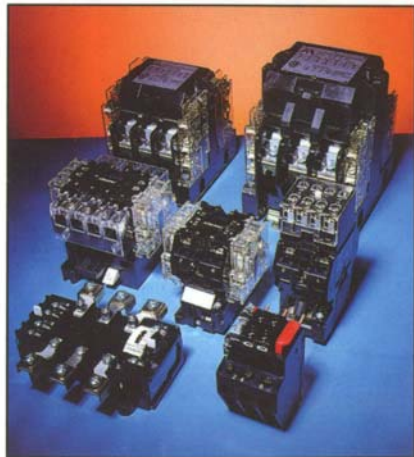
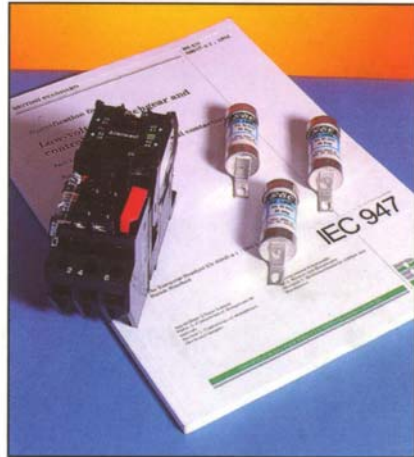


# POWER UNDER CONTROL


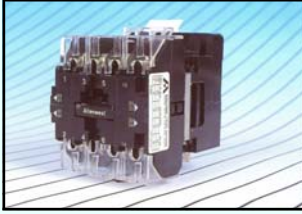

Whippendell Marine

STANDARD PRODUCTS



**CONTACTOR  
SELECTION  
GUIDE**

# Westmaster Contactors Selection Guide

				
Contactor		UA11	UA22	U030
I th open	A	32	60	70
AC1	A	25	55	65
AC2	A	22	44	60
AC 3 DUTY	220V KW	5.9	12.5	17
		A	22	44
	415V KW	11	22	30
		A	22	44
	440V KW	12.5	26	35
		A	22	44
550V KW	9.5	15	27	
	A	14.5	20	37
AC4 DUTY	415V KW	5.5	8.0	16
	*Note 1 A	11	15	30
	440V KW	6	8.5	17
	A	11.5	15	30
AC5a (Lamp)	A	19	39	54
AC5b (Lamp)	A	18.0	35	48
AC6b (Capacitor) A KVA <sub>r</sub> @ 415/440V		16.0	27	39
		11.5	19.3	28
Coil (Inrush)	VA	80	100	170
Coil (Sealed)	VA	12	12	24
Mechanical Life Million Operations		10	10	10
Max. Aux. Contacts		6	9	8
Short Cct Max Fuse 32-50kA, Type 2 *Note 2		50	80	125
Operating Time mS Energise		8—14	8-14	14-27
Operating Time mS De-energise		7—10	7-10	5-15

\*Note 1 415V ratings are shown as the contactors max AC3 ratings. The motor KW ratings have been rounded down to the nearest metric frame size.

\*Note 2 Short Circuit Co-ordination—max fuse ratings for Type 2 pass at 32-50kA prospective current.

# Westmaster Contactors Selection Guide



U055	U090	U200	U400
130	200	400	730
120	180	380	700
105	170	330	650
30	50	100	200
101	168	325	626
55	90	184	400
105	165	325	646
65	100	200	420
105	162	321	646
37	90	200	400
52	117	260	510
33	59	110	245
60	105	200	425
35	60	125	260
60	105	200	425
95	153	300	580
84	136	264	520
63	110	215	350
45	78	155	255
245	700	1500	3000
22	140	250	420
10	5	5	3
8	8	8	8
200	315	450	800
16-32	35-50	55-95	40-70
6-17	17-23	16-20	18-25

## NOTES

1. Rating are valid over a frequency range of 40-60 Hz, for other frequencies consult the sales office.
2. Rated insulation voltage (Ui) is 660V for all devices.
3. Lamp switching : AC5a (IEC 947) - Discharge Lamps, AC5b (IEC 947) - Incandescent Lamps.
4. Capacitor switching AC6b (IEC947) : Ratings listed are for prospective current of 20kA at the capacitor installation. For other values please contact the sales office.
5. Coil consumption is listed in apparent power (VA). To determine the current at any particular voltage use the following formula :  $I = VA/V$

# Westmaster Contactors

## Derating Factors

The ratings tabulated in this catalogue are applicable to contactors operating in surrounding air temperature between -25°C and +60°C.

For surrounding air temperature above 60°C (up to a maximum of 80°C) current ratings should be decreased by 1% per degree C.

**Note** - Surrounding air temperature is that surrounding the contactor, not the enclosure.

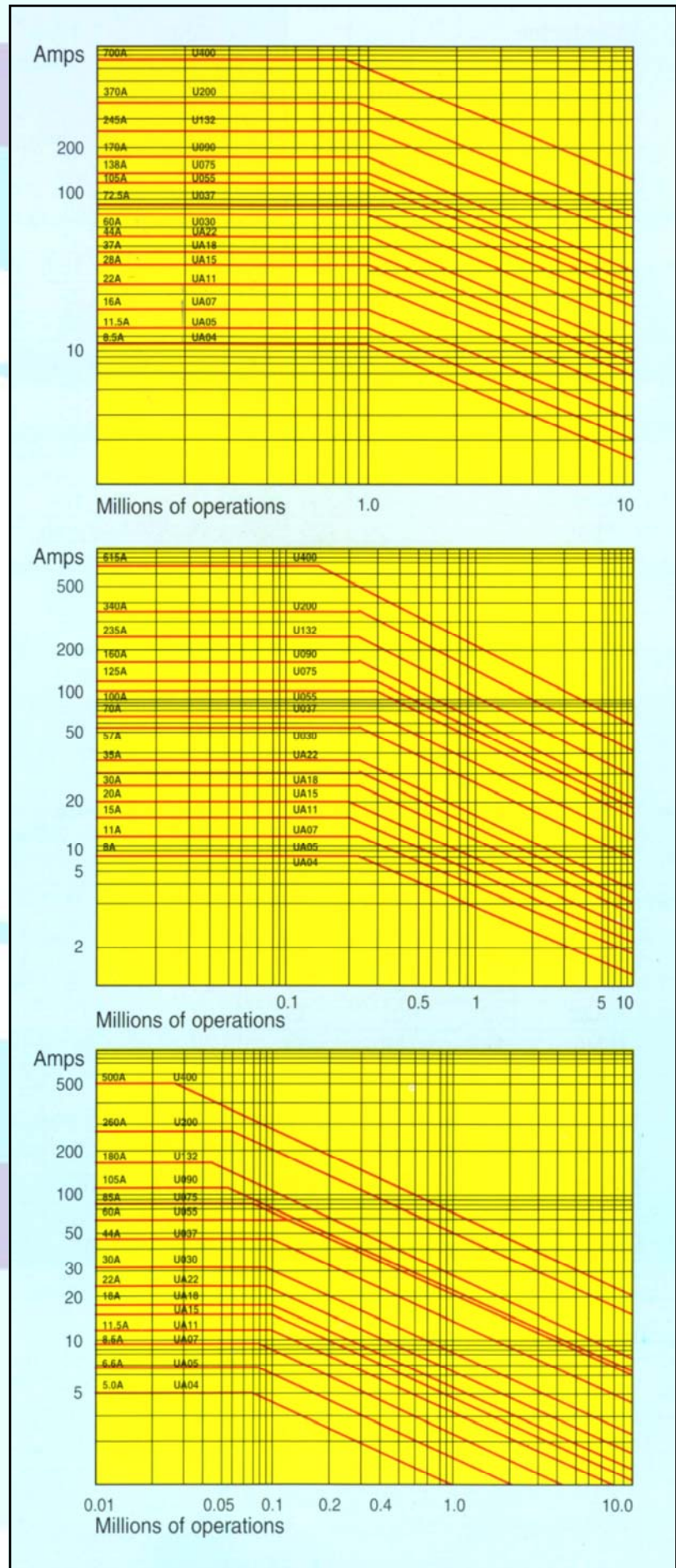
Maximum altitude (without derating)  
2000M

### 100% AC3 DUTY

### 90% AC3, 10% AC4 DUTY

### 100% AC4 DUTY

## ELECTRICAL LIFE CHARACTERISTICS



# Westmaster Contactors

## DEFINITIONS

**Utilisation Categories.** Utilisation categories indicate the type of load to be switched. It is important to understand these categories and ensure that the correct category is specified when selecting contactors. The utilisation categories appropriate to the majority of motor applications are :

UTILISATION CATEGORY	Multiples of FLC Normal Operation	
	Make	Break
<b>AC1</b> Non inductive, slightly inductive or resistive loads.	1	1
<b>AC2</b> Starting or plugging of slip ring motors.	2.5	2.5
<b>AC3</b> Starting or switching off during running of squirrel cage motors.	6	1
<b>AC4</b> Starting, inching or switching off during running of squirrel cage motors.	6	6

**Rated Operational Voltage ( $U_e$ ).** These are values of voltage at which the contactor is capable of switching the associated values of rated operational current. They may not be greater than the rated insulation voltage except in the case of rotor resistance switching contactors.

**Rated Insulation Voltage ( $U_i$ ).** This is the value of voltage assigned to the contactor which determines the required creepage, clearance, dielectric and impulse voltage test levels necessary.

**Rated Thermal Current ( $I_{th}$ ).** Values of thermal rated current may be given unenclosed and/or enclosed. These values are determined by testing to the requirements of IEC947 and BS EN 60947 such that, under the test conditions specified, temperature rise limits are not exceeded. The tests are conducted until thermal equilibrium is reached or for a minimum of 8 hours.

**Rated Operational Current ( $I_e$ ).** The current value that a contactor will operate at taking into account the supply voltage, intermittent duty and utilisation category. The maximum operational current may not exceed the thermal rated current.

**Mechanical Life.** The number of no load operations that can be made before it is necessary to replace any part.

**Contact Life (Electrical Life).** The number of on load operations performed at a given load without any repair or replacement of contacts.

**Short Circuit Coordination.** In the event of a short circuit on the load side of a contactor (or starter) the heavy current resulting could completely destroy the device and possibly cause danger to personnel. By including a correctly rated protective device i.e. an HRC fuse or moulded case circuit breaker, the damage can be limited to one of two categories. The permissible damage is briefly summarised below :

**Type 1** All internal parts of the starter may have to be replaced. The case or enclosure must not be damaged, or become live during the short circuit.

**Type 2** Damage is limited to welded contacts which must be separable.

When test in accordance with IEC947 and BS EN 60947

# Whippendell Marine



## STANDARD PRODUCTS

### ALL SALES ENQUIRIES

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