

# BH

BH200-RE / BH200-NE  
(with reference mark) / (without reference mark)

Compact, reflective rotary Laserscale featuring high accuracy, high resolution, and high-speed response, Ideal for high-resolution angle measuring in HDD manufacturing equipment and precision measuring instruments



Actual size



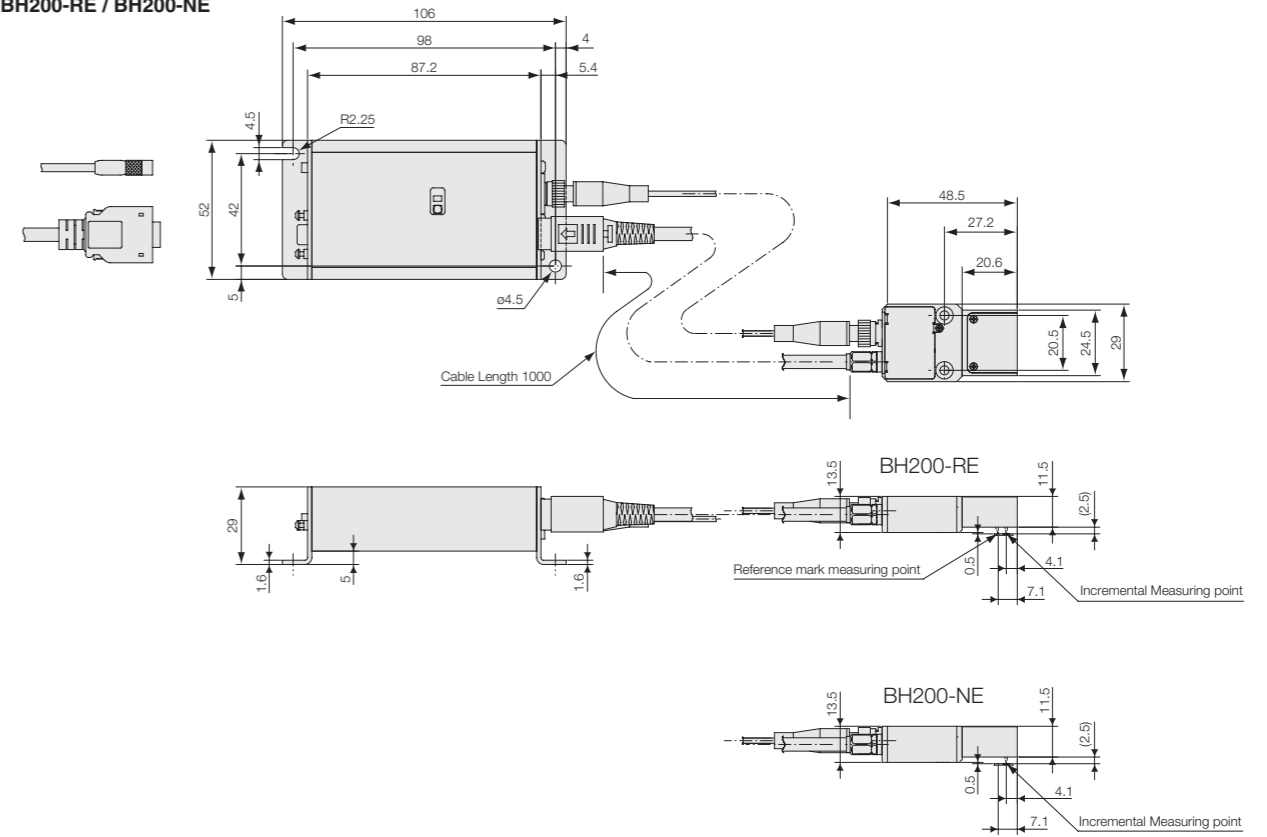
Type example : BH200-RE

E: Open type scale  
R: with Reference point;  
N: without Reference point  
\*Contact us directly for detail specifications

- High resolution and high response speed (signal wavelength : 250nm)
- Clock generator from 10 to 200 MHz
- 907,200 pulses/Rotation (r=36mm)
- Completely non-contact remote head
- Available with reference point (BH200-RE) and without reference point (BH200-NE)

## External Dimensions

### ● BH200-RE / BH200-NE



## Main specifications

Model	BH200-RE	BH200-NE
Reference point <sup>1)</sup>	Asynchronous, unidirectional detection	None
Detection method	Grating interferometer	
Light source	Semiconductor laser Wavelength: 790nm Output: 6mW or less	
Pulse number/scale radius	907,200 pulses, scale detection radius: 36.1mm	
Response speed	10MHz to 200MHz(660rpm to 13,000min <sup>-1</sup> )	
Category temperature range	10 °C~30 °C (head) 0 °C~50 °C (detector part)	
Storage temperature range	Thing to avoid high humidity there is no 10°C~50°C be dewy	
The maximum response speed	13,000min <sup>-1</sup>	
Head angular tolerance	Roll	±10min(output ±40%)
	Azimuth	±10min(output ±40%)
	Roll	±10min(output ±40%)
Head position tolerance	Δ X	±70μm(output ±40%)
	Δ Y	±70μm(output ±40%)
	Δ Z	±50μm(output ±40%)
Output signal	CLK signal(LVDS), 1/2 or 1/4 CLK signal(LVDS) <sup>2)</sup>	
Input signal	Switch over 1/2 or 1/4(TTL)	
Power supply	DC ±5V(±5%)	
Maximum power consumption	DC +5V: 400mA, DC -5V: 200mA	
Operating temperature	+10 to +30 °C (head), 0 to +50 °C (detector)	
Storage temperature	-10 to +50 °C No condensation Avoid operating under high humidity	
Jitter (target) <sup>3)</sup>	0.5 nsec (@5000rpm)	
Optical fiber minimum bend radius	50mm	

<sup>1)</sup> Zero point signal is asynchronous to CLK, 1/2CLK and 1/4CLK signals. Detection is unidirectional.

<sup>2)</sup> 1/2 or 1/4 signals to CLK signal frequency. No output with input frequency of 50MHz or less. 1/2 CLK and 1/4 CLK signals cannot be used simultaneously with CLK signal.

<sup>3)</sup> Jitter of CLK signal: Pulse duration variation at 1000 pulses(3σ p-p). Measured by inspection equipment at Magnescale Corporation.