

# H2A-D200i100 series



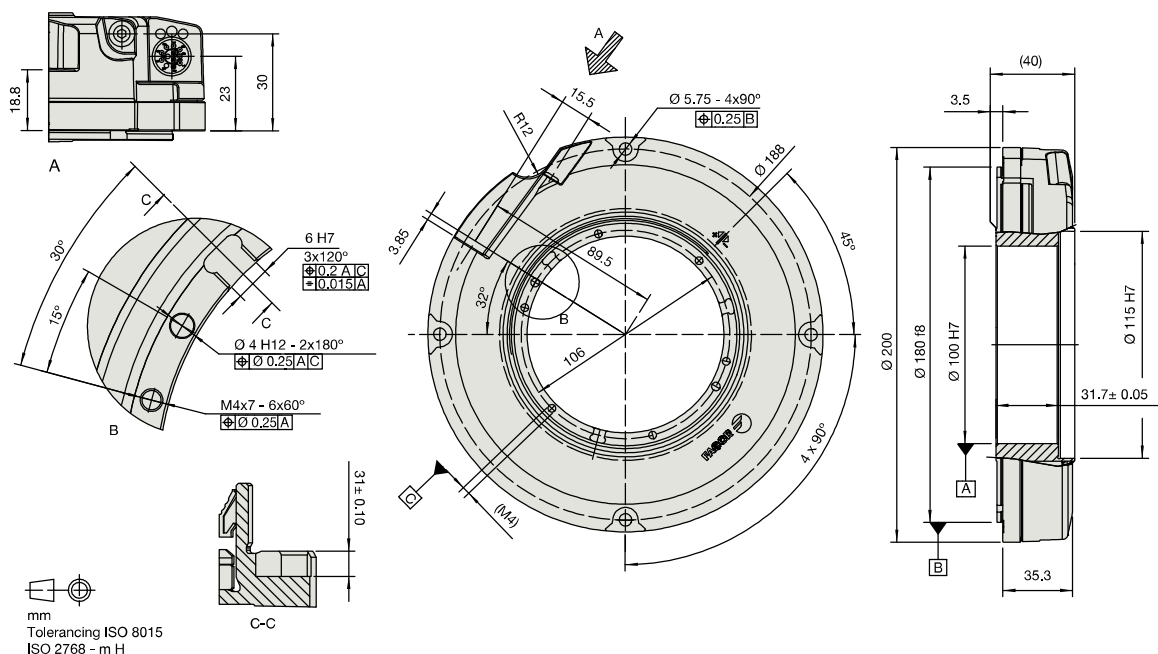
**Model description:**

- H2A: Absolute angular encoders with SSI protocol for FAGOR and others.
- H2AS: Absolute angular encoders with SSI protocol for SIEMENS® (Solution Line).
- H2AF: Absolute angular encoders with FANUC® (01, 02 and  $\alpha$ i) protocol.
- H2AM: Absolute angular encoders with MITSUBISHI® CNC protocol.
- H2AP: Absolute angular encoders with PANASONIC® (Matsushita) protocol.
- H2AD: Absolute angular encoders with FeeDat® protocol for FAGOR and others.
- H2AD + EC-PA-DQ1: Absolute angular encoders with DRIVE-CLiQ® protocol, for SIEMENS® (Solution Line).
- H2ABC: Absolute angular encoders with BiSS® C protocol.

## Characteristics

	H2A	H2AS	H2AF
Measurement	By means of graduated glass disk		
Accuracy	± 1 arc-second ± 2 arc-seconds		
Output signals	~ 1 Vpp	~ 1 Vpp	–
Resolution / Maximum number of positions per turn	27 bits (134 217 728 positions) 1 Vpp: 32 768 pulses/turn	27 bits (134 217 728 positions) 1 Vpp: 32 768 pulses/turn	29 bits (536 870 912 positions)
Maximum frequency	180 kHz for 1 Vpp signal	180 kHz for 1 Vpp signal	–
Maximum electrical speed	< 300 min <sup>-1</sup>	< 300 min <sup>-1</sup>	< 750 min <sup>-1</sup>
Natural frequency	> 500 Hz		
Supply	5 V (3.6...5.25); < 250 mA (without load)		
Maximum cable length	75 m (*)	100 m	30 m
Maximum mechanical speed	1000 min <sup>-1</sup> non-mechanical fault exclusion		
Inertia	10 <sup>-3</sup> kgm <sup>2</sup>		
Turning torque	< 0.5 Nm		
Vibration	100 m/s <sup>2</sup> (55...2000 Hz) IEC 60068-2-6		
Shock	1000 m/s <sup>2</sup> (6 ms) IEC 60068-2-27		
Operating temperature	0°C...50°C		
Storage temperature (in its packaging)	-20°C...60°C		
Weight	3.2 kg		
Protection	IP 64 DIN 40050 (standard) > IP 64 (DIN 40050) using pressurized air at 0.8 ± 0.2 bar in angular encoders		
Connection	With built-in connector		

(\*) Contact Fagor Automation for other lengths.



Note: more detailed information on the installation in the manual

## Order identification

Example of Angular Encoder: **H2AF-29-D200i100-1**

H2	A	F	29	D200	i100	1
<b>Type of shaft:</b> • H2: Hollow shaft	<b>Letter identifying the absolute encoder</b>	<b>Type of communications protocol:</b> • Blank space: SSI protocol (FAGOR) • D: FeeDat® protocol (FAGOR) (*) • S: SSI SIEMENS® (SL) protocol • F: FANUC® (01 and 02 and $\alpha$ ) protocol • M: MITSUBISHI® CNC protocol • P: PANASONIC® (Matsushita) protocol • BC: BiSS® C protocol	<b>Absolute positions per turn:</b> • 29 bits (536 870 912 positions) • 27 bits (134 217 728 positions)	<b>Outside diameter:</b> • D200: 200 mm	<b>Inside diameter:</b> • i100: 100 mm	<b>Accuracy:</b> • 2: ± 2 arc-seconds • 1: ± 1 arc-second

(\*) Plus EC-PA-DQ1 with DRIVE-CLiQ® protocol for SIEMENS® (Solution Line)

Notes: Not all protocol, positions per turn and accuracy combinations are possible. Please consult with Fagor Automation for a list models.

H2AM	H2AP	H2AD	H2AD + EC-PA-DQ1	H2ABC
		By means of graduated glass disk		
		± 1 arc-second ± 2 arc-seconds		
-	-	-	-	(***)
29 bits (536 870 912 positions)	29 bits (536 870 912 positions)	29 bits (536 870 912 positions)	29 bits (536 870 912 positions)	29 bits (536 870 912 positions)
-	-	-	-	
< 750 min <sup>-1</sup>	< 750 min <sup>-1</sup>	< 750 min <sup>-1</sup>	< 750 min <sup>-1</sup>	< 750 min <sup>-1</sup>
		> 500 Hz		
		5 V (3.6...5.25); < 250 mA (without load)		
30 m	30 m	100 m	30 m	(**)
		1000 min <sup>-1</sup> non-mechanical fault exclusion		
		10 <sup>-3</sup> kgm <sup>2</sup>		
		< 0.5 Nm		
		100 m/s <sup>2</sup> (55...2000 Hz) IEC 60068-2-6		
		1000 m/s <sup>2</sup> (6 ms) IEC 60068-2-27		
		0°C...50°C		
		-20°C...60°C		
		3.2 kg		
		IP 64 DIN 40050 (standard) > IP 64 (DIN 40050) using pressurized air at 0.8 ± 0.2 bar in angular encoders		
		With built-in connector		

(\*\*) Contact Fagor Automation for maximum cable length. (\*\*\*) Consult Fagor Automation for analog output signals.