

AGD155

AGD155 is an AC powered single-axis intelligent drive. While it is a fully featured single-axis standalone controller, it also comes with analog input to receive +/-10V current or velocity command, and Pulse & Direction input as position command. It can drive various types of motors like voice coil, brushed or brushless motor, including direct-drive linear and rotary motors. AGD155 can also synchronize with other axes in an Ethernet, CAN or RS485 network. The internal standalone program supports up to 8 multi-threading tasks, each can be configured with different priority. With an external PC or PLC as a system level controller, AGD155 can be used in a synchronized, multi-axis environment.



General Specifications

Description	AGD155-PA-2A03	AGD155-PA-2A06	AGD155-AF-2A06	AGD155-AF2A10
Number of Axes	1			
Power Supply (1- ϕ or 3- ϕ)	110 to 240 VAC			
Continuous Current	3 Arms	6 Arms	6 Arms	10 Arms
Peak current	9 Arms	18 Arms	18 Arms	20 Arms
Isolated inputs ¹	9		16	
Isolated outputs ²	4		6	
Differential Inputs (RS422)	3		3	
Differential Outputs (RS422)	4		4	
Bi-Directional Differential I/Os (RS422)	0		1	
Analog inputs	2 (14-bit)		2 (16-bit)	
Analog outputs	0		2 (16-bit)	
PT100 Input	0		1 (0 to 130 °C)	
Brake output ³	0		1	
Regeneration Output	1		1	
Encoder Port 1 (MAIN)	Configurable as AquadB, Absolute Biss-C or EnDat2.2		Configurable as AquadB, SinCos, Absolute Biss-C or EnDat2.2.	
Encoder Port 2 (AUX)	NA		Configurable as AquadB, Absolute Biss-C or EnDat2.2.	
Motor Types	Voice Coil, Brushed/Brushless Linear or Rotary Motor, Steppers (Open and Close Loop, micro-stepping)			
Communication	RS232, USB		Ethernet, RS232, CAN, USB, RS485	
Control Sampling rate	16 KHz (profiler, position, velocity, optional force, current)			
Operational Modes	Position, Velocity, Force or Current (Torque) modes			
Motion Modes	Point to Point, Repetitive, Jog, ECAM, Gearing, Joystick, Handwheel, Pulse & Direction, Gantry, CNC sequential contour (G-codes) , Vector and Tracking motion modes. Motion parameters, such as speed, acceleration, deceleration, and target position can be all modified on-the-fly.			
Features	Encoder Error Mapping: 1D, 2D or 3D, Auto-Loop Shaping (auto-tuning), Frequency Domain System Identification and Modelling, Flexible Gain Scheduling, Position Lock and Event, Ultra-Precision Mode (UPM), Input-Shaping, Profile-Shaping, Machine Vibration Control, Spring and Friction Compensation, Complex-Kinematics (robot kinematics), etc.			

Programming Interfaces	Standalone User Program – high level script-based program executed in the controller (up to 8 multi-threading programs with priority setting for each thread). IDE integrated in PCSuite Windows .Net API – available in NuGet Manager. Standard TCP/IP communication – ASCII string commands or binary CAN format.
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¹ Note 1: Digital isolated input can be configured as NPN or PNP, in groups of 3 or 4.

² Note 2: Digital isolated output can sink up to 500mA or source up to 300mA.

³ Note 3: Brake output up to 48VDC, 3A.

Ordering Information

Product Part Number	Description	Optional Accessories	Accessories Description
AGD155-PA-2A03	Low Cost Single-axis Driver – 230Vac, 3Arms continuous, 9Arms peak	AGD155-PA-CK	AGD155-PA Connector Kit
AGD155-PA-2A06	Low Cost Single-axis Driver – 230Vac, 6Arms continuous, 18Arms peak		
AGD155-AF-2A06	Single-axis Driver – 230Vac, 6Arms continuous, 18Arms peak	AGD155-AF-CK	AGD155-AF Connector Kit
AGD155-AF-2A10	Single-axis Driver – 230Vac, 10Arms continuous, 20Arms peak		