



Fagor Automation S. Coop.

Manual code: 14460195

Manual version: 1511



ENCODER HAP-D200

MANUAL DE INSTALACIÓN
INSTALLATION MANUAL

FAGOR AUTOMATION S. COOP.

B^a San Andrés N° 19

Apdo de correos 144

20500 Arrasate/Mondragón

- Spain -

Web: www.fagorautomation.com

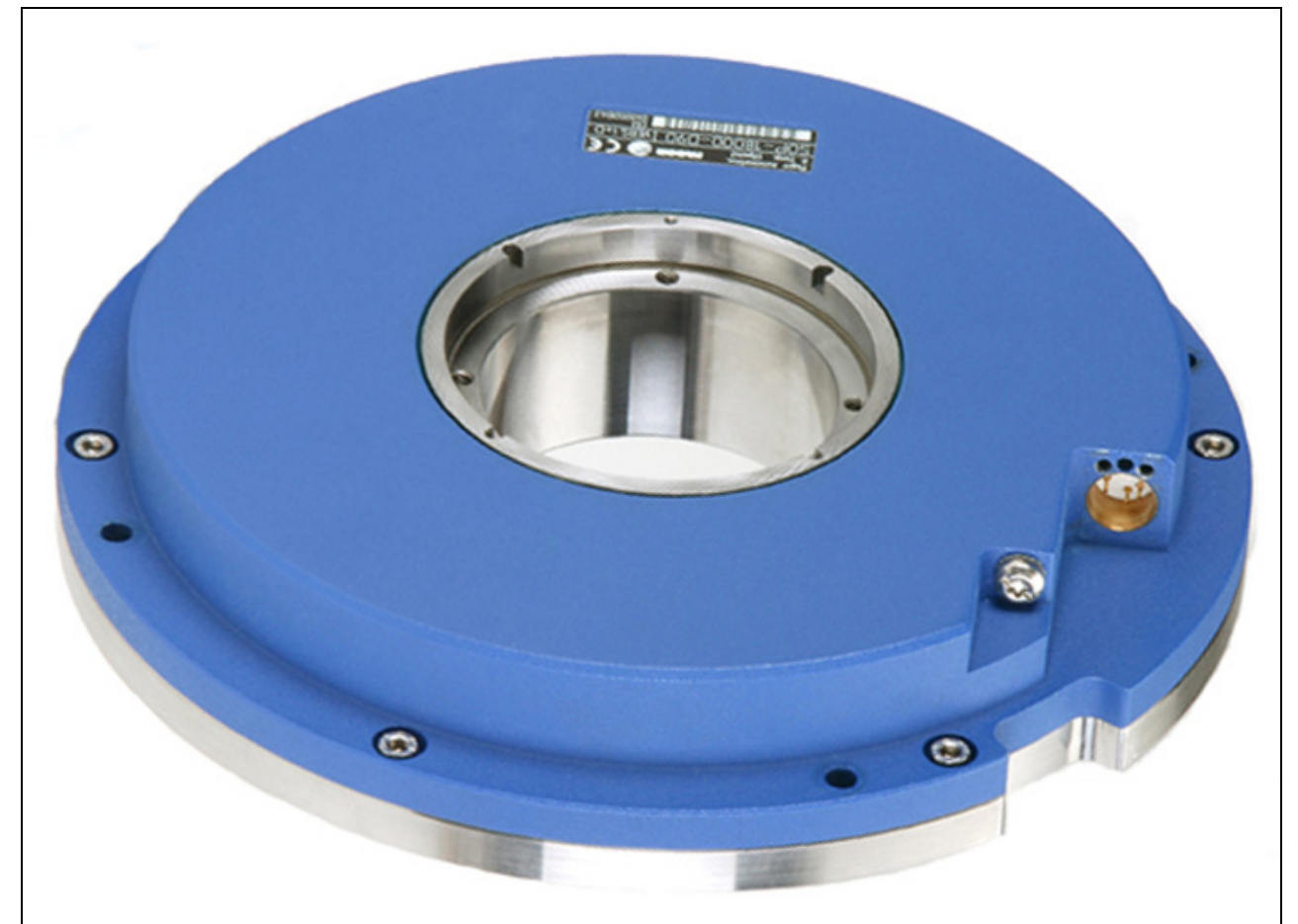
Email: info@fagorautomation.es

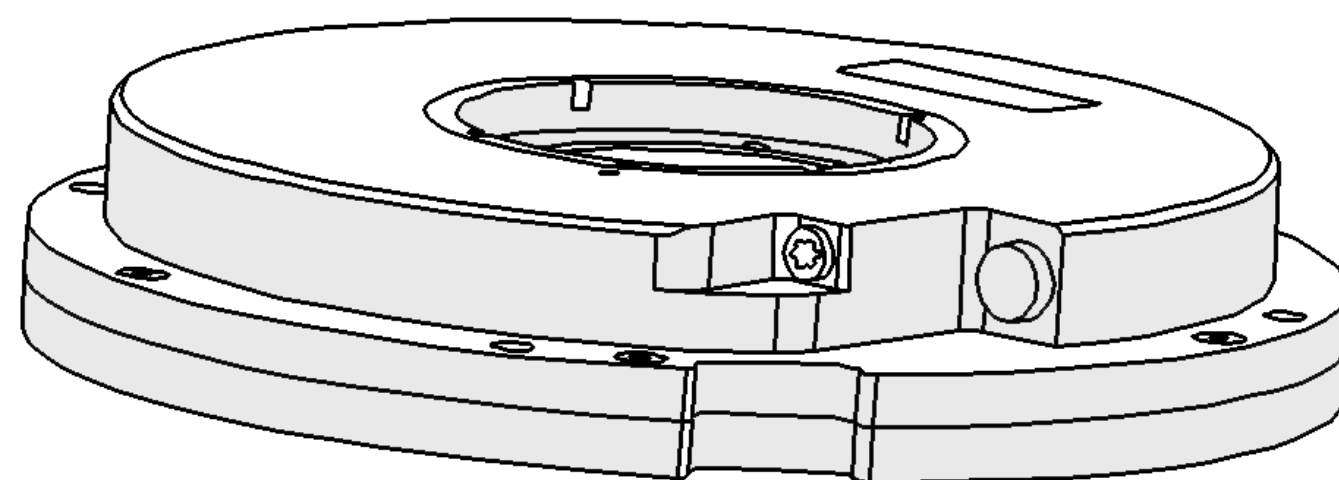
Tel.: (34) 943 719200

Fax: (34) 943 791712



Fagor Automation S. Coop.





MANUAL

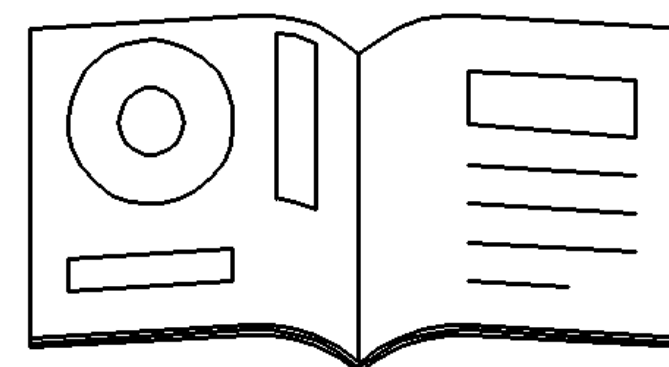
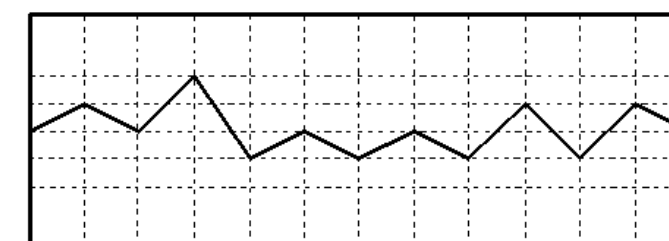
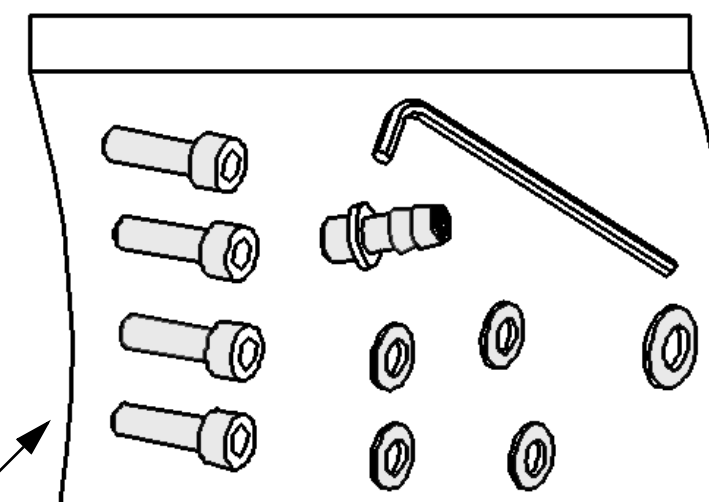


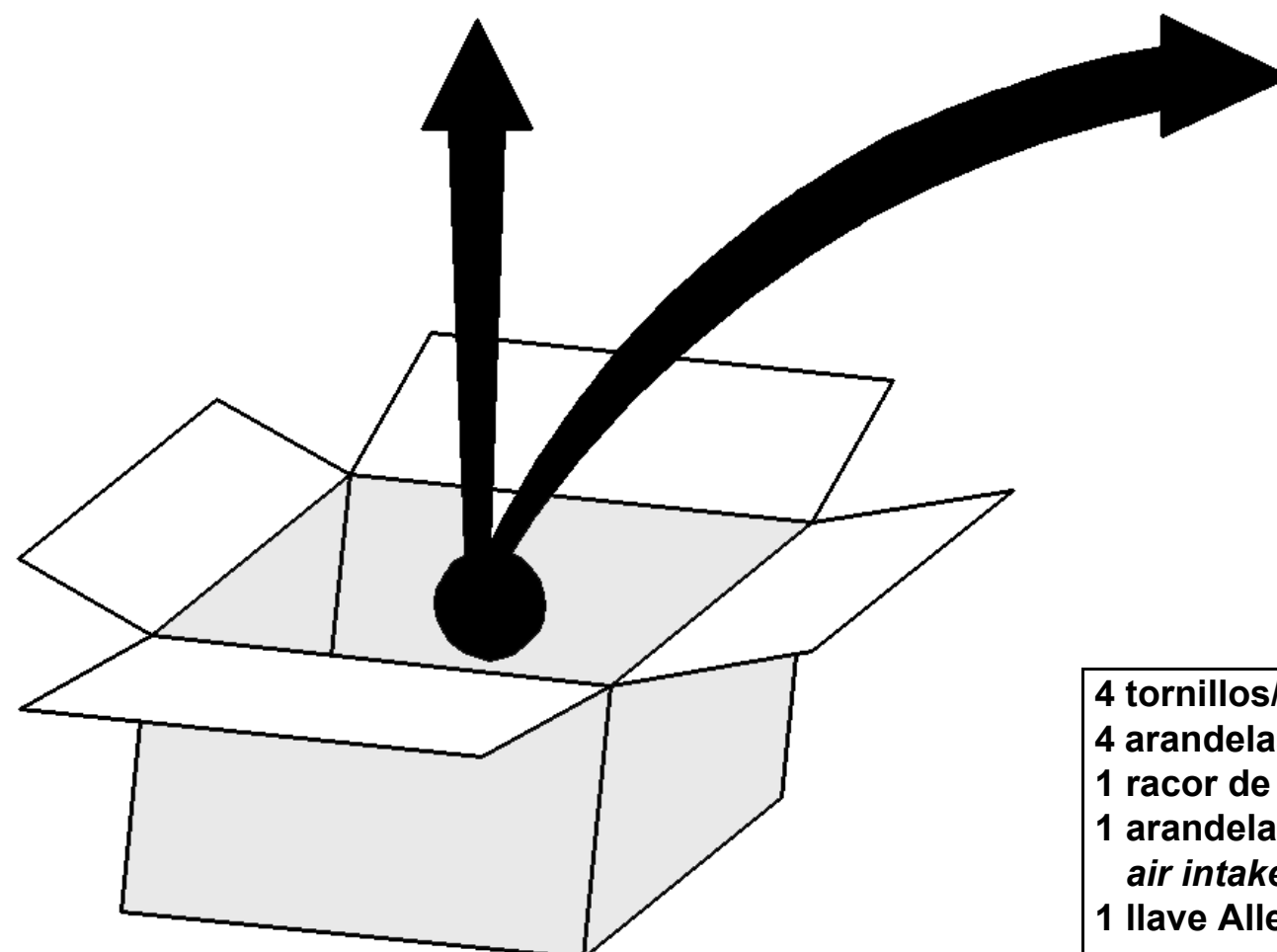
GRÁFICO
GRAPH



ACCESORIOS
ACCESSORIES

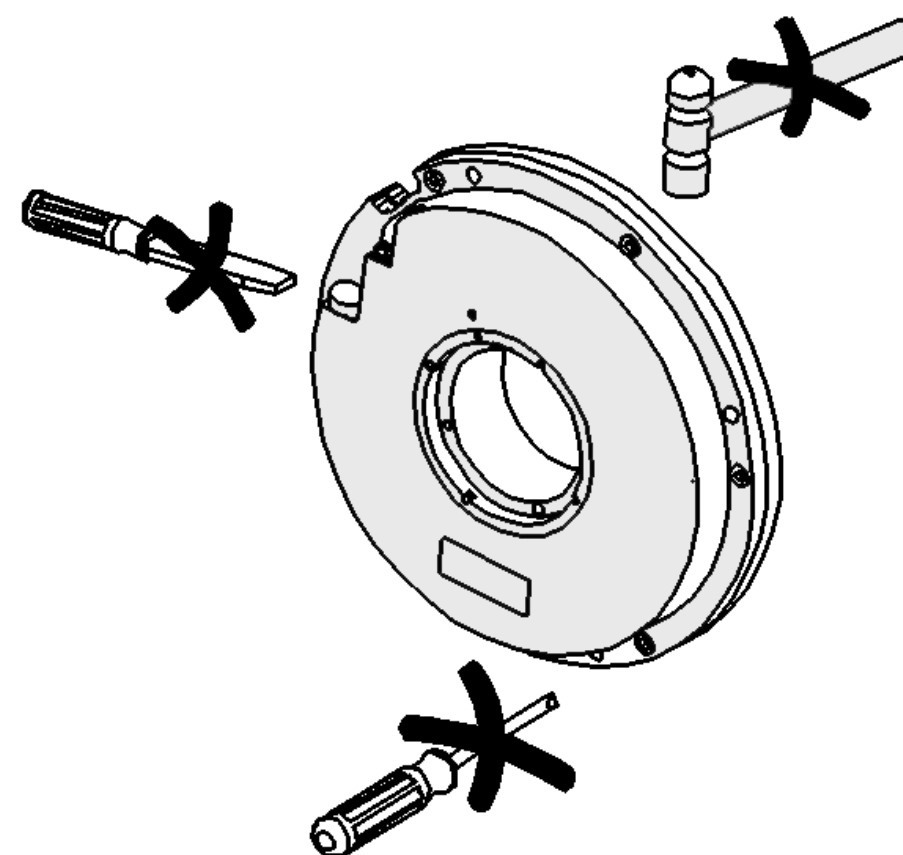
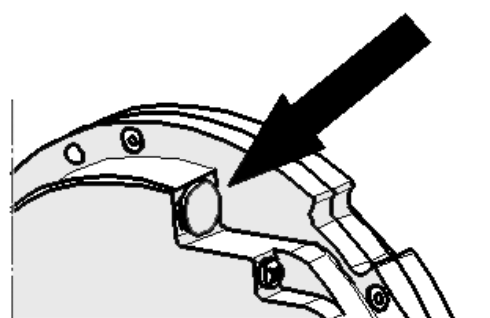
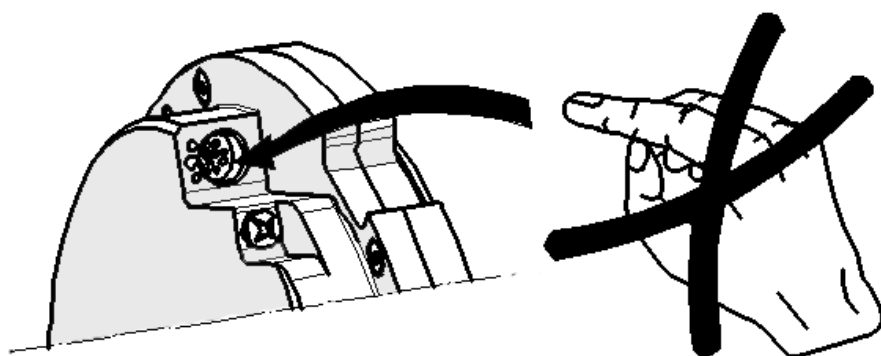
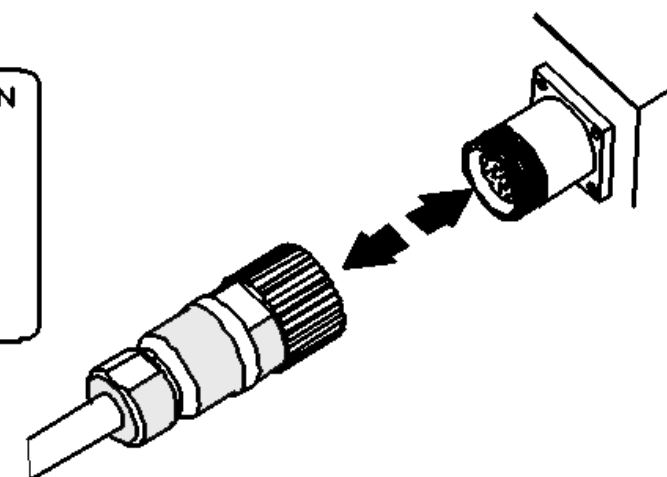
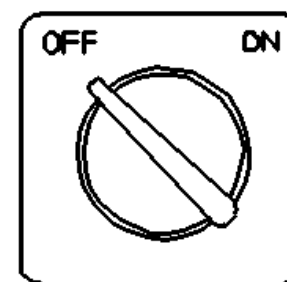
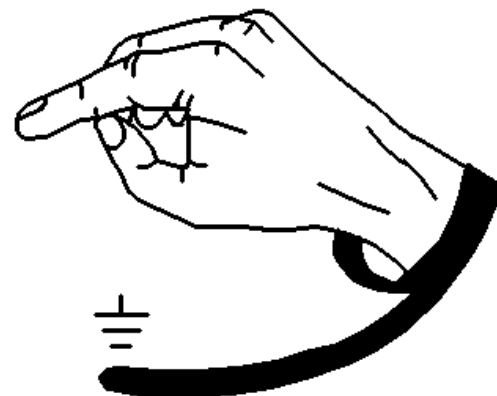


4 tornillos/bolts M5 x 25 DIN 912
4 arandelas/washers M5 DIN 125
1 racor de aire / air intake
1 arandela racor de aire /
air intake washer
1 llave Allen / Allen wrench

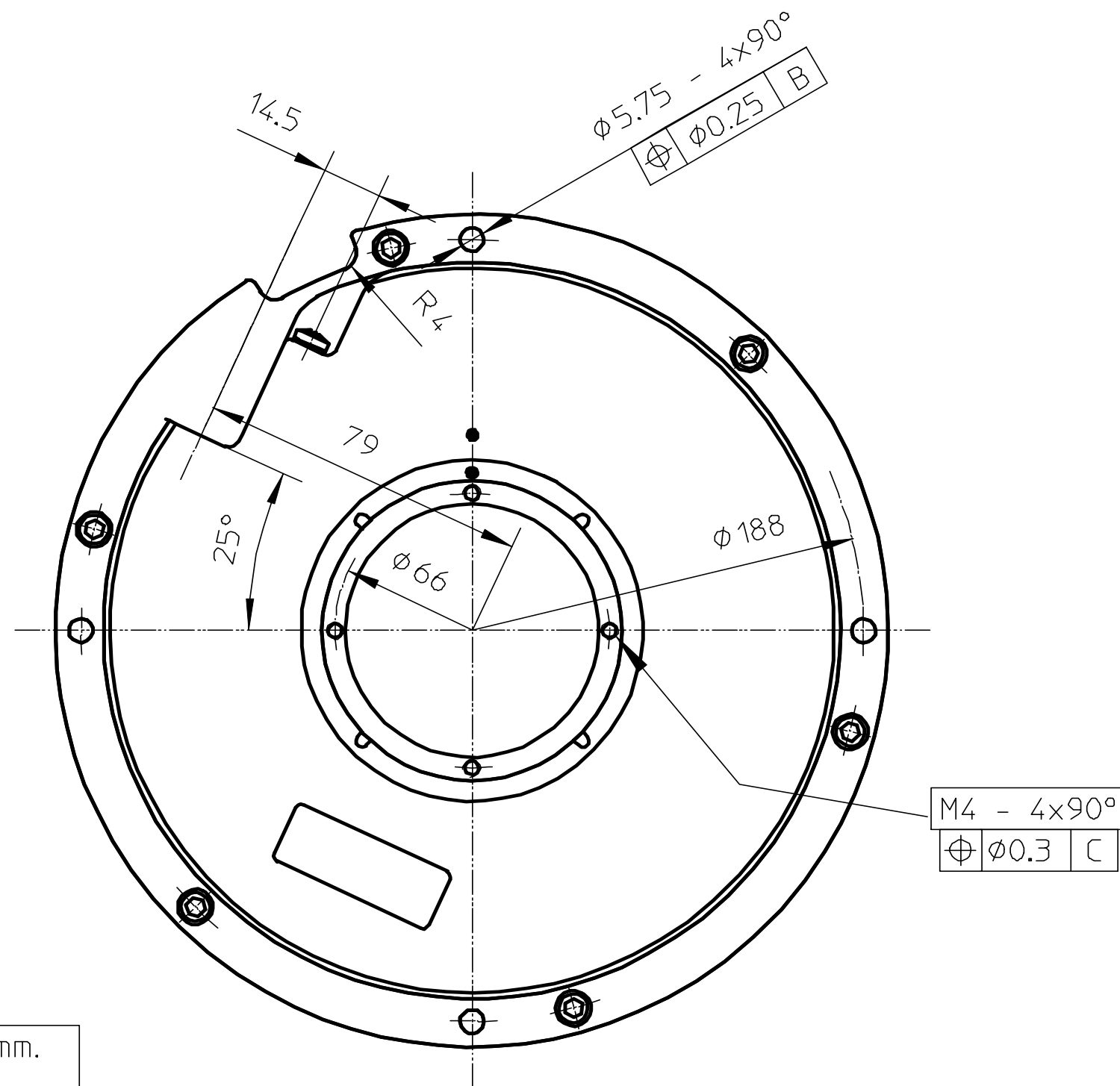




DIN EN 100



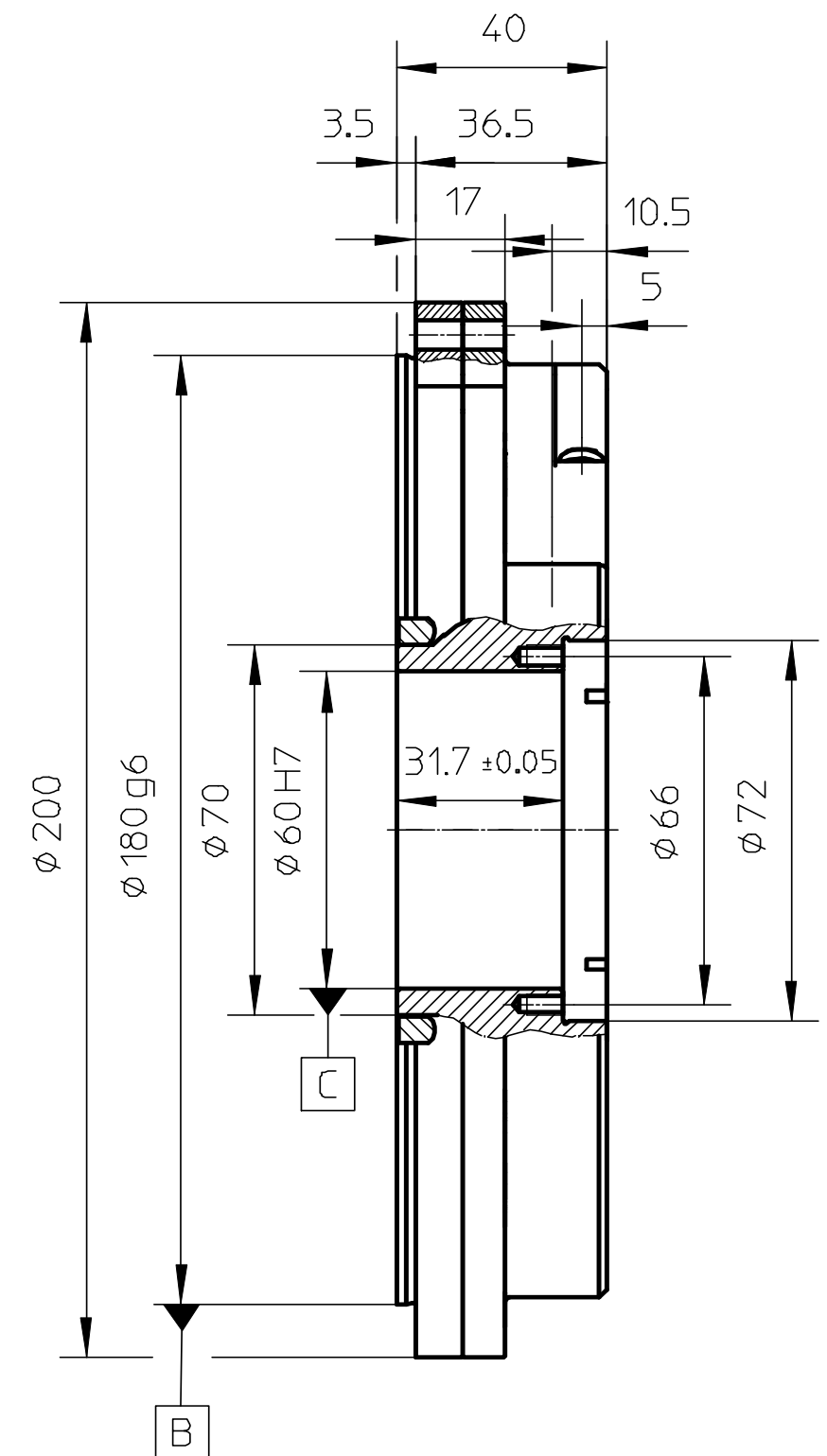
GENERAL DIMENSIONS



Dimensions in mm.



Tolerance ISO 8015
ISO 2768 - m H

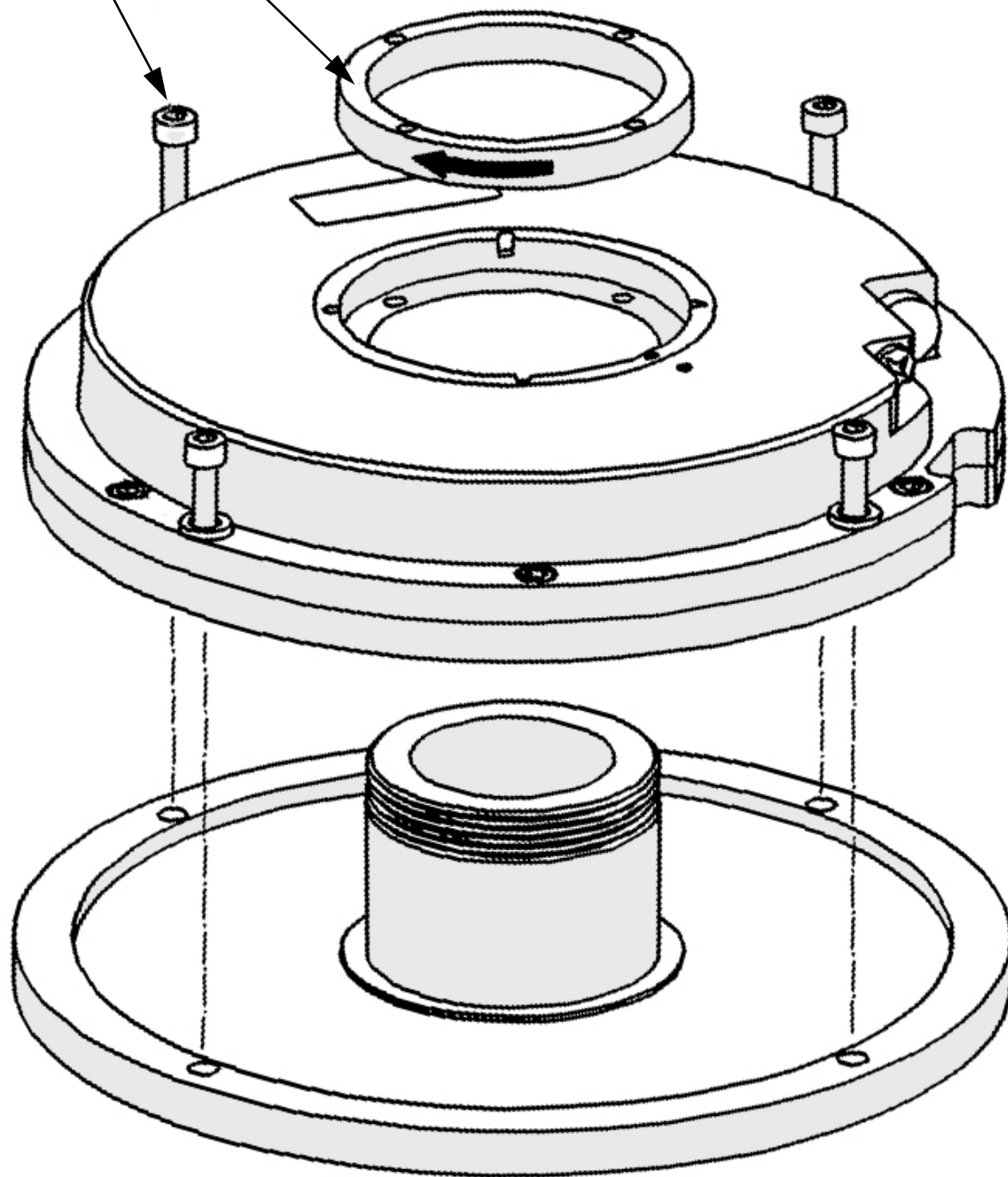


MONTAJE / MOUNTING

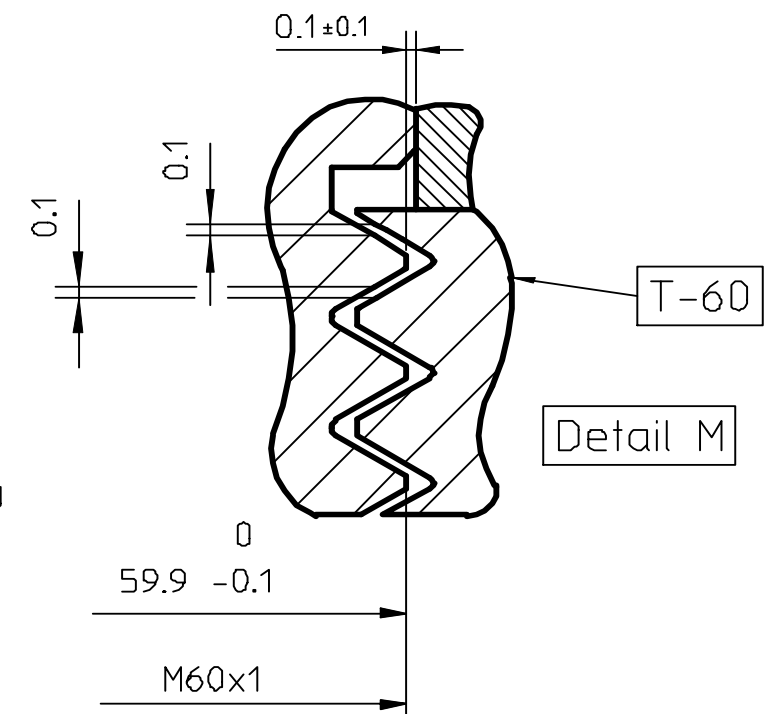
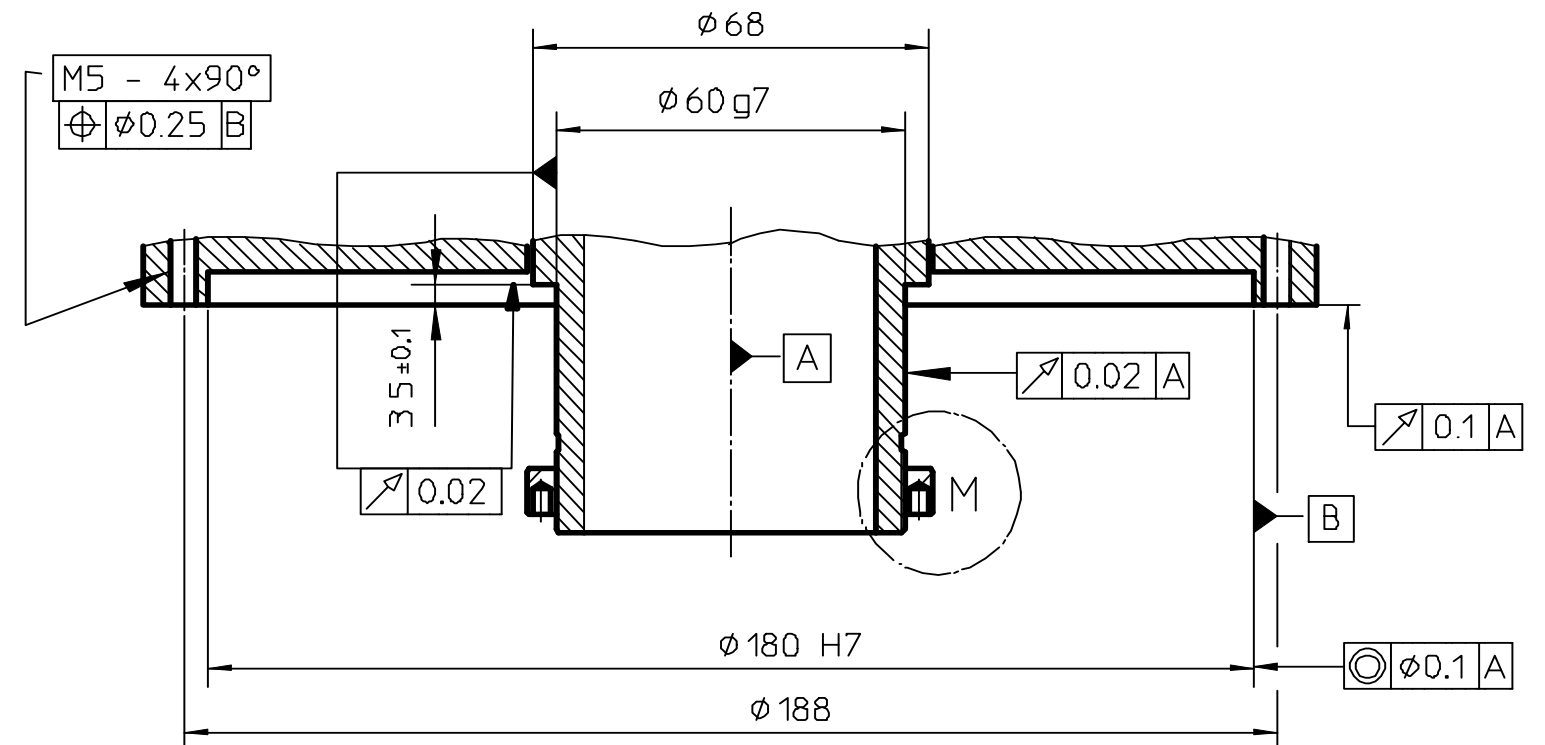
4 M5 DIN 125

4 M5 DIN 912, T = 5 Nm

T = 20 Nm T-60 (ver página 10 / see page 10)



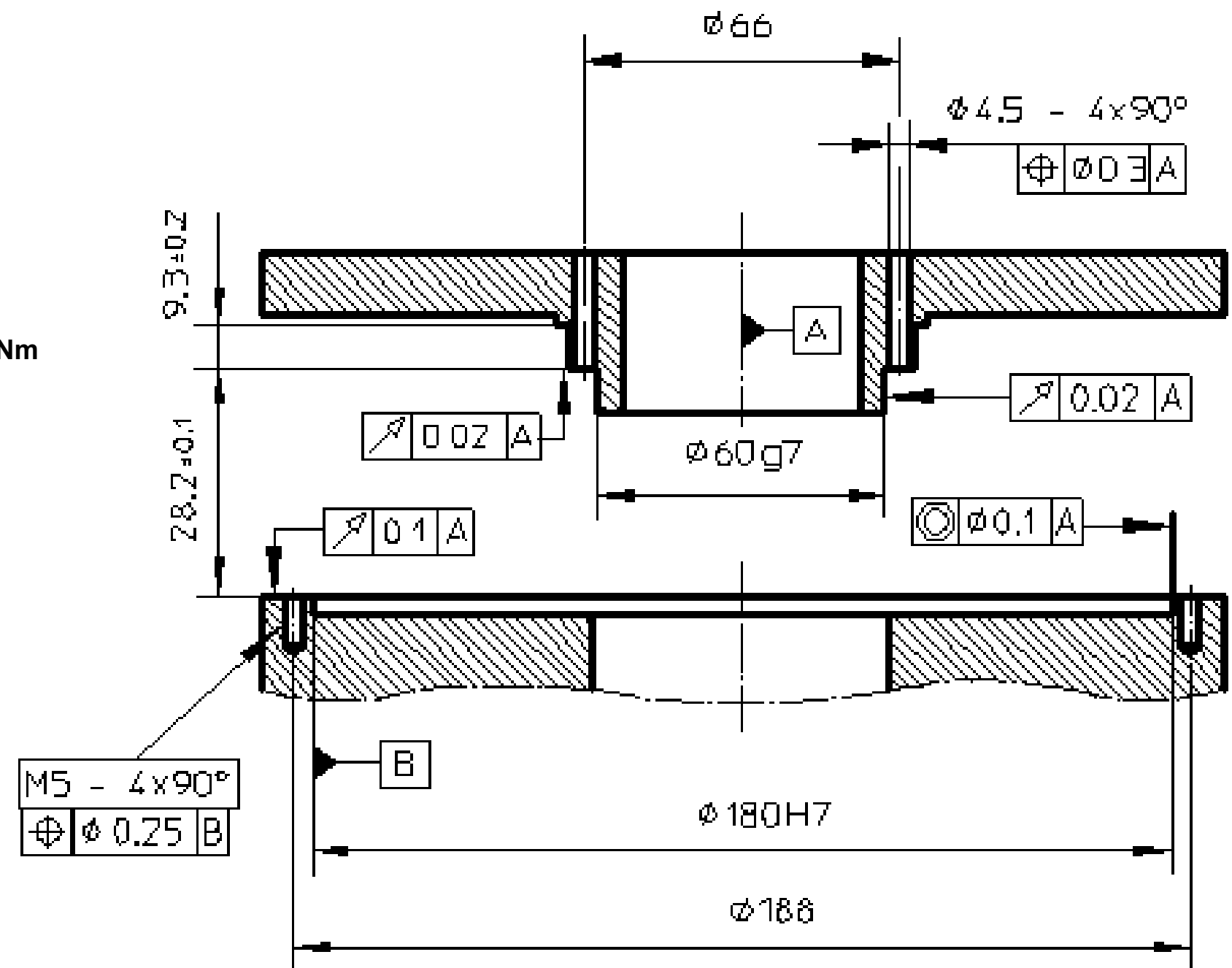
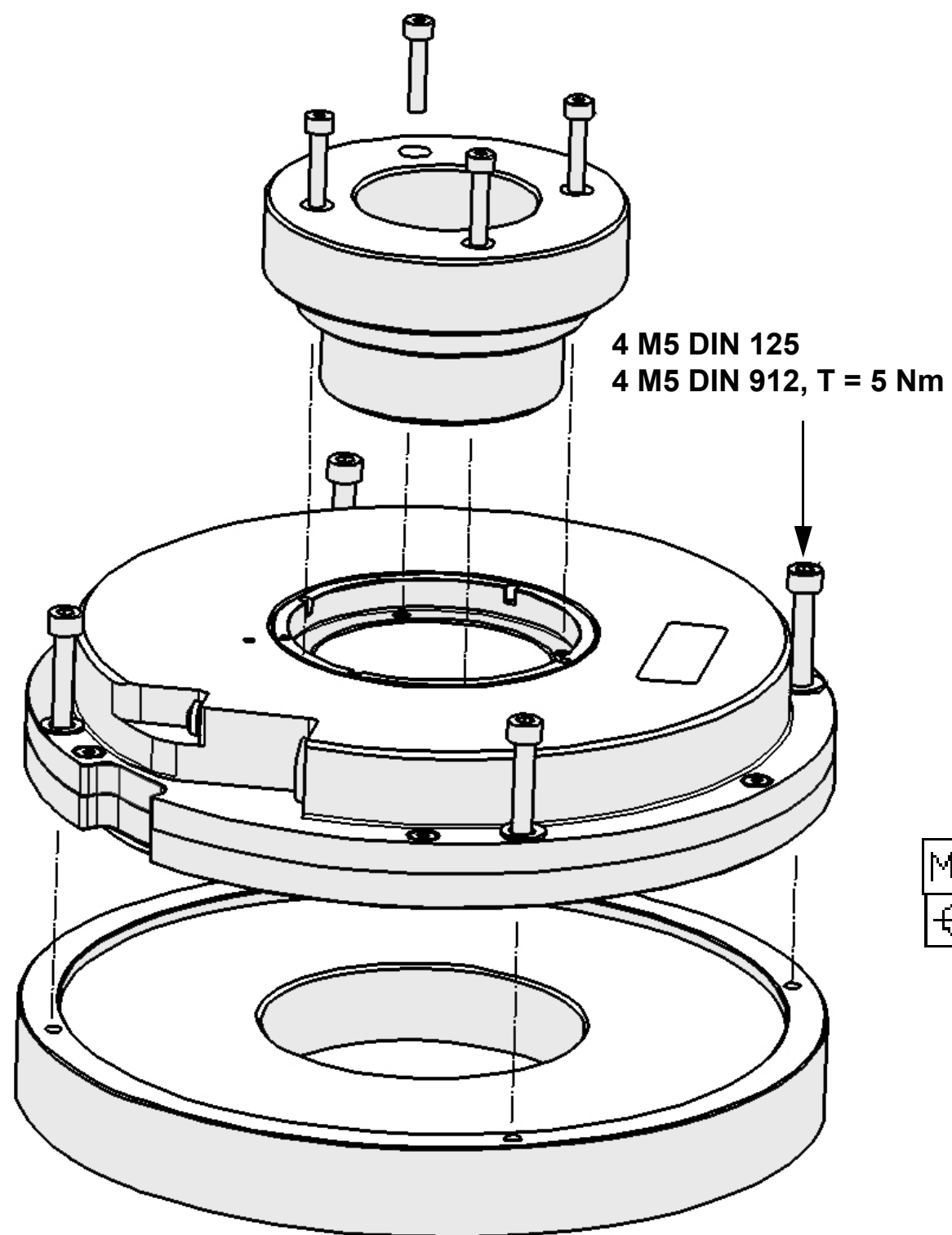
Cotas de montaje / Mounting dimensions



A Rodamiento / Roller bearing

MONTAJE / MOUNTING

Cotas de montaje / *Mounting dimensions*



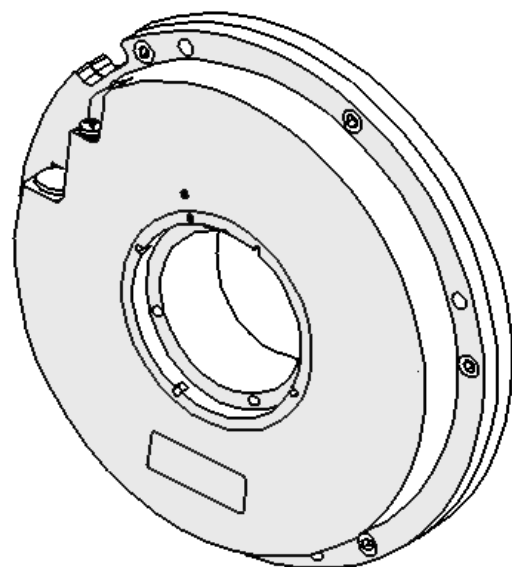
CARACTERÍSTICAS MECÁNICAS

MECHANICAL CHARACTERISTICS

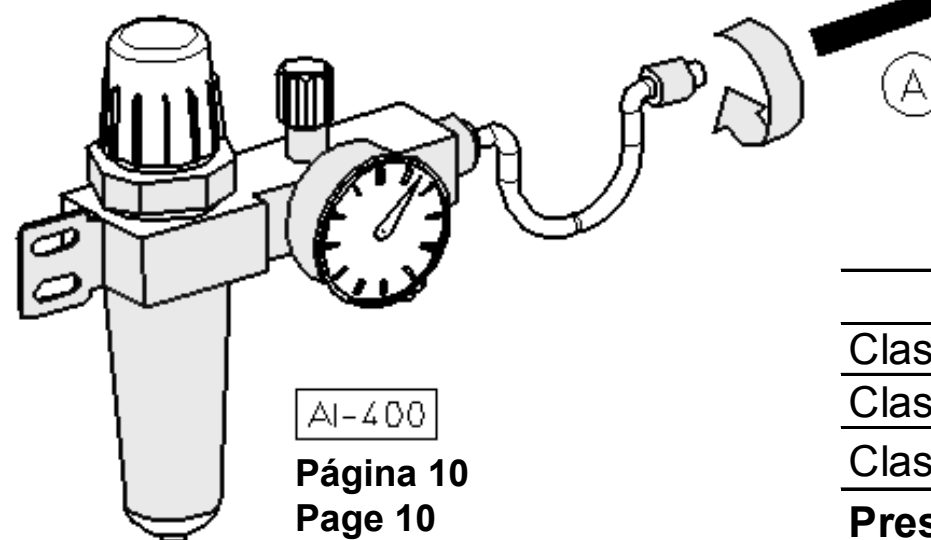
Modelo	HAP-23-D200-2	Model
Precisión	±2"	Accuracy
Maxima velocidad de giro	1000 rpm *	Max. Turning speed
Momento de inercia del eje	10000 gr.cm2	Inertia of the rotor
Par (20°C)	≤ 0.05 Nm	Torque
Frecuencia natural	≥ 1000 Hz	Natural frequency
Peso	3.2 kg	Weight
Estanqueidad	IP-64 (DIN 40050)	Sealing protection
Vibración (55 - 2000 Hz)	100 m/s2 (IEC 60 068-2-6)	Vibration (50 - 2000 Hz)
Impacto (6ms)	1000 m/s2 (IEC 60 068-2-27)	Impact (6 ms)
Temperatura de funcionamiento	0 °C ... 50 °C (32 °F ... 122 °F)	Operating temperature
Temperatura de almacenamiento	-30 °C ... 80 °C (-22 °F ... 176 °F)	Storage temperature

* Limitación eléctrica = 750 rpm / Electrical limitation = 750 rpm

Nivel máximo: IP 64
Maximum level IP 64



> IP 64



AI-400

Página 10
 Page 10

(A) AIR CONDITIONS

DIN ISO 8573 - 1

Class 1 - Particle Max. 0.1 μm

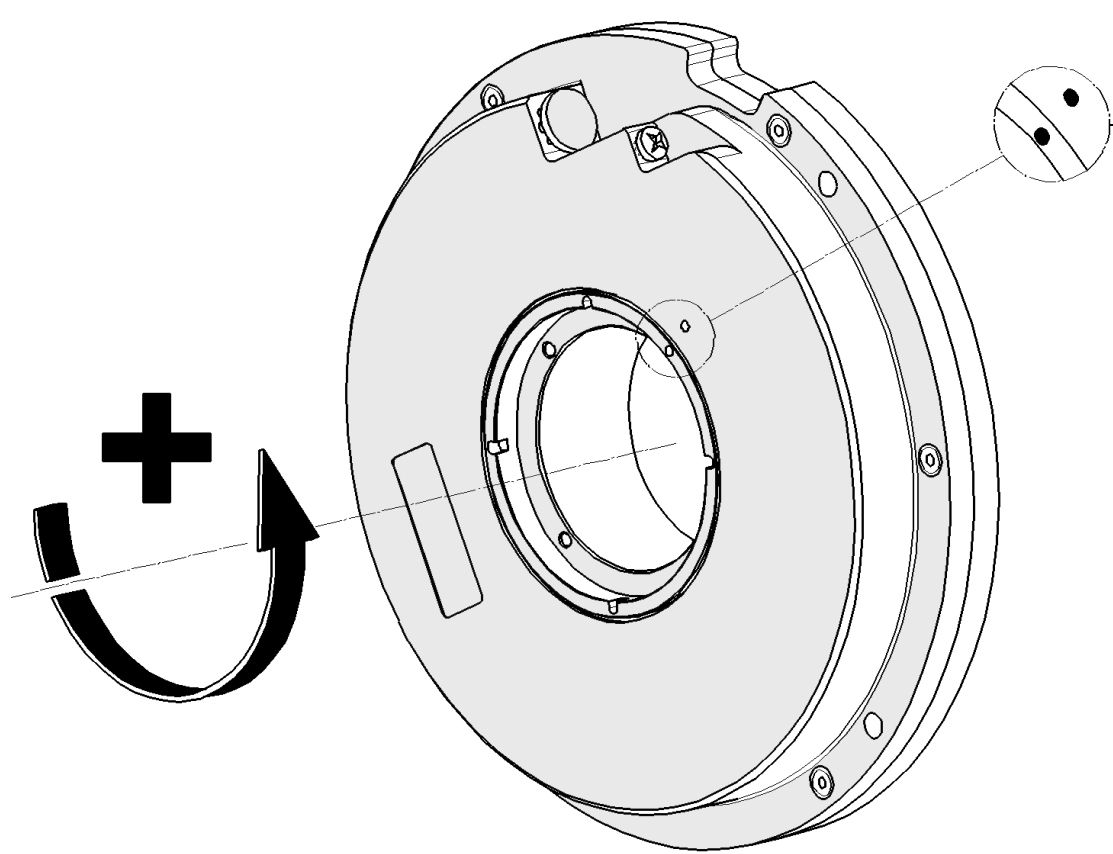
Class 4 (7 bar) - Punto rocío / Dewpoint 3 $^{\circ}\text{C}$

Class 1 - Max. Oil concentration 0,01 mg/m^3

Presión / Pressure 1 kg/cm^2

Flujo / Flow 10 l./min/encoder

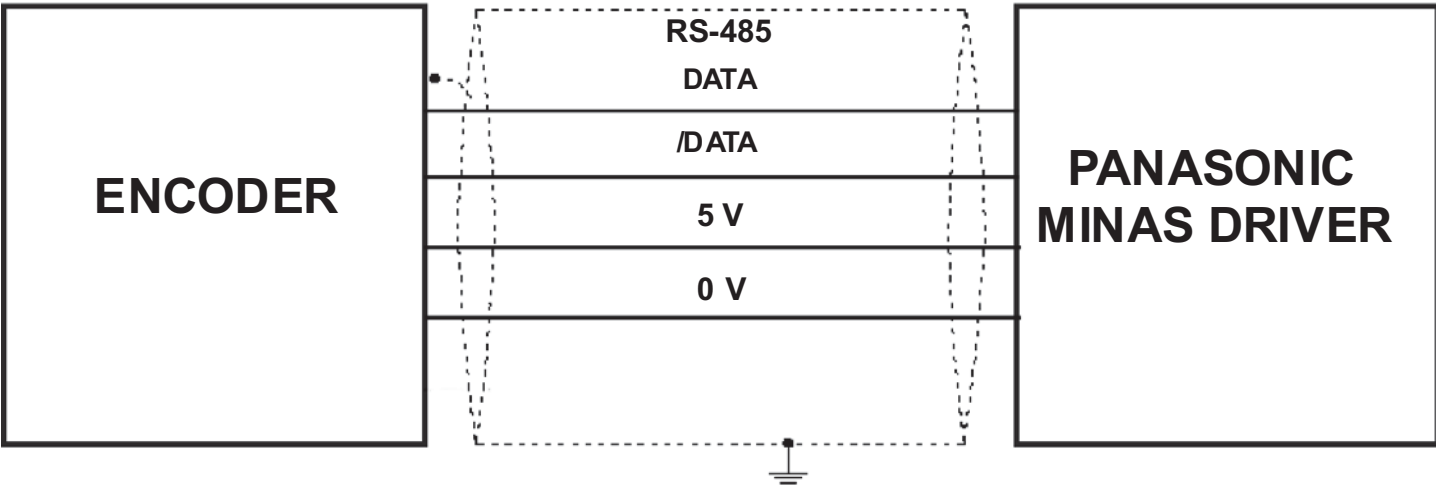
CARACTERÍSTICAS ELÉCTRICAS / ELECTRICAL

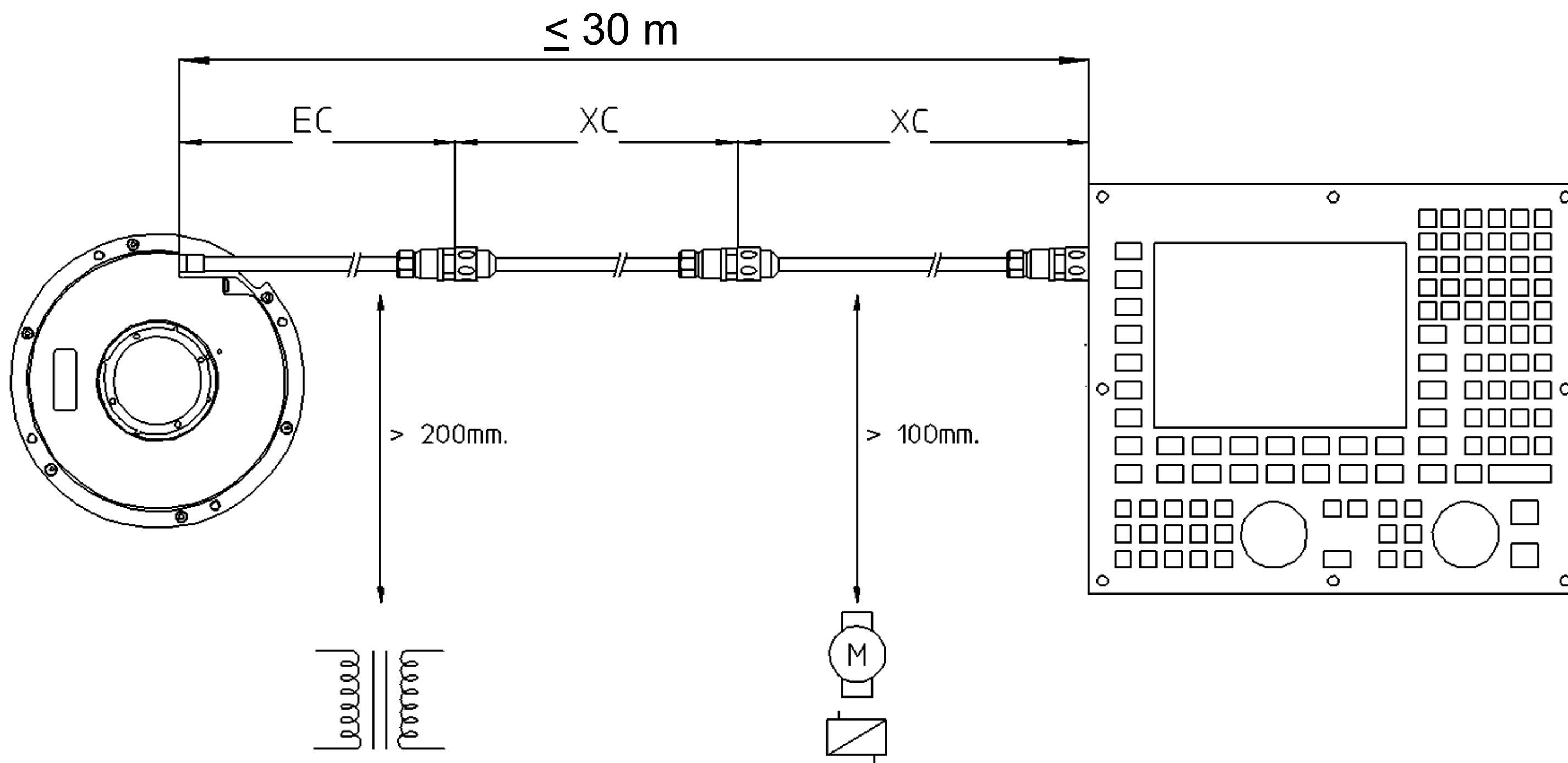


Posición del origen 0°
0° origin position

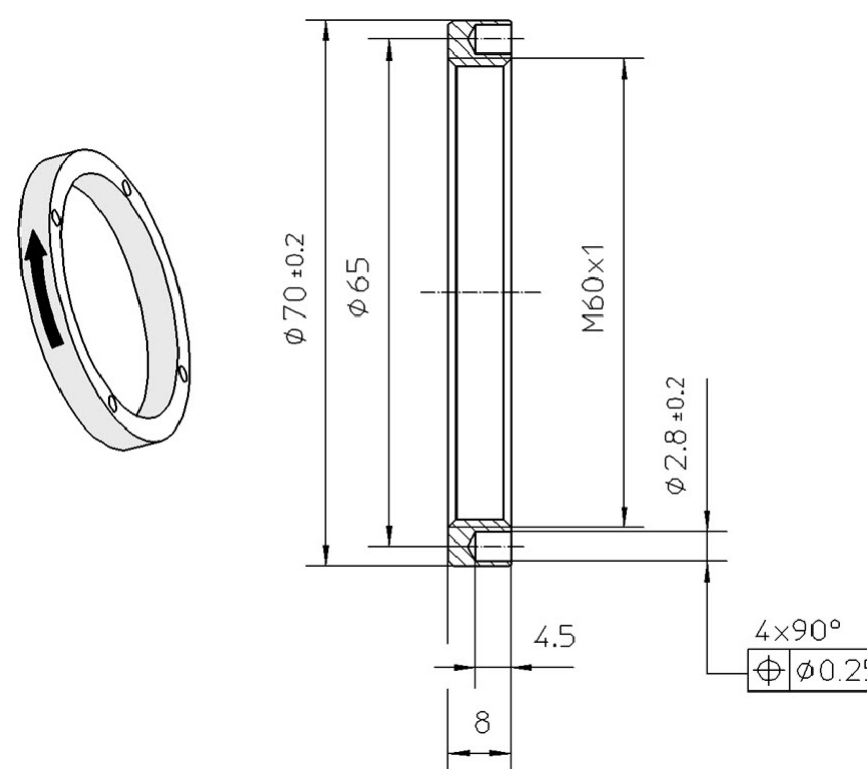
Girar eje para alinear puntos
Turn the shaft ligning up the dots

HAP-23-D200-2	
Resolución <i>Resolution</i>	23 bit (8 388 608) Pulsos / vuelta <i>pulses / turn</i>
Alimentación <i>Power supply</i>	3.6 V ... 5.25 V, <300 mA
Conexión <i>Connection</i>	Con conector incorporado <i>With built-in connector</i>
Longitud de cable <i>Cable length</i>	30 m 99 feet

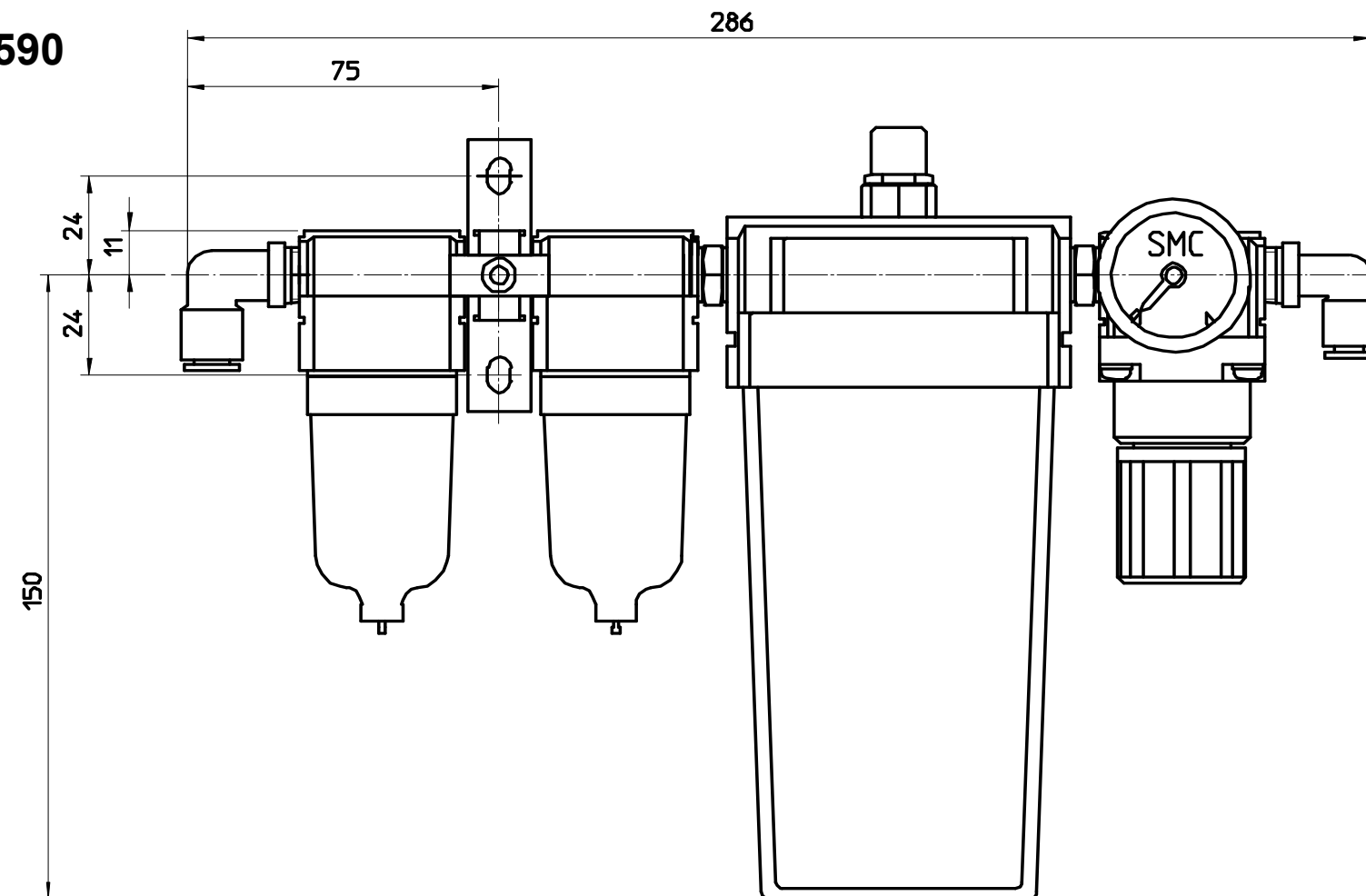




TUERCA / NUT



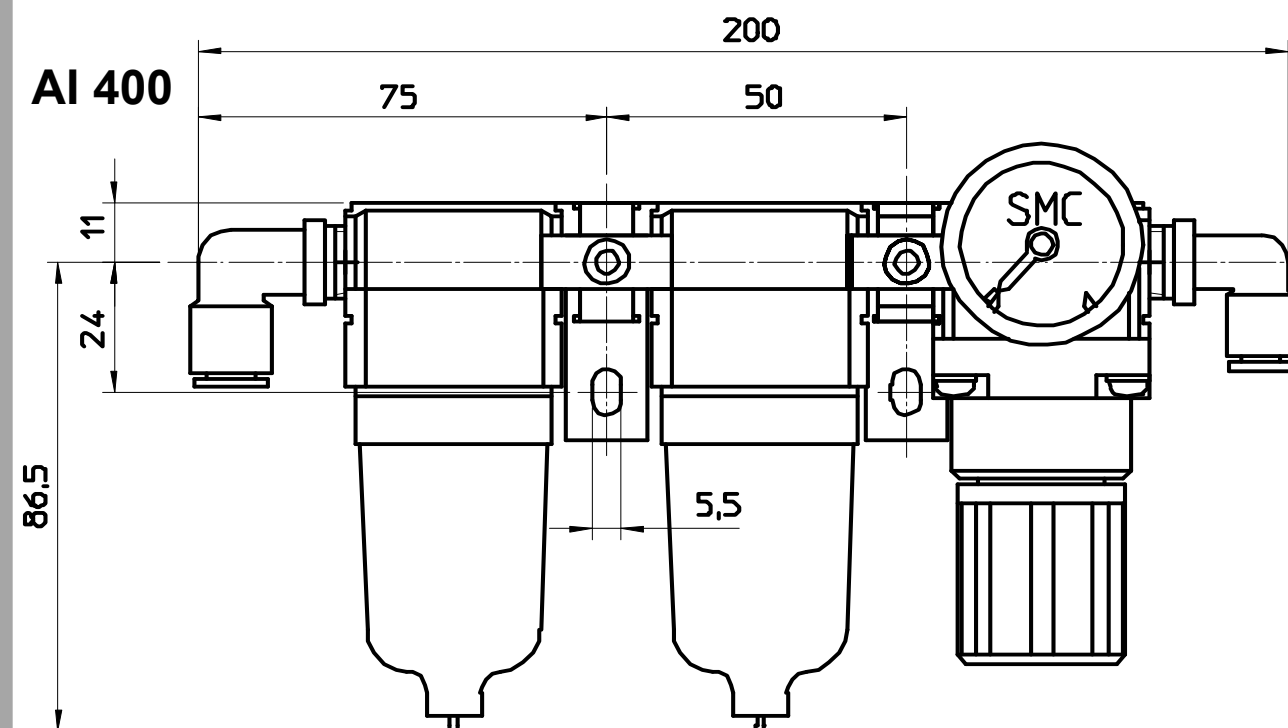
AI 590



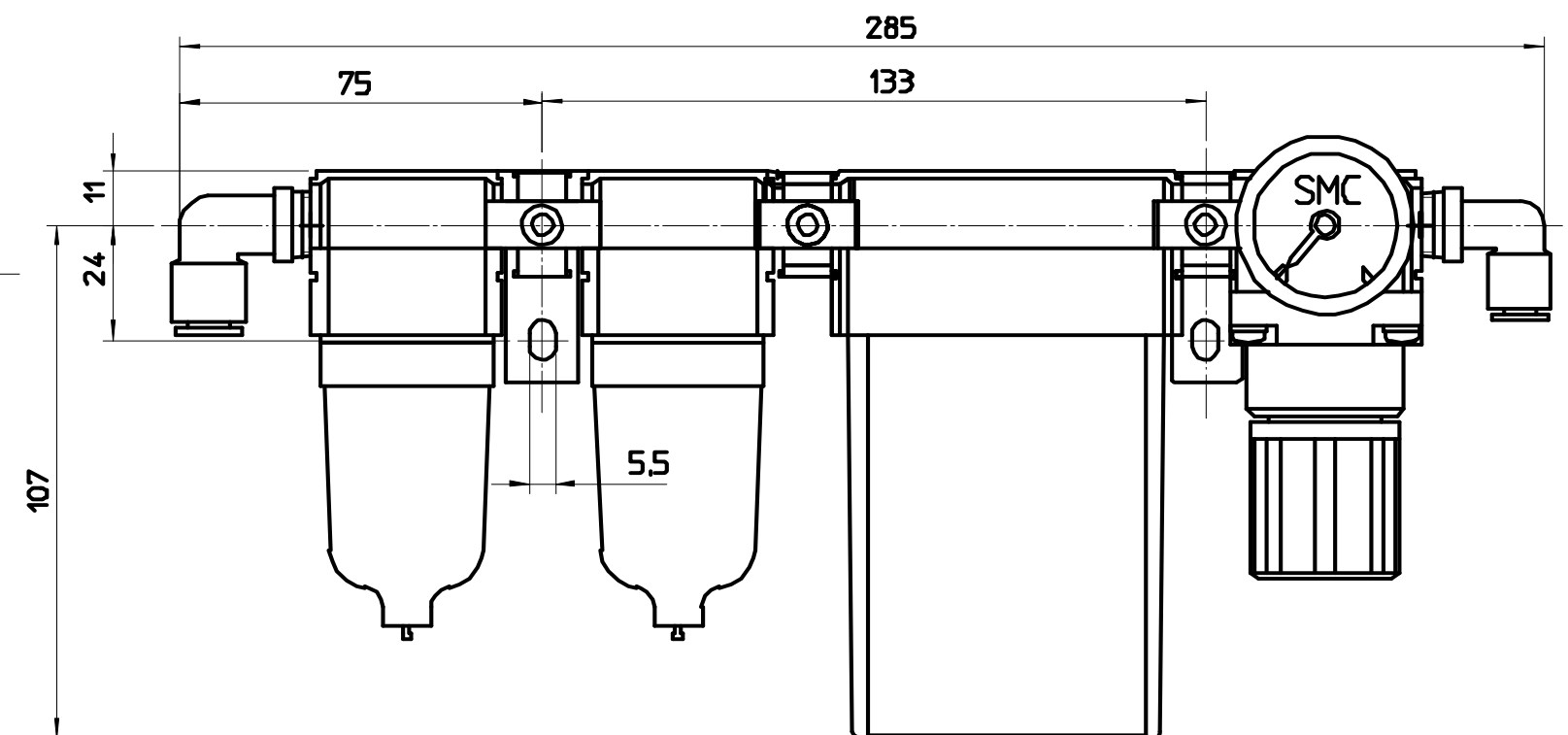
FILTROS DE AIRE / AIR FILTERS

02200000	AI 400	25 l/min
02200001	AI 525	25 l/min
02200002	AI 550	50 l/min
02200003	AI 590	90 l/min

AI 400



AI 525 / AI 550



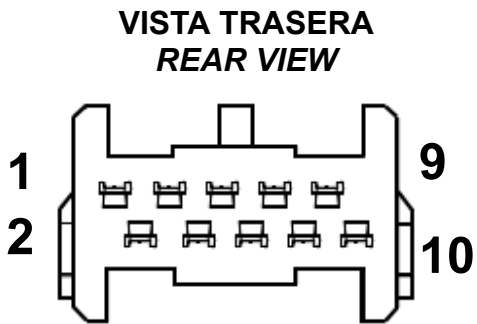
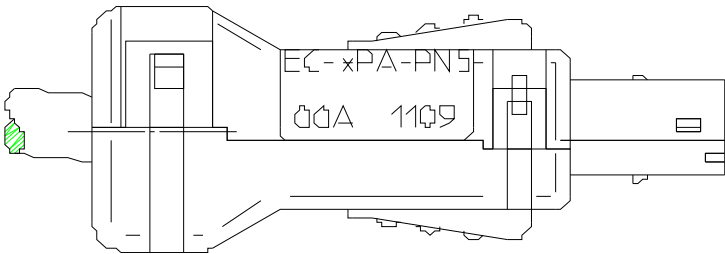
PANASONIC: CONEXIONES / CONNECTIONS

EC...PA...PN5

Cable para **conexión directa** a sistemas MINAS. Disponible en 1, 3, 6 and 9 metros.
*Cable for **direct connection** to MINAS systems. Available in 1, 3, 6 and 9 meters.*

EC-PA-PN5

PIN	3	4	1	2	Carcasa / Housing
SEÑAL SIGNAL	DATA	/DATA	+5V	0V	Tierra / Ground
COLOR	Verde Green	Amarillo Yellow	Marrón + Gris Brown + Gray	Blanco + Rosa White + Pink	Malla Shield



PANASONIC: CONEXIONES / CONNECTIONS

Alargaderas / Extension cables

CABLE		ALARGADERA / EXTENSION CABLE			LONGITUD TOTAL TOTAL LENGTH
Reference	Connector	Connector	Reference	Connector	
EC-1B-C9	C9	C8	XC-C8-xA-PN5	Panasonic	* 30 m
EC-1B-C9-N	Round 17-PM/RM	Round 17-PH/RH	XC-C8-xF-C9	C9-Round 17-PM/RM	

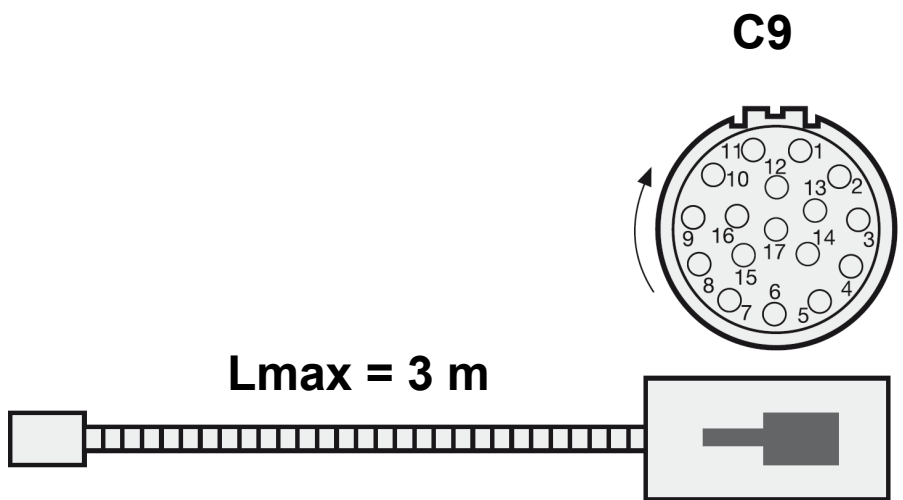
PM = Pines macho, RM = Rosca Macho, PH = Pines hembra, RH = Rosca hembra, M= Macho, H = Hembra
Round = Circular, PM = Male pins; RM = Male thread, PH = Female pins, RH = Female thread, M = Male, H = Female

También se puede utilizar la combinación de un cable **EC...B...C9** con una alargadera **XC...C8...A-PN5** para otras longitudes.
*A combination of **EC...B...C9** cable and an **XC...C8...A-PN5** extension cable may be used for other lengths.*

EC...B...C9 Cable disponible en 1 y 3 metros. Contactar con FAGOR para otras longitudes.
Cable available in 1 and 3 meters. Contact FAGOR for other lengths.

Conector (C9) macho circular 17 male connector

PIN	14	17	7	1	10	4	Caperuza Housing
SEÑAL SIGNAL	DATA	/DATA	+5V	+5V sensor	0V	0V sensor	Tierra Ground
COLOR	Gris Grey	Rosa Pink	Marrón Brown	Verde claro Light green	Blanco White	Naranja Orange	Malla interna Internal shield



GARANTIA

*Plazo: 12 meses a partir de la fecha de expedición de fábrica.

*Cubre gastos de Materiales y Mano de Obra de reparación en FAGOR AUTOMATION.

*Los gastos de desplazamiento son a cargo del cliente.

*No cubre averías por causas ajenas a FAGOR AUTOMATION, como: golpes, manipulación por personal no autorizado, etc.

WARRANTY

**Term: 12 months from factory invoice date.*

**It covers parts and labor at FAGOR AUTOMATION.*

**Travel expenses are payable by the customer.*

**Damages due to causes external to FAGOR AUTOMATION, such as unauthorized handling, blows, etc. are not covered.*

DECLARACION DE CONFORMIDAD

Fabricante: Fagor Automation, S. Coop.

Barrio de San Andrés 19, C.P. 20500, Mondragón -Guipúzcoa- (ESPAÑA)

Declaramos bajo nuestra exclusiva responsabilidad la conformidad del producto al que hace referencia este manual

Nota. Algunos caracteres adicionales pueden seguir a las referencias de los modelos indicados en este manual. Todos ellos cumplen con las siguientes normas:

COMPATIBILIDAD ELECTROMAGNÉTICA:

EN 61000-6-2:2005 Norma de Inmunidad en entornos industriales

EN 61000-6-4:2007 Norma de Emisión en entornos industriales

De acuerdo con las disposiciones de la Directiva Comunitaria: 2004/108/CE de Compatibilidad Electromagnética.

Mondragón a 1 de noviembre de 2015

Fagor Automation, S. Coop.


Director Gerente
Pedro Ruiz de Aguirre

DECLARATION OF CONFORMITY

Manufacturer: Fagor Automation, S. Coop.

Barrio de San Andrés 19, C.P. 20500, Mondragón -Guipúzcoa- (SPAIN)

We declare under our exclusive responsibility the conformity of the product referred to in this manual.

Note. Some additional characters may follow the model references indicated in this manual. They all comply with the following regulations:

ELECTROMAGNETIC COMPATIBILITY:

EN 61000-6-2:2005 Standard on immunity in industrial environments

EN 61000-6-4:2007 Standard on emission in industrial environments

According to the European Directive: 2004/108/CE on electromagnetic compatibility.

Mondragón, November 1st 2015

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