Frequently Asked Questions

BEFORE YOU CALL

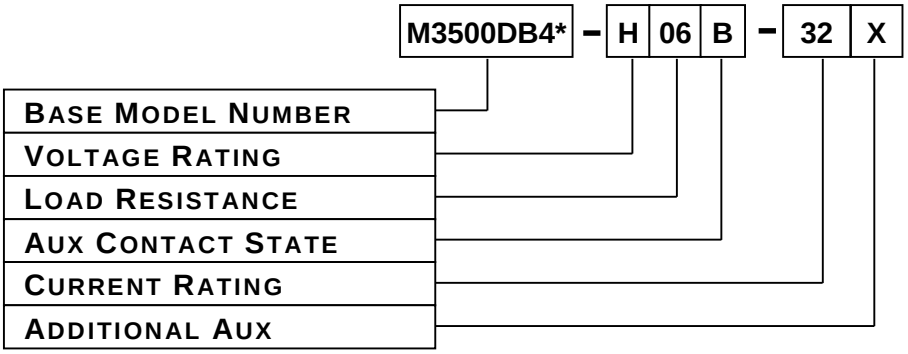
If technical help is required, please have the following information when calling:

- Model number of unit
- Serial number of unit
- Name of original equipment supplier (if available)
- Record the line voltage
- Record the DC Bus voltage immediately after the AC voltage
- Brief description of the application
- Drive and motor HP or kW
- kVA rating of power source
- Source configuration and grounding

Table of Contents

Frequently Asked Questions

1) What is the M3500DB part breakdown?



BASE MODEL NUMBER*

The Base Model Number for the standard Dynamic Safety Brake is **M3500DB**. The standard module meets category II safety requirements per EN-954.

Model number **M3500DB4** should be used if redundant, positive-guided braking contactors are needed to satisfy category IV safety requirements in accordance with EN-954.

MAXIMUM VOLTAGE RATING

The standard AC voltage rating for Model M3500DB and M3500DB4 Dynamic Safety Brake modules uses the letter **H**. These modules are intended for systems with a maximum of 460VAC input line voltage. Lower voltages can be used.

LOAD RESISTANCE

The load resistance rating indicates the internal load resistance of the braking module. For instance, a number **06** in the part number would indicate that the module has a load resistance of 6Ω per leg in a wye configuration.

See Section 6 for available part numbers.

AUXILIARY CONTACT STATE

The 32A and 43A units in both M3500DB and M3500DB4 Dynamic Safety Brake Modules are available with either a normally open (N.O.) or normally closed (N.C.) auxiliary contact output on each braking contactor for monitoring contactor status. The terms normally open and normally closed refer to the state of the auxiliary contact when the braking contactor is in a de-energized condition. This can occur with the loss of power or while in brake mode.

A letter **A** in this position of the part number indicates that the module is supplied with **Normally Closed** auxiliary contact outputs.

A letter **B** in this position of the part number indicates that the module is supplied with **Normally Open** auxiliary contact outputs.

The 65A and 150A units provide both auxiliary contacts (N.C. and N.O.) for each power contact, and therefore only use the **A** in this position.

Frequently Asked Questions

CURRENT RATING

The current rating indicates the maximum FLA rating of the braking module's internal braking contactor(s). The number **32** in the part number would indicate that the module's braking contactors are rated for 32 full load amps.

Both the M3500DB and M3500DB4 series of Dynamic Safety Brake modules are available with 32FLA, 43FLA, 65FLA, or 150FLA rated braking contactors.

See Section 6 for available part numbers.

ADDITIONAL AUXILIARY CONTACTS

An x in this position indicates that the signal filtering option is exchanged for an extra set of auxiliary contacts on the contactors. For the DB4 module, each contactor has an independent set of contacts.

2) What are the voltage ratings for the M3500DB?

These modules are designed to be used in 460VAC systems, however, lower voltages can be used.

3) How quickly does the M3500DB stop the servo motor?

How quickly the M3500DB stops the servo motor depends on the amount of current and the inertia of the load that is on the servo motor. The M3500DB is meant to provide a stopping mechanism in the event of an Emergency.

4) How does the M3500DB conform to EN-594?

EN-954 requires that a single fault in each of the associated parts does not lead to a loss of safety. If a fault does occur it does not lead to a loss of the safety of the product and it will be detected to prevent any loss of safety. The M3500DB4 is the secondary brake, and will stop the motor in case of power or motion controller failure. The M3500DB4 requires the use of an additional contactor to provide redundancy in the circuit.
The secondary contactor can accept a secondary voltage supply from a SECONDARY BRAKE input.

5) How often can the M3500DB be used for an Emergency Stop?

3 Full Load Stops per Hour.

6) What do I do if there is a problem with the M3500DB?

Any repairs or modifications to this unit must be made by Bonitron approved personnel only. Any repair or modification will void any remaining warranty.
Contact Bonitron with your model number, serial number, application detail, and any other information if there is an issue with the unit.

Frequently Asked Questions

7) How do you properly size the M3500DB for my application?

The current rating is determined by the size of the resistor. The maximum current rating should be determined by what the motor and the drive can handle.
The resistor size is independent of the drive's minimum Ohm rating.
The current is found by taking the operational DC voltage and dividing by the ohm rating of the resistor.