



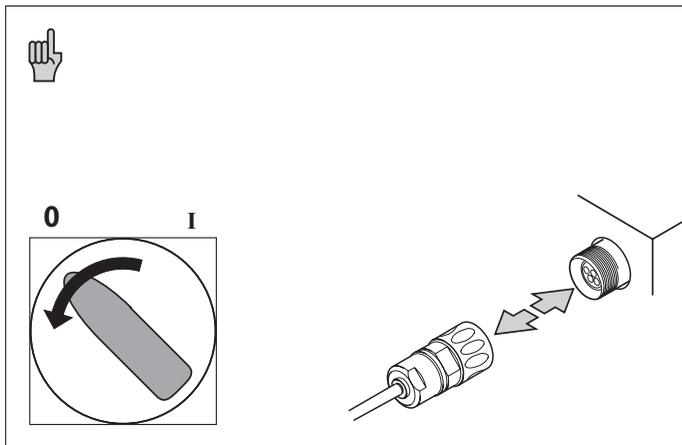
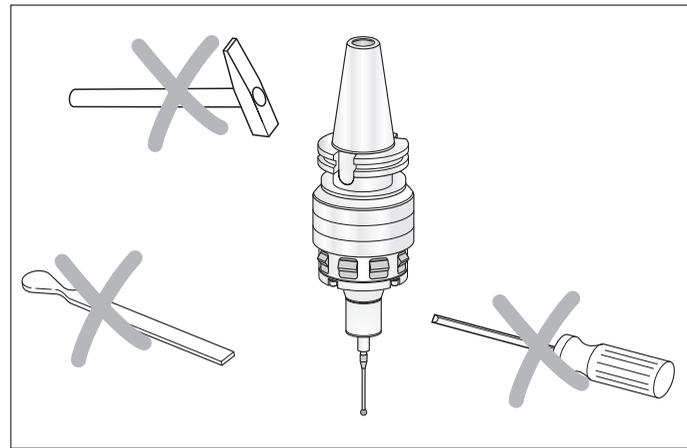
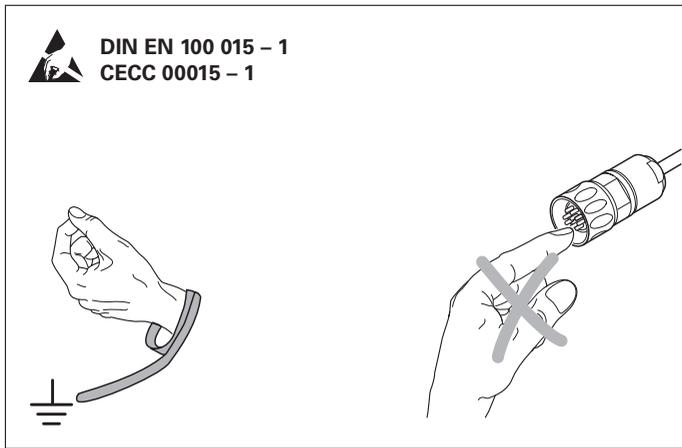
HEIDENHAIN

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

TS 641
SE 641
APE 652

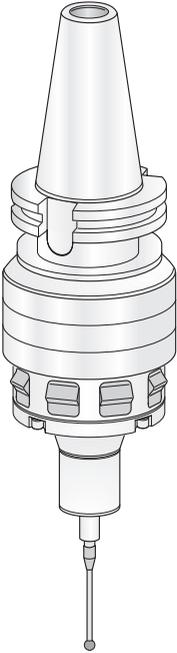
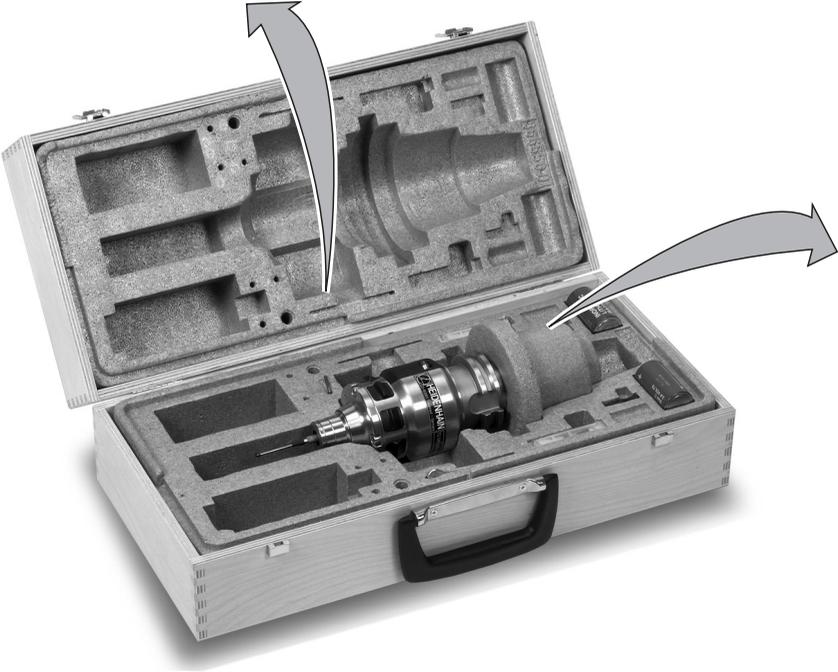
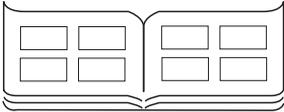
12/2004

Warnhinweise · Warnings · Recommendations · Avvertenze · Advertencias



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

TS 641



SE 641

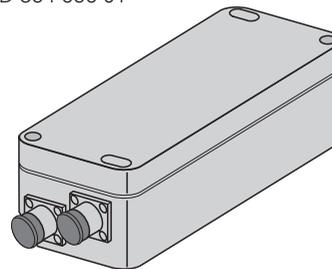


TS 641

SK-AD/B 40	DIN 69871	/S81	517 352-51
SK-AD/B 50	DIN 69871	/S75	517 352-42
HSK-E 50	DIN 69893	/S68	517 352-13
HSK-A 63	DIN 69893	/S69	517 352-14
HSK-A 100	DIN 69893	/S72	517 352-17
BT 40	JIS B 6339	/S88	517 352-18
BT 50	JIS B 6339	/S71	517 352-16

APE 652

ID 354 656-01

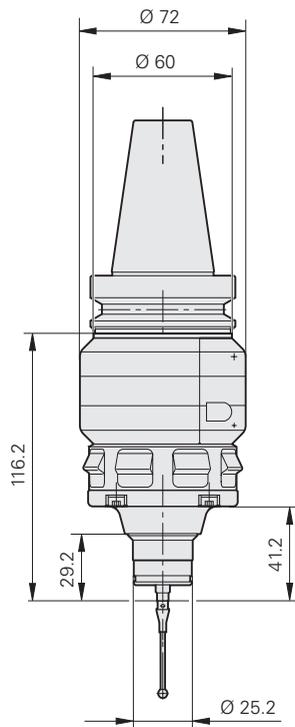


TS 640

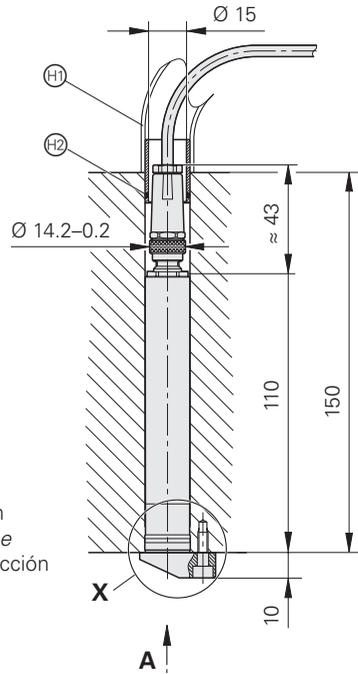
mm



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

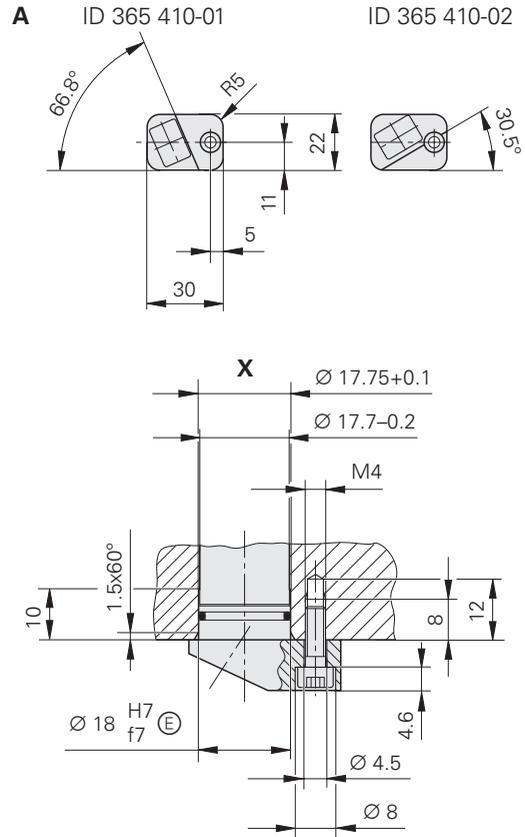


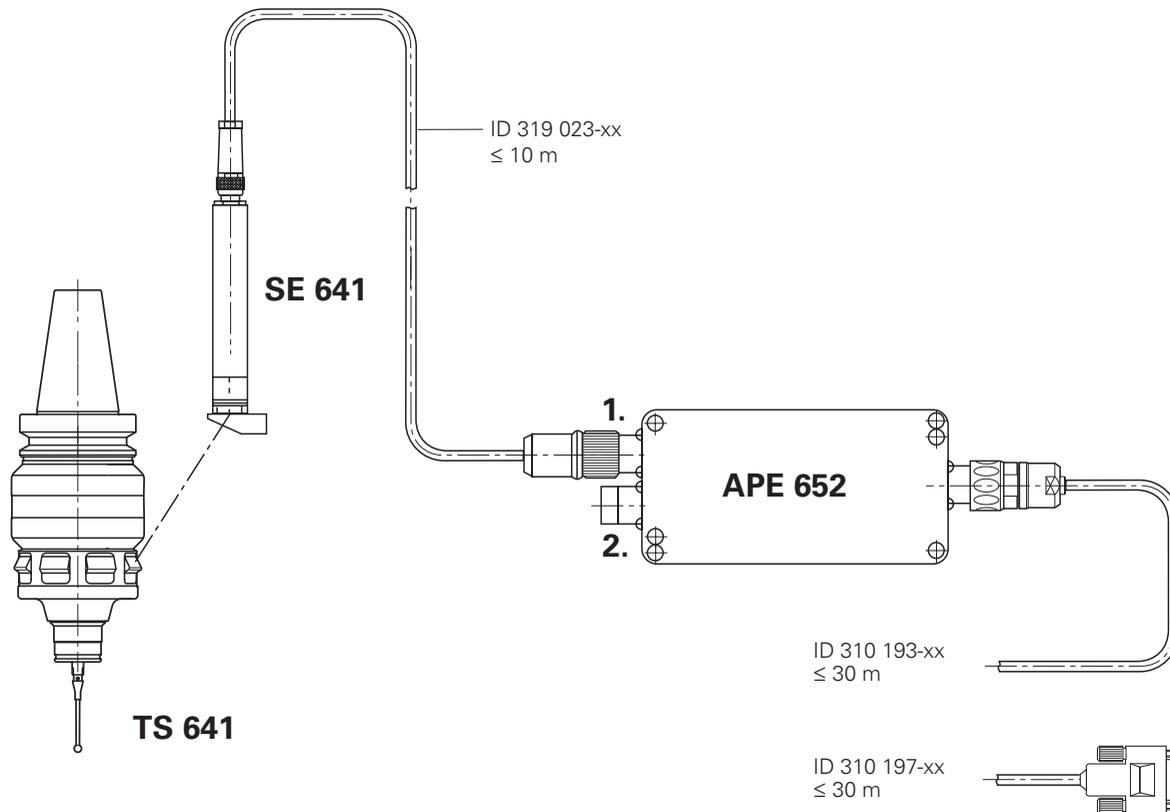
SE 641



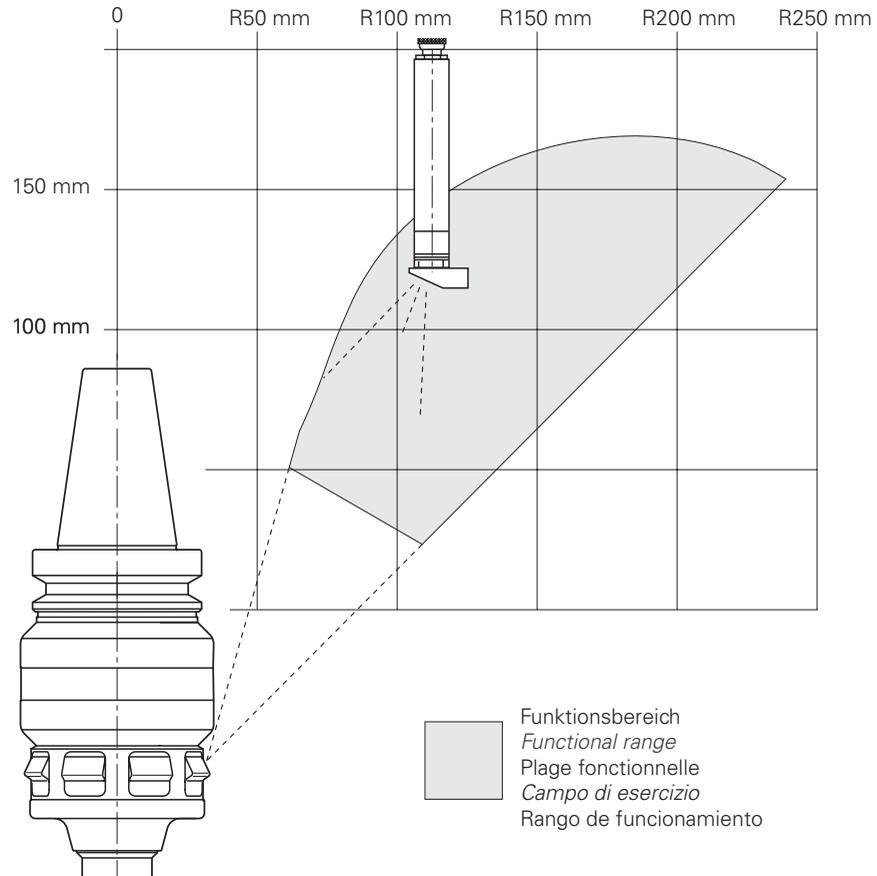
Ⓜ1 = Schutzschlauch
 Metal armor
 Gaine de protection
 Guaina di protezione
 Manguera de protección

Ⓜ2 = O-Ring 16x1
 O-ring 16x1
 Joint torique 16x1
 O-ring 16x1
 Anillo obturador toroidal 16x1

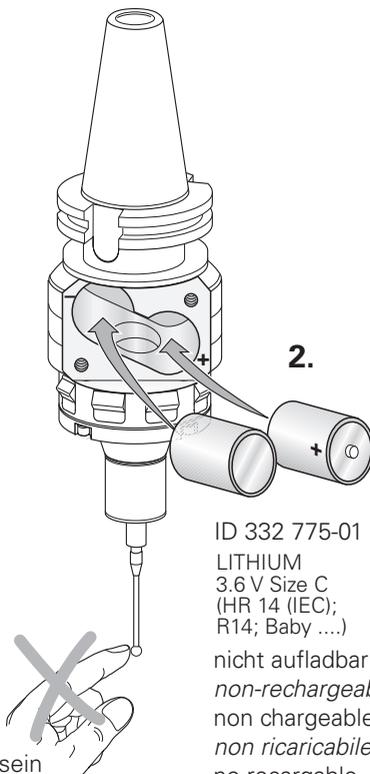
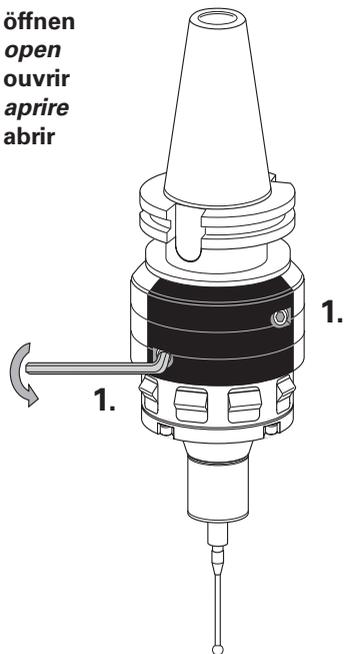




Abstrahlbereich · *Transmission range* · Plage de rayonnement · *Campo di riflessione* · Campo de irradiación

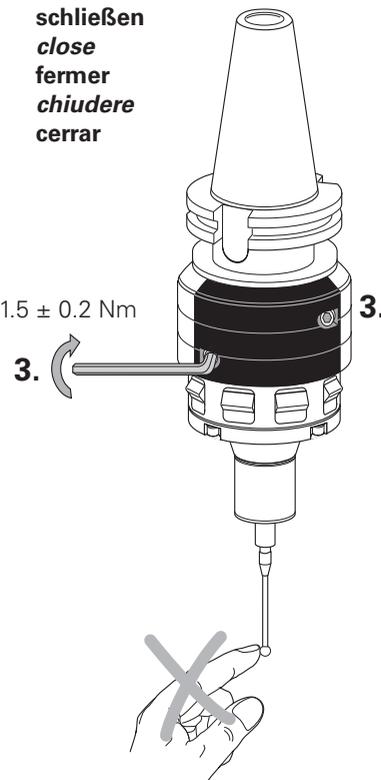


öffnen
open
ouvrir
aprire
abrir



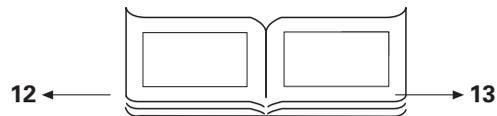
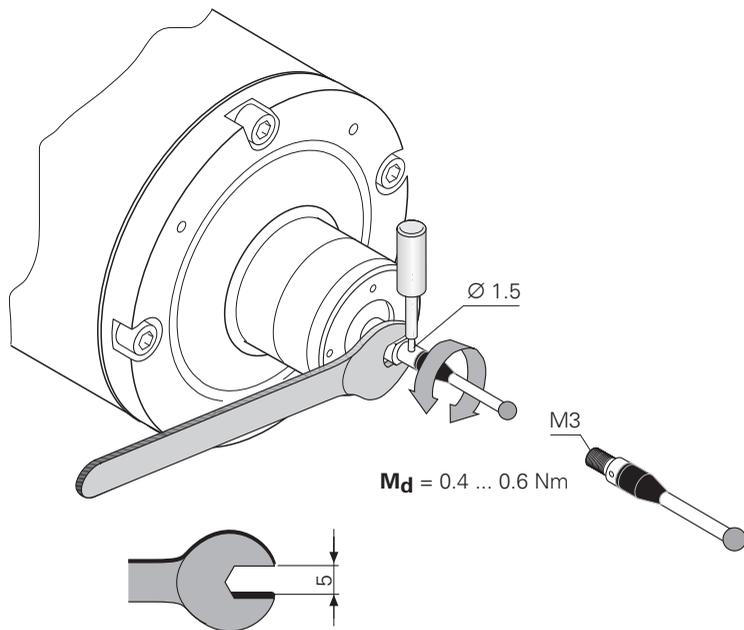
schließen
close
fermer
chiudere
cerrar

2x
 $M_d = 1.5 \pm 0.2 \text{ Nm}$

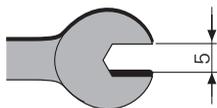


Wegen Selbstkalibrierung, muss Taststift frei sein
The stylus must hang loose for the self-calibration
En raison de l'auto-étalonnage, la tige de palpage doit être libre
Lo stilo deve essere libero per autocalibrazione
Debido a la autocalibración, el vástago debe estar libre

Taststiftwechsel · Stylus Exchange · Changement de la tige de palpague · Sostituzione dello stilo · Cambio vástago palpación

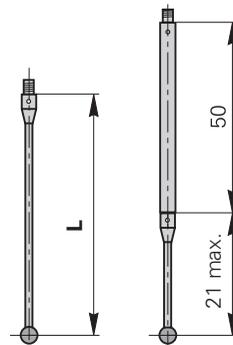


! Neu zentrieren
 Recenter
 Recentrer
 Rifare in centraggio
 Centrar de nuevo



L = 21 / 40 mm

mit Taststiftverlängerung nur **L 21 mm** verwenden
 For stylus extension use only **L 21 mm**
 n'utiliser que **L 21 mm** avec prolongation de tige de palpague
 con la prolunga dello stilo utilizzare solo **L 21 mm**
 con prolongador de vástago utilizar únicamente **L 21 mm**



Elektronisch
Electronic
électronique
elettronico
electrónico

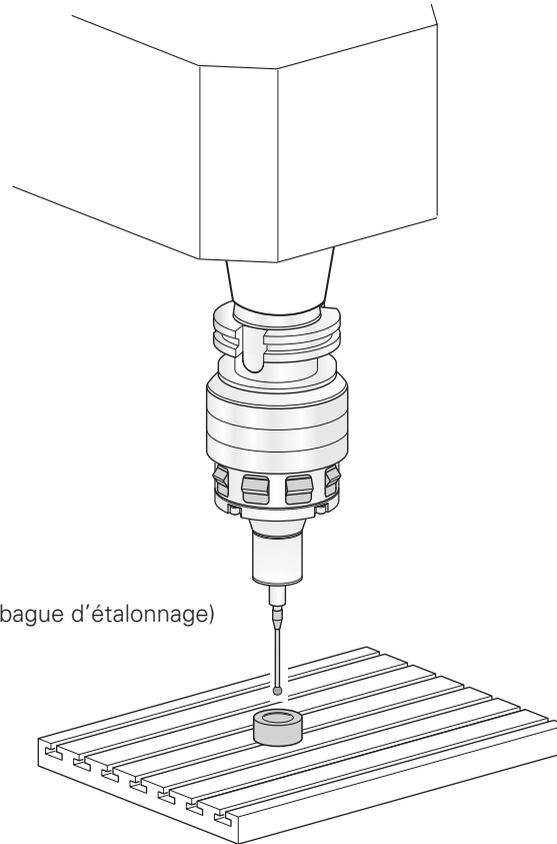
in NC durch Umschlagmessung (Kalibrierring)

In NC through probing from opposite directions (calibration ring)

Dans la CN par mesure avec rotation dans les deux sens à 180°(bague d'étalonnage)

Tramite CN eseguire tastatura su due punti diametrali opposti

En NC mediante medición iniciada (anillo de calibración)



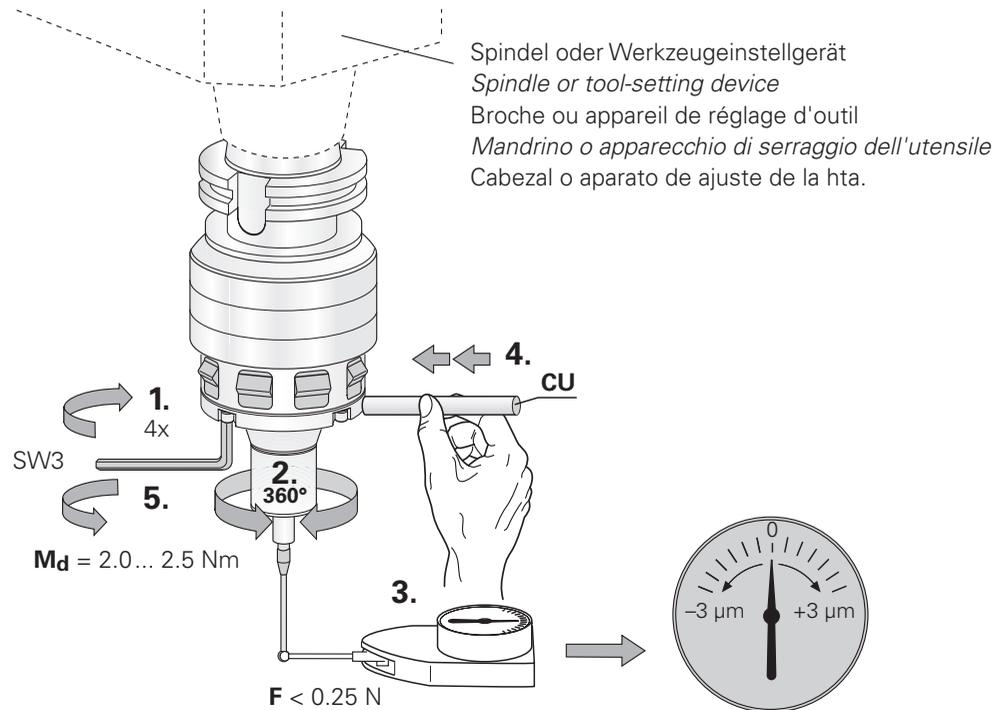
Mechanisch Zentrieren, nur nötig wenn keine elektronische Zentrierung möglich ist.

Mechanical centering. Only necessary if electronic centering is not possible.

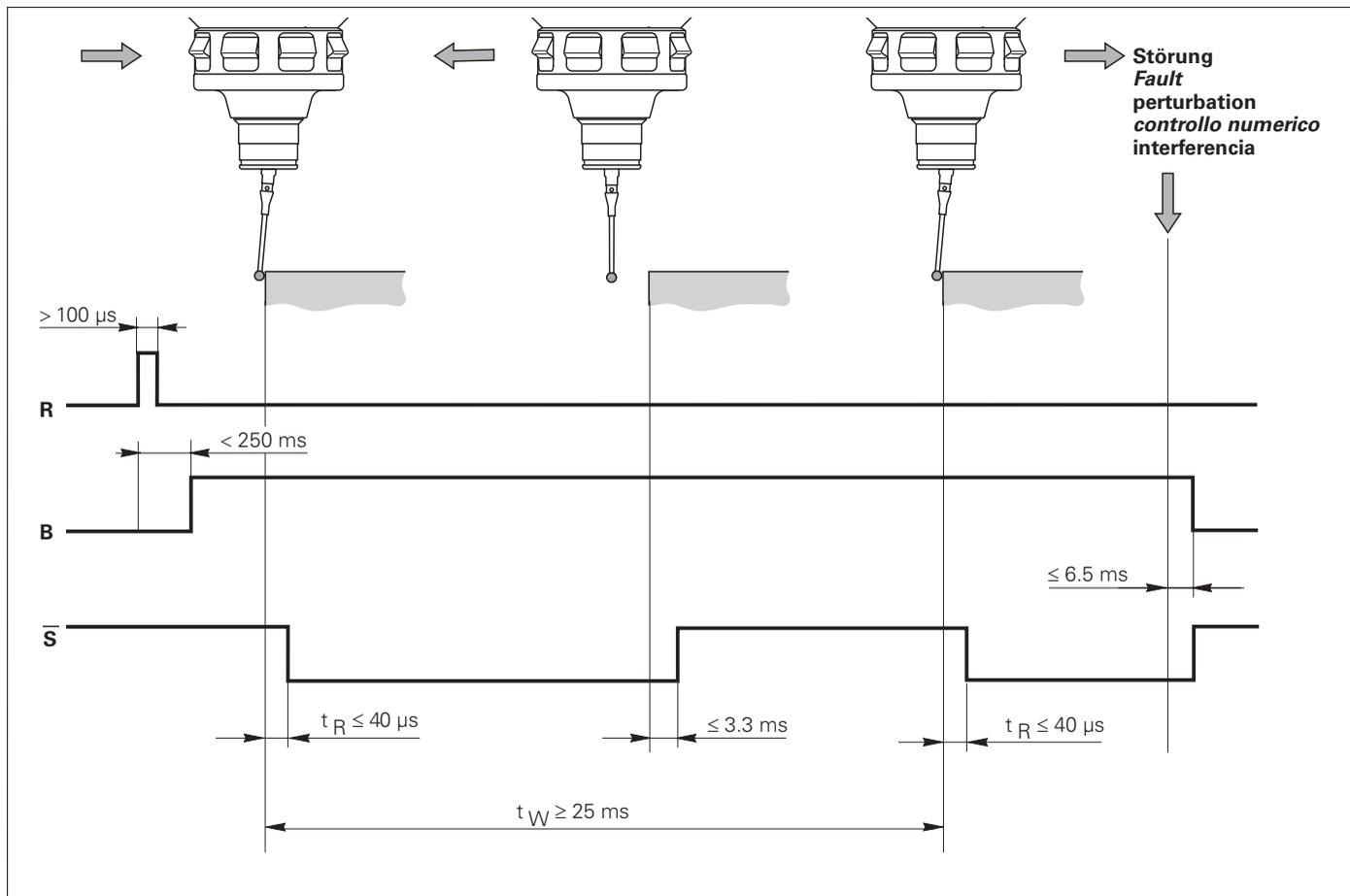
Centrage mécanique, n'est nécessaire que si le centrage électronique s'avère impossible.

Centrare meccanicamente solo se non è possibile il centraggio elettronico

Centraje mecánico, necesario sólo en el caso de no ser posible el centrage electrónico.

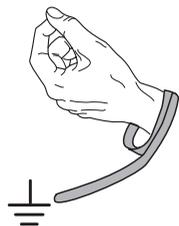


Signalfolge · *Signal sequence* · Train du signal · *Sequenza segnali* · sucesión de señales





DIN EN 100 015 - 1
CECC 00015 - 1



	Standard <i>Standard</i> <i>standard</i> <i>estándar</i>	Signal <i>Signal</i> <i>signal</i> <i>segnale</i> <i>señal</i>	Optional <i>Optional</i> <i>en option</i> <i>opzionale</i>	Signal <i>Signal</i> <i>signal</i> <i>segnale</i> <i>señal</i>
S1		\bar{S}		S
S2		\bar{W}		W
S3		B		\bar{B}
S4		R		\bar{R}
S5		$\frac{B}{\bar{B}} = \frac{B}{\bar{B}}$		$\frac{B}{\bar{B}} = \frac{B + \bar{W}}{\bar{B} + W}$
S6		$\frac{\bar{S}}{S} = \frac{\bar{S}}{S}$		$\frac{\bar{S}}{S} = \frac{B + \bar{S}}{S + S}$



← **U_p, R**

→ **B, \bar{W} , \bar{S}**

R = Startsignal
Start signal
 Signal de
Segnale di
 Señal de

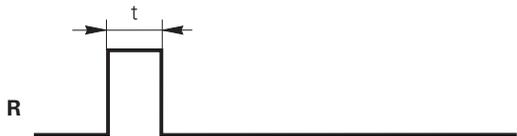
B = Bereitschaftssignal
Ready signal
 Signal de réponse
Segnale di pronto
 Señal de disposición

\bar{S} = Schaltsignal
Trigger signal
 Signal de commutation
Segnale di commutazione
 Señal de conexión

\bar{W} = Batteriewarnung (Batteriekapazität < 10%)
Battery warning (Battery capacity < 10%)
 Témoins batterie (capacité batterie < 10%)
Allarme batteria (capacità batteria < 10%)
 Aviso de batería (capacidad de la batería < 10%)

U_p _____

U_p = 15 V ... 30 V
 (≤ 75 mA)



R:
 $U_H = (10 \dots 30) \text{ V}$
 $U_L \leq 2 \text{ V}$ ($I_H = \frac{U_H - 10 \text{ V}}{10 \text{ k}\Omega}$)
 $I_L \leq 100 \mu\text{A}$
 $t \geq 100 \mu\text{s}$



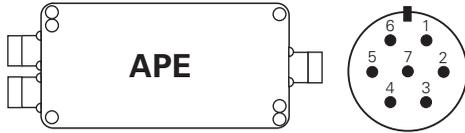
B, \bar{S} , \bar{W} :
 $U_H \geq [U_p - 2,2 \text{ V}]$
 ($-I_H \leq 20 \text{ mA}$)



$U_L \leq 1.8 \text{ V}$
 ($I_L \leq 100 \text{ mA}$)

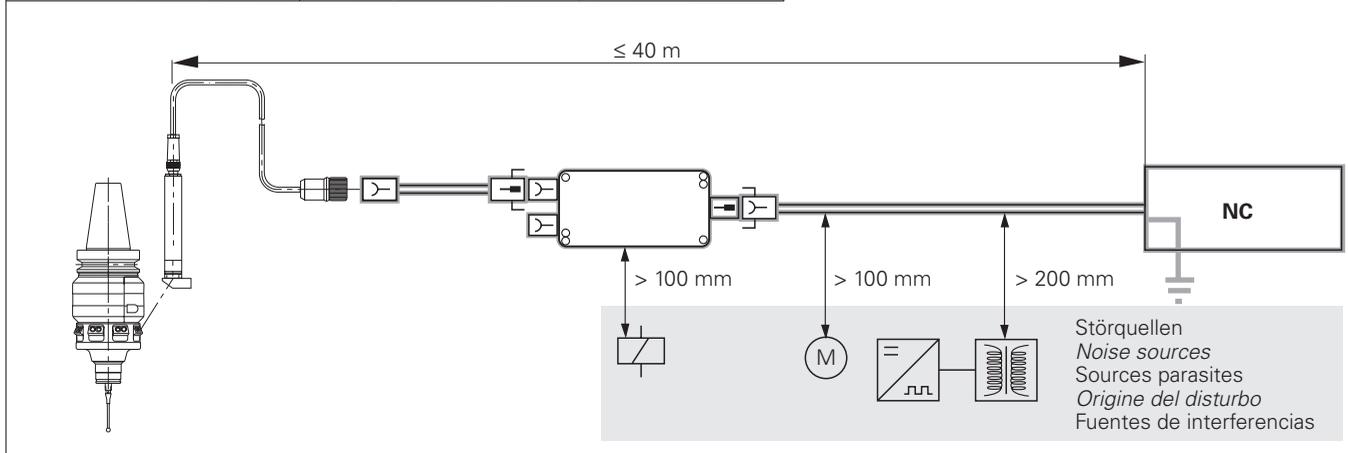


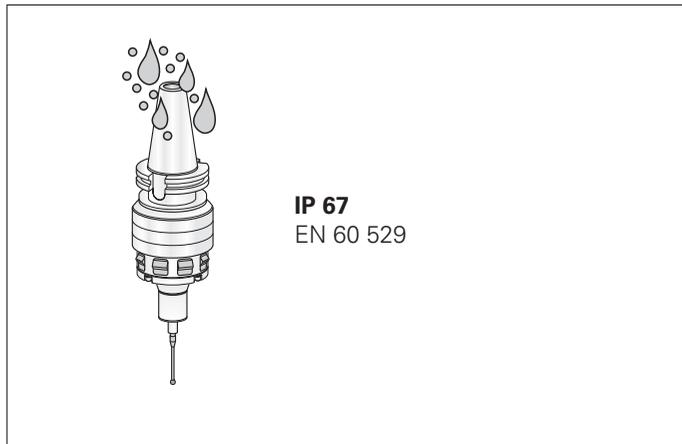
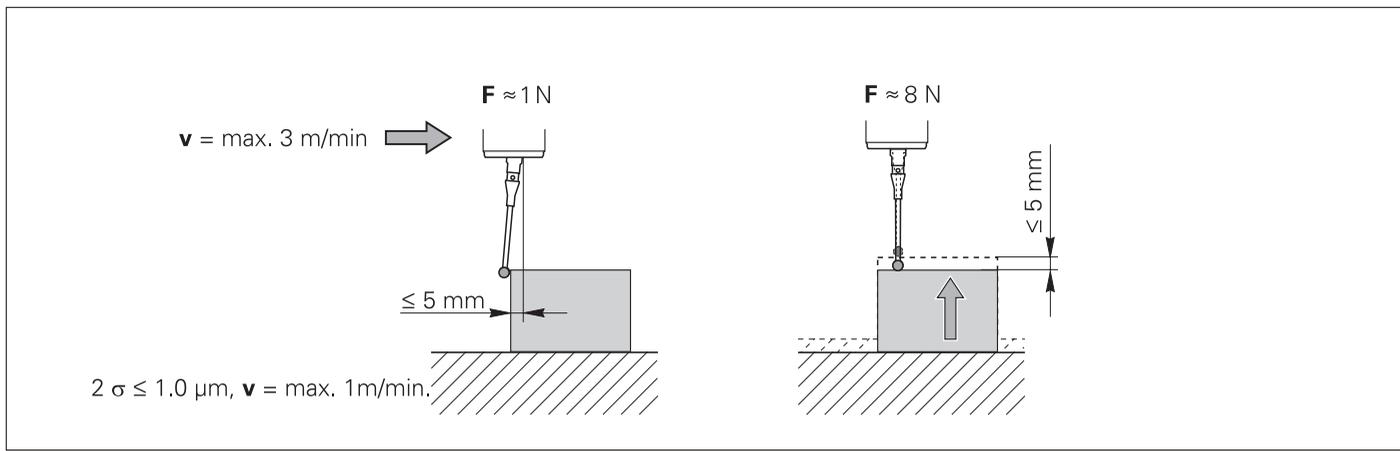
Elektrischer Anschluss · *Electrical Connection* · Raccordement électrique · *Collegamento elettrico* · Conexión eléctrica



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)

1	2	3	4	5	6	7
0 V U _N	15 ... 29 V U _P	R	S̄	B	W̄	Innenschirm <i>Internal shield</i> blindage interne <i>schermo interno</i> pantalla interna
weiß <i>white</i> blanc <i>bianco</i> blanco	braun <i>brown</i> brun <i>marrone</i> marrón	gelb <i>yellow</i> jaune <i>giallo</i> amarillo	grün <i>green</i> vert <i>verde</i> verde	grau <i>gray</i> gris <i>grigio</i> gris	blau <i>blue</i> bleu <i>azzurro</i> azul	weiß/braun <i>white/brown</i> blanc/brun <i>bianco/marrone</i> blanco/marrón





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