BD

BD96
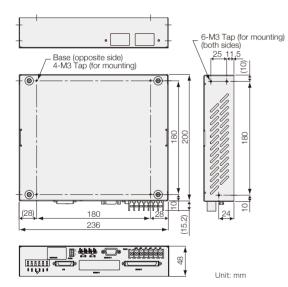### Interpolator for Laserscale

Minimum resolution of 17pm when combined with the BS series. Supporting various serial and binary outputs.

External Dimensions

● **BD96-B1,B2,Y1,Y2, M1, M2 commonness**

Base (opposite side)
4-M3 Tap (for mounting)
6-M3 Tap (for mounting) (both sides)

25 11.5 (10)
180 200 180
(28) 180 28
236
48
24 10 (15.2)

Unit: mm

● Minimum resolution :
  0.4nm (When connected with BL series)
  31pm (When connected with BH series)
  17pm (When connected with BS series)
● High response speed :
  1,100mm/s (When connected with BL series)
  700mm/s (When connected with BH series)
  400mm/s (When connected with BS series)
● Various serial or binary outputs
● Includes automatic signal compensation
● A/B quadrature output (standard : 4 divisions) (binary output axis 1 or 2 type)
  BS series : 34.5nm, BH series : 62.5nm, BL series : 100nm
● Max. divisions : 8000 (When connected with BS and BH series) (special model)

∗ Please inquire about various specifications, such as the number of divisions.

Main Specifications

Model	BD96
Resolution	17pm (When connected with BS series), 31.25pm (When connected with BH series), 0.4nm (When connected with BL series)
Max. response speed	400mm/s (When connected with BS series),700mm/s (When connected with BH series),1,100mm/s (When connected with BL series)
Max. divisions	025 : 256, 051 : 512, 040 : 400, 050 : 500, 100 : 1000, 200 : 2000, 400 : 4000 (special model 800: 8000 divisions)
Alarm	When exceeding the max. response speed or when the laser signal level is too low (disconnection); LED lights up
Input signal compensation	DC offset, amplitude, phase
Power supply	DC +5V±5% DC +12V±5% DC -12V±5%
Power consumption (When connected with scale)	DC +5V : 0.4A DC +12V : 0.4A DC -12V : 0.2A (1 axes type) DC +5V : 0.4A DC +12V : 0.7A DC -12V : 0.5A (2 axes type)
Operating temperature	0 to +40℃
Storage temperature	-10 to +50℃
Dimensions	236 (W) x 215.2 (D) x 48 (H)mm
Mass	Approx. 1.6kg

BD96-☆△∗∗∗□C
　Shape C: Case type
　Scale type S: BS series H: BH series L: BL series
　Division 025: 256 divisions 051: 512 divisions 040: 400 divisions 050: 500 divisions 100: 1000 divisions 200: 2000 divisions 400: 4000 divisions
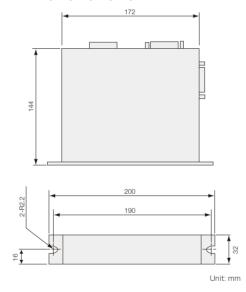　Axis type 1: 1 axis 2: 2 axes
　Output mode B: Binary (Axis type 1 : 40 bits, 2 : 20bits) Y: Yaskawa Electric serial ∗1   M: Mitsubishi Electric serial F: FANUC serial ∗2

∗1 Only supported with 256 and 512 division ∗2 Special model

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BD95
Interpolator for BS series Laserscale

Interpolator with A/B quadrature output that achieves resolution from 4.3nm~34.5nm.

External Dimensions

● **BD95-T10,T13,T14,T15,T16,T17commonness**

172
144
2-R2.2
200
190
16
32

Unit: mm

● High resolution: 4.3 to 34.5nm (depends on the number of divisions)
● High response speed: 400mm/s
● DC offset, gain, phase automatic conditioning
● 32 bit binary output by data request input (T14, T16, T17)

Main Specifications

Model	BD95-T13	BD95-T14	BD95-T15	BD95-T16	BD95-T10	BD95-T17
Resolution	34.5 nm (4 divisions) or 17.2nm (8 divisions) 100 nm or 50 nm during pitch compensation		17.2 nm (8 divisions) or 8.6 nm(16 divisions) 100 nm, 50 nm, or 10 nm during pitch compensation		8.6 nm (16 divisions) or 4.3 nm(32 divisions) 100 nm, 50nm, 10 nm or 5 nm during pitch compensation	
Max. response speed	400 mm/s (with 4 divisions) 275 mm/s (with 8 divisions)		275 mm/s (with 8 divisions) 120 mm/s (with 16 divisions)		120 mm/s (with 16 divisions) 60 mm/s (with 32 divisions)	
Output signal	A/B quadrature 1 with / without pitch compensation (compliant with EIA-422) A/B quadrature 2 without pitch compensation (compliant with EIA-422) Reference point (compliant with EIA-422) Alarm (compliant with EIA-422) (Switching between automatic reset and holding is possible) Laserscale signal (SIN/COS) 32-bit binary data (-T14, -T16, -T17 only)					
Alarm	When exceeding the max. response speed or when the laser signal level is too low (disconnection); LED lights up					
Pitch compensation function	A/B quadrature 1 only A round-off error of 1 resolution occurs.					
Power supply	DC + 24V±1V					
Power consumption (when connected with scale)	400mA (maximum)					
Operating temperature	0 to 50℃					
Storage temperature	-10 to 60℃					
Dimensions	172 (W)x144(D)x32(H) mm					
Mass	Approx. 0.8 kg					