



ORIENTAL MOTOR U.S.A. Corp.  
 570 Alaska Avenue  
 Torrance, CA 90503  
 1-800-GO-VEXTA (468-3982)

**Item # RKS596ACD-TS30-3, Microstep Stepper Motor & Driver with Built-in Controller (Stored Data)**

Each component can be purchased individually. The package item number has been discontinued. Please contact our technical support team for a replacement.

Web Price —

**Request Quote**



[Specifications](#) | [Driver Specifications](#) | [RS-485 Communication](#)

Specifications —

Return Policy	This product cannot be cancelled or returned once the order has b
Basic Step Angle	0.024°
Frame Size	3.54 in
Motor Length	2.68 in.
Speed-Torque Characteristics	<p>The graph shows Speed-Torque Characteristics for the RKS596 Gear Ratio 30. The y-axis represents Torque (oz-in) and the x-axis represents Speed (RPM). The graph includes curves for Maximum Torque, Holding Torque, and No-load Speed. The maximum torque is 3520 oz-in at 0 RPM, and the no-load speed is approximately 1000 RPM.</p>
Holding Torque	3520 oz-in
Type	Geared
Shaft/Gear Type	Spur Gear (Offset Shaft)



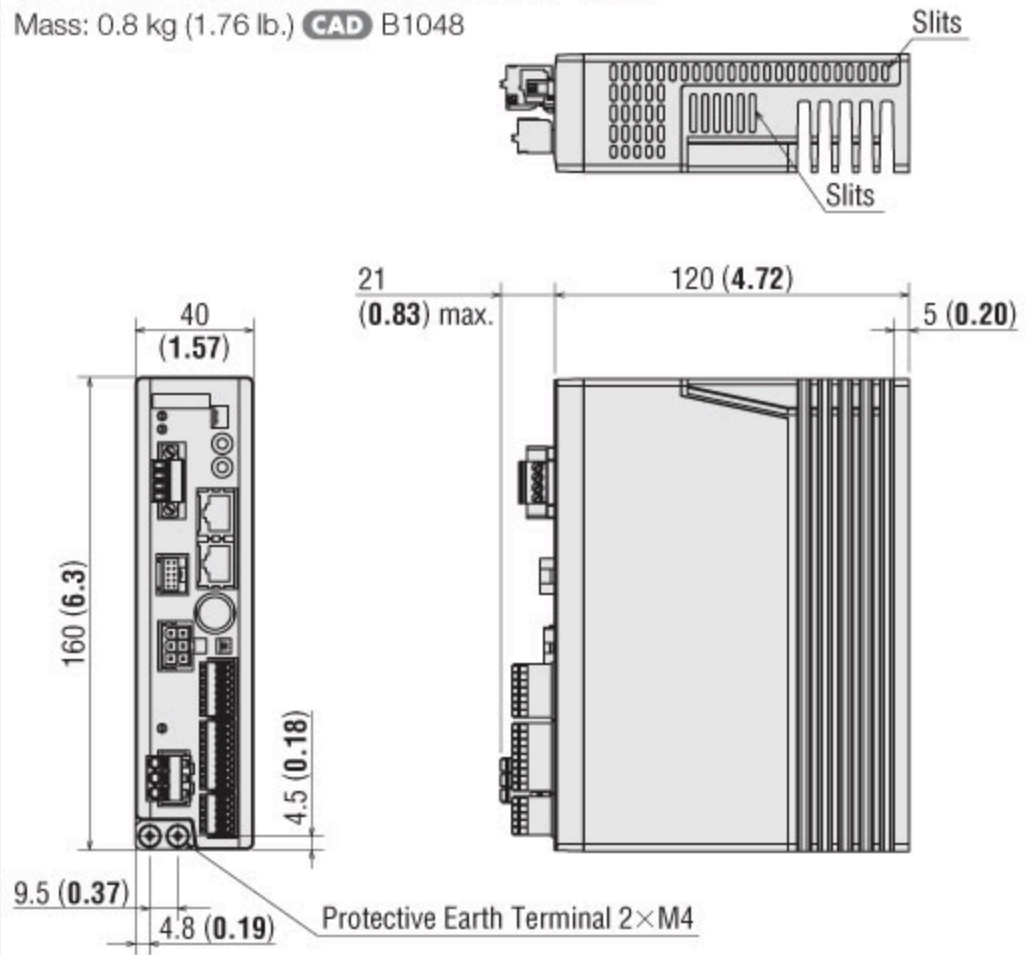
<b>Gear Ratio (X:1)</b>	30 :1
<b>Backlash</b>	10 arc min (0.17°)
<b>Encoder</b>	Not Equipped
<b>Shaft</b>	Single
<b>Electromagnetic Brake</b>	Not Equipped
<b>Power Supply</b>	Single-Phase 200-240 VAC
<b>Current</b>	3.0 A
<b>Permissible Speed Range (r/min)</b>	0 ~ 150
<b>Rotor Inertia</b>	6 oz-in <sup>2</sup>
<b>Radial Load</b>	0 in. from Shaft End = 67 lb 0.2 in. from Shaft End = 73 lb 0.39 in. from Shaft End = 78 lb 0.59 in. from Shaft End = 84 lb 0.79 in. from Shaft End = 90 lb
<b>Axial Load</b>	33 lb
<b>RoHS Compliant</b>	Yes
<b>Safety Standards</b>	UL CE
<b>CE Marking</b>	Low Voltage Directives EMC Directives
<b>California Proposition 65</b>	<b>⚠ CA WARNING</b> Cancer risk from exposure to Nickel. See <a href="http://www.P65Warnings.ca.gov">www.P65Warnings.ca.gov</a> Risk of reproductive harm from exposure to Di-n-hexyl phthalate (L Risk of cancer and reproductive harm from exposure to Di(2-ethylf See "?" or copy/paste <a href="http://www.P65Warnings.ca.gov">www.P65Warnings.ca.gov</a> in your browser.
<b>Components</b>	RKSD507-CD [Driver] PKE596AC-TS30 [Motor]
<b>Degree of Protection</b>	[Motor] IP20 [Driver] IP10

## Dimensions Unit = mm (in.)

### Drivers

#### ◇ Built-in Controller (Stored Data) Type

Mass: 0.8 kg (1.76 lb.) **CAD** B1048



### ● Accessories

Connector for Power Input Terminal (CN1)

Connector: MC1,5/4-STF-3,5 (PHOENIX CONTACT GmbH & Co.,KG.)

Connector for Sensor Signal (CN5)

Connector: FK-MC0,5/5-ST-2,5 (PHOENIX CONTACT GmbH & Co.,KG.)

Connector for Input Signal (CN8)

Connector: FK-MC0,5/9-ST-2,5 (PHOENIX CONTACT GmbH & Co.,KG.)

Connector for Output Signal (CN9)

Connector: FK-MC0,5/7-ST-2,5 (PHOENIX CONTACT GmbH & Co.,KG.)

Connector for Regeneration Unit/Main Power Supply (CN3)

Connector: FKCT2,5/3-ST-5,08 (PHOENIX CONTACT GmbH & Co.,KG.)

# Dimensions Unit = mm (in.)

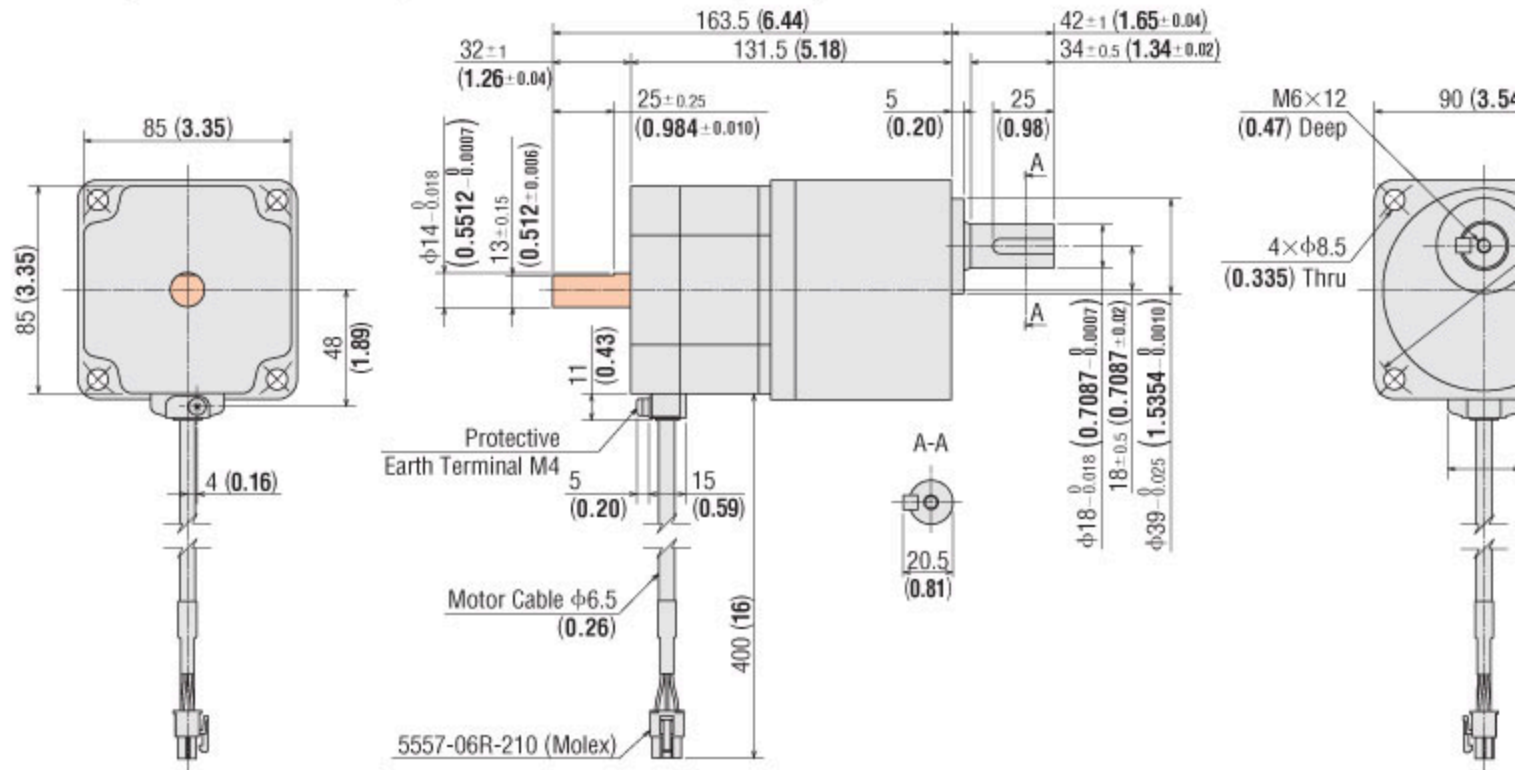
## Motors

### ◇ TS Geared Type

Frame Size 90 mm (3.54 in.)

Product Name		Motor Product Name	Gear Ratio	Mass kg (lb.)	CAD
Built-in Controller	Pulse Input				
RKS596A-D-TS-3	RKS596A-TS-3	PKE596AC-TS	<b>3.6, 7.2,</b>	3.1 (6.9)	B1053
RKS596B-D-TS-3	RKS596B-TS-3	PKE596BC-TS	<b>10, 20, 30</b>		

● Mounting Screw: M8×90 P1.25 (4 screws are included with the product)



**Dimensions** Unit = mm (in.)

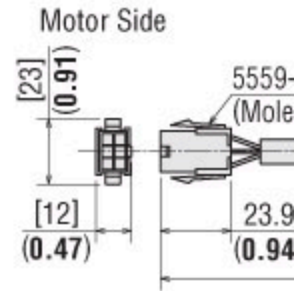
● Cable for Motor (Included)

◇ Only with the Type Supplied with a Connection Cable

Common to All Types

● Cable for Motor

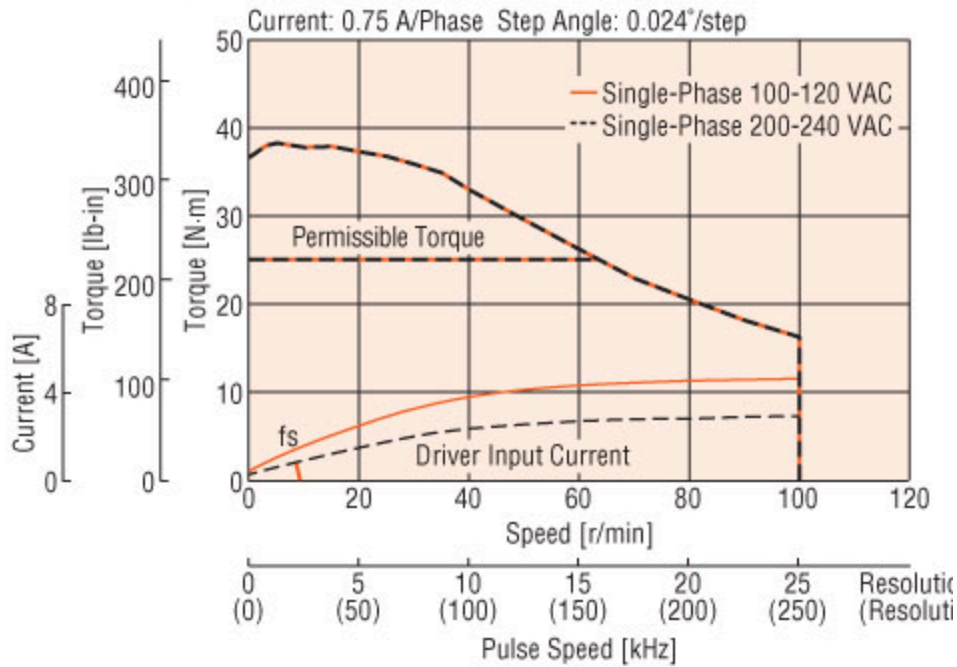
Cable Type	Length L m (ft.)
Cable for Motor	3 (9.8)



**Speed – Torque Characteristic**

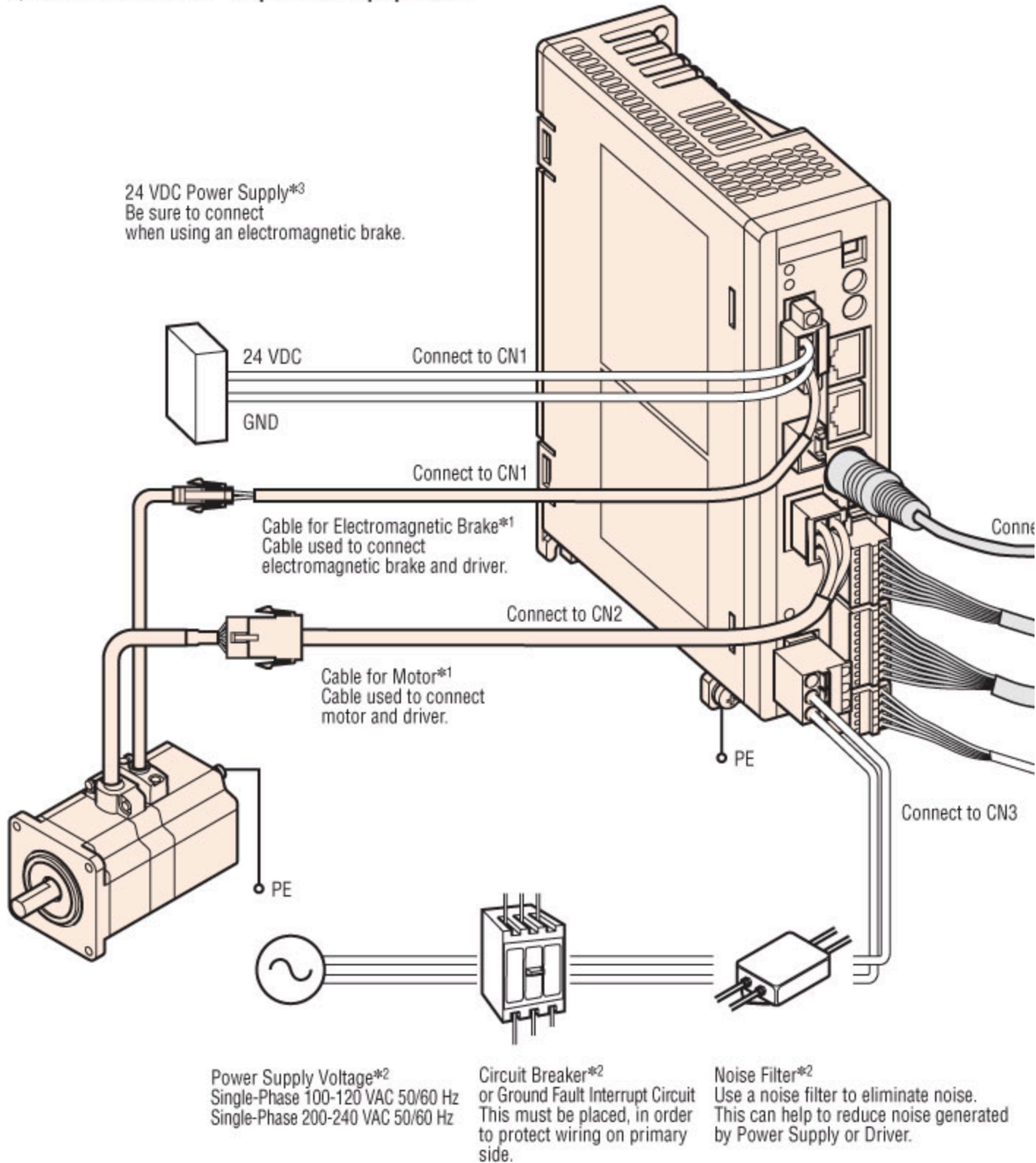
fs: Maximum Starting Frequency

**RKS596 Gear Ratio: 30**



## ● Connection Diagram

### ◇ Connection to Peripheral Equipment



\*1 Each product comes with a motor cable 3 m (9.8 ft.) long. Different lengths and flexible cables are available (sold separately).

When wiring the motor and the driver, keep a maximum distance of 20 m (65.6 ft.).

\*2 Not Supplied.

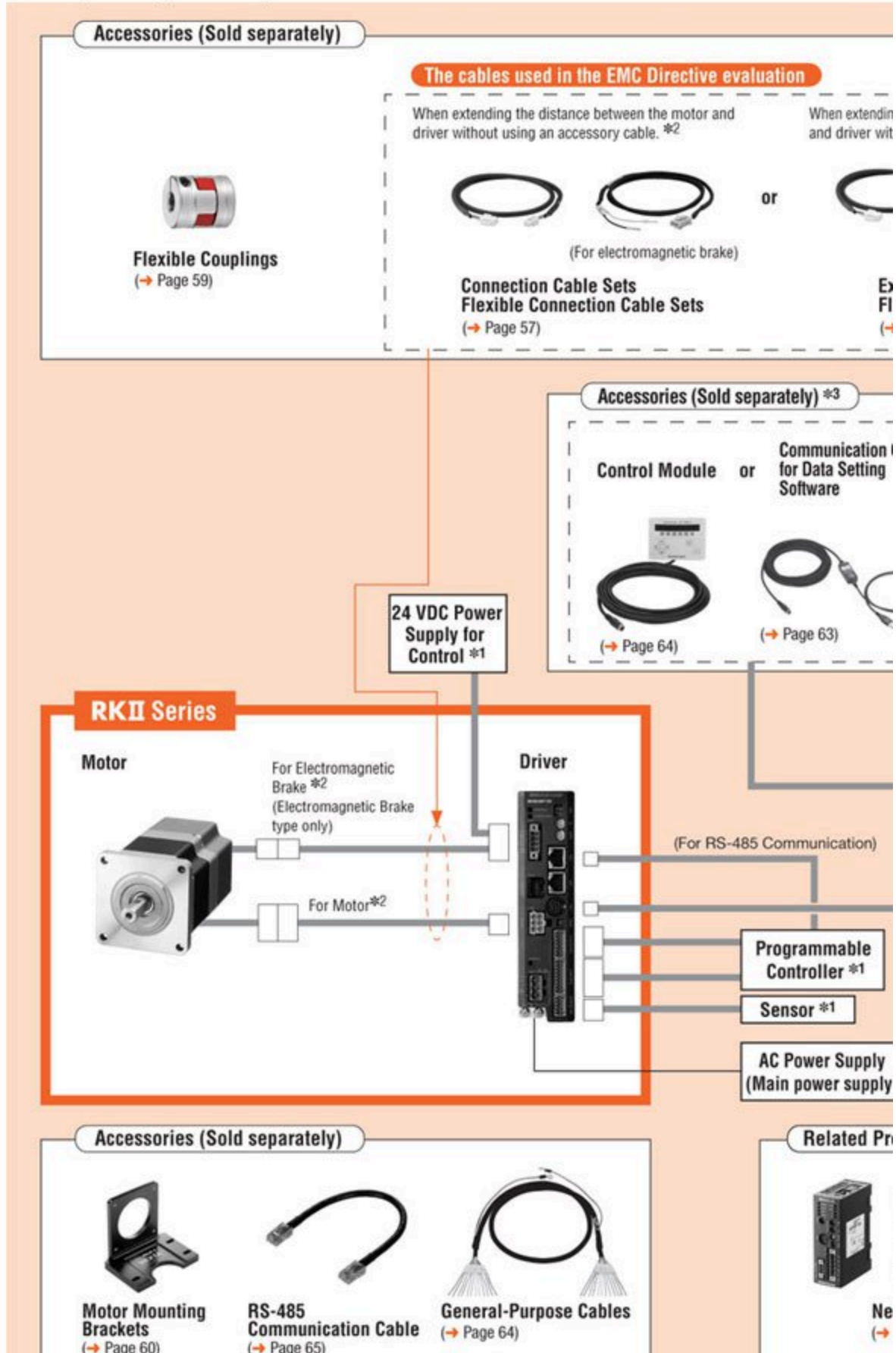
\*3 Not Supplied. If the wiring distance between the motor and driver is extended to 15 m (49.2 ft.) or longer by using an accessory



## System Configuration

### Built-in Controller Package Standard Type with Electromagnetic Brake

An example of a system configuration when used with either I/O control or RS-485 communication.



● Refer to the User Manual for operation procedure of this product. For details, please contact the nearest sales office or download from the Oriental Motor website. [www.orientalmotor.com](http://www.orientalmotor.com)

## Driver Specifications

<b>Number of Positioning Data Sets</b>	64
<b>Positioning Operation</b>	One-shot operation, Linked operation, Linked operation 2, Sequential mode, Direct mode
<b>Other Operation</b>	Continuous Operation, JOG Operation, Return-to-Home Operation, Test Operation

## RS-485 Communication

<b>Protocol</b>	Modbus Protocol (Modbus RTU mode)
<b>Electrical Characteristics</b>	EIA-485 compliance Twisted-pair wire (TIA/EIA-568B CAT5e or greater recommended) is used up to a total extension length of 50 m.
<b>Transmission/Reception Mode</b>	Half-duplex communication
<b>Baud Rate</b>	9600 bps/19200 bps/57600 bps/115200 bps
<b>Physical Layer</b>	Asynchronous mode (data: 8-bit, stop bit: 1-bit/2-bit, parity: none/odd/even)
<b>Connection Type</b>	Up to 31 units can be connected to one programmable controller (master equipment).

