



**DELIVERING
ELECTRICAL
PRODUCT
INNOVATION**



OMEGALEC CAPABILITIES GUIDE

OMEGALEC

Omegalec design and manufacture a wide range of products and can also custom design to your specific requirements. All products manufactured by Omegalec are compliant with the relevant Australian Standards. With our engineering expertise, skilled team and well equipped production facility, we can also assess and repair a wide range of existing equipment.

At Omegalec small production runs are no problem. There is no minimum order quantity. However we also welcome large project and ongoing orders, and pricing can be negotiated accordingly. Our standard warranty is 24 months, unless specified otherwise.

What We Offer

Transformers

Single Phase Isolation Transformers

Three Phase Isolation Transformers

Reactors : Neutral Earthing, Line Input, DC Chokes

Single Phase Variable Transformers

Three Phase Variable Transformers

Three Phase DC Transformer Unit

Autotransformers

Power Supplies

Linear Power Supply

Standard and Custom Switchmode Power Supplies

Industrial DIN Rail Power Supply

Three Phase Switchmode Power Supply

DC UPS Systems

Battery Chargers

System Management Battery Charger

Converters

Standard and Custom DC to DC Converters

Other Products

Neutral Earthing Resistors

Standard and Custom Signal Isolators

PCB Layout

PCB Population Turnkey Solutions

Manufactured to Australian and International Standards and RCM compliant. OmegaLec reserves the right to alter specifications without prior notice.

Test Equipment

Current Injection Sets

High Voltage Test Sets

Capacitor Discharge Test Sets

Manufacture and Design

Design, Prototyping and Product Development

Embedded Systems Control Design and Manufacture

PCB Layout

PCB Population Turnkey Solutions

Service and Calibration

Programming PLC and Microcontroller Systems

Component Sourcing and Replacement

Consulting and System Integration

Circuit Breaker Injection Testing

Calibration and General Testing

Repairs

PLC and Logic Cards

Micro-Controllers

Management Systems

Control Panels and Motor Drives

Transducers and PC Boards

Analogue / Digital

Power Supplies : Linear, Switchmode etc

Battery Chargers

Converters and Inverters

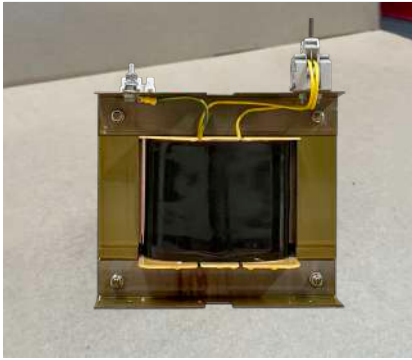
Transformers : Rewinds, Repairs, Duplication

Welders

Industrial Machinery



OUR PRODUCT RANGE



SINGLE PHASE ISOLATION TRANSFORMS



THREE PHASE ISOLATION TRANSFORMS



AUTOTRANSFORMERS



DC-UPS SYSTEMS



SYSTEM MANAGEMENT BATTERY CHARGERS



LINEAR POWER SUPPLIES



SWITCHMODE POWER SUPPLIES STANDARD AND CUSTOM



TEST EQUIPMENT



NEUTRAL EARTHING RESISTORS

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Single Phase Isolation Transformers

Rating (VA)	Dimensions (mm) L x W x H	Weight (kg)	Features
30	68 x 58 x 75	0.8	Long service life
60	78 x 70 x 88	1.3	Double wound
100	96 x 70 x 105	2.0	Competitively priced
150	96 x 100 x 105	2.8	Optional Extras
200	116 x 86 x 115	3.6	Primary / Secondary Fuse
300	116 x 96 x 120	4.3	Earth Screen
400	135 x 102 x 136	5.8	Centre Tapped
500	135 x 128 x 136	8.5	Enclosures
700	155 x 117 x 155	11	Additional Windings
800	155 x 145 x 155	12	Double Insulation
1,000	155 x 145 x 155	12.8	Temp Class F (150°C)
2,000	192 x 144 x 186	22.4	Temp Class H (180°C)
3,000	230 x 600 x 500	27.5	Epoxy Encapsulated
5,000	230 x 140 x 500	37.7	High Voltage Windings
			High Current Windings
			Rectification
			Bakelite Fuse Panel

Voltage*	Input: (Specify) Output: (Specify)
Duty Cycle / Cooling	100% / AN
Temperature Class	B (130°C)
Frequency	50 / 60Hz
Connections	Low voltage/current: Terminal blocks / DIN TRail
Warranty	24 months

* Dimensions shown are for the "non-enclosed" version

* High voltage/current: Studs mounted on bakelite, insulated bushing.

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TRANSFORMERS

Three Phase Isolation Transformers

Rating (VA)	Dimensions (mm) L x W x H	Weight (kg)	Features
1,000	180 x 100 x 200	8	Long service life
2,000	240 x 114 x 250	18	Double wound
3,000	300 x 143 x 300	29	Competitively priced
5,000	300 x 168 x 300	43	Optional Features Primary / Secondary Fuse Earth screen Centre tapped Enclosures Additional windings Double insulation Temp class F (150°C) Temp Class H (180°C) Epoxy encapsulated High Voltage Windings High Current Windings Rectification Bakelite fuse panel
6,000	300 x 168 x 300	50	
8,000	360 x 180 x 355	63	
10,000	420 x 190 x 405	85	
12,000	420 x 200 x 405	96	
16,000	420 x 220 x 405	128	
20,000	480 x 240 x 460	150	
25,000	480 x 270 x 460	170	
30,000	480 x 290 x 460	200	
40,000	600 x 280 x 560	220	
50,000	600 x 310 x 560	250	
60,000	600 x 340 x 560	285	
70,000	600 x 360 x 560	300	
80,000	600 x 370 x 560	325	
90,000	600 x 400 x 560	360	
100,000	600 x 430 x 560	400	

Voltage*	Input: (Specify) Output: (Specify)
Duty Cycle / Cooling	100% / AN
Temperature Class	B (130°C)
Frequency	50 / 60Hz
Connections	Low voltage/current: Terminal blocks / DIN Rail
Warranty	24 months

* Dimensions shown are for the "non-enclosed" version.

* High voltage/current: Studs mounted on bakelite, insulated bushing.

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Reactors: Neutral Earthing, Line Input, DC Chokes

Omegalec manufactures a wide range of custom inductive products to suit any application including, specialised Line Input and output REACTORS for variable speed drives, including DC power supply chokes.

Voltage	Inductance	Impedance @ 50Hz	Dimensions (mm) L x W x H
55V@ 5A	35mH	11ohms	68 x 60 x 85
63V @ 5A	40mH	12.6ohms	68 x 60 x 85
115V @ 5A	73mH	23ohms	78 x 68 x 98
120V @ 5A	76mH	24ohms	78 x 68 x 98
140V @ 5A	89mH	28ohms	96 x 58 x 115
240V @ 5A	153mH	48ohms	96 x 65 x 115
250V @ 5A	160mH	50ohms	96 x 65 x 115
550V @ 5A	350mH	110ohms	135 x 90 x 150

Voltage	2Up to 24kV
Duty Cycle	Selective to 100%
Cooling	AN
Frequency	All frequencies up to 0.5GHz
Connections	Studs mounted on bakelite, screws, stud or custom terminals
Phase	Single or Polyphase
Temperature Class	Class B. F. H
Warranty	24 months



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TRANSFORMERS

Single Phase Variable Transformer

Order Code	Current	Dimensions (mm) L x W x H	Weight (kg)	Housing
D-21-OB	2A	127 x 122 x 110	4	Open back / panel mount
D-41-OB	4A	140 x 190 x 175	6	Open back / panel mount
D-81-OB	8A	170 x 190 x 175	8	Open back / panel mount
D-101-OB	10A	165 x 210 x 192	9	Open back / panel mount
D-151-OB	15A	185 x 240 x 220	14	Open back / panel mount
D-201-OB	20A	205 x 290 x 250	18	Open back / panel mount
D-281-OB	28A	205 x 345 x 295	25	Open back / panel mount
D-21-P	2A	180 x 220 x 175	7	Enclosed / Bench Top
D-41-P	4A	180 x 220 x 175	7	Enclosed / Bench Top
D-81-P	8A	180 x 220 x 175	9	Enclosed / Bench Top
D-101-P	10A	188 x 220 x 195	10	Enclosed / Bench Top
D-151-P	15A	190 x 270 x 230	15	Enclosed / Bench Top
D-201-P	20A	210 x 310 x 304	20	Enclosed / Bench Top
D-281-P	28A	210 x 365 x 360	27	Enclosed / Bench Top

Voltage	Input: 240 VAC Output: 0 ~ 270V	Features
Ambient Temperature	45°C	Epoxy Encapsulated
Frequency	50 / 60Hz	Current limited
Phase	Single	Temperature protection
Cooling	AN	
Warranty	24 months	

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Three Phase Variable Transformer

Order Code	Current	Dimensions (mm) L x W x H	Weight (kg)	Housing
D-203-OB	20A	640 x 290 x 250	55	Open back / panel mount
D-283-OB	28A	650 x 34 x 295	77	Open back / panel mount
D-23- P	2A	415 x 165 x 145	14	Enclosed / Bench Top
D-43- P	4A	510 x 240 x 190	26	Enclosed / Bench Top
D-83- P	8A	550 x 240 x 190	33	Enclosed / Bench Top
D-103- P	10A	550 x 280 x 220	39	Enclosed / Bench Top
D-153- P	15A	550 x 315 x 240	52	Enclosed / Bench Top
D-203- P	20A	655 x 400 x 315	75	Enclosed / Bench Top
D-283- P	28A	655 x 435 x 360	80	Enclosed / Bench Top

Voltage	Input: 415 VAC Output: 0 ~ 470 V	Features
Ambient Temperature	45°C	Good regulation
Frequency	B (130°C)	Smooth control
Phase	Three	High efficiency, long life
Cooling	AN	High ambient tolerance
Warranty	24 months	Sine wave purity. Continuously adjustable.

TRANSFORMERS

Autotransformer

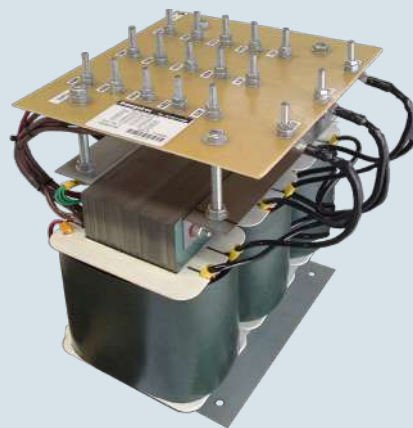
Rating	D-203-OB up to 400 kVA	Features
Phase	20A Single or Polyphase	Smaller frame size
Temperature Class	Class B, F, H	Low cost
Warranty	24 months	

*Note: Autotransformers DO NOT PROVIDE ISOLATION

Autotransformers	VS	Double Wound Transformers
Must have neutral connected through, no neutral isolation**	vs	No need for neutral can use 3-wire supply (3PH)
No isolation from mains ,uses common winding with taps	vs	Isolation from mains, separate input and output windings
Cannot be used as a safety transformer	vs	Can be used for a safety transformer
Not advisable to have a volt difference more than half Smaller frame size	vs	Operates on a complete voltage range Larger frame size
Phase displacement cannot be changed on input and output***	vs	Phase displacement can be changed on input and output
Lower cost to manufacture	vs	Higher cost to manufacture

** Special Delta options available.

*** Excludes Phase shifting Delta units.



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Three Phase DC Transformer Unit

Wattage	Output Voltage / Current	Dimensions (mm) L x W x H
240	24V / 10A	235 x 90 x 160
360	24V / 15A	235 x 96 x 160
480	24V / 20A	235 x 120 x 160
720	24V / 30A	255 x 130 x 170

Input Voltage*	Standard range 110 to 1000 volts	Features
Output Voltage*	Up to 200 VDC	Low ripple
Connections	Input and Output: terminal blocks	Good load regulation
Mounting	Bracket with mounting feet	Reliable with high MTBF
Cooling	Free air convection	Excellent for harsh conditions
Warranty	24 months	

Options

Redundancy type /w alarms and auctioneering diodes

Large operating temperature range up to 60°C Ambient

High Current for large inrush equipment (up to 10 times for 3 seconds without tripping)

Applications

DC motors, solenoids, DC drives, DC magnets and electrolysis.

* Customer input voltage available.



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POWER SUPPLIES

Linear Power Supply

Order Code	Wattage	Current	Output Surge	Dimensions (mm) L x W x H
LPS-0124	24W	1A	1.5A	100 x 100 x 110
LPS-0424	96W	4A	6A	100 x 100 x 110
LPS-0724	168W	7A	10A	115 x 230 x 105
LPS-1024	240W	10A	14A	135 x 255 x 135

Voltage*	Input: 240 VAC Output: 24 V DC	Features
Ambient Temperature	45°C max	Over load protection
Load Regulation	± 0.5%	Low ripple and noise
Ripple	± 10mV	Robust and reliable
Connection	Input and Output terminal blocks	Short circuit protection
Warranty	24 months	High surge capability (can supply equipment with high in rush current)

Optional Extras

Input Flex and Plug

Carry Handle

*Also available in 12V DC, 48V DC and 110V DC.



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Switchmode Power Supplies: Standard and Custom

Input Voltage*	110Vac to 1200Vac Single or Polyphase	Features
Output Voltage	5V to 600VDC	Stainless steel enclosure
Housing	Rack type, custom enclosures or open gear tray	Excellent regulation, high efficiency, low noise engineered solutions
Connections	Screws, lug or bus-bar terminals	Competitively priced unit
Warranty	24 months	up to 100kW

Options

Programmable, Remote control, monitoring and control via Modbus TCP, Touch screen control with full customisation.

Applications

Regulated high power DC requirements, laboratory power supplies, aircraft ground power, plating, motor control, constant current systems.

*Also available in 415 VAC input.



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BATTERY CHARGERS

System Management Battery Charger

Input Voltage	110 Vac ~1000 Vac Single or Polyphase
Output Voltage	12 to 220Vdc
Output Current	5, 10, 15, 20, 30, 60 Amps
Wattage	Up to 2kW
Connections	Multi-way terminals for alarms and status
Protection	Overload and short circuit
Cooling	Free air convection
Housing	Mounted on gear tray (no cover), 550(L) * 200(W) or 19" rack style mounted enclosure
Temperature	Compensation
Ambient Temperature	60°C
Control	Keypad and CD display
LED Indication	AC On, boost on, charger fail, low volt, high volt
Settings	Pre-programmed. Password protected for custom settings
Standard Alarms	AC fail, charger fail, low voltage, high voltage. Earth fault, battery bank integrity monitor

Features	Optional Extras	Excellent for
Microprocessor controlled	Powder coated enclosures with hinged door	Industrial control panels
Highly competitive prices	Electrolyte level alarm	Switchboards
Comprehensive alarm system	Earth fault alarm	Stand by and back up systems
Fully automatic float / boost sequences		



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DC UPS Systems

Features

Fully automatic unit	Temperature compensated charging	Battery integrity monitoring
User programmable	Modbus TCP status	Automatic battery testing
Password protected	Large user friendly touch screens	Easy installation
Complete with batteries	Full comprehensive alarms with time and date stamped logging of alarms and status	

Input Voltage / Frequency 240 VAC / 50Hz

Output Voltage 12V to 220Vdc

Housing Floor standing, wall mounted or 19" rack style systems, with segregated compartments for battery banks, power and control, and DC distribution circuit breakers.

Protection Short circuit , Overload, Polarity. Over temperature, battery bank error.

Metering Touch screen or separate metering for Voltage, charger current and load current.

Ambient Temperature 60 °C

LED Indication Customisable 22mm large led indication for status and alarms

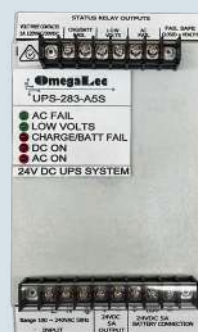
Batteries Maintenance free VRSLA battery types with options of 20 year design life

Buttons and Control All systems controlled via 4" or 7" full color user friendly touch screens

Warranty 24 months

Applications

Sub station protection DC system, communications DC backup, Emergency generator control DC system including Start and control, N+1 redundant systems.



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OTHER PRODUCTS

DC-DC Converters: Standard and Custom

Input Voltage	12VDC to 750VDC	Features
Output Voltage	3.3V to 600Vdc	DIN rail mount options
Wattage	10W to 100kW	Low ripple noise
Regulation	Excellent regulation at $< \pm 1\%$	Low working temperature
Connections	Screw type terminal blocks	Options
Housing	Rack type or custom	Remote control
Protection	Overload, over voltage	Modbus TCP
Warranty	24 months	Touch screens
		Metering
		Constant current types

Suitable for

PLC power supplies, control panels, Stand-by systems. Sensitive electronic equipment etc.



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Neutral Earthing Resistors

Part Number	Current Rating	Maximum Voltage	Resistance	System Voltage	Length mm	Depth mm
WR-5-55	5A	55V	11 ohms	110V	300	30
WR-5-120	5A	120V	24 ohms	240V	355	50
WR-5-240	5A	240V	48 ohms	415V	555	60
WR-5-577	5A	577V	115 ohms	1000V	220	555
WR-5-606	5A	606V	121 ohms	1050V	220	555
WR-5-635	5A	635V	127 ohms	1100V	220	555
WR-5-1905	5A	1905 V	381 ohms	3300V	580	555

Operating Temperature	-55° C to 200° C	Features
Surface Temperature	300°C max at 40°C	100% Duty cycle
Resistance Tolerance	Standard $\pm 5\%$	Excellent for mining applications
Connection	Brass screw and nut terminals	Industrial grade unit
Duty Cycle	100%	Low surface temperature
Overload	10 times the wattage applied for 5 seconds	Flame proof silicon coating
Construction	Wire wound ceramic tube and coated with Silicon Varnish	Exceptional stability and performance
Warranty	24 months	



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OTHER PRODUCTS

Signal Isolators: Standard and Custom

Full Isolation	This unit offers full isolation of 1000V between input power supply or input and output with 2 wires to transmitter and 2 wires to receiver. Transmitter and Receiver are loop powered via the transducer.
Input Isolation	This unit offers isolation on the input but the output is common with the power supply. Transmitter and Receiver are loop powered via the transducer.
Output Isolation	This unit offers isolation on the output but the input is common with the power supply. Transmitter and Receiver are loop powered via the transducer.

Housing	Compact plastic case	Custom Design Options
Connections	Input and output screw terminals	1 / 2 / 3 channel outputs
Mounting	DIN rail mount	Isolated or non-isolated
Dimensions	75(W) *110(D) *78(H) mm	Isolation level range from 0 to 3000V RMS



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Test Equipment

All OmegaLec test equipment is custom designed and manufactured to suit your specifications.
The products listed below are an indication of what can be manufactured, Please contact us to discuss your requirements.

Current Injection Sets	High Voltage Test Sets	Capacitor Discharge Test Sets
Currents from 1A to 63,000A	Currents from 0.1A to 10A	For cable fault location
Voltage 240V or 415V	Voltage from 1V to 20,000V	Voltages up to 6000V
Phase: 1PH or 3PH SP-20M		

Features	Suitable for Testing
Built in timers	High current circuit breakers
Auto / trip record functions	Switchgear
Short circuit protection	Sub-station protection systems
Overload protection	Current transformers
Current metering	High voltage systems
Voltage metering	



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ELECTRICAL ENGINEERING PRODUCTS

1300 36 26 26 | sales@colterlec.com.au

www.colterlec.com.au

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Canberra • Newcastle • Sydney • Wollongong • Queensland • South Australia • Tasmania • Victoria • Western Australia