



Variable Speed VFD Controller

Installation, Maintenance and Parts Manual



DORNER MFG. CORP.
P.O. Box 20 • 975 Cottonwood Ave.
Hartland, WI 53029-0020 USA

INSIDE THE USA
TEL: 1-800-397-8664
FAX: 1-800-369-2440

OUTSIDE THE USA
TEL: 262-367-7600
FAX: 262-367-5827

For other service manuals visit our website at:
www.dorner.com/service_manuals.asp

Table of Contents

Introduction	2	Stand Mount	6
Warnings - General Safety	3	Wiring	7
Product Description	4	Preventive Maintenance and Adjustment	8
Specifications	4	Controller Setup	8
Variable Speed VFD Controller	4	Service Parts.....	9
Installation	5	VFD Motor Control.....	9
Required Tools.....	5	Return Policy.....	10
Conveyor Mount	5		

Introduction

IMPORTANT
Some illustrations may show guards removed. Do NOT operate equipment without guards.

Dorner’s Limited Warranty applies.
Dorner reserves the right to make changes at any time without notice or obligation.

- Upon receipt of shipment:
- Compare shipment with packing slip. Contact factory regarding discrepancies.
 - Inspect packages for shipping damage. Contact carrier regarding damage.
 - Accessories may be shipped loose. See accessory instructions for installation.

Warnings - General Safety

WARNING

The safety alert symbol, black triangle with white exclamation, is used to alert you to potential personal injury hazards.

DANGER



Climbing, sitting, walking or riding on conveyor will cause severe injury.
KEEP OFF CONVEYORS.

DANGER



DO NOT OPERATE CONVEYORS IN AN EXPLOSIVE ENVIRONMENT.

WARNING

Controller must be properly grounded. Failure to properly ground controller may cause injury to personnel.

DANGER



Hazardous voltage will cause severe injury or death.
LOCKOUT POWER BEFORE wiring.

WARNING



Exposed moving parts can cause severe injury.
DO NOT ATTEMPT ADJUSTMENTS WITH CONVEYOR RUNNING.

WARNING



Dorner cannot control the physical installation and application of conveyors. Taking protective measures is the responsibility of the user.

When conveyors are used in conjunction with other equipment or as part of a multiple conveyor system, **CHECK FOR POTENTIAL PINCH POINTS** and other mechanical hazards before system start-up.

Product Description

Dorner Variable Speed VFD Controllers (**Figure 1**) are AC motor speed controllers for Standard and Heavy Load VFD gearmotors.



Figure 1

NOTE

For additional information, refer to KB Electronics Controller Install and Operation Manual KBWA-23D shipped with your controller for controller operation details. See Specifications table for models.

Typical Components:

- 1 On/Off Switch
- 2 Speed Potentiometer
- 3 Forward/Stop/Reverse Switch

Specifications

Variable Speed VFD Controller

Part Number	Input Volts	Input Phase	Input Hz	Output Volts	Output Phase	Max. Hp	Max. Amps	Reversing
22MV1122B	115	1	60	230	3	0.5	2.4	Yes
22MV1122BR	115	1	60	230	3	0.5	2.4	No

Required Tools

- Hex key wrenches:
3 mm, 5 mm
- Flat-blade screwdriver

Installation Component List (Figure 2):

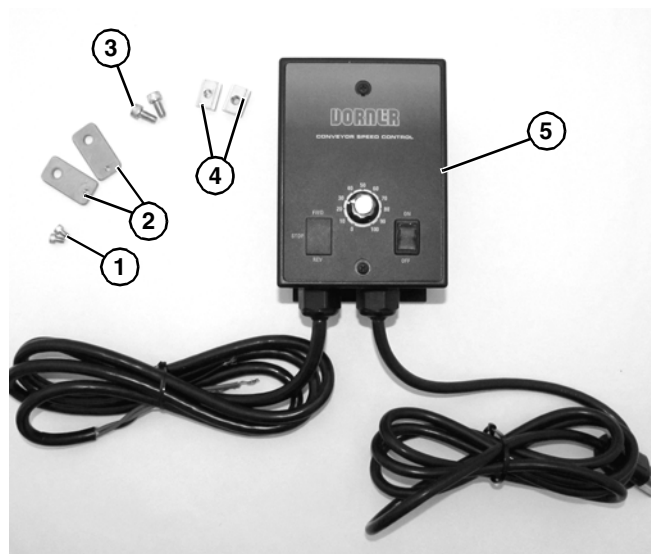


Figure 2

- | | |
|---|---|
| 1 | Socket Head Screw, M4-0.70 x 6 mm (2x) |
| 2 | Mounting Clip (x2) |
| 3 | Socket Head Screw, M6-1.00 x 12 mm (x2) |
| 4 | T-Bar, Single Drop-In (x2) |
| 5 | Controller |

Conveyor Mount

⚠ WARNING



Exposed moving parts can cause severe injury.

LOCK OUT POWER before removing guards or performing maintenance.

1. Assemble mounting clips (**Figure 3, item 1**) with screws (**Figure 3, item 2**) to the top of the controller.

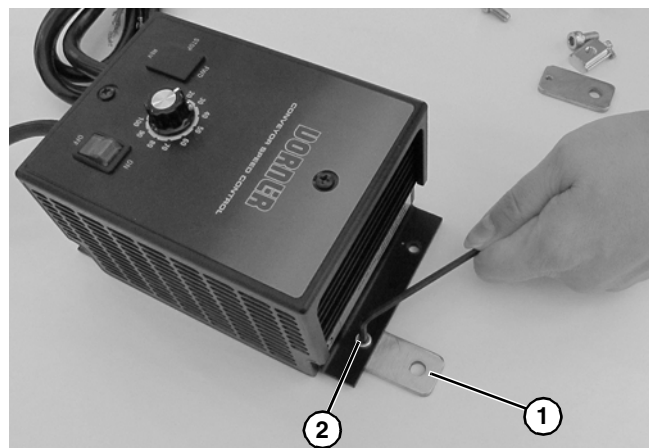


Figure 3

2. Install T-bars (**Figure 4, item 1**) into T-slots of conveyor.

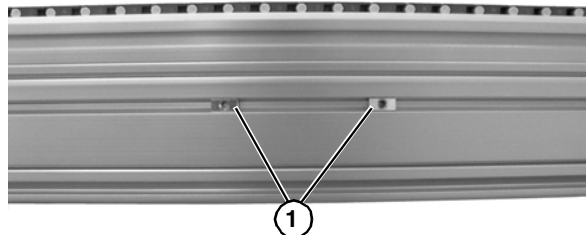


Figure 4

Installation


3. Attach controller to conveyor with two screws (**Figure 5, item 1**).



Figure 5

4. Slide controller to its desired mounting location along conveyor and tighten both screws.

Stand Mount

⚠ WARNING

Exposed moving parts can cause severe injury. LOCK OUT POWER before removing guards or performing maintenance.

1. Assemble mounting clips (**Figure 6, item 1**) with screws (**Figure 6, item 2**) to the side of the controller.

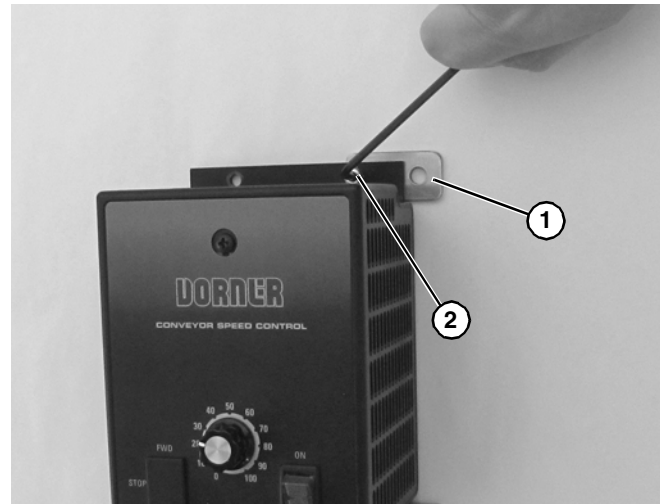


Figure 6

2. Install T-bars (**Figure 7, item 1**) into T-slots of stand leg.



Figure 7

3. Attach controller to stands with two screws (**Figure 7, item 2**).
4. Slide controller to its desired mounting location along conveyor and tighten both screws.

Wiring

DANGER



Hazardous voltage will cause severe injury or death.

LOCKOUT POWER BEFORE wiring.

WARNING



Exposed moving parts can cause severe injury.

LOCK OUT POWER before removing guards or performing maintenance.

WARNING

Controller must be properly grounded.
Failure to properly ground control box may cause injury to personnel.

NOTE

A circuit breaker or a disconnect switch with fuses must be provided in accordance with the National Electrical Code (NEC) and all local codes.

Refer to KB Electronics Controller Install and Operation Manual KBWA-23D shipped with your controller.

NOTE

For electrical wiring or troubleshooting, refer to information provided by controller manufacturer.

1. Connect the controller wires to the motor. Refer to wiring diagram on the inside cover of the motor's terminal box (**Figure 8, item 1**).

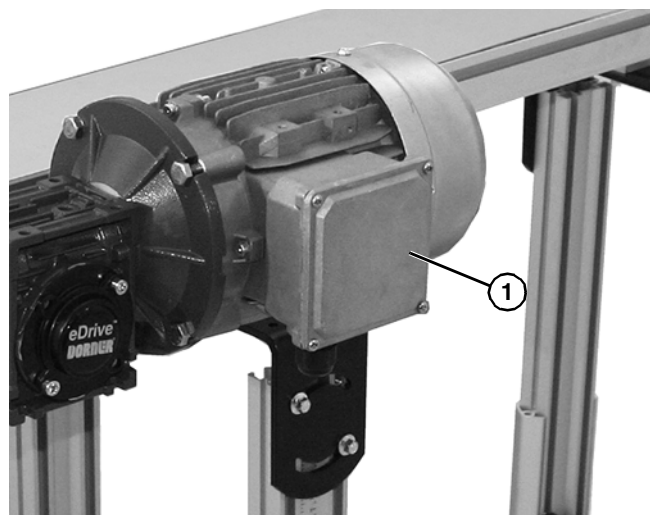


Figure 8

Preventive Maintenance and Adjustment

Controller Setup

DANGER



Hazardous voltage will cause severe injury or death.

LOCKOUT POWER BEFORE wiring.

WARNING




Exposed moving parts can cause severe injury.

LOCK OUT POWER before removing guards or performing maintenance.

NOTE

Refer to KB Electronics Controller Install and Operation Manual KBWA-23D shipped with your controller for Preventative Maintenance and Adjustment details.

NOTE

For replacement parts other than those shown in this section, contact an authorized Dorner Service Center or the factory. Key Service Parts and Kits are identified by the Performance Parts Kits logo . Dorner recommends keeping these parts on hand.

VFD Motor Control



Item	Part Number	Description
1	920406M	Socket Head Screw, M4-0.70 x 6 mm
2	202658	Mounting Clip (x2)
3	920612M	Socket Head Screw, M6-1.00 x 12 mm (x2)
4	639971M	T-Bar, Single Drop-In (x2)
5	827-101	Controller
	827-100	Reversing Controller

Return Policy

Returns must have prior written factory authorization or they will not be accepted. Items that are returned to Dorner without authorization will not be credited nor returned to the original sender. When calling for authorization, please have the following information ready for the Dorner factory representative or your local distributor:

1. Name and address of customer.
2. Dorner part number(s) of item(s) being returned.
3. Reason for return.
4. Customer's original order number used when ordering the item(s).
5. Dorner or distributor invoice number (if available, part serial number).

A representative will discuss action to be taken on the returned items and provide a Returned Goods Authorization (RMA) number for reference. RMA will automatically close 30 days after being issued. To get credit, items must be new and undamaged. There will be a return charge on all items returned for credit, where Dorner was not at fault. It is the customer's responsibility to prevent damage during return shipping. Damaged or modified items will not be accepted. The customer is responsible for return freight.

	Product Type								
	Standard Products								Engineered to order parts
Product Line	Conveyors	Gearmotors & Mounting Packages	Support Stands	Accessories	Spare Parts (non-belt)	Spare Belts - Standard Flat Fabric	Spare Belts - Cleated & Specialty Fabric	Spare Belts - Plastic Chain	All equipment and parts
1100	30% return fee for all products except: 50% return fee for conveyors with modular belt, cleated belt or specialty belts						non-returnable		case-by-case
2200									
2200 Modular Belt									
2200 Precision Move									
2300									
2300 Modular Belt									
3200									
3200 LPZ									
3200 Precision Move									
4100									
5200									
5300									
6200									
Controls									
7200 / 7300	50% return fee for all products								
7350	non-returnable								
7360									
7400									
7600									

Returns will not be accepted after 60 days from original invoice date. The return charge covers inspection, cleaning, disassembly, disposal and reissuing of components to inventory. If a replacement is needed prior to evaluation of returned item, a purchase order must be issued. Credit (if any) is issued only after return and evaluation is complete.

Dorner has representatives throughout the world. Contact Dorner for the name of your local representative. Our Customer Service Team will gladly help with your questions on Dorner products.

For a copy of Dorner's Warranty, contact factory, distributor, service center or visit our website at www.dorner.com.

For replacement parts, contact an authorized Dorner Service Center or the factory.



Dorner Mfg. Corp. reserves the right to change or discontinue products without notice. All products and services are covered in accordance with our standard warranty. All rights reserved. © Dorner Mfg. Corp. 2013

DORNER MFG. CORP.

975 Cottonwood Ave., PO Box 20
Hartland, WI 53029-0020 USA
TEL 1-800-397-8664 (USA)
FAX 1-800-369-2440 (USA)
Internet: www.dorner.com

Outside the USA:
TEL 1-262-367-7600
FAX 1-262-367-5827