di montaggio
Posibilidades de montaje

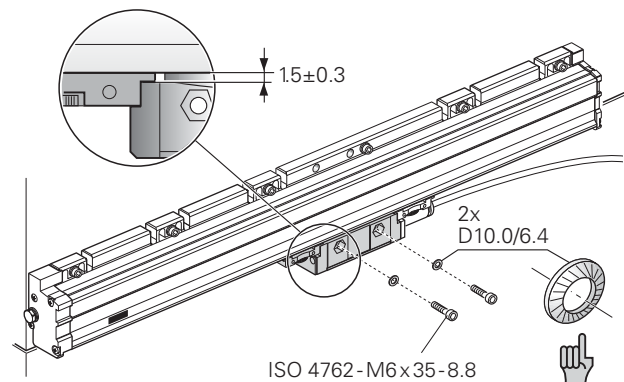
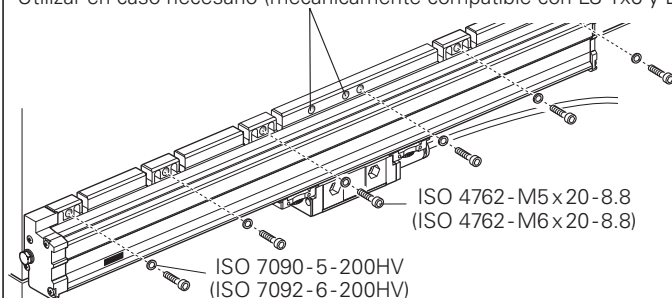
Ⓚ = Kundenseitige Anschlussmaße
Required mating dimensions
Conditions requises pour le montage
Dimensioni di collegamento lato cliente
Cotas de montaje requeridas

Ⓛ = Rippenscheibe D10.0/6.4 (Zubehör)
Ribbed look washer D10.0/6.4 (accessories)
Rondelle à nervures D10.0/6.4 (accessoires)
Rondella alettata D10.0/6.4 (Accessori)
Arandela nervada D10.0/6.4 (Accesorios)

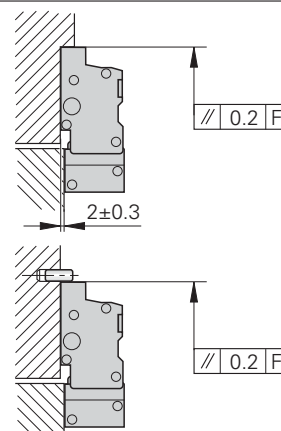
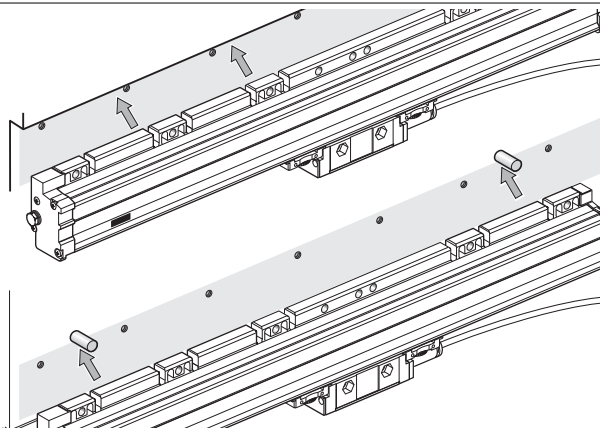


Anbau des Maßstabs · *Mounting the scale* · Montage de la règle de mesure · *Montaggio della riga* · Montaje de la regla

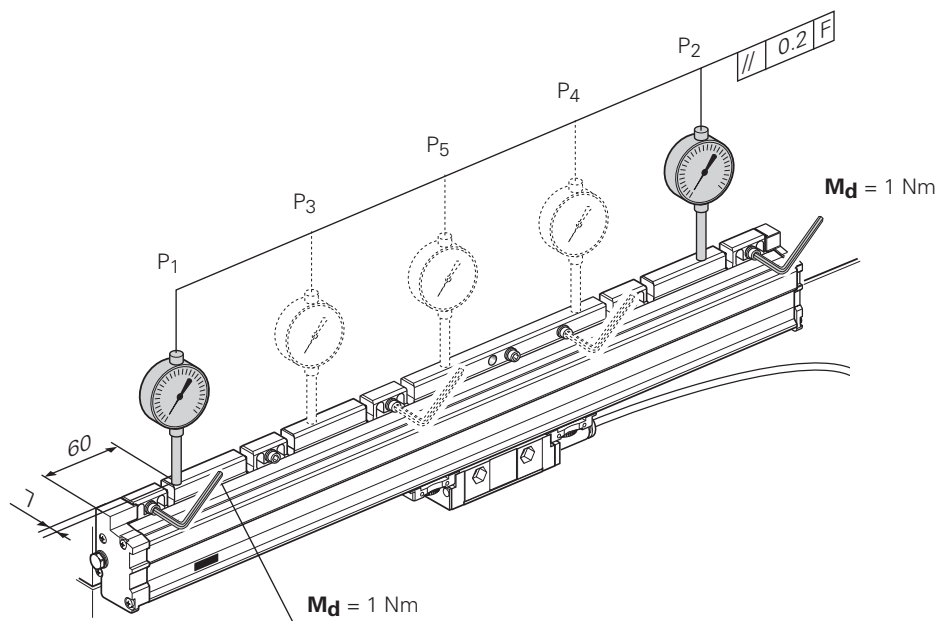
bei Bedarf verwenden (Anbaukompatibel zu LS 1x6 und LC 1x1).
Use if necessary (mechanically compatible to LS 1x6 and LC 1x1).
 Utiliser en cas de besoin (montage compatible LS 1x6 et LC 1x1).
Utilizzare secondo necessità (montaggio compatibile con LS 1x6 e LC 1x1).
 Utilizar en caso necesario (mecánicamente compatible con LS 1x6 y LC 1x1).



zusätzliche Anbaumöglichkeiten
Additional mounting options
 Possibilités de montage supplémentaires
Altre possibilità di montaggio
 Posibilidades de montaje adicionales



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



ML	
≤ 840 mm	2x
≤ 1740 mm	3x
≤ 3040 mm	4x
≤ 4240 mm	5x



Befestigungsreihenfolge beachten

Mittlere Befestigung zwingend notwendig („Thermischer Fixpunkt“)

Use the correct sequence when fastening

Mid-point must be fastened ("thermal fixpoint")

Respecter l'ordre chronologique de la fixation

Fixation centrale impérative („point fixe thermique“)

Attenzione alla sequenza per il fissaggio

Il punto di fissaggio centrale è obbligatorio („punto di fissaggio termico“)

Tener en cuenta la secuencia de sujeción

Sujeción central necesariamente obligatoria („Punto de fijación térmico“)

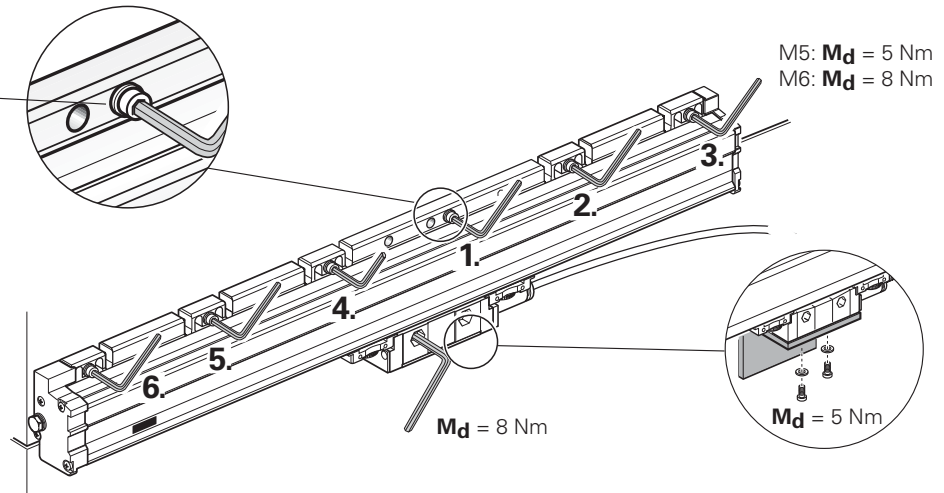
„Thermischer-Fixpunkt“

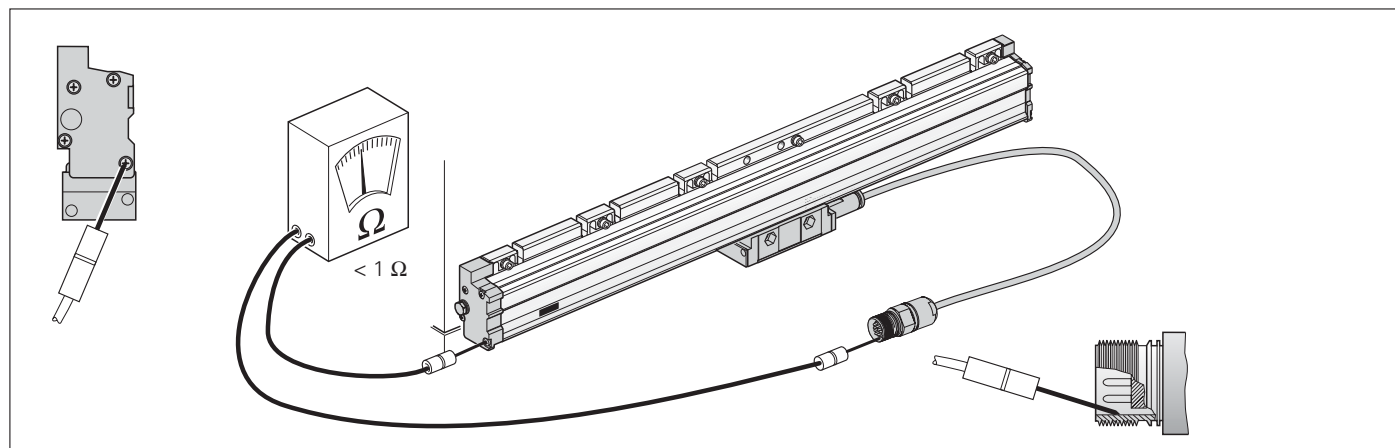
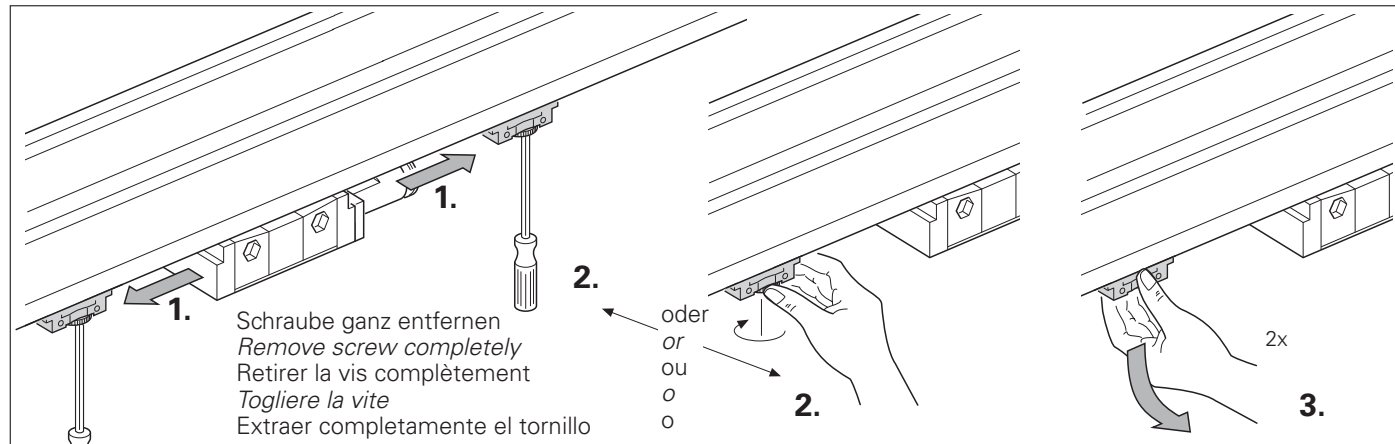
„Thermal fixpoint“

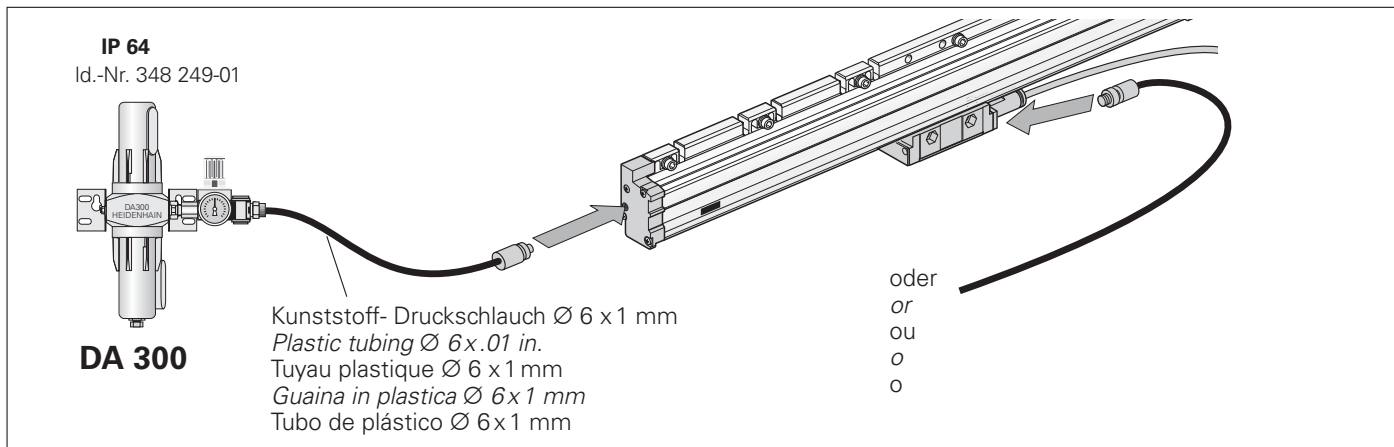
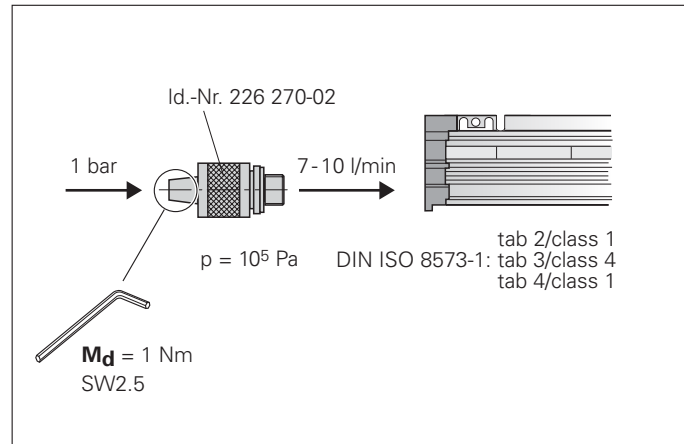
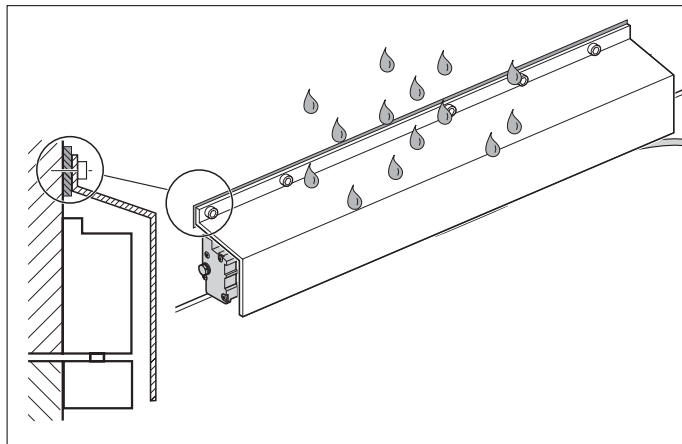
„Point fixe thermique“

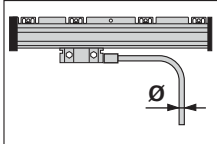
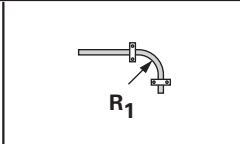
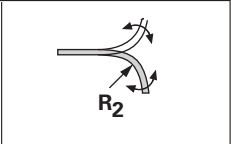
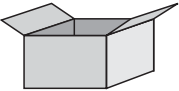
„Punto di fissaggio termico“

„Punto de fijación térmico“

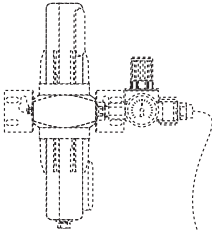




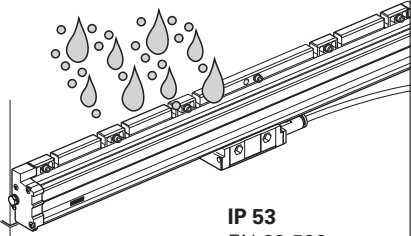


			 °C (°F)	
Ø 6 mm	$R_1 \geq 20 \text{ mm}$	$R_2 \geq 75 \text{ mm}$		
Ø 10 mm	$R_1 \geq 35 \text{ mm}$	$R_2 \geq 75 \text{ mm}$		
 Ø 8 mm	$R_1 \geq 40 \text{ mm}$	$R_2 \geq 100 \text{ mm}$		 -20 ... 70 °C (- 4 ... 158 °F) ML > 3040 mm: -10 ... 50 °C (- 14 ... 122 °F)

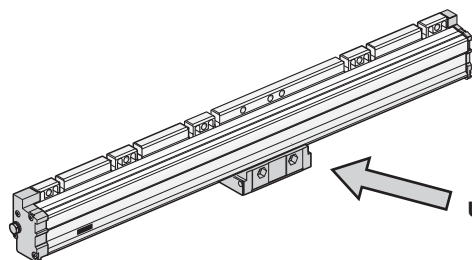
IP 64
EN 60 529



DA 300



IP 53
EN 60 529



RS-485



CLOCK

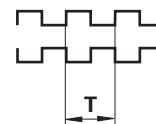
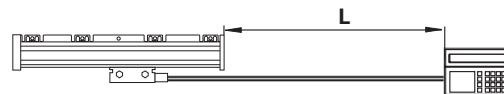


CLOCK

$U_P = 5V \pm 5\%$
(max. 300 mA)

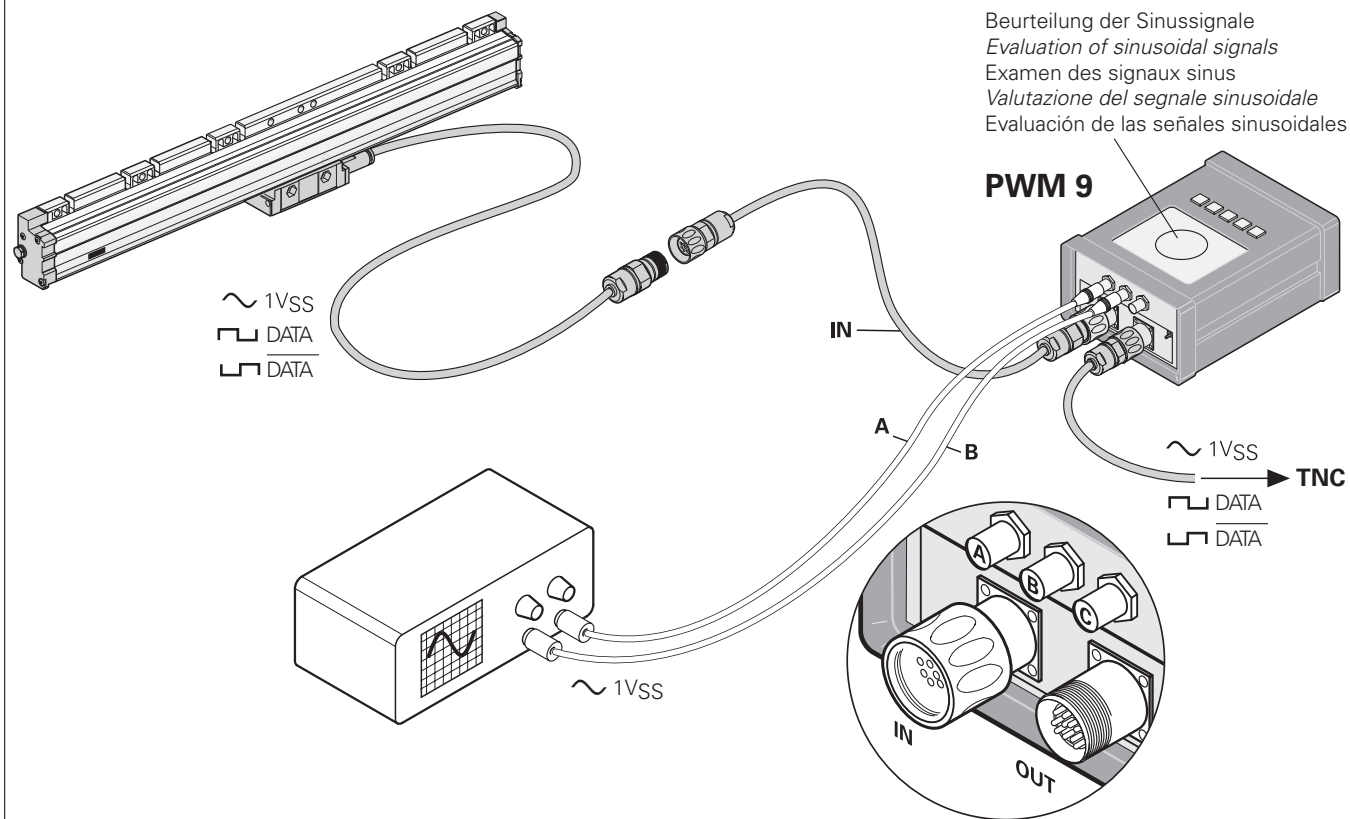


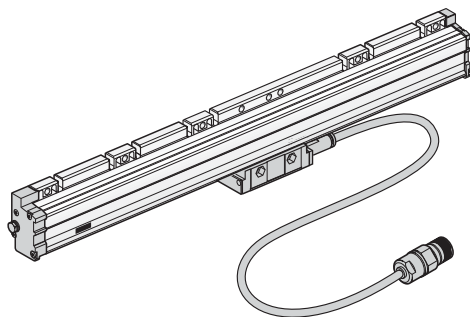
EN 50 178/4.98; 5.2.9.5
IEC 364-4-41: 1992; 411(PELV/SELV)
(siehe, see, voir, vedi, véase
HEIDENHAIN D 231 929)



CLOCK
CLOCK

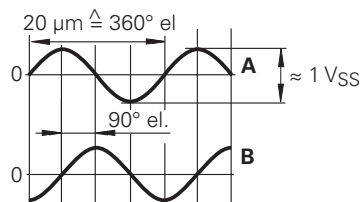
L	T		f
10 m	0.5...10µs	$\triangle$	2000...100 kHz
50 m	1 ...10µs	$\triangle$	1000...100 kHz
100 m	2.0...10µs	$\triangle$	500...100 kHz
150 m	3.3...10µs	$\triangle$	300...100 kHz





A ($20 \mu\text{m} \hat{=} 360^\circ \text{ el}$)

B ($20 \mu\text{m} \hat{=} 360^\circ \text{ el}$)

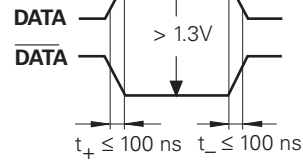


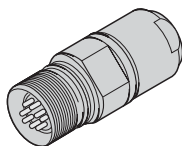
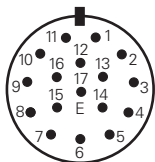
DATA
DATA



RS-485

RS-485

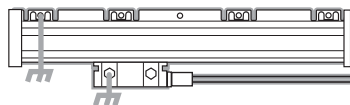




1) Außenschirm auf Gehäuse
External shield on housing
 Blindage externe sur boîtier
Schermo esterno sulla carcassa
 Blindaje externo a carcasa

2) Innenschirm
Internal shield
 Blindage interne
Schermo interno
 Blindaje interno

15	16	12	13	14	17	8	9	7	10	1)	1	4	11
A		B		DATA	DATA	CLOCK	CLOCK	5 V U _P	0 V U _N		5 V sensor	0 V sensor	2)
+	-	+	-										
grün/schwarz <i>green/black</i> vert/noir <i>verde/nero</i> verde/negro	gelb/schwarz <i>yellow/black</i> jaune/noir <i>giallo/nero</i> amarillo/negro	blau/schwarz <i>blue/black</i> bleu/noir <i>azzurro/nero</i> azul/negro	rot/schwarz <i>red/black</i> rouge/noir <i>rosso/nero</i> rojo/negro	grau <i>gray</i> gris <i>grigio</i> gris	rosa <i>pink</i> rose <i>rosa</i> rosa	violett <i>violet</i> violet <i>viola</i> violeta	gelb <i>yellow</i> jaune <i>giallo</i> amarillo	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	



> 100 mm

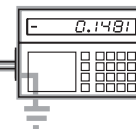


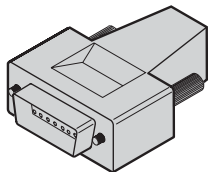
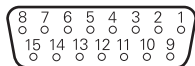
> 100 mm



> 200 mm

Störquellen
Noise sources
 Sources parasites
Origine del disturbo
 Fuentes de interferencias

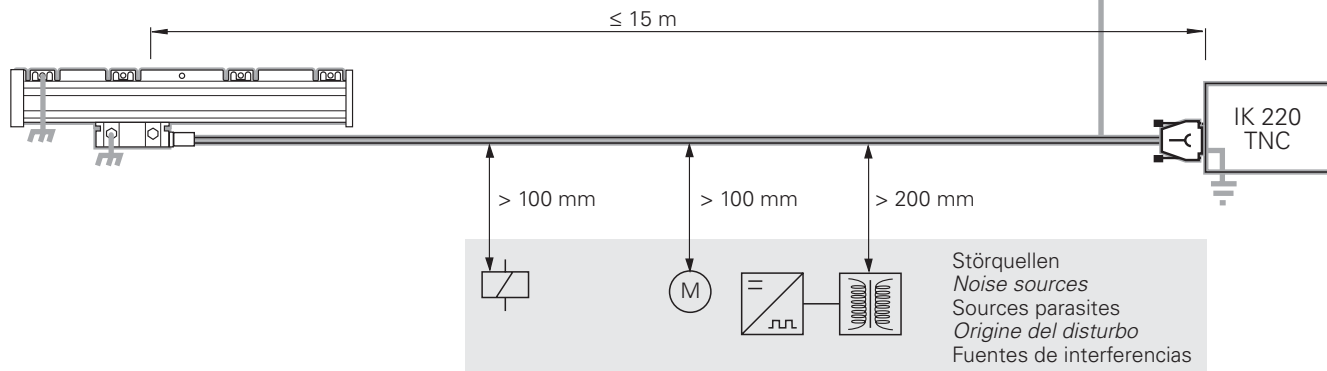




1) Außenschirm Gehäuse
External shield on housing
 Blindage externe sur boîtier
Schermo esterno sulla carcassa
 Blindaje externo a carcasa

2) Innenschirm
Internal shield
 Blindage interne
Schermo interno
 Blindaje interno

3	4	6	7	5	8	14	15	1	2	1)	9	11	13
A		B		DATA	DATA	CLOCK	CLOCK	5 V U _P	0 V U _N		5 V sensor	0 V sensor	2)
+	-	+	-										
grün/schwarz <i>green/black</i> vert/noir <i>verde/nero</i> verde/negro	gelb/schwarz <i>yellow/black</i> jaune/noir <i>giallo/nero</i> amarillo/negro	blau/schwarz <i>blue/black</i> bleu/noir <i>azzurro/nero</i> azul/negro	rot/schwarz <i>red/black</i> rouge/noir <i>rosso/nero</i> rojo/negro	grau <i>gray</i> gris <i>grigio</i> gris	rosa <i>pink</i> rose <i>rosa</i> rosa	violett <i>violet</i> violet <i>viola</i> violeta	gelb <i>yellow</i> jaune <i>giallo</i> amarillo	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	



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