OPTION Brake



FASTECH

Fast Accurate Smooth Motion

OPTION Brake

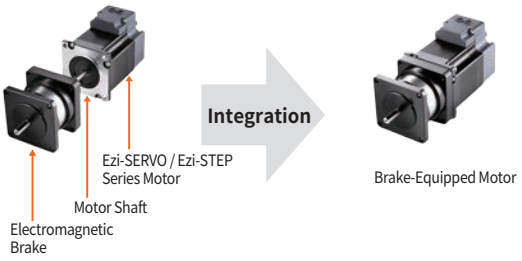


Overall Table of Brake

Name of Product	Motor Brake Size		
	42 mm	56 mm	60 mm
Ezi-SERVO CC-Link IE TSN			
Ezi-SERVO CC-Link IE TSN ALL			
Ezi-SERVO CC-Link IE TSN 4X			
Ezi-STEP CC-Link IE TSN			
Ezi-STEP CC-Link IE TSN ALL			
Ezi-STEP CC-Link IE TSN 4X			

High-Performance Brake-Equipped Motors

FASTECH's brake-equipped motors are integrated units that combine an electromagnetic brake with a stepper motor from the Ezi-SERVO or Ezi-STEP series.



Long Durability

Brake integrated into Ezi-SERVO BK series applies long durability of brake wear plate(Brake Lining) so it guarantees high durability and long life cycle.

Apply non-excitation electromagnetic Brake

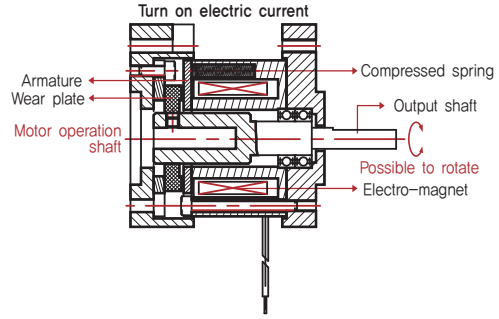
Different from excitation type of brake that only generates braking-power by electromagnetic-power when power supplies at brake and loses brake power when power cutoff, Ezi-SERVO BK series adopts non-excitation electromagnetic brake that immediately generate friction of brake torque by inner spring's binding post-tensioning force once power cut off. So Ezi-SERVO BK series enables complete stopping of stepping motor and can forestall risks with brake's mechanical braking-power under emergency situation as like sudden blackout in machine operation.

Automatic Braking during power cutoff or blackout

Ezi-SERVO BK series, Unit product, integrated between high performance of non-excitation electromagnetic brake and step motor that enables immediate braking to keep holding point and prevent falling under power cut off or blackout during operation so customer can be flexible in responding to sudden situation.

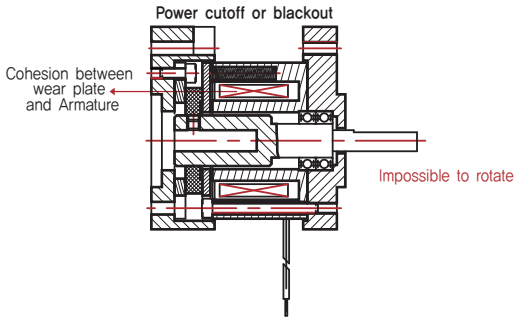
Rapid Brake Timing

Ezi-SERVO BK series, non-excitation electromagneic brake, enables rapid braking because loaded spring closed brake can quicken rising of brake torque.



(Output shaft can be rotated because wear plate can be separate from Armature by electromagnetic force)

POWER OFF



(Impossible to rotate because compressed spring power let wear plate stick to Armature and brakes output shaft.)

Allowable Overhung Load and Allowable Thrust Load of BK series

Motor Size	Allowable Overhung Load [N] Based on Center of Shaft (mm)				Allowable Thrust Load [N]
	3	8	13	18	
42 mm	22	26	33	46	Must be less than the motor weight
56 mm	52	65	85	123	
60 mm	70	87	114	165	

1. Drive Specification and Size
Please refer to the individual catalogue to check drive specification and size.

2. System Configuration and Setting/Operation
Please refer to the individual catalogue to check series'system configuration, Name and Function

3. External Wiring Diagram
Please refer to the individual catalogue to check series'external wiring diagram.

Part Numbering

In Case of Ezi-SERVO series

Unit Part Number	Motor Model Number	Drive Model Number
Ezi-SERVO-□-□-□-BK	EzM-□-□-BK	Not Changed

※ It can be added BK at the end of model name of each series. T(he name of drive model is not changed.)

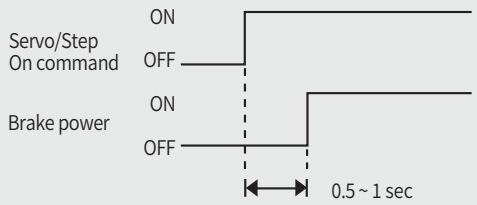
changed.)

Unit Part Number Motor Model Number Drive Model Number Ezi-SERVO-ST-42S-A-BK EzM-42S-A-BK EzS-PD-42S-A

Unit Part Number	Motor Model Number	Drive Model Number
Ezi-SERVO-ST-42S-A-BK	EzM-42S-A-BK	EzS-PD-42S-A

Electromagnetic Brake Operation Timing Chart

When releasing the brake externally, wait 0.5 to 1 second after executing the Servo/Step ON command before releasing the brake. Failure to do so may cause the load to fall.



- Please use Cable at least thicker than AWG24(0.2 ㎟) when connect electromagnetic brake and power.
- ctromagnetic Brake is non-polar so there is no polarity in Brake Cable
- Over input voltage can induce high temperature of electromagnetic
- brake and motor so it can be main reason of failure
- Reversely too low input voltage will cause non-operation of electromagnetic brake.

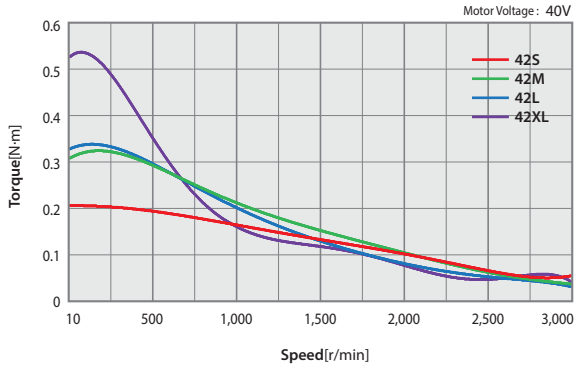
Specifications of Brake [42 mm]

Applicable Model		
Ezi-SERVO CC-Link IE TSN	Ezi-SERVO CC-Link IE TSN ALL	Ezi-SERVO CC-Link IE TSN 4X
Ezi-STEP CC-Link IE TSN	Ezi-STEP CC-Link IE TSN ALL	Ezi-STEP CC-Link IE TSN 4X

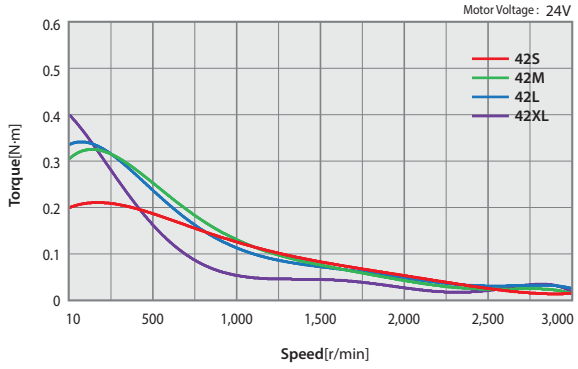
Model	Unit	42			
		42S	42M	42L	42XL
Electromagnetic Brake	-	Non-Excitation Type			
Input Voltage	V	24 V DC ± 10 %			
Rated Current	A	0.2			
Power Consumption	W	5			
Friction Torque	N·m	0.2			

※ Electromagnetic brake will not be using for braking but for holding position when power-off.

Torque Charcteristics of Motor with Brake [42 mm]



Applicable Model
Ezi-SERVO CC-Link IE TSN
Ezi-STEP CC-Link IE TSN



Applicable Model
Ezi-SERVO CC-Link IE TSN ALL
Ezi-SERVO CC-Link IE TSN 4X
Ezi-STEP CC-Link IE TSN ALL
Ezi-STEP CC-Link IE TSN 4X

※ The maximum supported speed of Ezi-SERVO CC-Link IE TSN ALL is 2,000 r/min.

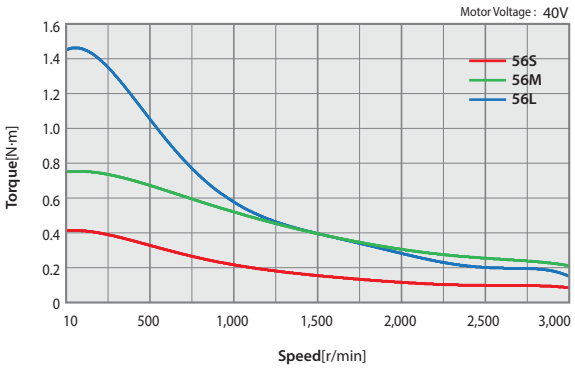
Specifications of Brake [56 mm]

Applicable Model		
Ezi-SERVO CC-Link IE TSN	Ezi-SERVO CC-Link IE TSN ALL	Ezi-SERVO CC-Link IE TSN 4X
Ezi-STEP CC-Link IE TSN	Ezi-STEP CC-Link IE TSN ALL	Ezi-STEP CC-Link IE TSN 4X

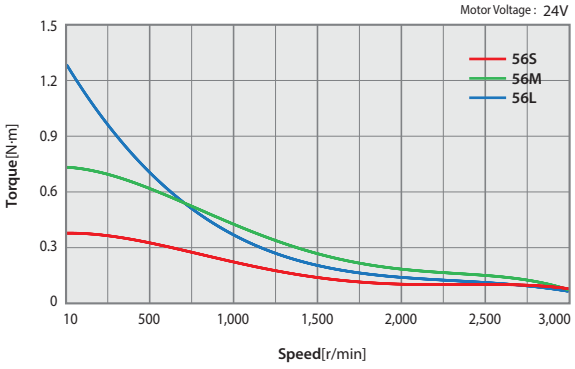
Model	Unit	56		
		56S	56M	56L
Electromagnetic Brake	-	Non-Excitation Type		
Input Voltage	V	24 V DC ± 10 %		
Rated Current	A	0.27		
Power Consumption	W	6.6		
Friction Torque	N·m	0.7		

※ Electromagnetic brake will not be using for braking but for holding position when power-off.

Torque Charcteristics of Motor with Brake [56 mm]



Applicable Model
Ezi-SERVO CC-Link IE TSN
Ezi-STEP CC-Link IE TSN



Applicable Model
Ezi-SERVO CC-Link IE TSN ALL
Ezi-SERVO CC-Link IE TSN 4X
Ezi-STEP CC-Link IE TSN ALL
Ezi-STEP CC-Link IE TSN 4X

※ The maximum supported speed of Ezi-SERVO CC-Link IE TSN ALL is 2,000 r/min.

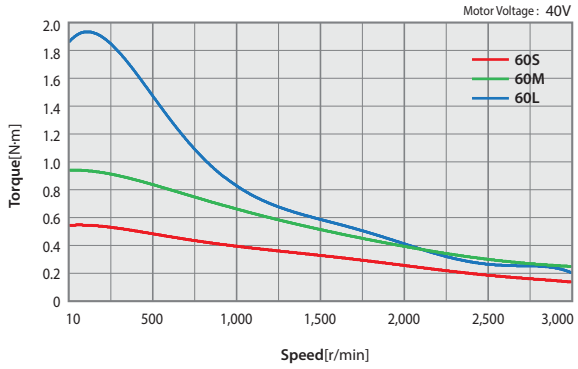
Specifications of Brake [60 mm]

Applicable Model		
Ezi-SERVO CC-Link IE TSN	Ezi-SERVO CC-Link IE TSN ALL	Ezi-SERVO CC-Link IE TSN 4X
Ezi-STEP CC-Link IE TSN	Ezi-STEP CC-Link IE TSN ALL	Ezi-STEP CC-Link IE TSN 4X

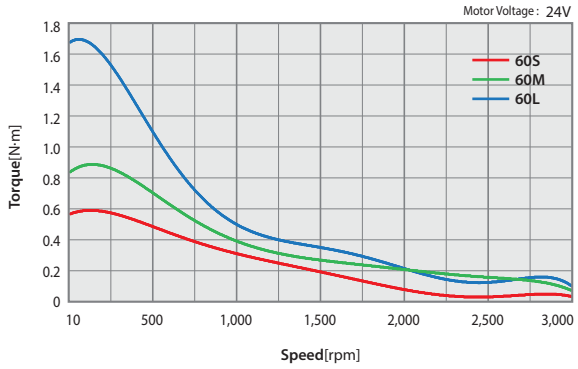
Model	Unit	60		
		60S	60M	60L
Electromagnetic Brake	-	Non-Excitation Type		
Input Voltage	V	24 V DC ± 10 %		
Rated Current	A	0.27		
Power Consumption	W	6.6		
Friction Torque	N·m	0.7		

※ Electromagnetic brake will not be using for braking but for holding position when power-off.

Torque Charcteristics of Motor with Brake [60 mm]



Applicable Model
Ezi-SERVO CC-Link IE TSN
Ezi-STEP CC-Link IE TSN



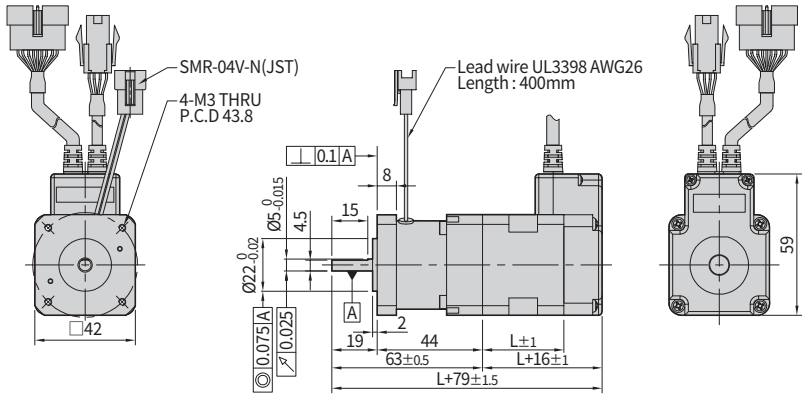
Applicable Model
Ezi-SERVO CC-Link IE TSN ALL
Ezi-SERVO CC-Link IE TSN 4X
Ezi-STEP CC-Link IE TSN ALL
Ezi-STEP CC-Link IE TSN 4X

※ The maximum supported speed of Ezi-SERVO CC-Link IE TSN ALL is 2,000 r/min.

Dimensions of Motor with Brake [42 mm]

Applicable Model

Ezi-SERVO CC-Link IE TSN	Ezi-SERVO CC-Link IE TSN 4X	

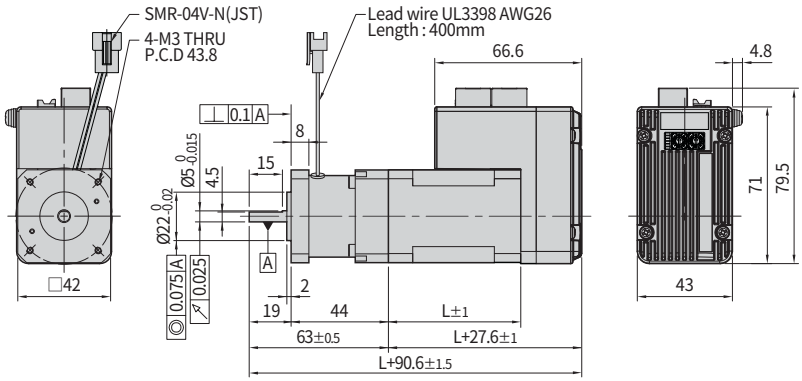


42 *mm*

Model Name	Length(L)
EzM-42S	34
EzM-42M	40
EzM-42L	48
EzM-42XL	60

Applicable Model

Ezi-SERVO CC-Link IE TSN ALL	Ezi-STEP CC-Link IE TSN ALL	

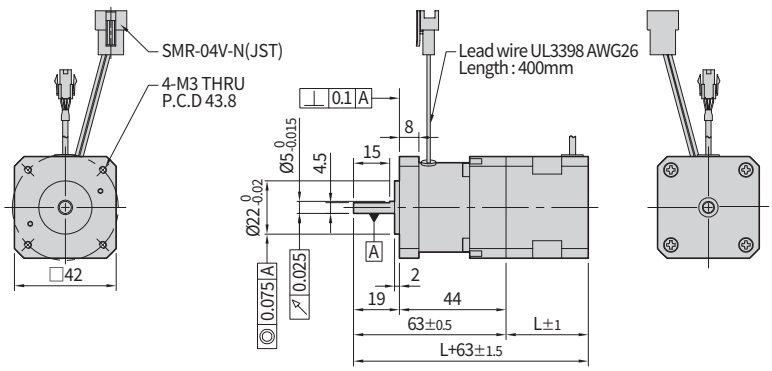


42 *mm*

Model Name	Length(L)
42M	40
42L	48
42XL	60

Applicable Model

Ezi-STEP CC-Link IE TSN	Ezi-STEP CC-Link IE TSN 4X	



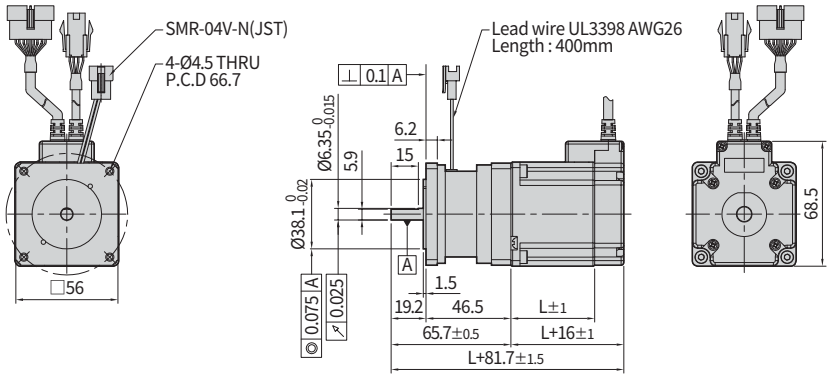
42 *mm*

Model Name	Length(L)
BM-42S	34
BM-42M	40
BM-42L	48
BM-42XL	60

Dimensions of Motor with Brake [56 mm]

Applicable Model

Ezi-SERVO CC-Link IE TSN	Ezi-SERVO CC-Link IE TSN 4X	

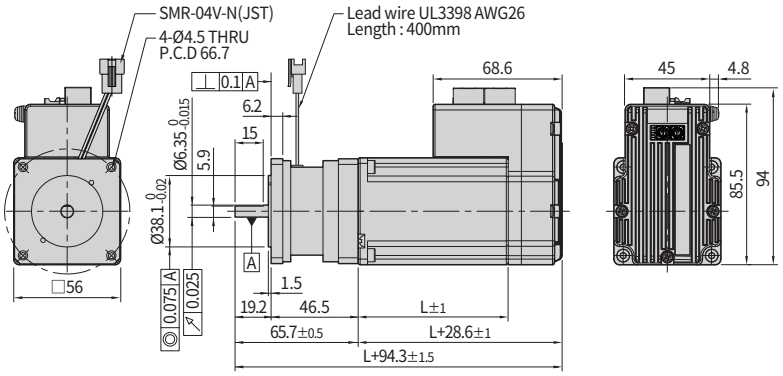


56 mm

Model Name	Length(L)
EzM2-56S	46
EzM2-56M	55
EzM2-56L	80

Applicable Model

Ezi-SERVO CC-Link IE TSN ALL	Ezi-STEP CC-Link IE TSN ALL	

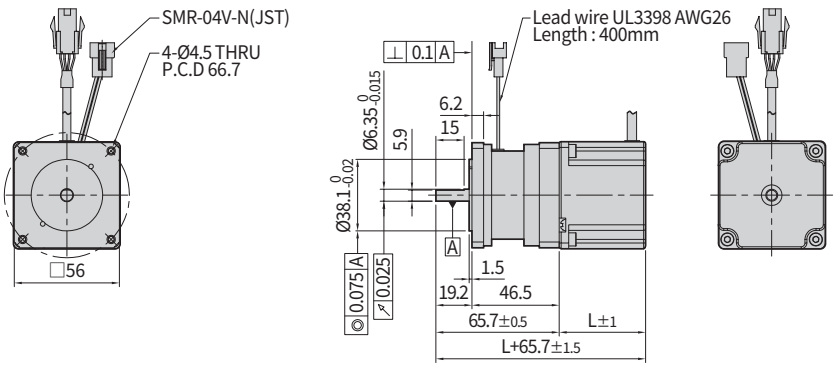


56 mm

Model Name	Length(L)
56S	46
56M	55
56L	80

Applicable Model

Ezi-STEP CC-Link IE TSN	Ezi-STEP CC-Link IE TSN 4X	



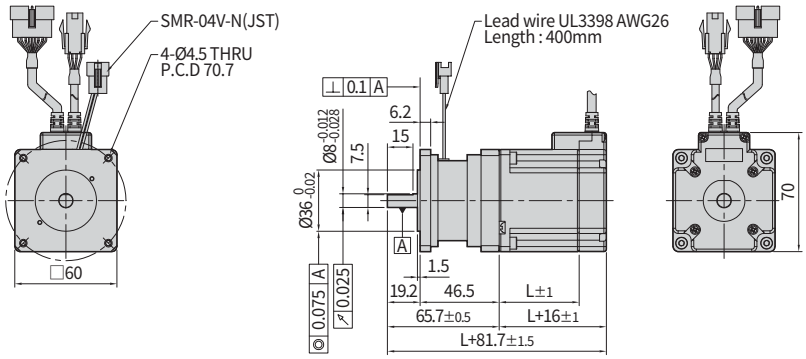
56 mm

Model Name	Length(L)
BM-56S	46
BM-56M	55
BM-56L	80

Dimensions of Motor with Brake [60 mm]

Applicable Model

Ezi-SERVO CC-Link IE TSN	Ezi-SERVO CC-Link IE TSN 4X

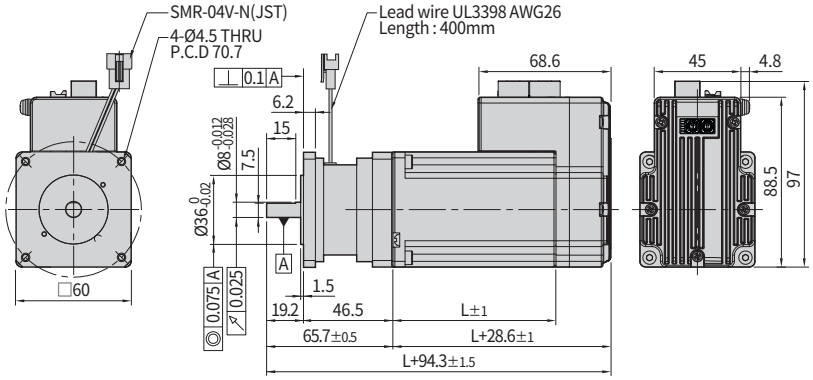


60 *mm*

Model Name	Length(L)
EzM2-60S	47
EzM2-60M	56
EzM2-60L	85

Applicable Model

Ezi-SERVO CC-Link IE TSN ALL	Ezi-STEP CC-Link IE TSN ALL

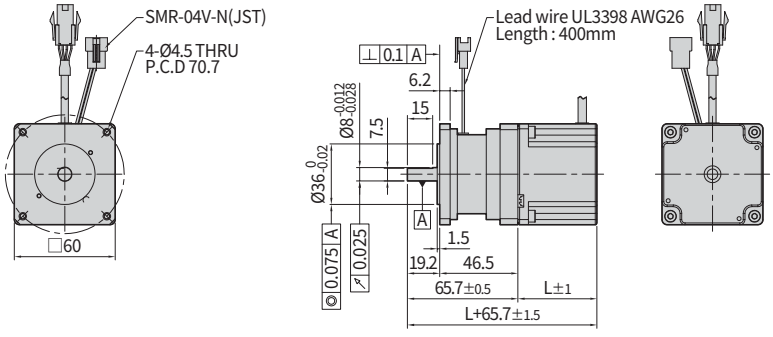


60 *mm*

Model Name	Length(L)
60S	47
60M	56
60L	85

Applicable Model

Ezi-STEP CC-Link IE TSN	Ezi-STEP CC-Link IE TSN 4X

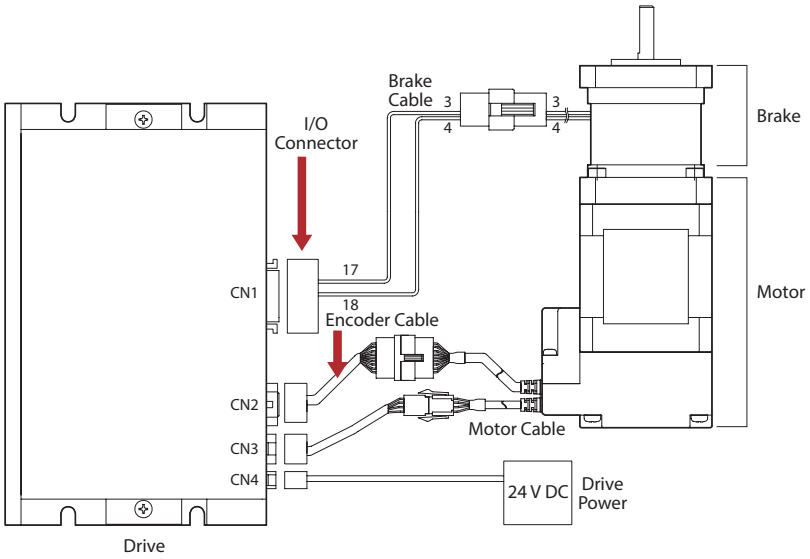


60 *mm*

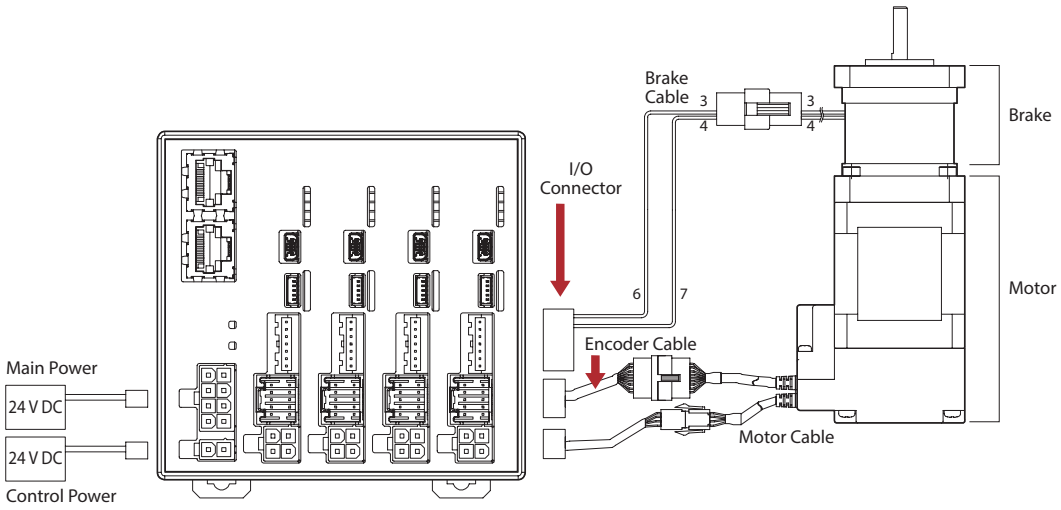
Model Name	Length(L)
BM-60S	47
BM-60M	56
BM-60L	85

Electrical Brake and Power Connection

Ezi-SERVO CC-Link IE TSN

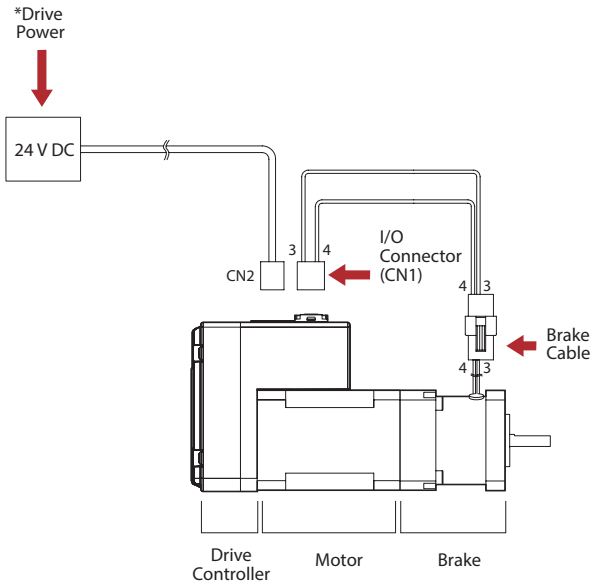


Ezi-SERVO CC-Link IE TSN 4X



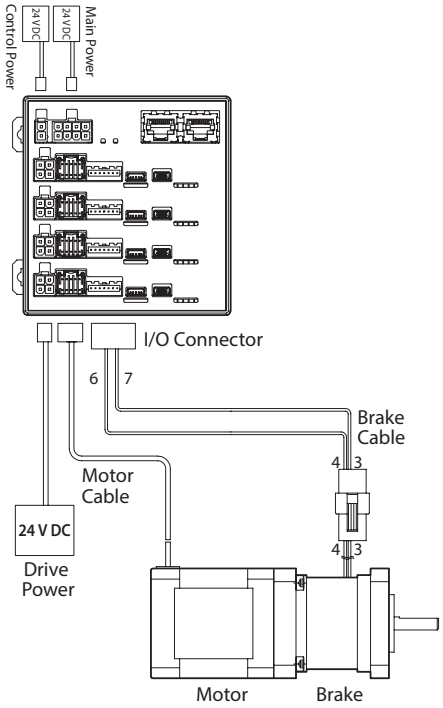
Electrical Brake and Power Connection

Ezi-SERVO CC-Link IE TSN ALL

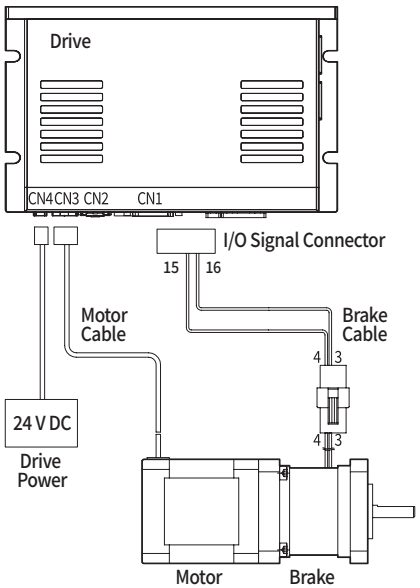


Electrical Brake and Power Connection

Ezi-STEP CC-Link IE TSN 4X

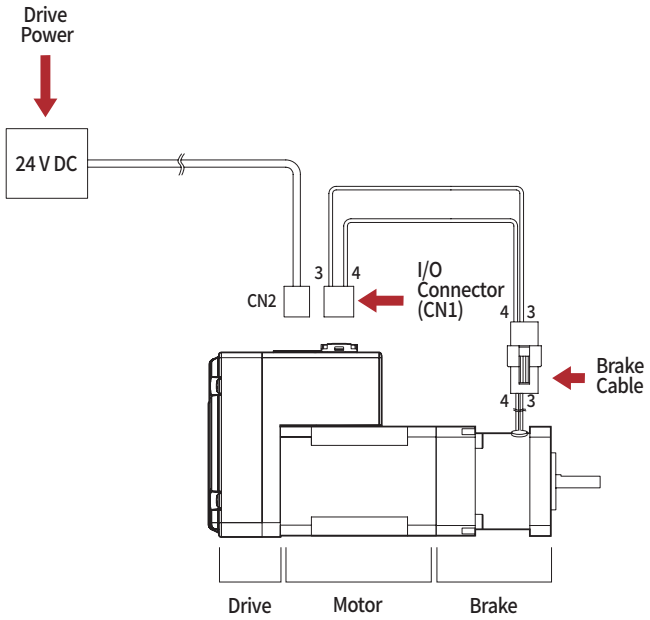


Ezi-STEP CC-Link IE TSN



Electrical Brake and Power Connection

Ezi-STEP CC-Link IE TSN ALL



FASTECH

Fast Accurate Smooth Motion

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