

H3B-D200 series



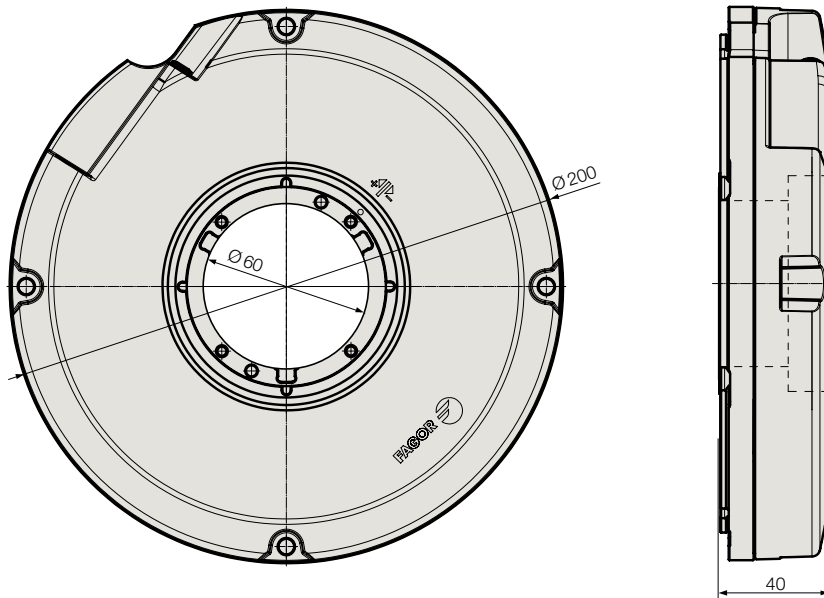
Model description:

- H3B:** Absolute angular encoders with SSI protocol for FAGOR and others.
- H3BS:** Absolute angular encoders with SSI protocol for SIEMENS® (Solution Line).
- H3BF:** Absolute angular encoders with FANUC® (α and αi) protocol.
- H3BM:** Absolute angular encoders with MITSUBISHI® CNC protocol.
- H3BP:** Absolute angular encoders with PANASONIC® (Matsushita) protocol.
- H3BD:** Absolute angular encoders with FeeDat® protocol for FAGOR and others.
- H3BD + EC-PA-DQ1-M:** Absolute angular encoders with DRIVE-CLiQ® protocol, for SIEMENS® (Solution Line and Sinumerik One) (*).
- H3BBC:** Absolute angular encoders with BiSS® C protocol.

(*) Pending approval.

Characteristics

	H3B	H3BS	H3BF
Measurement	By means of graduated glass disk		
Accuracy	± 1 arc-second ± 2 arc-seconds		
Output signals	~ 1 Vpp 27 bits (134 217 728 positions) 1 Vpp: 32 768 pulses/turn		—
Resolution / Maximum number of positions per turn			αi : 29 bits (536 870 912 positions) α : 27 bits (134 217 728 positions)
Maximum frequency	400 kHz for 1 Vpp signal		—
Maximum electrical speed	< 750 min ⁻¹		< 1500 min ⁻¹
Natural frequency	> 1000 Hz		
Supply	3.8 to 14 V DC; < 250 mA (at 5V without load)		
Maximum cable length	75 m (1)	100 m	50 m
Maximum mechanical speed	1000 min ⁻¹ non-mechanical fault exclusion		
Inertia	Rotor: 10 ⁻³ kgm ²		
Starting torque (at 20 °C)	< 0.5 Nm		
Vibration	100 m/s ² (55...2000 Hz) IEC 60068-2-6		
Shock	200 m/s ² (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 (3)		
Connection	With built-in connector		



Dimensions in mm

Additional information can be found in the technical documentation and installation manual available on the website www.fagorautomation.com

Order identification

Example of Angular Encoder: H3BF-29-D200-1

H3	B	F	29	D200	1
Type of shaft: • H3: Hollow shaft	Letter identifying the absolute encoder	Type of communications protocol: • Blank space: SSI protocol (FAGOR) • D: FeeDat® protocol (FAGOR) (1) • S: SSI SIEMENS® (SL) protocol • F: FANUC® (α and αi) protocol • M: MITSUBISHI® CNC protocol • P: PANASONIC® (Matsushita) protocol • BC: BiSS® C protocol	Absolute positions per turn: • 29 bits (536 870 912 positions) (2) • 27 bits (134 217 728 positions)	Outside diameter: • D200: 200 mm	Accuracy: • 2: ± 2 arc-seconds • 1: ± 1 arc-second

(1) Plus EC-PA-DQ1-M with DRIVE-CLIQ® protocol for SIEMENS® (Solution Line and Sinumerik One).

(2) Only for purely digital models, not available for SSI models.

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

H3BM	H3BP	H3BD	H3BD + EC-PA-DQ1-M	H3BBC
By means of graduated glass disk				
± 1 arc-second				
± 2 arc-seconds				
—				(2)
29 bits (536 870 912 positions)				
—				
< 1500 min ⁻¹				
> 1000 Hz				
3.8 to 14 V DC; < 250 mA (at 5V without load)				
30 m	100 m		Up to 100 m (4)	50 m
1000 min ⁻¹ non-mechanical fault exclusion				
Rotor: 10 ⁻³ kgm ²				
< 0.5 Nm				
100 m/s ² (55...2000 Hz) IEC 60068-2-6				
200 m/s ² (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 (3)				
With built-in connector				

(1) Contact Fagor Automation for maximum cable length.

(3) For more information consult the Filter Unit catalog.

(2) Consult Fagor Automation for analog output signals.

(4) Depending on CNC model. Consult SIEMENS® documentation.