



For GPD 515 or GPD 503  
Adjustable Frequency Drives

## PULSE MONITOR (PO-36F) MODEL DS392

Before installing this option, a **TECHNICALLY QUALIFIED INDIVIDUAL**, who is familiar with this type of equipment and hazards involved, should **READ** this **ENTIRE INSTRUCTION SHEET**.

### IMPORTANT

This option may have been installed by the factory. However, certain steps can only be completed at the installation site. Therefore, review and then perform those steps which complete the installation process.

### INTRODUCTION

When installed, this option allows the user to employ a high accuracy, isolated pulse train signal to monitor GPD 515 or GPD 503 output frequency. The user has 1 of 5 selections: 1F, 6F, 10F, 12F or 36F, with 1F synchronized with the drive output frequency.

### CAUTION

**The option card uses CMOS IC chips. If proper electrostatic discharge (ESD) protective procedure is not used when handling the card, the ICs may be damaged, resulting in erratic performance of the drive.**

### INSTALLATION

1. Disconnect all electrical power to drive.
2. Remove drive front cover. Check that CHARGE indicator lamp inside drive is off.
3. Verify voltage has been disconnected by using a voltmeter to check for voltage at incoming power terminals (L1, L2, L3).

### WARNING

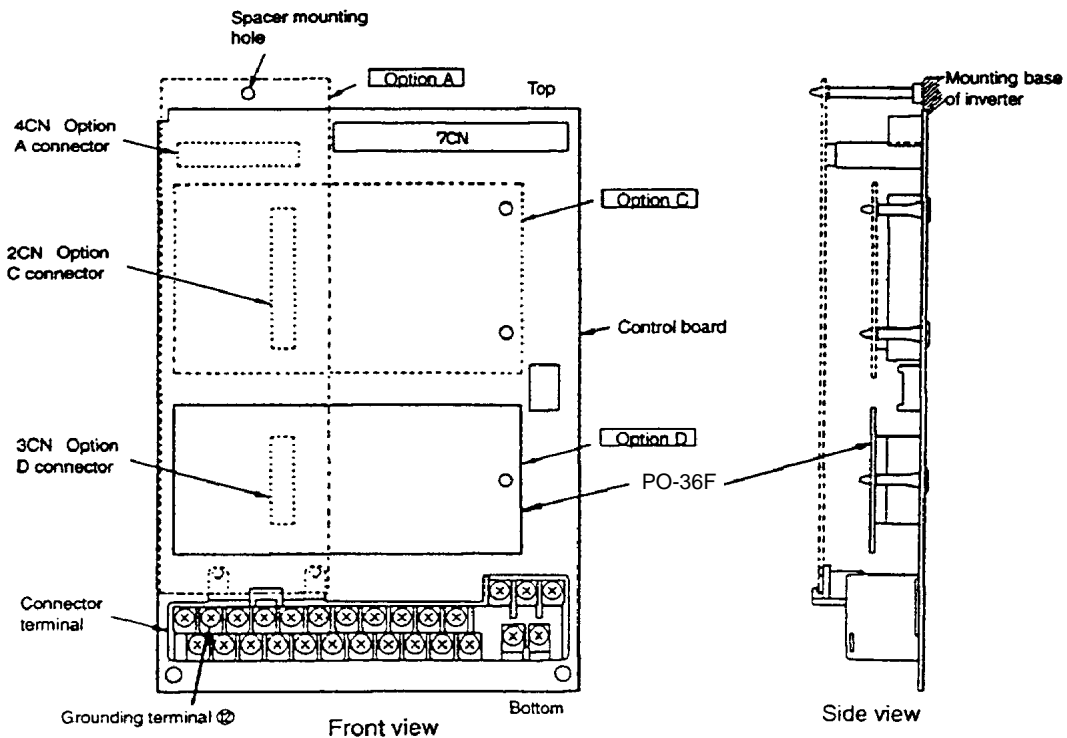
**HAZARDOUS VOLTAGE CAN CAUSE SEVERE INJURY OR DEATH. LOCK ALL POWER SOURCES FEEDING DRIVE IN "OFF" POSITION.**

**NOTE:** If this option is being installed on a GPD 515 with speed feedback, the speed feedback card needs to be temporarily un-installed to allow access to the connector 3CN on the drive's Control Board and terminals TD1 and TD2 on the PO-36F option card.

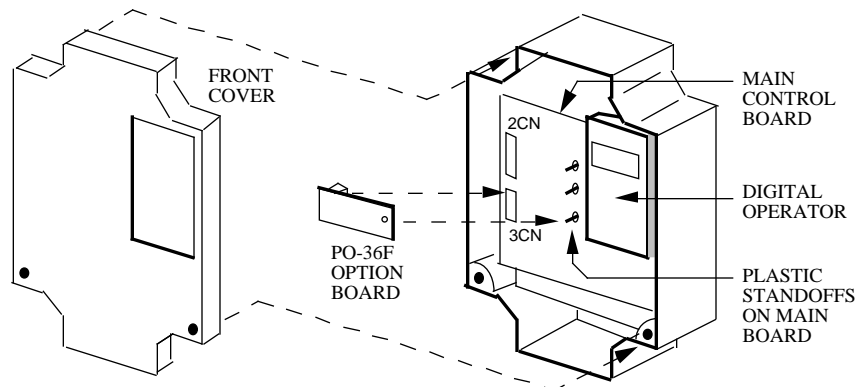
4. See Figure 1 (GPD 515) or Figure 2 (GPD 503). Install the option on the Main Control Board, 1PCB, and ensure 3CN is properly connected. Make sure Electrostatic procedure is followed.

CHANGE	RECORD			
1	STD-4687 3-1-91			
2	STD-6601 6-13-96			

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SHEET NO. 1 OF 5  
REL. 02/7/91 (m-df)



**Figure 1. Installation of Pulse Monitor (PO-36F) in GPD 515**



**Figure 2. Installation of Pulse Monitor (PO-36F) in GPD 503**

**Table 1. Specifications**

Parameter	Value
Output Pulse Train	1F, 6F, 10F, 12F or 36F
Output Voltage	+12V (isolated) $\pm 10\%$
Output Current	20mA Max.

Control voltage input (from drive): 12V (isolated)

5. Connect the Pulse Monitor's grounding (green) wire to terminal 12 of the drive.
6. Wiring. See Figure 3 for Pulse Monitor connections. See Table 2 for terminal functions.

Refer to Sheet 1 for latest change.

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**Table 2. Terminal Functions of PO-36F**

Terminal	Function	Signal Level	Notes
TD1	Pulse train signal output 1F, 6F, 10F, 12F or 36F (F = drive output freq.)	Output voltage: +12v $\pm$ 10% Output current: 20mA Duty: 50%	— Output Accuracy: 0.02% (sampling time: 1 second)
TD2	Pulse train common	0V	— Terminal screws are metric size M3.

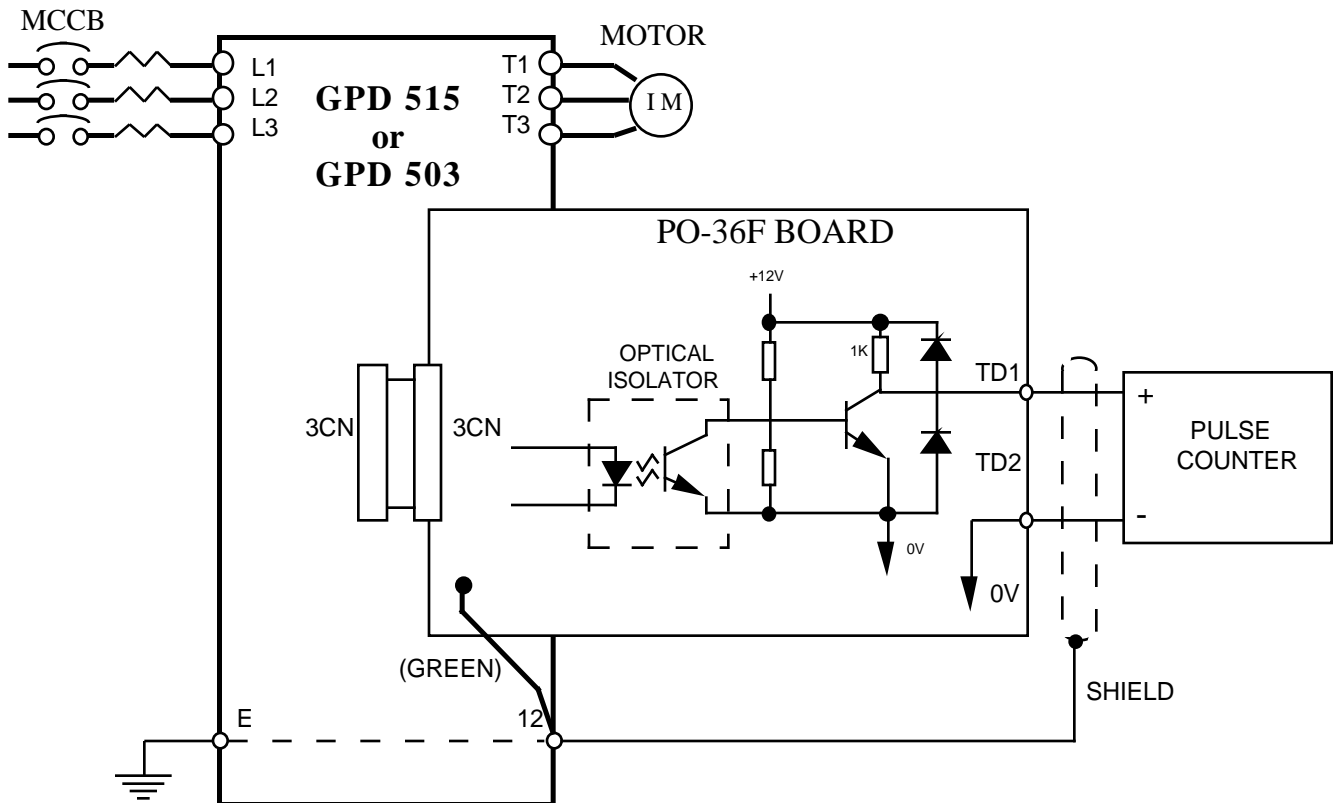
**CAUTION**

KEEP PULSE MONITOR (I.E. CONTROL CIRCUIT) WIRING SEPARATE FROM MAIN CIRCUIT INPUT/OUTPUT WIRING.

**CAUTION**

TO PREVENT ERRONEOUS OPERATION CAUSED BY NOISE INTERFERENCE, USE SHIELDED CABLE FOR CONTROL WIRING, AND LIMIT DISTANCE TO 50M (165 FEET) OR LESS.

Route wires from the drive and connect to the peripheral device. Refer to "Electrical Installation" in the drive's technical manual for further information on use of shielded cable.



**Figure 3. Interconnection for Pulse Monitor (PO-36F) Circuit**

Refer to Sheet 1 for latest change.

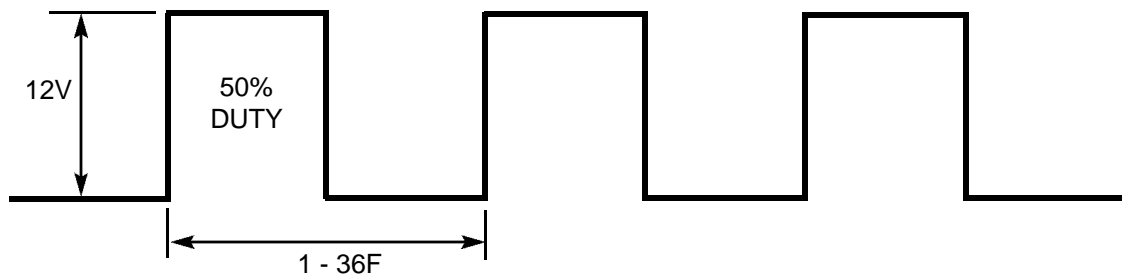
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7. Adjustments.

A. GPD 515: There are no adjustments to be made on the Pulse Monitor option; however, the GPD 515 will have to be reprogrammed for the input requirement of the remote device. See Table 3 and Figure 4.

**Table 3. F7-01 – PO-36F Output Pulse Train Selection**

Set Value	Output Pulse Train Signal	Applicable Range
0	1F; GPD 515 output frequency x 1 (synchronized)	0.50 – 400.0Hz
1	6F; GPD 515 output frequency x 6	2.56 – 400.0Hz
2	10F; GPD 515 output frequency x 10	1.53 – 400.0Hz
3	12F; GPD 515 output frequency x 12	1.28 – 400.0Hz
4	36F; GPD 515 output frequency x 36	0.85 – 400.0Hz



**Figure 4. PO-36F Output Pulse Train Waveform**

B. GPD 503: There are no adjustments to be made on the Pulse Monitor option; however, the GPD 503 will have to be reprogrammed for the input requirement of the remote device. See Table 4 and Figure 5.

**Table 3. Sn-27 – PO-36F Output Pulse Train Selection**

Sn-27 Digits	Set Value	Output Pulse Train Signal	Applicable Range
<u>X X X X</u> *	000X	1F; GPD 503 output frequency x 1 (synchronized)	0.50 – 400.0Hz
	001X	6F; GPD 503 output frequency x 6	2.56 – 400.0Hz
	010X	10F; GPD 503 output frequency x 10	1.53 – 400.0Hz
	011X	12F; GPD 503 output frequency x 12	1.28 – 400.0Hz
	100X	36F; GPD 503 output frequency x 36	0.85 – 400.0Hz

\* If programmed to a value not shown in table, pulse signal will NOT be outputted.

8. Reinstall and secure drive cover.
9. Place this instruction sheet with the drive's technical manual.

THIS COMPLETES INSTALLATION OF THIS OPTION.