DATI TECNICI
TECHNICAL DATA

serie / series **BL192**

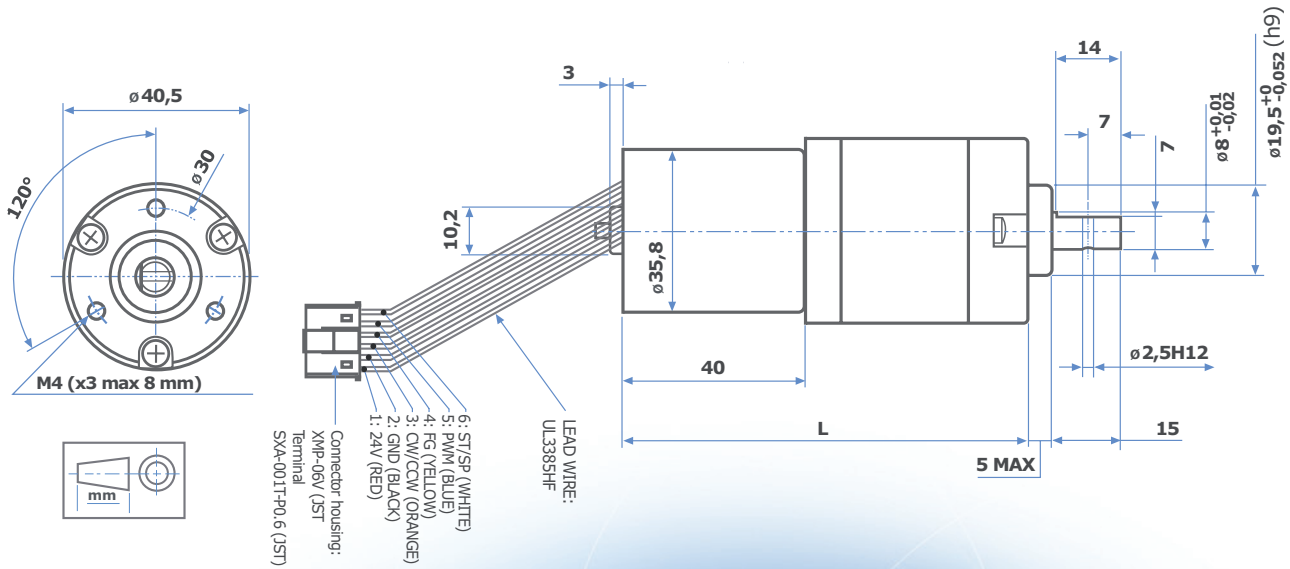
Motoriduttore Brushless con elettronica integrata.
Motore brushless 3 fasi 12 poli con 3 sensori di Hall.
Albero di uscita supportato da due cuscinetti a sfera.
Massimo carico radiale: 200N
(a 10mm dalla flangia di fissaggio)
Massimo carico assiale: 100N.
Temperatura di esercizio: -10 °C/+50 °C.
Peso approssimativo: 320/420g.

Brushless gear-motor with electronics on-board.
Brusless motor 3 phase 12 pole with 3 Hall sensors.
Outgoing shaft supported by two ball bearings.
Maximum radial shaft load: 200N
(10 mm from the fixing flange).
Maximum axial shaft load: 100N
Temperature working range: -10 °C/+50 °C
Approx weight: 320/420g

Valori tipici a temperatura ambiente +20° Tolleranza +/- 10%

Typical values at ambient temperature +20° Tolerance +/- 10%

TIPO / TYPE	TENSIONE NOMINALE / NOMINAL VOLTAGE	L	RAPPORTO :1 / RATIO TO:1	COPPIA NOMINALE / NOMINAL TORQUE	VELOCITÁ / SPEED		CORRENTE / CURRENT		POTENZA ASSORBITA CON COPPIA NOMINALE / INPUT POWER AT NOMINAL TORQUE
					SENZA CARICO / NO LOAD	CON COPPIA NOMINALE / AT NOMINAL TORQUE	SENZA CARICO / NO LOAD	CON COPPIA NOMINALE / AT NOMINAL TORQUE	
	v	mm		Ncm	rpm		mA		W
BL192 • 24 • 3	24	67,5	3,66	15	1360	880	<350	1150	27,6
BL192 • 24 • 5	24	67,5	5	20	1000	660	<350	1150	27,6
BL192 • 24 • 13	24	74,5	13,44	45	370	255	<350	1100	26,4
BL192 • 24 • 18	24	74,5	18,33	60	275	190	<350	1100	26,4
BL192 • 24 • 25	24	74,5	25	90	210	138	<350	1100	26,4
BL192 • 24 • 49	24	81,5	49,29	160	102	68	<350	1100	26,4
BL192 • 24 • 67	24	81,5	67,22	220	73	50	<350	1100	26,4
BL192 • 24 • 91	24	81,5	91,66	270	54	37	<350	1050	25,2
BL192 • 24 • 125	24	81,5	125	300	40	30	<350	950	22,8
BL192 • 24 • 180	24	88,5	180,75	220	29	24	<350	630	15,12
BL192 • 24 • 246	24	88,5	246,48	300	20	17	<350	670	16,08
BL192 • 24 • 336	24	88,5	336,11	300	15	13	<350	560	13,44
BL192 • 24 • 458	24	88,5	458,33	300	11	10	<350	530	12,72
BL192 • 24 • 625	24	88,5	625	300	8	7,5	<350	430	10,32



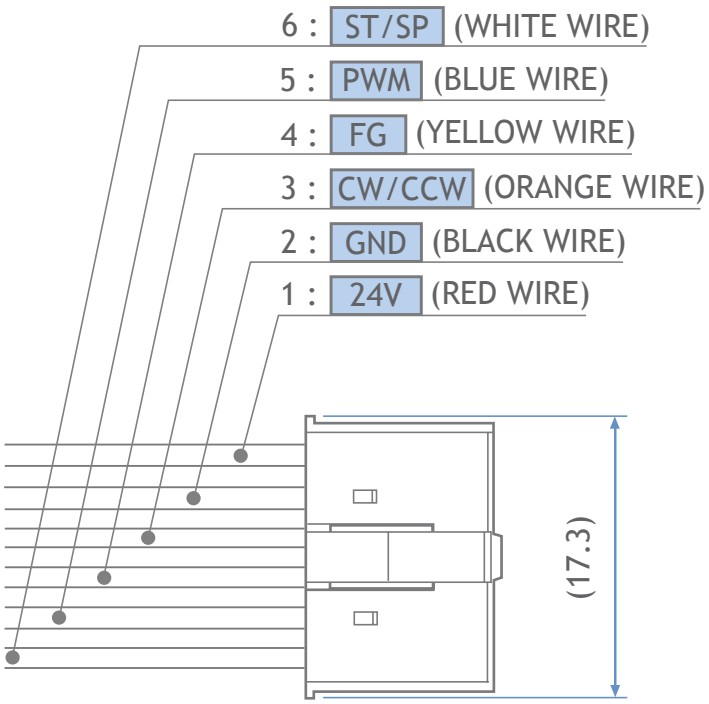
Brushless motor

for series **BL192**

BL192

Interface				
Pin No.	**Signal name**	**I/O**	**Specification**	**Note**
1	VM	IN	DC 24V +/- 10%	Power supply
2	GND	IN	Ground	
3	CW/CCW	IN		
	Input voltage range		0-5V	High CW Low CCW
	VIH		2.0V Min	
	VIL		1.0V Max	
4	FG	OUT		
	VOH		6V Max	You need to pull up for FG terminal so that the terminal is open drain output.
	VOL		0.6V Max	
	Max rating of FG sink current		3mA	
	Number of FG output pulse		6 Pulse/round	
5	PWM	IN		
	Imput voltage range		0-5V	High motor ON Low motor OFF
	VIH		2.5V Min	
	VIL		1.0V Max	
	Max PWM input frequency		40 kHz	Recommended between 15 to 25 kHz
6	STOP/START	IN		
	Imput voltage range		0-5V	High motor START Low motor STOP
	VIH		2.0V Min	
	VIL		1.0V Max	

You should connect a Schottky Barrier Diode between each signal line and and ground to prevent Ic from being damaged. We recommend to the connect 47uF capacitor between 5V to GND for protecting from filter actions by electrical noises. Do not change CW/CCW input until motor has stopped completely, if you change the CW/CCW signal during motor running, motor may have some damage or be destroyed.



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Ratings

N°	Item	Specification	Note
1	Rated voltage	DC 24V	
2	Min. operating voltage	DC 16V	
3	Man. operating voltage	DC 26.4V	
4	Type	3 phases 12 poles brushless motor with 3 hall sensor	
5	Rotating direction	CW/CCW	
6	Bearing type	Sleeve bearing	
7	Motor posture	Horizontal	
8	Motor mass	145g Typ.	

Electrical characteristics (temp. 20+/-5 °C, relative humidity 80% max)

N°	Item	Specification	Note
1	Dielectric strength	AC 600V 1 sec 1mA	Check between all shorted terminals and motor cover.
2	Insulation resistance	DC 500V 10MΩ Min	
3	No load current	0.36A Max	DC 24V
4	No load speed	5000 +/- 15% RPM	DC 24V

Temperature ratings

N°	Item	Specification	Note
1	Operating ambient conditions	Dry bulb temp: -10 +50 °C	Relative humidity: 0 - 90%
2	Max permissive coil temp.	115 °C	
3	Max permissive IC surface temp.	110 °C	
4	Max permissive FET surface temp.	110 °C	
5	Max Transistor Temperature	110 °C	
6	Max permissive lead wire temp.	105 °C	
7	Max permissive bearing temp.	90 °C	

Circuit protection

N°	Item	Specification	Note
1	Current limit	3A Typ.	Using PWM
2	Thermal shutdown	175 °C +/-30 °C	There is no guarantee of proper operation when thermal shutdown motor is reused.
3	Motor lock protection	2 sec Typ.	When the motor locks, the motor current is automatically cut off within the defined time. The motor restarts by power supply reset.

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