

INTRODUCTION

The CAT Electronic Anti-Corrosion System is designed to help manage corrosion on trucks, buses, mobile plant, machinery, larger air-conditioning and refrigeration units. The CATIII HD control module impresses a low-voltage signal into the metal through 6 to 12 adhesive coupler pads. The system runs from a 12 V or 24 V DC battery or power source. The module detects the input voltage automatically and adjusts its operation and diagnostics to suit.

The control module has **2 output circuits** (blue wires). Coupler pads are wired like a daisy chain, starting at the module and using the main harness, extension leads and pad wiring splitters supplied. It is best practice to have the same number of pads on each circuit and, where possible, to use one circuit for each side of the vehicle, machine or structure.

Please read these instructions before you start. Familiarise yourself with the size and shape of each component and the length of the wiring supplied. If you need help, call us on (08) 6262 7703.

PACKAGE CONTENTS

- 1 × CATIII HD control module
- 1 × Fused wiring harness
- Coupler pads (6, 8, 10 or 12)
- 2 m blue extension leads
- Pad wiring splitters
- Velcro strip to mount the control module
- Black cable ties and alcohol wipes
- Spare fuse and fitting instructions



CATIII HD control module



Coupler pads, leads and splitters



HD module installed

STEP 1 — PLAN THE INSTALLATION

1. Remove all components from the package and extend the wiring harness. The length of the wiring often decides the mounting sites you choose.
2. **Choose a site for the control module:**

APPLICATION	CONTROL MODULE LOCATION
Vehicles, trucks, mobile plant and machinery	Ideally on the same side as the battery, as far as possible from the exhaust manifold, where the status LED can be seen.
For All Other Applications (Air conditioners, Fixed Plant)	On a secure solid surface ideally where the status indicator light can be seen and close to the power source.

3. **Choose sites for the coupler pads.** Pads must go on a **painted, predominantly flat metal surface** — paint is not removed under the pads. The more pads used, the greater the coverage, and coverage is always greatest close to each pad.

APPLICATION	COUPLER PAD LOCATIONS
Vehicles, trucks, mobile plant and machinery	Mount the first pair inside the engine bay — on the firewall, inner guard or wheel arch — as far apart as possible. Spread the rest evenly along the vehicle or machine: both chassis rails and cross-members, underside of the floor or cab, inner guards, inner walls behind trim, the rear of the cab and the body or tray. On a truck with a separate body, put pads on both the cab and the chassis.
For All Other Applications (Air conditioners, Fixed Plant)	On flat painted metal surfaces, low down and spread as evenly as practical. Avoid hot surfaces, coil fins, unpainted galvanised sheet and panels removed for service.

4. **Split the pads evenly across the two output circuits** (3 + 3 on a CATIII-6HD, 4 + 4 on an 8HD, 5 + 5 on a 10HD, 6 + 6 on a 12HD) and, where possible, run one circuit to each side.
5. **Dry-fit the wiring** before fixing anything:
 - a. Plug the main connector of the harness into the control module and loosely place the module in position.
 - b. Separate the black (–) and red (+) power wires and check they reach the battery or power source.

- c. Separate the 2 blue pad wires and find a route to the first 2 pads, using the 2 m blue extension leads where needed. Extra cable may be spliced in if it is similar-gauge multi-strand cable and every joint is soldered and sealed.
- d. Connect the remaining pads on each circuit with the pad wiring splitters and extension leads.
- e. We recommend enclosing the wiring in split tubing or conduit for added protection and a neat finish.
- f. Check all wiring is clear of moving parts and hot fittings and leave service panels removable.

STEP 2 — MOUNT THE COMPONENTS

Control module

- a. Clean the mounting area with Prep Sol, thinners or one of the alcohol wipes provided.
- b. Attach the Velcro strip to the back of the module, remove the backing and press the module squarely and firmly onto the cleaned surface. (The Velcro lets you remove the module later.)
- c. Secure with a suitable fastener if wanted.
- d. Plug in the main harness connector if you haven't already.

Coupler pads (repeat for each pad)

- a. Clean the mounting area with Prep Sol, thinners or an alcohol wipe.
- b. Remove the adhesive backing and roll the pad into position from one edge, so no air is trapped. Press and rub firmly for full adhesion.
- c. For extra security, run a bead of black automotive Sikaflex around the edge of the pad.
- d. Plug the pad into its splitter or blue extension lead.

STEP 3 — CONNECT THE POWER

Option A — Vehicles, mobile plant and machinery (existing battery)

- a. Connect the **black** lead to the battery **negative (-)** terminal.
- b. Connect the **red** lead to the battery **positive (+)** terminal.
- c. The battery negative is already earthed to the chassis — the same metal the pads are on — so no extra earth is needed.

Option B — Other applications such as air conditioners or fixed plant (voltage converter)

- a. Fit a mains (240 V AC) converter with a regulated 12 V (or 24 V) DC output, rated for continuous duty. Mount it close to the control module, dry and protected; any connection to mains power must be done by a licensed electrician.
- b. Connect the **red** lead to the converter's **positive (+)** output.
- c. Connect the **black** lead to the converter's **negative (-)** output, **and run a second wire from that same negative output to the metal casing, chassis or frame the pads are mounted on.**
- d. Use a clean, paint-free, rust-free earth point — an existing earth stud, bolt or casing screw is ideal. Make it tight and protect it from moisture.

IMPORTANT — EARTH THE NEGATIVE OUTPUT

The voltage converter's negative (-) output must be earthed to the same metal structure as the coupler pads. The black lead to the control module completes the sensing and diagnostic return circuit through the pads and the metal. **Without this earth the system cannot work or self-diagnose.** It is the same principle as a vehicle, where the battery negative is earthed to the chassis.

Final checks

- a. The LED shines **solid green** when first connected, then **flashing or solid green** in normal operation.
- b. Check every connection is secure and tie up loose wiring with the cable ties supplied.
- c. Refit any covers, service panels or trim removed during installation.

TROUBLESHOOTING

First check the LED on the control module. **Green (flashing or solid) is normal — no fault.**

No light — no power to the module, or the module may be faulty

1. **Check the power source.** Vehicles: start the engine — if it doesn't start normally, fix that first; if it does, recheck the LED with the engine running. Air conditioners and fixed plant: check the converter is plugged in and switched on, and measure its DC output.
2. Check the red and black connections at the battery or converter.
3. Check the in-line fuse on the red wire.
4. Check any isolator or mains switch is on.
5. Check the whole power harness and that the main connector is pushed fully home.

Yellow light — supply voltage is outside the normal range

1. Vehicles: start the engine and recheck. If it turns green, the battery is likely failing — have it checked by an auto electrician.
2. Air conditioners and fixed plant: measure the converter's DC output. If it is outside the range in the specifications below, replace the converter.

Red light — a possible fault with the module, the pads or the pad wiring

1. Check the power source as for "No light". If the LED turns green, all is OK.
2. Non-vehicle installations: check the negative earth wire from the converter to the metal casing or structure — a missing or poor earth is the most common cause of a red light on air conditioners.
3. Check every blue wire for damage, and every pad for lifting at the edges or bubbles underneath (this needs to be significant to cause a problem).
4. **Reset:** remove the in-line fuse or unplug the module for a few seconds, then restore power. If the LED goes red again straight away or soon after, the module is faulty — contact us. If it is green, re-calibrate.
5. **Re-calibrate:** with the power disconnected, unplug every pad at the black connector nearest it. Restore power — the LED should be green. Reconnect all the pads — it should stay green. If it turns red at any time, contact us.

If the fault doesn't clear, re-check everything above before contacting us. The output signal itself can only be checked with an oscilloscope — a multimeter won't show it.

STATUS LED

LIGHT	MEANING	WHAT TO DO
Green — flashing	Normal operation	Nothing
Green — solid	Normal operation — supply voltage very good	Nothing
Yellow — flashing or solid	Supply voltage low or high	See Troubleshooting
Red — flashing or solid	Fault condition detected	See Troubleshooting
No light	No power to the system	See Troubleshooting

OPERATING SPECIFICATIONS

PROPERTY	VALUE	PROPERTY	VALUE
Coupler Pads	6 – 12 (3 + 3 to 6 + 6)	Control Module	1 × CATIII HD, 2 output circuits
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

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.

10-YEAR PRODUCT WARRANTY

This CATIII HD product is guaranteed for 10 years from the date of purchase against faults in manufacture or materials, provided it has been fitted in accordance with these installation instructions and the serial number has not been defaced.

This warranty does not apply to any defect, deterioration, loss, injury or damage caused by misuse or abuse of the product. Our obligation for a valid claim is limited to repair or, at our discretion, replacement of the product. Make all claims by contacting the supplier, CAT Systems Australia.

Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and to compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if they fail to be of acceptable quality and the failure does not amount to a major failure.

OWNER'S RECORD			
Date of purchase		Purchased from	
Invoice number		Serial number	
Installed on (vehicle / unit)		Installation date	

Register your warranty online at www.catsystemsaustralia.com.au/register. Not registering doesn't affect your rights under consumer law, but it helps us deal with any claim quickly. Thank you for choosing CAT.