

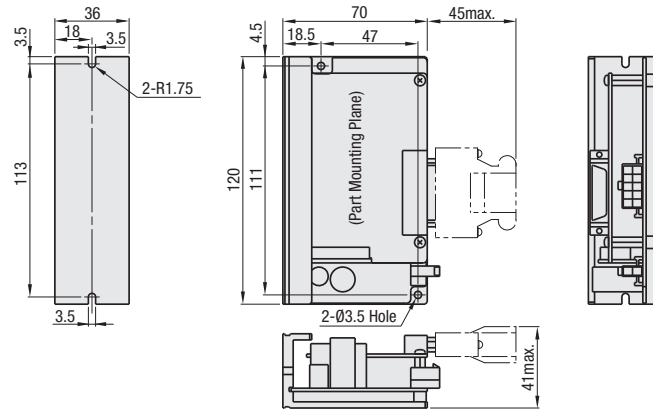
## Specification Of Oriental Motor $\alpha$ Step Driver

### Oriental Motor $\alpha$ Step ASC36AK

#### Driver Basic Specifications

<b>Input Power Supply</b>		DC24V $\pm$ 10%
<b>Velocity / Position Control Commands</b>		Pulse Input
<b>Maximum Input Pulse Frequency</b>		250 kHz (When pulse duty is 50%)
<b>Protection Functions</b>		When the following protective functions are activated, motor stops automatically with alarm signal. Overload, overvoltage and velocity error protections, and overspend, EEPROM data error, sensor error and system error
<b>Input Signal</b>		Photo Coupler Input / Input Resistance: 220 $\Omega$ Input Current: 7~20 mA [CW Pulse / CCW Pulse (Negative Logic Pulse Input), Pulse / Rotational Direction Switch (Negative Logic Pulse Input) / Current OFF / Alarm Clear / Resolution Switch]
<b>Output Signal</b>		Photo Coupler / Open-Collector Output External Use Condition: DC30V / 15mA max. (Positioning Completion Signal, Alarm Signal) Transistor / Open-Collector Output Interface Condition: DC30V, 15 mA max. (Feedback Pulse A/B Signal)
<b>Insulation Resistance</b>		100M $\Omega$ minimum when measured by DC500V megger between the following places. - Heat Sink - Power Supply Input Terminals
<b>Dielectric Strength Voltage</b>		Sufficient to withstand the following for one minute: - Heat Sink - Power Supply Input Terminals 0.5kV 50Hz or 60Hz
<b>Operating Environment (in Operation)</b>	<b>Operating Temperature</b>	0~+40 $^{\circ}$ C (No Freezing)
	<b>Operating Humidity</b>	85%RH or below (No Condensation)
	<b>Ambience</b>	No corrosive gases or dust. No direct contact with water or oil.

#### External Dimension Diagram

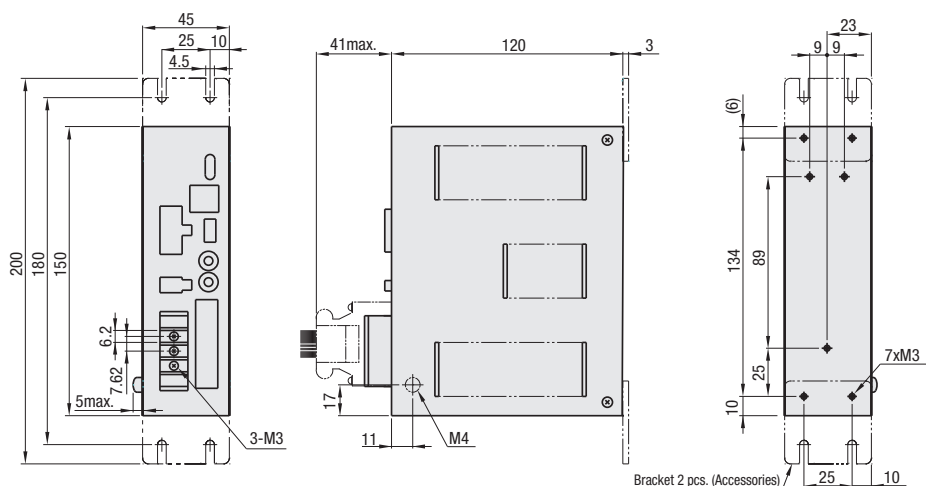


**Oriental Motor  $\alpha$  Step AS46AA (MA) / AS66AAE (MAE)**

**Driver Basic Specifications**

<b>Input Power Supply</b>	Single-phase AC100-115V -15~+10% 50/60Hz	
<b>Velocity / Position Control Commands</b>	Pulse Input	
<b>Maximum Input Pulse Frequency</b>	250 kHz (when pulse duty is 50%)	
<b>Protection Functions</b>	When the following protective functions are activated, motor stops automatically with alarm signal. Overheat, overload, overvoltage, velocity error and over current protections, and over speed protections, EEPROM data error, sensor error and system error	
<b>Input Signal</b>	Photo Coupler Input / Input Resistance: 220 $\Omega$ Input Current: 7~20 mA [CW Pulse / CCW Pulse (Negative Logic Pulse Input), Pulse / Rotational Direction Switch (Negative Logic Pulse Input) / Current OFF / Alarm Clear / Resolution Switch]	
<b>Output Signal</b>	Photo Coupler / Open-Collector Output External Use Conditions: DC30V, 15mA max. (Positioning Completion Signal and Alarm Signal) Transistor Open-Collector Output External Use Conditions: DC30V, 15 mA max. (Timing, Feedback Pulse A/B-phase) Line Driver Output 26C31 Equivalent (Timing, Feedback Pulse A/B-phase)	
<b>Insulation Resistance</b>	100M $\Omega$ minimum when measured by DC500V megger between the following places. · Frame - Power Supply Input Terminals, I/O - Power Supply Input Terminals	
<b>Dielectric Strength Voltage</b>	Sufficient to withstand the following for one minute: · Frame - Power Supply Input Terminals 1.5kV 50Hz or 60Hz, I/O Power Supply Input Output Terminals 2.3kV 50Hz or 60Hz	
<b>Operating Environment (in Operation)</b>	<b>Operating Temperature</b>	0~+50°C (No Freezing)
	<b>Operating Humidity</b>	85%RH or below (No Condensation)
	<b>Ambience</b>	No corrosive gases or dust. No direct contact with water or oil.

**External Dimension Diagram**



## Specification Of Oriental Motor 5-phase Stepping Driver

### Oriental Motor 5-phase Stepping Motors RK545AA (AMA) / RK566AAE (AMAE)

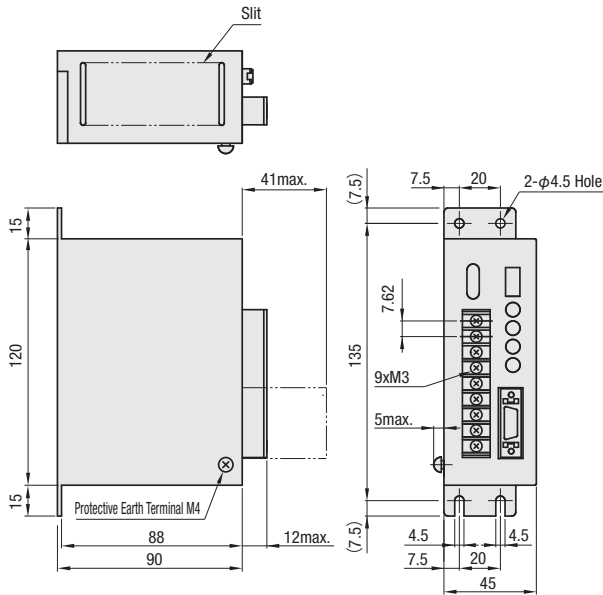
#### Driver Basic Specifications

Input Signal	Input	Photo Coupler Input: Input Resistance 220Ω, Input Current 10~20 mA Photo Coupler "ON": +4.5~5V, Photo Coupler "OFF": 0~+1V (Voltage between Terminals)
	CW Pulse Signal (Pulse Signal)	CW direction step command signal (operation command pulse signal when in 1-pulse input mode) negative logic pulse input Pulse Width 2.5μs minimum, Pulse Rise/Fall Time 2μs max., Pulse Duty 50% or below Motor moves one step when the pulse input is switched from photo coupler ON to OFF. Max. Pulse f / Frequency 200kHz (when pulse duty is 50%)
	CCW Pulse Signal (Rotation Direction Signal)	CCW direction operation command pulse signal (rotation direction signal when in 1-pulse input mode photo coupler ON: CW OFF: CCW) negative logic pulse input Pulse Width 2.5μs minimum, Pulse Rise/Fall Time 2μs max., Pulse Duty 50% or below Motor moves one step when the pulse input is switched from photo coupler ON to OFF. Max. Pulse f / Frequency 200kHz (when pulse duty is 50%)
	All Windings Off Signal*	When in the "photo coupler ON" state, the output current to the motor is cut off and the motor shaft can be rotated manually. When in the "photo coupler OFF" state, the current is supplied to the motor.
	Step Switching Signal	Step angle is specified by DATA1 when photo coupler is "OFF." Step angled is specified by DATA2 when photo coupler is "ON".
Output Signal	Output Mode	Photo Coupler / Open-collector output external use conditions: DC24V max., 15mA max.
	Excitation Timing Signal	The signal is output every time the excitation sequence returns to the initial stage "0". (Photo Coupler: ON) Ex.) 0.72° / step (Divide by 1): Signal output every 10 pulses, 0.072° / step (Divide by 10): Signal output every 100 pulses
	Overheat Signal	Output is turned off when the driver's internal temperature rises to approximately 80°C (176°F) or above. (Photo Coupler: OFF)
Function	Automatic current cutback, automatic current OFF, step angle switch, pulse input mode switch, electromagnetic brake function switch*, smooth drive function, power save mode*	
Indicator (LED)	Power input, excitation timing signal output, overheat signal output	
Cooling Method	Natural ventilation	
Insulation Resistance	100MΩ minimum when measured by DC500V megger between the following places. - Power input terminal - Protective earth terminal, Motor output terminal - Protective earth terminal, Electromagnetic brake power output terminal* - Protective earth terminal - Signal I/O terminal - Power input terminal, Signal I/O terminal - Motor output terminal, Signal I/O terminal - Electromagnetic brake power output terminal*	
Dielectric Strength Voltage	Sufficient to withstand the following for one minute, (AC1.5kV/1.8kV 50Hz or 60Hz) - Power input terminal - Protective earth terminal, Motor output terminal - Protective earth terminal, Electromagnetic brake power output terminal* - Protective earth terminal (1.5kV) - Signal I/O terminal - Power input terminal, Signal I/O terminal - Motor output terminal, Signal I/O terminal - Electromagnetic brake power output terminal* (1.8kV)	
Operating Environment (in Operation)	Operating Temperature	0~+50°C (No Freezing)
	Operating Humidity	85%RH or below (No Condensation)
	Ambience	No corrosive gases or dust. No direct contact with water or oil.

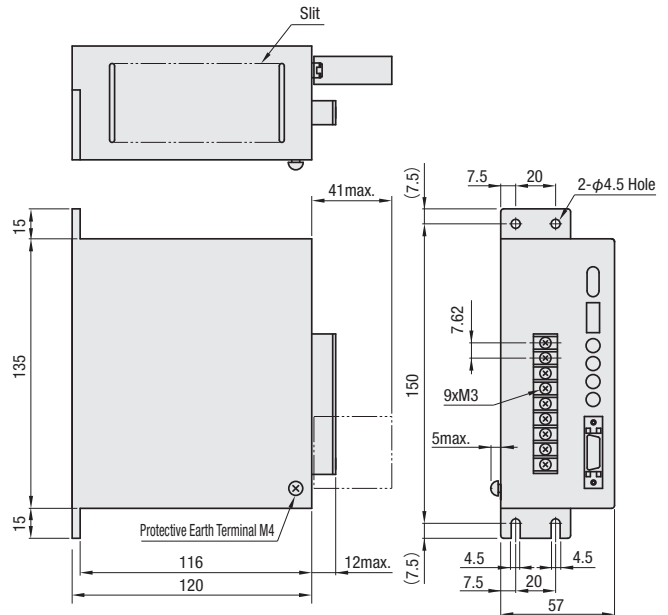
\*Electromagnetic type only

#### External Dimension Diagram

RK545AA (AMA)



RK566AAE (AMAE)



# Cables

Recommended for use with SX Single Axis Actuator with motor. A 3m long cable is included as the standard accessory; if different cable length is required, order the cable separately.  
Other than those listed on this page, FA Electronics Catalog lists more various items with shield or custom alterations. For details, please see Wiring Components Catalog.

## Cables for Oriental Motors

Part Number	Cable Type	Length (m)	Applicable Actuators	Motors	Motor/Driver Set Number	QExternal Dimension Diagram (mm)
CC010VA2R2	For without brake type	1	SXM20	T1E	AR26SAK	
CC020VA2R2		2				
CC030VA2R2		3				
CC050VA2R2		5				
CC070VA2R2		7				
CC100VA2R2		10				
CC150VA2R2		15				
CC200VA2R2		20				
CC300VA2R2	30					
CC010VAR	For without brake type	1	SXM20 SXM26 SXM30 SXM45	T2E T3E	AR46AA AR66AA	
CC020VAR		2				
CC030VAR		3				
CC050VAR		5				
CC070VAR		7				
CC100VAR		10				
CC150VAR		15				
CC200VAR		20				
CC300VAR	30					
CC010VARB	For a motor with an electromagnctic brake ※1	1	SXM20 SXM26 SXM30 SXM45	T2BE T3BE	AR46MA AR66MA	
CC020VARB		2				
CC030VARB		3				
CC050VARB		5				
CC070VARB		7				
CC100VARB		10				
CC150VARB		15				
CC200VARB		20				
CC300VARB	30					
CC010VPF	For without brake type	1	SXM20 SXM26 SXM30 SXM45	T4E T5E	RKS545AA RKS566AA	
CC020VPF		2				
CC030VPF		3				
CC050VPF		5				
CC070VPF		7				
CC100VPF		10				
CC150VPF		15				
CC200VPF		20				
CC010VPFB	For a motor with an electromagnctic brake ※1	1	SXM20 SXM26 SXM30 SXM45	T4BE T5BE	RKS566MA	
CC020VPFB		2				
CC030VPFB		3				
CC050VPFB		5				
CC070VPFB		7				
CC100VPFB		10				
CC150VPFB		15				
CC200VPFB		20				

Ordering Example: **Part Number** - **Cable Type** - **Length** - **Insulation Strip Length**  
 SVPM-J3HF1 - B - 5 - 02S

\*Insulation strip length can be specified for SVPM only.