

Electric Motor Q&A



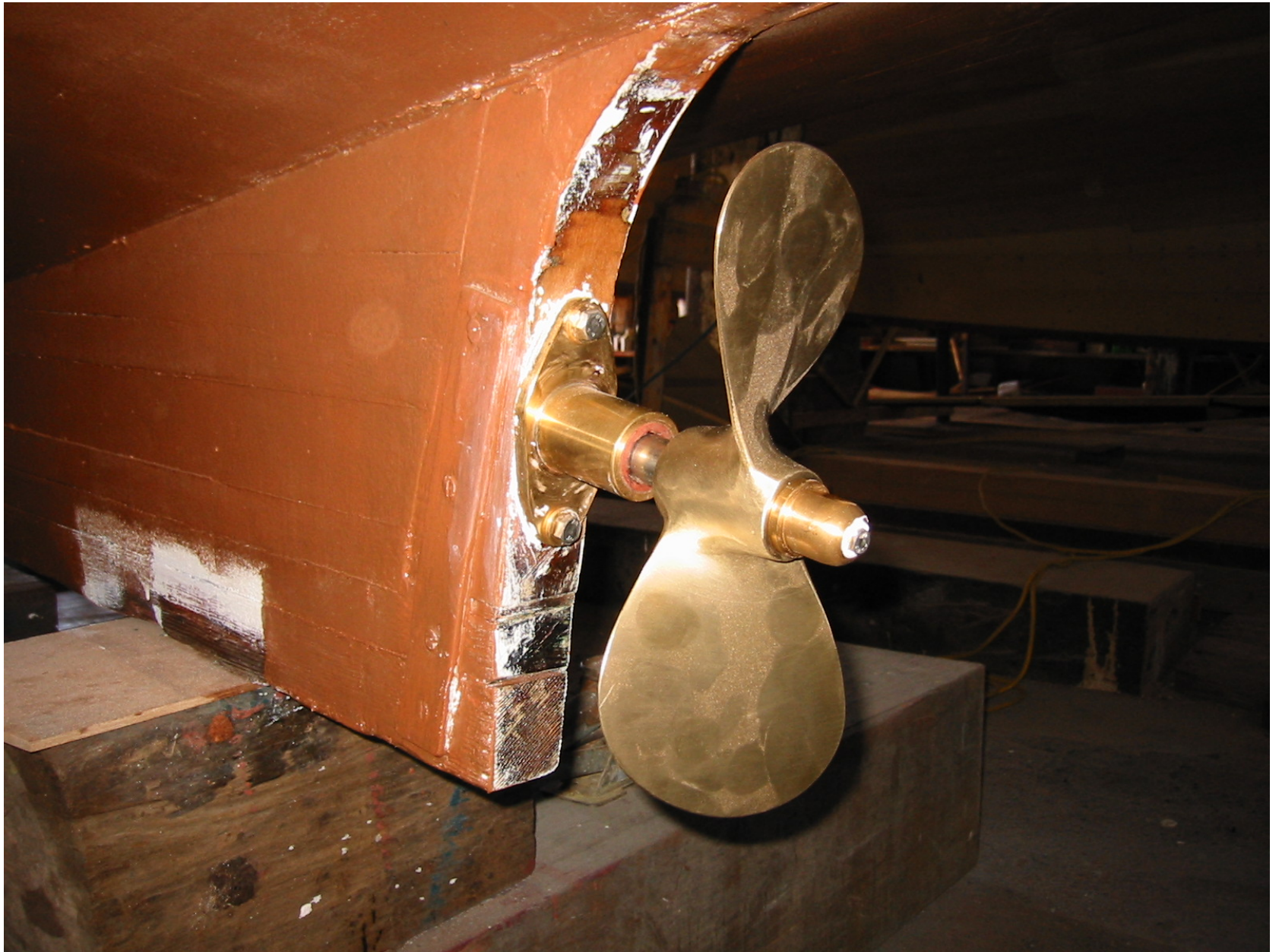
Cockpit with
motor box



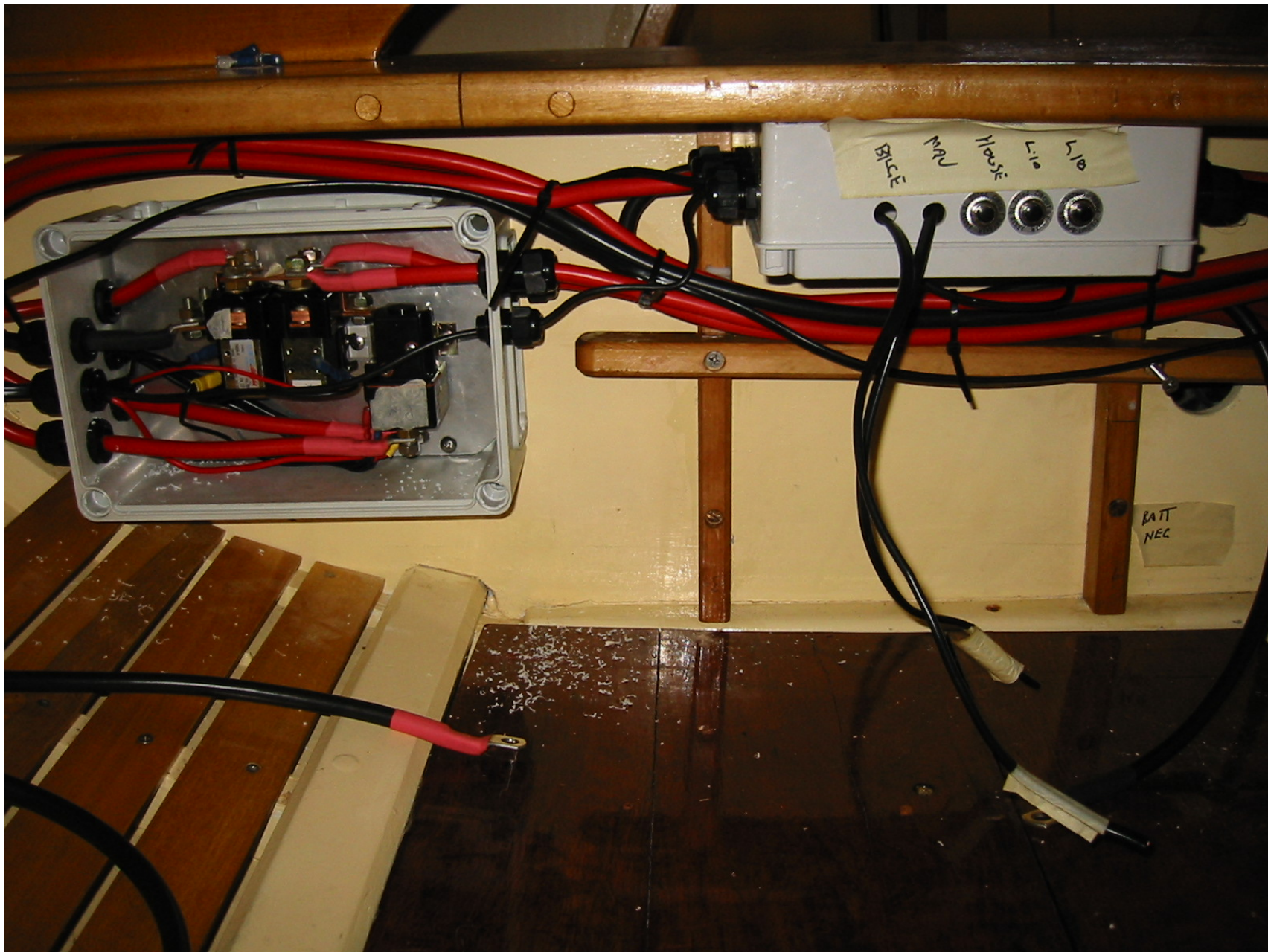
Motor and frame



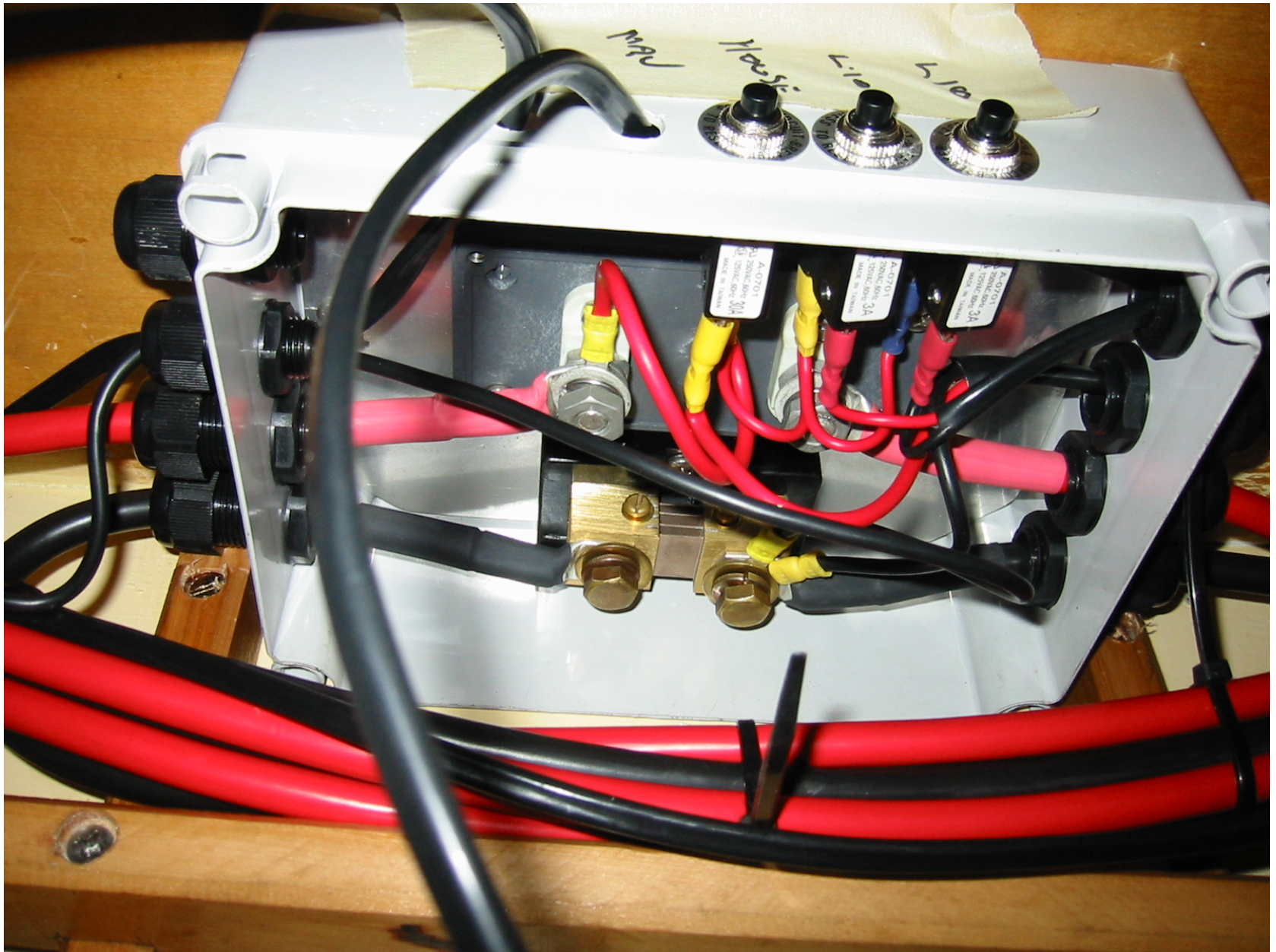
Motor and shaft



Propeller and shaft



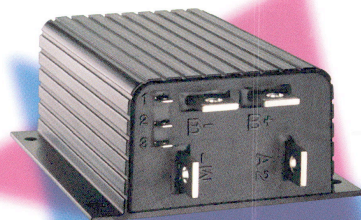
Cabling



Over current protection

MOSFET ELECTRONIC MOTOR SPEED CONTROLLERS

MODELS 1204/1205



AUSTRALIAN DISTRIBUTOR

BYLONG INDUSTRIES
PTY LTD

119 Killeaton Street,
St Ives 2075 NSW

PO Box 222, St Ives 2075 NSW

Telephone: (02) 9449 9222

Fax: (02) 9488 8822

ACN 002 258 086

DESCRIPTION

Curtis PMC Models 1204/1205 are power MOSFET electronic motor speed controllers designed to provide smooth, silent, efficient and cost effective speed, torque and braking control.

WARRANTY

One year from date of delivery.

CURTIS

Application

Curtis PMC MOSFET motor speed controllers are ideal for a variety of electric vehicle applications, including industrial trucks, personnel carriers, material handling vehicles and golf cars, etc.

Features:

- High frequency switching and ultra low voltage drops provide very high efficiency and silent operation. Costs, heatsinking requirements and motor and battery losses are reduced. Low end torque, range and battery life are increased.
- Environmental protection provided by a rugged anodized aluminum extrusion housing. Simple mounting and wiring with push-on type connectors for control signals. Plated solid copper busses used for all power connections.
- Thermal protection and compensation circuit provides constant current limit over operating range and under temperature and over temperature cutback. No sudden loss of power under any thermal conditions.
- No adjustments are required.
- Simple installation — Uses a two wire throttle potentiometer.
- Potentiometer fault protection circuitry disables controller if throttle wires become open.
- High pedal disable prevents controller operation if key is turned on while throttle is applied.
- Plug braking or free wheeling options.

Specifications:

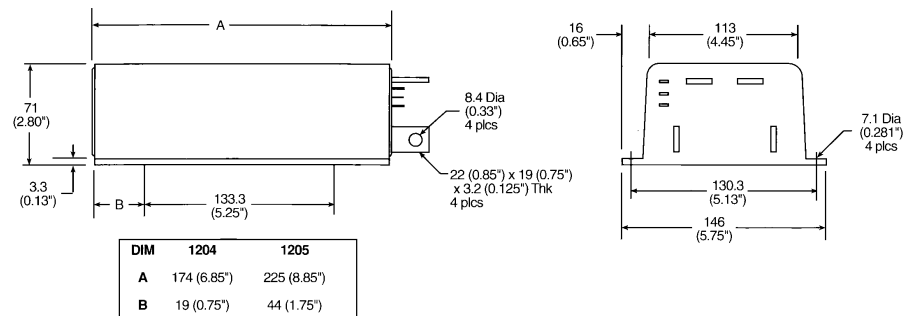
- Frequency of Operation: 15 kHz
- Standby Current: less than 20 mA
- Standard Throttle Input: 0-5k ohms $\pm 10\%$ (others available)
- Weight: 1204: 1.8 kg (4 lbs);
1205: 2.7 kg (6 lbs)
- Full Power Operating Temperature Range: -25°C to 75°C (controller temperature)

CURTIS INSTRUMENTS, INC. • 200 KISCO AVENUE • MT. KISCO, NY 10549 • TEL (914) 666-2971 • FAX (914) 666-2188
CURTIS PMC • 6591 SIERRA LANE • DUBLIN, CA 94568 • (510) 828-5001 • FAX (510) 833-8777
CURTIS INSTRUMENTS, (UK) LTD. • 51 GRAFTON STREET • NORTHAMPTON NN1 2NT, ENGLAND • TEL (1604) 29735 • FAX (1604) 29876

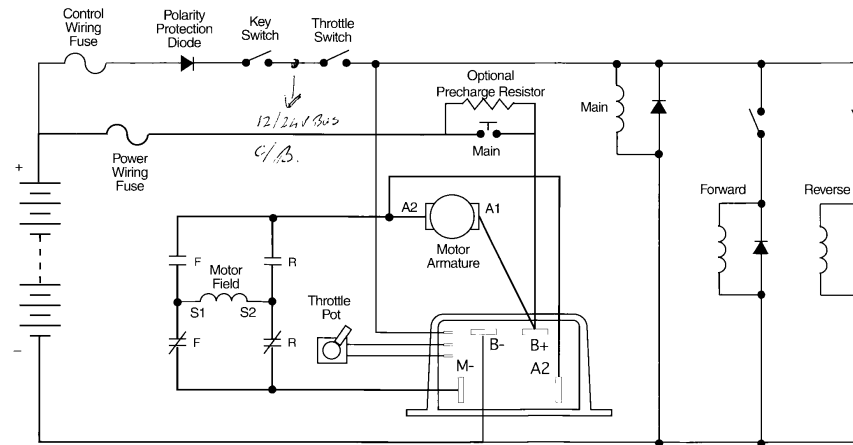
Motor controller

CURTIS PMC MODELS	VOLTAGE (volts)	CURRENT (amps)	2 MIN RATING (amps)	5 MIN RATING (amps)	1 HOUR RATING (amps)	VOLTAGE DROP @ 100A	UNDERVOILT CUTBACK (volts)
1204-0xx	24-36	275	275	200	125	.35	16
1204-1xx	24-36	175	175	130	75	.50	16
1204-2xx	24-36	275	275	200	125	.35	16
1204-3xx	24-36	175	175	130	75	.50	16
1204-4xx	36-48	275	275	200	125	.35	21
1204-5xx	36-48	175	175	130	75	.50	21
1204-6xx	12	275	275	200	125	.35	9
1204-7xx	12	175	175	130	75	.50	9
1205-1xx	24-36	400	400	275	175	.25	16
1205-2xx	36-48	350	350	250	150	.30	21
1205-3xx	12	400	400	275	175	.25	9

Dimensions: mm (inches)

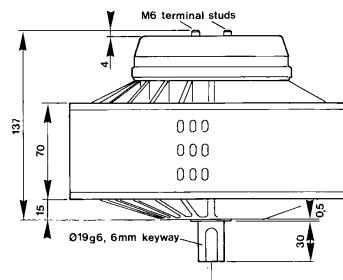
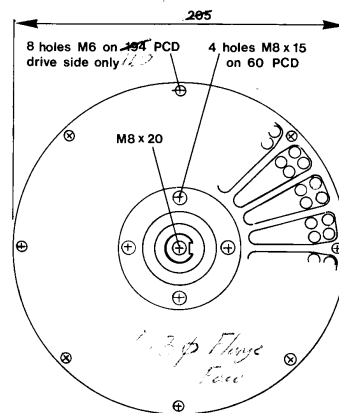


Typical Wiring Diagram:



Specifications subject to change without notice

50036 REV A 7/97



PERFORMANCE CURVES

Curves are available for all voltages. Please contact your local distributor for further details.

CURRENT RATING

Nominal 200 amps at the maximum rated voltage.

SPEED RANGE

All motors are rated 60 rpm per volt, maximum speed limit is 4000. Applications requiring low maintenance and long-term reliability should not exceed 48V nominal.

PATENTS

European 0230759; USA 4823039; Japan 61-304083 (pending); others pending.

For further information and sales details please contact:

Manufacturing

Lemco Ltd., Unit 8, Heath Close, Heathpark Ind. Est., Honiton, Devon, England EX14 8SE.

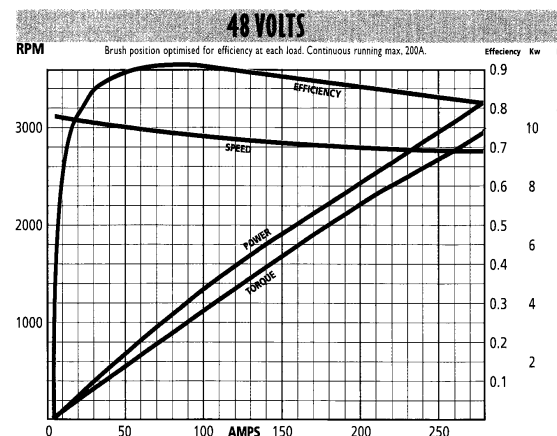
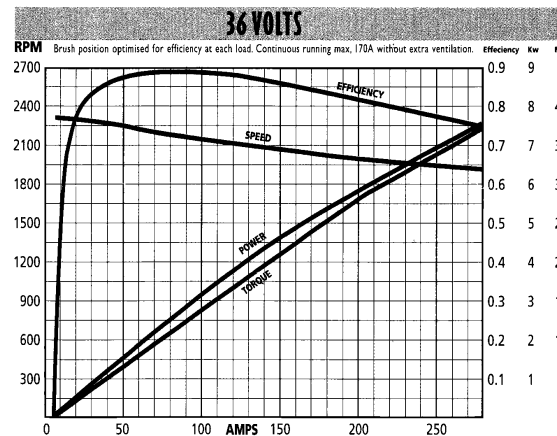
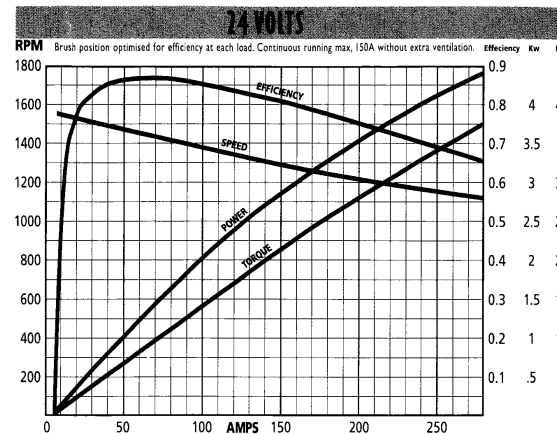
Tel: +44 (0) 1404 44132

Fax: +44 (0) 1404 47050

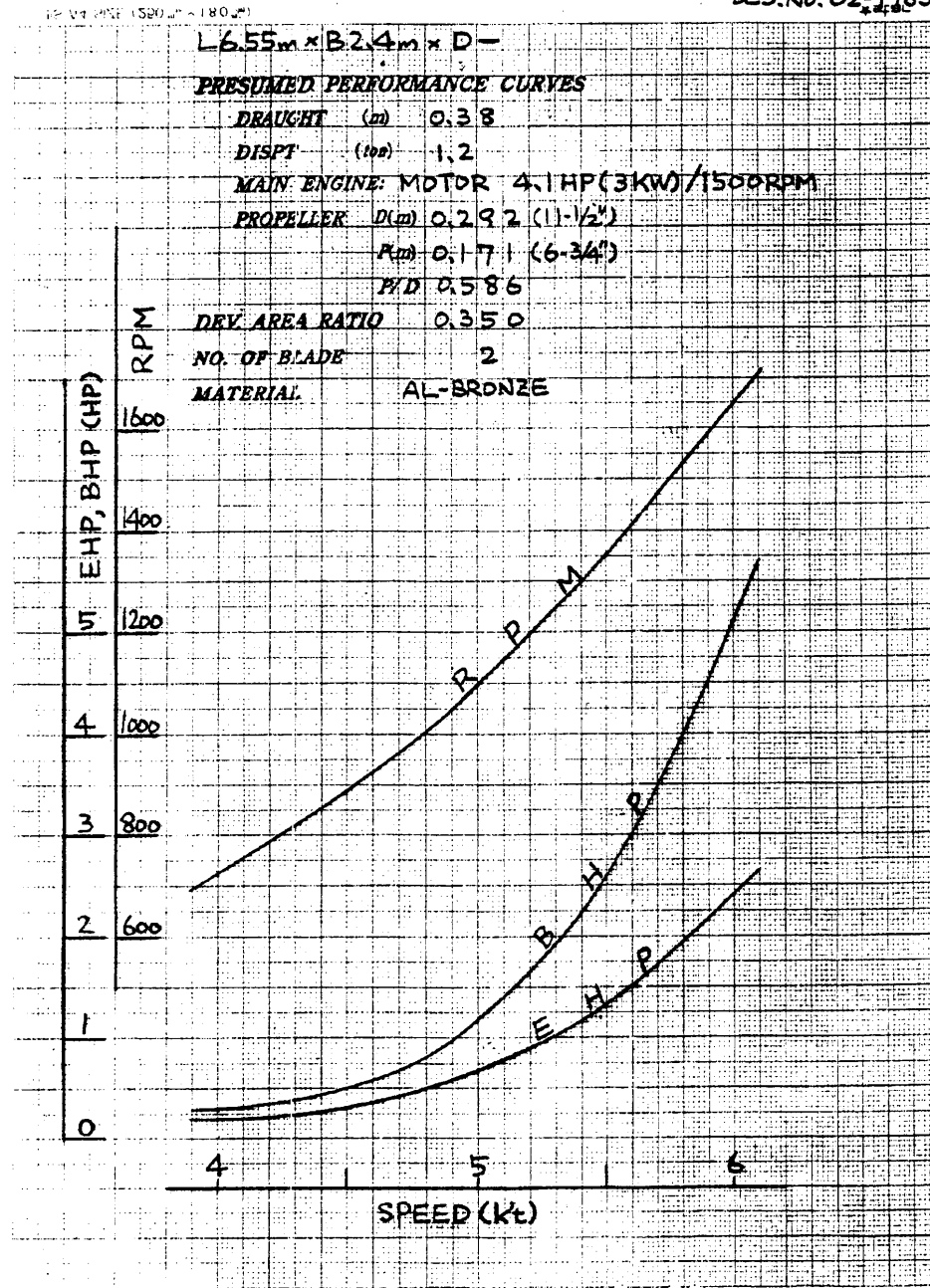
Registered in England 3288517

Distributors

www.lemco Ltd. com



DES.No. 02-1785A



Propeller Curves

Pier 21 to Rous Head	2.25	sea miles
Rous Head to Blackwall Reach	3.75	sea miles
Net allowance for 2 knot ebb tide	1.75	sea miles
Total distance	7.75	sea miles
Time taken	2.50	hours
Energy used	60.00	AH
	1440.00	Watt-hours
Average Speed	3.10	knot
Average Current from Battery	24.00	Amp
Average Power	576.00	Watts
	0.75	HP
Battery capacity	140.00	AH
Range on full battery charge 100AH	12.92	sea miles
	4.17	hours

Prop and motor performance curves