

TRANSPORTATION, MOBILITY AND VEHICLE SYSTEMS

Power it. Control it. Prove it.

The electrical line for the vehicle and the infrastructure it runs on: the DC switching and connection at the pack, the conversion that feeds the auxiliaries, the operator interface, and the data path that rides along. The manufacturers Dynamic Measurement and Control Solutions represents, organized 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.



SCHALTBAU

Isolates the pack, then keeps working

The contactor in the battery disconnect unit has to clear a DC arc on a fault and work again the next morning. Schaltbau DC contactors use permanent-magnet arc blowout in an open chamber, **bidirectional, to 3,000 V**: the C800 family for passenger and commercial vehicles with shock and vibration ratings, C110B 48 V-class contactors from 60 to 250 A for trucks and AGVs.



SCHALTBAU

Connectors that carry the traction current

HV connectors at **1 kV and 470 A** for the electric excavator and the mine truck, LV charging connectors to 500 A for forklifts and AGVs, and a marine line with C320 and C360 contactors carrying DNV approval for the electric ferry. Rail connectors on the same shelf, from a company built on rolling stock.



PREMIUM PSU

Onboard power from the catenary or the pack

OVX-6400 takes **600 or 750 V catenary straight to three-phase AC** for HVAC and auxiliary motors; CVS-280 brings 750 V down to 24 V for the onboard DC bus; CMS-2000 takes 180 to 950 V DC from a traction pack, sealed to IP67 and IP69K; CRS and CTS DC/DC for control, lighting and signaling. EN 50155 and EN 45545-2 across the rail families.



CELDUC

Heaters and compressors from the catenary

Solid state relays built for the rail vehicle: the SDI protected DC relay at **750 V DC and 50 A**, the SCM to 1,700 V DC, okpac AC relays to 690 V for heating, compressors and switch-point heating, with the EN 45545-2 HL2 fire-behavior rating the vehicle needs. Reed and magnetic sensors for door detection, sealed, nothing to wear.

Control it

Commanded, coordinated. The switching station, the depot and the cab.



IMO

The switching station and the depot panel

Contactors with a **3 W sealed coil draw**, chosen for US rail switching stations running on solar, battery and mains, with cam switches and pilot lights beside them; UL-approved miniature circuit breakers, RCBOs and surge protection for the charger and depot circuits; Jaguar drives and iSmart or XGB logic for the wash bay and the workshop.



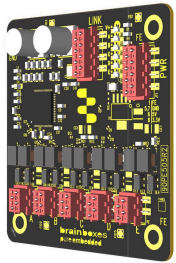
GETT

Interfaces for the cab, the platform and the yard

Stainless steel keyboards and keypads that **shrug off vandalism and weather**, capacitive keyboards that work through gloves, optical switches with no moving part, and InduSmart panel PCs with an IP65 front for the driver's desk and the maintenance bay. Complete outdoor terminals to IP65 for ticketing and access.

Prove it

Proven, not assumed. The data path that rides along, and the meter at the depot.



BRAINBOXES

Ethernet that rides along

Board-level Ethernet **55 by 55 by 10 millimeters**, rated **-40 to +85 C**, designed into the payload where every gram counts; it has flown on weather balloons and gone subsea on inspection vehicles. A compact switch in the roadside cabinet holds **-40 to +80 C**, and remote I/O beside it reads the gate, the door and the sensor.



BRAINBOXES

The wayside and the structure

Strain and vibration streams at **100 kHz** from a bridge, PoE cameras on 100-meter runs, a redundant switch pair in a DIN cabinet by the track: Ethernet-to-serial, analog input modules and PoE switches that present it all on one network the operations center already polls.



SATEC

DC to 1,500 V, one platform

PRO Series meters the traction substation and the charger on the same family: DC to 1,500 V through Hall-effect sensors at 0.2 percent, up to 3,000 A DC, and a **Class 0.2S revenue meter with a Class A Edition 3.1 power quality analyzer** on the AC service. What the fleet drew at 06:00 is a log, not an estimate.



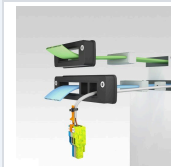
SATEC

Every charger feed, one device

BFM-II meters up to **54 single-phase or 18 three-phase circuits** from one DIN-rail unit, against two voltage sources. Each depot charger, the shop and the wash bay carry their own kWh, so **the demand charge has a face**. HACS split-core sensors clip on around the conductor, so it goes into a depot that is already running.

Foundation

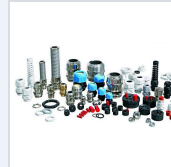
Looks simple. Fails first. Where the schematic meets the panel.



CONTA-CLIP

Terminals and entries that take the vibration

Spring-clamp terminal blocks that hold under vibration, KDS-FB flat-cable entries built for industrial trucks, cranes and elevators, and KDS split entries that pass a pre-terminated harness through a sealed wall, IP66 from **-40 to +120 C**.



WISKA

Sealing from a shipbuilding start

WISKA started on ship installations in 1919: glands including EMC versions, COMBI junction boxes to IP66, UV and ozone resistant, and venting, for the deck, the depot and the roadside cabinet.

DC breaks differently than AC

No zero crossing means the contactor has to stretch and cool the arc itself. Ask what a contactor breaks under load, not only what it holds; the two numbers are not the same.

Ratings are thermal-bound

A DC contactor's voltage rating is quoted at its maximum thermal current; at a lower current it switches a higher voltage. Spec the breaking capacity you need, not a cycle count, and split make life from break life when you write it.

Where we will say no

Anything deterministic, safety rated or inside the traction control loop stays with the controller vendor. Rail families carry EN 50155 and EN 45545-2; a listing for a North American build is confirmed on your exact configuration when we quote it. We do not represent batteries, motors or enclosures.

Talk it through at the design stage

If any part of this card raises a question mid-design, whether that is the contactor at the pack, the converter feeding the auxiliaries or the network on the vehicle, 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/transportation-solutions-rugged-components-for-evs-rail-aviation

THE MANUFACTURERS ON THIS CARD



WISKA