

Specifications – ZETA4, ZETA8, ZETA12, and ZETA4-240

Parameter		Value			
Power		ZETA4	ZETA8	ZETA12	ZETA4-240
	AC Power Input	---- 95-132VAC Single Phase, 50/60Hz ----			95-264VAC Single Phase, 50/60Hz
	Motor Current (A _{pk})	0-4 Amps	0-8 Amps	0-12 Amps	0-4 Amps
	Bus Voltage	----- 170 VDC nominal -----			@120VAC: 170VDC nominal, @240VAC: 340VDC nominal
Performance	Accuracy	±5 arc min (0.0833°) typical. Unloaded-bidirectional with Compumotor supplied motors. Other motors may exhibit different absolute accuracy. ±1 arc min (0.0167°) Loaded-in addition to unloaded accuracy, per each frictional load equal to 1% rated torque.			
	Repeatability	±5 arc sec (0.0014°) typical. Unloaded-one revolution returning to start point from same direction.			
	Hysteresis	Less than 2 arc min (0.0334°) unloaded-bidirectional.			
	Resolution	16 selectable choices: 200, 400, 1000, 2000, 5000, 10000, 12800, 18000, 20000, 21600, 25000, 25400, 25600, 36000, 50000, 50800			
	Waveform	Selectable. Allows waveform shaping for optimum smoothness or relative accuracy. Pure sine; -4%, -6%, -10% 3rd harmonic.			
Motors	Type	2-phase hybrid permanent magnet, 1.8 degree.			
	Breakdown Voltage (HIPOT)	1,150VDC @ 120VAC input; 1,900VDC @ 240VAC input			
	Number of Leads	4, 6 or 8			
	Accuracy Grade	3%			
	Inductance	0.5 mH minimum; 5 to 50 mH recommended range; 100 mH max			
Amplifiers	Type	20 kHz fixed frequency, variable duty cycle PWM (pulse width modulated). Current controlled, bipolar type.MOSFETconstruction.			
	Number of Phases	2			
	Protection*				
	• Short Circuit	Phase-to-phase, phase-to-ground.			
	• Brownout	If AC supply drops below 85VAC.			
	• Over-temperature	Over-temperature shutdown fault at 113°F (50°C)			
	Auto Standby	If selected, motor current ramps to 50% of preset value if no step pulses are received for 1 second. Current levels are resumed upon receipt of next step pulse.			
	Automatic Test Function	This feature (used primarily for testing and verification of correct wiring) rotates the motor at approximately 1 rps in the negative (CCW) direction.			
	Step Input	High-going pulse, 200 nsec min. width; max. pulse rate is 2 MHz.			
	Direction Input	Logic High = positive (CW) rotation. Logic Low = negative (CCW) rotation. Direction input may change polarity, coincident with first step pulse.			
	CW/CCW Input	Dip switch selectable. High-going pulse, 200 nsec min width; max pulse rate is 2 MHz.			
	Shutdown Input	Logic High = amplifier disable. Logic Low = normal operation.			
	Reset Input	Logic High = drive held in reset. Logic Low = normal operation.			
	Fault Output	Conducting = normal operation. Not Conducting = drive fault			
Environmental	Operating drive	32°F to 113°F (0°C to 45°C) Fan cooling may be required if airflow restricted.			
	Storage drive	-40°F to 185°F (-30°C to 85°C)			
	Motor	212°F (100°C) maximum motor case temperature. Actual temperature rise is duty-cycle dependent.			
	Humidity	0-95%, non-condensing			
Certifications	UL Recognized	ZETA4, ZETA4-240, ZETA8, ZETA12			
	CE (LVD)	ZETA4, ZETA4-240, ZETA8, ZETA12			
	CE(LVD & EMC)	ZETA4-420, ZETA8, ZETA12 provided the following items are used and installed properly:			
	(EMC for CISPR22/ EN55022 Class B)**	• CE(LVD) motor. Compumotor recommends a terminal board (NPS) motor construction for easier installation • C10 (C10H) motor cable accessory (LVD/EMC cable kit) • ZETA EMC KIT			
	Low Noise (FCC Class B)**	ZETA4-420, ZETA8, ZETA12 provided the following items are used and installed properly: • CE(LVD) motor. Compumotor recommends a terminal board (NPS) motor construction for easier installation • C10 (C10H) motor cable accessory (LVD/EMC cable kit) • ZETA EMC KIT			
* Drive shuts down in conditions listed					
** System compliance					

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