



PROCESS CONTROL SYSTEMS, INC.
 327 LAKE HAZELTINE DRIVE, CHASKA, MN 55318

952-361-3026
 (Fax) 952-368-4129
 800-328-0738

MAXIGARD™



C5000 & C5000NF PULSE INITIATOR

Introduction

The MAXIGARD C5000 and C5000NF are designed to generate digital square wave pulses that are shaped to interface with most PLC, Count/Control systems and other electronic data processors. They are precision built of quality material and are factory tested to insure long life and trouble free operation.

Principle of Operation

When the monitored shaft (with the magnet disc or optional magnet wrap attached) is rotating, magnets mounted in the disc or wrap pass in front of the sensor, pluses are generated and shaped by the circuitry. These pulses are not impaired by build up dust or any other foreign material on the magnets or sensor. The pulse width can be adjusted for "on time" to accommodate the scan rate of most PLC (programmable controllers).

Components

THE C5000 AND C5000NF PACKAGE INCLUDES:

- 4" MAGNET DISC (OTHER OPTIONAL TARGETS AVAILABLE)
- CIRCUITRY
- MOUNTING BRACKET
- STATED ENCLOSURE

THE C5000 REQUIRES AN OUTSIDE POWER SUPPLY SOURCE OF 6-24 VDC, USUALLY AVAILABLE FROM THE INTERFACE EQUIPMENT.

CALL TOLL FREE  800-328-0738

www.maxigard.com
 E-mail: techsupport@maxigard.com

SECTION 1 - MECHANICAL

1.0 Magnet Disc

- 1.1 The end of the shaft to be monitored should be square to prevent excessive disc wobble.
- 1.2 Center drill and tap the shaft end. (Suggested #21 drill and #10-32NF tap). Bolt the magnet disc to the end of the shaft. Use "Loc-tite" to keep the bolt and disc tight on the shaft.
(see figure 1A, page 3).

2.0 Magnet Wrap (optional)

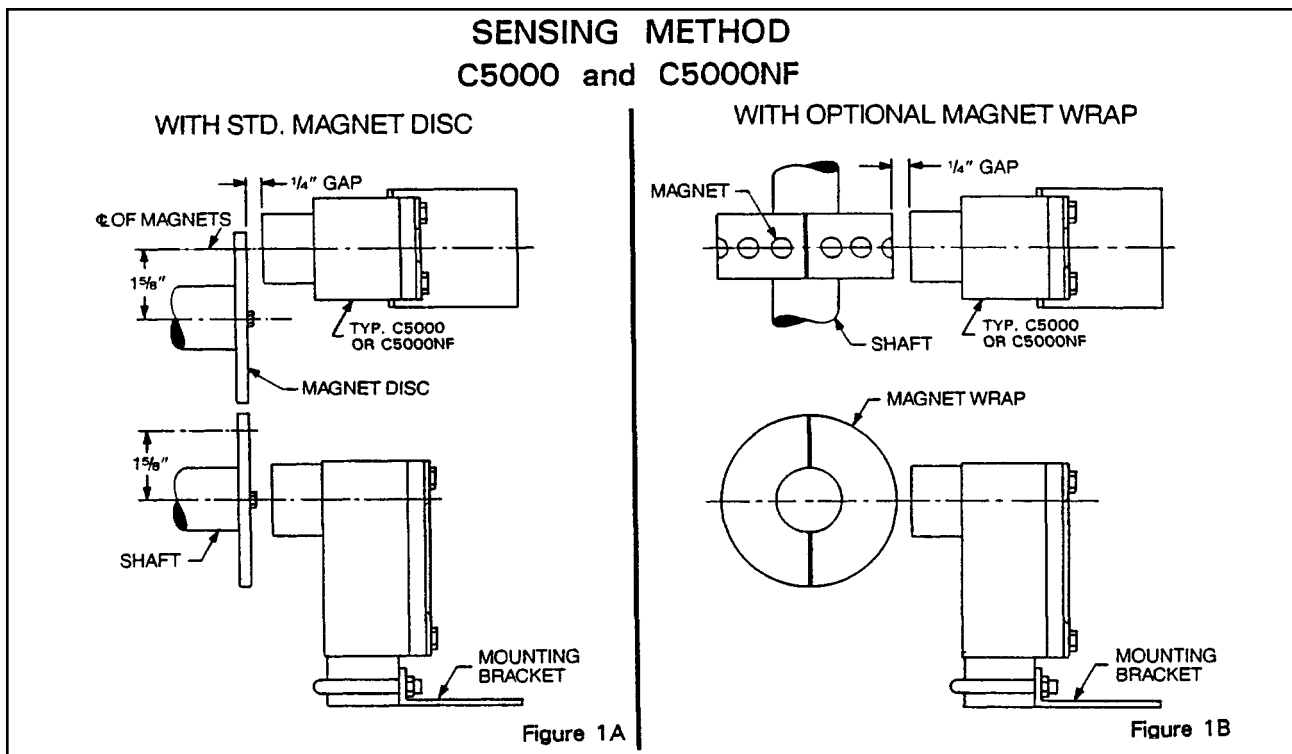
- 2.1 Separate the two halves of the magnet wrap by loosening the cap screws holding the two halves together.
- 2.2 Place both halves of the magnet wrap around the shaft. Re-insert and tighten the cap screws making sure the wrap is square to the shaft.
(see figure 1B, page 3).

NOTE

There will be a slight gap between the two halves after tightening. This gap will not affect the generated signal.

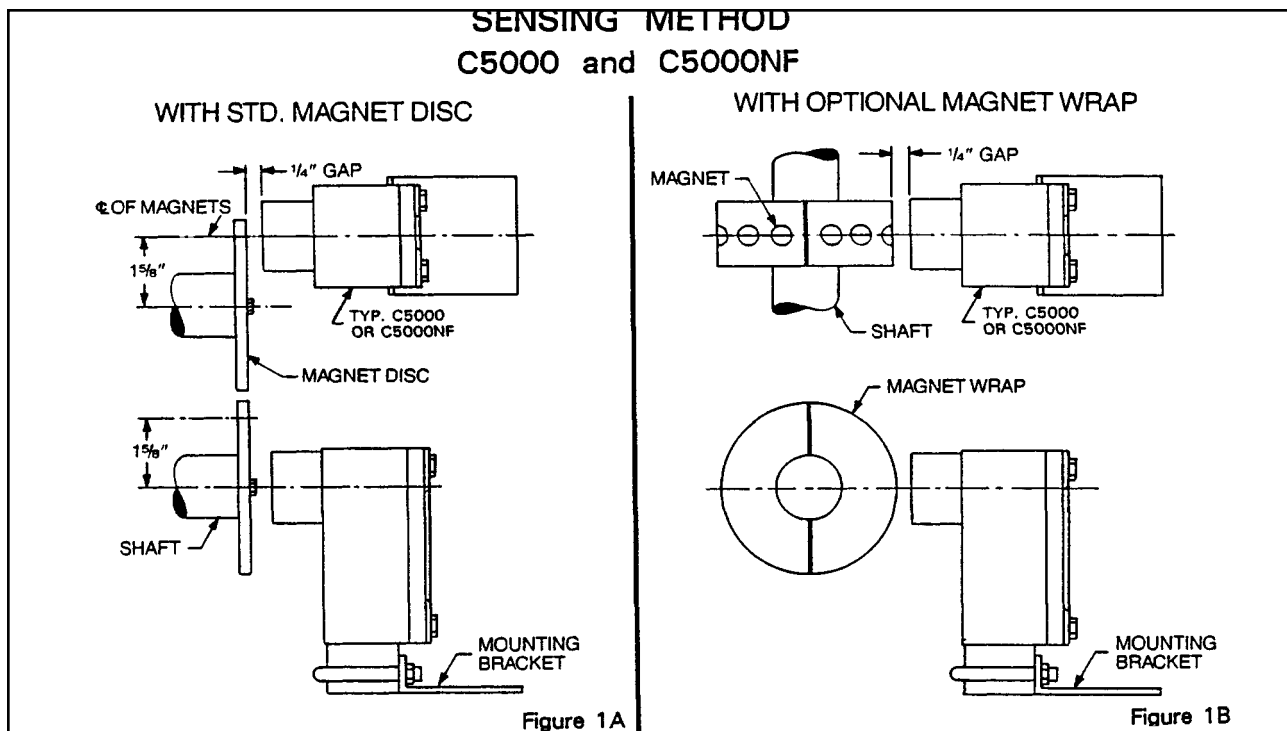
3.0 Mounting the Sensor

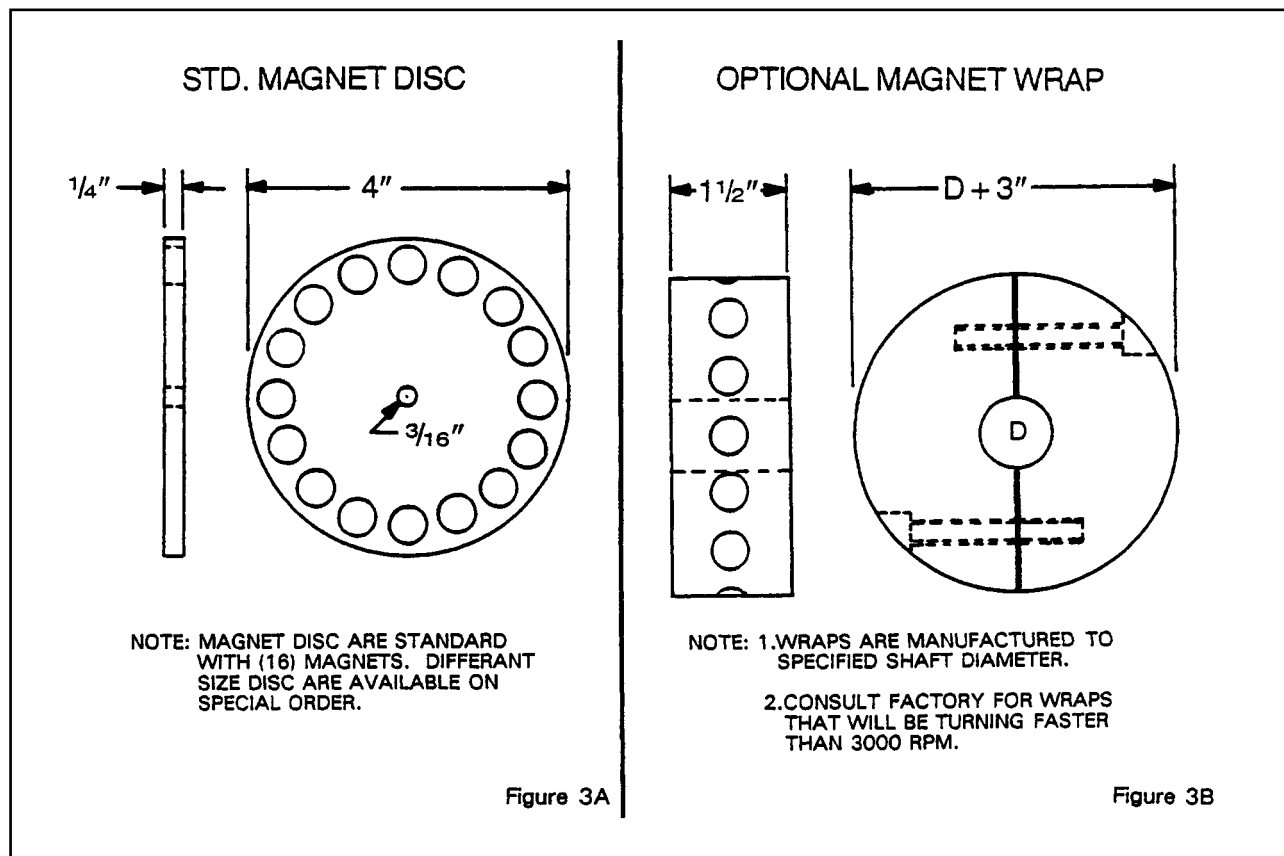
- 3.1 Place the sensor so that it is centered directly in front of the magnets in the disc or optional wrap.
(see figure 1A & 1B, page 3).
- 3.2 The gap setting between the sensor and magnet disc should be approximately 1/4" - 3/8".



4.0 Sensor Enclosure

- 4.1 Model C5000, rated CL. 1, GR. C and D, CL. 11, E, F and G. This is not waterproof. (see figure 2A, page 3)
- 4.2 Model C5000NF, rated NEMA 3 PVC. (see figure 2B, page 3)





1

SECTION 2 - FIELD WIRING

5.0 Wiring and Pulse Width Adjustment

NOTE

The C5000 requires an external power supply usually available from the interface device for input and output connections.
(see figure 4, page 5)

5.1 Output selection, (sinking or sourcing)

5.1.1 Position the jumper tabs as required for sinking or sourcing.
(see figure 4, page 5)

5.1.2 If bench testing, use a 2K ohm load across the output. For pull-up, use the sinking configuration, for pull-down, use the sourcing configuration.

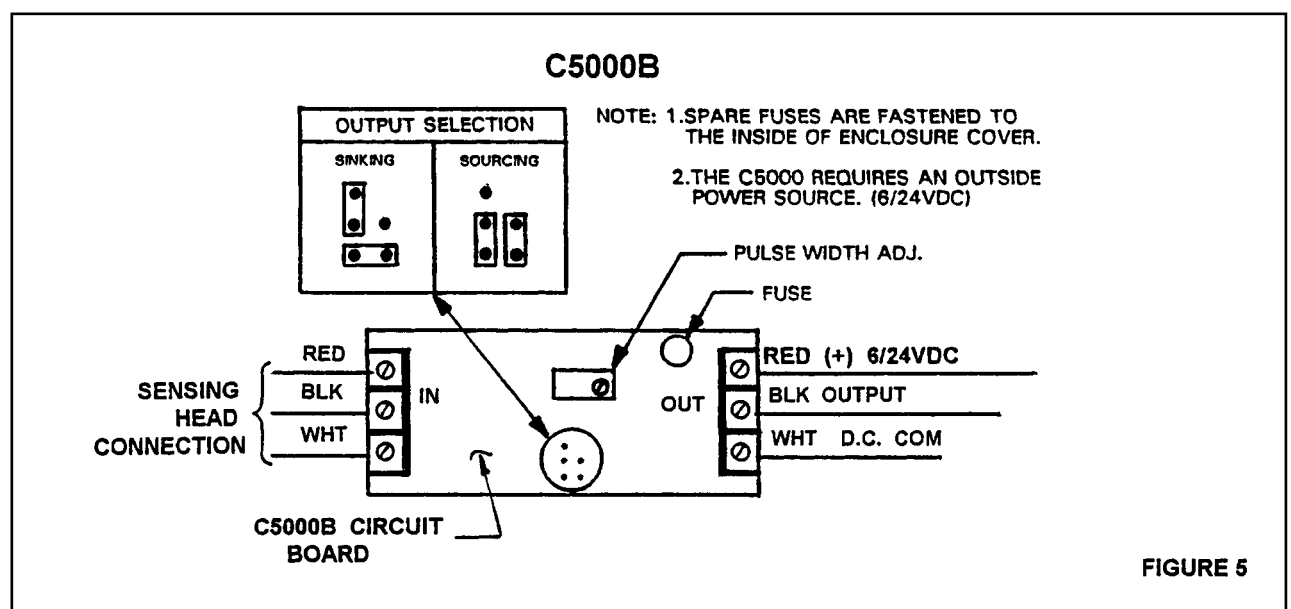
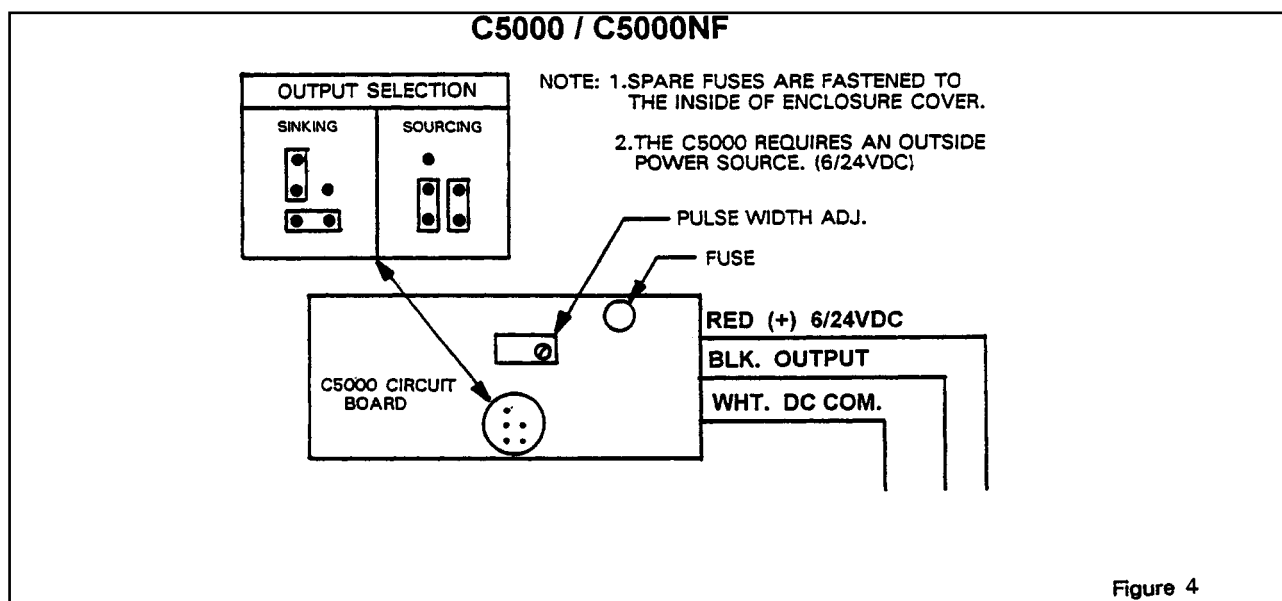
5.2 Pulse width adjustment (0.1 to 100 MS)

NOTE

The pulse width has been factory preset at 35 MS @ 50 RPM using a 16 magnet disc, unless otherwise specified with order.

5.2.1 Locate pulse width adjustment POT, on the circuit board.
(see figure 4, page 5)

5.2.2 Turn POT, screw (C.C.W.) to increase pulse width, (C.W.) to decrease pulse width.



LIMITED WARRANTY

Process Control Systems, Inc. will repair or replace, at their option, F.O.B. factory, any part or unit which proves to be defective in material or workmanship within five years of purchase date, provided that part of the unit was installed and operated as recommended, to be established by examination of the part or unit at the factory. Goods returned under warranty must be shipped prepaid to the factory and accompanied by the serial number, description of defect, order number and date of purchase.

This warranty shall not apply to any Maxigard™ product which shall have been repaired or altered outside of the Process Control Systems factory or has been subject to misuse, negligence or accident.

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There is no further warranty either expressed or implied beyond that set forth herein.