



Bulletin 1334 & 1335

Modulator Logic Board 50387-002

Objective Modulator Logic Board **50387-002** replaces existing Modulator Logic Boards **50387** and **50387-001**. The **50387** board is currently used in Bulletin 1334 and 1335 Drives that have a 380, 415, or 460V AC input voltage. The **50387-001** board is currently used in Bulletin 1334 Drives that have a 575V AC input voltage. Replacement of existing boards is not mandatory, however old boards may no longer be ordered.

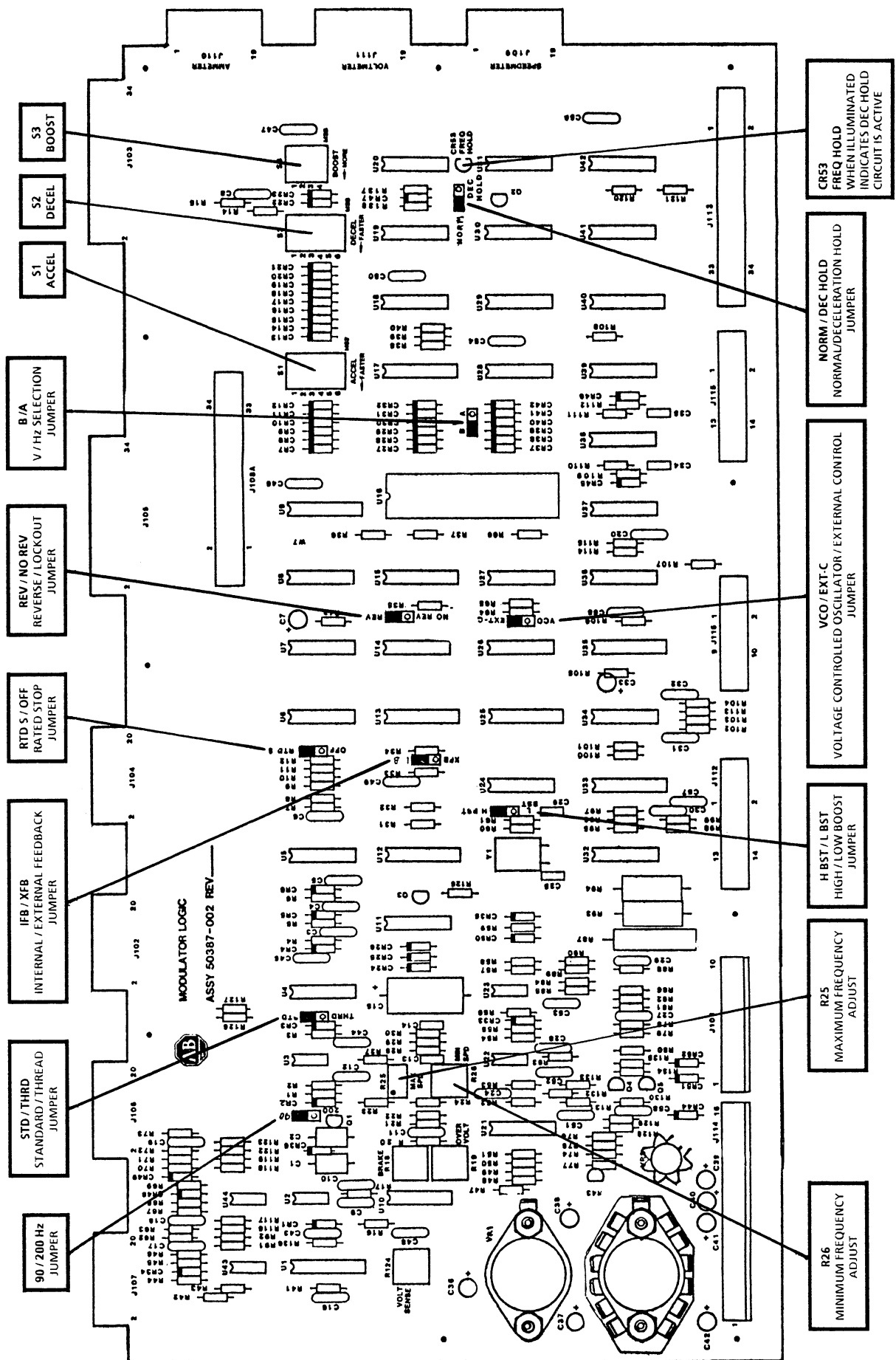
Modulator Logic Board **50387-002** is designed to retrofit to any existing Bulletin 1334 or 1335 Drive. New connections or rewiring is not required. In most applications all potentiometer, jumper, and switch settings will remain the same. There are two main differences between the new Modulator Logic Board and the older Modulator Logic Board.

- A “Decel Hold” jumper has been added to the new board. This feature may be used to avoid overvoltage trips of the Drive while decelerating high inertia loads. The overvoltage trip point remains the same value as described in the instruction manual for each Drive.
- A “Decel Hold” LED has been added to the new board to indicate when the Decel Hold circuit is active.

Because of these new features, once a new board is installed in your Drive, some additional adjustment and troubleshooting procedures will be required. Any changes should be noted in your instruction manual.

IMPORTANT

Modulator Logic Board 50387-002 Supplemental Kit Instructions are intended to provide information in addition to that already supplied in your instruction manual and are not intended to serve as stand-alone installation and adjustment procedures.



S3 BOOST
S2 DECEL
S1 ACCEL

B/A V / HZ SELECTION JUMPER

REV / NO REV REVERSE / LOCKOUT JUMPER

RTD S / OFF RATED STOP JUMPER

IFB / XFB INTERNAL / EXTERNAL FEEDBACK JUMPER

STD / THRD STANDARD / THREAD JUMPER

90 / 200 HZ JUMPER

CR53 FREQ HOLD WHEN ILLUMINATED INDICATES DEC HOLD CIRCUIT IS ACTIVE

NORM / DEC HOLD NORMAL/DECELERATION HOLD JUMPER

VCO / EXT-C VOLTAGE CONTROLLED OSCILLATOR / EXTERNAL CONTROL JUMPER

H BST / L BST HIGH / LOW BOOST JUMPER

R25 MAXIMUM FREQUENCY ADJUST

R26 MINIMUM FREQUENCY ADJUST

Adjustment

Chapter 5 Startup & Adjustment Procedures

Drive Data Log Sheets

The following setting should be added to all Drive Data Log Sheets.

□ **NORM/DEC HOLD Jumper** – set for _____

Modulator Logic Board Jumper Settings

□ V/Hz Jumper

As shown on the facing page, the V/Hz jumper setting on the new board has been relabeled B and A.

- For all Bulletin 1334 460V Drives, B = 7.6 V/Hz, A = 3.8 V/Hz.
- For all Bulletin 1334 575V Drives, B = 9.58 V/Hz, A = 4.79 V/Hz.
- For all Bulletin 1335 Drives, B = 7.6 V/Hz, A = 3.8 V/Hz.

□ **NORM/DEC HOLD Jumper**

Normally set to **DEC HOLD** (Deceleration Hold). Used to avoid overvoltage trips during deceleration of high inertia or regenerative loads.

In **DEC HOLD** the DC bus voltage is monitored by the Decel Hold circuit for a high voltage condition. If a high voltage condition is sensed — usually caused by decelerating a high inertia load too quickly — the deceleration of the Drive will be paused until the bus voltage decreases. Whenever the Decel Hold circuit is active, LED **CR53 FREQ HOLD** on the Modulator Logic Board will light.

In **NORM** the deceleration hold circuit is disabled. If a high Bus voltage occurs, the Drive will continue at the set deceleration rate. If the Bus voltage rises to the overvoltage trip level, the Drive will trip on an overvoltage fault. The **OVER VOLTS** fault LED will light at the diagnostic display but the **FREQ HOLD** will not be lit.

1. Depending on your Drive, if the **MOPC** or **OVERLOAD** LED comes on or a phase protect trip occurs during Decel, a reduction in the DC boost setting and/or a slower Decel rate may correct the problem.
2. If an **OVER VOLTS** fault trip occurs during Decel and selecting **DEC HOLD** or a slower decel rate does not correct the problem, consult your nearest Allen-Bradley Sales/Support Office for additional information.
3. If the Dynamic Brake option is used with the Drive, it is recommended to use the **DEC HOLD** position.

Appendix B Troubleshooting

Diagnostic LED Display

CR53 FREQ HOLD – Located on Modulator Logic Board 50387-002. When illuminated indicates that the **NORM/DEC HOLD** jumper is set to **DEC HOLD** and that the Dec Hold circuit has been activated due to a DC Bus Voltage approaching the overvoltage trip point.

Symptom	DIAGNOSTIC PROCEDURE
<p>Drive starts and runs properly, but trips during deceleration. Red OVER VOLTS fault LED is illuminated.</p>	<p>Deceleration Rate too fast for the motor/load inertia.</p> <p>STEP 1 – Check the position of the NORM/DEC HOLD jumper on the Modulator Logic Board. Move the jumper to the DEC HOLD position.</p> <p>STEP 2 Monitor LED CR53 FREQ HOLD on the Modulator Logic Board. During deceleration, with the NORM/DEC HOLD jumper in the DEC HOLD position, the LED should light before an overvoltage trip occurs. If the LED lights, decrease the Decel Rate setting. If the LED does not light, replace the Modulator Logic Board.</p> <p>STEP 3 If the Drive trips out on Over Volts during deceleration and a slower decel ramp is not acceptable, consult your nearest Allen-Bradley Sales/Support Office.</p>



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