

## AEF-9/14 Absolute Encoding Wafer Flipper

**MultiMetrixs** offers several designs of wafer flippers that can be integrated with most robots. They work equally well in any environment and can operate with vacuum end- effectors and electrical wafer edge-grippers. The absolute encoder increases positioning accuracy, wafer-handling security and simplifies programming. MultiMetrixs' flippers compact size, high torque and speed, lightweight and wide rotation range make them the best in the industry.

Flipper Model		AEF-9W	AEF-14W	AEF-14V
Model Description		High speed, Compact, Cost effective	Supper accurate positioning	Supper accurate positioning, Vacuum feed- through
1	Gear-Motor Ratio	1:50	1:100	
2	Speed, max	750 °/sec	500 °/sec	
3	Rotation Range	± 275°		
4	Position Resolution	0.035° ( 0°2' )	0.01° ( 0°0' 30" )	
5	Position Repeatability	± 0.03°	± 0.015°	
6	Positioning Accuracy	0.05° ( 0° 3' )	0.02° ( 0° 1' )	
7	Positional Accuracy at Power-On	± 0.70°	± 0.02°	
8	Acceleration/ Deceleration	3,600 °/sec <sup>2</sup>	3,000 °/sec <sup>2</sup>	
9	Peak Torque	0.9 N·m	1.4 N·m	
10	Radial Load	60 N	70 N	
11	Flipper size: H x L x W (mm)	46 x 130 x 112	55 x 130 x 125	55 x 140 x 125
12	Flipper weight	770 g	810 g	840 g
13	Communication	RS 232, RS 422, RS 485, I/O & CAN		
14	Particles and Contamination	ISO Class 2 compliant		
15	Operating Environment	Atmospheric, Wet, CMP		
16	Power Consumption	0.5A / 24V		
17	MTBF	> 30 million cycles		