

**HIGH VOLTAGE WARNING**

Dangerous voltages are present within the power supply and isolation transformers should be used between rails and power supply if work is to be carried out with the safety covers removed.

**1. IMPORTANT SAFETY INSTRUCTIONS**

The OMEGA 400 range is designed for use within other equipment or enclosures which restrict access to authorised competent personnel only. For safe installation and operation of this product carefully follow the instructions below:

- The unit covers are designed only to protect skilled personnel from hazards. They must not be used as part of the external covers of any equipment where they may be accessible to operators, since, under full load conditions, part or parts of the unit chassis may reach temperatures in excess of those considered safe for operator access.
- All servicing, repair and testing of these products must be carried out by competent personnel who are conversant with the particular hazards of AC line operated equipment, and with the particular dangers of switched mode power supplies.
- AFTER DISCONNECTING THE AC SOURCE, ALLOW 5 MINUTES BEFORE TOUCHING THE UNIT TO ALLOW CAPACITORS WITHIN THE UNIT TO DISCHARGE.
- BABT CONTROLLED UNITS.

For units carrying a BABT logo, the following instructions must be obeyed:

- The apparatus must be installed in an enclosure such that:
  - Any electrical connections to or within the relevant terminal equipment which are not contained within a restricted access location as defined in BS EN41003:1991 Clause 3.5 shall either be insulated or connected to protective earth.
  - Any electrical connections to or within the relevant terminal equipment shall either be installed, connected to protective earth, or shall have a minimum of 1.6mm creepage distance and 1.0mm clearance from each conductive part of the enclosure other than parts connected to protective earth.
  - Conductive parts of the enclosure, other than those connected to protective earth, shall have a minimum of 5mm creepage distance and 4mm clearance from any parts conductively connected to an excessive voltage as defined in BS EN41003:1991 Clause 3.3.

- A protective earth must be provided for safety in accordance with BS6701:Part 1:1990:Clause 6.10 (which refers to the IEE Wiring Regulations).

**WARNING:** It is essential that the earth of this product be securely connected to earth (hard-wired) by the end user. **PREVENTION OF ACCESS BY THE USER:** This apparatus is intended to be accessible to authorised personnel only. Ensure that user access to this product, when installed in a host equipment, complies with BS EN41003:1991. Failure to do this will invalidate the BABT approval given to this apparatus.

- WARNING:** All outputs and the following marked ports where fitted / used are TNV circuits normally operating within the limits of SELV circuits, as defined in EN60950 Clause 2.3. As such, all these outputs and ports must only be connected to TNV circuits complying with the requirements of Clause 3.4 of BS EN41003 1991. Other interconnections will invalidate any approval given to this apparatus.

MF-MAINS FAIL SIGNAL-PINS 1 AND 2 - X OPTION CONNECTOR. INH-INHIBIT CONTROL-PINS 3 AND 4 - X OPTION CONNECTOR. PORTS 1,2,3,4 - Y OPTION CONNECTOR.

**e. EARTH TERMINAL MARKING**

**IMPORTANT:** If in the end use equipment the incoming mains cable earth wire connects directly to the "GND" connection on the Omega unit, without being interrupted or junctioned on its way to that connection, then this connection forms the main protective earth of the system, and to comply with IEC950, EN60950, UL1950, BS7002, CSA22.2 No.234, IEC601-1, EN60601-1, BS5724 Part 1, EN61010-1, and IEC1010-1 requirements then this terminal must be marked with:



as defined in IEC417 No.5019a. The customer should therefore affix an adhesive label which will pass the 15 second rub test (IEC950, EN60950, UL1950, BS7002, CSA22.2 No.234 Clause 1.7.15, EN61010-1, IEC1010-1 Clause 5.3 and IEC601-1, EN60601-1 and BS5724 Part 1, Clause 6.12) showing the above symbol adjacent to the earth connection. This symbol must only be used at the first interruption/connection of the incoming earth wire.

**f. HEALTH AND SAFETY AT WORK ACT**

Section 6 of the Health and Safety at Work Act requires that manufacturers have an obligation to protect Service Engineers as well as Users. In order to comply with this legal requirement, customers and OEM's must fit a label to these products which will be clearly visible to Service Personnel accessing the overall equipment, and which legibly warns that surfaces of these products may be hot and must not be touched when the products are in operation.


**g. RECEIPT AND UNPACKING**

On receipt, a unit should be unpacked carefully and checked for transit damage. If damage has occurred, do not apply power or install the unit - seek specialist advice. If an electrical test is carried out on the unit prior to installation, then this must be carried out by a qualified person familiar with AC powered equipment and having the specialised knowledge required of the hazards associated with switched mode power supplies. This is particularly essential if the unit covers are removed exposing many devices operating at line voltage, and some operating at peak voltages in excess of 700volts.

**h. MOUNTING REQUIREMENTS AND COOLING**

**WARNING:** DO NOT EXCEED THE MAXIMUM SCREW PENETRATION DEPTH OF 5MM. These units possess a fan and can be mounted in any orientation provided that the fan air intake and air outlet slots are not impeded.

**i. PRODUCTS COMPLYING WITH IEC 601-1, EN60601-1, AND BS5724 PART 1** (Denoted by the marking of (iii) below)

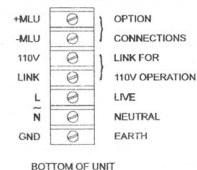
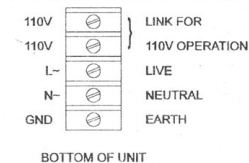
- Units conforming with these medical standards are type approved for an input voltage as follows: Nominal 100-118VAC/200-230VAC. Frequency range 47-63Hz.
- These products are designed for continuous operation within an overall enclosure complying with Clause 16 of IEC601-1, EN60601-1, and BS5724 Pt1, and must be mounted such that access to the mains terminals is restricted.
- These products are classed as Class 1, Type B equipment according to IEC601-1, and EN60601-1, and BS5724 Pt 1. Type B equipment is indicated by the marking of IEC878-02-02, i.e. .
- These products are NOT suitable for use in the presence of flammable anaesthetic mixtures with air or with oxygen or with nitrous oxide.
- These products are classed as ordinary equipment according to IEC601-1, EN60601-1, and BS5724 Pt1, and hence NOT protected against the ingress of water. Storage, transport, and use of such products is therefore restricted to a non-condensing environment.
- These products contain NO user serviceable parts and must therefore be returned to the manufacturer for repairs.
- Connect only apparatus complying with IEC601-1, EN60601-1, and BS5724 Pt1 to the signal ports.
- Except for permanently installed equipment as defined in Clause 57.6 of IEC601-1, EN60601-1, and BS5724 Pt1, the overall equipment in which these products are installed must have double pole fusing on the input mains supply of DC supply as appropriate. The products themselves have single pole fusing in the live line or positive DC line as appropriate.
- For BP and DP modules only, to comply with requirements of IEC601-1, EN601-1, and BS5724PT, it is not possible to earth either output pin.  
N.B Except for input voltage details in (i) above, refer to sections 4.2 and 4.4 for approval limitations.

**j. PRODUCTS COMPLYING WITH IEC1010-1 AND EN61010-1**

- Any parts which are required to be examined or replaced must be examined or supplied by Coutant Lambda Ltd or their authorised agents.
- If this product is used in a manner not specified within this handbook or by Coutant Lambda Ltd then the protection provided by or within this product may be impaired.

**2. INPUTS****2.1 INPUT CONNECTIONS**

The input terminal block is located on the input pcb, vertically mounted adjacent to the fan. It is accessible by removing the terminal cover at the converter end of the unit, which is adjacent to the shock hazard symbol. This connector has

**FOR STANDARD OMEGA 400****FOR OMEGA 400J (LATER VERSION)**

This connector employs 6-32 screws with 8.25mm spacing between adjacent screw centres, and a screw head diameter 6.6mm. Connections to this block should be made using correct coloured mains flex i.e. Brown for Live, Blue for Neutral, and Green/Yellow striped for Earth.

**IMPORTANT NOTE:** The input connectors for these products are not suitable for connection directly to external primary power supply connectors. In accordance with Clause 3.3.6 of BS7002, EN60950, UL1950, CSA22.2 No.234. Customers should therefore take account of this clause in the end equipment by use of a suitable connector, or using terminals in compliance with Clause 3.3.6.

The symbol ~ means A.C. (Alternating Current).

**2.2 INPUT VOLTAGE SELECTION AND FUSES**

**IMPORTANT NOTE:** Service Engineers should note that a common input filter pcb is used on the 200W and 400W Omega products, and the fuse marking states "400W F/M10AH 250V, 200W F/M5AH 250V", or "400W F/M12.5AH 250V, 200W F/M5AH 250V". Omega 200W and 400W units can be fitted with a fast acting or a medium time lag fuse, but medium time lag is preferred.

The input voltage selection will be factory preset to operate from 230V AC nominal, unless otherwise specified on your order. To change this to operate from 115V AC nominal input, remove the terminal cover, and connect a link of 20swg tinned copper wire or the equivalent to the terminals marked "LINK FOR 110V OPERATION" as shown in 2.1. above.

For automatic input voltage ranging use the W option. OMEGA 400 10A (12.5A on later versions) FAST ACTING OR MEDIUM TIME LAG HBC FUSE - 5 x 20mm. **NOTE:** HBC = HIGH BREAKING CAPACITY (1500A), LBC = LOW BREAKING CAPACITY (A). **IMPORTANT:** REPLACE FUSE WITH SAME TYPE AND RATING AS THAT FITTED.

3. **OUTPUTS**

3.1 **OUTPUT VOLTAGE ADJUSTMENT AND REMOTE SENSE**

All output modules have voltage adjustment by means of a potentiometer accessible through a hole in the module front panel. Overvoltage Protection is provided, refer to manufacturer instruction manuals for details. To compensate for voltage drops up to 0.25V per line in the output leads the links connecting + output to + sense and - output to - sense can be removed, and the sensing terminals connected directly to the load with separate leads. The correct output voltage will then be regulated at the load. Remote sensing is available on all single output modules.

**NOTES:**

- a. It is always prudent to use separate twisted pairs for output power and remote sense wiring.
- b. Route the sensing leads to prevent pick-up from motors etc.
- c. Never disconnect the output power rail with the sensing still connected to the load. This may burn out the internal resistors connected between power and sensing Terminals.

**ADJUSTMENT AND DERATING**

The Omega 400 series is designed to provide a maximum output power of 400W at nominal output voltages. If the outputs are adjusted below 90% of nominal then the rules listed below must be followed:

- a. Calculate user power for each module (volts x amps).
- b. Add all the individual module powers together. The total power must not exceed the power rating of the converter 400W.
- c. Calculate secondary transformer turns x amps for each module - see below for transformer secondary turns.
- d. Add all the module turns x amps together and this must not exceed 222AT.
- e. If necessary reduce the loading until the conditions are met.

**SECONDARY TURNS FOR OMEGA 400**

VOLTS	MODULE												STD CONFIG
	A	B	C	D	E,K	F	G	H	J	L	BP	DP	
2-2.5V	2	2								2	3		
2.6-3V	3	3								2	3		
3.1-6V	3	3	4		3	4				3	3		2-6V
6.1-9V			4		4	4							
9.1-12V			5		5	5		5				10	
12.1-15V			6	6	6	6	7	6				10	5-15V
15.1-17V				7			8	7				10	
17.1-20V				8			9	8				10	
20.1-24V				9			10	9				10	
24.1-28V				10			11	10	12			10	12-28V
28.1-30V									12			10	
30.1-32V									13				

VOLTS	MODULE	STD CONFIG
	J	
32.1-35V	14	
35.1-37V	15	
37.1-40V	16	
40.1-44V	17	
44.1-48V	18	
48.1-52V	19	
52.1-56V	20	
56.1-60V	21	25-60V
60.1-64V	22	

STANDARD	AGENCY	LICENCE / FILE
EN41003 UL1950 CSA22.2 No. 220EB1402C BS7002/EN60950	BABT UL  CSA BSI	BABT 601559 E135494  LR91780 KM13930

**4. SAFETY APPROVALS**

Designed to comply with IEC950, EN60950, BS7002, UL1950, CSA 22.2 No234, IEC 1010\*, and EN41003 when correctly installed in a limited access environment.

\* Requires special input connector.

**4.1 ENERGY HAZARDS**

The following modules are capable of providing hazardous energy (>240VA), and the J module is capable of providing hazardous voltage (>60V DC) according to output voltage setting. Final equipment manufacturers must provide protection to service personnel against inadvertent contact with these module output terminals. If set such that hazardous voltage or energy can occur, then the module terminals or connections therefor must not be user accessible. The J module must not be set higher than 57V and the overvoltage no higher than 58.5V to avoid hazardous voltage, as defined in the 950 family of standards.

**4.2 MINIMUM LOAD REQUIREMENTS**

In order to comply with the approval requirements, under worst case abnormal fault conditions, it is necessary for customers to ensure that minimum loads are provided for the following modules:

MODULE	MINIMUM LOAD
A	6 AMPS
B	2 AMPS
C	0.6 AMPS
D,DP	0.8 AMPS
F	0.8 AMPS
G	1.5 AMPS
H	0.4 AMPS PER CHANNEL
J	1.5 AMPS
L	3 AMPS

**4.3 ENVIRONMENTAL PARAMETERS**

**OPERATION** - The Omega 400 range of products is designed for the following parameters: Material Group 111a, Pollution Degree 2, Installation Category 2, Class 1, Indoor use (as part of another equipment such that the Omega product is accessible to service engineers only), Altitude - 155 metres to +3050 metres relative to sea level, Humidity 5 to 95% RH non-condensing, Operating temperature 0 to 45°C derating at 2.5%/°C above 45°C up to 70°C.

**STORAGE** - Temperature: -40°C to +85°C. Humidity : 5% to 95% RH non-condensing. Air Pressure: 500hPa to 1060hPa.

**4.4 APPROVAL LIMITATIONS**

**4.4.1 USE IN NORTH AMERICA (AC UNITS ONLY)** - When this product is used on 180-250VAC mains with no neutral, connect the two live wires to L (live) and N (neutral) terminals on the input connector.

**4.4.2 SPECIFIC LIMITATIONS**

- i) 1 to 5 slots.
- ii) 400W max output power.
- iii) 222 ampere-turns maximum
- iv) Ambient temperatures covered by approvals are : EN60950 - 0 to 50°C; BS EN41003 - 0 to 50°C; UL1950 - 0 to 40°C; CSA22.2 No. 220EB1402C - 0 to 40°C (for input currents up to 8.33A).
- v) Input voltage range 90-132VAC, 180-265VAC. For EN60950 265VAC max.
- vi) E and K modules are limited to a max channel current of 5 amps with a total current of 6 amps from both channels.
- vii) The maximum number of turns of foil type 1 used on the transformer secondary is 6.
- viii) The range of secondary turns used with each module is: A, B & L modules 2-3 turns; C,E,K & F modules 6-10 turns; J module 12-21 turns.
- ix) W option approvals are in progress, BABT, BSI and UL approvals cover the W option.
- x) The modules may only be used according to this table.
- xi) Where CSA approval is to Level 5.

MODULE	MAX. CURRENT LIMIT	SETTING FOR HAZARDOUS ENERGY
A (2-6V,60A)	78 Amps	>3V
C (5-15V,12A)	16.5 Amps	>14.5V
D,DP (12-30V,7A)	9.1 Amps	>26.3V
F (5-15V,24A)	28.8 Amps	>8.3V
G (12-28V,15A)	19.5 Amps	>12.3V
J (25-57V,10A)	16 Amps	>15V
L (2-6V,100A)	120 Amps	>1.85v

	SLOT 1	SLOT 2	SLOT 3	SLOT 4	SLOT 5	BACKPLANE
2W	B,C,D (30A)	B,C,D (30A)				11782
2W	A,F,G,J (60A)					11782
3W	A,F,G,J (60A)		C,D,E,H (12A)*			11783
3W	B,C,D (30A)	F,G,J (24A)				11783
3W	B,C,D (30A)	B,C,D (30A)	C,D,E,H (12A)*			11783
3W	B,C,D (30A)	C,D,E,H (12A)*	C,D,E,H (12A)*			11786
3W	C,D,E,H (12A)*	C,D,E,H (12A)*	C,D,E,H (12A)*			11705
3W	L (100A)					11791
4W	A,F,G,J (60A)		F,G,J (24A)			11784
4W	B,C,D (30A)	F,G,J (24A)		C,D,E,H (12A)*		11784
4W	B,C,D (30A)	B,C,D (30A)	F,G,J (24A)			11784
4W	B,C,D (30A)	B,C,D (30A)	C,D,E,H (12A)*	C,D,E,H (12A)*		11784
4W	A,F,G,J (60A)		A,F,G,J (60A)			11787
4W	W wide range I/p	A,F,G,J (60A)		C,D,E,H (12A)*		11739
4W	L (100A)			C,D,E,H (12A)*		11824
5W	A,F,G,J (60A)		F,G,J (24A)		C,D,E,H (12A)*	11785
5W	A,F,G,J (60A)		C,D,E,H (12A)*	F,G,J (24A)		11785
5W	B,C,D (30A)	F,G,J (24A)		F,G,J (24A)		11785
5W	A,F,G,J (60A)		C,D,E,H (12A)*	C,D,E,H (12A)*	C,D,E,H (12A)*	11785
5W	B,C,D (30A)	F,G,J (24A)		C,D,E,H (12A)*	C,D,E,H (12A)*	11785
5W	B,C,D (30A)	B,C,D (30A)	F,G,J (24A)		C,D,E,H (12A)*	11785
5W	B,C,D (30A)	B,C,D (30A)	B,C,D (30A)	F,G,J (24A)		11785
5W	B,C,D (30A)	B,C,D (30A)	B,C,D (30A)	C,D,E,H (12A)*	C,D,E,H (12A)*	11785
5W	W wide range I/P	A,F,G,J (60A)		F,G,J (24A)		11775
5W	W wide range I/P	A,F,G,J (60A)		C,D,E,H (12A)*	C,D,E,H (12A)*	11775
5W	L (100A)			F,G,J (24A)		11825
5W	L (100A)			C,D,E,H (12A)*	C,D,E,H (12A)*	11825
5W	L (100A)			A,F,G,J (60A)		11826
	W Module must be fitted in slot 1 & can be used with any backplane unless an 'A' module is used in slot 2, where special backplanes must be used (see table).					

## NOTES

1. This table assumes that the slot position has to deliver the max current of the module. In a configuration where a lower current is required it is possible to fit 'B' modules in slots 3, 4, and 5.

2. Maximum continuous currents per slot are shown in brackets.

4.5 LEVELS OF INSULATION - Dielectric Strength testing is carried out at follows: Primary mains circuits to earth - 2.4KVDC; Primary mains circuits to transformer core - 4.3KVDC; \*\*Primary mains circuits to secondary - 5.4KVDC Secondary circuits to transformer core - 2.4KVDC; Outputs to each other and to earth are isolated to 500VDC. (\*\* This test is not possible with modules fitted to the unit as damage to RFI capacitors will occur.)

## SPECIFICATIONS

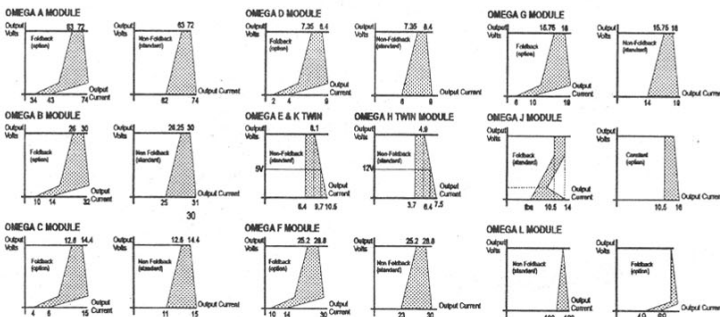
### INPUT

NOMINAL INPUT VOLTAGE RANGE	115/230VAC
INPUT VOLTAGE TOLERANCE	90-132VAC, 180-265VAC
INPUT FREQUENCY	47-63Hz
MAX INPUT CURRENT	9Amps, 5 Amps AC
INRUSH CURRENT	<20 AMPS

### PROGRAMMABLE MODULES

MODULE	BP1 to BP6	DP1 to DP7
RANGE (V)	0.15 to 6.0	0.25 to 30.0
CURRENT	25A	7A
SLOTS	1	1
OUTPUT POWER (50C)	100W	150W
CURRENT LIMIT (FIXED)	26 to 30A	7.4 to 9.1A
CURRENT LIMIT (PROG)	2.5 to 25A	0.5 to 5A

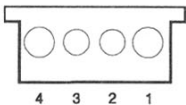
### CURRENT LIMIT



## OPTION SPECIFICATIONS

W-OPTION - For AC units only, this provides automatic input voltage range selection. This option is a 23mm module and occupies slot 1 on Omega 200 and 400, and slot 5 on Omega 400U.

X-OPTION - Provides input supply fail indication, and converter (global) inhibit terminated on a Molex connector. Mating connector is a Molex 50-37-5043, with pins 08-70-1040. Pin out is:



PIN 1 INHIBIT -VE (OPTO DIODE CATHODE); PIN 2 INHIBIT +VE (OPTO DIODE ANODE); PIN 3 MAINS FAIL +VE (OPTO TRANSISTOR COLLECTOR); PIN 4 MAINS FAIL -VE (OPTO TRANSISTOR EMITTER)

MAINS FAIL - Max sink current 10mA, transistor turns off 5ms min prior to loss of regulation. Transistor also turns off if input supply is <90/180 VAC.

THERMAL SHUT DOWN WARNING - Mains fail transistor turns off 5ms before outputs shutdown in the event of an over temperature shutdown.

INHIBIT - Input current to opto isolated photo diode 7.5mA to inhibit the entire unit. The inhibit can also be used to reset output modules when their O/V has fired, and Omega units which have thermally shut down.

Y-OPTION - 2 or more options provided on a Molex connector, for control or monitoring individual modules. Mating connector is Molex 39-01-2040, with pins 30-00-0038. Pin out is:

Y5 OPTION: PIN 1 STARPOINT PARALLEL; PIN 2 STARPOINT PARALLEL; PIN 3 MODULE GOOD +VE (OPTO TRANSISTOR COLLECTOR); PIN 4 MODULE GOOD -VE (OPTO TRANSISTOR EMITTER).

Y6 OPTION: PIN 1 INHIBIT ACTIVE HIGH; PIN 2 INHIBIT ACTIVE LOW; PIN 3 POWER GOOD +VE (OPTO TRANSISTOR COLLECTOR); PIN 4 POWER GOOD -VE (OPTO TRANSISTOR EMITTER).

Y7 OPTION: PIN 1 NOT USED; PIN 2 ENABLE ACTIVE HIGH; PIN 3 POWER GOOD +VE (OPTO TRANSISTOR COLLECTOR); PIN 4 POWER GOOD -VE (OPTO TRANSISTOR EMITTER).

Y8 OPTION: PIN 1 ENABLE ACTIVE LOW; PIN 2 NOT USED; PIN 3 POWER GOOD +VE (OPTO TRANSISTOR COLLECTOR); PIN 4 POWER GOOD -VE (OPTO TRANSISTOR EMITTER).

YPR1 OPTION ; For use with G module only. Provides for external resistive programming of output voltage. Connect potentiometer between pins 1 and 2.

STARPOINT PARALLEL - Forces paralleled modules to share current load at 25% rated load to within 2% of rated current, subject to current limit setting.

MODULE PARALLEL INSTRUCTIONS Y5 OPTION - When paralleling modules to similar modules with Y5 options in other Omega units, the module outputs should be fitted with blocking diodes for correct operation of the module good signal. For further information please contact Technical Sales at Coutant Lambda telephone (01271) 865656.

POWER GOOD - Opto isolated transistor turns off when module output goes outside +/-9% of nominal voltage set.

MODULE GOOD - As Power Good, except limit is -9% of nominal and transistor also turns off if starpoint parallel circuit goes out of range and fails to control current sharing.

INHIBIT ACTIVE HIGH - Inhibit threshold is 90% (typ) of output voltage, and module output is pulled low to 1.5V (typ) on no load.

INHIBIT ACTIVE LOW - Inhibit threshold is 10% (typ) of output voltage, and module output is pulled to 1.5V (typ) on no load.

ENABLE ACTIVE HIGH - Connect to +ve output terminal, otherwise module output is pulled low to 1.5V (typ) on no load.

ENABLE ACTIVE LOW - Connect to -ve output terminal, otherwise module output is pulled low to 1.5V (typ) on no load.

VME OPTION - This provides mains fail, power good & system reset signals according to the following timing relationships:

ON POWER UP	
POWER GOOD to SYS RESET	>200ms
AC FAIL to SYS RESET	>200ms

This option is designed for use with A, B & L modules only.

ON POWER DOWN	
AC FAIL to POWER GOOD	>4ms
AC FAIL to SYS RESET	>2ms
SYS RESEST to POWER GOOD	>50us

## OUTPUTS

MODULE	A	B	C	D,DP	E	F	G	H	K	L
RANGE(V)	2-6	2-6	5-15	12-30	5-15	5-15	12-28	12-28	5-15	2-6
CURRENT	60A	25A	12A	7A	6A TOT	24A	15A	3.5A TOT	6A	100A
SLOTS	2	1	1	1	1	2	2	1	1	3

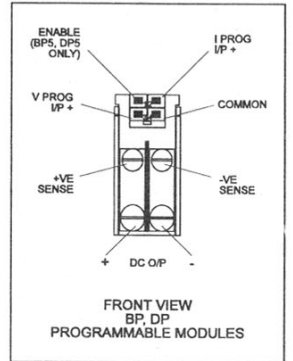
## VOLTS MODE PROG FOR PROGRAMMABLE MODULE

REMOTE PROG RES	1000 OHMS/V - BP	1000 OHMS/V - DP
RES CURRENT	0.83mA	0.17mA
PROG VOLTAGE	0-5V	0-5V

Please refer to application note no 5 for full details for programmable module.

## CURRENT MODE PROG FOR PROGRAMMABLE MODULE

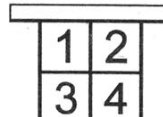
REMOTE PROG RANGE	0-25A - BP	0-6A - DP
ACCURACY	±10% to 0.5A	±10% to 0.1A
O/V PROTECTION	TRACKING	TRACKING



## PROGRAMMABLE MODULE DESCRIPTION

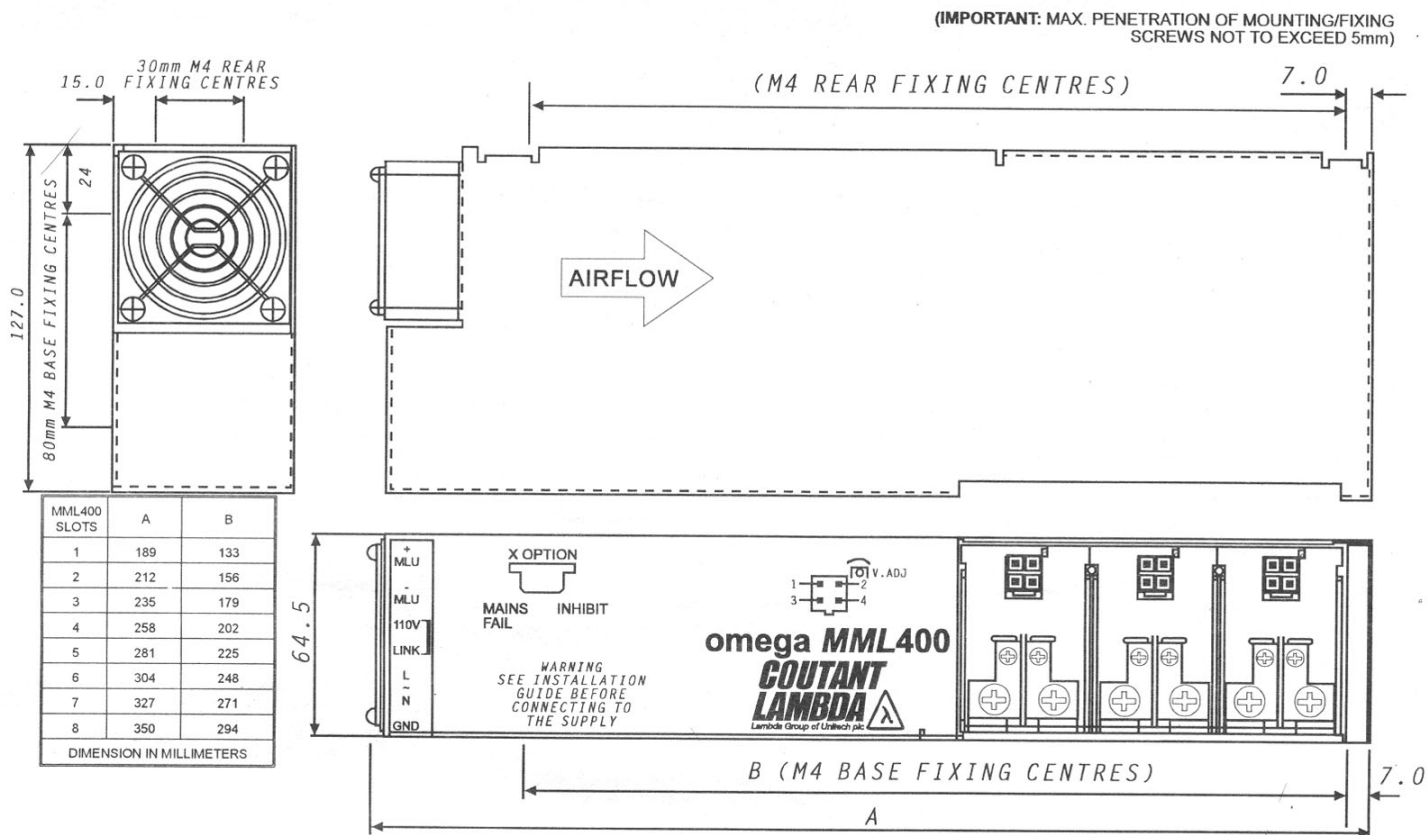
DESC	VOLTS & AMPS	OPTION DESC
MML DP1	0-30V @ 0-5A	V/R PROG,IPROG,TRACK OV (EXT)
MML DP2	0-30V @ 7A	V/R PROG,ENABLE,TRACK OV (EXT) POWER GOOD
MML DP3	0-15V @ 2A	V PROG, -FIXED OV (INT) SET AT 17.25 - 18.75V
MML DP4	0-30V @ 0-5A	V/R PROG,IPROG,TRACK OV (INT)
MML DP5	0-30V @ 0-5A	V/R PROG,IPROG,TRACK OV (EXT) ENABLE
MML DP6	0-30V @ 0-2A	V PROG,IPROG,TRACK OV (INT)
MML DP7	0-30V @ 7A	V/R PROG,ENABLE,FIXED OV (EXT) SET AT 34.5 - 37.5V
MMLDP8	0-30V@7A	V/R PROG, FIXED OV (EXT) SET AT 21.4 TO 24.6V
MML BP1	0-6V @ 0-25A	V/R PROG,IPROG,TRACK OV (EXT)
MML BP2	0-6V @ 25A	V/R PROG,ENABLE,TRACK OV (EXT) POWER GOOD
MML BP3	0-6V @ 25A	V PROG, -FIXED OV (INT)
MML BP4	0-6V @ 0-25A	V/R PROG,IPROG,FIXED OV (INT)
MML BP5	0-6V @ 0-25A	V/R PROG,IPROG,TRACK OV (EXT) ENABLE
MML BP6	0-6V @ 20A	V/R PROG, -TRACK OV (INT)

The Molex connection is as shown below:



1. ACFAIL
2. SYSRESET
3. POWER GOOD
4. GROUND

## 6. CASE DIMENSIONS



## MOUNTING OF POWER SUPPLIES

1. To comply with approvals and to gain maximum fan life Omega Power Supplies should not be mounted vertically, i.e. fan at top or bottom of unit.

## 7. DECLARATION OF CONFORMITY

To comply with the Telecommunications Terminal Equipment Directive (91/263/EEC) manufacturers are required to produce Declarations of Conformity to Type for products which carry a BABT Approval Number or have an EC Type Examination Certificate Number.

### DECLARATION OF CONFORMITY

We, Coutant Lambda Limited, of Kingsley Avenue, Ilfracombe, North Devon, England declare under our sole responsibility, that the products covered by this handbook and which bear a BABT Approval Number or EC Type Examination Certificate Number, are in conformity with the type as described in the appropriate EC Type Examination Certificate or the appropriate BABT Approval licence and file, except where changes have been agreed by BABT or introduced under the BABT ALE Scheme. Furthermore, these products are in conformity with BS6301, 1989, or BS EN41003\* as detailed on the appropriate Certificate or Licence.

\* NOTE: There may be additional Common Technical Regulations or these standards may be replaced by Common Technical Regulations, as defined on the Certificate or Licence.

Signed Declarations of Conformity are available at the Ilfracombe Plant which provide for traceability to batch and/or serial number.

## 8. SERVICE

1. When returning units to our Service Department, please ensure that they are adequately packed for the journey. The units must also be accompanied by information as to their origin and the nature of the fault.
2. Coutant Lambda Ltd reserve the right to make design and component changes without notice.

## 9. CE MARKING

CE Marking, when applied to a product covered by this handbook, indicates compliance with the Low Voltage Directive (72/23/EEC) as modified by the CE Marking Directive (93/68/EEC) in that it complies with EN60950.

**COUTANT  
LAMBDA**   
Lambda Group of Unitech

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