



HEIDENHAIN

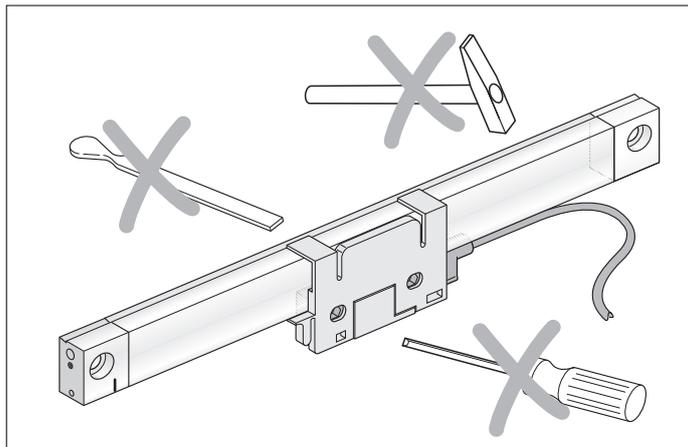
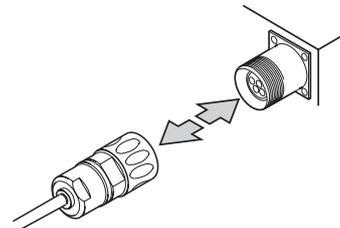
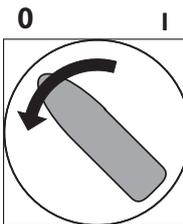
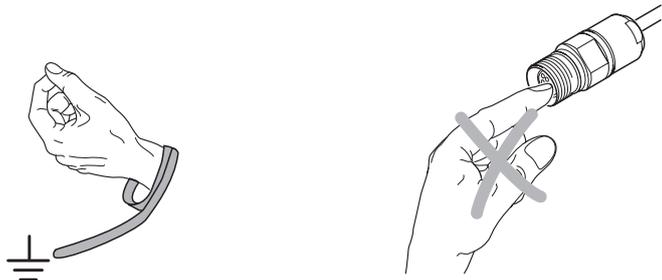
Montageanleitung
Mounting Instructions
Instructions de montage
Istruzioni di montaggio
Instrucciones de montaje

LC 491 M

Mitsubishi
High Speed Serial Interface

10/2003

 DIN EN 100 015 – 1
CECC 00015 – 1



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



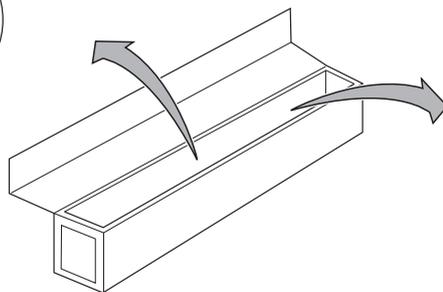
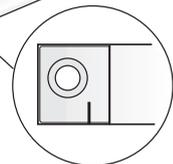
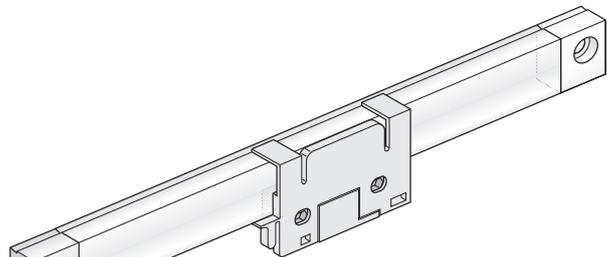
Die Inbetriebnahme des LC 491 M erfordert eine richtige Parametrierung der MITSUBISHI-Steuerung (Gefahr von Sach- und Personenschäden). Zur richtigen Parametrierung nehmen Sie bitte Kontakt zum Hersteller der Maschine auf.

The MITSUBISHI control parameters for the LC 491 M 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.

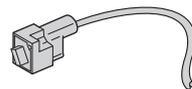
La mise en route du LC 491 M nécessite un paramétrage correct de la commande MITSUBISHI (risque matériels et corporels). Pour effectuer le paramétrage correctement, prenez S.V.P. contact avec le constructeur de la machine.

La messa in funzione della LC 491 M richiede una corretta parametrizzazione del controllo MITSUBISHI (rischio di danni alle cose e alle persone). Per una corretta parametrizzazione mettersi in contatto con il costruttore della macchina.

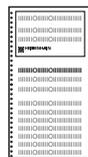
La puesta en marcha de la LC 491 M requiere una parametrización correcta del sistema de medida MITSUBISHI (peligro de daños en cosas y personas). Para la parametrización correcta contacten con el constructor de la máquina.



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

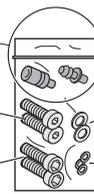


17



2x
M8x25 DIN 6912

2x
M8x25 ISO 4762



2x
D13.0/8.4
3x
D7.0/4.3



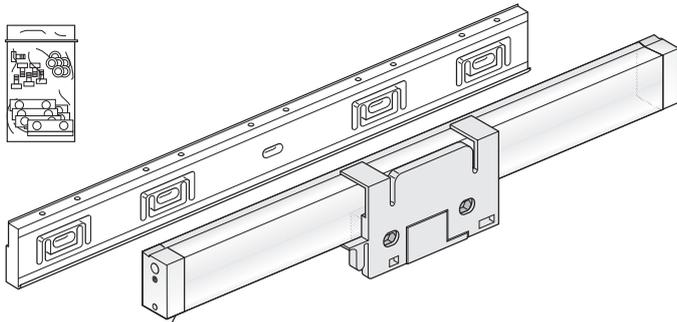
Bei Montage bitte Geräteschild-Aufkleber anbringen (Schaltschrank, Maschinen-Handbuch usw.)

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

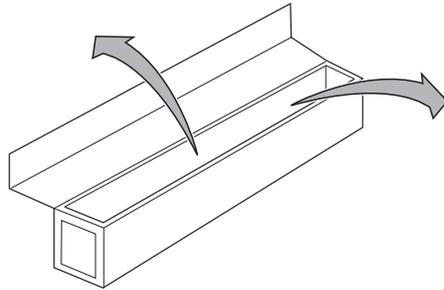
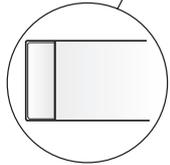
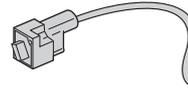
lors du montage, accoler S.V.P. l'étiquette signalétique de l'appareil (armoire électrique, manuel de la machine, etc.)

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



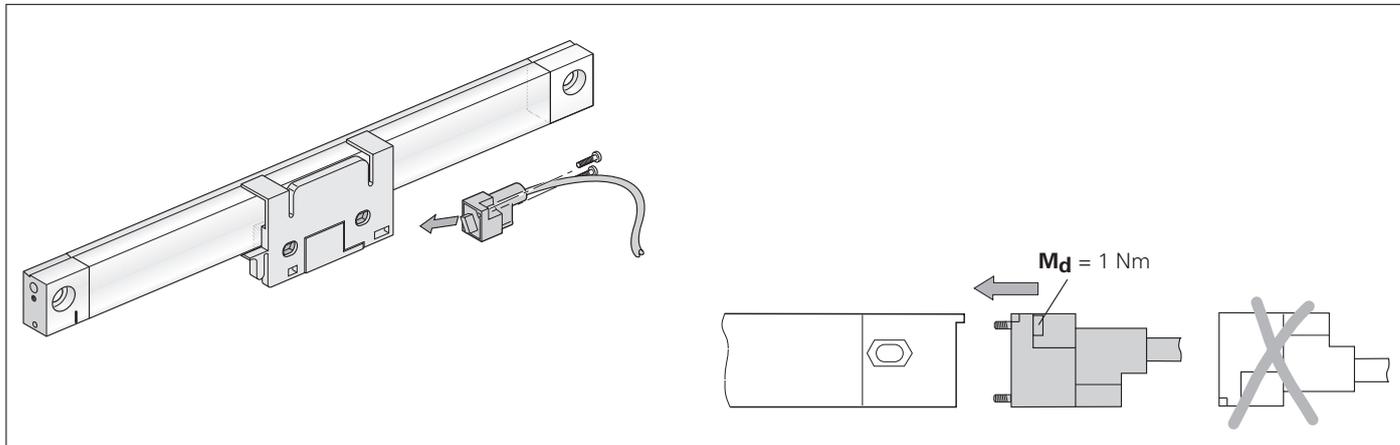
17

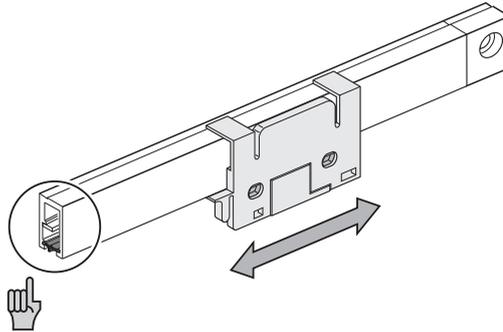
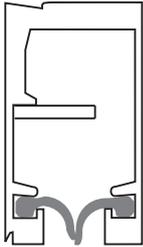
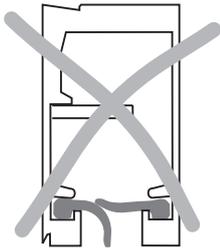


3x
D7.0/4.3

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.)

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





Achtung: Nur mit Transportsicherung manuell verfahren!

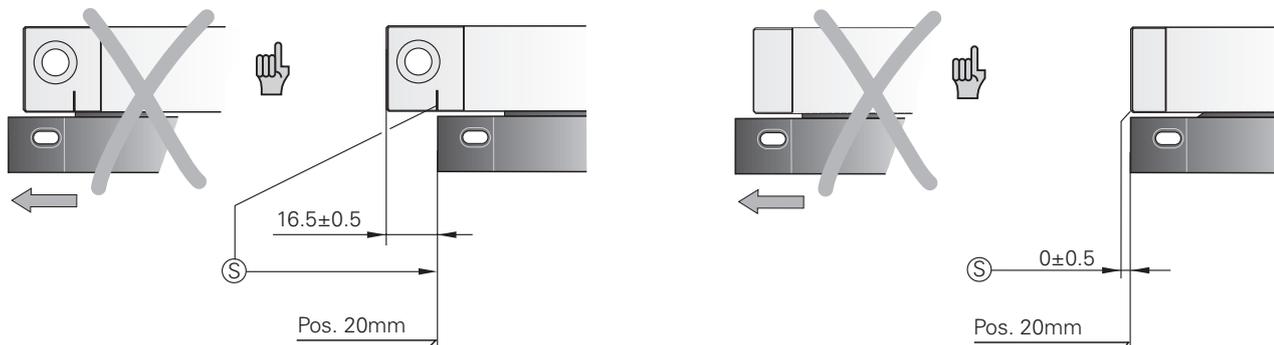
Caution: Move manually only with the shipping brace!

Attention: déplacement manuel seulement avec sécurité de transport!

Attenzione: Muovere manualmente solo con dispositivo di sicurezza per il trasporto installato

¡Atención: Desplazar manualmente sólo con seguro de transporte!

Hinweise zur Montage · Mounting Procedure · Procédures pour le montage



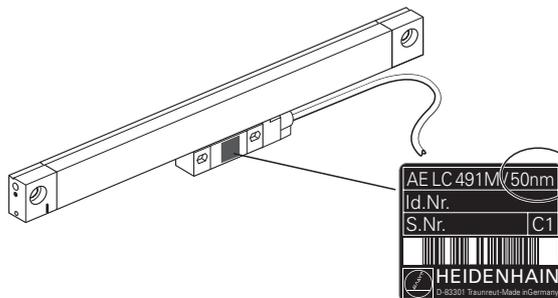
Ⓢ = Der Absolutwert beim Beginn der Messlängen beträgt 20 mm. Je nach Auflösung errechnet sich der Positionswert.

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.



Messschritt z.B. 50 nm oder 0 = programmierbar für Service

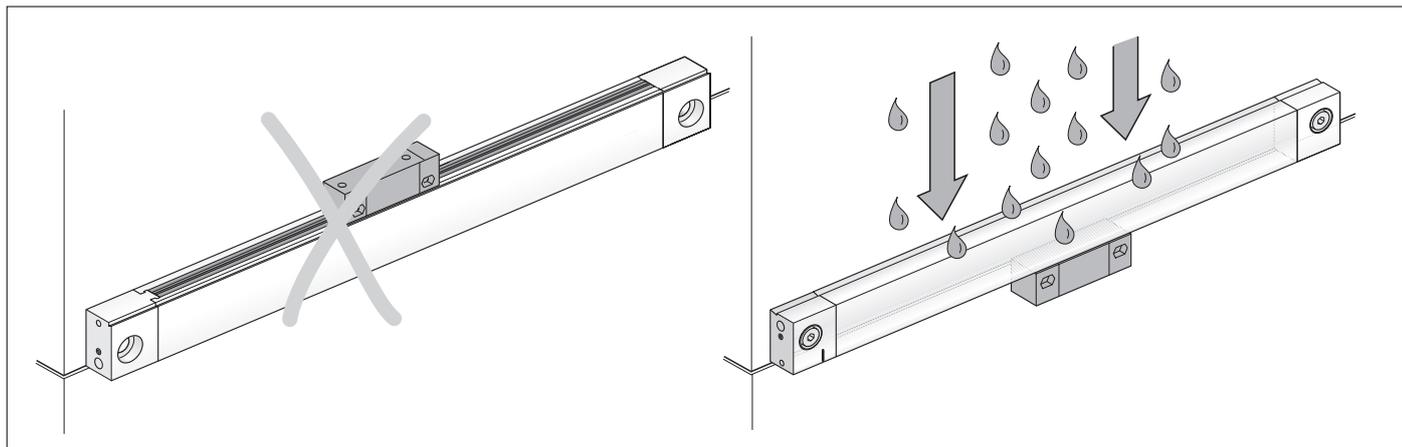
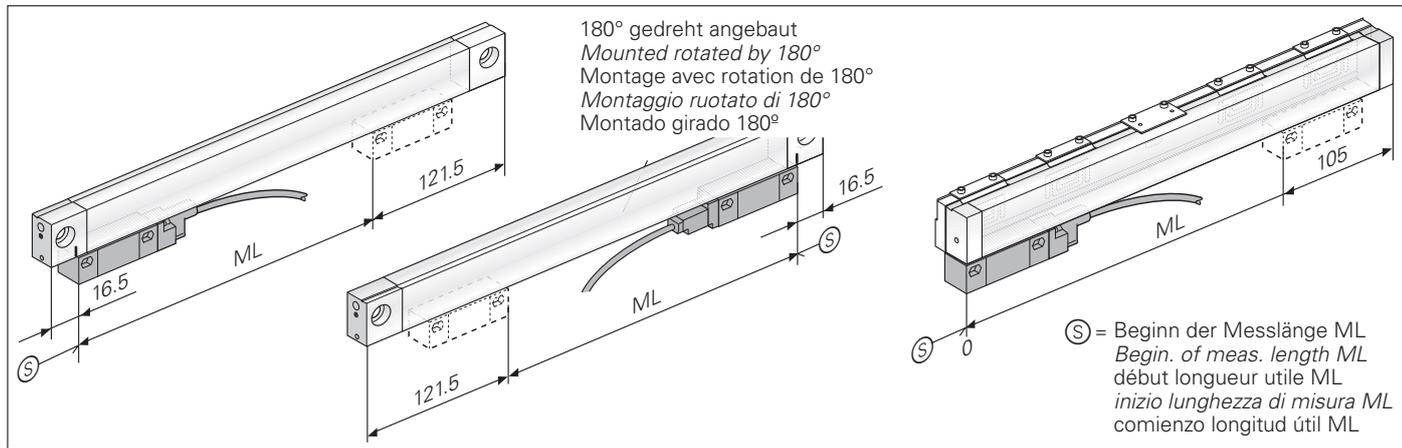
Measuring step e.g. 50 nm or 0 = programmable for Service

Pas de mesure ex. 50 nm ou 0 = programmable pour SAV

Passo di misura ad. es. 50 nm oppure 0 = programmabile per assistenza tecnica

Paso de medición p.ej. 50 nm ó 0 = programable para servicio

Avvertenze per il montaggio · Indicaciones para el montaje



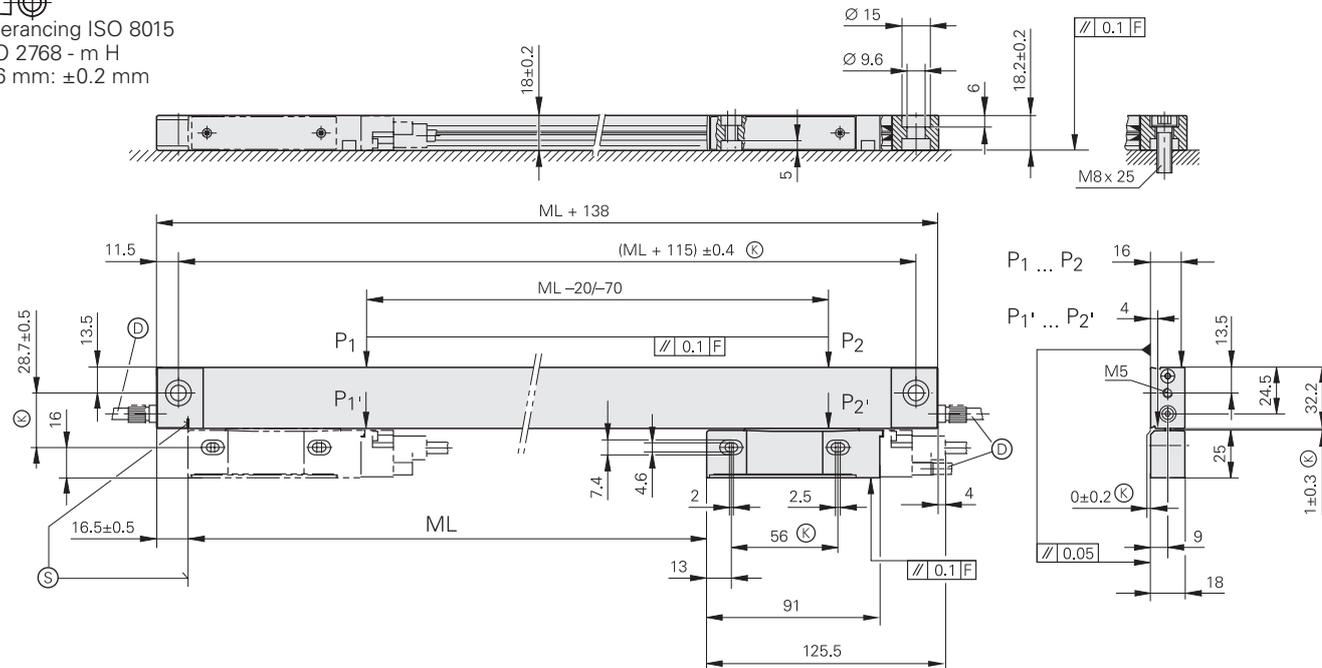
mm



Tolerancing ISO 8015

ISO 2768 - m H

< 6 mm: ±0.2 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

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

**Abmessungen
mit Montageschiene**

**· Dimensions with
Mounting Spar**

**· Dimensions
avec rail de guidage**

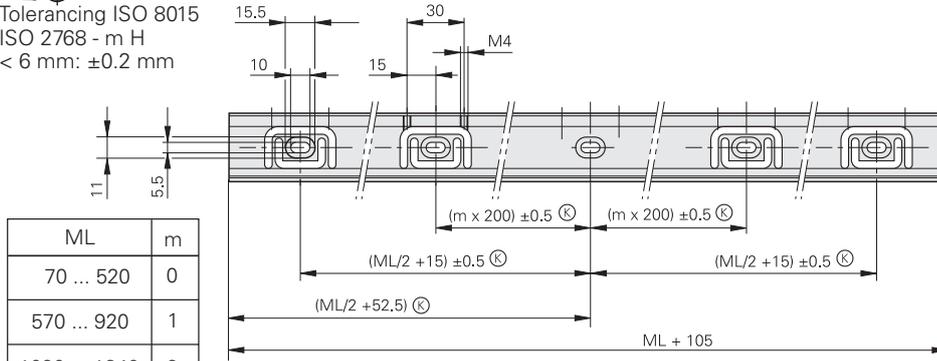
**· Dimensioni
con guida**

**· Dimensiones
con guía de montaje**

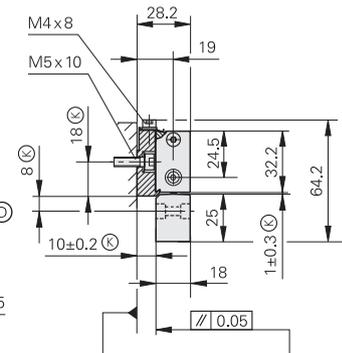
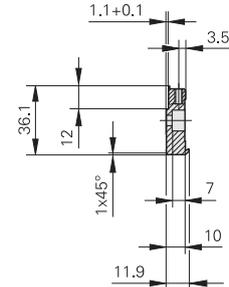
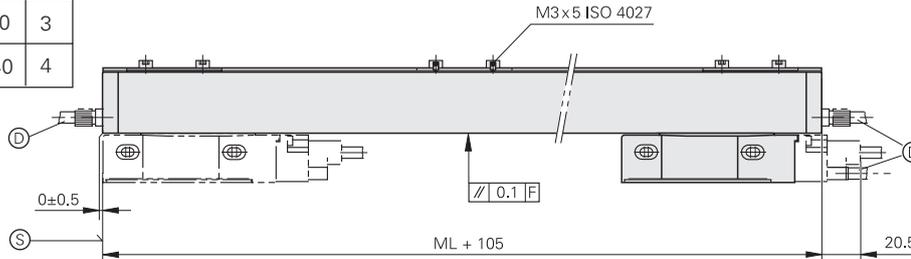
mm



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



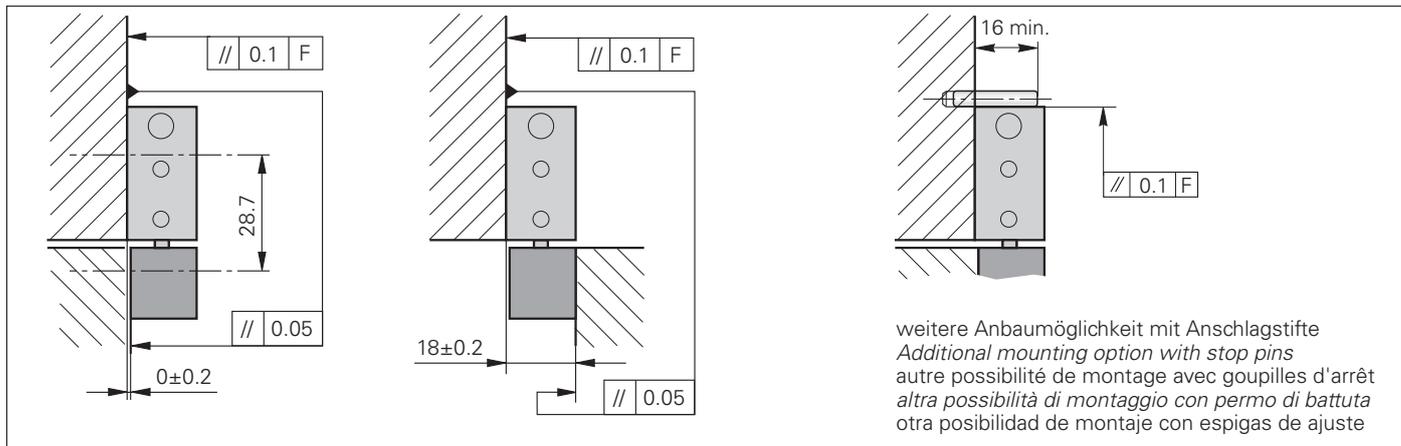
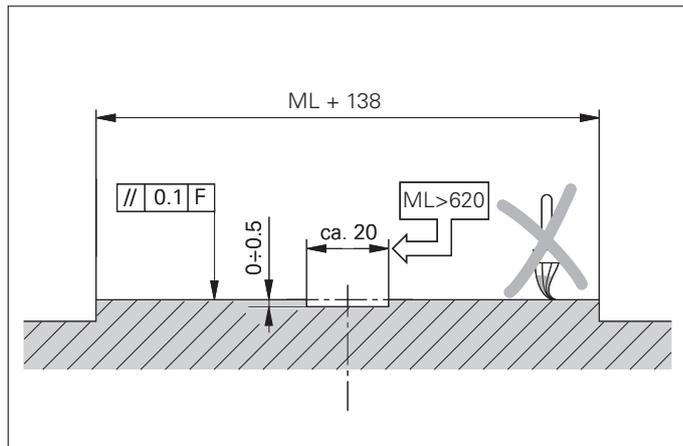
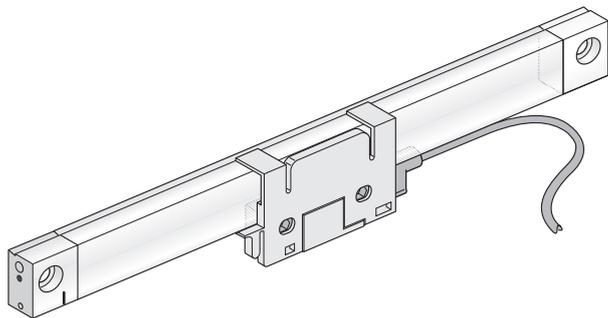
| ML | m |
|---------------|---|
| 70 ... 520 | 0 |
| 570 ... 920 | 1 |
| 1020 ... 1340 | 2 |
| 1440 ... 1740 | 3 |
| 1840 ... 2040 | 4 |



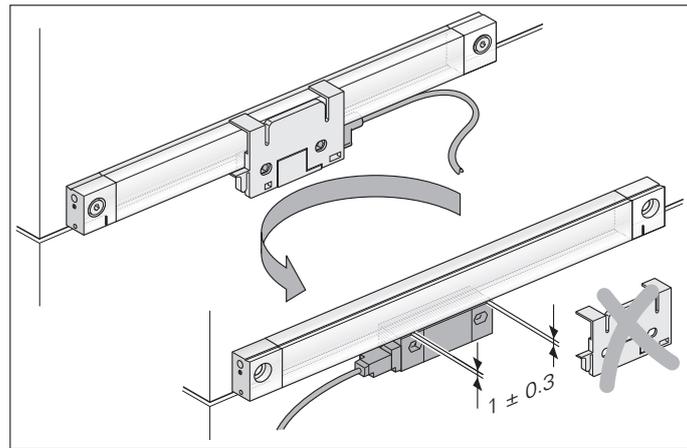
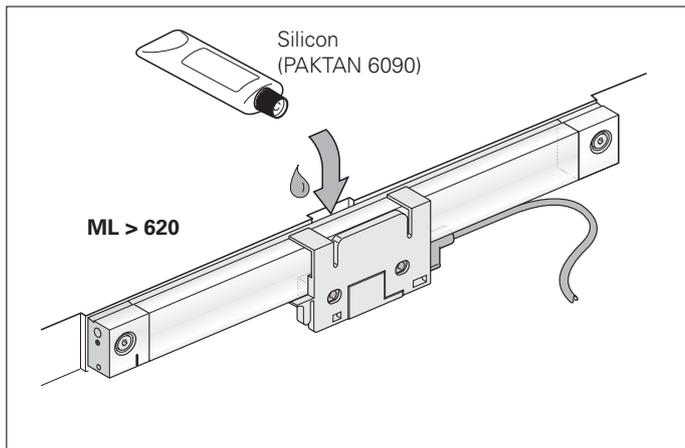
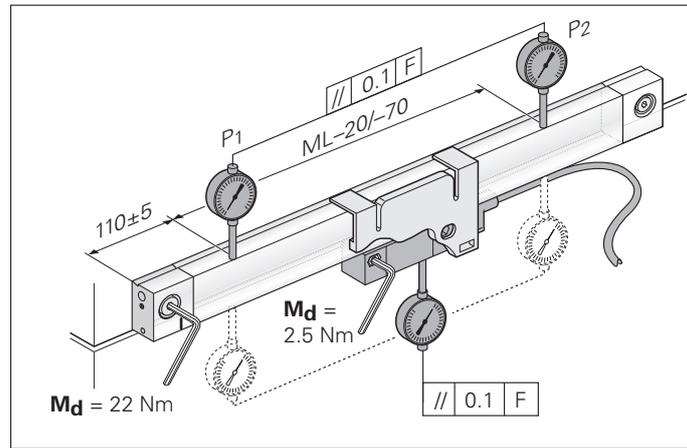
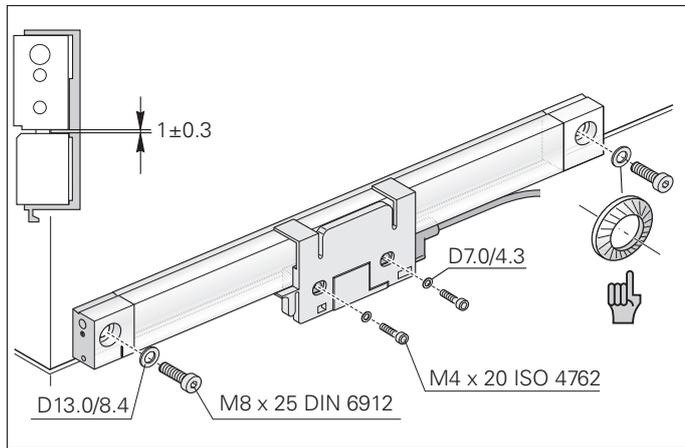
Ⓚ = Kundenseitige Anschlussmaße
Required mating dimensions
conditions requises pour le montage
dimensioni di collegamento lato cliente
cotas de montaje requeridas

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

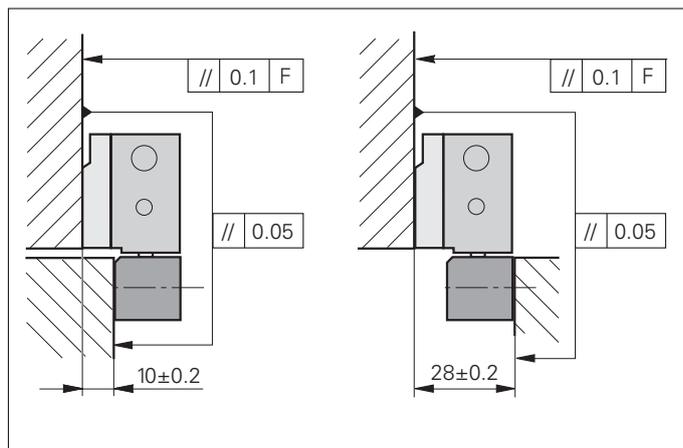
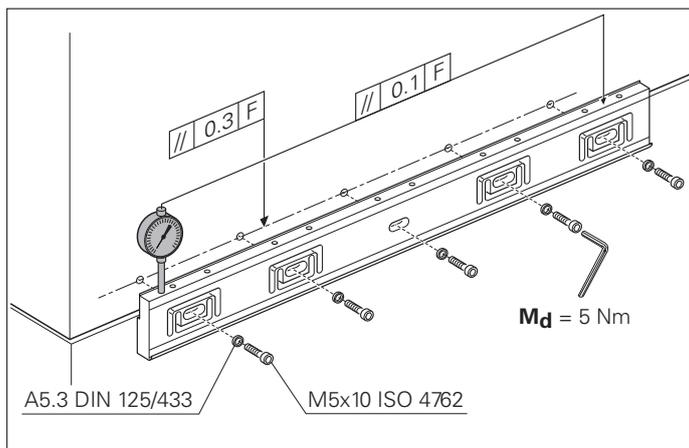
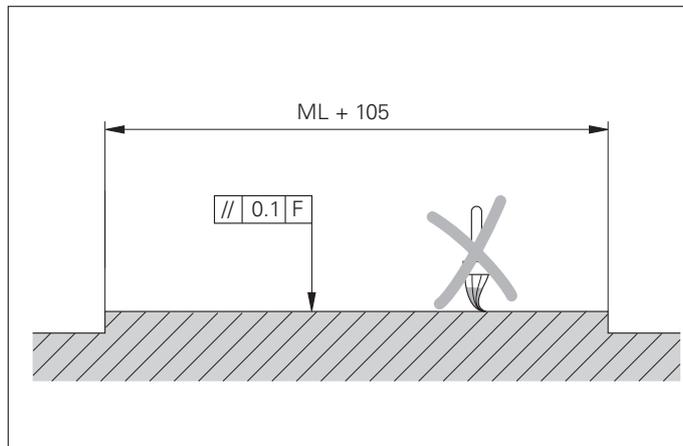
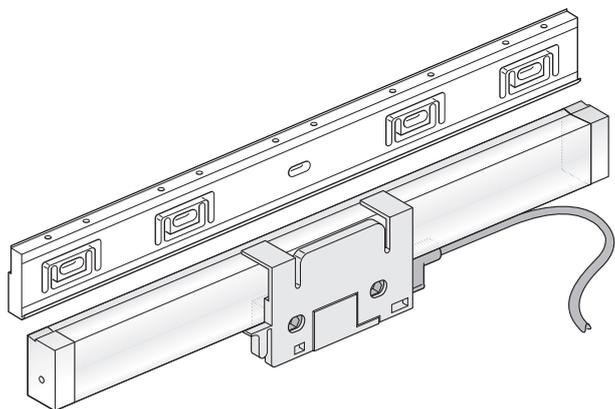
Anbau ohne Montageschiene · *Mounting without Mounting Spar* · Montage sans rail de guidage



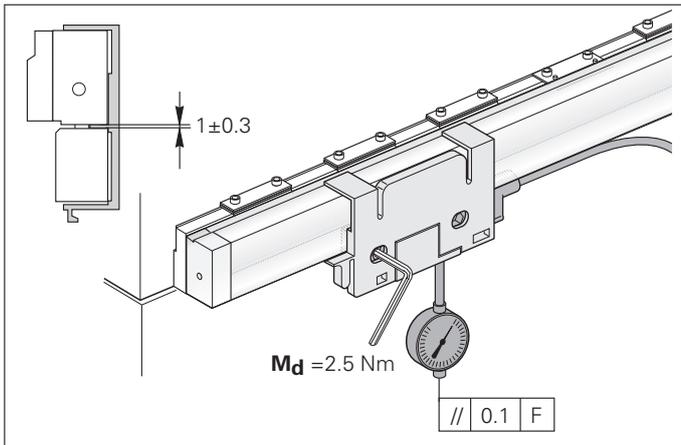
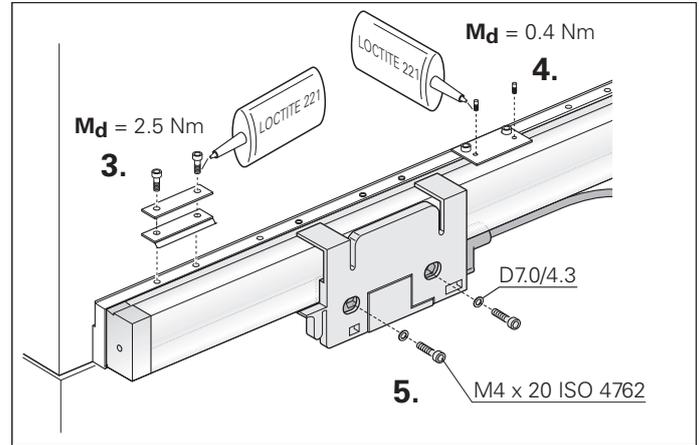
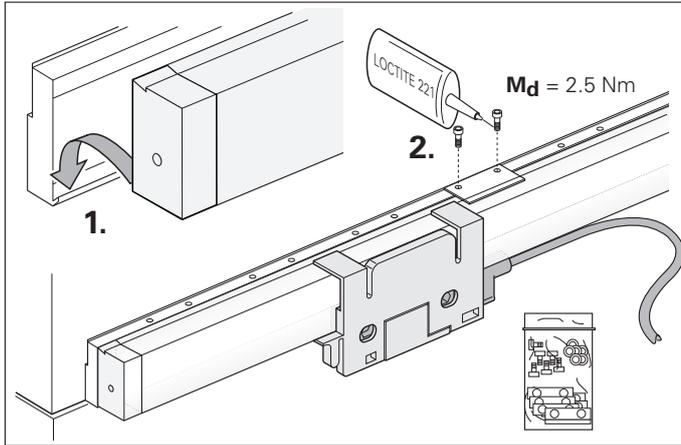
Montaggiosenza guida · Instalación sin guía de montaje



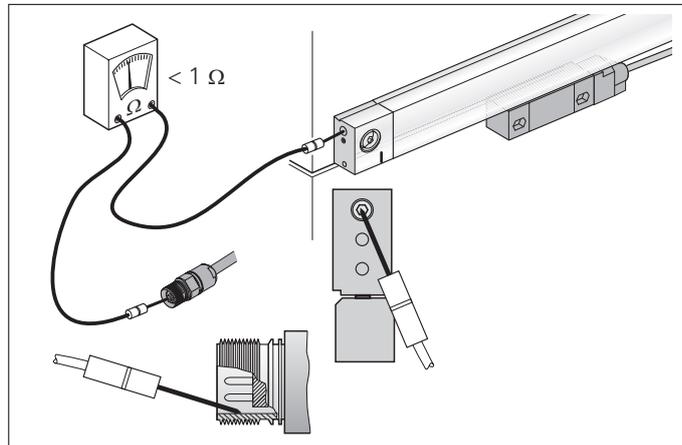
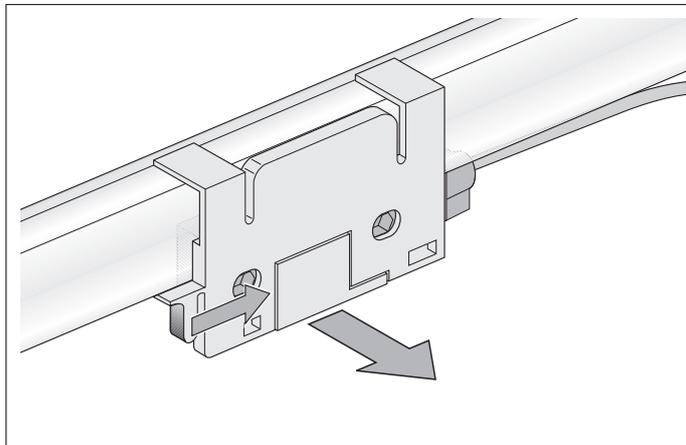
Anbau mit Montageschiene · *Mounting with Mounting Spar* · Montage avec rail de guidage



Montaggio con guida · Instalación con guía de montaje



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



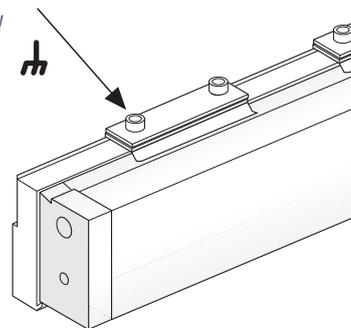
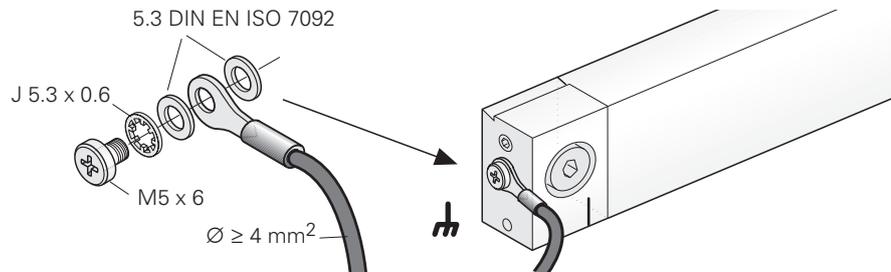
Bei Erdungsproblemen zusätzlich Endstück oder Montageschiene erden!

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

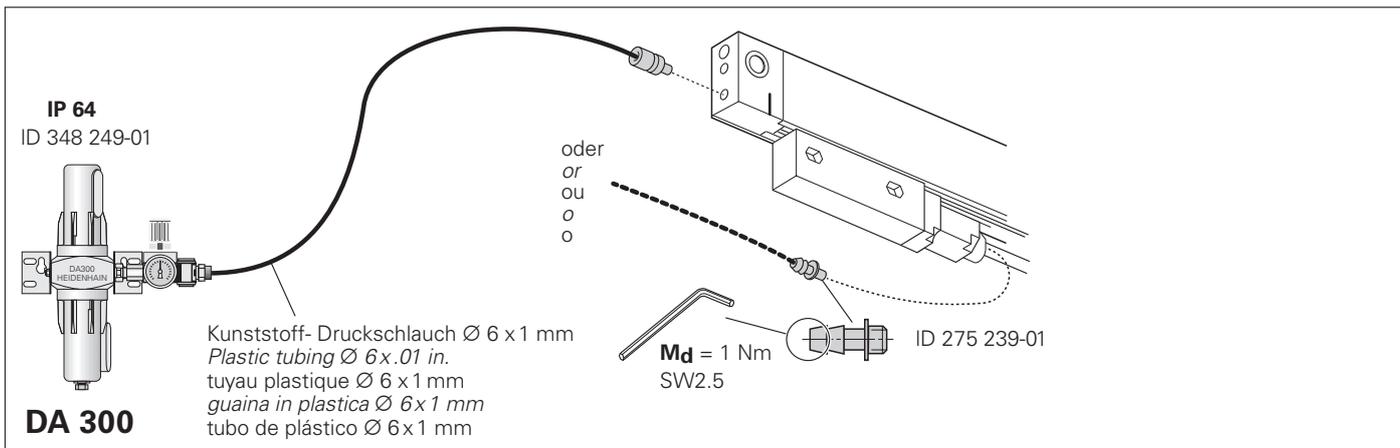
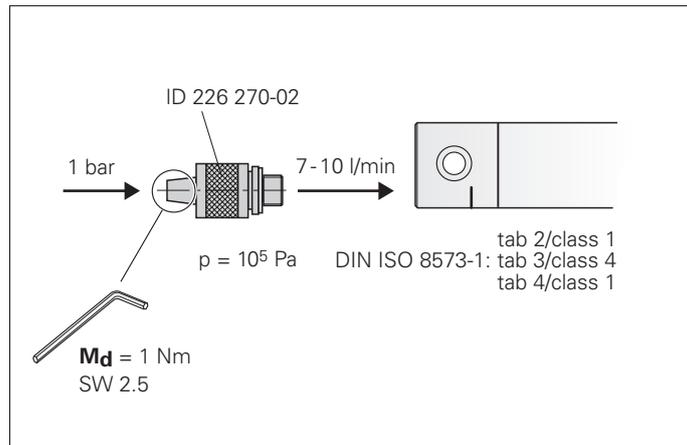
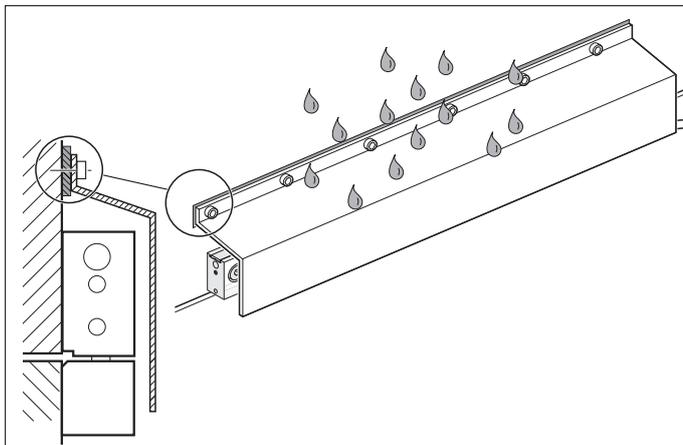
En cas de problèmes de messa a terra, mettre aussi l'embout ou le rail de montage à la terre!

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

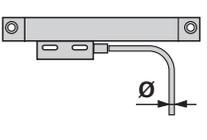
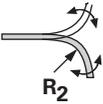
¡En caso de problemas de tierras, poner a tierra adicionalmente la pieza final o la guía de montaje!

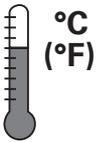
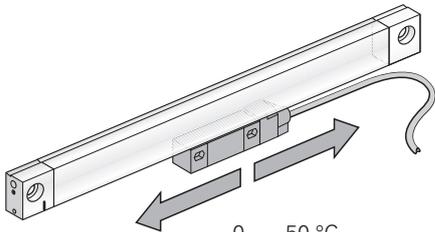
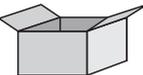


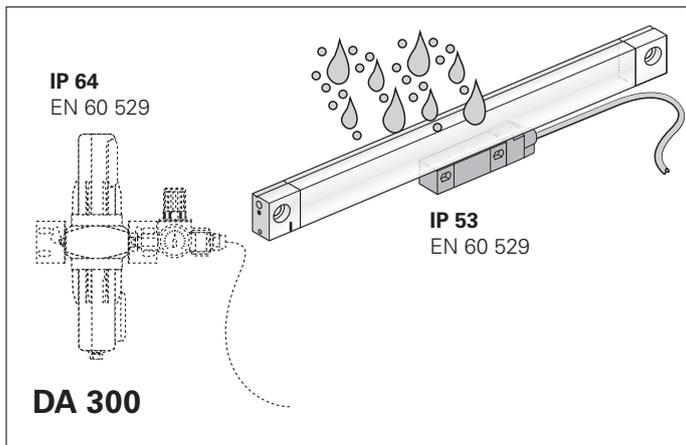
Schutzmaßnahmen · Protective Measures · Mesures préventives · Precauzioni · Medidas de protección

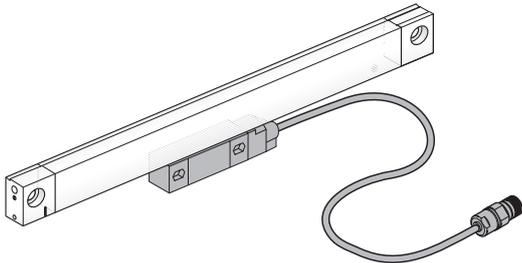


Technische Kennwerte · Specifications · Caractéristiques techniques · Dati tecnici · Datos técnicos

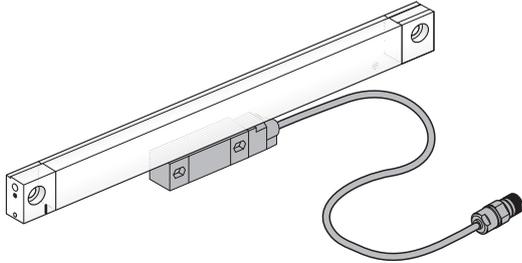
| | | |
|--|---|---|
|  |  |  |
| Ø 6 mm | $R_1 \geq 20 \text{ mm}$ | $R_2 \geq 75 \text{ mm}$ |
| Ø 10 mm | $R_1 \geq 35 \text{ mm}$ | $R_2 \geq 75 \text{ mm}$ |
|  | $R_1 \geq 40 \text{ mm}$ | $R_2 \geq 100 \text{ mm}$ |

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

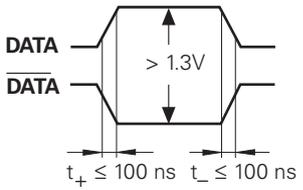




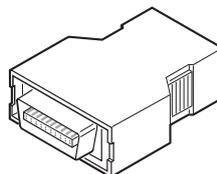
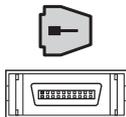
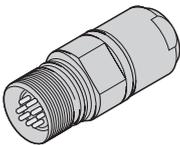
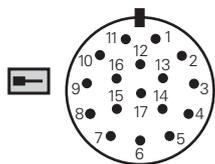
 RS-485
 **Request Frame**
 **Request Frame**
 **U_P = 5 V ± 5 %** (Remote Sensing)
 (max. 300 mA)
 EN 50 178/4.98; 5.2.9.5
 IEC 364-4-41: 1992; 411 (PELV/SELV)
 (siehe, *see, voir, vedi, véase*
 HEIDENHAIN D231.929)



 RS-485
 **DATA**
 **DATA**
 RS-485

RS-485


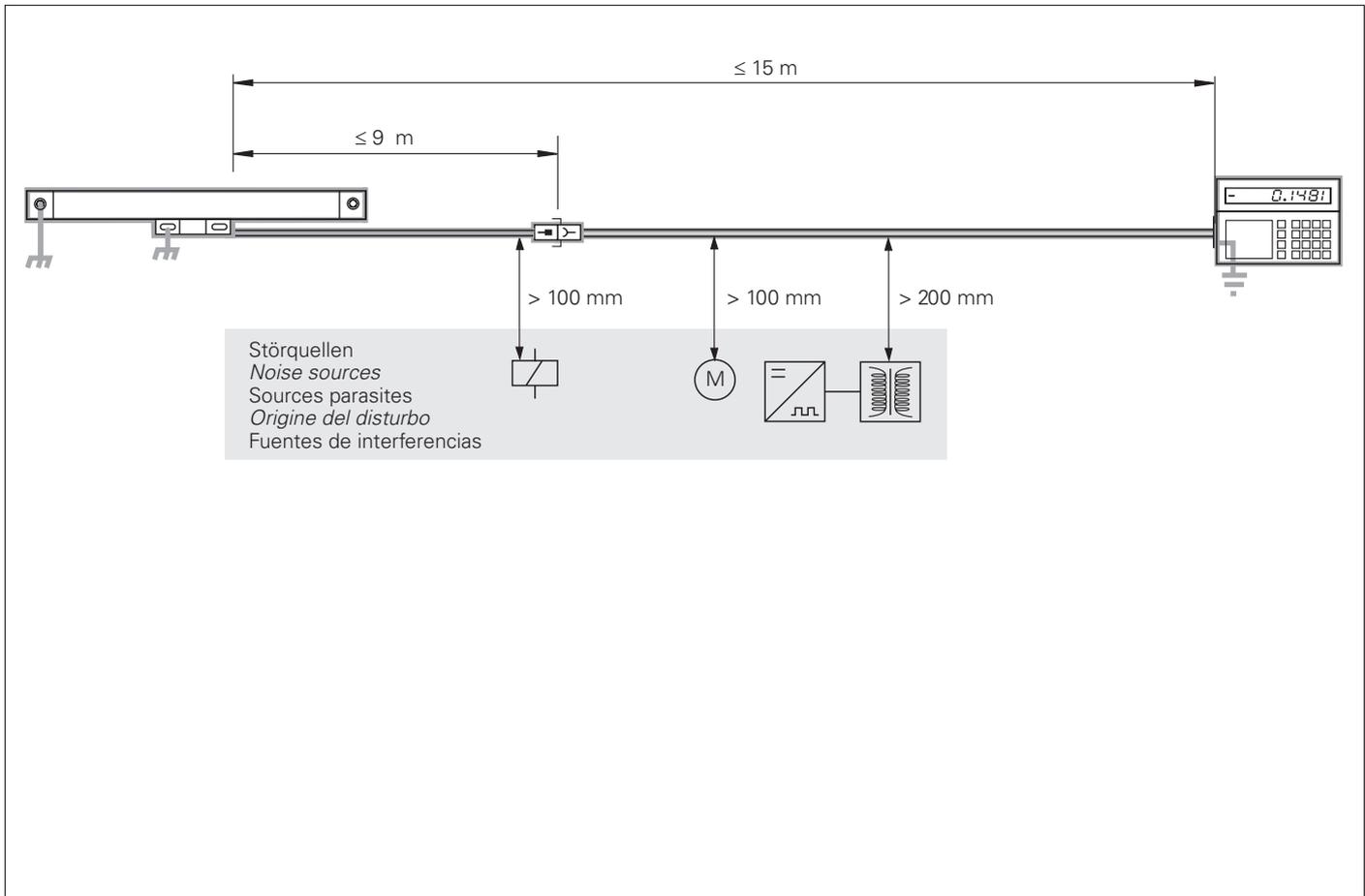
Elektrischer Anschluss · Electrical connection · Raccordement électrique · Collegamento elettrico · Conexión eléctrica



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

| | | | | | | | | |
|--|--|--------------------------------------|---|---|---|---|--|--|
| | 14 | 17 | 8 | 9 | 7 | 1 | 10 | 4 |
| | 6 | 16 | 7 | 17 | 20 | 19 | 1 | 11 |
| | DATA | DATA | Request Frame | Request Frame | 5 V Up | 5 V sensor | 0 V U_N | 0 V sensor |
| | grau gray gris grigio gris | rosa pink rose rosa rosa | violett violet violet viola violeta | gelb yellow jaune giallo amarillo | braun/grün brown/green brun/vert marrone/verde marron/verde | blau blue bleu azzurro azul | weiß/grün white/green blanc/vert bianco/verde blanco/verde | weiß white blanc bianco blanco |

Die Sensorleitung ist intern mit der Versorgungsleitung verbunden.
 The sensor line is connected internally with the power supply.
 La ligne de palpeur est reliée de manière interne à la ligne d'alimentation.
 La linea del sensore è collegata internamente con la linea di alimentazione.
 La línea de sensor está unida internamente con la línea de alimentación.



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