

UTILITY, SUBSTATION AND GRID SYSTEMS

Power it. Control it. Prove it.

The product lines for the substation, the interconnect and the crew that keeps them running: **the DC that keeps protection alive, the heavy power terminations, the measurement that sits beside the relay, and the network path for the device that only speaks serial.** The manufacturers Dynamic Measurement and Control Solutions represents, on a line card built for the way you design, with an application engineer on the phone before the spec locks.

Power it

Energy in, converted, moved. And the switching and protection that keeps it safe.



PREMIUM PSU

The station battery charger

FlexStorm FDS-3K rectifiers at **125 V DC, adjustable 86 to 157 V**, for NiCd and lead-calcium station batteries, built up in a configurable cabinet to 72 kW at 110 or 125 V out. ThyriStorm thyristor chargers for secure DC in medium and low voltage substations. Premium names power utilities as a core market.



PREMIUM PSU

DC that keeps protection alive

EPS-120 and EPS-200 DC UPS for the protection and control cabinet, with **10 kV input to output isolation** and a 10 kV dielectric test on every unit, so a surge on the station supply does not become a fault on the supply behind the relay. DC/DC for the lower control voltages from the same maker.



SCHALTBAU

Breaks DC at the interconnect

Utility-scale storage and PV put a DC bus that never crosses zero behind the interconnect. Schaltbau contactors clear the arc with permanent-magnet blowout in an **open, non-encapsulated chamber**, bidirectional, so charge and discharge run through one device: C303 at 1,500 V and 500 A, C320 at 1,800 V and 1,000 A.



WALTHER

Power for the outage crew

Portable distribution from a **400 A camlok main input** down to protected outlets, a breaker on every outlet, for the shutdown, the staging yard and the emergency job. Series II pin and sleeve at 20 to 100 A, 125 to 480 V, and finished cords built to length at the Walther shop in Somerset, New Jersey.

Control it

Commanded, coordinated. The balance of plant around the site, and the air gap at the string.



IMO

A real air gap at the string

The SI Series TRUE DC isolator (**UL 508, 8 million units installed since 2009**) where the PV string or the DC feeder needs a disconnect you can see and lock. The SIM compact version is about a third smaller for the combiner.



IMO

The auxiliary panel at the site

Miniature circuit breakers, RCBOs and surge protection for the auxiliary circuits, contactors with a **3 W sealed coil** that run cool in a remote switching station on solar-hybrid power, and iSmart or XGB logic with license-free programming for the fans, pumps, heaters and doors around the enclosure.

Prove it

Proven, not assumed. The relay keeps protection; the measurement goes on a meter built for it.



SATEC

Power quality beside the relay

PM17x PRO is a Class A Edition 3.1 power quality analyzer with **IEC 61850 Edition 2**, time-synced to 1 microsecond over IRIG-B or PTP, harmonics to the 63rd. The protective relay keeps tripping on the fault; the meter records the event, the sag and the harmonics. It never trips anything.



SATEC

Revenue metering at the interconnect

PRO Series: a **Class 0.2S revenue meter and a Class A Edition 3.1 power quality analyzer in one instrument**, IEC 61850 Edition 2 with MMS and GOOSE, AC and DC to 1,500 V. When the storage site, the solar plant or the new large load disputes what crossed the point, both sides are reading a log.



SATEC

Every feeder, one device

BFM-II meters up to **54 single-phase or 18 three-phase circuits** from one DIN-rail unit, against two voltage sources. The fault-recording version captures fault current to **40 times nominal on 12 feeders**, and DNP3 and IEC 60870-5-104 put it on the SCADA you already run. HACS split-core sensors clip on around an energized conductor.



BRAINBOXES

The old device already has the port

The meter, charger or controller that only speaks RS-232, 422 or 485 goes on the network through it, and the software still sees the same COM port. **Nothing is replaced to get it connected.** SFP fiber switches for the run across the yard, most parts rated -40 to +80 C, USB-to-serial for the laptop at the cabinet.

Foundation

Looks simple. Fails first. Where the schematic meets the panel.



CONTA-CLIP

Heavy power terminals, 125 to 520 A

HSKG high power terminal blocks at **1,000 V, 125 to 520 A, conductors from 2.5 to 300 square millimeters**, -40 to +120 C, built for energy-transmitting connections. SVBA distribution blocks from 85 to 1,100 A for copper and aluminum, and the DIN-rail blocks and marking around them.



WISKA

Junction boxes built for outside

COMBI junction boxes to IP66, UV and ozone resistant, quarter-turn lids, membrane entries that need no locknut, for the substation yard, the pad and the pole. Glands, venting and the Brace conduit system around them, from a company that started on ships in 1919.

Protection and measurement are two jobs

A protective relay is built to decide in milliseconds whether to trip. A power quality meter is built to record what the power did, to revenue accuracy. Buying relay channels to do the meter's job spends protection money on measurement.

Accuracy class is a system property

A Class 0.2S meter reading through a 1 percent CT is a 1 percent system, and the error grows with every metering point you sum. The number on the box only survives if the CT chain lets it.

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.

Talk it through at the design stage

If any part of this card raises a question mid-design, whether that is the station DC, the heavy power termination or the meter beside the relay, that question is exactly what we are for. A short technical conversation before the spec locks usually surfaces the options a datasheet does not.

Jeff Weseloh, Application Engineer
 Dynamic Measurement and Control Solutions
 (408) 780-9190 · jeff@dynamicrep.com ·

www.dynamicrep.com/reliable-components-for-energy-systems-dynamic

THE MANUFACTURERS ON THIS CARD

