

# PK14, PK14A and PK20 Kits

For use with 90 VDC Bison PM gearmotors



## **Installation of PK14 and PK14A kits**

### **Attach mounting bracket to motor**

Most Bison gearmotors have the hollowed rear armature shaft flush with the rear endbell. Certain earlier models have recessed shafts. The PK14 kit is designed for both motor designs, whereas the PK14A kit is specifically designed for the flush armature shaft motors.

### **Motors with flush armature shaft**

Attach the PK14A pickup mounting bracket directly to the endbell. Attach PK14 pickup mounting bracket to motor with the 3/16-in. standoffs and the longer screws included in the kit. Tighten screws firmly

### **Motors with recessed armature shaft**

#### **Install shaft and gear assembly**

1. Apply one drop of Loctite adhesive to the 3/16" dia shaft of the shaft/gear assembly. Excess adhesive will damage the motor if it is extruded when the shaft/gear assembly is inserted.

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2. Insert the assembly into the hollowed armature shaft. Seat its shoulder firmly against the armature shaft face. Do not hammer the shaft/gear assembly into place; if force must be used, tap the shaft gently!

### **Install pickup into the mounting bracket**

1. Remove one nut from the pickup. Thread pickup into tapped hole in mounting bracket. Hold second nut beneath the bracket hole so that it also becomes threaded on the pickup as it emerges from bracket.
2. Continue rotating pickup until its sensor tip just contacts a tooth of the gear. Back off the pickup until there is a clearance of 0.005-0.010in. between the sensor tip and the gear.
3. Rotate the shaft by hand through one complete revolution. If the clearance drops below 0.005 in. at any point, back off the pickup until this clearance requirement is met. Then continue to rotate the shaft through one revolution.

## **PK14 and PK14A Kit Contents**

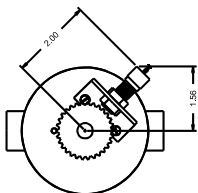
- 1 ea Electromagnetic pickup w/ mounting nuts P/N 211-0001
- 1 ea 0.5 cc Loctite adhesive . . . . .P/N 190-0013
- 1 ea Pickup mounting bracket, tapped . . . . .P/N 221-0060

plus (PK14 kit only)

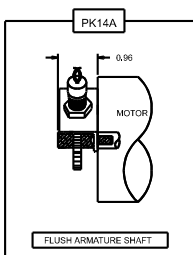
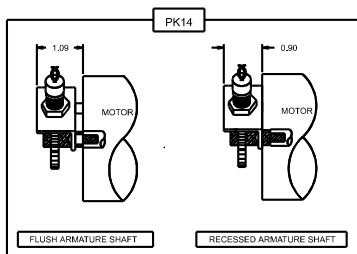
- 1 ea Shaft and 30-tooth gear assy . . . . .P/N 211-0040
- 2 ea 6-32 x 1/2" PH screw . . . . .P/N 150-0088
- 2 ea 3/16"L x 1/4" O.D. x 0.140" I.D. standoff P/N 153-0060

plus (PK14A kit only)

- 1 ea Shaft and 30-tooth gear assy . . . . .P/N 211-0030
- 2 ea 6-32 x 3/8" PH screw . . . . .P/N 150-0092



PK14 and PK14A

**Figure 1. PK14 and PK14A Installation**

## Installation of PK20 kit

### Attach sensor assembly to motor

1. Apply a drop of Loctite adhesive to the end of the shaft and insert into the hollowed armature shaft firmly, for a permanent installation.
2. Attach sensor board to endbell using spacers provided. Be certain that the sensor faces away from the motor and toward the shaft.
3. Place the magnet wheel on the shaft, its cylindrical surface centered on the exposed sensor face. Secure the wheel to the shaft with one drop of Loctite adhesive.
4. Loosen the mounting screws slightly to permit the sensor face to be moved as close to the magnet wheel edge as possible without touching it.
5. Tighten both screws securely.

### PK20 color code

Red = +5V DC supply to sensor

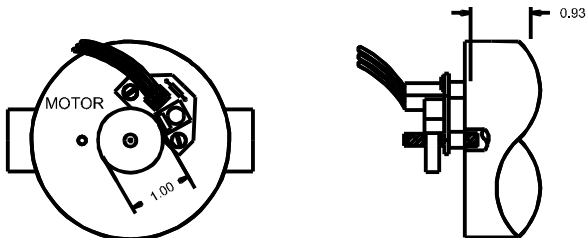
White = signal output

Black = signal common

## PK20 Kit Contents

- 1 ea Hall Effect sensor board assembly . . . . .P/N 200-0373
- 1 ea 60 pole, 1" dia magnet wheel . . . . .P/N 211-0039
- 1 ea 3/16" dia x 1-1/8" shaft . . . . .P/N 210-0054
- 2 ea 1/4" x 1/4" spacer . . . . .P/N 153-0007
- 2 ea 6-32 x 1/2" PH screw . . . . .P/N 150-0088
- 1 ea 0.5 cc Loctite® adhesive . . . . .P/N 190-0013

PK20



### COMPONENT DIMENSIONS:

211-0039 MAGNET WHEEL: 1"OD x 3/16"BORE x 0.2"THICK

210-0054 EXTENSION SHAFT: 1-1/8"L x 3/16"D

153-0007 SPACER (2): 1/4"L x 1/4"OD x 0.140"ID

MOUNTING HOLES: 0.10"D (NOM.) x 0.37"DEEP, ON 1.500" B.C.

## Figure 2. PK20 Installation

# Notes

# Notes

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# Unconditional Warranty

## A. Warranty

Minarik Corporation (referred to as "the Corporation") warrants that its products will be free from defects in workmanship and material for twelve (12) months from date of manufacture thereof. Within this warranty period, the Corporation will repair or replace such products that are returned to Minarik Corporation, 901 East Thompson Avenue, Glendale, CA 91201-2011 USA.

This warranty shall not apply to any product that has been repaired by unauthorized persons. The Corporation is not responsible for removal, installation, or any other incidental expenses incurred in shipping the product to and from the repair point.

## B. Disclaimer

The provisions of Paragraph A are the Corporation's sole obligation and exclude all other warranties of merchantability for use, express or implied. The Corporation further disclaims any responsibility whatsoever to the customer or to any other person for injury to the person or damage or loss of property of value caused by any product that has been subject to misuse, negligence, or accident, or misapplied or modified by unauthorized persons or improperly installed.

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In the event of any claim for breach of any of the Corporation's obligations, whether express or implied, and particularly of any other claim or breach of warranty contained in Paragraph A, or of any other warranties, express or implied, or claim of liability that might, despite Paragraph B, be decided against the Corporation by lawful authority, the Corporation shall under no circumstances be liable for any consequential damages, losses, or expense arising in connection with the use of, or inability to use, the Corporation's product for any purpose whatsoever.

An adjustment made under warranty does not void the warranty, nor does it imply an extension of the original 12-month warranty period. Products serviced and/or parts replaced on a no-charge basis during the warranty period carry the unexpired portion of the original warranty only.

If for any reason any of the foregoing provisions shall be ineffective, the Corporation's liability for damages arising out of its manufacture or sale of equipment, or use thereof, whether such liability is based on warranty, contract, negligence, strict liability in tort, or otherwise, shall not in any event exceed the full purchase price of such equipment.

Any action against the Corporation based upon any liability or obligation arising hereunder or under any law applicable to the sale of equipment or the use thereof, must be commenced within one year after the cause of such action arises.

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