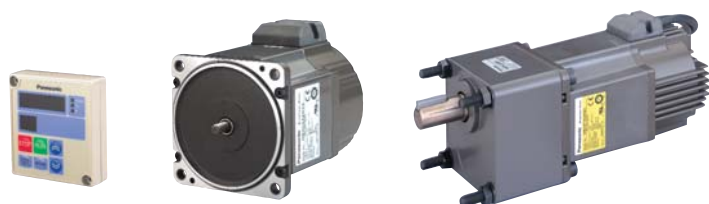
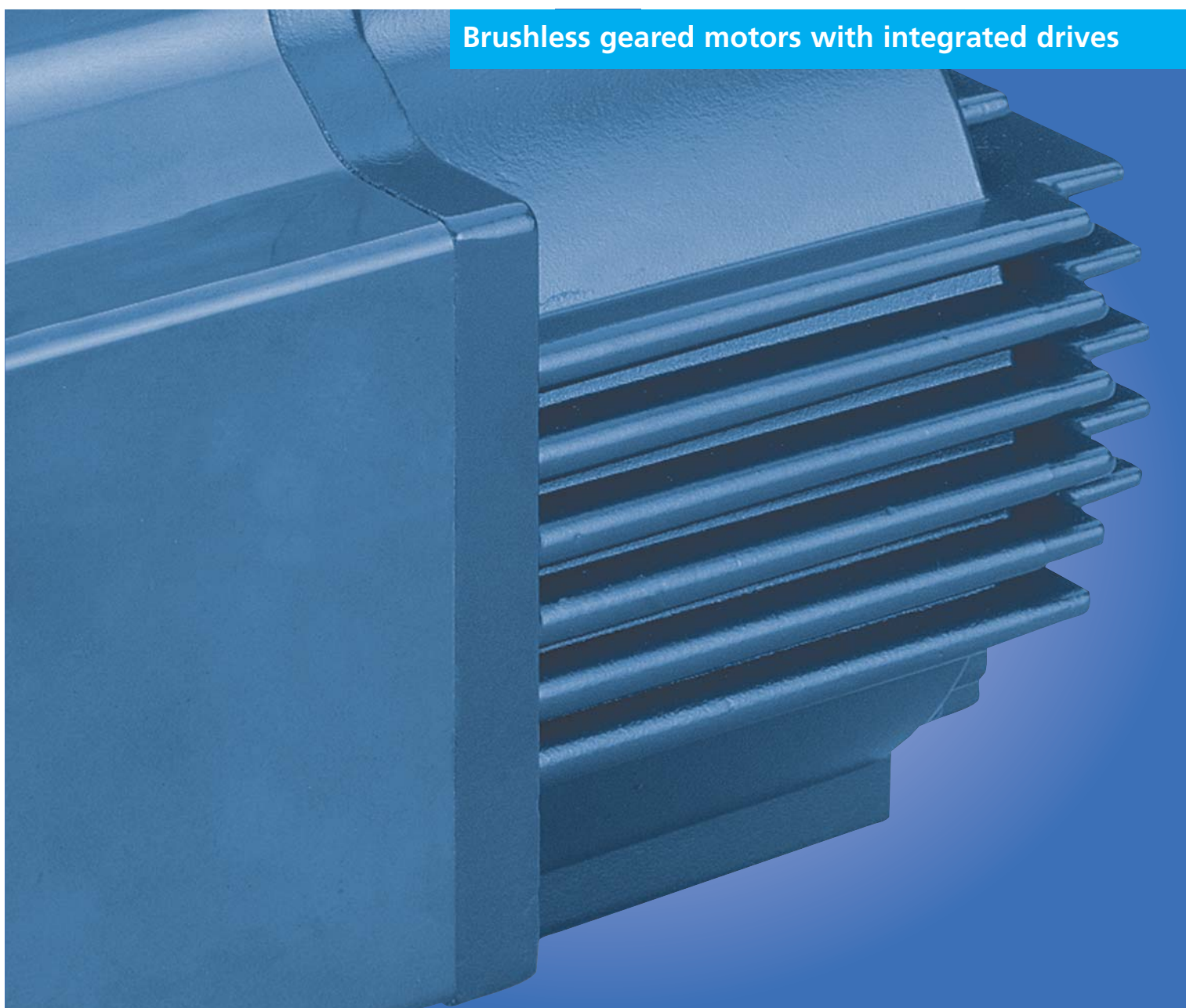


Panasonic B-series



Brushless geared motors with integrated drives



OPIS Engineering k.s.
Roztočíme Váš svět

Panasonic B-series | with integrated drive

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, 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

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

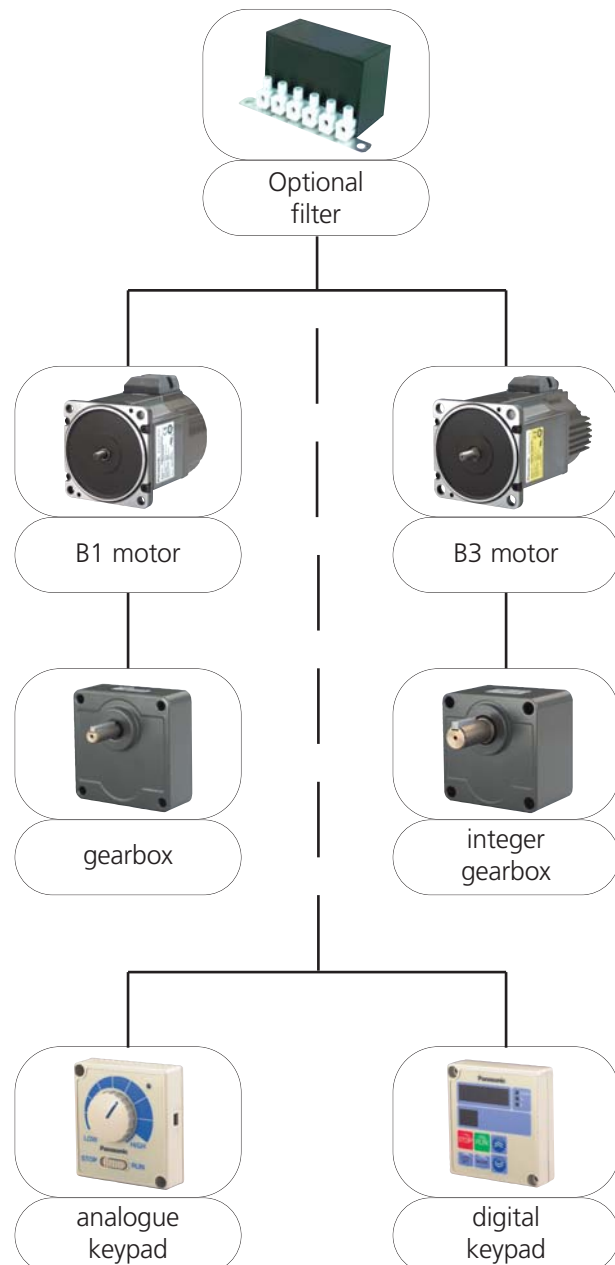
Both B1 and B3 models can be supplied without gearboxes for controllable output speeds between 30 and 3000r/min.

Cables

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



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



Panasonic B-series | performance

	Motor specification			
Power (W)	30	50	90	130
Rated speed (r/min)	3000r/min			
Supply	1 phase 200-240V ± 10% 50-60Hz (100V available on request)			
Rated current (A)	0.6	0.7	1.1	1.5
Rated torque (Nm)	0.095	0.16	0.29	0.41
Static torque (Nm)	0.14	0.24	0.43	0.62
Insulation	Category E 120°C			
Duty cycle	Continuous			30 minutes or continuous 80% load
Overload warning level	100%			80%
Time at overload	60s at 150% loading			
Protection	motor to IP65 excluding base of shaft and wire ends, keypad IP20			
Ambients	-10 to 40°C, humidity less than 85%			
Weight (kg)	1.1	1.3	2.3	2.3

Motors with D-shaped straight shafts for use without gearboxes are available on request.

B1-series



		B1
Control speed		30~3000 r/min (Speed 1:100)
Speed fluctuations	Load Voltage Temperature	± 1% of rated speed from zero to rated torque ± 1% of rated speed for mains supply ± 10% ± 1% of rated speed for ambients -10 to +40°C
Acceleration/Deceleration time		0.3 seconds (Time from 0 to 1000r/min) *
Stop method		Free run & Stop *
Speed setting		0 ~ 3000 r/min (Analogue voltage (0~5V) Set by either keypad) Analogue : ± 5% of upper limit speed (± 150 r/min when upper limit is 3000 r/min)
Accuracy of set speed (At 20°C)		(Digital: 1% of upper limit speed)
Protective function		Over-current. Regenerative over voltage. Parameter error. CPU error. Over-speed. Sensor error. Over-heat. Under-voltage protection*. Overload.

* can be set by digital keypad

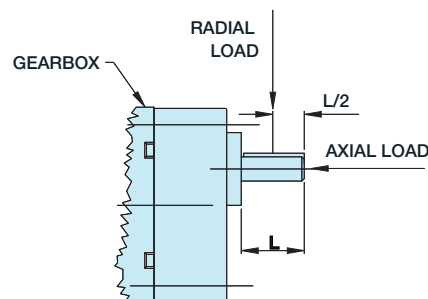
B3-series



		B3
Control method		Position control with communication sensor signal PWM sine wave drive
Points to position		4 points (Set distance, speed, acceleration, absolute/relative for each point)
Positioning resolution		288 pulses/rotation (Accuracy : ± 5% at 20°C)
Input Signal		4 inputs
Output Signal		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, System parameter error
RS232C communication		Set parameters or monitor motor status with digital keypad or PC.
RS485 communication		Set parameters or monitor status with controller.

Radial & axial loads

Models	Speed r/min	Radial N	Axial N	
B1	30/50W	0-1000	249	49
	90/130W	0-1000	588	147
B3 30/50W	0-600	245	98	
	300-150	343	98	
B3 90/130W	100-60	539	98	
	0-600	294	147	
	300-150	490	147	
	100-60	637	147	



Panasonic B Series | selections and part numbers

		30W			50W			
		Output speed (r/min)	Type No.	Max output torque (Nm)	Max load inertia x10 ⁻⁴ kgm ²	Type No.	Max output torque (Nm)	Max load inertia x10 ⁻⁴ kgm ²
B1-Series - speed control type	IP20 plugs	30	PANB130A230X	6.99	342	PANB150A230X	7.84	342
		60	PANB130A260X	3.55	342	PANB150A250X	5.93	342
		100	PANB130A2100X	2.16	127	PANB150A2100X	3.61	127
		150	PANB130A2150X	1.55	55.8	PANB150A2150X	2.59	55.8
		200	PANB130A2200X	1.15	30.6	PANB150A2200X	1.92	30.6
		300	PANB130A2300X	0.77	13.8	PANB150A2300X	1.29	13.8
		600	PANB130A2600X	0.38	3.42	PANB150A2600X	0.64	3.42
	1000	PANB130A21000X	0.23	1.25	PANB150A21000X	0.39	1.25	
	IP65 plugs	30	PANB130A230XI	6.99	342	PANB150A230XI	7.84	342
		60	PANB130A260XI	3.55	342	PANB150A250XI	5.93	342
		100	PANB130A2100XI	2.16	127	PANB150A2100XI	3.61	127
		150	PANB130A2150XI	1.55	55.8	PANB150A2150XI	2.59	55.8
		200	PANB130A2200XI	1.15	30.6	PANB150A2200XI	1.92	30.6
		300	PANB130A2300XI	0.77	13.8	PANB150A2300XI	1.29	13.8
600		PANB130A2600XI	0.38	3.42	PANB150A2600XI	0.64	3.42	
1000	PANB130A21000XI	0.23	1.25	PANB150A21000XI	0.39	1.25		
90W				130W				
IP20 plugs	30	PANB190A230Z	19.6	1684	PANB1130A230Z	19.6*	1684	
	60	PANB190A260Z	9.81	1684	PANB1130A260Z	14.7*	1684	
	100	PANB190A2100Z	6.22	589	PANB1130A2100Z	9.34*	589	
	150	PANB190A2150Z	4.11	257	PANB1130A2150Z	6.17*	257	
	200	PANB190A2200Z	3.06	142	PANB1130A2200Z	4.59*	142	
	300	PANB190A2300Z	2.28	67.6	PANB1130A2300Z	3.42*	67.6	
	600	PANB190A2600Z	1.12	16.4	PANB1130A2600Z	1.69*	16.4	
1000	PANB190A21000Z	0.67	5.93	PANB1130A21000Z	1.01*	5.93		
IP65 plugs	30	PANB190A230ZI	19.6	1684	PANB1130A230ZI	19.6*	1684	
	60	PANB190A260ZI	9.81	1684	PANB1130A250ZI	14.7*	1684	
	100	PANB190A2100ZI	6.22	589	PANB1130A2100ZI	9.34*	589	
	150	PANB190A2150ZI	4.11	257	PANB1130A2150ZI	6.17*	257	
	200	PANB190A2200ZI	3.06	142	PANB1130A2200ZI	4.59*	142	
	300	PANB190A2300ZI	2.28	67.6	PANB1130A2300ZI	3.42*	67.6	
	600	PANB190A2600ZI	1.12	16.4	PANB1130A2600ZI	1.69*	16.4	
1000	PANB190A21000ZI	0.67	5.93	PANB1130A21000ZI	1.01*	5.93		

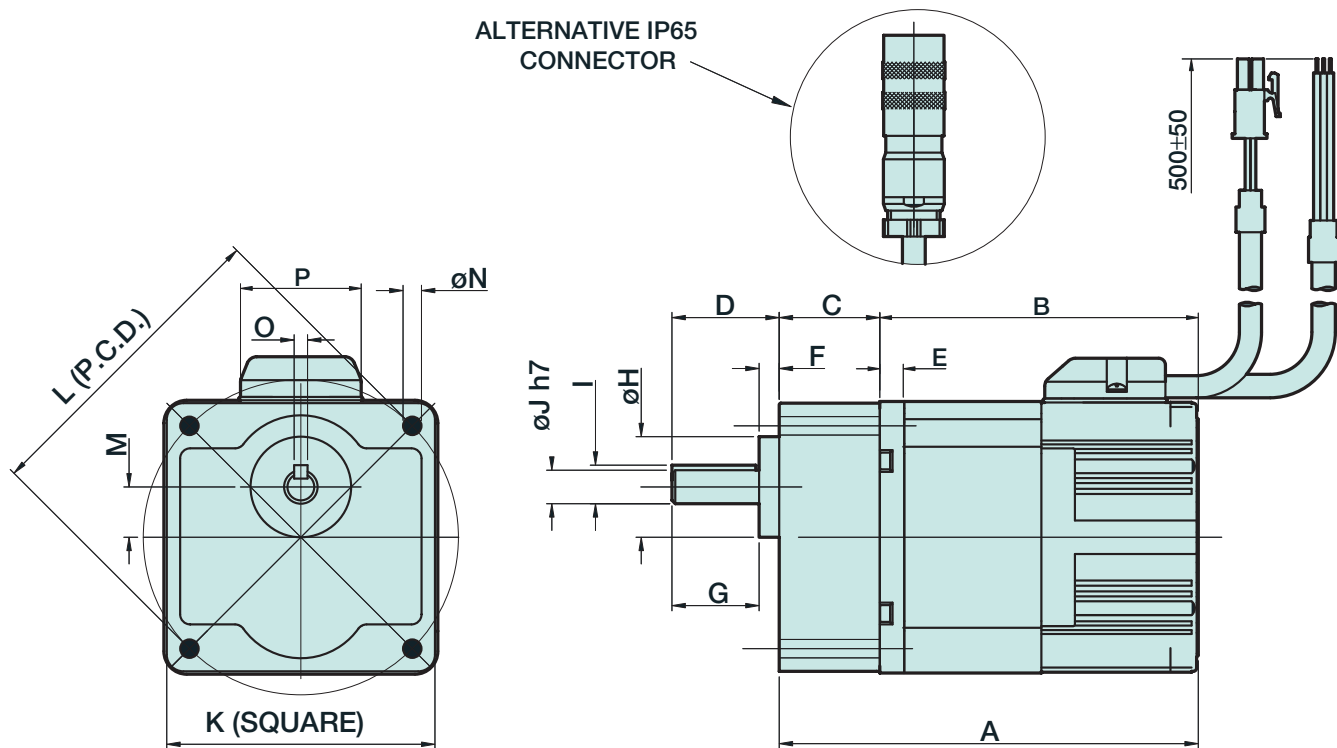
* not continuously rated

		30W			50W			
		Output speed (r/min)	Type No.	Max output torque (Nm)	Max load inertia x10 ⁻⁴ kgm ²	Type No.	Max output torque (Nm)	Max load inertia x10 ⁻⁴ kgm ²
B3-Series - positioning type	IP20 plugs	60	PANB330E260XV	4.1	342	PANB350E260XV	6.8	342
		100	PANB330E2100XV	2.5	127	PANB350E2100XV	4	127
		150	PANB330E2150XV	1.8	55.8	PANB350E2150XV	2.8	55.8
		200	PANB330E2200XV	1.3	30.6	PANB350E2200XV	2.2	30.6
		300	PANB330E2300XV	0.86	13.8	PANB350E2300XV	1.4	13.8
		600	PANB330E2600XV	0.43	3.42	PANB350E2600XV	0.71	3.42
	IP65 plugs	60	PANB330E260XVI	4.1	342	PANB350E260XVI	6.8	342
		100	PANB330E2100XVI	2.5	127	PANB350E2100XVI	4	127
		150	PANB330E2150XVI	1.8	55.8	PANB350E2150XVI	2.8	55.8
		200	PANB330E2200XVI	1.3	30.6	PANB350E2200XVI	2.2	30.6
		300	PANB330E2300XVI	0.86	13.8	PANB350E2300XVI	1.4	13.8
		600	PANB330E2600XVI	0.43	3.42	PANB350E2600XVI	0.71	3.42
	90W				130W			
	IP20 plugs	60	PANB390E260ZV	11.6	1684	PANB3130E260ZV	17.7*	1684
		100	PANB390E2100ZV	7	589	PANB3130E2100ZV	10.7*	589
		150	PANB390E2150ZV	4.9	257	PANB3130E2150ZV	7.4*	257
		200	PANB390E2200ZV	3.6	142	PANB3130E2200ZV	5.6*	142
		300	PANB390E2300ZV	2.5	67.6	PANB3130E2300ZV	3.7*	67.6
600		PANB390E2600ZV	1.2	16.4	PANB3130E2600ZV	1.9*	16.4	
IP65 plugs	60	PANB390E260ZVI	11.6	1684	PANB3130E260ZVI	17.7*	1684	
	100	PANB390E2100ZVI	7	589	PANB3130E2100ZVI	10.7*	589	
	150	PANB390E2150ZVI	4.9	257	PANB3130E2150ZVI	7.4*	257	
	200	PANB390E2200ZVI	3.6	142	PANB3130E2200ZVI	5.6*	142	
	300	PANB390E2300ZVI	2.5	67.6	PANB3130E2300ZVI	3.7*	67.6	
	600	PANB390E2600ZVI	1.2	16.4	PANB3130E2600ZVI	1.9*	16.4	

* not continuously rated

When ordering geared motor please refer to mounting position on back page.

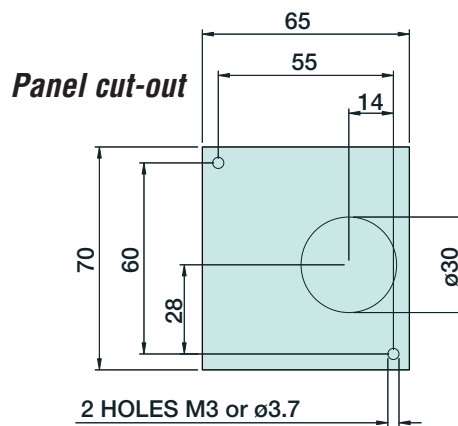
Dimensions | no panel space required



B1-series	Model power (W)	A	B	C	D	E	F	G	H	I	J h7	K	L	M	N	O	P	Weight kg
	30	125	95	30	32	7	6	25	30	11.5	10	80	94	15	5.5	4	36	1.7
50	131	101	30	32	7	6	25	30	11.5	10	80	94	15	5.5	4	36	1.9	
90, 130	215	155	60	38	7	7	29	34	17	15	90	104	18	7	5	36	3.7	

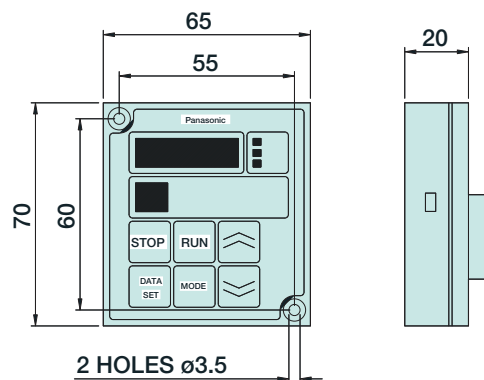
B3-series	Model power (W)	Output 30-100r/min		Output 150-600r/min		B	D	E	F	G	H	I	J h7	K	L	M
		A	C	A	C											
30	136	41	141	46	95	35	7	7	26.5	34	17	15	80	94	13	
50	142	41	147	46	101	35	7	7	26.5	34	17	15	80	94	13	
90,130	200	45	213	58	155	42	7	5	35	40	20.5	18	90	104	18	

B3-series	Model power (W)	N	O	P	Weight kg
	30	6.5	5	36	2.0
50	6.5	5	36	2.0	
90,130	805	6	36	≥ 100r/min 3.4kg ≥ 100r/min 3.7kg	

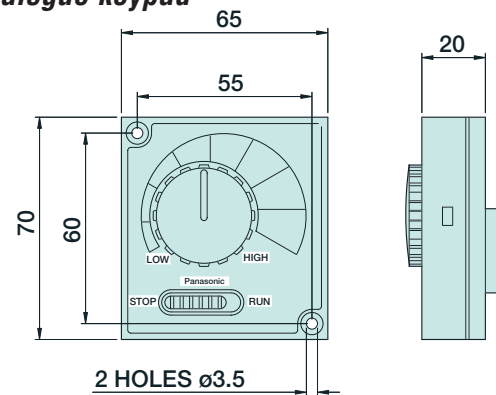


Keypad information

Digital keypad



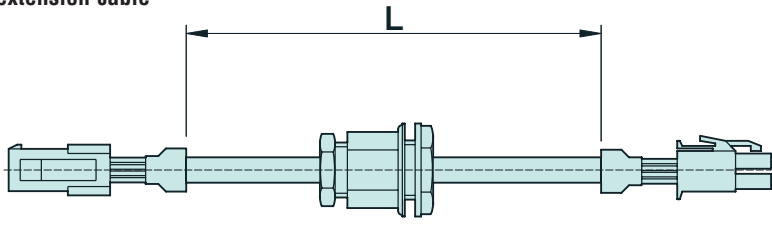
Analogue keypad



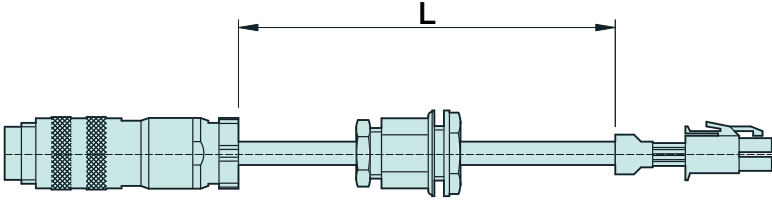
Panasonic B-series | pre-assembled cables

B1-series

IP20 keypad extension cable



IP65 keypad extension cable

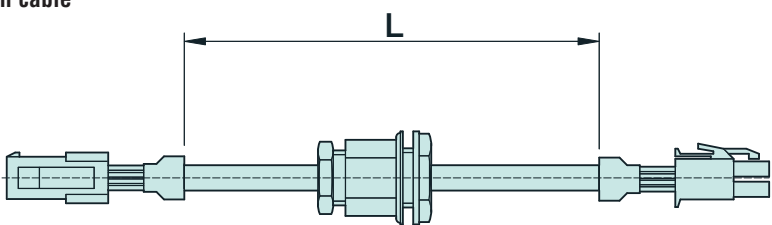


Length	Type No
1m	PANB1AC1PP
2m	PANB1AC2PP
3m	PANB1AC3PP
4m	PANB1AC4PP
5m	PANB1AC5PP

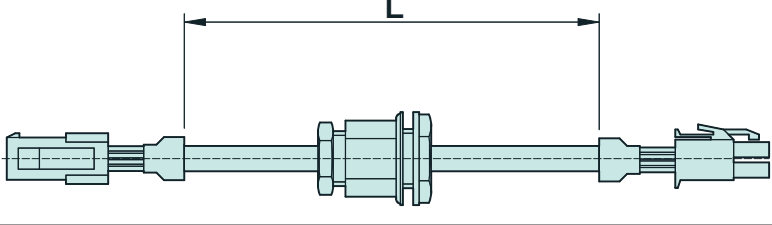
Length	Type No
1m	PANB1AC1MP
2m	PANB1AC2MP
3m	PANB1AC3MP
4m	PANB1AC4MP
5m	PANB1AC5MP

B3-series

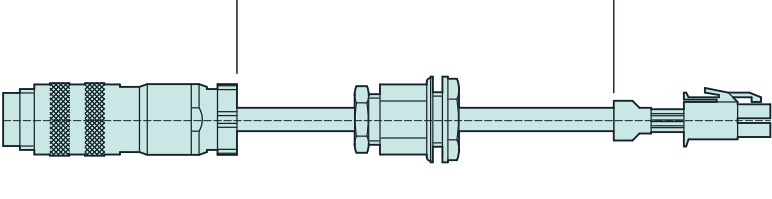
IP20 extension cable



IP20 keypad extension cable



IP65 keypad extension cable




Length	Type No
1m	PANB3EC1PP
2m	PANB3EC2PP
3m	PANB3EC3PP
4m	PANB3EC4PP
5m	PANB3EC5PP

Length	Type No
1m	PANB3EK1PP
2m	PANB3EK2PP
3m	PANB3EK3PP
4m	PANB3EK4PP
5m	PANB3EK5PP

Length	Type No
1m	PANB3EC1MP
2m	PANB3EC2MP
3m	PANB3EC3MP
4m	PANB3EC4MP
5m	PANB3EC5MP

B1 & B3

IP65 mains input extension cable



Length	Type No
1m	PANB3EM1M
2m	PANB3EM2M
3m	PANB3EM3M
4m	PANB3EM4M
5m	PANB3EM5M

Panasonic B-series | keypads & options

Keypads



Analogue
For run/stop, direction, control and speed setting.
Suits B1-series
Type No [PANB1DVOP3500](#)

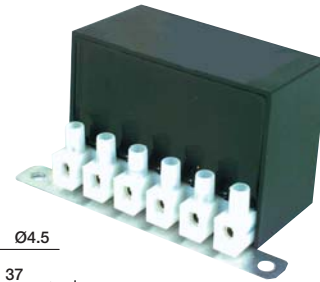
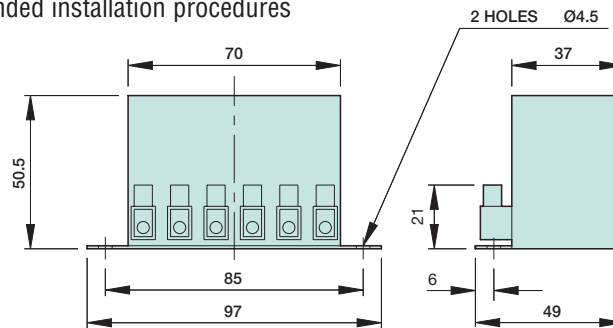


Digital
For run/stop, direction, speed control plus parameter setting.
Suits B1 and B3-series
Type No [PANB3DVOP3510](#)

RFI filter

Current rating	Weight	Type number
2A	0.2 kg	PANB1SF1494

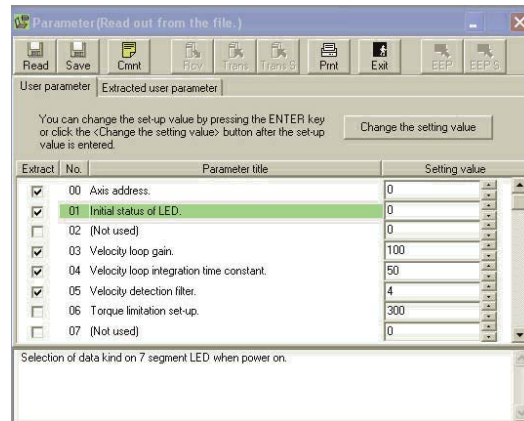
To achieve compliance to EN55011 class A (Industrial Installations) or class B (Domestic Installations) it is recommended that an RFI filter is used. Compliance can be achieved for motor cables up to a maximum of 15 metres when the recommended installation procedures are followed.



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.

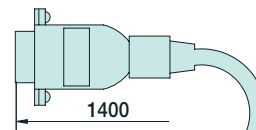
Description	Type No.
B3-series Panaterm set-up software	PANB3DVOP4150



B3-series Programming module

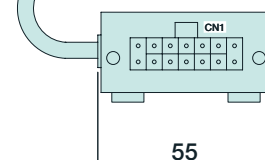
The programming cable is for use with the B3 model and allows a direct programming link between a PC and the B3-series drive using RS232.

Description	Type No.
B3-series RS232 programming cable	PANB3DVOP4140



1400

Length 1.5m



55

Ordering | fast and simple



Ordering example:

B3 130W 150rpm geared motor with IP65 connectors

Digital Keypad

IP65 keypad extension cable - 1m

IP65 mains input cable - 1m

Optional RFI filter to suit European EMC regulations

Type number

PANB3130E2150ZVI

PAN3DVOP3510

PANB3EC1MP

PANB3EM1M

PANB1SF1494

8

If programming is required from a PC

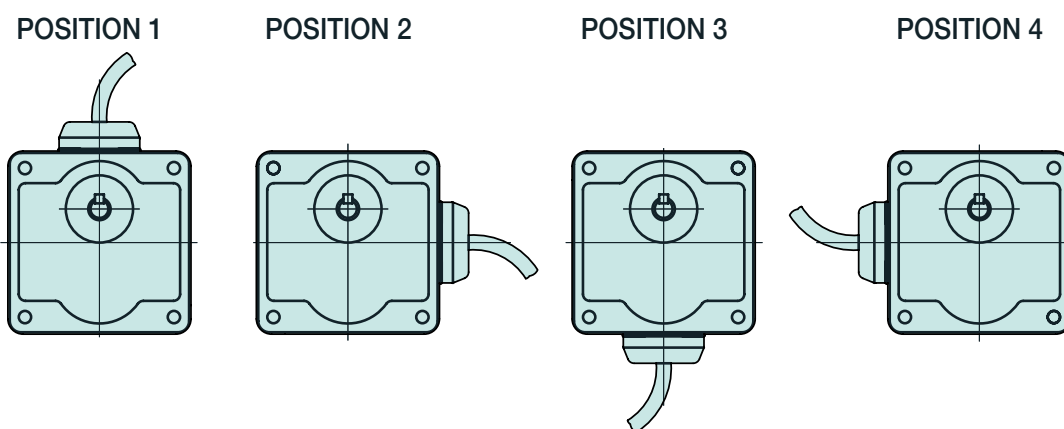
RS232 programming module

Panaterm programming software (free of charge)

PANB3DVOP4140

PANB3DVOP4150

Specify Mounting position (shaft with relation to cable)



For European sales & service addresses see our website

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