

ONE BENCH. EVERY UNIT. ON THE RECORD.

The product lines for the test floor from one local rep: the instrument rack on the network, DC switching that opens under load, heater relays that report, isolated power for the instruments, and a hookup that locks out.

1 to 8 ports

Brainboxes Ethernet to serial: every instrument its own COM port over the network, the test software unchanged

1,500 V DC

Schaltbau C310 main contactor, 500 A, opens under load in either direction; C320 to 1,000 A

4 to 125 A

Celduc solid state relays for chamber and burn-in heat, no contact to wear, versions that report load current

A test bench is built around the first unit and then asked to run hundreds. **The parts that wear are the ones chosen for the first unit, not the thousandth.**

01 WIRED FOR THE FIRST UNIT

Four things that stop a bench from becoming a test floor:

- **The PC parked at the rack.** Every instrument runs a cable into the back of one machine, so a second bench means a second PC, and the test software lives in two places.
- **Every cycle ends with an open under load.** A battery, powertrain or supply bench breaks DC with current flowing, and an emergency stop is a normal part of the day. A contactor rated for steady conduction welds.
- **The chamber relay clicks a million times.** Burn-in and thermal cycling switch heaters several times a minute for weeks. A mechanical contactor wears out, and the controller knows it commanded the heater, not whether current flowed.
- **The bench runs on building power.** A mains dip mid-run resets the controller and the run starts over; the instruments see the building's noise on their supply.

02 RATED FOR THE THOUSANDTH UNIT

Each line does one job on the bench, with the factory's published rating behind it.

- **BRAINBOXES The COM port stays.** An Ethernet to serial unit beside the instrument puts it on the network; the test PC still sees the COM port the software always used, so LabVIEW and the VIs you have keep working.
- **SCHALTBAU Built to break DC.** Open-air ceramic arc chute, bidirectional by design. C310 at 1,500 V DC and 500 A; C320 makes 3,000 A and withstands 4,500 A for 100 ms without welding.
- **CELDUC No contact to wear, and a relay that reports.** Zero-cross for heating loads, random turn-on for motor duty; SOI relays sense the load current, so a broken element is flagged before the lot runs cold.
- **PREMIUM PSU Power the instruments can trust.** TDS and TDX converters deliver AC with galvanic separation from the mains; a DC UPS with Ethernet reporting keeps the bench controller through a dip.
- **WALTHER, SATEC Locked out, and on the record.** An interlocked receptacle that cannot be made or broken under load; a SATEC PRO meter that logs what the unit drew and what the supply did.

03 WHERE IT FITS ON THE BENCH

INSTRUMENT RACK TO TEST PC

An Ethernet to serial unit beside each instrument; one PC runs more than one bench, the COM port stays.

FIXTURE STATES AND INTERLOCKS

Remote I/O: guard and door positions, run states, counts and thermocouples as Modbus TCP devices.

BATTERY AND DC SUPPLY BENCHES

C310 and C320 isolate the unit under test and open under full load, charge and discharge through one device.

BURN-IN AND THERMAL CHAMBERS

Celduc solid state relays on the heater zones, zero-cross, versions that report a broken element.

INSTRUMENT POWER

TDS isolated AC for metrology loads; a DC UPS with Ethernet reporting behind the bench controller.

HOOKUP AND THE RUN RECORD

Walther interlocked receptacles and drops, 20 to 100 A; a SATEC PRO meter logs what the unit drew and the sag that failed the run.

04 PRODUCT LINE-UP

LINE AND SERIES	WHAT IT DOES ON THE BENCH	RATING	LISTING, TEMPERATURE
 BRAINBOXES Ethernet to serial ES-246, 257, 701, 279 (DB9); ES-511, 522, 551, 571 (DIN rail)	The instrument joins the network; the PC keeps its COM port. DB9 desk and rack units, PoE versions; DIN-rail industrial units	1, 2, 4 or 8 ports; RS-232 or RS-422/485; PoE 802.3af	-10 to +60 °C DB9; -40 to +80 °C industrial
 BRAINBOXES Remote I/O ED-516, 527, 588, 538; ED-593, 582, 549, 560	Fixture states, interlocks, counts, thermocouples, RTDs and analog values as Modbus TCP or ASCII devices the test software polls	16 in; 16 out; 8 in plus 8 out; 8 in plus 4 relays; 8 TC; 4 RTD; 8 analog in	-40 to +80 °C; 5 to 30 V DC supply
 SCHALTBAU C310, C320 DC contactors Main contactor for cyclers, emulators and DC supplies	Opens under load in either direction, charge and discharge through one device; short circuits are a rated duty, no welding	1,500 V DC; 500 A (C310), 1,000 A (C320); 4,500 A for 100 ms	Mirror contacts per IEC 60947-4-1 Annex F; CT and CP to 3,000 V
 CELDOC Solid state relays okpac, SOI reporting relays, SCM DC relays	Chamber and burn-in heaters at zero cross; motor duty with random turn-on; SOI relays report load status; SCM switches DC with no arc	4 to 125 A single and three phase; SCM to 1,700 V DC, 0 to 150 A	1 to 1.5 W per amp to the heatsink; not a disconnect
 PREMIUM PSU TDS, TDX, DC UPS; EFC Instrument power and control power	Isolated AC for metrology and laser loads; a DC UPS with charger, changeover and Ethernet reporting built in; EFC fuse on four 24 V channels	3 kVrms isolation standard; DIN-rail supplies 120 to 480 W	Published-spec parts; the datasheet before the drawing
 WALTHER Interlocked receptacles, drops Series II pin and sleeve; finished cords and drops	Receptacle and switch in one unit: cannot be made or broken under load, the handle takes a lock. Finished drops built to length in Somerset, New Jersey	20, 30, 60, 100 A; 125 to 480 V	UL Listed and CSA Certified together; IP44, IP67
 SATEC PRO series, PM17x PRO The run on the record	Revenue meter and power quality analyzer in one instrument: what the unit drew, and the sags and interruptions logged with time and depth	Class 0.2S; Class A Ed. 3.1; DC to 1,500 V at 0.2 percent, to 3,000 A	Events stamped to 1 microsecond; harmonics to the 63rd
 IMO Protection and bench logic Breakers, RCBOs, surge, contactors, iSmart	Breakers, RCBOs and surge for the bench feed; contactors for fixture loads; iSmart smart relays for fixture sequencing, license-free programming	UL-approved breakers; contactors compact to heavy frames	Same-day dispatch from US stock

Also on the bench: Conta-Clip KDS split cable entry (the harness through the wall with connectors on, IP66, UL Recognized) and terminal blocks; GETT sealed keyboards for the test station. Factory figures per row; ask for the datasheet before a part goes on a drawing.

05 CHALLENGE US

After 30-plus years in the industrial hardware space we know these products, on our line card and off it. Bring us your most stringent or most mundane requirement. If one of our product lines fits, we will show you where. If it does not, we know someone who will. We would be happy to help.

NEXT STEP: SEND US THE BENCH

The instruments and their ports, the DC bus voltage and current, the chamber heater loads, the hookup amperage. We return one part list across the lines and scope an evaluation unit. www.dynamicrep.com/products

POWER IT. CONTROL IT. PROVE IT.

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