



HEIDENHAIN



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

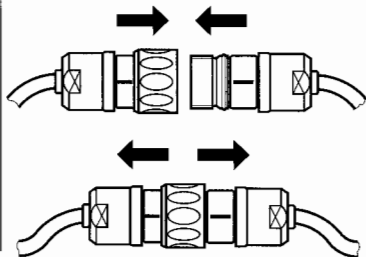
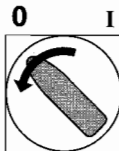
ERA 180

5/2000

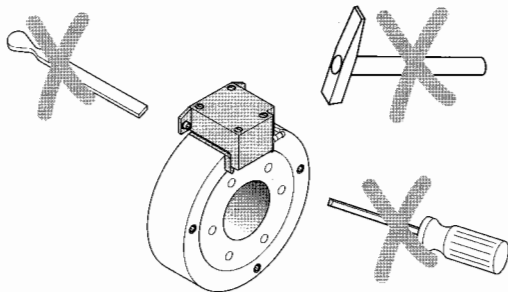
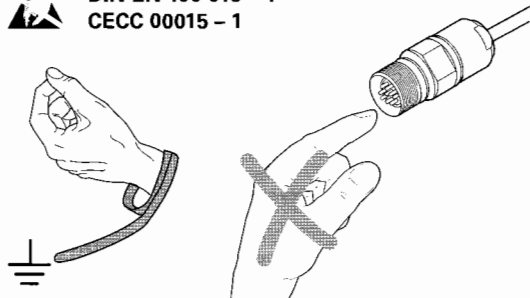


1.

2.



DIN EN 100 015 - 1
CECC 00015 - 1




ERA 180.xxxx

3 -3dB ≥ 250 kHz
-6dB ≥ 500 kHz

4 -3dB ≥ 500 kHz
-6dB ≥ 1 MHz

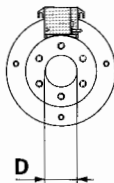
E R A 1 8 0 . 3 0 0 3 - 0 1 0 2 4

80

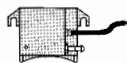
 1 V_{SS}
(U_p = 5 V)

D

1	∅ 180
2	∅ 120
3	∅ 80
4	∅ 40
5	∅ 270
6	∅ 425
7	∅ 512



00



02



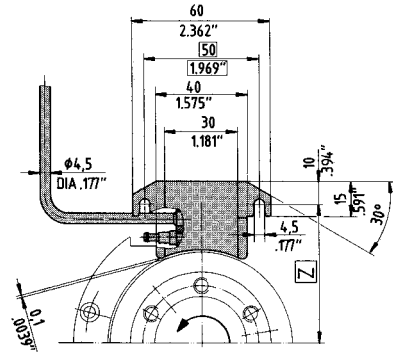
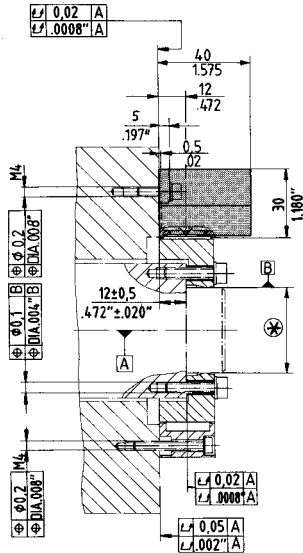
Z= Strichzahl
Line count
nombre de traits
numero di linee
número de impulsos

mm/inches



DIN ISO 8015

ISO 2768 - m H



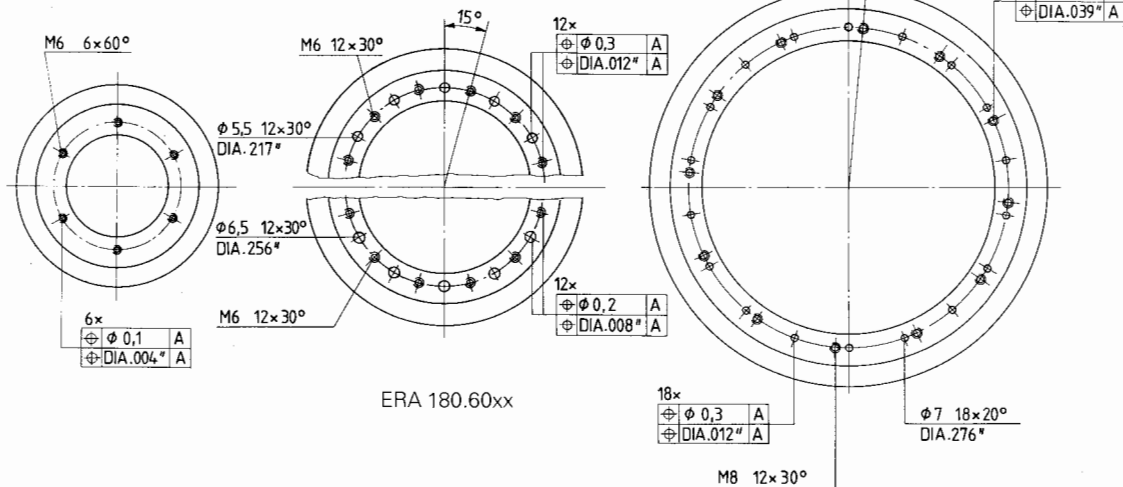
[A] = Lagerung
Bearing
roulement
cuscinetto
rodamiento

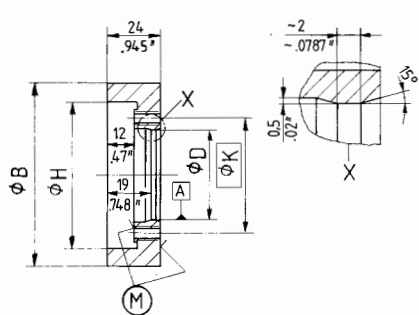
(*) = $\varnothing \cong D$ Haft- oder Schiebesitz
Wringing or sliding fit
ajustement collant ou glissant
accoppiamento forzato o scorrevole
ajuste fijo medio o ligero

ERA 180.10xx
 .20xx
 .30xx
 .40xx

ERA 180.50xx

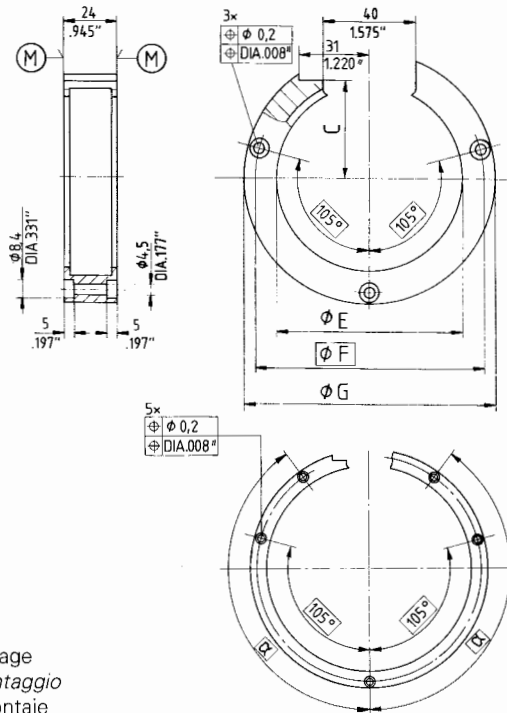
ERA 180.70xx



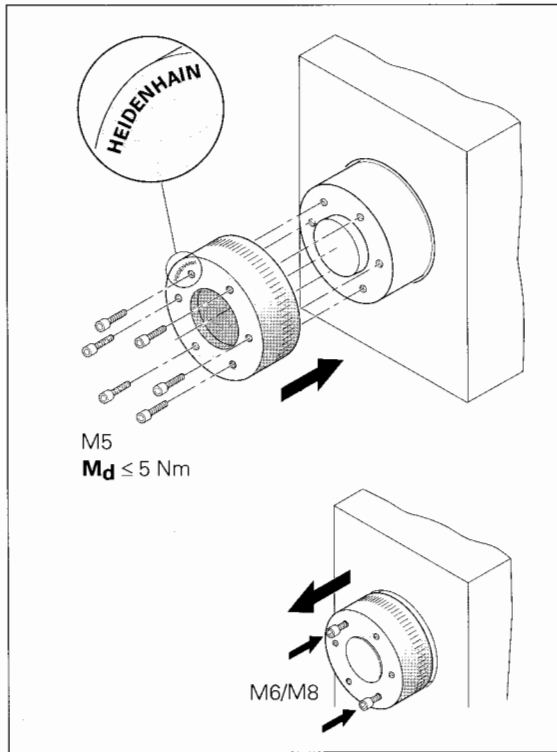
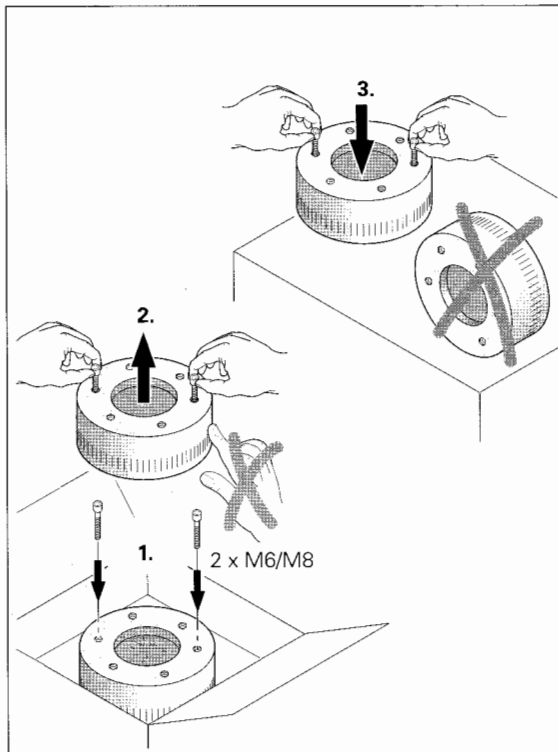


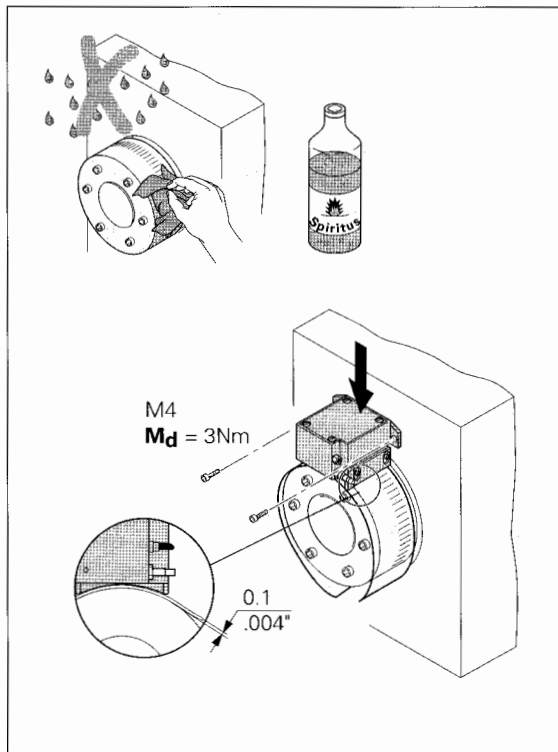
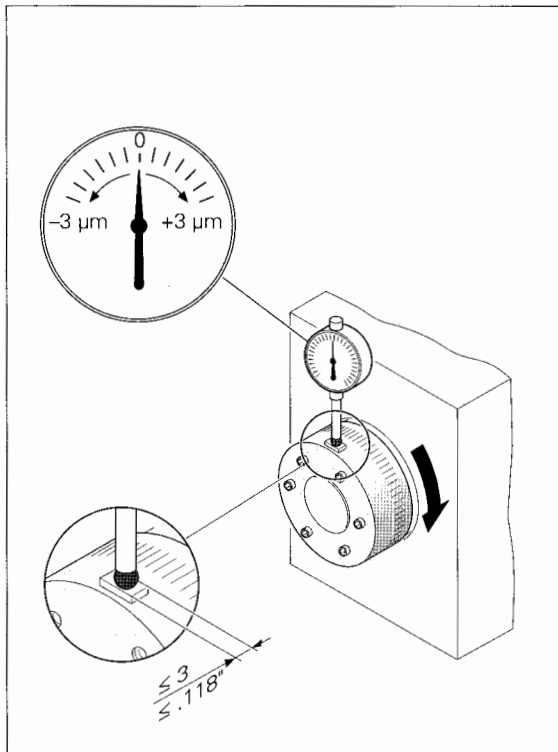
A = Lagerung
 Bearing
 roulement
 cuscinetto
 rodamiento

M = Montagefläche
 Mounting face
 surface de montage
 superficie di montaggio
 superficie de montaje

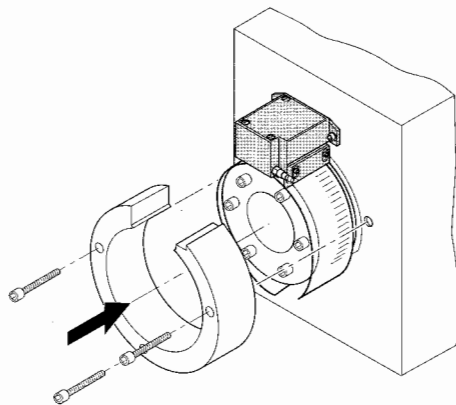


	$\varnothing D$	$\varnothing B$	$\varnothing H$	$\varnothing K$	$\varnothing E$	$\varnothing F$	$\varnothing G$	C	α	Z
180.10xx	180 -0.001 -0.008 7.086614 -0.0004" -0.003"	250 9.843"	232 9.134"	200 7.874"	250.4 9.858"	270 10.630"	280 11.024"	127.5 5.020"	150°	145 5.709"
180.20xx	120 -0.001 -0.008 4.724409 -0.0004" -0.003"	180 7.087"	162 6.378"	140 5.512"	180.4 7.102"	200 7.875"	210 8.268"	92.5 3.642"	144°	110 4.331"
180.30xx	80 -0.001 -0.005 3.149606 -0.0004" -0.002"	130 5.118"	112 4.409"	95 3.740"	130.4 5.134"	150 5.906"	160 6.299"	67.5 2.657"	-	85 3.346"
180.40xx	40 -0.001 -0.005 1.574803 -0.0004" -0.002"	80 3.149"	64 2.519"	50 1.969"	80.4 3.165"	100 3.937"	110 4.330"	42.5 1.673"	-	60 2.362"
180.50xx	270 -0.01 10.629921 -0.0004"	330 12.992"	312 12.283"	290 11.417"	-	-	-	-	-	185 7.283"
180.60xx	425 -0.01 16.732283 -0.0004"	485 19.094"	467 18.386"	445 17.520"	-	-	-	-	-	262.5 10.335"
180.70xx	512 -0.015 20.15748 -0.0006"	562 22.126"	544 21.417"	528 20.787"	-	-	-	-	-	301 11.850"

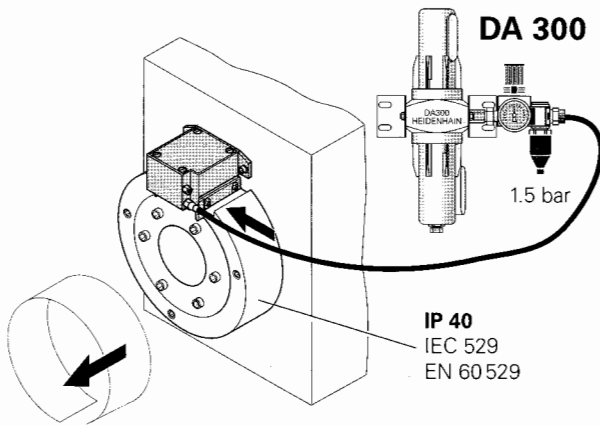




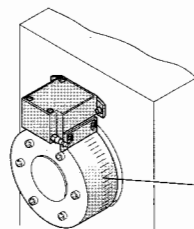
Id.-Nr. 339 284-xx



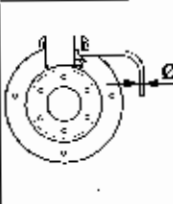
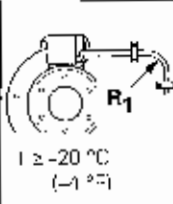
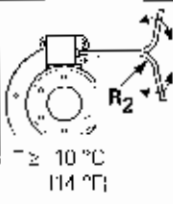
M4
M_d = 2.5 Nm

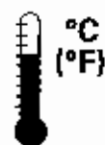


IP 40
IEC 529
EN 60 529



IP 00
IEC 529
EN 60 529

		
	$T \geq -20\text{ °C}$ (-4 °F)	$T \geq 10\text{ °C}$ (14 °F)
Ø 4.5 mm DIA .177 in.	$R_1 \geq 10\text{ mm}$ $R_1 > .4\text{ in.}$	$R_2 > 50\text{ mm}$ $R_2 \geq 2\text{ in.}$
Ø 8 mm DIA .315 in.	$R_1 \geq 40\text{ mm}$ $R_1 > 1.6\text{ in.}$	$R_2 \geq 100\text{ mm}$ $R_2 \geq 4\text{ in.}$

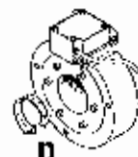


-10 ... 80 °C
(14 ... 176 °F)

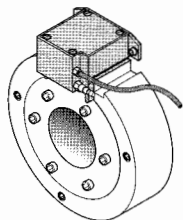


-30 ... 60 °C
(-22 ... 176 °F)

F	ERA 180.10xx	$F \leq \pm 3$
Genauigkeit Accuracy précision precisión	ERA 180.20xx	$F < \pm 3$
	ERA 180.30xx	$F \leq \pm 3$
	ERA 180.40xx	$F \leq \pm 5$
	ERA 180.50xx	$F \leq \pm 3$
	ERA 180.60xx	$F \leq \pm 2$
	ERA 180.70xx	$F \leq \pm 2$



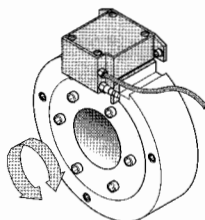
ERA 180.10xx	$n \leq 3\,000\text{ min}^{-1}$
ERA 180.20xx	$n \leq 8\,000\text{ min}^{-1}$
ERA 180.30xx	$n \leq 25\,000\text{ min}^{-1}$
ERA 180.40xx	$n \leq 40\,000\text{ min}^{-1}$
FRA 180.50xx	$n \leq 10\,000\text{ min}^{-1}$
ERA 180.60xx	$n \leq 7\,500\text{ min}^{-1}$
ERA 180.70xx	$n \leq 6\,000\text{ min}^{-1}$



$U_P = 5V \pm 10\%$
(max. 150 mA)



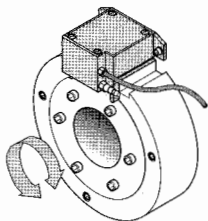
IEC 742
EN 50178



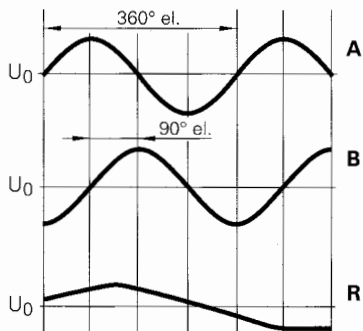
Z = Strichzahl
Line count
nombre de traits
numero di linee
número de impulsos

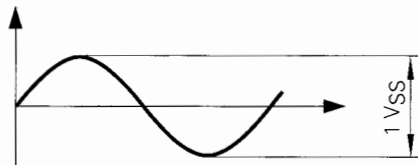
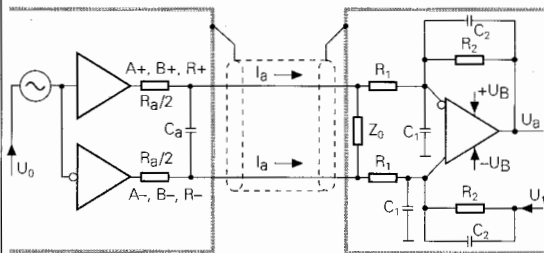
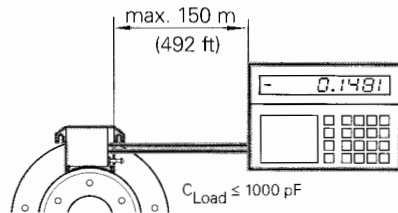
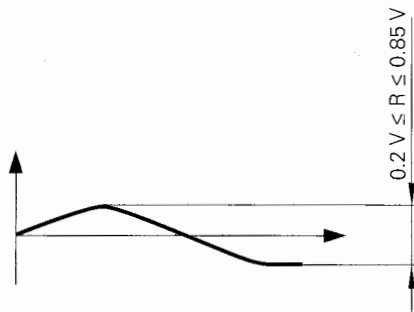
$$\text{ERA 180. xxx3: } n \leq \frac{250}{Z} \cdot 10^3 \cdot 60 \text{ min}^{-1} (-3\text{dB})$$

$$\text{ERA 180. xxx4: } n \leq \frac{500}{Z} \cdot 10^3 \cdot 60 \text{ min}^{-1} (-3\text{dB})$$



A, B, R



A, B**R**

$$R_a < 100 \Omega$$

$$C_a < 50 \text{ pF}$$

$$\Sigma I_a < 1 \text{ mA}$$

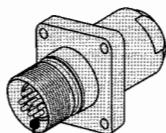
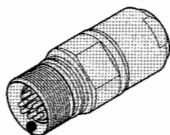
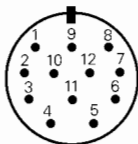
$$U_0 = 2.5 \text{ V} \pm 0.5 \text{ V}$$

$$Z_0 = 120 \Omega$$

$$U_1 \approx U_0$$

Id.-Nr. 291 698-03

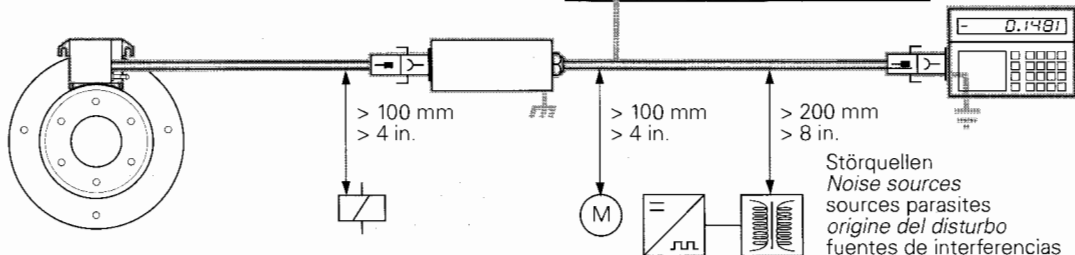
Id.-Nr. 291 698-14



5	6	8	1	3	4	12	10	2	11
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 marrón/verde	weiß/grün white/green blanc/vert bianco/verde blanco/verde	blau blue bleu azzurro azul	weiß white blanc bianco blanco

Schirm
Shield
blindage
schermo
blindaje

IEC 742 EN 50 178





HEIDENHAIN

DR. JOHANNES HEIDENHAIN GmbH


Dr.-Johannes-Heidenhain-Straße 5


83301 Traunreut, Germany


 +49/86 69/31-0

 +49/86 69/50 61

e-mail: info@heidenhain.de

 **Service** +49/86 69/31-12 72

 TNC-Service +49/86 69/31-14 46

 +49/86 69/98 99

e-mail: service@heidenhain.de

<http://www.heidenhain.de>

