

CATIII HD

Heavy Duty Electronic Anti-Corrosion System — 6 to 12 Pad Systems

PRODUCT DESCRIPTION

The CATIII HD is CAT Systems' heavy-duty electronic anti-corrosion system for trucks, buses, mobile plant, machinery, larger air-conditioning and refrigeration units, and other large steel structures. **One CATIII HD control module drives 6 to 12 coupler pads**, so the signal is spread across a large structure from more points.

The control module generates a low-voltage signal with a specific waveform and frequency and impresses it into the metal through adhesive coupler pads. The system is designed to help manage corrosion on "free-air" steel structures — those not buried in soil or immersed in water, where traditional cathodic protection can't be used. It runs continuously from a 12 V or 24 V supply and detects the voltage automatically. CAT is designed to work **alongside paint and protective coatings** as part of a corrosion management program, not in place of them.

FEATURES & BENEFITS

- **Heavy-duty coverage** — one HD control module and 6 to 12 coupler pads; add 2 Pad Expansion Packs at any time
- **Works 24/7** — a continuous signal whenever the system is connected to power
- **12 V / 24 V automatic** — detects the supply voltage and adjusts its operation and diagnostics to suit
- **Battery-safe** — active low-voltage cut-out, so it won't flatten the battery
- **Self-diagnosing** — a status LED shows normal operation, supply faults and pad faults
- **No drilling** — adhesive coupler pads and a Velcro-mounted module; paint is not removed under the pads
- **Built tough** — rated for -30°C to +85°C; EMC certified (C-Tick, FCC and CE); 10-year product warranty

APPLICATIONS

- Trucks, prime movers, buses and coaches
- Mobile plant and machinery — mining, construction, earthmoving and agricultural equipment
- Large 4WDs, trailers and commercial vehicles with a 12 V or 24 V supply
- Larger air-conditioning and refrigeration units, fixed plant and steel structures, powered through a 12 V / 24 V DC converter



CATIII HD control module



Coupler pads, leads and splitters



HD module installed

TECHNICAL SPECIFICATIONS

PROPERTY	VALUE	PROPERTY	VALUE
Systems	CATIII-6HD, -8HD, -10HD, -12HD	Coupler Pads	6 – 12, split evenly: 3 + 3 to 6 + 6
Control Module	1 × CATIII HD, 2 output circuits	Expansion	2, 3, 4 or 5 × 2 Pad Expansion Packs (6, 8, 10, 12 pads)
HD 2 Pad System	HD module, fused harness, 2 pads, 2 × 2 m leads, Velcro, fuse, ties, wipes	Expansion Pack	2 pads, 2 splitters, 2 × 2 m leads, ties, wipes
Input Voltage	12 V / 24 V DC (automatic)	Operating Voltage	9 – 32 V DC
Low Voltage Cut-Out	11.8 V / 23.6 V	High Voltage Cut-Out	14.9 V / 29.1 V
Max Current Draw	25 mA	Cut-Out Current Draw	9 mA
Operating Temp.	-30°C to +85°C	Ground	Negative earth
Module Size	75 × 75 × 35 mm	Coupler Pad Size	70 × 70 × 5 mm
Fusing	In-line fuse (spare supplied)	Fixed Installs	Regulated 12 / 24 V DC converter, continuous duty

STATUS LED

LIGHT	MEANING	WHAT TO DO
Green — flashing or solid	Normal operation (solid: supply voltage very good)	Nothing
Yellow — flashing or solid	Supply voltage low or high	Start the engine and recheck (if green, test the battery); fixed installs: measure the converter output
Red — flashing or solid	Fault — module, pads or pad wiring	Check power, the earth wire (fixed installs), blue wires and pads; reset, then re-calibrate
No light	No power to the system	Check the battery or converter, fuse, isolator or mains switch, harness and connector

INSTALLATION AT A GLANCE

- **Coupler pads** go on a painted, predominantly flat metal surface — paint is not removed under the pads. Spread them evenly and as far apart as practical; coverage is greatest close to each pad.
- **Split the pads evenly** across the module's two output circuits, with one circuit on each side of the vehicle, machine or structure where possible.
- **Power:** vehicles and mobile plant run from the existing 12 V or 24 V battery. Air conditioners, fixed plant and structures need a regulated 12 / 24 V DC converter, with its negative output also earthed to the metal the pads are on — without it the system can't work or self-diagnose.
- **Wiring** stays clear of moving parts and hot components; any extension is similar-gauge multi-strand cable, soldered and sealed.
- Full steps, wiring diagram and troubleshooting: **CATIII HD Installation Guide**.

THE IMPORTANCE OF PAINT & COATINGS

CAT works **with** the vehicle's or structure's coatings, not instead of them. Its effectiveness depends on a sound dielectric (insulating) coating between the metal and the environment — in most cases, paint. The better the coating, the better CAT can do its job. A system must be applied, not just a device.

- **Bare metal:** where metal is left bare, a thin layer of ferric oxide (surface rust) may form. Prime and paint bare areas wherever practical.
- **Ageing paint:** as paint becomes thin and porous with age or oxidation, salt, acid and moisture can reach the metal beneath. Seal or re-coat these areas for best performance.
- **Damage:** repair stone chips, scratches and damaged coatings promptly, and treat existing rust before the system is fitted.
- **Underbody and cavities:** in harsh conditions, use CAT alongside suitable underbody coatings and cavity wax.
- **Keep it clean:** wash off salt, mud and chemicals regularly — especially underneath, and after coastal, beach, mine-site or farm use.

Checking the system: the status LED is the everyday check, so keep it visible. The output signal itself can only be checked with an oscilloscope, not a multimeter. At each service, check the pads for lifting or bubbles and the wiring for damage.

SAFETY

- Low-voltage DC equipment — keep the in-line fuse fitted (same rating only) and follow the maker's electrical procedures.
- Fixed installations: mount the converter dry and protected; any 240 V mains connection must be done by a licensed electrician.
- Prep Sol and thinners are flammable — use with good ventilation, away from ignition sources.

CERTIFICATIONS, TESTING & WARRANTY

EMC: C-Tick (Australia), FCC (USA), CE (Europe). **Salt-fog testing:** SGS Laboratories, April 2015 (report on request).

Warranty: 10 years against faults in manufacture or materials when fitted to the installation instructions — register at catsystemsaustralia.com.au/register.

DISCLAIMER

This is not a specification. Information is given in good faith. Results depend on installation, coatings, environment and maintenance, which are beyond the supplier's control, so it is given without warranty, expressed or implied, other than the product warranty above and guarantees under the Australian Consumer Law. The CAT system is a corrosion management aid and should be used with suitable protective coatings. Final determination of suitability for any application is the sole responsibility of the user. CAT Systems Australia reserves the right to change specifications without notice.