

Specifications for Motor Cables of AR Series

This document describes types and connector pin assignments for the motor cable of the **AR** Series.

1. Motor cable types

For the **AR** Series, there are two types of the motor cables as shown below.

- **Connection cable**

Use when connecting a motor and a driver.



When installing the motor on a moving part, use a flexible cable having excellent flex resistance.

- **Extension cable**

Use when extending the distance between a motor and a driver or when the length of the connection cable used is not enough. Extend the distance by connecting the extension cable to the connection cable.

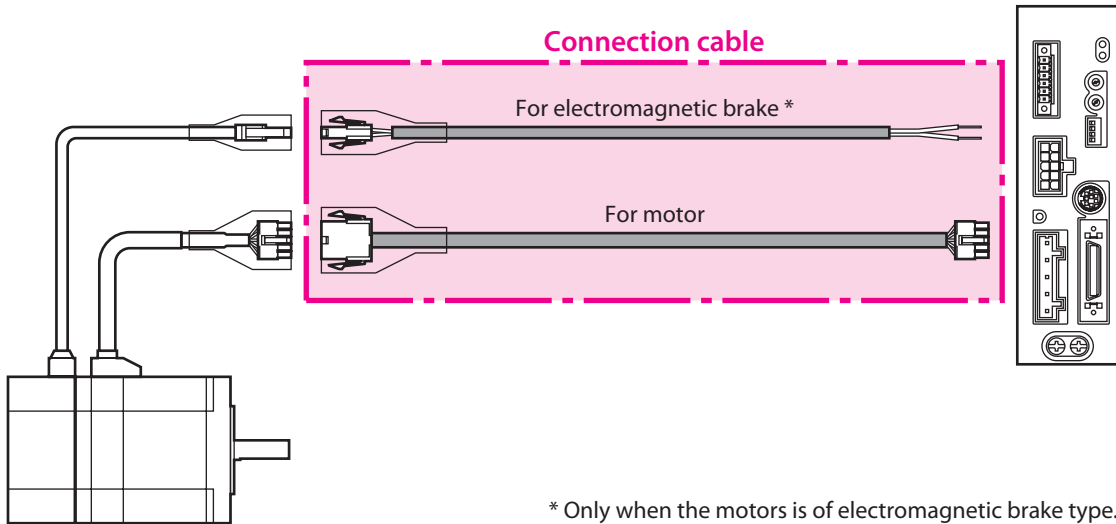


- When installing the motor on a moving part, use a flexible cable having excellent flex resistance.
- When extending the wiring length by connecting an extension cable to the connection cable, keep the total cable length to 30 m (98.4 ft.) or less.

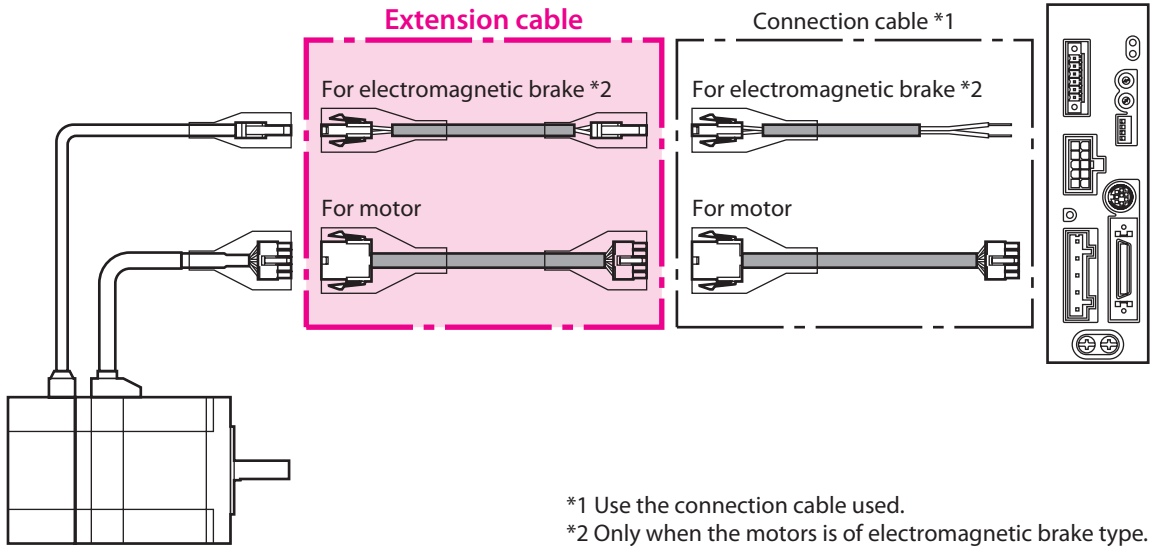
Motor cables for AC power input

1. Configurations of cables

■ Connection cable



■ Extension cable



2. Connection cable



When installing the motor on a moving part, use a flexible cable having excellent flex resistance.

■ About the model name

Ordering model names of the connection cables are shown in the tables below.

□ in the model names indicates a number representing the length of a connection cable.

[Example: **010** → 1 m (3.3 ft.), **020** → 2 m (6.6 ft.)]

For standard type motor

Cable type	Model
Connection cable	CC□□□VAF
Flexible connection cable	CC□□□VAR

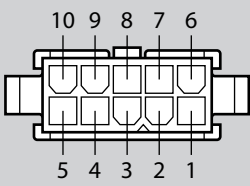
For electromagnetic brake type motor

Cable type	Model
Connection cable	CC□□□VAFB
Flexible connection cable	CC□□□VARB

■ Connector pin assignments

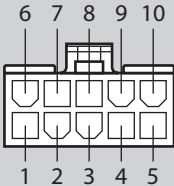
● Cable for motor

• Motor side



Manufacture	Molex
Model	5559-10P-210
Terminal	5558T2

• Driver side



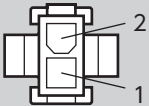
Manufacture	Molex
Model	5557-10R-210
Terminal	5556T2

• Pin assignment

Pin No.	Color	Lead size
1	White	AWG26 (0.14 mm ²)
2	Purple	
3	Red	AWG22 (0.3 mm ²)
4	Blue	
5	Green	
6	Black	AWG26 (0.14 mm ²)
7	Brown	
8	Gray	AWG22 (0.3 mm ²)
9	Orange	
10	Drain wire	AWG26 (0.14 mm ²)


● Cable for electromagnetic brake

• Motor side



Manufacture	Molex
Model	5559-02P-210
Terminal	5558T

• Driver side



Manufacture	PHOENIX CONTACT GmbH & Co. KG
Terminal	AI0.5 8WH

• Pin assignment

The connection cable and the flexible connection cable differ in the diameter of lead wires.

Pin No. *	Color	Lead size	
		Connection cable	Flexible connection cable
1	White	AWG20 (0.5 mm ²)	AWG21 (0.5 mm ²)
2	Black		

* A pin number of the driver side is described on the wire marker of the terminal.

3. Extension cable



- When installing the motor on a moving part, use a flexible cable having excellent flex resistance.
- When extending the wiring length by connecting an extension cable to the connection cable, keep the total cable length to 30 m (98.4 ft.) or less.

■ About the model name

Ordering model names of the extension cables are shown in the tables below.

□ in the model names indicates a number representing the length of a extension cable.

[Example: **010** → 1 m (3.3 ft.), **020** → 2 m (6.6 ft.)]

For standard type motor

Cable type	Model
Extension cable	CC□□□VAF T
Flexible extension cable	CC□□□VA RT

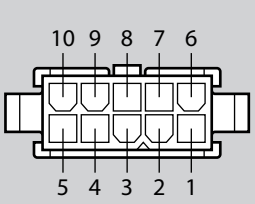
For electromagnetic brake type motor

Cable type	Model
Extension cable	CC□□□VAF BT
Flexible extension cable	CC□□□VA RBT

■ Connector pin assignments

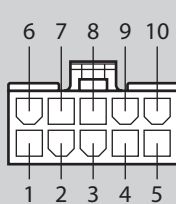
● Cable for motor

• Motor side



Manufacture	Molex
Model	5559-10P-210
Terminal	5558T2

• Driver side



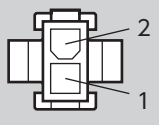
Manufacture	Molex
Model	5557-10R-210
Terminal	5556T2

• Pin assignment

Pin No.	Color	Lead size
1	White	AWG26 (0.14 mm ²)
2	Purple	
3	Red	AWG22 (0.3 mm ²)
4	Blue	
5	Green	
6	Black	AWG26 (0.14 mm ²)
7	Brown	
8	Gray	AWG22 (0.3 mm ²)
9	Orange	
10	Drain wire	AWG26 (0.14 mm ²)

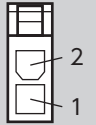
● Cable for electromagnetic brake

• Motor side



Manufacture	Molex
Model	5559-02P-210
Terminal	5558T

• Driver side



Manufacture	Molex
Model	5557-02R-210
Terminal	5556T

• Pin assignment

The extension cable and the flexible extension cable differ in the diameter of lead wires.

Pin No.	Color	Lead size	
		Extension cable	Flexible extension cable
1	White	AWG20 (0.5 mm ²)	AWG21 (0.5 mm ²)
2	Black		

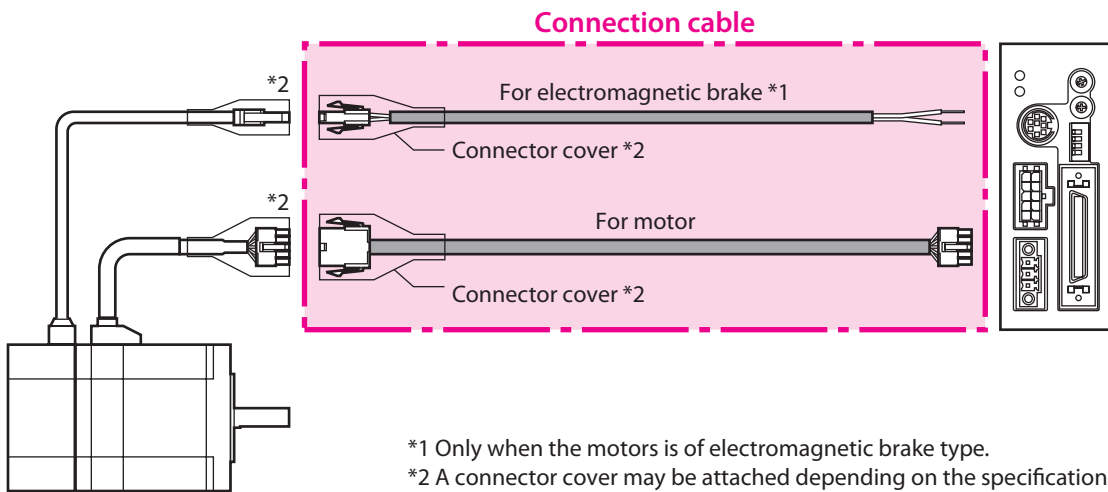
Motor cables for DC power input

1. Configurations of cables

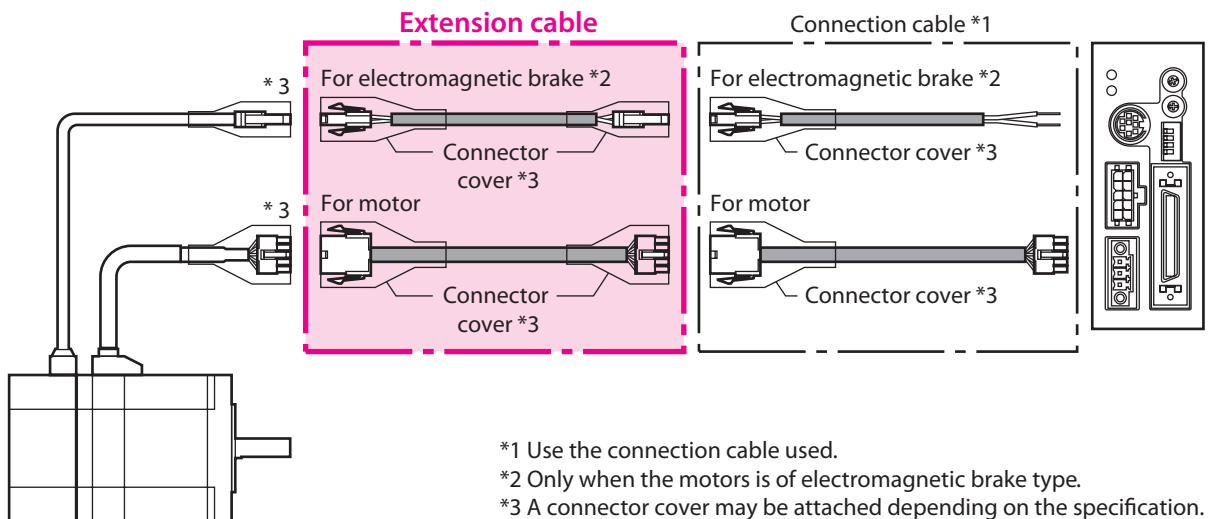


Connectors made by Molex or TE Connectivity are used for the cables. Even a combination of connecting the Molex connector and the TE Connectivity connector can be used without any problem.

■ Connection cable



■ Extension cable



2. Connection cable



When installing the motor on a moving part, use a flexible cable having excellent flex resistance.

■ About the model name

Ordering model names of the connection cables are shown in the tables below.

□ in the model names indicates a number representing the length of a connection cable.

[Example: **010** → 1 m (3.3 ft.), **020** → 2 m (6.6 ft.)]

For standard type motor

Cable type	Model	
	With connector cover	Without connector cover
Connection cable	CC□□□VAF2	CC□□□VA2F2
Flexible connection cable	CC□□□VAR2	CC□□□VA2R2

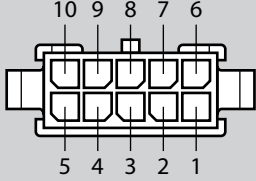
For electromagnetic brake type motor

Cable type	Model	
	With connector cover	Without connector cover
Connection cable	CC□□□VAFB2	CC□□□VA2FB2
Flexible connection cable	CC□□□VARB2	CC□□□VA2RB2

■ Connector pin assignments

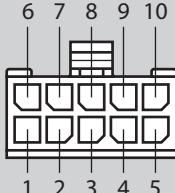
● Cable for motor

● Motor side



Manufacture	Molex	TE Connectivity
Model	43020-1000	1-794615-0
Terminal	for AWG22	43031-0001
	for AWG26	43031-0004

● Driver side



Manufacture	Molex	TE Connectivity
Model	43025-1000	1-794617-0
Terminal	for AWG22	43030-0001
	for AWG26	43030-0004

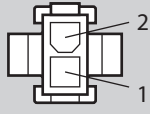
● Pin assignment

Pin No.	Color	Lead size
1	White	AWG26 (0.14 mm ²)
2	Black	
3	Purple	
4	Brown	
5*	Green	AWG22 (0.3 mm ²)
6	Red	
7	Gray	
8	Blue	
9	Orange	
10	Drain wire	

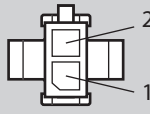
* No wiring for **AR14**, **AR15**, **AR24**, and **AR26** types.

● **Cable for electromagnetic brake**

● Motor side (With connector cover)

	
Manufacture	Molex
Model	5559-02P-210
Terminal	5558T

● Motor side (Without connector cover)

		
Manufacture	Molex	TE Connectivity
Model	43020-0200	794615-2
Terminal	43031-0001	1-794608-0

● Pin assignment

The connection cable and the flexible connection cable differ in the diameter of lead wires.

Pin No.	Color	Lead size	
		Connection cable	Flexible connection cable
1	White	AWG20 (0.5 mm ²)	AWG21 (0.5 mm ²)
2	Black		

3. Extension cable



- When installing the motor on a moving part, use a flexible cable having excellent flex resistance.
- When extending the wiring length by connecting an extension cable to the connection cable, keep the total cable length to 30 m (98.4 ft.) or less.

■ About the model name

Ordering model names of the extension cables are shown in the tables below.

□ in the model names indicates a number representing the length of a extension cable.

[Example: **010** → 1 m (3.3 ft.), **020** → 2 m (6.6 ft.)]

For standard type motor

Cable type	Model	
	With connector cover	Without connector cover
Extension cable	CC□□□VAFT2	CC□□□VA2F2
Flexible extension cable	CC□□□VART2	CC□□□VA2R2

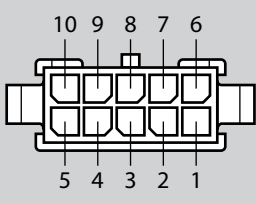
For electromagnetic brake type motor

Cable type	Model	
	With connector cover	Without connector cover
Extension cable	CC□□□VAFBT2	CC□□□VA2FBT2
Flexible extension cable	CC□□□VARBT2	CC□□□VA2RBT2

■ Connector pin assignments

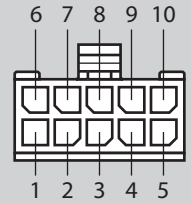
● Cable for motor

• Motor side



Manufacture		Molex	TE Connectivity
Model		43020-1000	1-794615-0
Terminal	for AWG22	43031-0001	1-794608-0
	for AWG26	43031-0004	1-794609-0

• Driver side



Manufacture		Molex	TE Connectivity
Model		43025-1000	1-794617-0
Terminal	for AWG22	43030-0001	794606-1
	for AWG26	43030-0004	794607-1

• Pin assignment

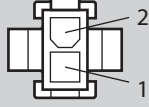
Pin No.	Color	Lead size
1	White	AWG26 (0.14 mm ²)
2	Black	
3	Purple	
4	Brown	
5 *	Green	AWG22 (0.3 mm ²)

Pin No.	Color	Lead size
6	Red	AWG22 (0.3 mm ²)
7	Gray	
8	Blue	
9	Orange	
10	Drain wire	AWG26 (0.14 mm ²)

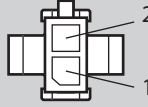
* No wiring for **AR14**, **AR15**, **AR24**, and **AR26** types.

● Cable for electromagnetic brake

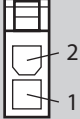
● Motor side (With connector cover)

	
Manufacture	Molex
Model	5559-02P-210
Terminal	5558T

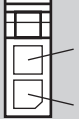
● Motor side (Without connector cover)

		
Manufacture	Molex	TE Connectivity
Model	43020-0200	794615-2
Terminal	43031-0001	1-794608-0

● Driver side (With connector cover)

	
Manufacture	Molex
Model	5557-02R-210
Terminal	5556T

● Driver side (Without connector cover)

		
Manufacture	Molex	TE Connectivity
Model	43025-0200	794617-2
Terminal	43030-0001	794606-1

● Pin assignment

The extension cable and the flexible extension cable differ in the diameter of lead wires.

Pin No.	Color	Lead size	
		Extension cable	Flexible extension cable
1	White	AWG20 (0.5 mm ²)	AWG21 (0.5 mm ²)
2	Black		

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