BL 58 EB Brushless DC motor Compact 35 Watt

ADINCO
ADVANCED INSTRUMENTS & COMPONENTS

Features:

- Adjustable speed loop
- Direction control input (forward / reverse)
- Frequency Generator output (Speed sensing)
- Thermal motor protection (shutdown at 90°C, restart at 80°C)
- Long life (20.000 hours)

Options:

- Square mounting flange
- Shaft diameter, 7or 8 mm
- Speed loop with frequency input
- Protection class IP67DS

Product combinations:

- Gearboxes S64A, S69A, P50A, P59A

Motor data

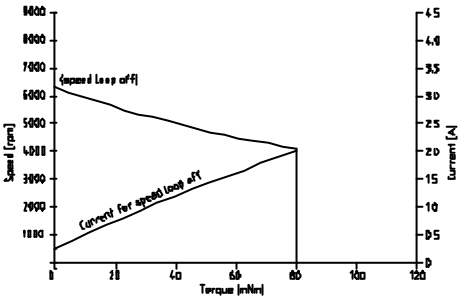
Motor order number	Shaft length 25 mm	4322 016 58041	
	Shaft length 20 mm (for combination with gearbox)	4322 016 58042	
Nominal voltage		24	V
No load speed (V in>6V)		6300	rpm
No load current (V in >4V)		250	mA
Nominal current limitation (V in>6V)		2.2	A
Nominal speed		4000	rpm
Nominal torque		80	mNm
Maximum output power		35	W
Operating temperature range		0 to 90	°C
Thermal resistance from housing to ambient		4.2	K/W
Rotor inertia		75x10^{-6}	kgm^2
Mass of motor		450	G
Maximum radial load 20 mm from mounting front (no axial load towards flange)		-	N
Maximum axial load -towards flange (no radial load)		-	N
-from flange		-	N

For thermal reasons it is advised to mount the motor on a heat conducting frame if high output power is desired.

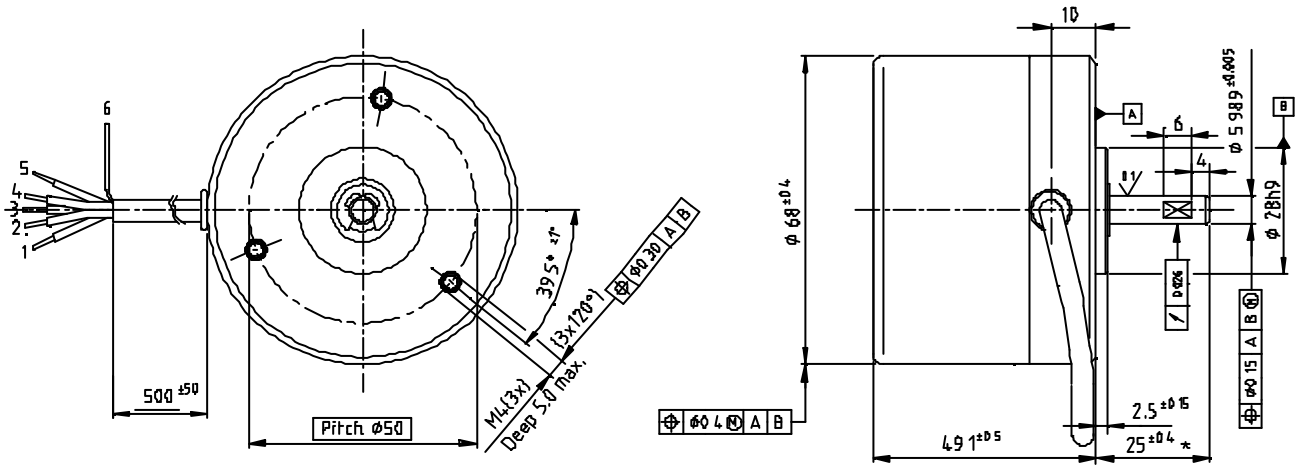
Electrical connection

Lead no.	Lead color	Function	Description
1	brown	FW / RV	Direction control input:"High"CW, "Low" CCW (shaftside) (do not leave this lead floating)
2	white	V in	Input voltage (setpoint) for speed loop Resulting speed approx. 1000 rpm/V V in > 6V : motor at full speed, speedloop off (open loop)
3	green	FG	Frequency generator output,36 ppr : R out = 4k? (approx)
4	black	GND	Motor return, ground (0V)
5	red	Vp	Motor supply voltage +24V (min.14V – max 30V)
6	bare	Shield	Shield for cable, connected to housing

Performance curve



Dimensional drawing



BL 58 EB Active Brake Brushless DC 35 Watt

ADINCO
ADVANCED INSTRUMENTS & COMPONENTS

Features:

- Active Brake
- Direction control input (forward / reverse)
- Frequency Generator output
- Adjustable speed loop
- Thermal motor protection (shutdown at 90^{0}C, restart at 80^{0}C)
- Long life (20.000 hours)

Options:

- Square mounting flange
- Shaft diameter, 7or 8 mm
- Speed loop with frequency input
- Protection class upto IP67DS

Product combinations:

- Gearboxes S64A, S69A
- Gearboxes P50A, P59A

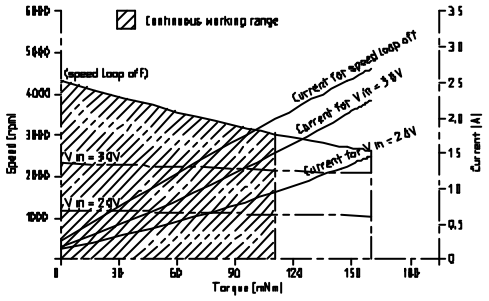
Motor data

Motor order number	Shaft length 25 mm	8204 045 07821	
	Shaft length 20 mm (for combination with gearbox)	8204 045 07831	
Nominal voltage		24	V
Nominal torque		110	mNm
No load speed (V_{in} >5V)		4330	rpm
No load current (V_{in} >5V)		280	mA
Nominal current limitation (V_{in}>5V)		3.4	A
Nominal output power		35	W
Operating temperature range		0 to 90	^{0}C
Thermal resistance from housing to ambient		3.7	K/W
Rotor inertia		120x10^{-6}	kgm^2
Mass of motor		550	G
Maximum radial load 20 mm from mounting front (no axial load towards flange)		40	N
Maximum axial load -towards flange (no radial load) -from flange		18 10	N N

PRELIMINARY SPECIFICATION

For thermal reasons it is advised to mount the motor on a heat conducting frame if high output power is desired.

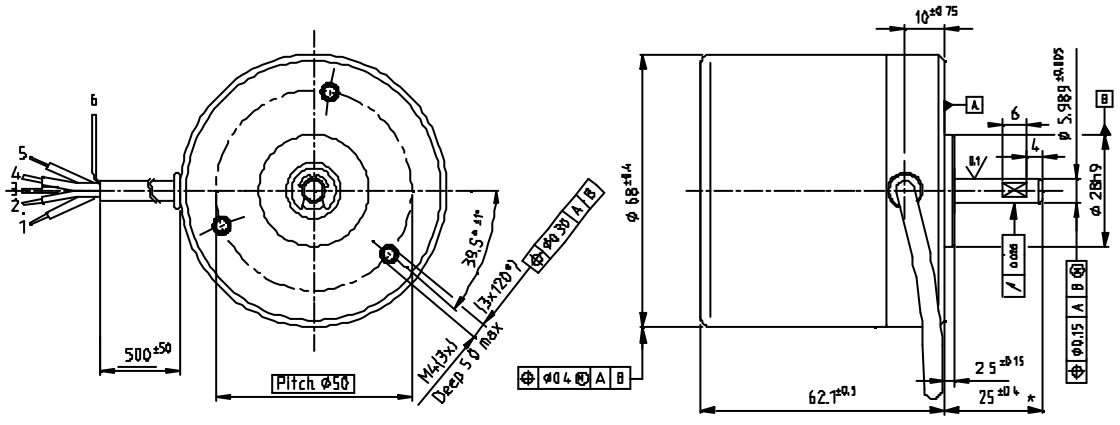
Performance curve



Electrical connection

Lead no.	Lead Color	Function	Description
1	Brown	FW/RV	Direction control input:"high" CW, "Low" CCW (shaftside) (Don't leave this lead floating!)
2	White	V in	Input Voltage for speed loop and enabling brake function 0 < V_{in} <0,5 V, Brake active 0,5 < V_{in} < 0,9V, Motor Disabled V_{in} > 0,9V, resulting speed approx. 1100 rpm/V
3	Green	FG	Frequency Generator output, 36ppr; R out=4k? (approx.)
4	Black	GND	Motor return, ground (0 V)
5	Red	VP	Motor supply voltage +24V (min. 14V- max 30V)
6	bare	shield	Shield for cable, connected to housing

Dimensional drawing



BL 58 EB Brushless DC motor 35-50 Watt

ADINCO
ADVANCED INSTRUMENTS & COMPONENTS

Features:

- Adjustable speed loop
- Direction control input (forward / reverse)
- Frequency Generator output
- (Speed sensing)
- Thermal motor protection (shutdown at 90^{0}C, restart at 80^{0}C)
- Long life (20.000 hours)

Options:

- Square mounting flange
- Shaft diameter, 7or 8 mm
- Speed loop with frequency input
- Protection class IP67DS

Product combinations:

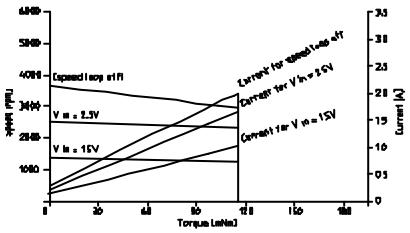
- Gearboxes S64A, S69A, P50A, P59A

Motor data

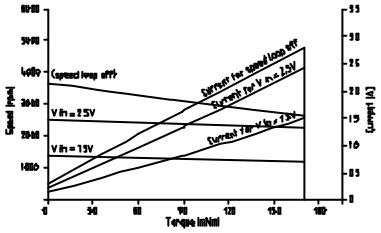
Motor order number					
	Shaft length 25 mm	4322 016 58001	4322 016 58021	4322 016 58011	
	Shaft length 20 mm (for combination with gearbox)	4322 016 58002	4322 016 58022	4322 016 58012	
Nominal voltage		24	24	24	V
Nominal speed		3000	2700	4100	rpm
Nominal torque		110	170	114	mNm
No load speed (V in>4V)		3650	3650	5050	rpm
No load current (V in >4V)		280	280	380	mA
Nominal current limitation (V in>4V)		2.0	3.0	3.1	A
Maximum output power		35	50	50	W
Operating temperature range		0 to 90	0 to 90	0 to 90	^{0}C
Thermal resistance from housing to ambient		3.7	3.7	3.7	K/W
Rotor inertia		120x10^{-6}	120x10^{-6}	120x10^{-6}	kgm^2
Mass of motor		550	550	550	G
Maximum radial load 20 mm from mounting front (no axial load towards flange)		40	40	40	N
Maximum axial load -towards flange (no radial load) -from flange		18 10	18 10	18 10	N N

For thermal reasons it is advised to mount the motor on a heat conducting frame if high output power is desired.

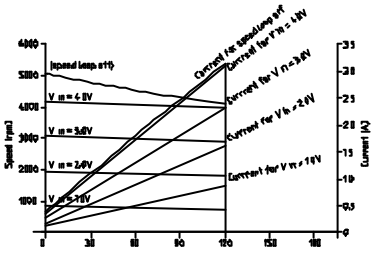
Performance curve 35 Watt version



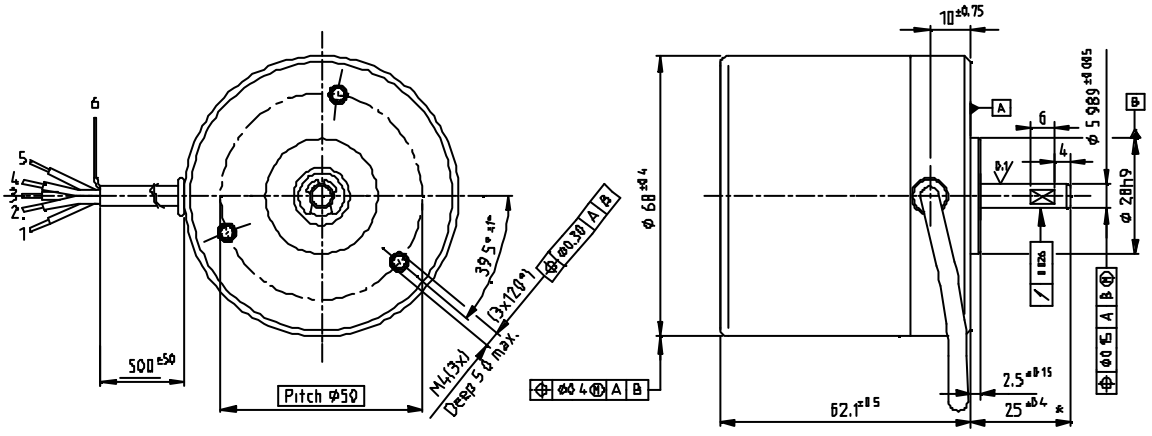
Performance curve 50 Watt high torque



Performance curve 50 Watt high speed



Dimensional drawing



BL 58 EB Brushless DC motor 35-50 Watt

Electrical connection

ADINCO
ADVANCED INSTRUMENTS & COMPONENTS

Lead no.	Lead colour	Function	Discription
1	Brown	FW/ RV	Direction control input : 'High' CW , 'Low' CCW (shaftside) (do not leave this lead floating)
2	White	V in	Input voltage (setpoint) for speed loop. Resulting speed approx. 1000 rpm/V V in> 4V : motor at full speed, speed loop off (open loop)
3	Green	FG	Frequency generator output, 36 ppr ; R out = 4 k? (approx.)
4	Black	GND	Motor return, ground (0 V)
5	Red	Vp	Motor supply voltage +24V (min. 14V – max. 30V)
6	bare	shield	Shield for cable and connected to motor housing

Electrical connection

		Minimum	Typ.	Maximum
Lead 1				
Input 'High'	V	4.1	5	
Input 'low'	V		0	1.9
Abs. max/ min. input	V			±30
Lead 2				
Abs. max/ min. input	V			±30
Lead 3				
Output 'high', not loaded	V	4.0	4.5	5.0
Output 'low' , not loaded	V	0	0.1	0.2

Dimensional drawing