



 **OEM AUTOMATIC**

**Panasonic**

Motors

# A long term partner to improve your competitive advantage

OEM Automatic markets components for industrial automation. For more than 30 years it has collaborated with market leading manufacturers from all over the world and performs the sales and marketing function for the countries where we operate. We offer a product range which is one of the widest and deepest on the market. The products are continually being developed and refined in order to offer just what the customer needs.

Supported by an efficient organisation we can offer our customers quick and effective service. We can help to select the best products for each application and by reducing the number of suppliers lower the total cost of purchasing. OEM Automatic aims to build long lasting relationships with both our customers and suppliers.

## A valuable link between manufacturers and customers

OEM Automatic Ltd acts as the manufacturers sales and marketing organisation for the UK market. Through our market presence, customer focus and high level of service we add real value to the supply chain. By working closely with the manufacturer and the customer we can provide the most cost-effective solution.

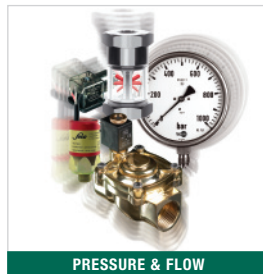
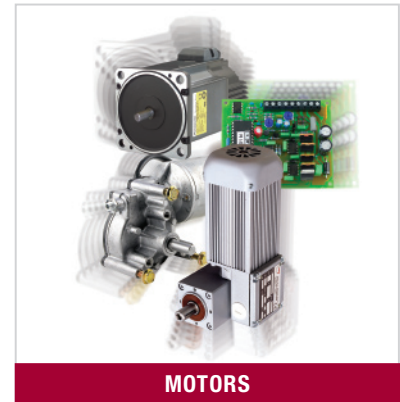
## Close to the customer for best service

Our UK head office and warehouse is located centrally, close to Leicester, which provides excellent communication links with the rest of the country. Our team of travelling sales engineers are also located there so are never far away if a personal visit is required.



There are other OEM Automatic companies in Sweden, Finland, Norway, Denmark, Poland, Czech Republic, Slovakia and Estonia. Together we are a leading company in the field of industrial automation components for northern europe.

To offer the best service and support we are organised into four specialised business areas, based on products and markets.



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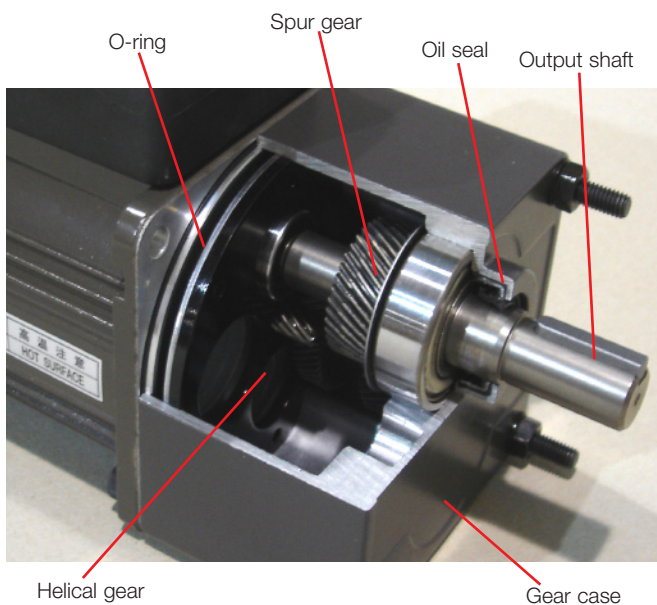


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## Panasonic 3-Series Geared Motors

Panasonic, one of the largest motor manufacturers in the world, have designed and developed a new range of globally approved geared motors. Covering powers from 6 to 90W these units replace the established G-Series range with improved efficiency and longer life, continuing the reputation for quality, value and reliability.



### Features:

- All ball bearing gearboxes as standard, rated to 10,000 hrs lifetime
- Globally approved CE/ UL/ cUL/ CCC
- Speed range from 1375r/min down to 0.7r/min
- Fixed speed and variable speed models available
- IP 65 available on request
- RoHS compliant
- Proven quality and reliability

### Range Overview of the 3-Series

#### 1 Phase

Geared motors suitable for running at fixed or variable speed in a power range of 6 to 90W.

#### Quick Reversing

Single phase geared motors with a built in constant friction brake that reduces overrun.

#### 3 Phase

Geared motors ranging from 25-90W. The 230V versions suit variable speed running with an inverter. The 400V versions are designed to be connected directly to 3 phase supplies.

#### Brake Motor

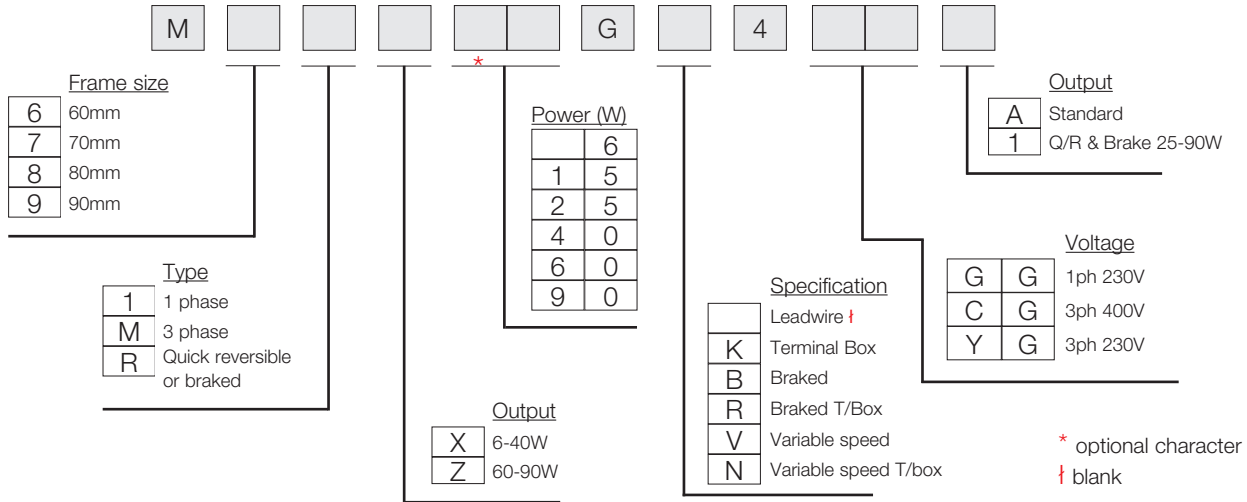
Geared motors with an integrated electro magnetic spring applied brake for 1 or 3 phase 230V supply.

## WARNING!

Please note that the new 3-Series gearboxes are not interchangeable with old G-Series motors and likewise G-Series gearboxes are not interchangeable with 3-Series motors.

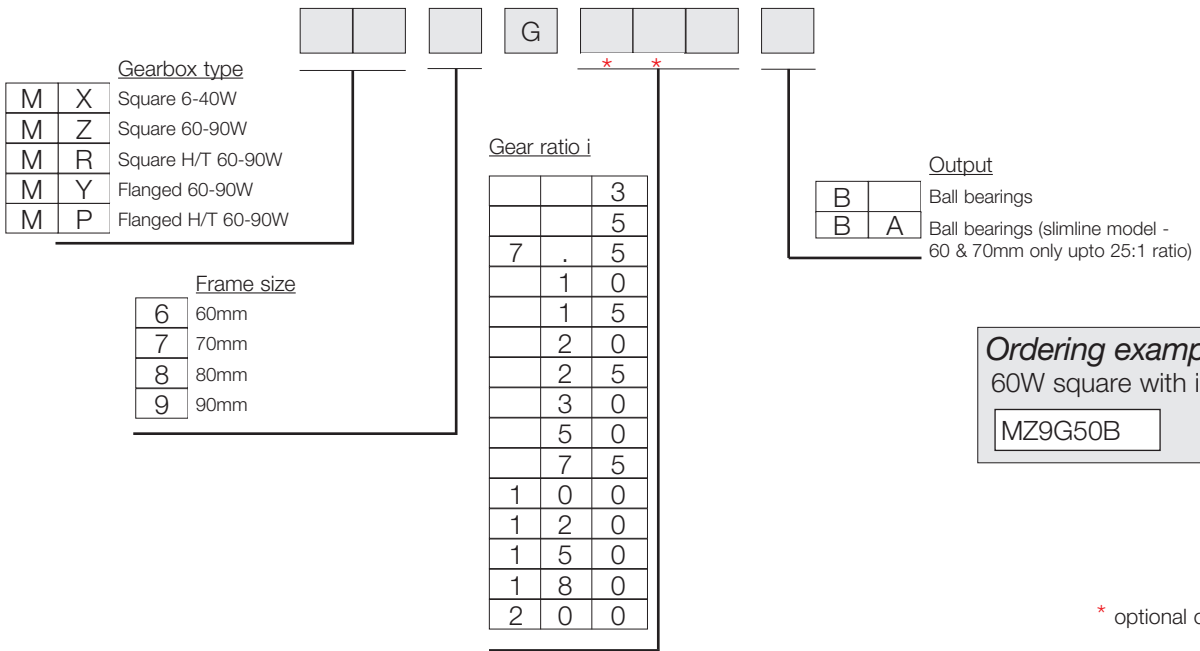
## Component part number coding

### Motor



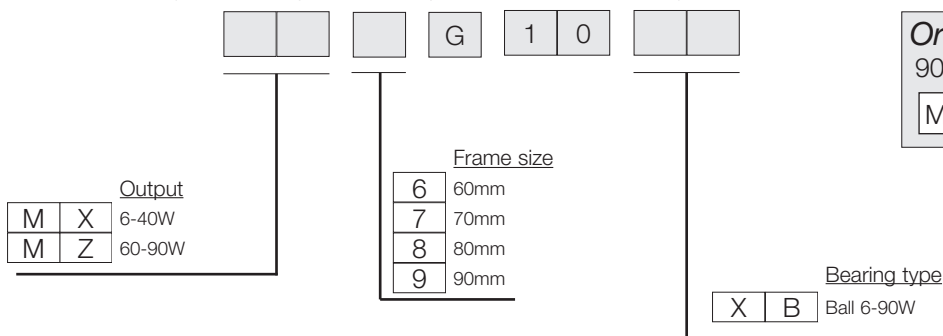
**Ordering example**  
25W 1 phase 230V brake motor with terminal box.  
**M8RX25GR4GG1**

### Gearbox



**Ordering example**  
60W square with i = 50  
**MZ9G50B**

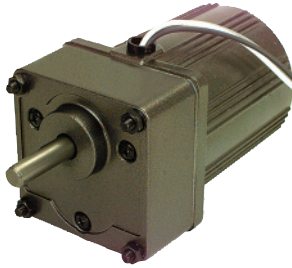
### Decimal Gearbox (additional requirement for speeds 7.5 r/min and below)



**Ordering example**  
90W decimal gearbox  
**MZ9G10XB**

6W

## Induction motors with spur gears



- All ball bearing gearbox as standard, rated to 10,000 hrs lifetime
- Continuous duty S1/reversible S2
- IP22 for leadwire and IP54 for terminal box
- Virtually silent running
- Impedance protected
- Globally approved CE/ UL/ cUL/CCC
- Supplied with run capacitor

### Technical data, motor

Article No	Motor type	Supply voltage VAC/Hz	Output power	Speed r/min	Torque Ncm	Current A	Capacitor $\mu$ F	Weight with gearbox Kg
M61X6G4GGA	Lead wire	1-Phase 230/50	6	1250	4,6	0,11	0,6 (450 V)	1
M61X6GT4GM1	T - Box	1-Phase 230/50	6	1250	4,6	0,11	0,6 (450 V)	1
M6RXG4GGA	Reversible	1-Phase 230/50	6	1300	4,4	0,12	0,8 (450 V)	1
M6RXG6B4GGA	Brake	1-Phase 230/50	6	1300	4,4	0,12	0,8 (450 V)	1,2
M61X6GV4GGA	Variable speed (with tacho)	1-Phase 230/50	6	90-1200	3,4-4,4	0,12	0,6 (450 V)	1,1

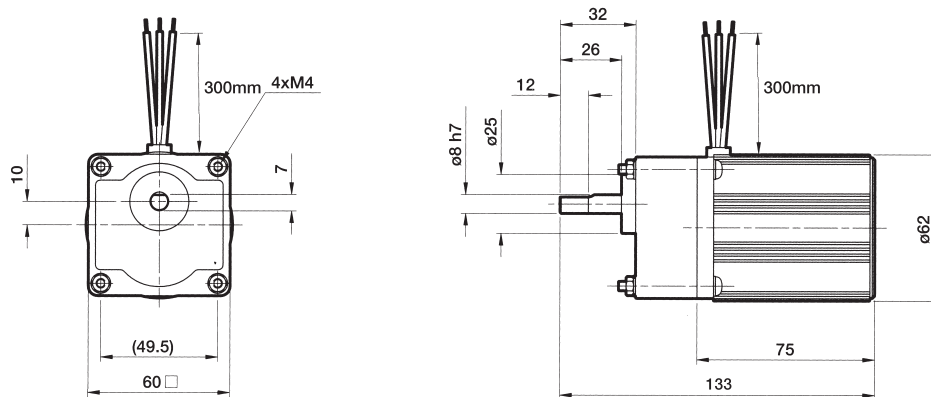
### Technical data, gearbox

Nominal speed r/min	500	300	150	100	75	50	30	20	15	12.5	10	8.3	
Ratio	3	5	10	15	20	30	50	75	100	120	150	180	Max gearbox output torque 2.45Nm
Nominal torque Nm	0.10	0.16	0.33	0.49	0.66	0.95	1.57	2.25	2.45	2.45	2.45	2.45	

Output speed based on synchronous motor speed (1500 r/min). Actual speed depends on load resulting in 2-20% slower.

### Dimensions (inc. gearbox)

Leadwire motor



Add 7mm to length for 30:1 gear ratio and above.

Add 24.5mm to length for decimal gearbox.

Add 42.5mm to length for brake motor.

### Ordering information

Part number	Description
M6B2	Foot mount

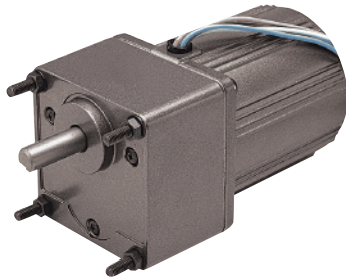
Part number	Description
MX6G3BA	Ratio 3:1
MX6G5BA	Ratio 5:1
MX6G10BA	Ratio 10:1
MX6G15BA	Ratio 15:1
MX6G20BA	Ratio 20:1
MX6G30B	Ratio 30:1

Part number	Description
MX6G50B	Ratio 50:1
MX6G75B	Ratio 75:1
MX6G100B	Ratio 100:1
MX6G120B	Ratio 120:1
MX6G150B	Ratio 150:1
MX6G180B	Ratio 180:1
MX6G10XB	Inter decimal gearbox 10:1

Other gearbox ratios are available on request

**15W**

## Induction motors with spur gears



- All ball bearing gearbox as standard, rated to 10,000 hrs lifetime
- Continuous duty S1/reversible S2
- IP22 for leadwire and IP54 for terminal box
- Virtually silent running
- Globally approved CE/ UL/ cUL/CCC
- Supplied with run capacitor

### Technical data, motor

Article No	Motor type	Supply voltage VAC/Hz	Output power	Speed r/min	Torque Ncm	Current A	Capacitor $\mu$ F	Weight with gearbox Kg
M71X15G4GGA	Lead wire	1-Phase 230/50	15	1300	11,0	0,16	1,2 (450 V)	1,64
M7RX15G4GGA	Reversible	1-Phase 230/50	15	1275	11,0	0,18	1,3 (450 V)	1,64
M7RX15GB4GGA	Brake	1-Phase 230/50	15	1300	11,0	0,17	1,3 (450 V)	1,64
M71X15GV4GGA	Variable speed (with tacho)	1-Phase 230/50	15	90-1200	4,9-11,0	0,28	1,2 (450 V)	1,64

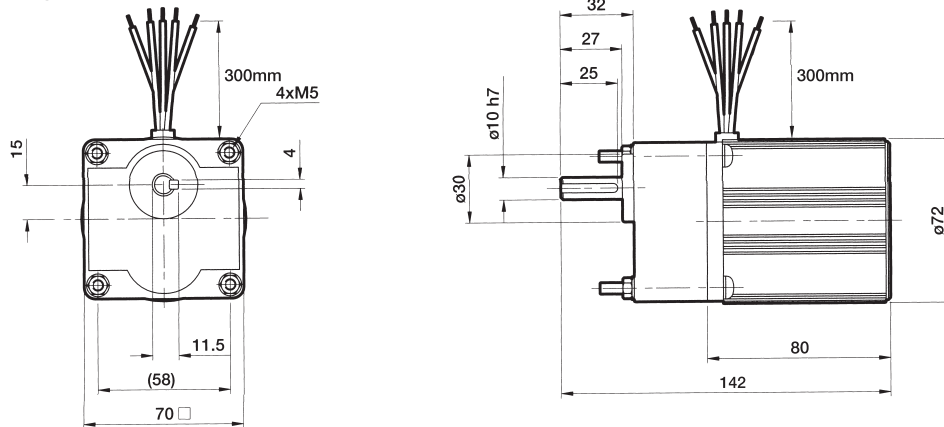
### Technical data, gearbox

Nominal speed r/min	500	300	150	100	75	50	30	20	15	12.5	10	8.3	
Ratio	3	5	10	15	20	30	50	75	100	120	150	180	Max gearbox output torque 4.90Nm
Nominal torque Nm	0.24	0.39	0.80	1.18	1.57	2.25	3.82	4.90	4.90	4.90	4.90	4.90	

Output speed based on synchronous motor speed (1500 r/min). Actual speed depends on load resulting in 2-20% slower.

### Dimensions (inc. gearbox)

Leadwire motor



Add 6mm to length for 30:1 gear ratio and above.

Add 28mm to length for decimal gearbox.

Add 42.5mm to length for brake motor.

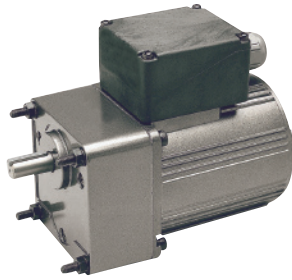
### Ordering information

Part number	Description
M7B2	Foot mount
Part number	Description
MX7G3BA	Ratio 3:1
MX7G5BA	Ratio 5:1
MX7G10BA	Ratio 10:1
MX7G15BA	Ratio 15:1
MX7G20BA	Ratio 20:1
MX7G30B	Ratio 30:1

Part number	Description
MX7G50B	Ratio 50:1
MX7G75B	Ratio 75:1
MX7G100B	Ratio 100:1
MX7G120B	Ratio 120:1
MX7G150B	Ratio 150:1
MX7G180B	Ratio 180:1
MX7G10XB	Inter decimal gearbox 10:1

Other gearbox ratios are available on request

**25W**



## Induction motors with spur gears

- All ball bearing gearbox as standard, rated to 10,000 hrs lifetime
- Continuous duty S1/reversible S2
- IP22 for leadwire and IP54 for terminal box
- Virtually silent running
- Globally approved CE/ UL/ cUL/CCC
- Supplied with run capacitor

### Technical data, motor

Article No	Motor type	Supply voltage VAC/Hz	Output power	Speed r/min	Torque Ncm	Current A	Capacitor $\mu$ F	Weight with gearbox Kg
M81X25G4GGA	Lead wire	1-Phase 230/50	25	1250	19	0,28	1,5 (450V)	2,48/2,18
M81X25GK4GGA	T-box	1-Phase 230/50	25	1250	19	0,28	1,5 (450V)	2,48/2,18
M8MX25G4YGA	3x230v, Lead wire	3-Phase 230/50	25	1320	16	0,23	1,5 (450V)	2,48/2,18
M8MX25GK4YGA	3x230v, T-box	3-Phase 230/50	25	1320	16	0,23	1,5 (450V)	2,48/2,18
M8MX25GK4CGA	400v, T-box	3-Phase 400	25	1325	18	0,12	1,5 (450V)	2,48
M8RX25GK4GG1	Reversible	1-Phase 230/50	25	1250	19	0,28	2,0 (450V)	2,48
M8RX25GR4GG1	Brake	1-Phase 230/50	25	1275	19	0,27	2,0 (450V)	2,8
M81X25GN4GG1	Variable speed (with tacho)	1-Phase 230/50	25	90-1200	4,9-19	0,48	1,5 (450V)	2,48

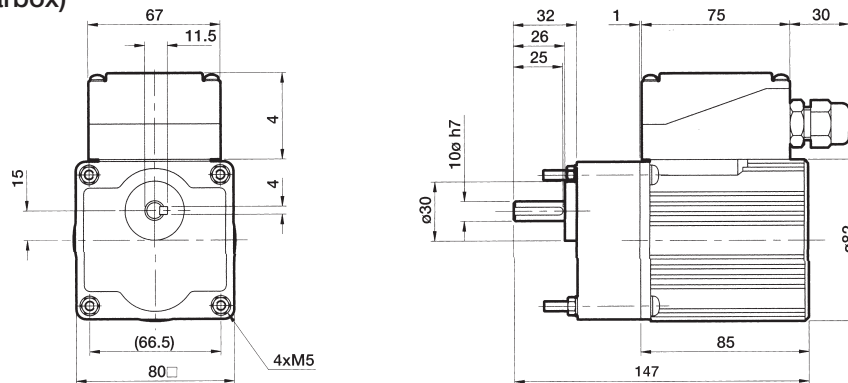
### Technical data, gearbox

Nominal speed r/min	500	300	150	100	75	50	30	20	15	12.5	10	8.3	
Ratio	3	5	10	15	20	30	50	75	100	120	150	180	Max gearbox output torque 7.84Nm
Nominal torque Nm	0.39	0.66	1.27	1.96	2.55	3.82	6.35	7.84	7.84	7.84	7.84	7.84	

Output speed based on synchronous motor speed (1500 r/min). Actual speed depends on load resulting in 2-20% slower.

### Dimensions (inc. gearbox)

Motor with terminal box



Add 30mm to length for decimal gearbox.

Add 42.5mm to length for brake motor.

### Ordering information

Part number	Description
M8B2	Foot mount (forward feet)
M8B3	Foot mount (reverse feet)

Part number	Description
MX8G3B	Ratio 3:1
MX8G5B	Ratio 5:1
MX8G10B	Ratio 10:1
MX8G15B	Ratio 15:1
MX8G20B	Ratio 20:1

Part number	Description
MX8G30B	Ratio 30:1
MX8G50B	Ratio 50:1
MX8G75B	Ratio 75:1
MX8G100B	Ratio 100:1
MX8G120B	Ratio 120:1
MX8G150B	Ratio 150:1
MX8G180B	Ratio 180:1
MX8G10XB	Inter decimal gearbox 10:1

Other gearbox ratios are available on request

**40W**



## Induction motors with spur gears

- All ball bearing gearbox as standard, rated to 10,000 hrs lifetime
- Continuous duty S1/reversible S2
- IP22 for leadwire and IP54 for terminal box
- Virtually silent running
- Globally approved CE/ UL/ cUL/CCC
- Supplied with run capacitor

### Technical data, motor

Article No	Motor type	Supply voltage VAC/Hz	Output power	Speed r/min	Torque Ncm	Current A	Capacitor $\mu$ F	Weight with gearbox Kg
M91X40G4GGA	Lead wire	1-Phase 230/50	40	1275	30	0,37	2,5 (450V)	3,6/4,0
M91X40GK4GGA	T-box	1-Phase 230/50	40	1275	30	0,37	2,5 (450V)	3,6/4,0
M9MX40G4YGA	3x230v, Lead wire	3-Phase 230/50	40	1340	27	0,28	2,5 (450V)	3,6/4,0
M9MX40GK4YGA	3x230v, T-box	3-Phase 230/50	40	1340	27	0,28	2,5 (450V)	3,6/4,0
M9MX40GK4CGA	400v, T-box	3-Phase 400	40	1350	28	0,15	2,5 (450V)	4,0
M9RX40GK4GG1	Reversible	1-Phase 230/50	40	1300	33	0,40	3,5 (450V)	4,0
M9RX40GR4GG1	Brake	1-Phase 230/50	40	1350	28	0,36	3,5 (450V)	4,6
M91X40GN4GG1	Variable speed (with tacho)	1-Phase 230/50	40	90-1200	7,8-30	0,72	2,5 (450V)	4,0

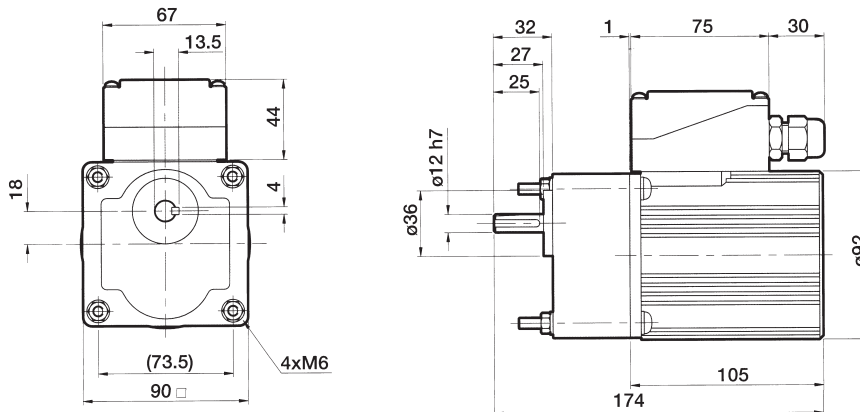
### Technical data, gearbox

Nominal speed r/min	500	300	150	100	75	50	30	20	15	12.5	10	8.3	
Ratio	3	5	10	15	20	30	50	75	100	120	150	180	Max gearbox output torque 9.80Nm
Nominal torque Nm	0.66	1.08	2.25	3.23	4.41	6.37	9.80	9.80	9.80	9.80	9.80	9.80	

Output speed based on synchronous motor speed (1500 r/min). Actual speed depends on load resulting in 2-20% slower.

### Dimensions (inc. gearbox)

Motor with terminal box



Add 35mm to length for decimal gearbox.

Add 46mm to length for brake motor.

### Ordering information

Part number	Description
M9B2	Foot mount (forward feet)
M9B3	Foot mount (reverse feet)

Part number	Description
MX9G3B	Ratio 3:1
MX9G5B	Ratio 5:1
MX9G10B	Ratio 10:1
MX9G15B	Ratio 15:1
MX9G20B	Ratio 20:1

Part number	Description
MX9G30B	Ratio 30:1
MX9G50B	Ratio 50:1
MX9G75B	Ratio 75:1
MX9G100B	Ratio 100:1
MX9G120B	Ratio 120:1
MX9G150B	Ratio 150:1
MX9G180B	Ratio 180:1
MX9G10XB	Inter decimal gearbox 10:1

Other gearbox ratios are available on request



**60W**



## Induction motors with spur gears

- All ball bearing gearbox as standard, rated to 10,000 hrs lifetime
- Continuous duty S1/reversible S2
- IP22 for leadwire and IP54 for terminal box
- Virtually silent running
- Globally approved CE/ UL/ cUL/CCC
- Supplied with run capacitor

### Technical data, motor

Article No	Motor type	Supply voltage VAC/Hz	Output power	Speed r/min	Torque Ncm	Current A	Capacitor $\mu$ F	Weight with gearbox Kg
M91Z60G4GGA	Lead wire	1-Phase 230/50	60	1300	44	0,61	4,5 (450V)	4,2/4,5
M91Z60GK4GGA	T-box	1-Phase 230/50	60	1300	44	0,61	4,5 (450V)	4,2/4,5
M9MZ60G4YGA	3x230v, Lead wire	3-Phase 230/50	60	1320	41	0,40	4,5 (450V)	4,2
M9MZ60GK4YGA	3x230v, T-box	3-Phase 230/50	60	1320	41	0,40	4,5 (450V)	4,2
M9MZ60GK4CGA	400v, T-box	3-Phase 400	60	1325	43	0,22	4,5 (450V)	4,5
M9RZ60GK4GG1	Reversible	1-Phase 230/50	60	1275	45	0,66	5,0 (450V)	4,5
M9RZ60GR4GG1	Brake	1-Phase 230/50	60	1300	44	0,62	5,0 (450V)	4,8
M91Z60GN4GG1	Variable speed (with tacho)	1-Phase 230/50	60	90-1200	10-44	1,50	5,0 (450V)	4,5

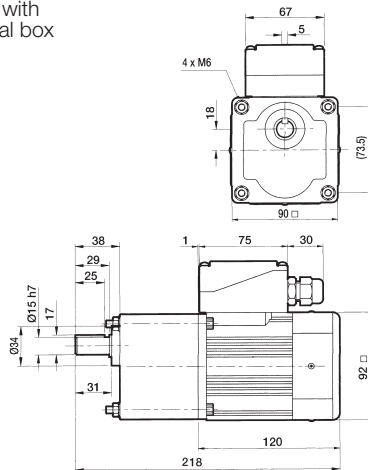
### Technical data, gearbox

Nominal speed r/min	500	300	150	100	75	50	30	20	15	12.5	10	8.3	7.5	
Ratio	3	5	10	15	20	30	50	75	100	120	150	180	200	Max gearbox output torque 19.60Nm
Nominal torque Nm	0.98	1.57	3.14	4.70	6.27	9.11	19.60	19.60	19.60	19.60	19.60	19.60	19.60	

Output speed based on synchronous motor speed (1500 r/min). Actual speed depends on load resulting in 2-20% slower. For high torque gearboxes, see page 9.

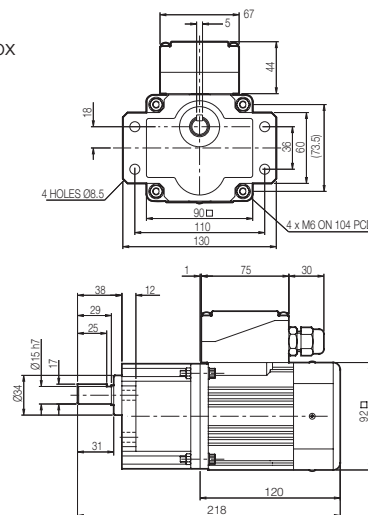
### Dimensions (inc. gearbox)

Motor with terminal box



Flanged gearbox

Add 43mm to length for decimal gearbox.  
Add 48.5mm to length for brake motor.



### Ordering information

Part number	Description
M9B2	Foot mount (forward feet)
M9B3	Foot mount (reverse feet)

Square	Flanged	
Part number	Part number	Description
MZ9G3B	MY9G3B	Ratio 3:1
MZ9G5B	MY9G5B	Ratio 5:1
MZ9G10B	MY9G10B	Ratio 10:1
MZ9G15B	MY9G15B	Ratio 15:1

Other gearbox ratios are available on request

Square	Flanged	
Part number	Part number	Description
MZ9G20B	MY9G20B	Ratio 20:1
MZ9G30B	MY9G30B	Ratio 30:1
MZ9G50B	MY9G50B	Ratio 50:1
MZ9G75B	MY9G75B	Ratio 75:1
MZ9G100B	MY9G100B	Ratio 100:1
MZ9G120B	MY9G120B	Ratio 120:1
MZ9G150B	MY9G150B	Ratio 150:1
MZ9G180B	MY9G180B	Ratio 180:1
MZ9G200B	MY9G200B	Ratio 200:1
MZ9G10XB		Inter decimal gearbox 10:1

90W



## Induction motors with spur gears

- All ball bearing gearbox as standard, rated to 10,000 hrs lifetime
- Continuous duty S1/reversible S2
- IP22 for leadwire and IP54 for terminal box
- Virtually silent running
- Globally approved CE/ UL/ cUL/CCC
- Supplied with run capacitor

### Technical data, motor

Article No	Motor type	Supply voltage VAC/Hz	Output power	Speed r/min	Torque Ncm	Current A	Capacitor $\mu$ F	Weight with gearbox Kg
M91Z90G4GGA	Lead wire	1-Phase 230/50	90	1250	69	0,89	6,0 (450V)	4,7/4,8
M91Z90GK4GGA	T-box	1-Phase 230/50	90	1250	69	0,89	6,0 (450V)	4,7/4,8
M9MZ90G4YGA	3x230v, Lead wire	3-Phase 230/50	90	1320	61	0,56	6,0 (450V)	4,7/4,8
M9MZ90GK4YGA	3x230v, T-box	3-Phase 230/50	90	1320	61	0,56	6,0 (450V)	4,7/4,8
M9MZ90GK4CGA	400v, T-box	3-Phase 400	90	1350	64	0,31	6,0 (450V)	4,8
M9RZ90GK4GG1	Reversible	1-Phase 230/50	90	1250	69	0,92	7,0 (450V)	4,8
M9RZ90GR4GG1	Brake	1-Phase 230/50	90	1275	67	0,89	7,0 (450V)	5,2
M91Z90GN4GG1	Variable speed (with tacho)	1-Phase 230/50	90	90-1200	29-54	1,50	6,0 (450V)	4,0

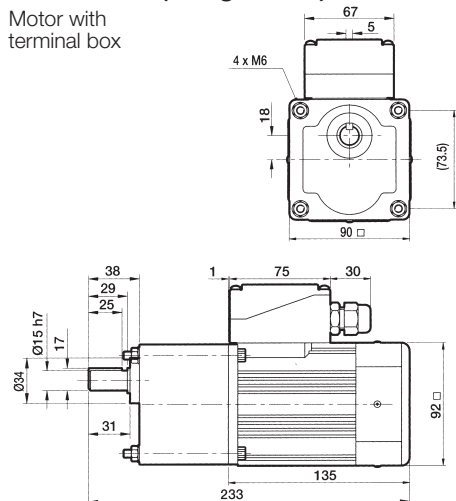
### Technical data, gearbox

Nominal speed r/min	500	300	150	100	75	50	30	20	15	12.5	10	8.3	7.5	
Ratio	3	5	10	15	20	30	50	75	100	120	150	180	200	Max gearbox output torque 19.60Nm
Nominal torque Nm	1.37	2.25	4.51	6.76	9.02	13.00	19.60	19.60	19.60	19.60	19.60	19.60	19.60	

Output speed based on synchronous motor speed (1500 r/min). Actual speed depends on load resulting in 2-20% slower. For high torque gearboxes, see page 9.

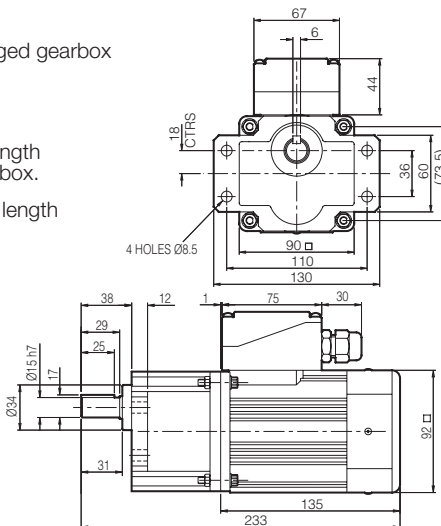
### Dimensions (inc. gearbox)

Motor with terminal box



Flanged gearbox

Add 43mm to length for decimal gearbox.  
Add 48.5mm to length for brake motor.



### Ordering information

Part number	Description
M9B2	Foot mount (forward feet)
M9B3	Foot mount (reverse feet)

Square	Flanged	Description
Part number	Part number	
MZ9G3B	MY9G3B	Ratio 3:1
MZ9G5B	MY9G5B	Ratio 5:1
MZ9G10B	MY9G10B	Ratio 10:1
MZ9G15B	MY9G15B	Ratio 15:1

Other gearbox ratios are available on request

Square	Flanged	Description
Part number	Part number	
MZ9G20B	MY9G20B	Ratio 20:1
MZ9G30B	MY9G30B	Ratio 30:1
MZ9G50B	MY9G50B	Ratio 50:1
MZ9G75B	MY9G75B	Ratio 75:1
MZ9G100B	MY9G100B	Ratio 100:1
MZ9G120B	MY9G120B	Ratio 120:1
MZ9G150B	MY9G150B	Ratio 150:1
MZ9G180B	MY9G180B	Ratio 180:1
MZ9G200B	MY9G200B	Ratio 200:1
MZ9G10XB		Inter decimal gearbox 10:1

## High torque 60W and 90W gearboxes

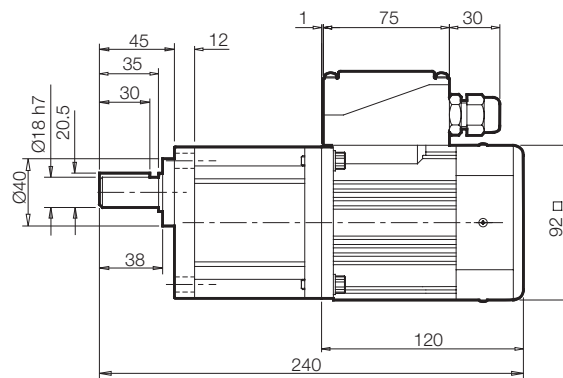
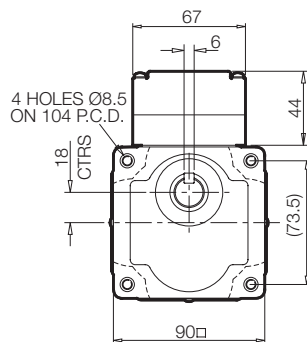
### Technical data, gearbox

Nominal speed r/min	30	20	15	12.5	10	8.3	7.5
Ratio	50	75	100	120	150	180	200
60w	15.20	22.10	29.40	29.40	29.40	29.40	29.40
90w	21.20	29.40	29.40	29.40	29.40	29.40	29.40

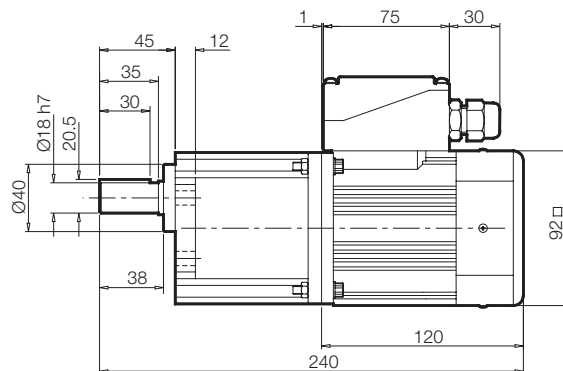
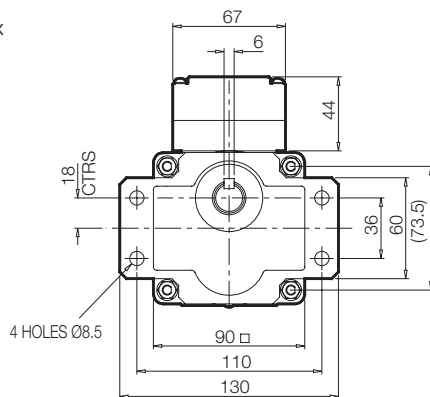
Output speed based on synchronous motor speed (1500 r/min). Actual speed depends on load resulting in 2-20% slower.

### Dimensions

Square gearbox



Flanged gearbox



The above dimensions are for a 60W motor, for a 90W motor add 15mm to length.

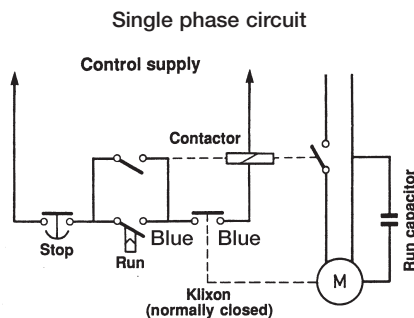
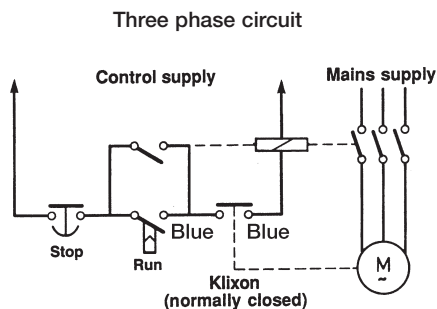
### Ordering information

Square	Flanged	Description
Part number	Part number	
MR9G50B	MP9G50B	Ratio 50:1
MR9G75B	MP9G75B	Ratio 75:1
MR9G100B	MP9G100B	Ratio 100:1
MR9G120B	MP9G120B	Ratio 120:1
MR9G150B	MP9G150B	Ratio 150:1
MR9G180B	MP9G180B	Ratio 180:1
MR9G200B	MR9G200B	Ratio 200:1
MZ9G10XB		Inter decimal gearbox 10:1

Other gearbox ratios are available on request

60 mm<sup>2</sup> motors are impedance protected.

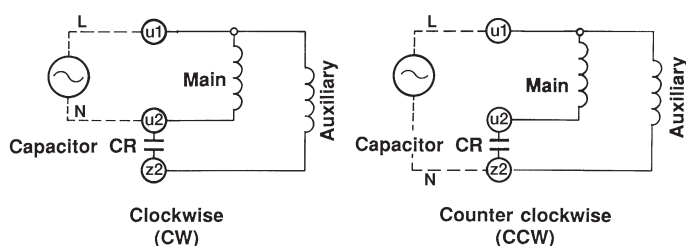
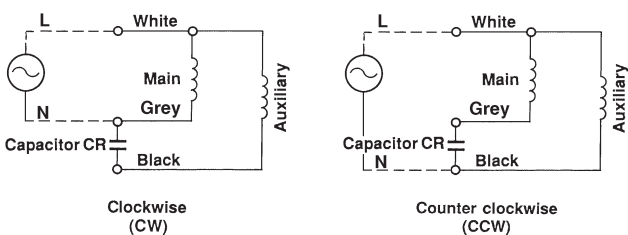
**IMPORTANT:** For 70/80/90mm motors the thermal switch is no longer in series with motor windings. Please ensure that thermal switch is wired as in our recommendations (see diagram below).



**Panasonic** single phase geared motors 230V/1ph/50Hz or 110V/1ph/50-60Hz

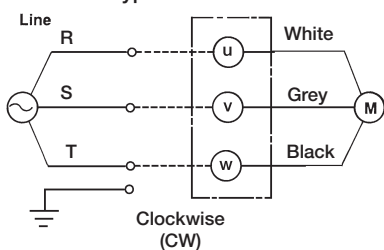
Lead wire type 60 – 70 mm<sup>2</sup>

Terminal box type 80 – 90 mm<sup>2</sup>

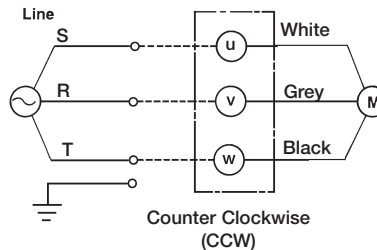


**Panasonic** three phase geared motors 230V or 400V/3ph/50-60Hz

Terminal box type/leadwire type

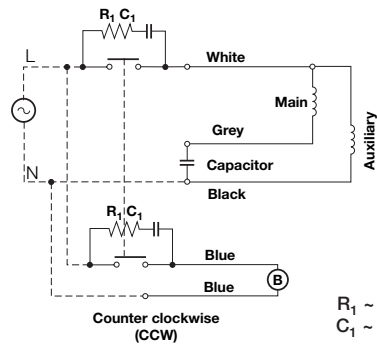
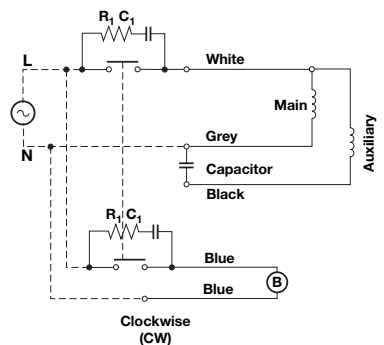


80 – 90 mm<sup>2</sup>



**Panasonic** single phase geared brake motors 230/1/50 or 115/1/50-60Hz

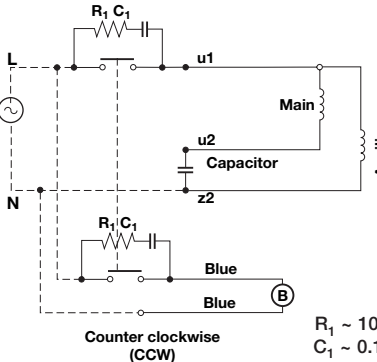
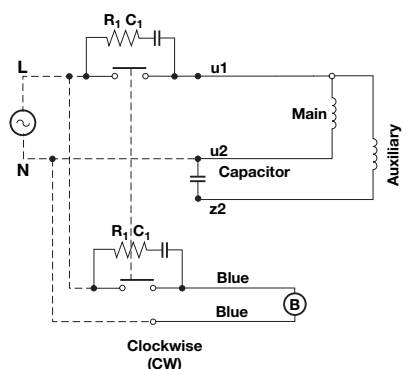
60 – 70 mm<sup>2</sup>



$R_1 \sim 100\Omega$   
 $C_1 \sim 0.1\mu F$

80 – 90 mm<sup>2</sup>

Terminal box type



$R_1 \sim 100\Omega$   
 $C_1 \sim 0.1\mu F$

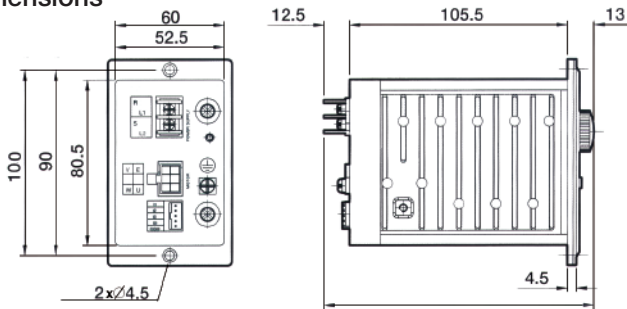


## Frequency inverter for 3 – Phase motors

- Compact and aesthetic design
- Simple operation
- Quick and easy to install



### Dimensions



### Function

The Panasonic Micro-Inverter can be used with any 3 phase, 230v motor up to 90W and is capable of delivering a starting torque of 200% full load torque achievable.

The standard XE version has a built in potentiometer for simple speed control. Also incorporated are a standard range of control functions. To allow greater flexibility, the XEA version will accept either an external speed potentiometer or an 0-5v analogue signal.

### Ordering information

Part number	Description
M1G4A2V1XE	Frequency inverter for 25/40W 3 Phase motors
M1G9A2V1XE	Frequency inverter for 60/90W 3 Phase motors
M1G4A2V1XEA	Frequency inverter for 25/40W 3 Phase motors with external speed reference
M1G9A2V1XEA	Frequency inverter for 60/90W 3 Phase motors with external speed reference



DVUS

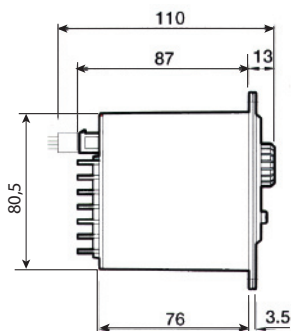


DVSD

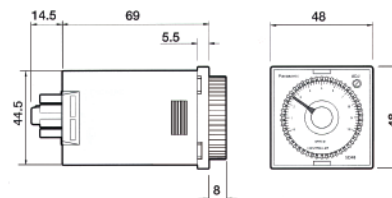
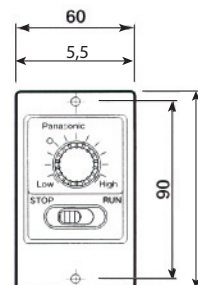
## Analogue speed controllers

- DVUS front panel mounted
- DVSD din rail mounted
- Suitable for 6-90W single phase variable speed 3-Series motors
- EMC noise filter recommended

### Dimensions (DVUS)



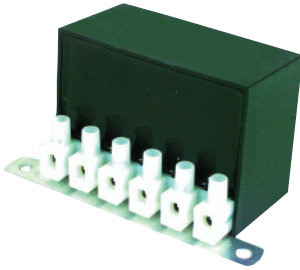
### (DVSD)



### Ordering information

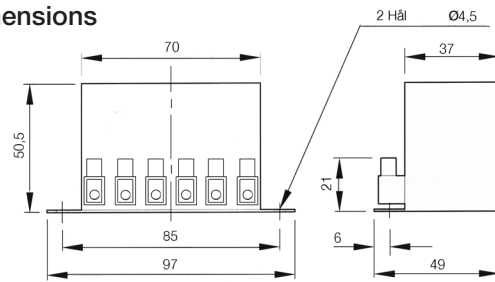
Part number	Type	Description	Speed range
DVUS990GE	DVUS	Panel mount analogue controller for 6-90W variable speed motors	50 - 1400 rpm
DVSD48AY	DVSD	Din rail/surface mount analogue controller for 6-15W variable speed motors	90 - 1400 rpm
DVSD48BY	DVSD	Din rail/surface mount analogue controller for 25-40W variable speed motors	90 - 1400 rpm
DVSD48CY	DVSD	Din rail/surface mount analogue controller for 60-90W variable speed motors	90 - 1400 rpm

## RFI filter



RFI filter designed for Panasonic frequency inverters to achieve EMC compliance.

## Dimensions

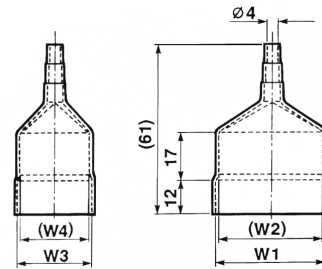


Part number	Rating	Weight
M9-7779987	2A	0.2Kg

## Capacitor caps



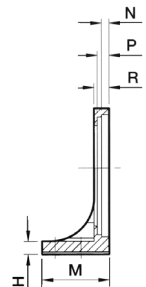
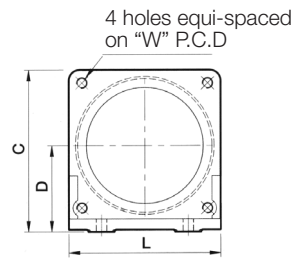
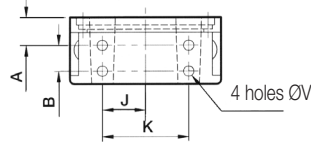
## Dimensions



Part number	Capacitor size $\mu\text{F}$	W1	W2	W3	W4
P9-86366	0.6, 1.0, 1.2, 1.5, 1.8	39.5	37.5	17	15
P9-86382	2.5	39.5	37.5	22	20
P9-86410	3.0, 4.0, 4.5, 5.0, 5.5	50	48	26	22

## Standard foot mount A

## Dimensions



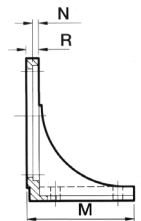
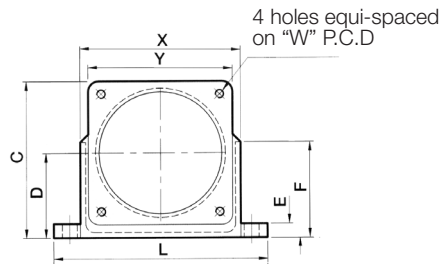
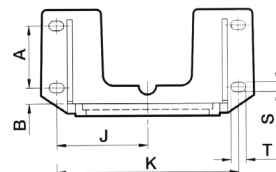
Motor	A	B	C	D	H	J	K	L	M	N	P	R	V	W	X
6W	12	8	65	35	6	17	34	60	25	3	5.5	6	$\varnothing 4.8$	$\varnothing 70$	M4
15W	13	12	75	40	6	20	40	70	31	3.5	5.5	7	$\varnothing 4.8$	$\varnothing 82$	M5
25W	15	14	85	45	6	23	46	80	35	3.5	-	7	$\varnothing 5.5$	$\varnothing 94$	M5
40-90W	20	20	95	50	6	28	56	90	46	3.5	-	8	$\varnothing 7$	$\varnothing 104$	M6

Part number	Description
M6B2	Standard foot mount A for 6W motor
M7B2	Standard foot mount A for 15W motor

Part No.	Description
M8B2	Standard foot mount A for 25W motor
M9B2	Standard foot mount A for 40-90W motor

## Side fixing foot mount B

## Dimensions



Motor	A	B	C	D	H	J	K	L	M	N	R	S	T	U	W	X	Y	Z
25W	35	9	89	48	8	51	102	128	60	3.5	7	5.4	8.4	54	$\varnothing 94$	90	81	M5
40-90W	40	9	98.5	53	10	56	112	130	67	3.5	10	5.4	8.4	60	$\varnothing 104$	100	91	M6

Part number	Description
M8B3	Standard foot mount B for 25W motor

Part No.	Description
M9B3	Standard foot mount B for 40-90W motor

Panasonic, one of the largest motor manufacturers in the world, have designed and developed the new B-series of motors and geared motors with integrated drives.

The B1 model suits general applications with a wide speed range, full torque from 0rpm, accurate speed holding and IP65 protection.

It is available from 30 to 130W as motors with round shafts, or geared motors using high efficiency helical gearboxes.

The B3 model has the additional feature of positioning control for up to four discrete positions with a step angle of 1.25°. It is available as motors or geared motors in the same power range 30 to 130W.



### Integrated drive

- no panel space required, faster installation & commissioning

### Compact

- space saving and IP65 enclosed

### High performance

- Panasonic Hyper technology for accurate speed holding & smooth running

### B1 Models

- optional gearboxes and analogue or digital keypads

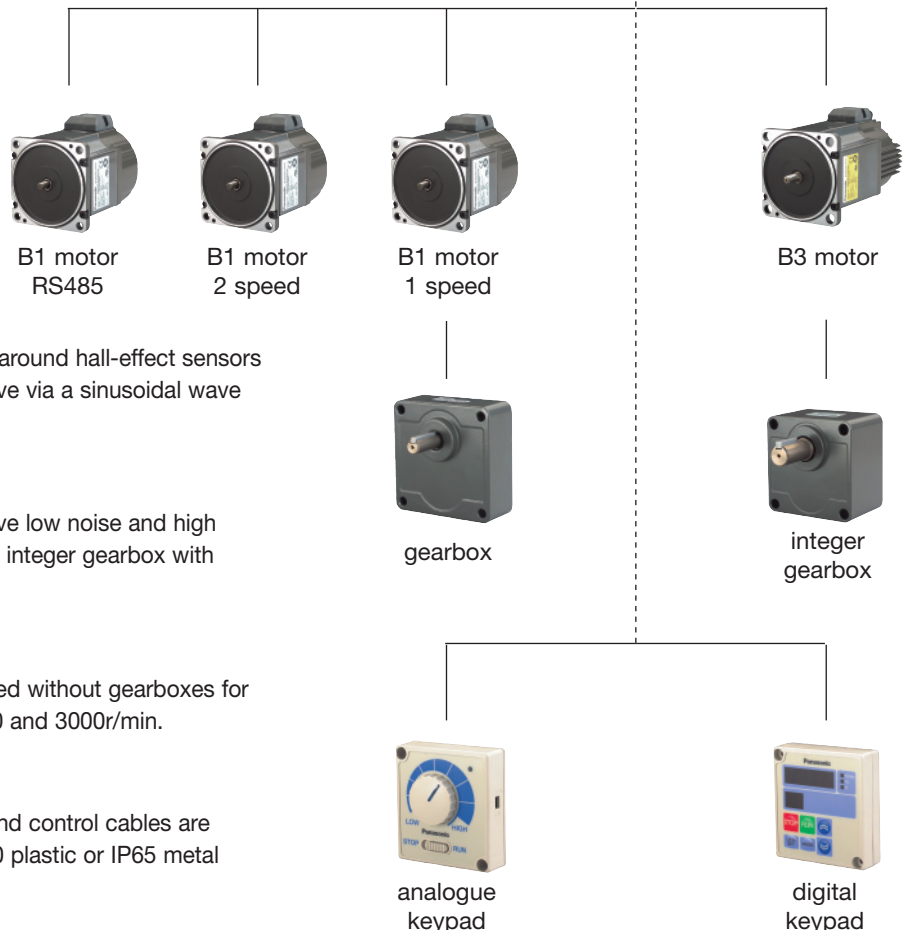
### B3 Models

- simple 4 point position control

Supply 200-240V, 1 ~, 50-60Hz  
(On request 100V-60Hz)



Optional filter



### Hyper technology

Panasonic Hyper technology is based around hall-effect sensors in the motor giving feedback to the drive via a sinusoidal wave for speed holding and positioning.

### Gearboxes

Accurately machined spur gears achieve low noise and high efficiency. B3 models are fitted with an integer gearbox with exact ratios for precise positioning.

### Motors only

Both B1 and B3 models can be supplied without gearboxes for controllable output speeds between 30 and 3000r/min.

### Cables

A full range of pre-assembled power and control cables are available. These are available with IP20 plastic or IP65 metal connectors.

**B1  
30-130W**



## Brushless motors with integrated drives

- Space saving with integrated drive
- Full torque from 0-3000rpm
- Speed range 100:1
- 5000 hours life with gearbox
- RS 485 option
- 1 or 2 configurable motor speed presets
- IP65, CE/UL approved



### Function

The Panasonic B1 range of motors and geared motors breaks new ground with the drive integrated inside the motor frame. Available from 30 to 130W, the B1 range combines the benefits of DC performance with the robustness of AC motors.

Using high efficiency brushless Panasonic Hyper technology based around hall-effect sensors in the motor giving feedback via sinusoidal waveform for speed holding and positioning. These compact motors remove the need for a panel mounted drive.

### Technical data, motor

Motor type		Output Power	Voltage	Frequency	Current	Torque	Starting torque	Speed
Shaft for gearbox	"D" cut shaft	(P2) W	(V)	(Hz)	(A)	(Nm)	(Nm)	(r/min.)
MBMC3A1AXB	MBMC3A1ASB	30	1-phase 100-120	50/60	1,0	0,095	0,14	3000
MBMC3A2AXB	MBMC3A2ASB	30	1-phase 200-240	50/60	0,6	0,095	0,14	3000
MBMC5A1AXB	MBMC5A1ASB	50	1-phase 100-120	50/60	1,5	0,16	0,24	3000
MBMC5A2AXB	MBMC5A2ASB	50	1-phase 200-240	50/60	0,7	0,16	0,24	3000
MBMC9A1AXB	MBMC9A1ASB	90	1-phase 100-120	50/60	2,0	0,29	0,43	3000
MBMC9A2AXB	MBMC9A2ASB	90	1-phase 200-240	50/60	1,1	0,29	0,43	3000
MBMC1E2AXB	MBMC1E2ASB	130	1-phase 200-240	50/60	1,5	0,41	0,62	3000

### General data

Motor type	MBMC3A****	MBMC5A****	MBMC9A****	MBMC1E****
Power (W)	30	50	90	130
Speed range	30-3000r/min (Speed 1:100)			
Speed fluctuation	Rated +/-1%			
Acc/Dec. Time	0.3 seconds (Time from 0 to 1000 r/min)*			
Stop method	Free run & Stop*			
Speed accuracy	Analogue: +/-3% of upper speed limit, Digital: 1% or less of upper speed limit			
Protective functions	Under-voltage warning, (Under-voltage protection *), Over-load, Over-current, Regenerative over-voltage, Parameter error, CPU error, Over-speed, Sensor error, Over-heat			
Insulation class	E (120 °C) (UL certified A 105°C)			
Duty cycle	Continuous			30min or Cont at 80% load
Overload warning level	100 %			80 %
Time limit for overload	60 sec at 150% loading			
IP Rating	IP65 motor, excluding foot of shaft and end of lead wires. Panel controllers IP20			
Weight (kg)	1,1	1,3	2,3	2,3

\* Can be set by Panel B

### Torque with gear (Nm)

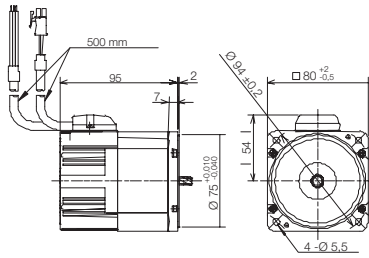
Model / Ratio	3	7,5	12,5	15	20	25	30	50	75	100	180	200
30 W, MX8G_B	0,23	0,58	0,96	1,15	1,55	1,93	2,16	3,55	5,43	6,99	7,84	
50 W, MX8G_B	0,39	0,96	1,61	1,92	2,59	3,23	3,61	5,93	7,84	7,84	7,84	
90 W, MZ9G_B	0,67	1,69	2,54	3,06	4,11	5,27	6,22	9,81	14,7	19	19,6	19,6
130 W, MZ9G_B	1,01	2,54	3,82	4,59	6,17	7,91	9,34	14,7	19,6	19,6	19,6	19,6

Grey area indicates gearbox runs in the same direction as the motor shaft.

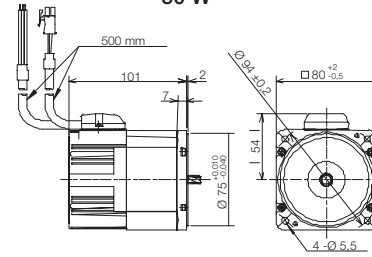


## Dimensions

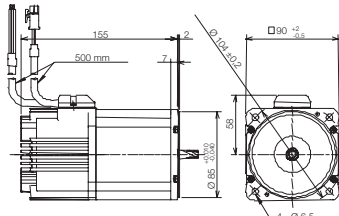
30 W



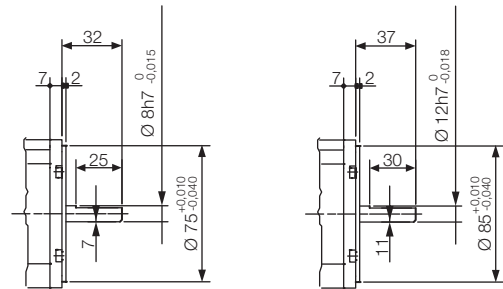
50 W



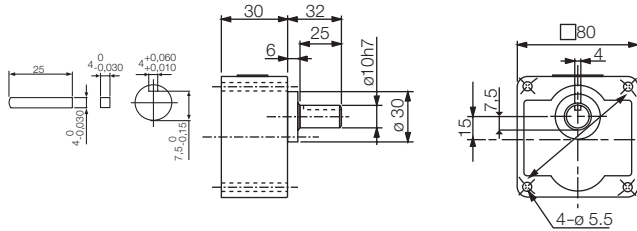
90 & 130 W



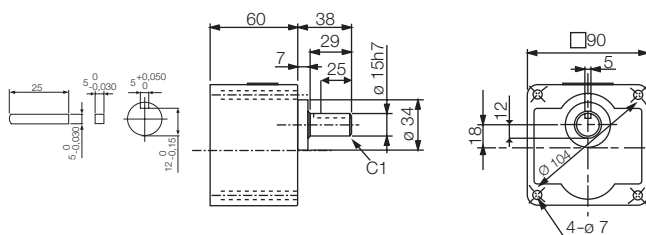
Straight shaft 30/50 W & 90/130 W



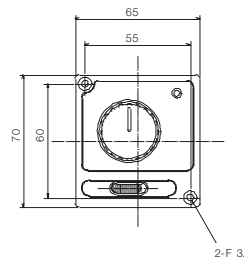
Gearbox dimensions 30/50 W



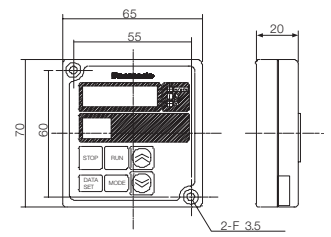
Gearbox dimensions 90/130 W



Panel dimensions A



Panel dimensions B



## Ordering information

Motor for gearbox		Motor with straight shaft	
Part number	Description	Part number	Description
MBMC3A1AXB	30 W, 110 V for gearbox	MBMC3A1ASB	30 W, 110 V straight shaft
MBMC3A2AXB	30 W, 230 V for gearbox	MBMC3A2ASB	30 W, 230 V straight shaft
MBMC5A1AXB	50 W, 110 V for gearbox	MBMC5A1ASB	50 W, 110 V straight shaft
MBMC5A2AXB	50 W, 230 V for gearbox	MBMC5A2ASB	50 W, 230 V straight shaft
MBMC9A1AZB	90 W, 110 V for gearbox	MBMC9A1ASB	90 W, 110 V straight shaft
MBMC9A2AZB	90 W, 230 V for gearbox	MBMC9A2ASB	90 W, 230 V straight shaft
MBMC1E2AZB	130 W, 230 V for gearbox	MBMC1E2ASB	130 W, 230 V straight shaft

Motors from 30 to 50 W		Motors from 90 to 130 W	
Part number	Description	Part number	Description
MX8G3B	Gearbox 3:1	MZ9G3B	Gearbox 3:1
MX8G7,5B	Gearbox 7,5:1	MZ9G7,5B	Gearbox 7,5:1
MX8G12,5B	Gearbox 12,5:1	MZ9G12,5B	Gearbox 12,5:1
MX8G15B	Gearbox 15:1	MZ9G15B	Gearbox 15:1
MX8G20B	Gearbox 20:1	MZ9G20B	Gearbox 20:1
MX8G25B	Gearbox 25:1	MZ9G25B	Gearbox 25:1
MX8G30B	Gearbox 30:1	MZ9G30B	Gearbox 30:1
MX8G50B	Gearbox 50:1	MZ9G50B	Gearbox 50:1
MX8G75B	Gearbox 75:1	MZ9G75B	Gearbox 75:1
MX8G100B	Gearbox 100:1	MZ9G100B	Gearbox 100:1
MX8G180B	Gearbox 180:1	MZ9G180B	Gearbox 180:1
		MZ9G200B	Gearbox 200:1

**B3  
30-130W**



## Brushless motor with integrated drive & encoder

- Positioning with integrated encoder
- Full torque available from 0 to 3000 rpm
- Maximum gear reduction 100:1
- 5000 hours life with gearbox
- CE/UL approval
- 4 discreet repeatable positions
- IP65



### Function

Panasonic B3 motor features integrated drive and encoder offers simple servo type performance. With full torque from zero speed up to 3000rpm, it can be used for positioning applications.

Programming is carried out simply using the digital keypad or by using the RS232 connection together with Panasonic's Panaterm software.

### Technical data

Motor type	Output power	Voltage	Frequency	Current	Torque	Starting torque	Speed
Shaft for gearbox "D" cut shaft	(P2) W	(V)	(Hz)	(A)	(Nm)	(Nm)	(r/min.)
MBMP3A1EBC MBMP3A1ESC	30	1-phase 100-120	50/60	1,0	0,095	0,14	3000
MBMP3A2EBC MBMP3A2ESC	30	1-phase 200-240	50/60	0,6	0,095	0,14	3000
MBMP5A1EBC MBMP5A1ESC	50	1-phase 100-120	50/60	1,5	0,16	0,24	3000
MBMP5A2EBC MBMP5A2ESC	50	1-phase 200-240	50/60	0,7	0,16	0,24	3000
MBMP9A1EBC MBMP9A1ESC	90	1-phase 100-120	50/60	2,0	0,29	0,43	3000
MBMP9A2EBC MBMP9A2ESC	90	1-phase 200-240	50/60	1,1	0,29	0,43	3000
MBMP1E2EBC MBMP1E2ESC	130	1-phase 200-240	50/60	1,5	0,41	0,62	3000

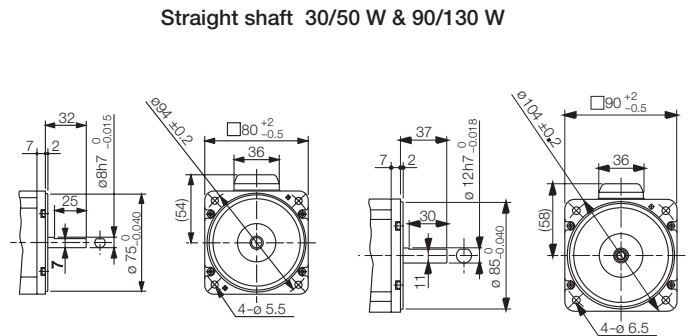
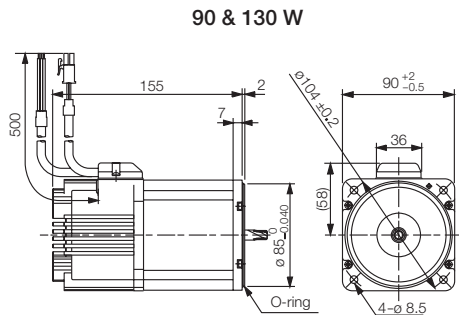
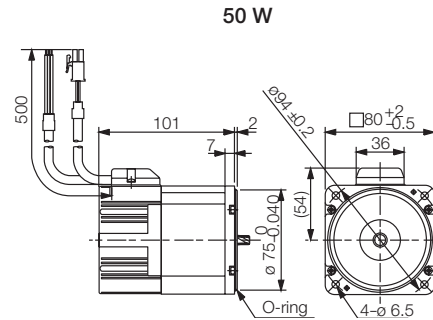
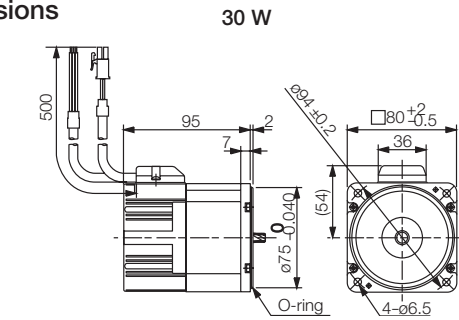
### General data

Motor type	MBMP3A****	MBMP5A****	MBMP9A****	MBMP1E****
Power (W)	30	50	90	130
Speed range	30-3000 r/min (Speed 1:100)			
Speed control method	PWM			
Points to position	Set distance, speed, acceleration, absolute/relative for each point			
Positioning	288 pulses/rev (±5 % or less at 20°)			
Input signals	4 signals			
Output signals	2 outputs (open collector)			
Protective function	Overload, over-current, over-voltage, under-voltage, system error, over-speed, sensor error, over-heat, position error, externally enforced trip, overflow of error counter, RS485 error, motion execution error, homing error, hardware limit error, operation panel B error, user parameter error.			
RS232C communication	Set parameters or monitor status with panel B or PC			
RS485 communication	Set parameters or monitor status with controller			
Insulation level	E (120°) (UL Approved A (105°))			
Duty cycle	Continuous			30 min or cont. at 80% loading
Over load warning level	100 %			80%
Time limit at over load	60 seconds at 150% loading			
Start torque	150%			
IP rating	IP65, excluding shaft and lead wires to EN standards			
Mass (kg)	1,1	1,3	2,3	2,3

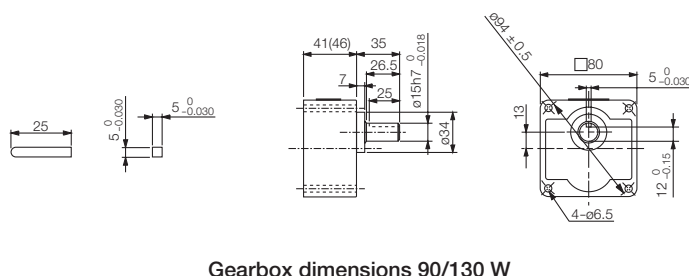
Torque with gear (Nm) Model/ratio	5	10	15	20	30	50
30 W, MB8G_BV	0,43	0,86	1,3	1,8	2,5	4,1
50 W, MB8G_BV	0,71	1,4	2,2	2,8	4,0	6,8
90 W, MB9G_BV	1,2	2,5	3,6	4,9	7,0	11,6
130 W, MB9G_BV	1,9	3,7	5,6	7,4	10,7	17,7

Grey area indicates gearbox runs in same direction as the motor shaft.

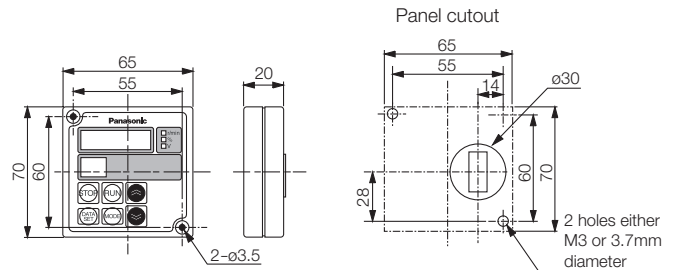
## Dimensions



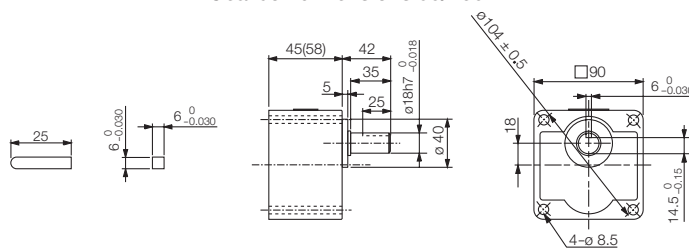
### Gearbox dimensions 30/50 W



### Panel dimensions B



### Gearbox dimensions 90/130 W



## Ordering information

Motor for gearbox		Motor with straight shaft	
Part number	Description	Part number	Description
MBMP3A1EBC	30 W, 110 V for gearbox	MBMP3A1ESC	30 W, 110 V straight shaft
MBMP3A2EBC	30 W, 230 V for gearbox	MBMP3A2ESC	30 W, 230 V straight shaft
MBMP5A1EBC	50 W, 110 V for gearbox	MBMP5A1ESC	50 W, 110 V straight shaft
MBMP5A2EBC	50 W, 230 V for gearbox	MBMP5A2ESC	50 W, 230 V straight shaft
MBMP9A1EBC	90 W, 110 V for gearbox	MBMP9A1ESC	90 W, 110 V straight shaft
MBMP9A2EBC	90 W, 230 V for gearbox	MBMP9A2ESC	90 W, 230 V straight shaft
MBMP1E2EBC	130 W, 230 V for gearbox	MBMP1E2ESC	130 W, 230 V straight shaft

Motors from 30 to 50 W		Motors from 90 to 130 W	
Part number	Description	Part number	Description
MB8G5BV	Gearbox 5:1	MB9G5BV	Gearbox 5:1
MB8G10BV	Gearbox 10:1	MB9G10BV	Gearbox 10:1
MB8G15BV	Gearbox 15:1	MB9G15BV	Gearbox 15:1
MB8G20BV	Gearbox 20:1	MB9G20BV	Gearbox 20:1
MB8G30BV	Gearbox 30:1	MB9G30BV	Gearbox 30:1
MB8G50BV	Gearbox 50:1	MB9G50BV	Gearbox 50:1

# Keypads & Options

## Panasonic

### Keypads



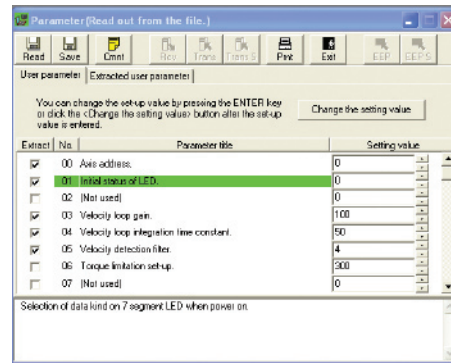
**Analogue**  
For run/stop, direction, control and speed setting.  
Suits B1-series Type No DVOP3500



**Digital**  
For run/stop, direction, speed control plus parameter setting.  
Suits B1 and B3-series Type No DVOP3510

### B3-series Panaterm software

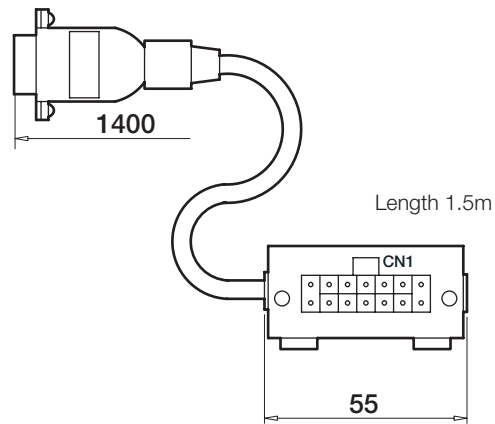
Panasonic Panaterm software makes programming of the B3 drive an almost effortless task. Using RS232 communications with a PC, drive parameters can be easily accessed, saved and downloaded.



Part number	Description
DVOP4150	B3-series Panaterm set-up software

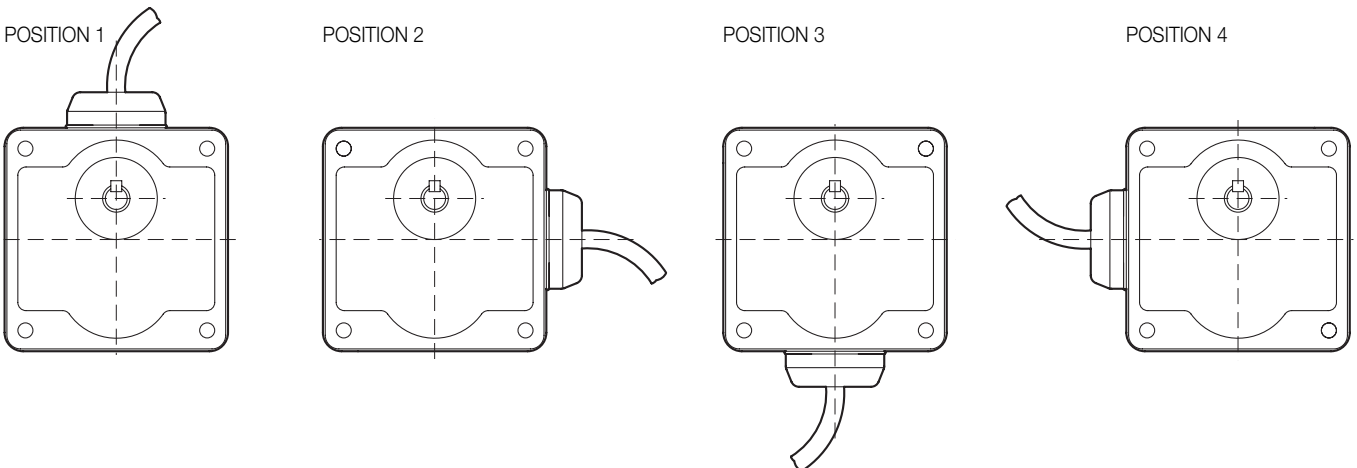
### B3-series Programming module

The programming cable is for use with the B3 model and allows a direct programming link between a PC and the B3-drive using RS232.



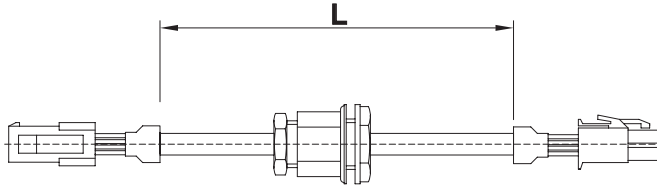
Part number	Description
DVOP4140	B3-series RS232 programming cable

Specify Mounting position (shaft with relation to cable)



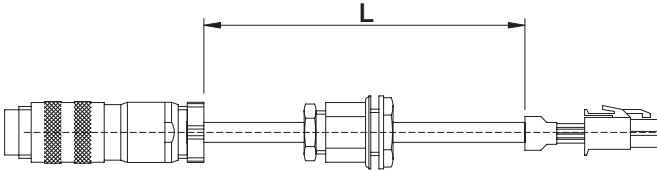
## B1-series

IP20 keypad extension cable



Part number	Description (L)
PANB1DVOP35910	1 metre
PANB1DVOP35930	3 metre
PANB1DVOP35950	5 metre

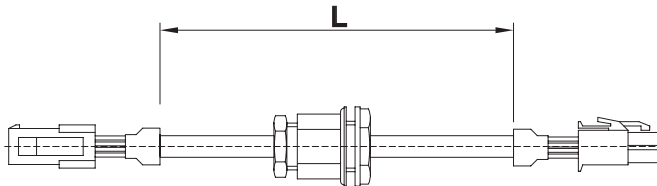
IP65 keypad extension cable



Part number	Description (L)
PANB1DVOP35910I	1 metre
PANB1DVOP35930I	3 metre
PANB1DVOP35950I	5 metre

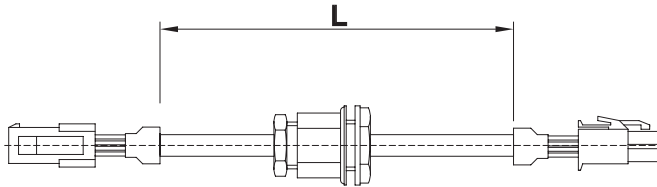
## B3-series

IP20 extension cable



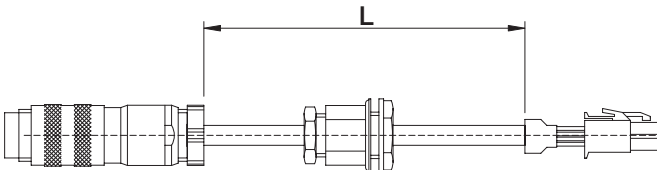
Part number	Description (L)
PANB3DVOP38510	1 metre
PANB3DVOP38530	3 metre
PANB3DVOP38550	5 metre

IP20 keypad extension cable



Part number	Description (L)
PANB3DVOP38605	0.5 metre

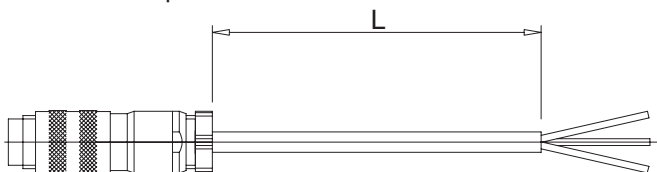
IP65 keypad extension cable



Part number	Description (L)
PANB3DVOP38510I	1 metre
PANB3DVOP38530I	3 metre
PANB3DVOP38550I	5 metre

## B1 & B3-series

IP65 mains input extension cable



Part number	Description (L)
PANB3EM1M	1 metre
PANB3EM3M	3 metre
PANB3EM5M	5 metre

## Overview of the OEM Motors Range



- Italian manufacturer of geared motors & servo motors
- IP65 as standard
- 9 - 270W AC, 4 - 150W DC and 32 - 880W servomotor
- Up to 90Nm output torque
- Optional encoders, brakes, tachos & speed control motors



- Spanish manufacturer of 12-24V DC permanent magnet motors and worm drive gearmotors
- 16 - 235W output power
- Start up torque of upto 135Nm
- Optional rear shaft versions available for hand winding, encoders & brake



- German manufacturer of synchronous motors, single phase 24 – 230V and three phase 230 – 690V
- Enclosure to IP55
- Output power of 5 to 60W
- Up to 75Nm output torque
- Available with gearbox options of spur, planetary, worm or a combination for various speed options
- Synchronous motors offer exceptional speed holding characteristics



- German manufacturer of geared motors & brushless DC
- Available from IP00 open frame to IP65 as standard
- 10W to 500W output power
- Upto 80Nm output torque
- Optional spur, planetary, worm and combination gearboxes



- Finnish manufacturer of drives for DC motor control
- Drives for DC motors upto 48VDC, upto 80VDC for stepping motors
- Up to 40A continuous with 90A peak current on DC motor drives
- Drives & controllers for: brushed DC motors, brushless DC motors, stepper motors, servo motors &
- Positioning drivers for linear actuators
- Bespoke designs on request



- These products are available exclusively for OEM machine builders and are all proven suppliers to both us and our customers. We supply products from a very large standard range whilst also offering motors of bespoke designs. We have full technical and commercial control with QA and logistic management both here and in the country of manufacture. Products include AC and DC micro-motors with and without gearboxes, brushless motors with and without integrated drives, DC coreless motors with and without gears and stepping motors.



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