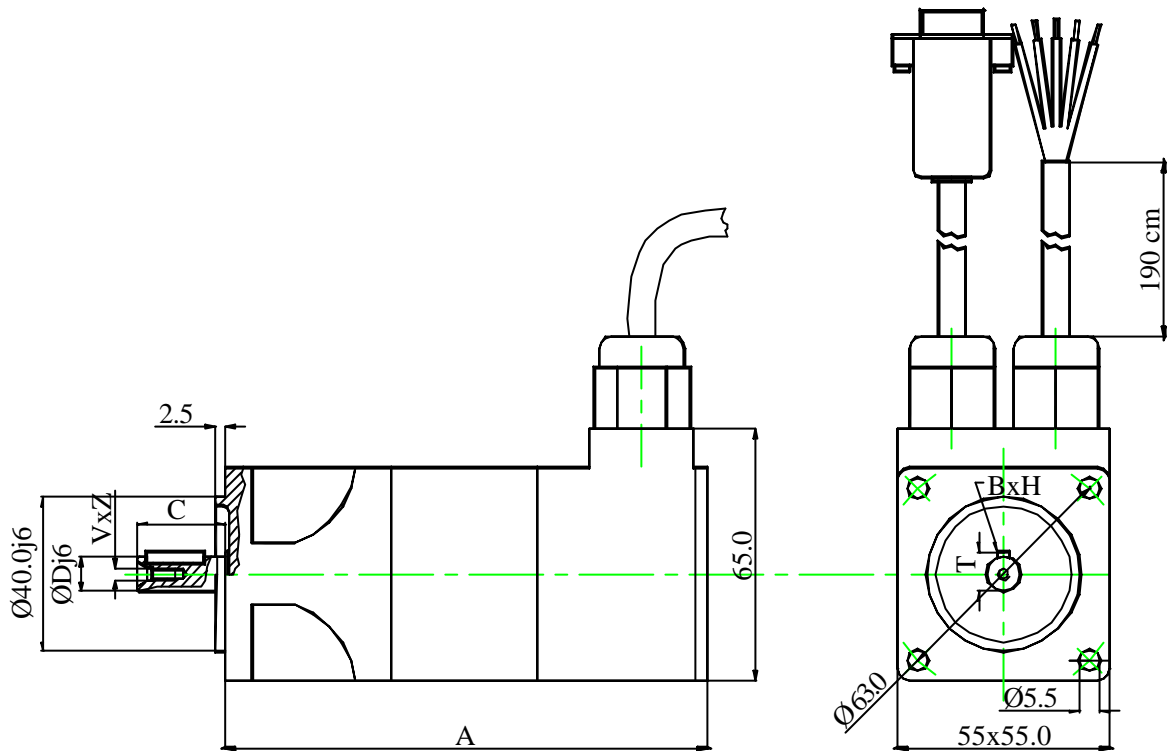




T E C H N O S O F T

Brushless MOTOR 370W, 230VAC with Encoder – 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

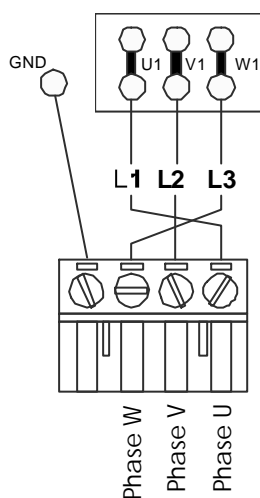
Description	Value	Units
Nominal stall torque	0.6	[Nm]
Nominal stall current	1.9	[A rms]
Peak torque	2.4	[Nm]
Peak current	7.6	[A rms]
Back-EMF (electro motive force) voltage at 1000 rpm (+/-5%)	20	[V / Krpm]
Torque constant (+/-5%)	0.27	[Nm/A]
Nominal speed	6000	[rpm]
Nominal power	377	[Watt]
Moment 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



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 500 lines incremental encoder with differential inputs and 3 digital Hall sensors. The following table summarizes the meaning of the signals from these sensors.

Wire Color	Name	Function
Red	+Vdc	+5Vdc supply for encoder and Hall sensors
Black	0 Volt (GND)	Ground
Green	A	A signal
Yellow	B	B signal
Blue	Z	Z (index) signal
Brown	/A	Complementary A signal
Orange	/B	Complementary B signal
White	/Z	Complementary Z signal
Gray	U	Hall sensor 1
Violet	V	Hall sensor 2
Gray / Pink	W	Hall sensor 3
Red / Blue	/U	Complementary Hall sensor 1
White / Green	/V	Complementary Hall sensor 2
Brown / Green	/W	Complementary Hall sensor 3



Encoder

Encoder - Type Eltra EF36K			
Resolution	lines	500	
Output type	channels	2, quadrature	
Supply voltage	V	5V +/- 5%	
Supply current	mA	150	
Output current	mA	15	

The motor feedback can be provided in two connectors' versions:

- **Encoder connector (5 positions)**

In this case, the encoder connector can be plugged into the J4 connector of the ACPM750 feedback connector, or into the J18 connector of the IMDM15 / ISDM15 intelligent power amplifier, as described in the following table:

Wire color	Meaning	J4 connector on ACPM750	J18 connector on IMDM15 / ISDM15
Green	Channel A	Pin 3	Pin 6
Yellow	Channel B	Pin 5	Pin 8
Blue	Index	Pin 2	--
Black	GND	Pin 1	Pin 1
Red	+5 VCC	Pin 4	Pin 2, Pin 4

- **Encoder connector (10 positions)**

In this case, the encoder connector can be plugged into the J3 connector of the ACPM750 feedback connector, or into the J18 connector of the IMDM15 / ISDM15 intelligent power amplifier, as described in the following table:

Wire color	Meaning	J3 connector on ACPM750	J18 connector on IMDM15 / ISDM15
Green	Channel A	Pin 6	Pin 6
Brown	Channel A-	Pin 5	Pin 5
Yellow	Channel B	Pin 8	Pin 8
Orange	Channel B-	Pin 7	Pin 7
Blue	Index	Pin 10	--
White	Index-	Pin 9	--
Black	GND	Pin 1	Pin 1
Red	+5 VCC	Pin 2, Pin 4	Pin 2, Pin 4

- **Hall sensors connections**

The Hall sensor leads can be connected to the screw terminals of the J10 connector of the ACPM750 inverter, or to the J10 connector of the IMDM15 / ISDM15 intelligent power amplifier, as described in the following table:

Wire color	Meaning	J10 connector on ACPM750	J10 connector on IMDM15 / ISDM15
Gray	U (Hall 1)	Pin 9	Pin 3
Violet	V (Hall 2)	Pin 10	Pin 4
Gray / Pink	W (Hall 3)	Pin 11	Pin 5
Black	GND	Pin 12	Pin 2
Red	+5 VCC	Pin 8	Pin 1