

LAB-ACO

THYRISTOR REGULATED HIGH POWER DC SOURCE



POSITIVE PROBLEM SOLVING **+ =**

The LAB-ACO range is a rugged thyristor regulated DC Source for high power applications. Output currents up to 50kA at powers of up to 1MW are possible.

The standard range covers the most common requirements. Different voltage and current ranges are available on request if one of the standard units is not ideal. The LAB-ACO has front panel control and display with 0-100% adjustment of both voltage and current limits. If remote control is required then analogue interfaces and computer interfaces such as RS-232, RS-485, CAN, USB and IEEE 488.2 are available for control and measurement.

- + Constant Voltage & Current Operation**
- + Analogue, RS-232 & IEEE488.2**
- + True Thyristor Regulated**
- + Currents up to 50,000A**
- + Voltages up to 500VDC**
- + Low Ripple Option**

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FURTHER DETAILS

A Remote Control Unit can also be provided with up to 20 meters of cable. Extra filtering can be specified to reduce the standard ripple of 5% down to 1%. The LAB-ACO is an air cooled design ensuring that troublesome water cooling systems need not be installed. The unit benefits from a comprehensive range of safety and protection features including super fast fuses, over current limit, over voltage limit, over power limit and thermal protection

TECHNICAL DATA

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|-----------------------------|-----------------------------|
| Input Voltage | 3 × 400Vac |
| Isolation (Input to Output) | 3000VAC |
| Safety | EN60950 |
| Emission | EN61000-6-4 |
| Immunity | EN61000-6-2 |
| Response Time | Typically 100ms |
| Ripple | <5% (1% option) |
| Stability | <1% |
| Display | 3.5 digits for V & I |
| Protection | OC / OT / OP |
| Analogue Interface | 0 - 5V (10V option /AI-10) |
| Isolated Analogue Interface | 0 - 5V (10V option /ATI-10) |
| Interface RS-232 | Option /LTRS232 |
| Interface IEE488.2 | Option /LT |
| Operating Temperature | -10°C to +40°C |
| Operating Humidity | 0 - 90% (non condensing) |

OPTIONS

| CODE | DESCRIPTION |
|-------------|---|
| /ATE | No front panel control or display, analogue Interface provided as standard |
| /AI-5 | 0-5V Analogue interface for all control and measurement functions |
| /AI-10 | 0-10V Analogue interface for all control and measurement functions |
| /ATI-5 | Isolated 0-5V Analogue interface for all control and measurement functions |
| /ATI-10 | Isolated 0-10V Analogue interface for all control and measurement functions |
| /LT | IEEE 488.2 interface |
| /LTRS232 | RS-232 interface |
| /LTRS485 | RS-485 interface |
| /LT+LTRS232 | IEEE 488.2 and RS-232 |
| /LT+LTRS485 | IEEE 488.2 and RS-485 |
| /USB | USB Interface |
| /RCU | Remote control unit with 20 metre cable |
| /LR | Ripple improved to 1% of full scale value |
| /4-20 | 4 - 20mA isolated interface for control and monitoring |

SELECTION TABLE

| Part Number | Max. Power | Voltage Range | Current Range | Part Number | Max. Power | Voltage Range | Current Range |
|------------------|------------|---------------|---------------|------------------|------------|---------------|---------------|
| LAB-ACO 10-5000 | 50kW | 0 - 10V | 0 - 5000A | LAB-ACO 10-30000 | 300kW | 0 - 10V | 0 - 30000A |
| LAB-ACO 50-500 | 50kW | 0 - 50V | 0 - 1000A | LAB-ACO 50-6000 | 300kW | 0 - 50V | 0 - 6000A |
| LAB-ACO 80-625 | 50kW | 0 - 80V | 0 - 625A | LAB-ACO 80-3750 | 300kW | 0 - 80V | 0 - 3750A |
| LAB-ACO 125-400 | 50kW | 0 - 125V | 0 - 400A | LAB-ACO 125-2400 | 300kW | 0 - 125V | 0 - 2400A |
| LAB-ACO 250-200 | 50kW | 0 - 250V | 0 - 200A | LAB-ACO 250-1200 | 300kW | 0 - 250V | 0 - 1200A |
| LAB-ACO 400-125 | 50kW | 0 - 400V | 0 - 125A | LAB-ACO 400-750 | 300kW | 0 - 400V | 0 - 750A |
| LAB-ACO 500-100 | 50kW | 0 - 500V | 0 - 100A | LAB-ACO 500-600 | 300kW | 0 - 500V | 0 - 600A |
| LAB-ACO 10-7500 | 75kW | 0 - 10V | 0 - 7500A | LAB-ACO 10-40000 | 400kW | 0 - 10V | 0 - 40000A |
| LAB-ACO 50-1500 | 75kW | 0 - 50V | 0 - 1500A | LAB-ACO 50-8000 | 400kW | 0 - 50V | 0 - 8000A |
| LAB-ACO 80-938 | 75kW | 0 - 80V | 0 - 938A | LAB-ACO 80-5000 | 400kW | 0 - 80V | 0 - 5000A |
| LAB-ACO 125-600 | 75kW | 0 - 125V | 0 - 600A | LAB-ACO 125-3200 | 400kW | 0 - 125V | 0 - 3200A |
| LAB-ACO 250-300 | 75kW | 0 - 250V | 0 - 300A | LAB-ACO 250-1600 | 400kW | 0 - 250V | 0 - 1600A |
| LAB-ACO 400-188 | 75kW | 0 - 400V | 0 - 188A | LAB-ACO 400-1000 | 400kW | 0 - 400V | 0 - 1000A |
| LAB-ACO 500-150 | 75kW | 0 - 500V | 0 - 150A | LAB-ACO 500-800 | 400kW | 0 - 500V | 0 - 800A |
| LAB-ACO 10-10000 | 100kW | 0 - 10V | 0 - 10000A | LAB-ACO 10-50000 | 500kW | 0 - 10V | 0 - 50000A |
| LAB-ACO 50-2000 | 100kW | 0 - 50V | 0 - 2000A | LAB-ACO 50-10000 | 500kW | 0 - 50V | 0 - 10000A |
| LAB-ACO 80-1250 | 100kW | 0 - 80V | 0 - 1250A | LAB-ACO 80-6250 | 500kW | 0 - 80V | 0 - 6250A |
| LAB-ACO 125-800 | 100kW | 0 - 125V | 0 - 800A | LAB-ACO 125-4000 | 500kW | 0 - 125V | 0 - 4000A |
| LAB-ACO 250-400 | 100kW | 0 - 250V | 0 - 400A | LAB-ACO 250-2000 | 500kW | 0 - 250V | 0 - 2000A |
| LAB-ACO 400-250 | 100kW | 0 - 400V | 0 - 250A | LAB-ACO 400-1250 | 500kW | 0 - 400V | 0 - 1250A |
| LAB-ACO 500-200 | 100kW | 0 - 500V | 0 - 200A | LAB-ACO 500-1000 | 500kW | 0 - 500V | 0 - 1000A |
| LAB-ACO 10-15000 | 150kW | 0 - 10V | 0 - 15000A | LAB-ACO 15-50000 | 750kW | 0 - 15V | 0 - 50000A |
| LAB-ACO 50-3000 | 150kW | 0 - 50V | 0 - 3000A | LAB-ACO 50-15000 | 750kW | 0 - 50V | 0 - 15000A |
| LAB-ACO 80-1875 | 150kW | 0 - 80V | 0 - 1875A | LAB-ACO 80-9375 | 750kW | 0 - 80V | 0 - 9375A |
| LAB-ACO 125-1200 | 150kW | 0 - 125V | 0 - 1200A | LAB-ACO 125-6000 | 750kW | 0 - 125V | 0 - 6000A |
| LAB-ACO 250-600 | 150kW | 0 - 250V | 0 - 600A | LAB-ACO 250-3000 | 750kW | 0 - 250V | 0 - 3000A |
| LAB-ACO 400-375 | 150kW | 0 - 400V | 0 - 375A | LAB-ACO 400-1875 | 750kW | 0 - 400V | 0 - 1875A |
| LAB-ACO 500-300 | 150kW | 0 - 500V | 0 - 300A | LAB-ACO 500-1500 | 750kW | 0 - 500V | 0 - 1500A |
| LAB-ACO 10-20000 | 200kW | 0 - 10V | 0 - 20000A | LAB-ACO 20-50000 | 1000kW | 0 - 20V | 0 - 50000A |
| LAB-ACO 50-4000 | 200kW | 0 - 50V | 0 - 4000A | LAB-ACO 60-16666 | 1000kW | 0 - 60V | 0 - 16666A |
| LAB-ACO 80-2500 | 200kW | 0 - 80V | 0 - 2500A | LAB-ACO 80-1250 | 1000kW | 0 - 80V | 0 - 1250A |
| LAB-ACO 125-1600 | 200kW | 0 - 125V | 0 - 1600A | LAB-ACO 125-8000 | 1000kW | 0 - 125V | 0 - 8000A |
| LAB-ACO 250-800 | 200kW | 0 - 250V | 0 - 800A | LAB-ACO 250-4000 | 1000kW | 0 - 250V | 0 - 4000A |
| LAB-ACO 400-500 | 200kW | 0 - 400V | 0 - 500A | LAB-ACO 400-2500 | 1000kW | 0 - 400V | 0 - 2500A |
| LAB-ACO 500-400 | 200kW | 0 - 500V | 0 - 400A | LAB-ACO 500-2000 | 1000kW | 0 - 500V | 0 - 2000A |

Different output ranges and application/user specific options are possible. Please contact ETPS Ltd to discuss your requirements.

Every effort is made to ensure that the information provided within this technical summary is accurate. However, ETPS Ltd must reserve the right to make changes to the published specifications without prior notice. Where certain operating parameters are critical for your application we advise that they be confirmed at the time of order. ETPS Ltd specialises in modifying its proven platforms to suit your needs. Please contact our office if your requirement is non-standard. Please note that your actual unit may differ from those shown.



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