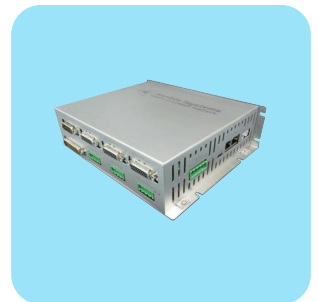
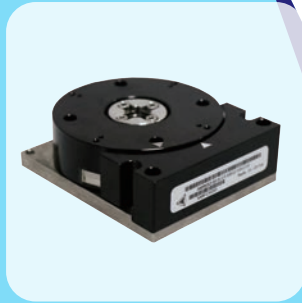


MINIATURE STAGES

AM SERIES



where precision matters



Akribis is a Latinized Greek word that means “Precision”. On the Akribis logo, the letter “a” is formed by a line and a circle, representing linear and rotary motions. These are supported by a tetrahedron structure, the same structure as the diamond crystal which has many exceptional physical properties.

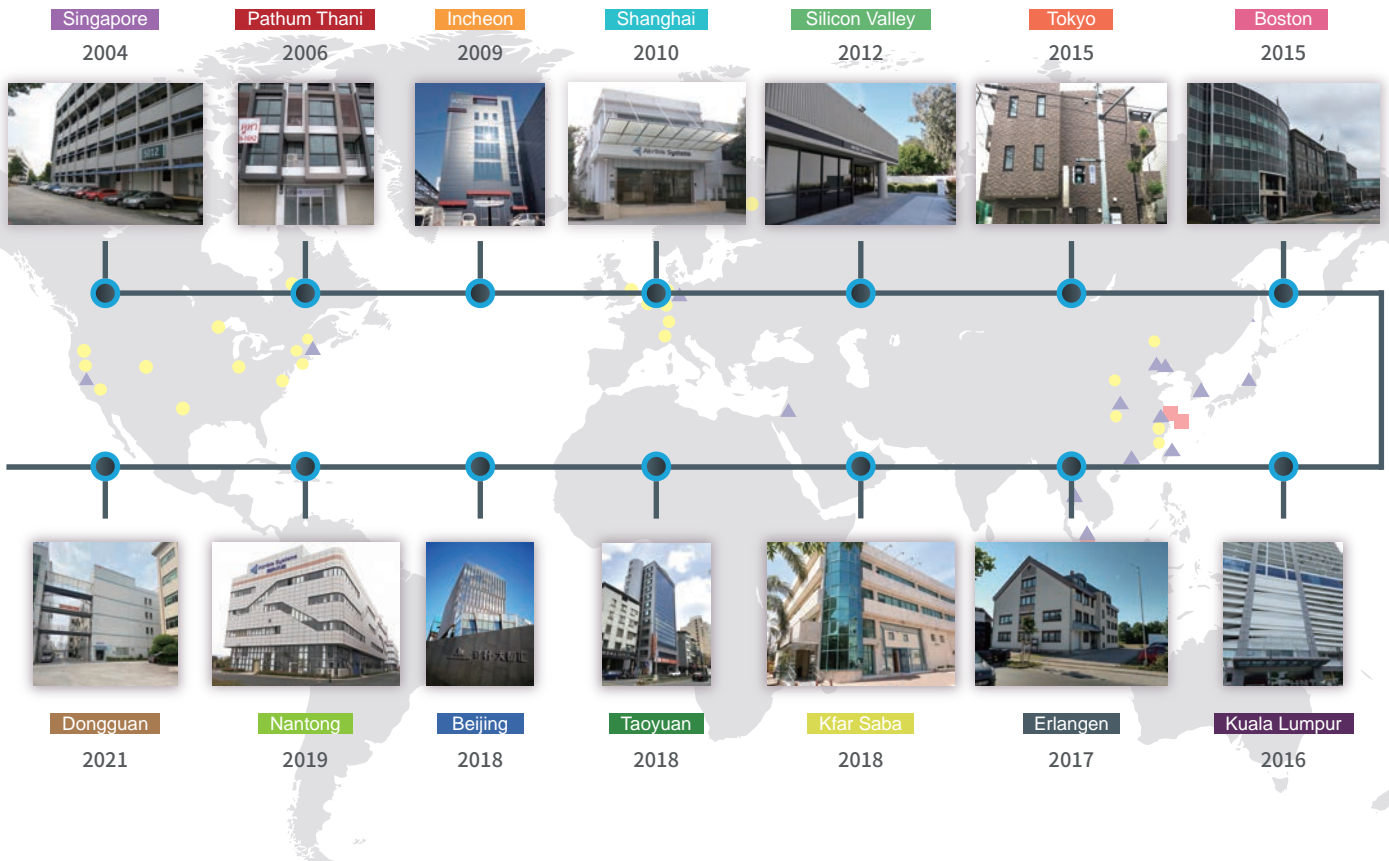
The logo signifies that Akribis Systems’ sound engineering expertise is the basis of the company’s foundation, and this enables us to provide customers with precise, direct drive motion control solutions.

Akribis Systems Pte Ltd was founded in 2004. We design and manufacture direct drive motors, stages and precision systems that are used in equipment for manufacturing, inspection and testing. Akribis Systems supports a wide range of industries including semiconductor, solar, flat panel, hard disk, LED, printed circuit board, printing, photonics and biomedical manufacturing.

From the beginning, the company has been focusing on innovation and development of new technologies and solutions in motion control, with more than 54 patents applied. Backed by a very strong and committed engineering team, the company continues to develop custom motors and systems for the most demanding applications.

We have manufacturing facilities in Singapore and in Shanghai, Nantong and Dongguan, China and in Selangor, Malaysia.

Our sales network includes our sales offices in USA, Germany, South Korea, Japan, Thailand, Israel and Malaysia, and is reinforced by our comprehensive distribution channels in Asia, Europe and North America.



■ CONTENTS

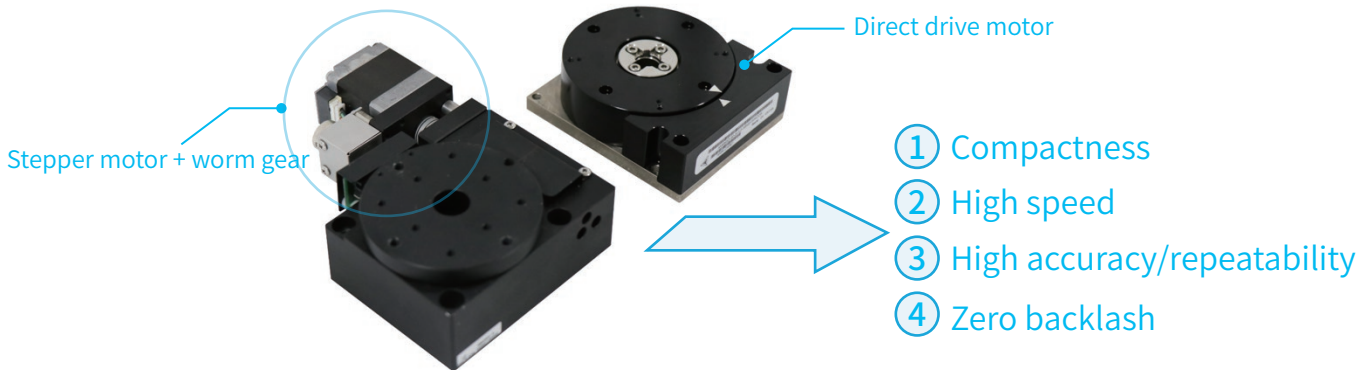
1. <i>AM Series Background Information</i>	04
2. <i>AML Series Linear Module</i>	06
3. <i>AMR Series Rotary Module</i>	09
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AM series

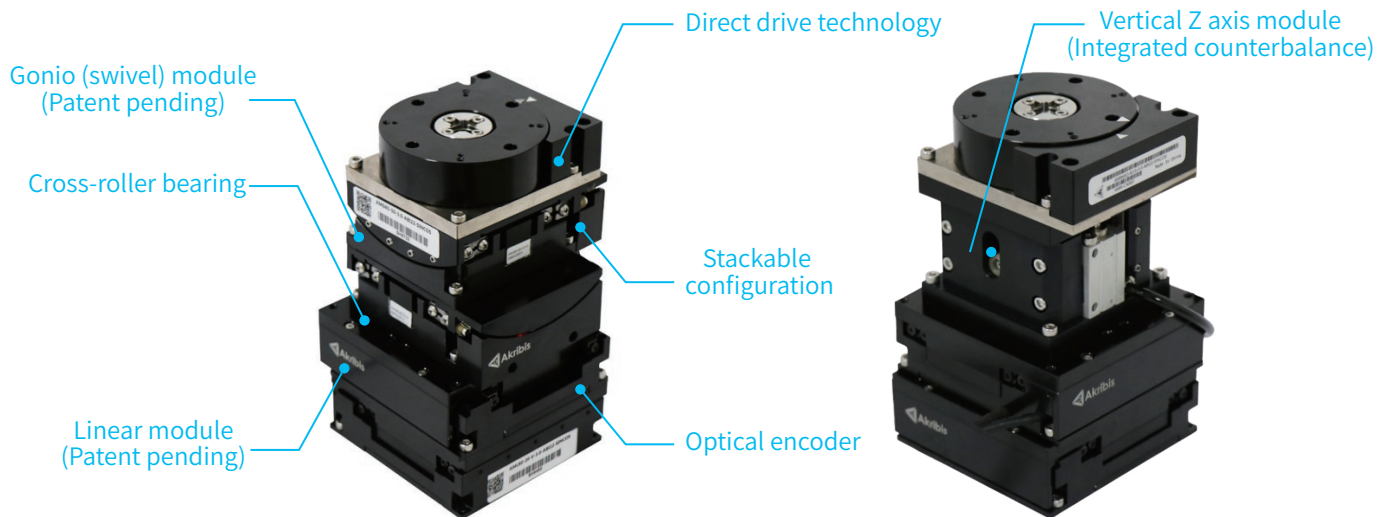
Introduction

AM series is a family of Akribis direct drive stages. “M” denotes “Miniature”, indicating its compactness. The elegant mechatronics design integrates the technology of motor, mechanics and sensors.

Why direct drive?

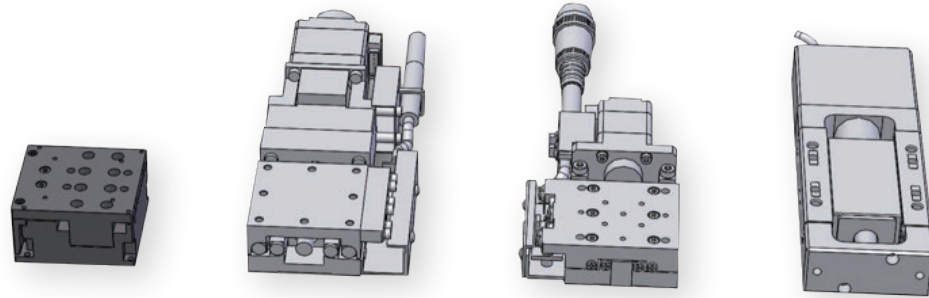


Features



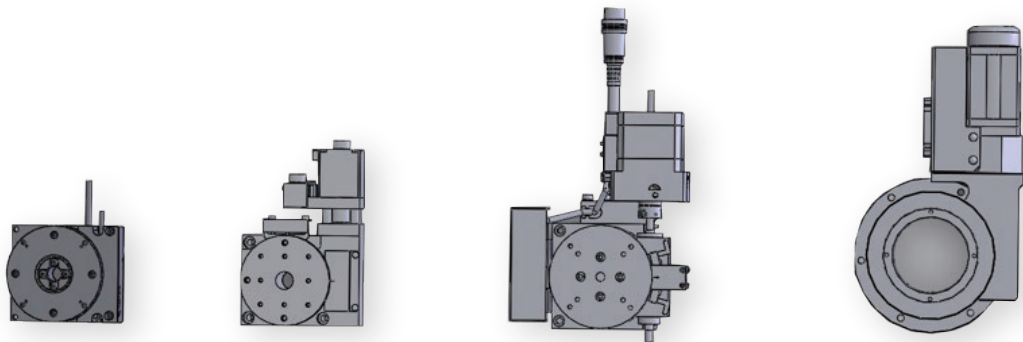
Comparison

AML



Specifications	Unit	Akribis	Brand X	Brand Y	Brand Z
Motor	-	Direct drive motor	Stepper motor + ball screw	Stepper motor + ball screw	Stepper motor + ball screw
Guide	-	Cross-roller bearing	Ball bearing	Cross-roller bearing	Ball bearing
Feedback	-	Optical encoder	N/A	N/A	Motor mounted encoder
Table size	mm	40×40	40×40	40×40	25×25
Dimension	mm	43×40×23	142.5×56.8×24.0	97×55×20.5	133.5×45×20
Repeatability	μm	±0.3	±0.5	±0.3	±0.75
Lost motion	μm	0	1	1	N/A
Backlash	μm	0	0.5	0.5	N/A
Max.speed	mm/s	400	10	10	1
Stroke	mm	10	13	10	25

AMR



Specifications	Unit	Akribis	Brand X	Brand Y	Brand Z
Motor	-	Direct drive motor	Stepper motor + worm	Stepper motor + worm	Stepper motor + worm
Feedback	-	Optical	N/A	N/A	None
Diameter	mm	65	60	68	84
Dimension	mm	65×76×25	123.5×79×35	140×109×30	212.6×110×50
Max.speed	degree/s	720	64	20	20
Lost motion	arcsec	0	0.2	N/A	N/A
Backlash	arcsec	0	0.6	0.06	N/A
Stroke	degree	50	11	270	N/A



AML SERIES LINEAR MODULE

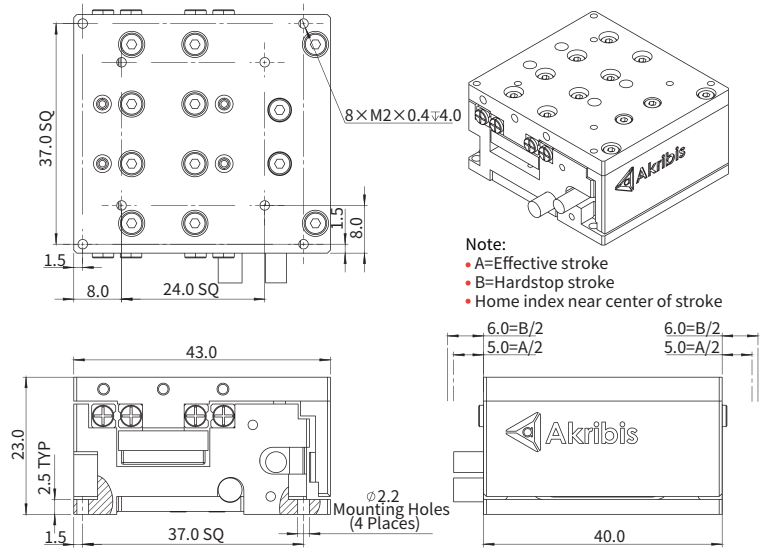
- ▶ Compact design
- ▶ Direct drive technology
- ▶ High precision optical encoder
- ▶ High response
- ▶ Stackable configuration

AML40-10

Specifications	Unit	Value	
		P	N
Precision Grade	-	P	N
Effective Stroke	mm	10	
Continuous Force	N	2.3	
Peak Force	N	6.9	
Continuous Current	A	2.9	
Peak Current	A	8.7	
Resolution	μm	SINCOS/0.05	0.2
Repeatability	μm	±0.3	±1.0
Vertical Straightness	μm	±1.5	
Horizontal Straightness	μm	±1.5	
Rated Payload ^①	kg	0.85	
No-load Moving Mass	kg	0.06	
No-load Total Mass	kg	0.16	
Max. Allowable Moment	Nm	0.1	

① Load capacity of module without cantilever.

Dimensional Drawing

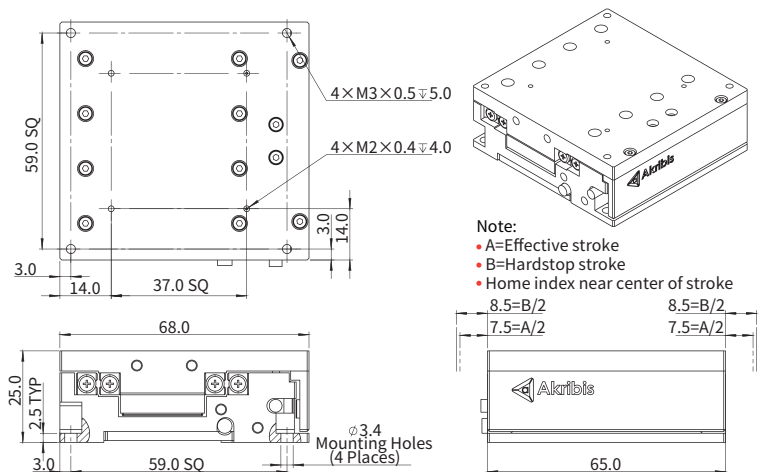


AML65-15

Specifications	Unit	Value	
		P	N
Precision Grade	-	P	N
Effective Stroke	mm	15	
Continuous Force	N	5.9	
Peak Force	N	17.7	
Continuous Current	A	2.7	
Peak Current	A	8.0	
Resolution	μm	SINCOS/0.05	0.2
Repeatability	μm	±0.3	±1.0
Vertical Straightness	μm	±1.5	
Horizontal Straightness	μm	±1.5	
Rated Payload ^①	kg	2.0	
No-load Moving Mass	kg	0.18	
No-load Total Mass	kg	0.39	
Max. Allowable Moment	Nm	0.5	

① Load capacity of module without cantilever.

Dimensional Drawing



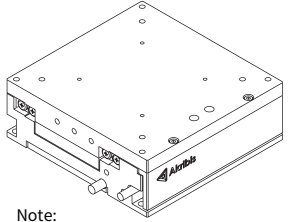
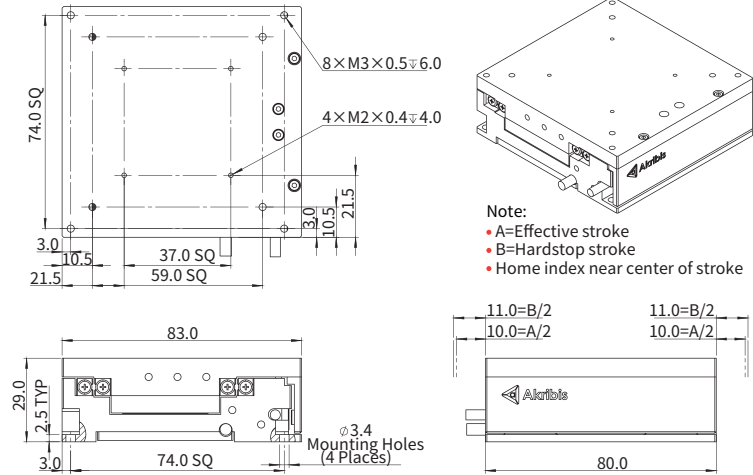
AML Series

AML80-20

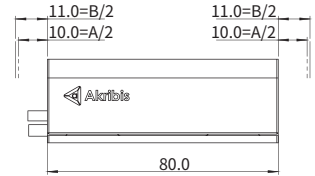
Specifications	Unit	Value	
Precision Grade	-	P	N
Effective Stroke	mm	20	
Continuous Force	N	9.6	
Peak Force	N	28.8	
Continuous Current	A	2.1	
Peak Current	A	6.4	
Resolution	μm	SINCOS/0.05	0.2
Repeatability	μm	±0.3	±1.0
Vertical Straightness	μm	±1.8	
Horizontal Straightness	μm	±1.8	
Rated Payload ¹	kg	2.5	
No-load Moving Mass	kg	0.34	
No-load Total Mass	kg	0.71	
Max. Allowable Moment	Nm	0.82	

¹ Load capacity of module without cantilever.

Dimensional Drawing



Note:
 • A=Effective stroke
 • B=Hardstop stroke
 • Home index near center of stroke

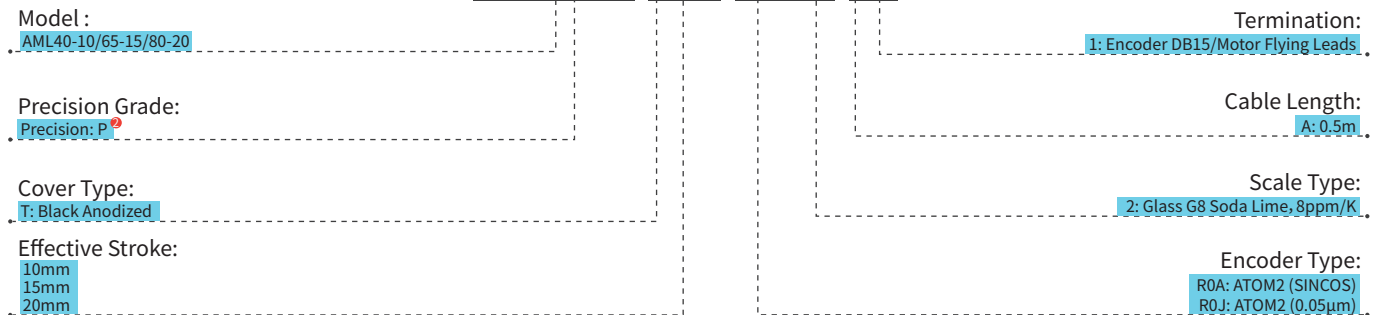


Ordering Part Number (OPN)

AML80-T20-A0G4-A1



AML80P-T20-R0A2-A1



Note:
¹ Normal uses non anti-creep roller and ABI-21.
² Precision uses anti-creep cross roller and ATOM2.



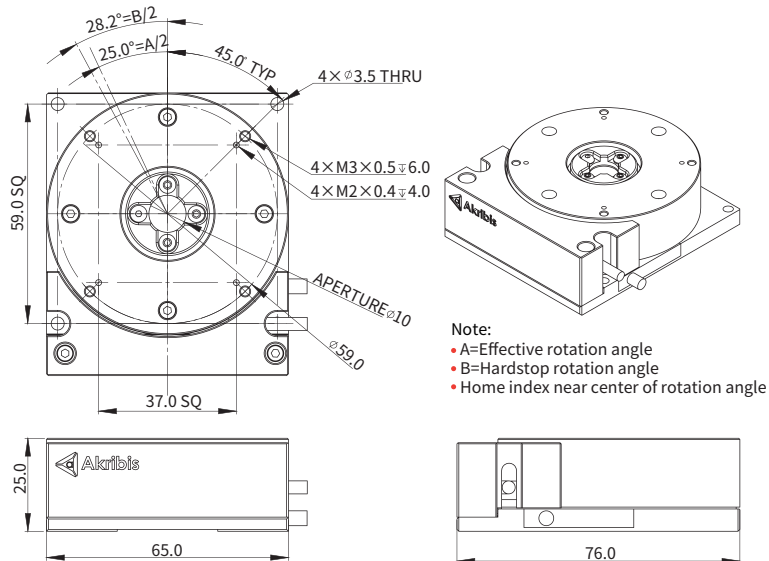
AMR SERIES ROTARY MODULE

- ▶ Compact design
- ▶ Direct drive technology
- ▶ Cogging free
- ▶ High precision optical encoder
- ▶ Stackable configuration

AMR65-50

Specifications	Unit	Value	
Precision Grade	-	P	N
Effective Stroke	degree	50	
Continuous Torque	Nm	0.13	
Peak Torque	Nm	0.51	
Continuous current	A	1.1	
Peak current	A	4.4	
Resolution	lines/rev	SINCOS/0.05	0.2
Repeatability	arc sec	±0.5	±0.5
Max. Speed	degree/s	720	
Rotor Inertia	kg.m ²	0.00014	
No-load Total Mass	kg	0.52	
Max. Allowable Axial Load	N	30	
Max. Allowable Moment Load	Nm	0.84	

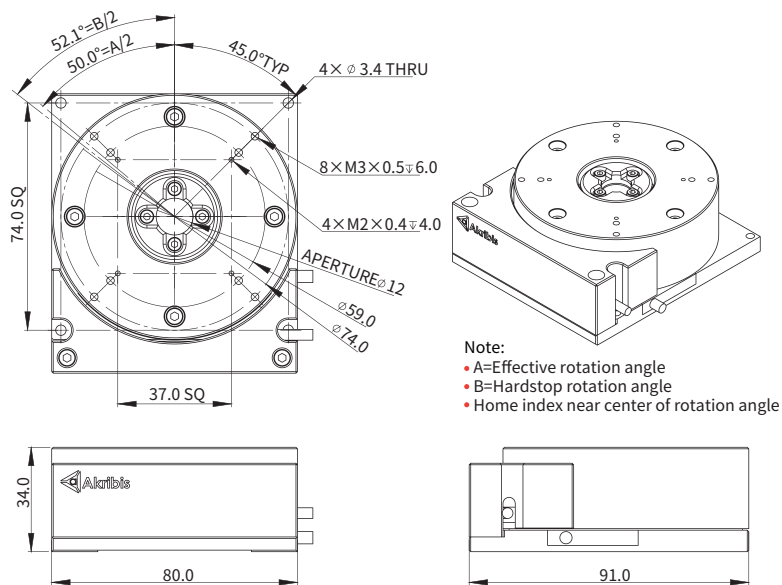
Dimensional Drawing



AMR80-100

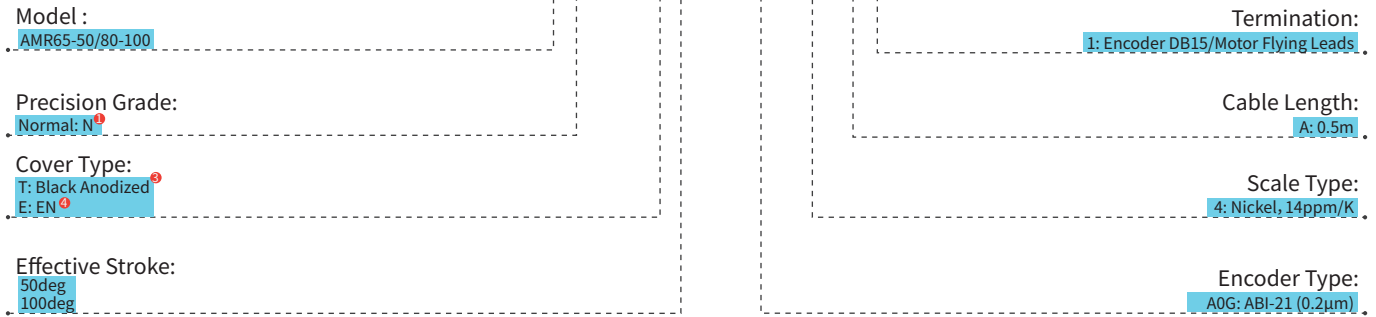
Specifications	Unit	Value	
Precision Grade	-	P	N
Effective Stroke	degree	100	
Continuous Torque	Nm	0.2	
Peak Torque	Nm	0.79	
Continuous Current	A	1.0	
Peak Current	A	4.0	
Resolution	lines/rev	SINCOS/0.05	0.2
Repeatability	arc sec	±0.5	±0.5
Max. Speed	degree/s	720	
Rotor Inertia	kg.m ²	0.00016	
No-load Total Mass	kg	1.1	
Max. Allowable Axial Load	N	60	
Max. Allowable Moment Load	Nm	2.0	

Dimensional Drawing

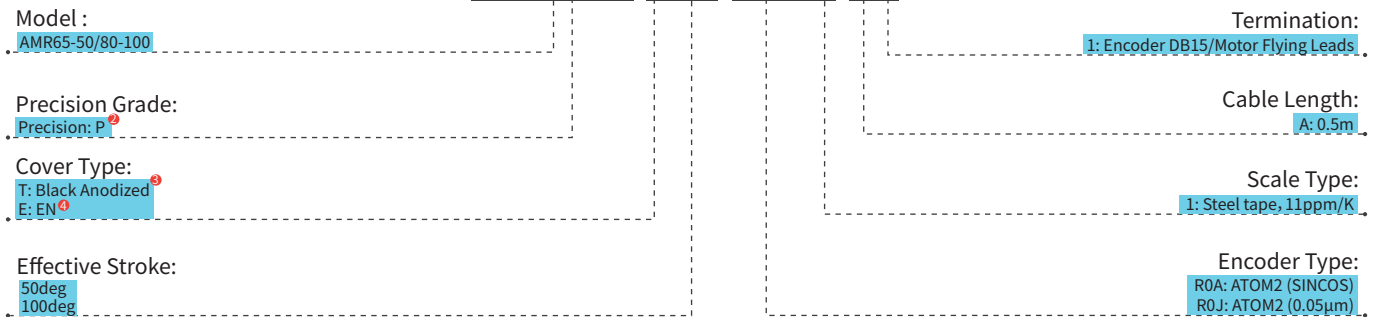


Ordering Part Number (OPN)

AMR65-T50-A0G4-A1

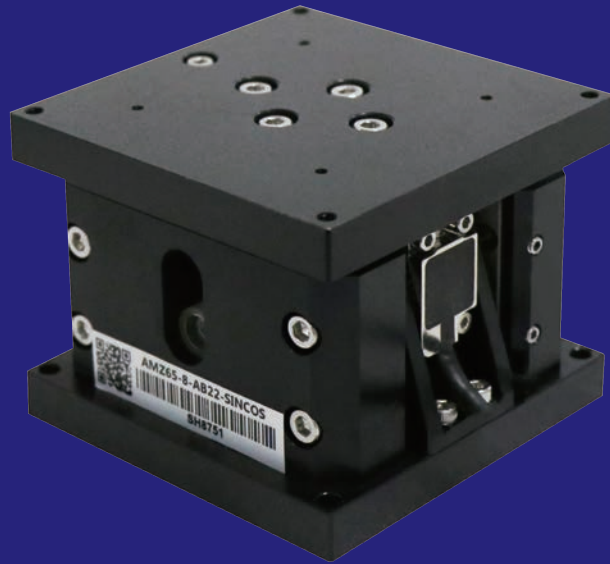


AMR65P-T50-R0A1-A1



Note:

- ① Normal uses ABI-21.
- ② Precision uses ATOM2.
- ③ Black anodized AMR is used with AML and AMZ.
- ④ Nickel plated AMR is used with AMS.



AMZ SERIES VERTICAL Z MODULE

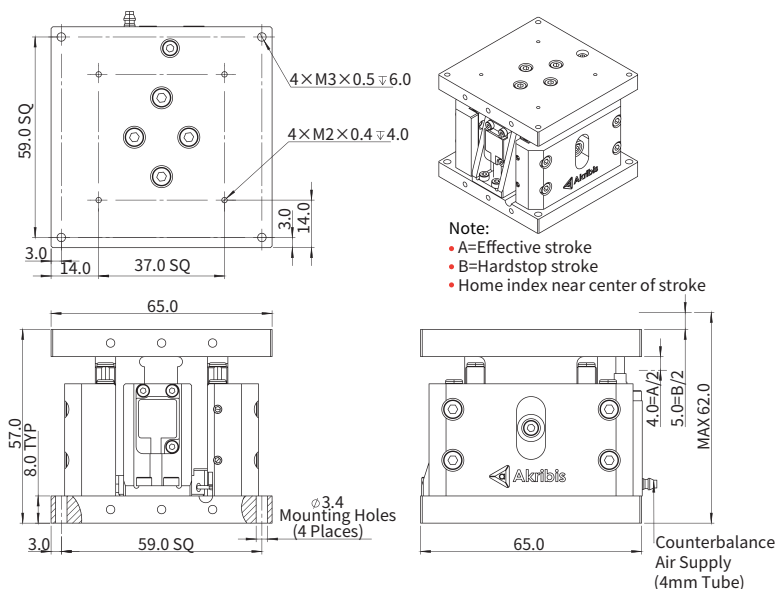
- ▶ Compact design
- ▶ Direct drive technology
- ▶ High response
- ▶ High precision optical encoder
- ▶ Stackable configuration

AMZ65-8

Specifications	Unit	Value	
Precision Grade	-	P	N
Effective Stroke	mm	8	
Continuous Force	N	7.35	
Peak Force	N	29.4	
Continuous Current	A	1.0	
Peak Current	A	4.0	
Resolution	μm	SINCOS/0.05	0.2
Repeatability	μm	±0.2	±1.0
Vertical Straightness	μm	±1.5	
Horizontal Straightness	μm	±1.5	
Rated Payload ^①	kg	0.5	
No-load Moving Mass	kg	0.29	
No-load Total Mass	kg	0.6	
Max. Allowable Moment	Nm	0.1	

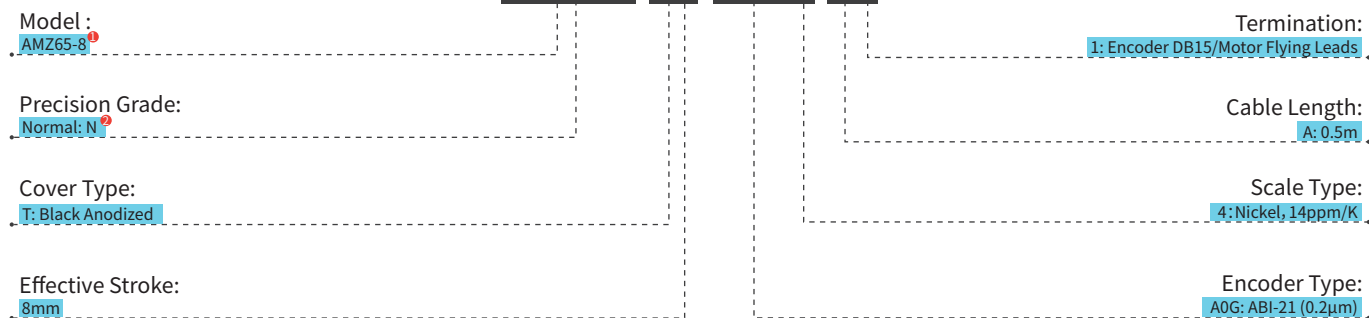
① Load capacity of module without cantilever.

Dimensional Drawing

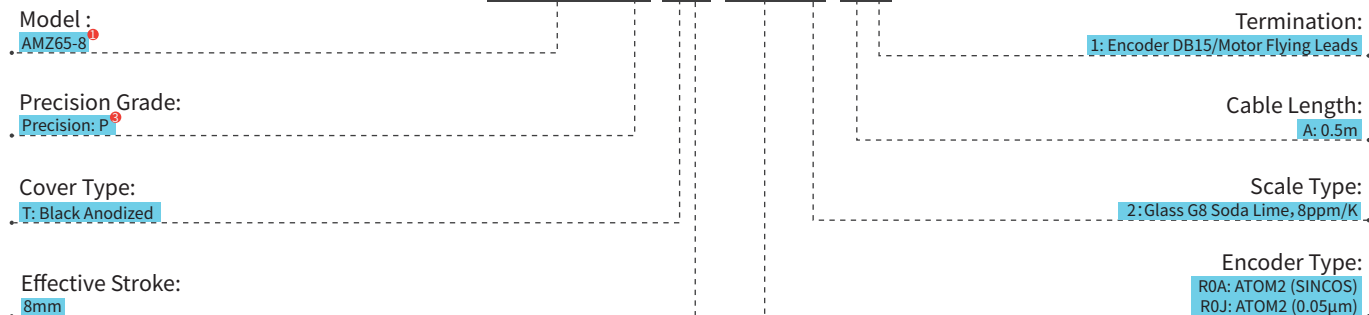


Ordering Part Number (OPN)

AMZ65-T8-A0G4-A1



AMZ65P-T8-R0A2-A1



Note:

- ① AMZ65 uses anti-creep cross roller.
- ② Normal uses ABI-21.
- ③ Precision uses ATOM2.



AMS SERIES LINEAR MODULE

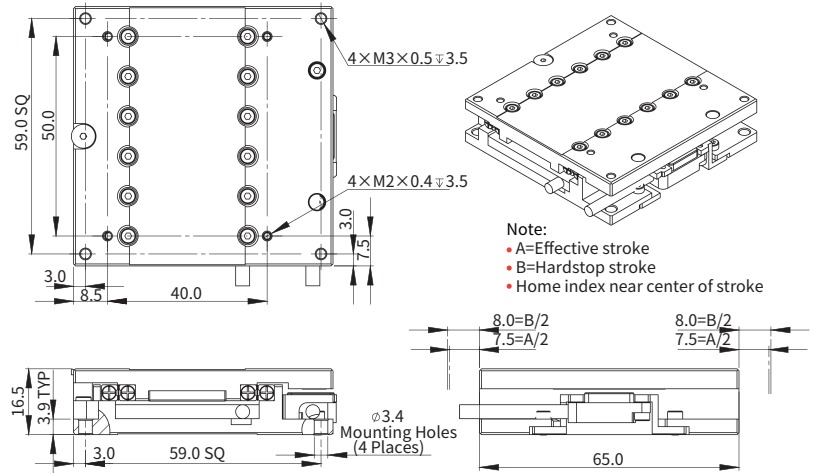
- ▶ Low profile
- ▶ Direct drive technology
- ▶ High response
- ▶ High precision optical encoder
- ▶ Stackable configuration

AMS65-15

Specifications	Unit	Value	
Precision Grade	-	P	N
Effective Stroke	mm	15	
Continuous Force	N	4.6	
Peak Force	N	8.4	
Continuous Current	A	2.9	
Peak Current	A	5.2	
Resolution	μm	SINCOS/0.05	0.2
Repeatability	μm	±0.3	±1.0
Vertical Straightness	μm	±1.5	
Horizontal Straightness	μm	±1.5	
Rated Payload ^①	kg	1.40	
No-load Moving Mass	kg	0.18	
No-load Total Mass	kg	0.42	
Max. Allowable Moment	Nm	0.31	

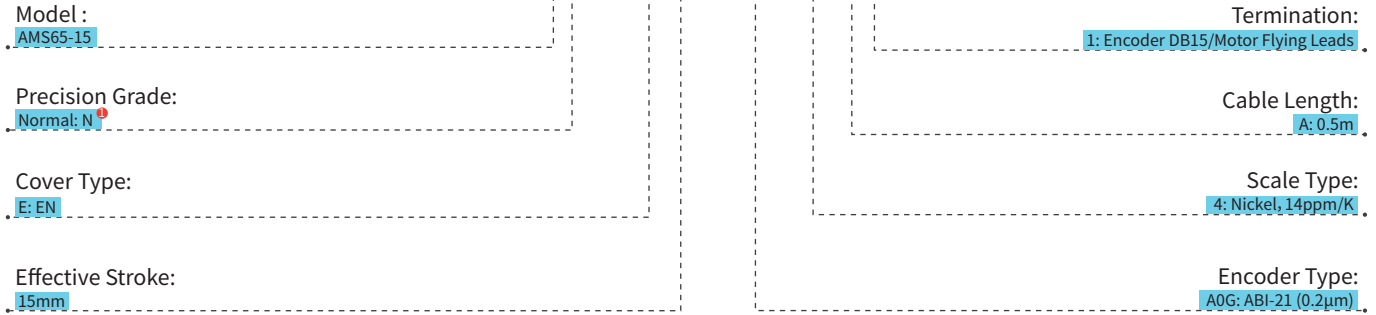
① Load capacity of module without cantilever.

Dimensional Drawing

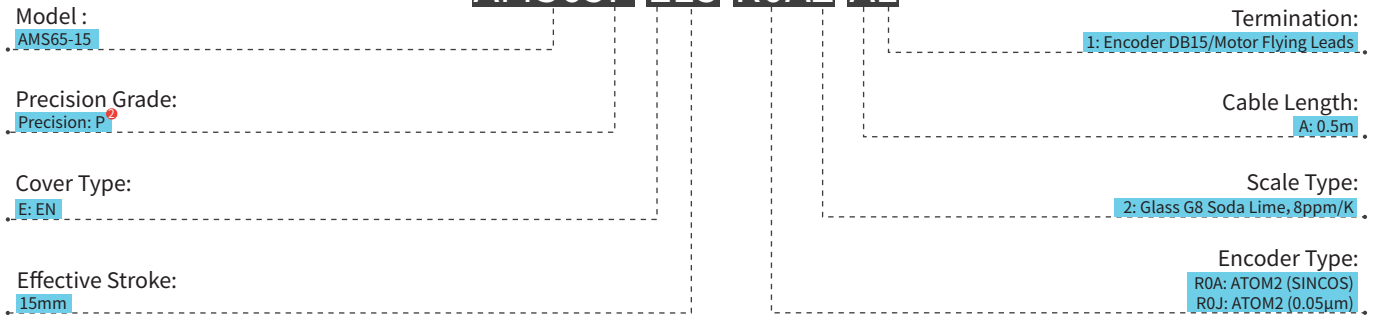


Ordering Part Number (OPN)

AMS65-E15-A0G4-A1



AMS65P-E15-R0A2-A1



Note:

① Normal uses non anti-creep roller and ABI-21.

② Precision uses anti-creep cross roller and ATOM2.

Motor Performance Parameters

AML

Motor Performance Parameters	Unit	AML40-10	AML65-15	AML80-20
Continuous Force @100°C ^{1 2}	N	2.3	5.9	9.6
Peak Force ²	N	6.9	17.7	28.8
Force Constant ±10% ³	N/Arms	0.8	2.2	4.5
Back EMF Constant ±10% ²	Vpeak/(m/s)	0.8	2.2	4.5
Motor Constant @25°C ²	N/Sqrt(W)	0.84	1.66	2.50
Resistance @25°C ±10% ³	Ω	0.89	1.76	3.26
Inductance ±20% ⁴	mH	0.15	0.72	2.53
Electrical Time Constant	ms	0.16	0.41	0.78
Continuous Current @100°C ¹	A	2.9	2.7	2.1
Peak Current	A	8.7	8.0	6.4
Continuous Power Dissipation @100°C ¹	W	9.6	16.3	19.1
Max. Coil Temperature	°C	100	100	100
Thermal Dissipation Constant ¹	W/°C	0.13	0.22	0.25
Max. Voltage	Vdc	48	48	48

Note:

- ¹ Measurement is taken at ambient temperature 25°C. Value depends on the thermal environment.
- ² The values are at mid stroke.
- ³ Resistance is measured by DC current with standard 0.5m cable.
- ⁴ Inductance is measured by current frequency of 1kHz.

AMZ

Motor Performance Parameters	Unit	AMZ65-8
Continuous Force @100°C ^{1 2}	N	7.35
Peak Force ²	N	29.4
Force Constant ±10% ³	N/Arms	7.35
Back EMF Constant ±10% ²	Vpeak/(m/s)	7.35
Motor Constant @25°C ²	N/Sqrt(W)	2.30
Resistance @25°C ±10% ³	Ω	10.24
Inductance ±20% ⁴	mH	2.82
Electrical Time Constant	ms	0.28
Continuous Current @100°C ¹	A	1.0
Peak Current	A	4.0
Continuous Power Dissipation @100°C ¹	W	5.2
Max. Coil Temperature	°C	100
Thermal Dissipation Constant ¹	W/°C	0.07
Max. Voltage	Vdc	60

Note:

- ¹ Measurement is taken at ambient temperature 25°C. Value depends on the thermal environment.
- ² The values are at mid stroke.
- ³ Resistance is measured by DC current with standard 0.5m cable.
- ⁴ Inductance is measured by current frequency of 1kHz.

AMR

Motor Performance Parameters	Unit	AMR65D-50	AMR80D-100
Continuous Torque (NC) @100°C ¹	Nm	0.13	0.2
Peak Torque	Nm	0.51	0.79
Torque Constant ±10%	Nm/Arms	0.12	0.2
Back EMF Constant ±10%	Vpeak/rpm	1.00E-02	1.69E-02
Motor Constant @25°C	Nm/Sqrt(W)	3.00E-02	5.30E-02
Resistance (L-L) @25°C ±10% ²	Ω	8	9.3
Inductance (L-L) ±20% ³	mH	0.75	1
Electrical Time Constant	ms	0.09	0.11
Continuous Current (NC) @100°C ¹	Arms	1.1	1
Peak Current	Arms	4.4	4
Continuous Power Dissipation (NC) @100°C ¹	W	18.8	18.1
Max. Coil Temperature	°C	100	100
Thermal Dissipation Constant (NC) ¹	W/°C	0.25	0.24
Max. Bus Voltage	Vdc	48	48
Pole Number	p	16	16
Max. Speed	Degree/s	720	720

Note:

- ¹ Measurement is taken at ambient temperature 25°C. Value depends on the thermal environment. Abbreviations: NC=Natural Cooling, AC=Air Cooling, WC=Water Cooling.
- ² Resistance is measured by DC current with standard 0.5m cable.
- ³ Inductance is measured by current frequency of 1kHz.
- ⁴ Values are based on ABI optical encoder (SIN/COS, 4096X) values at the highest bus voltage.

AMS

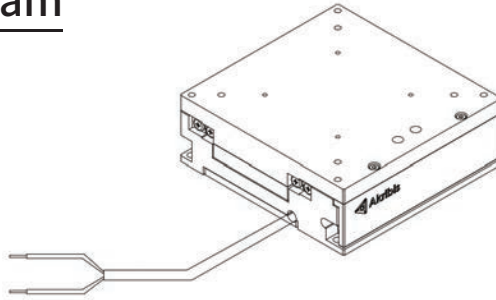
Motor Performance Parameters	Unit	AMS65-15
Continuous Force @100°C ^{1 2}	N	4.6
Peak Force ²	N	8.4
Force Constant ±10% ³	N/Arms	1.6
Back EMF Constant ±10% ²	Vpeak/(m/s)	1.6
Motor Constant @25°C ²	N/Sqrt(W)	1.4
Resistance @25°C ±10% ³	Ω	1.3
Inductance ±20% ⁴	mH	0.65
Electrical Time Constant	ms	0.5
Continuous Current @100°C ¹	A	2.9
Peak Current	A	5.2
Continuous Power Dissipation @100°C ¹	W	13.5
Max. Coil Temperature	°C	100
Thermal Dissipation Constant ¹	W/°C	0.18
Max. Voltage	Vdc	48

Note:

- ¹ Measurement is taken at ambient temperature 25°C. Value depends on the thermal environment.
- ² The values are at mid stroke.
- ³ Resistance is measured by DC current with standard 0.5m cable.
- ⁴ Inductance is measured by current frequency of 1kHz.

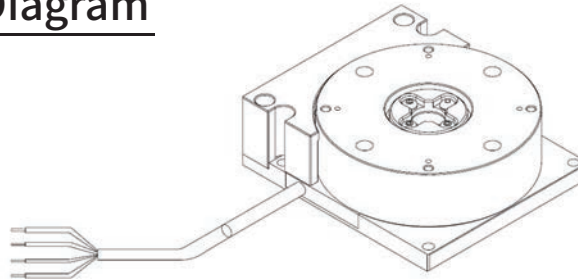
AML Motor Cable Connection Diagram

PIN	DESCRIPTION	COLOR
-	Positive	White
-	Negative	Black



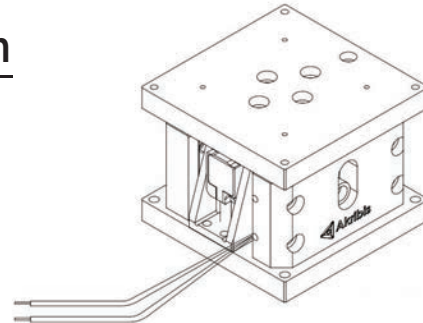
AMR Motor Cable Connection Diagram

PIN	DESCRIPTION	COLOR
-	M1	Black
-	M2	Blue
-	M3	Red
-	GND	Green



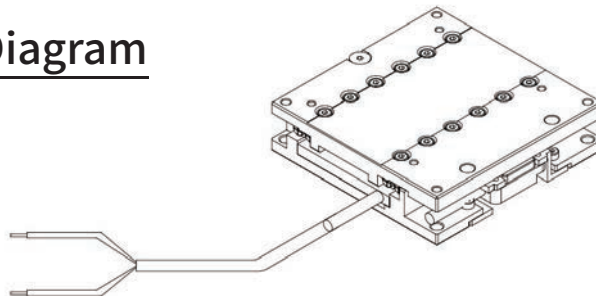
AMZ Motor Cable Connection Diagram

PIN	DESCRIPTION	COLOR
-	Positive	White
-	Negative	Black



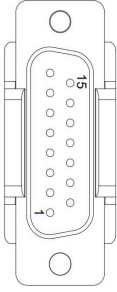
AMS Motor Cable Connection Diagram

PIN	DESCRIPTION	COLOR
-	Positive	White
-	Negative	Black



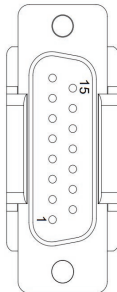
Encoder Pin Assignment

ABI21

I/O Connector	Pinout	Signal	Function
	Pin 3	Reserved	Do Not Connect
	Pin 4	A-	TTL A- Signal
	Pin 5	A+	TTL A+ Signal
	Pin 6	Reserved	Do Not Connect
	Pin 9	B-	TTL B- Signal
	Pin 10	B+	TTL B+ Signal
	Pin 12	+5V	Encoder Supply(5V)
	Pin 13	GND	Encoder Supply(0V)
	Pin 14	Index+	Index+ Signal
	Pin 15	Index-	Index- Signal
Case	Shield	Outer Shield	

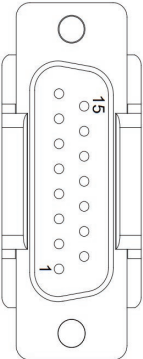
Note: Data from 'Datasheet for ABI-21 (EN)-20.08.04-Open'.

ABI22

I/O Connector	Pinout	Signal	Function
	Pin 1	Index-	Index- Signal
	Pin 2	Index+	Index+ Signal
	Pin 3	Reserved	Do Not Connect
	Pin 6	Reserved	Do Not Connect
	Pin 7	Cos+	Cosine+ Signal
	Pin 8	Sin+	Sine+ Signal
	Pin 11	Reserved	Do Not Connect
	Pin 12	+5V	Encoder Supply(5V)
	Pin 13	GND	Encoder Supply(0V)
	Pin 14	Cos-	Cosine- Signal
	Pin 15	Sin-	Sine- Signal
	Case	Outer Shield	Outer Shield

Note: Data from 'Datasheet for ABI-21 (EN)-20.08.04-Open'.

ATOM Ri

I/O Connector	Digital		Analogue		Function
	Pinout	Signal	Pinout	Signal	
	Pin 7,8	5V	Pin 4,5	5V	Power
	Pin 2,9	0V	Pin 12,13	0V	
	Pin 14	A+	Pin 9	V1+	Incremental Signals
	Pin 6	A-	Pin 1	V1-	
	Pin 13	B+	Pin 10	V2+	
	Pin 5	B-	Pin 2	V2-	
	Pin 12	Z+	Pin 3	V0+	Reference Mark
	Pin 4	Z-	Pin 11	V0-	
	Pin 11	E+	-	-	Alarm
	Pin 3	E-	-	-	
	Pin 1	X	Pin 6	Vx	Set-up
	-	-	Pin 14	CAL	Remote CAL
	Case	-	Case	-	Shield
	Pin 10,15	-	Pin 7,8,15	-	Do Not Connect

Note: Data from 'L-9517-9563-05-B_Data_sheet_ATOM_en'.

Controller&Driver

AGD200



AGD301



AME3



AGD Series – Integrated Controller and Drive Unit

AGD200

AGD200 series is a family of compact, high performance motion control units with 2 integrated servo amplifiers, allowing it driving 2 motors and control third axis through an external drive. It is equipped with Ethernet, USB, CAN bus, RS232 and RS485 communication ports to interface with any host devices. With 16 kHz sampling frequency, this product is ideal for any tightly coordinated motion systems. It supports a very wide range of bus-voltage from 12Vdc to 90Vdc and each axis can supply up to 5.6Arms continuous current and 11.2Arms peak current concurrently.

Equipped with a plethora of I/Os: 11 isolated digital inputs, 4 isolated digital output, 4 analog inputs, 4 analog outputs and 8 differential inputs, this product is fully capable of handling standalone applications. The typical use case of this product is in 3D printers, security surveillance camera systems, mobile robots, and factory automations.



AGD200

Description	AGD200-ET-2D01	AGD200-ET-2D02	AGD200-ET-2D05
Number of Axes	2 (3 rd axis with external drive)		
Power Supply	12-90 VDC		
Logic Power Supply (Optional)	12-36 VDC		
Continuous Current	1.4 Arms	2.8 Arms	5.6 Arms
Peak Current	2.8 Arms	5.6 Arms	11.2 Arms
Isolated Inputs ¹	11		
Isolated Outputs ²	4		
Differential Inputs	8		
Differential Outputs	4		
Analog Inputs ³	4 (12-bit, 16 bits analog input with extension board)		
Analog Outputs	4 (16-bit)		
Brake Output ⁴	2		
Encoder Inputs	3 Ports (each port is software configurable as AquadB, Absolute Biss-C or EnDat2.2 ⁵). Ports 1 and 2 support also Sin/Cos 1Vpp encoders		
Motor Types	Voice Coil, Brushed/Brushless Linear or Rotary Motor, Steppers (open and closed loop, micro-stepping)		
Communication	Ethernet, CAN bus, RS232, 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.		

¹ Digital isolated input can be configured as NPN or PNP, in groups of 3 or 4.

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

³ 16-bit analog inputs available in some product options. Consult your sales channel.

⁴ Brake output up to 48VDC, 3A each.

⁵ EnDat 2.2 supported by dedicated FPGA version (consult with sales engineer).

AGD Series – Integrated Controller and Drive Unit

AGD301

AGD301 series is a family of standalone, high performance 3-axis motion control units with integrated servo amplifiers. It is equipped with Ethernet, USB, CAN bus, RS232 and RS485 communication ports to interface with any host devices such as PC, PLC, HMI, etc. With 16 kHz sampling (profiler, position, velocity, optional force and current control loops) frequency, this product is ideal for any tightly coordinated motion systems, such as XYZ or XY-Theta stage, flexible-link gantry stages, Z-Theta or XZ-Theta pick and place modules, etc.

AGD301 can drive up to 3 voice coils, brushed or brushless servo motors or stepper motors, allowing very flexible configuration of the motors in the multi-axis system. It supports a very wide range of bus-voltage from 12Vdc to 90Vdc and each axis can supply up to 5.6Arms continuous current and 11.2Arms peak current concurrently. It is suitable to drive very small voice coil or brushed motors at 12Vdc, and is also capable drive 3 big motors with 0.5kW continuous power each.



AGD301

Description	AGD301-ET-2D05	AGD301-ET-2D09-001
Number of Axes	3	
Power Supply	12-90 VDC	
Logic Power (optional)	12-36VDC	
Continuous Current	5.6 Arms per axis	9 Arms per axis ^①
Peak Current	11.2 Arms per axis	18.2 Arms per axis
Isolated Inputs ^②	27	
Isolated Outputs ^③	17	
Bi-Directional Differential I/Os (RS422)	8	
Analog Inputs ^④	4 (12-bit)	4 (16-bit)
Analog Outputs	4 (16-bit)	
PT100/PT1000 Inputs ^⑤	3	
Brake Output ^⑥	3	
Hall Sensors Inputs ^⑦	3	
Regeneration Output	1	
Encoder Inputs	3 Ports (each port is software configurable as AquadB, Sin/Cos 1Vpp, Absolute BiSS-C or EnDat2.2).	
Motor Types	Voice Coil, Brushed/Brushless Linear or Rotary Motor, Steppers (open and closed loop, micro-stepping)	
Communication	Ethernet, RS232, CAN, USB, RS485	
Control Sampling Rate	16 kHz sampling rate for current, velocity and position control loops	
Operational Modes	Position, Velocity, optional Force or Current 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 – 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.	

① Digital isolated input can be configured as NPN or PNP, in groups of 3 or 4.

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

③ 16-bit analog inputs available in some product options. Consult your sales channel.

④ Hardware switch to select between PT100 and PT1000.

⑤ Brake output up to 48VDC, 3A each.

⑥ Part of general purpose inputs with internal 5V power supply.

⑦ Limited to 20 Arms for 3 axes in total.

3-axis EtherCAT Driver

AME3-90V-0510

AME3-90V-0510 (Akribis 3-axis Module Ethercat Driver) is 3-axis, high performance, DC powered drive . This product allows position, velocity and torque control using EtherCAT.

Each of the axis support cyclic synchronous position/velocity/torque, profile position velocity, Interpolated position mode (PVT) and homing. In micro stepping, mode, stepper command pulses and master encoder for camming or gearing is supported.

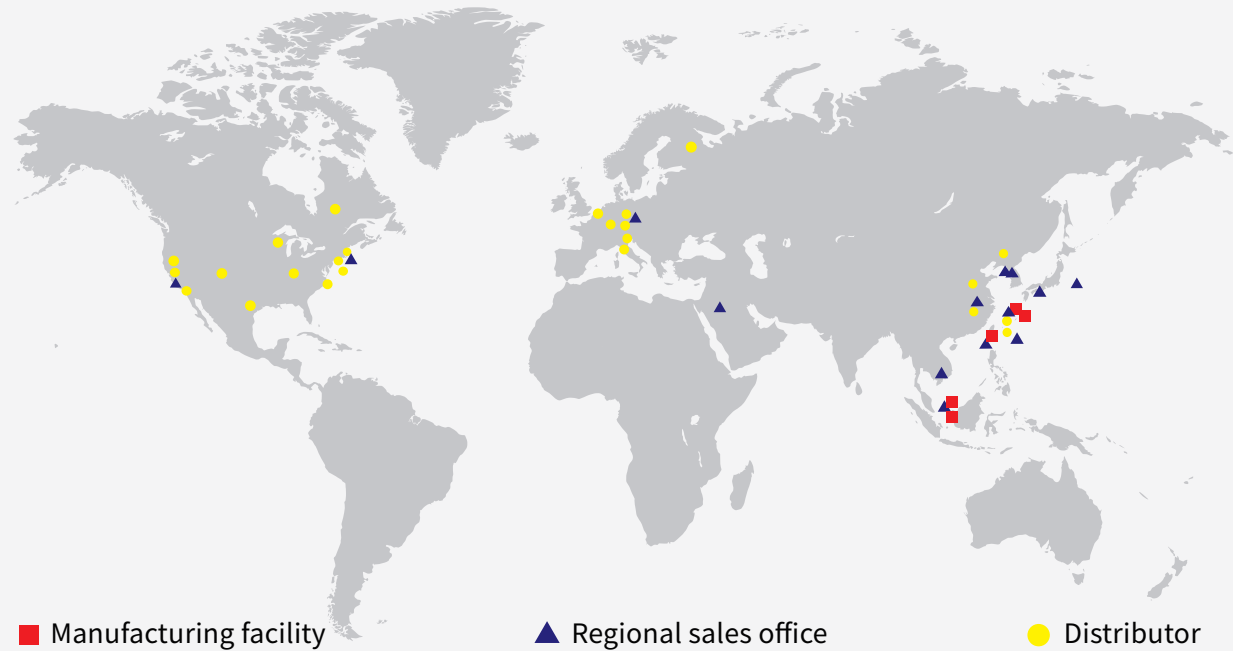
This product features with 19x High speed inputs, 3x MOSFET outputs, 6x CMOS High speed outputs, where the 3x MOSFETS outputs are 24V compatible can power motor brakes.



AME3-90V-0510

Description	AME3-90V-0510	
Vbus Voltage	+14 V to +90 V	
VAux Voltage	+21.6V to 26.4V, 12.3W max with all encoders @ 500mA	
Input Power Current Consumption (peak)	30 A (1 second)	
Input Power Current Consumption (continuous)	15 A	
Output Power (each axis)	Peak Current	10 A
	Peak Time	1 Second
	Continuous Current	5 A
Encoder Feedback Interface Support	Analog 1Vpp (incremental encoder)	
	Digital A quad B (incremental encoder)	
	EnDat (absolute encoder)	
	BISS C (absolute encoder)	
	SSI (absolute encoder)	
	Hall Sensor	
EtherCAT Interface	100BASE-TX cabling system	
	2x RJ45 (EtherCAT Network port)	
Control I/O Interface	19x HS Digital Input (*High speed)	
	3x MOSFET Digital Output	
	6x CMOS HS Digital Output (*High speed)	
	3x Differential Analog Input (12-bit)	
Operating Temperature	0°C - 45°C	

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