



Kit Installation Instructions

Models PK15, PK16, and PK17

General Information

Models PK15 and PK17 are kits for NEMA 56C motors. Model PK16 is designed for NEMA145TC motors. The PK15 and PK16 contain a 3-piece mounting plate assembly, an electromagnetic pickup transducer with 9-in. leads, a 60-tooth ferromagnetic gear with hub, and the necessary bolts and washers for mounting. PK17 uses the 3-piece mounting plate assembly, a Hall effect sensor assembly board, and a 120-pole magnet plastic wheel.

The transducer feeds a digital tachometer (such as Minarik® Model VT6) or a closed-loop digital control (Minarik Model DLC300, for example).

Installation

Attach the mounting plate to the motor. A permanent attachment uses all four 3/8-in. bolts and the lockwashers, and flat washers. A temporary attachment, prior to assembly of a pump or gearbox, may be made using just two sets of bolts and washers. The flat washer protects the plastic mounting plate surface when tightening the bolt.

Fit the plate against the motor with its ribbed surface facing outward. Align the bolt holes. Insert each bolt through a lockwasher and a flat washer, then thread it into one of the four bolt holes. Tighten each bolt firmly if this is to be the final installation.

Otherwise, tighten just enough to hold the plate firmly in place while aligning the gear or magnet wheel (see below). After completing the alignment, loosen and remove the two mounting bolts. Insert these bolts and the other two 3/8-in. bolts, with lockwashers only, through the mating flange and back through the plastic mounting plate into the motor. Tighten firmly.

PK15 and PK16 assembly and installation

Two set screws are provided for locking the 60-tooth gear into position on the motor shaft. Start both set screws into the tapped holes in the gear hub. Slide the gear onto the motor shaft with the gear nearer the motor. Do not tighten the set screws yet.

Loosely attach the small metal transducer lockplate to the mounting plate, using the two screws provided. Now, let the transducer down through the hole in the junction box until it just contacts the gear. Raise the pickup 1/16-in. to clear all the gear teeth. Tighten the screws to lock the transducer temporarily into this position. Slide the gear in or out on the shaft until the center of the gear teeth is directly below the pickup tip. The axis of the pickup should bisect the gear width. Tighten both set screws in the gear hub firmly.

The tip of the pickup must be within 0.005 in. to 0.010 in. of the gear teeth. The best performance is achieved at minimum clearance. To allow for runout and wobble, however, the gap may be set anywhere within these tolerances. Loosen the lockplate screws just enough to permit the pickup to be raised and lowered with gentle force. Use a feeler gauge to set the gap. Tighten the lockplate screws very firmly.

Connect the pickup leads to shielded cable. These leads must not be run in the same conduit with power lines or motor input. The housing in this assembly accommodates 1/2-in. Romex-type connectors.

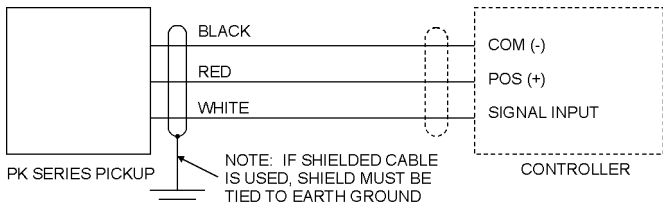
PK17 assembly and installation

Fasten the Hall effect assembly board to the mounting ring, feeding the leads up into the junction box. This can be done before or after attaching the plate to the motor.

Once the plate is attached, slide the magnet wheel onto the armature shaft and cement it into place directly below the sensor face.

Connect the leads to shielded cable. Do not run these leads in the same conduit as power leads or motor leads.

The assembly housing accepts 1/2-in. Romex connectors. See Figure 1 for connections.



**FIGURE 1. PK SERIES PICKUP
CONNECTION TO CONTROLLER**

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Document Number 250-0119, Revision 3

Printed in the U.S.A – 1/98

U.S.A. \$10.00, Outside U.S.A. \$11.00