

Options

Options

GV series

KV series

GP series

Options

Information



Contents

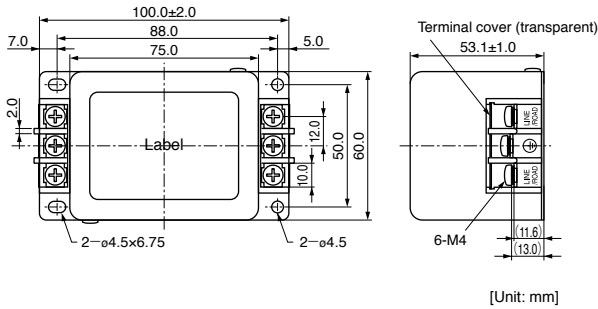
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Noise filter/ Surge absorber/ MCCB

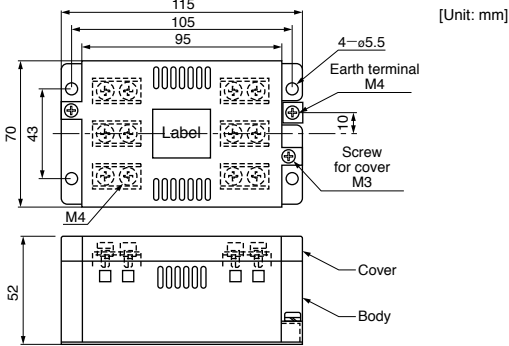
Part name	Optional parts number (option)	Manufacturer's parts number	Qty.	Manufacturer
Noise filter (single phase 100 V, 200 V)	DV0P4170	SUP-EK5-ER-6	1	OKAYA ELECTRIC IND. CO., LTD.
Noise filter (3-phase)	DV0PM20042	3SUP-HU10-ER-6	1	
Surge absorber (single phase 100 V, 200 V)	DV0P4190	R·A·V-781BWZ-4	1	
Surge absorber (3-phase)	DV0P1450	R·A·V-781BXZ-4	1	
Noise filter for control signals	DV0P1460	ZCAT3035-1330	4	TDK Corporation

Noise filter

• DV0P4170

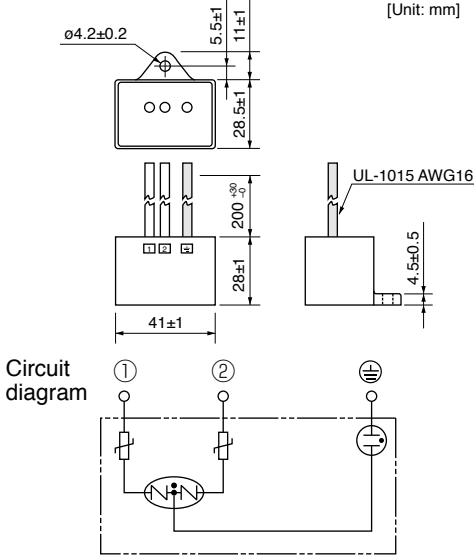


• DV0PM20042

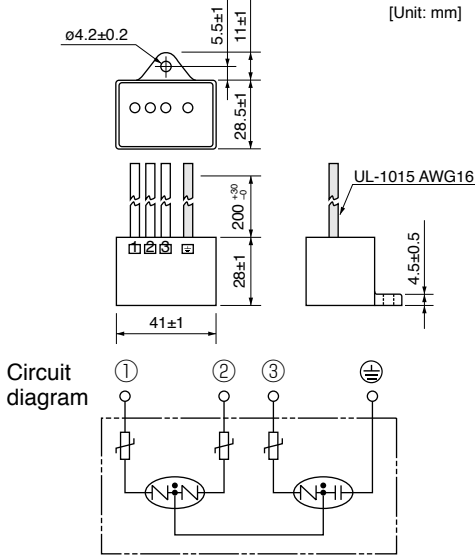


Surge absorber

• DV0P4190

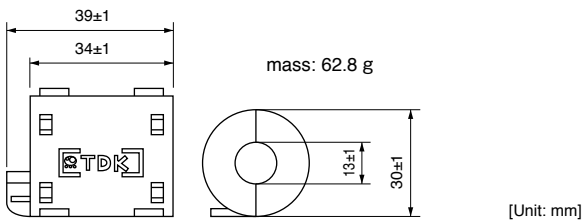


• DV0P1450



Noise filter for control signals

• DV0P1460



Recommended circuit breaker (MCCB)

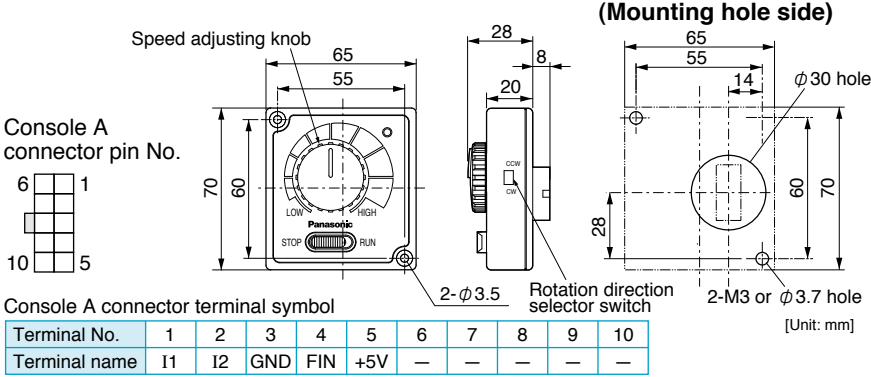
Made by Sensata Technologies Japan Limited: Type IELH-1-11-63-5A-M (single phase) Type IELH-1-111-63-5A-M (3-phase) (Rated current 5A, cutoff characteristics DELAY63)
• Recommended cutoff characteristics: DELAY61-63

Settings

Console A

Optional part number
DV0P3500

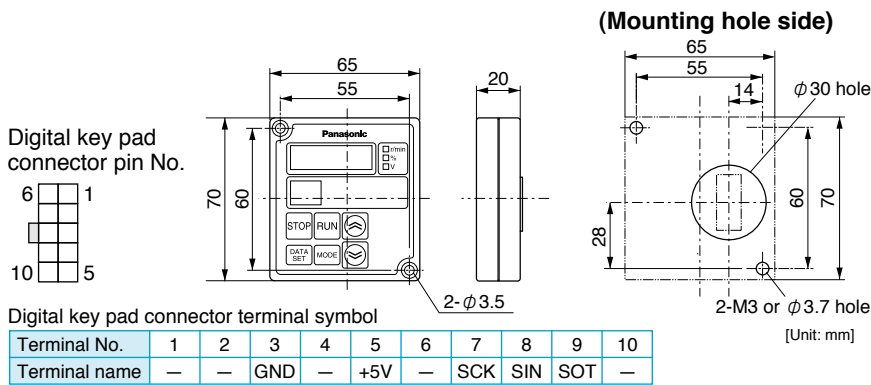
- Speed adjusting knob
- RUN/STOP switch
- Rotation direction selector switch



Digital key pad

Optional part number
DV0P3510

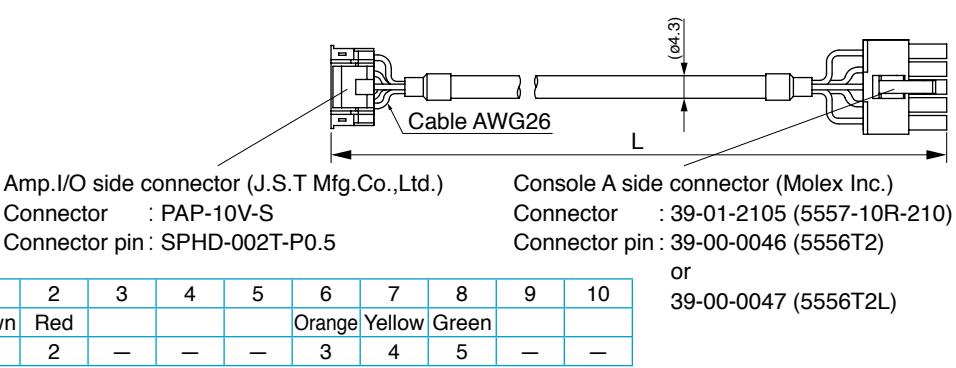
- RUN/STOP key
- Digital monitor [Rotation speed, Commanded speed, Internal DC voltage, Load factor, Torque, Trip history, (Display of the trip occurs, confirmation of the trip history) Overload warning (flashing)]
- Set/change parameters
- Storage of the parameters (read, write)



Cable

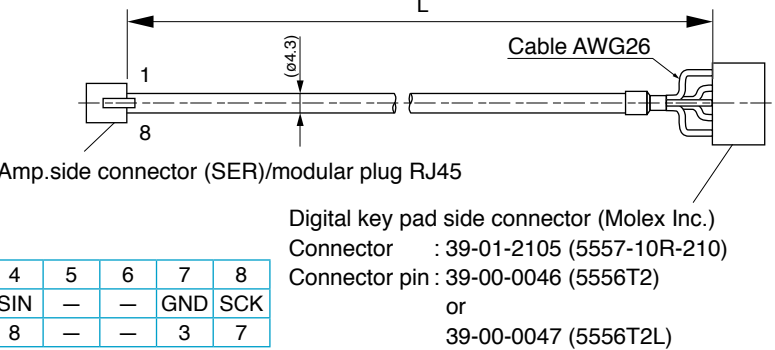
Console A connection cable

Optional parts number	Length (L)
DV0PM2006910	1 m
DV0PM2006930	3 m
DV0PM2006950	5 m



Digital key pad connection cable

Optional parts number	Length (L)
DV0P38310	1 m
DV0P38330	3 m
DV0P38350	5 m

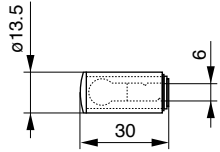


Motor extension cable GV GP

Optional parts number	Length (L)
DV0PQ1000110	1 m
DV0PQ1000130	3 m
DV0PQ1000150	5 m
DV0PQ10001A1	10 m

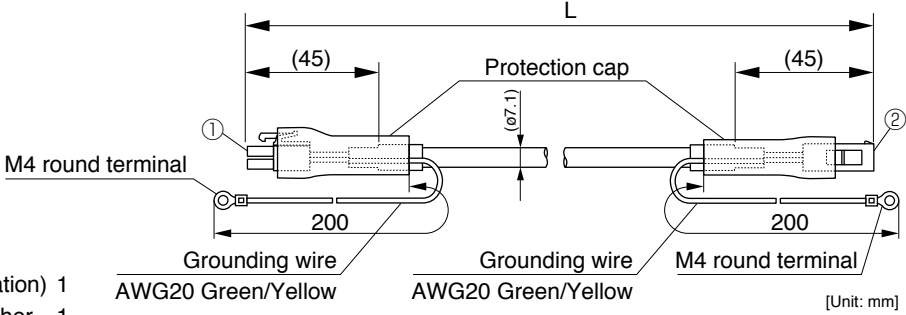
- **Accessories**
- Insulating cap (for grounding wire insulation) 1
 - M4 × 6 pan head screw with spring washer 1
 - M4 hex. nut 1

Insulating cap (for grounding wire insulation)



[Unit: mm]

- When using motor extension cable, be sure to connect its grounding wire to the grounding wire of the motor, and connect the other end of grounding wire of the extension cable to the earth terminal of the brushless amplifier.
- For connecting grounding wire of motor and motor extension cable, use M4 screw and insulating cap supplied as accessories.



[Unit: mm]

- ① Brushless amplifier side connector (Molex Inc.)
Connector : 39-01-2085 (5557-08R-210)
Connector pin : 39-00-0039 (5556TL) [for AWG 20]
39-00-0047 (5556T2L) [for AWG 26]
- ② Motor side connector (Molex Inc.)
Connector : 39-01-2086 (5559-08P-210)
Connector pin : 39-00-0041 (5558TL) [for AWG 20]
39-00-0049 (5558T2L) [for AWG 26]

<Connector wiring>

• Brushless amplifier side				• Motor side	
Pin No.	Signal	Wire color	Wire size	Pin No.	
1	U	Red	AWG20	1	
2	V	White	AWG20	2	
3	W	Black	AWG20	3	
4	Vcc	White	AWG26	4	
5	CS1	Red	AWG26	5	
6	CS2	Blue	AWG26	6	
7	CS3	Yellow	AWG26	7	
8	0V	Black	AWG26	8	
M4 round terminal	E	Green/Yellow	AWG20	M4 round terminal	

Motor extension cable KV

Optional parts number	Length (L)
DV0PQ1000310	1 m
DV0PQ1000330	3 m
DV0PQ1000350	5 m
DV0PQ10003A1	10 m

<Wiring of motor side connector>

- Motor connector

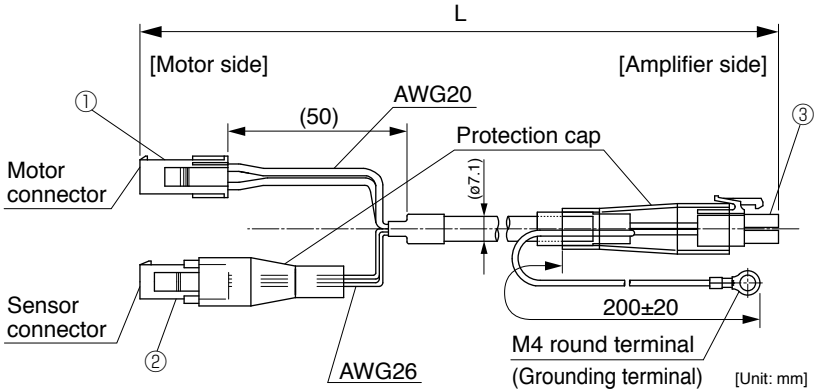
Pin No.	Signal	Wire color
1	U	Red
2	V	White
3	W	Black
4	E	Green/Yellow

- Sensor connector

Pin No.	Signal	Wire color
1	CS1	Red
2	CS2	Blue
3	CS3	Yellow
4	Vcc	White
5	0V	Black
6	NC	—

Do not connect anything on (NC).

- ① Motor side motor connector (Tyco Electronics.)
Connector : 172159-1
Connector pin : 170366-1 [for AWG 20]
- ② Motor side sensor connector (Molex Inc.)
Connector : 39-01-2066 (5559-06P-210)
Connector pin : 39-00-0049 (5558T2L) [for AWG 26]
- ③ Brushless amplifier side connector (Molex Inc.)
Connector : 39-01-2085 (5557-08R-210)
Connector pin : 39-00-0039 (5556TL) [for AWG 20]
39-00-0047 (5556T2L) [for AWG 26]



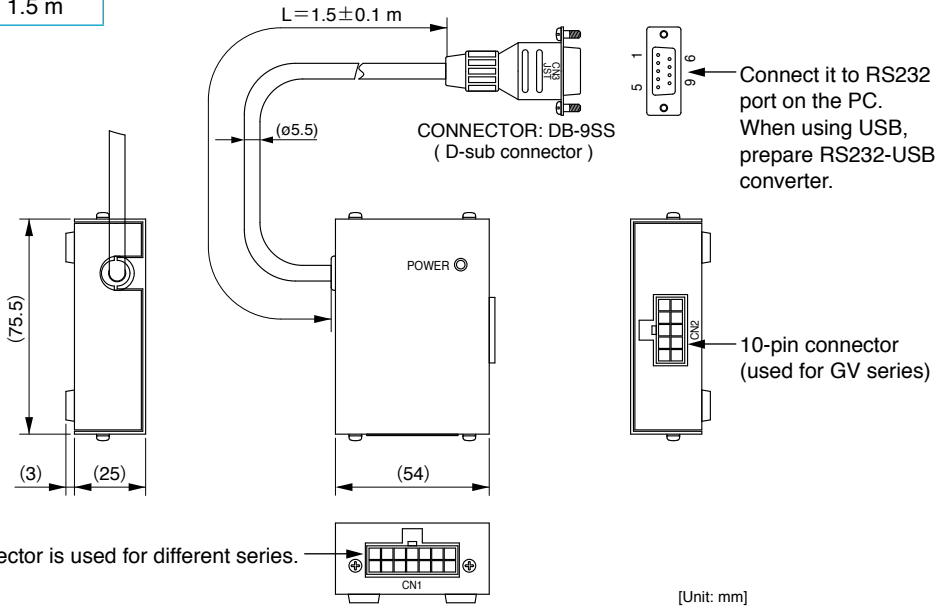
[Unit: mm]

<Connector wiring of amplifier side>

Pin No.	Signal	Wire color	Wire size
1	U	Red	AWG20
2	V	White	AWG20
3	W	Black	AWG20
4	Vcc	White	AWG26
5	CS1	Red	AWG26
6	CS2	Blue	AWG26
7	CS3	Yellow	AWG26
8	0V	Black	AWG26
M4 round terminal	E	Green/Yellow	AWG20

PC connection cable (10-pin D-sub connector pin 1.5 m) GV KV GP

Optional parts number	Length (L)
DV0P4140	1.5 m



[Unit: mm]

This 14-pin connector is used for different series.

Communication software GV KV GP

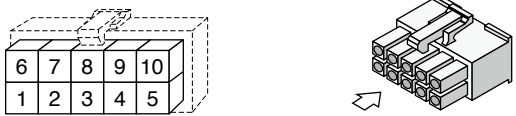
Model No.	
PANATERM for BL	Can be downloaded from our web site, free of charge. http://industrial.panasonic.com/ww/products/motors-compressors/fa-motors

Connector Kit/ Cable/ External speed setter

Power supply connector kit GV KV (50 W, 100 W) GP

Optional part number	Name	Manufacturer's parts No.	Qty.	Manufacturer	Note
DV0P2870	Connector	39-01-2105 (5557-10R-210)	1	Molex Inc	Fits to power supply connector (POWER)
	Connector pin	39-00-0060 (5556PBTTL)	6		

- 39-01-2105 (5557-10R-210)

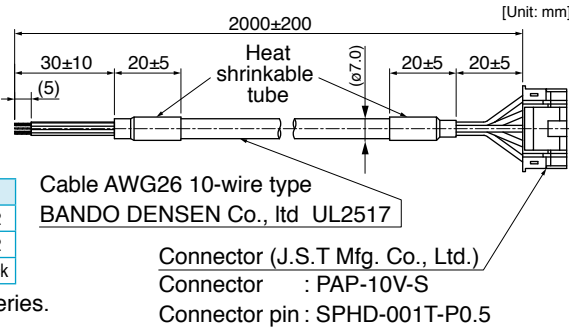


Control signal cable (Cable with an I/O connector) GV KV GP

Optional parts number	Length (L)
DV0PM20076	2 m

Pin No.	1	2	3	4	5	6	7	8	9	10
Terminal name	GV, KV series	I1	I2	I3	I4	I5	GNG	FIN	+5 V	O1
GP series		I1	I2	I3	NC	I4	GND	NC	+5 V	O1
Wire color		Brown	Red	Orange	Yellow	Green	Blue	Purple (Pink)	Gray	White

* Do not connect anything to the pin no.4 and pin no.7 in case of use the GP series.

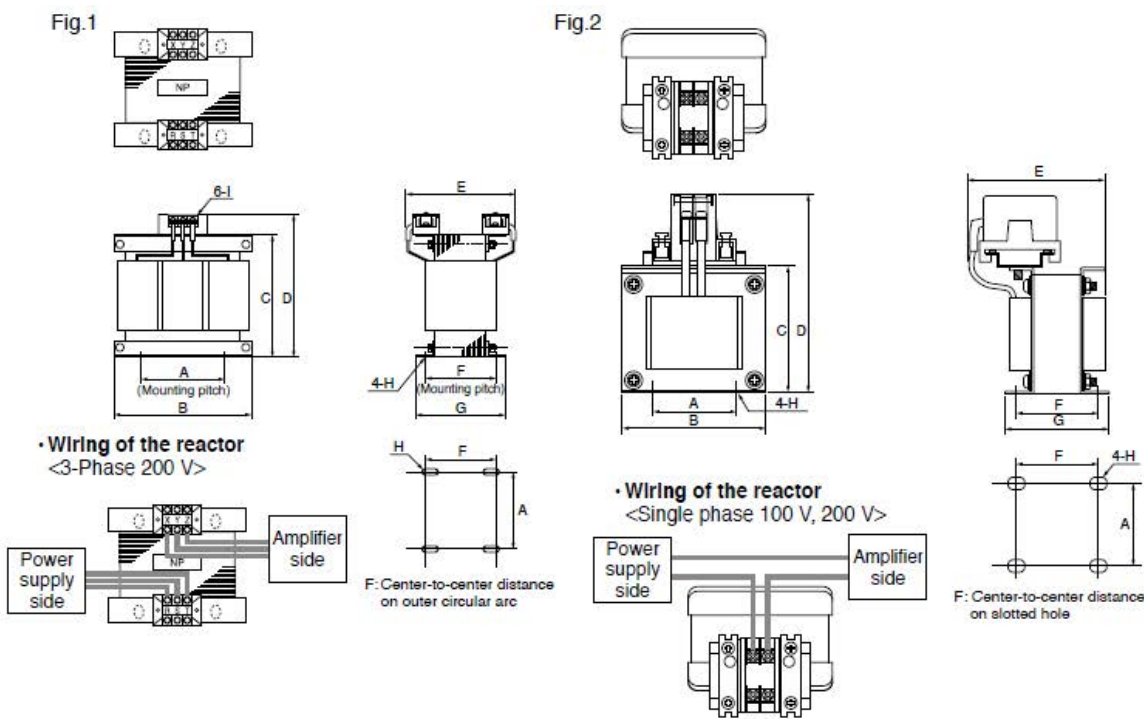


Connector (J.S.T Mfg. Co., Ltd.)
Connector : PAP-10V-S
Connector pin : SPHD-001T-P0.5

<For your reference>

For tools such as crimp tools necessary to assemble the cable, access the connector manufacturer's web site or consult the manufacturer: refer to p. 75 "List of peripheral equipment manufacturers".

Reactor **GV** **KV** **GP**



[Unit: mm]												
	Optional parts number	A	B	C	D (Max)	E (Max)	F	G	H	I	Inductance (mH)	Rated current (A)
Fig.1	DV0P220	65±1	125±1	(93)	136	155	70+3/-0	85±2	4-φ7×12	M4	6.81	3
	DV0P221	60±1	150±1	(113)	155	130	60+3/-0	75±2	4-φ7×12	M4	4.02	5
Fig.2	DV0P227	55±0.7	80±1	66.5±1	110	90	41±2	55±2	4-φ5×10	M4	4.02	5

* For applicability of reactor, refer to the corresponding table on p. 95.

Harmonic restraint

Harmonic restraint measures are not common to all countries. Therefore, prepare the measures that meet the requirements of the destination country.

With products for Japan, on September, 1994, “Guidelines for harmonic restraint on heavy consumers who receive power through high voltage system or extra high voltage system” and “Guidelines for harmonic restraint on household electrical appliances and general-purpose articles” established by the Agency for Natural Resources and Energy of the Ministry of Economy, Trade and Industry (the ex-Ministry of International Trade and Industry). According to those guidelines, the Japan Electrical Manufacturers’ Association (JEMA) have prepared technical documents (procedure to execute harmonic restraint:

JEM-TR 198, JEM-TR 199 and JEM-TR 201) and have been requesting the users to understand the restraint and to cooperate with us. On January, 2004, it has been decided to exclude the general-purpose inverter and servo driver from the “Guidelines for harmonic restraint on household electrical appliances and general-purpose articles”. After that, the “Guidelines for harmonic restraint on household electrical appliances and general-purpose articles” was abolished on September 6, 2004.

We are pleased to inform you that the procedure to execute the harmonic restraint on general-purpose inverter and servo driver was modified as follows.

1. All types of the general-purpose inverters and servo drivers used by specific users are under the control of the “Guidelines for harmonic restraint on heavy consumers who receive power through high voltage system or extra high voltage sytem”. The users who are required to apply the guidelines must calculate the equivalent capacity and harmonic current according to the guidelines and must take appropriate countermeasures if the harmonic current exceeds a limit value specified in a contract demand. (Refer to JEM-TR 210 and JEM-TR 225.)
2. The “Guidelines for harmonic restraint on household electrical appliances and general-purpose articles” was abolished on September 6, 2004. However, based on conventional guidelines, JEMA applies the technical documents JEM-TR 226 and JEM-TR 227 to any users who do not fit into the “Guidelines for harmonic restraint on heavy consumers who receive power through high voltage system or extra high voltage system” from a perspective on enlightenment on general harmonic restraint. The purpose of these guidelines is the execution of harmonic restraint at every device by a user as usual to the utmost extent.

<Remarks>

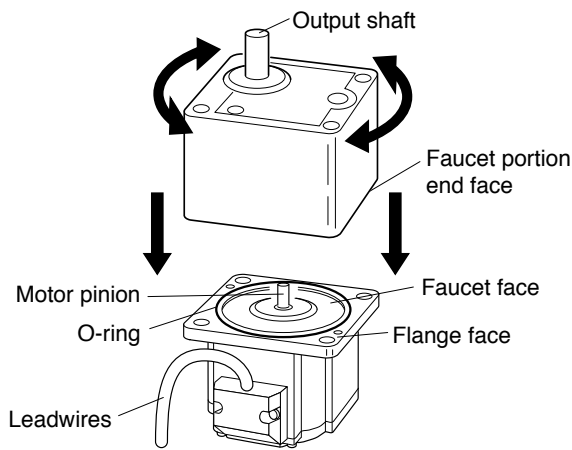
When using a reactor, be sure to install one reactor to one brushless amplifier.

O-ring **GV** **GP**

Repair parts 10pcs / bag

Optional parts number	Size
DV0PN10008	80 mm sq.
DV0PN10009	90 mm sq.

- Assemble with motor pinion faced up.
- Outward direction of motor leadwire can be aligned with any one of 4 sides of gear head with an output shaft at a different position.



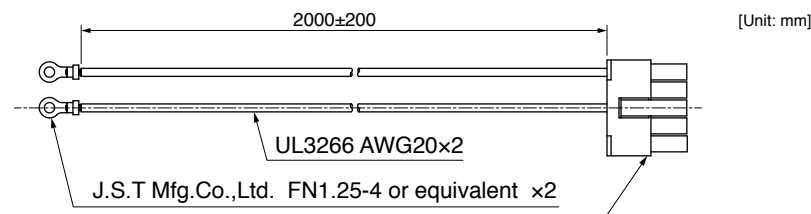
Power cable (single phase 100 V, 200 V) with connector **GV** **KV** (50 W, 100 W) **GP**

When the following part number is specified in the order, the power cable is delivered with the product.

		50 W	90 W	100 W	130 W
				—	
GV series	100 V	MBEG5A1BCVC	MBEG9A1BCVC	—	MBEG1E1BCVC
	200 V	MBEG5A5BCVC	MBEG9A5BCVC		MBEG1E5BCVC
KV series	100 V	MBEK5A1BCVC	—	MBEK011BCVC	—
	200 V	MBEK5A5BCVC		MBEK015BCVC	
GP series	100 V	MBEG5A1BCPC	MBEG9A1BCPC	—	MBEG1E1BCPC
	200 V	MBEG5A5BCPC	MBEG9A5BCPC		MBEG1E5BCPC

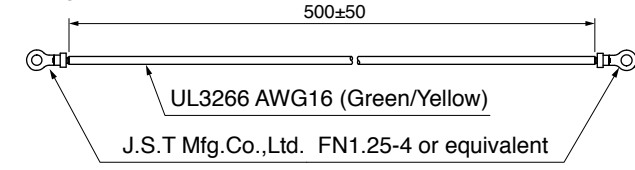
- When supplying 3-phase power source to a 200 V brushless amplifier, use the supplied power cable and connect 2 conductors to L1 and L2.
- When supplying 3-phase power, use a power connection kit and connect three conductors to L1, L2 and L3.
- For location of L1, L2 and L3, refer to the wiring diagram on pages 17, 19 and 21 (GV series), pages 35 and 37 (KV series), pages 57, 59 and 61 (GP series).

■ Cable specification



Connector for power supply connection (Molex Inc.)
Connector : 39-01-2105 (5557-10R-210)
Connector pin : 39-00-0038 (5556T) or 39-00-0039 (5556T2)

• Grounding wire



List of peripheral equipments

Manufacturer	Tel No. / Home page	Peripheral components
TDK Corporation	+81-3-5201-7229 http://www.tdk.co.jp/	Noise filter for signal lines
Okaya Electric Industries Co. Ltd.	+81-3-4544-7040 http://www.okayatec.co.jp/	Surge absorber Noise filter
Sensata Technologies Japan Limited	+81-49-283-7575 www.sensata.com/japan	Circuit breaker (MCCB)
Japan Molex Inc.	+81-462-65-2313 http://www.molex.co.jp	Connector
J.S.T. Mfg. Co., Ltd.	+81-45-543-1271 http://www.jst-mfg.com/index_i.html	
Iwaki Musen Kenkyusho Co., Ltd.	+81-44-833-4311 http://www.iwakimusen.co.jp/	Regenerative resistor
KK-CORP.CO.JP	+81-184-53-2307 http://www.kk-corp.co.jp/	Reactor core
NICHIFU Co.,Ltd.	+81-6-6911-1455 http://www.nichifu.co.jp/	Pin terminal

* This list is for reference only and subject to change without notice.

MEMO