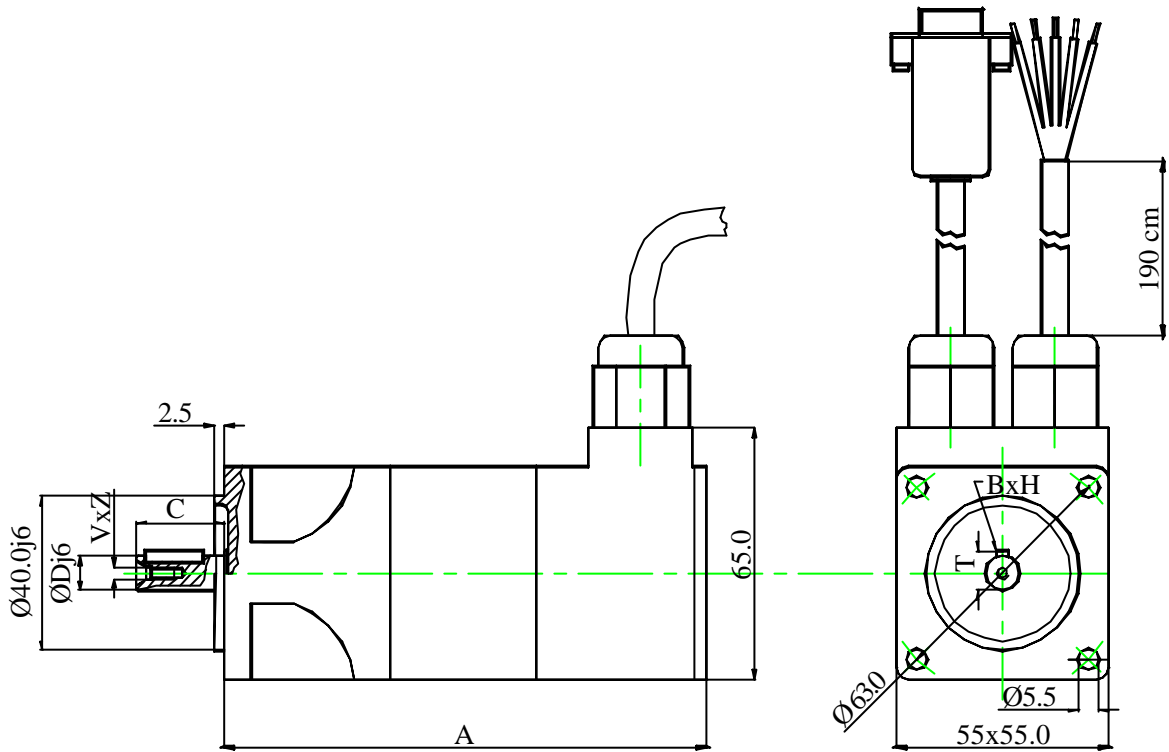




T E C H N O S O F T

BRUSHLESS MOTOR 370W, 230VAC WITH RESOLVER – XRB 55C FOR EVALUATION WITH MCK24x/24xx/28x or IMDM15/ISDM15



Part Number	A
RB 55/3	125
RB 55/6	160

Shaft	C	D	B x H	V x Z	T
Standard	23	9	3 x 3	M3 x 8	10.2
Oversize	23	11	4 x 4	M4 x 10	12.5

Dimensions mm
Drawing not to scale

Specifications

Description	Value	Units
Nominal stall torque	0.6	[Nm]
Nominal stall current	1.9	[A rms]
Peak torque	2.4	[Nm]
Peak current	7.6	[A rms]
Back-EMF (electromotive force) voltage at 1000 rpm (+/-5%)	20	[V / Krpm]
Torque constant (+/-5%)	0.27	[Nm/A]
Nominal speed	6000	[rpm]
Nominal power	377	[Watt]
Moment of inertia	0.251	Kg x cm ²
Terminal resistance at 25°C	3.1	[Ohm]
Terminal inductance	5	[mH]
Weight	2.1	[Kg]
Number of pole-pairs	4	[1]

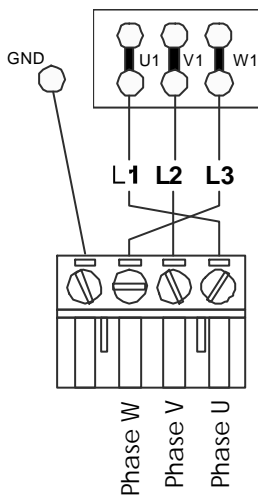


Motor Connections

Motor

Color	Description
Brown	Phase U
Green	Phase V
Gray	Phase W
Pink	PTC
White	PTC

Hookup



To connect to the ACPM750 power module (230VAC), use the shown D connection.

Connection table

Motor wire color	Meaning	ACPM750 Connector J11	IMDM15 / ISDM15 Connector J14
Brown	Phase U	Pin 3	Pin 5
Green	Phase V	Pin 2	Pin 6
Gray	Phase W	Pin 1	Pin 7
Motor case	Earth	Pin 4	Pin 8

Feedback

The motor is provided with a frameless resolver with a 4096 counts resolution. The following table summarizes the meaning of the signals from the resolver sensor.

Wire color	Function
Red	Reference/Excitation +
White	Cosine+ differential input
Green	Sinus+ differential input
Black	Ground

The resolver can be connected to the J5 and J6 connectors of the RDIM16 resolver interface module, or to the J1 connector of the ISDM15 intelligent power amplifier.

Wire color	DB9 connector	Function	J5 or J6 connector on RDIM16 v4.0	J1 connector on ISDM15
Red	Pin 1	Reference/Excitation +	J5, Pin 3	Pin 9
Black	Pin 2	Reference/Excitation -	J5, Pin 1	Pin 8
White	Pin 6	Cosine+ differential input	J6, pin 2	Pin 2
Black	Pin 5	Cosine- differential input	J6, pin 1	Pin 1
Green	Pin 4	Sinus+ differential input	J6, pin 4	Pin 4
Black	Pin 3	Sinus- differential input	J6, pin 5	Pin 3
	Pin 9	SHIELD	J5, pin 2; J6, pin 3	Pin 7



Frameless Resolver used on SYPMN00012.V2 – Delta motor

Specifications: (Subject to change without notice)

Resolver RE-15-1-A14

		Min.	Typ.	Max.	Units
Resolver coupling ratio	[U_{SIN}, U_{COS} divided by U_{EXC}]	0.45	0.5	0.55	-
Working frequency		5	5	5	KHz
		10	10	10	
Excitation amplitude		0		7	Vrms
Excitation input current	Working freq. = 5 kHz	0		58	mA
	Working freq. = 10 kHz	0		36	
Sin / Cos output impedance	Working freq. = 5 kHz		230		Ω
	Working freq. = 10 kHz		400		
Accuracy Absolute			$\pm 10'$		
Operating temperature		-55 °C		+155 °C	
Max. Permissible Speed				20000	rpm