Kit Instructions

1334-MOD-E

Local Programmable Speed Meter

Description

The 1334-MOD-E provides a (5) digit LED readout of Drive frequency which can be programmed to display Drive RPM, FPM, Hz, etc. The Programmable Speed Meter Display Board has been factory programmed to display 060.00 at 60 Hz.

The 1334-MOD-E Local Programmable Speed Meter may be used with:

- **Bulletin 1334 5-10 HP 460V Series A Drives**
- **Bulletin 1334 3-10 HP 460V Series B Drives**
- **Bulletin 1334 15-50 HP 460V Series A Drives**
- **Bulletin 1334 15-50 HP 575V Drives**
- **Bulletin 1335 12 & 16 Amp Variable Torque Drives**
- **Bulletin 1335 22-96 Amp Variable Torque Drives**

If a remote Bulletin 1334 or 1335 display is required, the 1334-MOD-E2 Remote Programmable Speed Meter Option Kit must be used.

Kit parts are designed to fit into existing mounting provisions on the Drive chassis without the need to modify the chassis. When properly mounted, the speed display can be viewed through the display window of the Drive enclosure without affecting the enclosure rating.

Each 1334-MOD-E Option Kit Includes:

- (1) Programmable Speed Meter Display Board, P/N 50381
- (4) $\frac{3}{4}$", $\frac{1}{4}$-Turn Standoffs, P/N 201106
- (1) 3-10 HP/12 & 16 Amp Ribbon Cable Assembly, P/N 41442-001
- (1) 15-50 HP/22-96 Amp Ribbon Cable Assembly, P/N 41442-002
- (3) Adhesive Backed Ribbon Cable Clamps, P/N 200391
- (1) Ribbon Cable Caterpillar Grommet, P/N 120613

Installation

WARNING

Only personnel familiar with the Drive and its associated machinery should plan or implement the installation, startup, and adjustment of MOD kits. Failure to comply may result in personal injury and/or equipment damage.

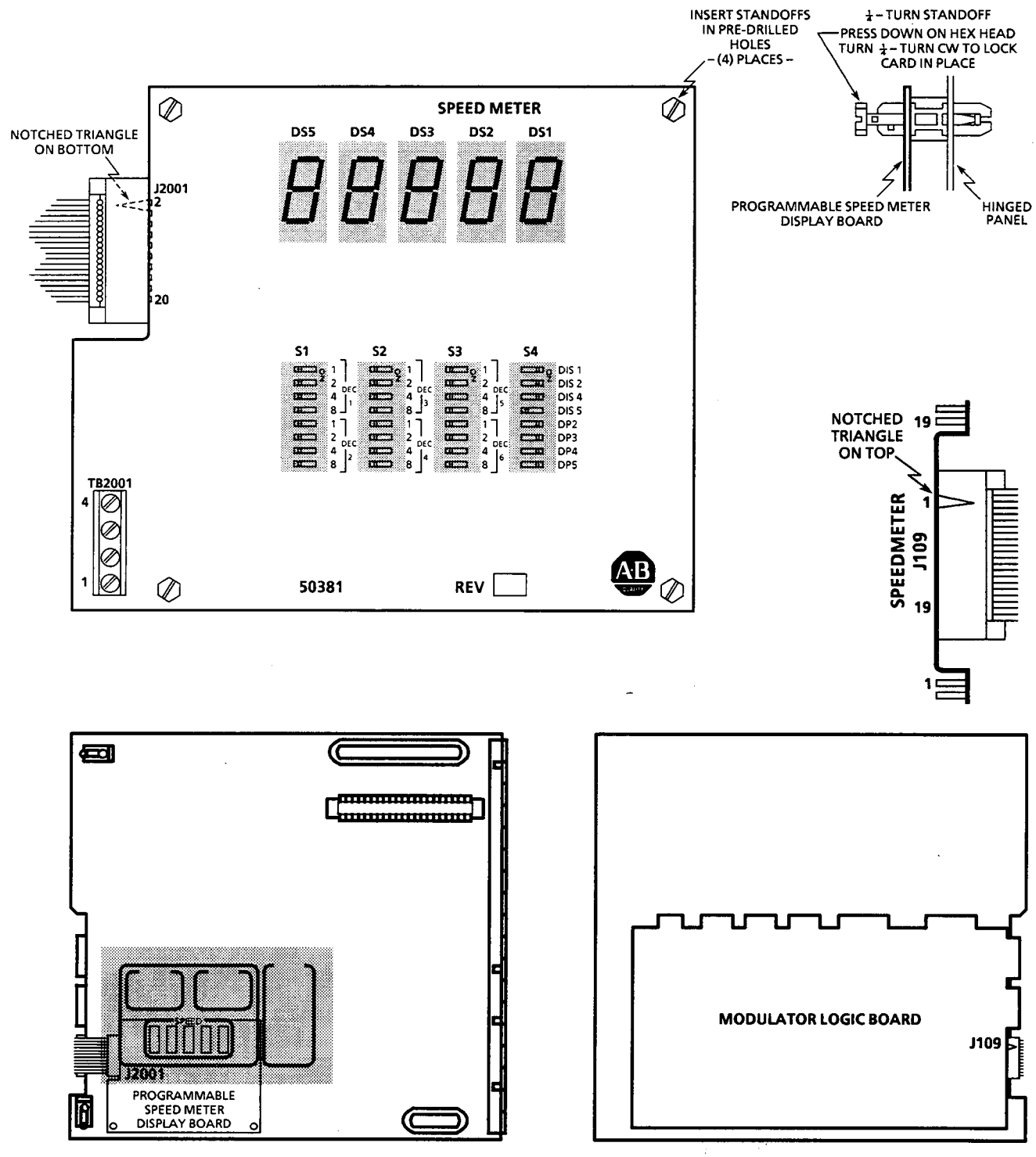
To guard against personal injury, always remove & lock-out power to the Drive at the main supply disconnect and all other power source disconnects. Ensure that DS1 is not lit when boards or wires are being installed or connected. Refer to the troubleshooting section of your Drive instruction manual for the location.

Programmable Speed Meter Display Board Installation

Remove the plastic display panel on the front of the hinged panel and install the (4) $\frac{3}{4}$", $\frac{1}{4}$-turn standoffs in the pre-drilled holes. Position the Programmable Speed Meter Display Board onto the standoffs and secure as shown.

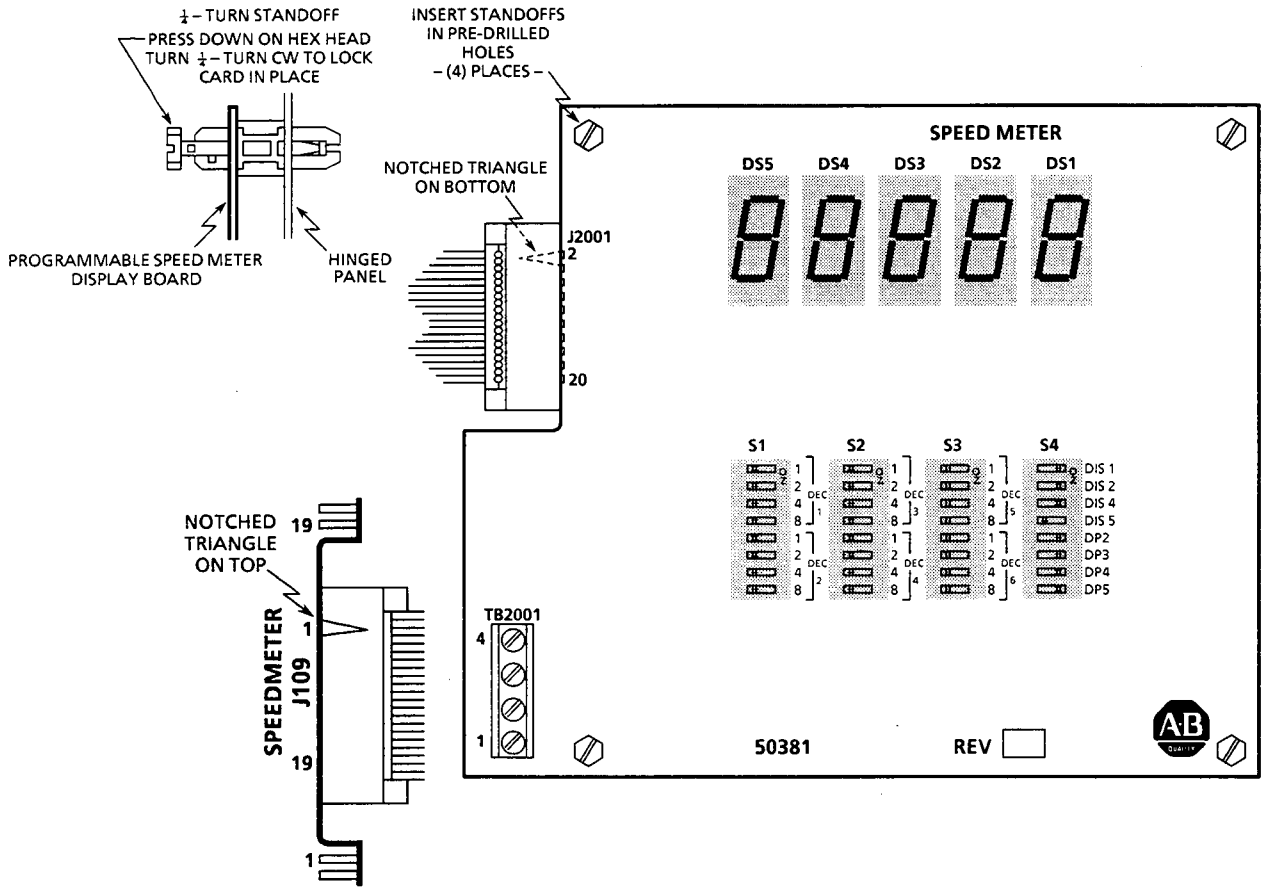
Cable Installation

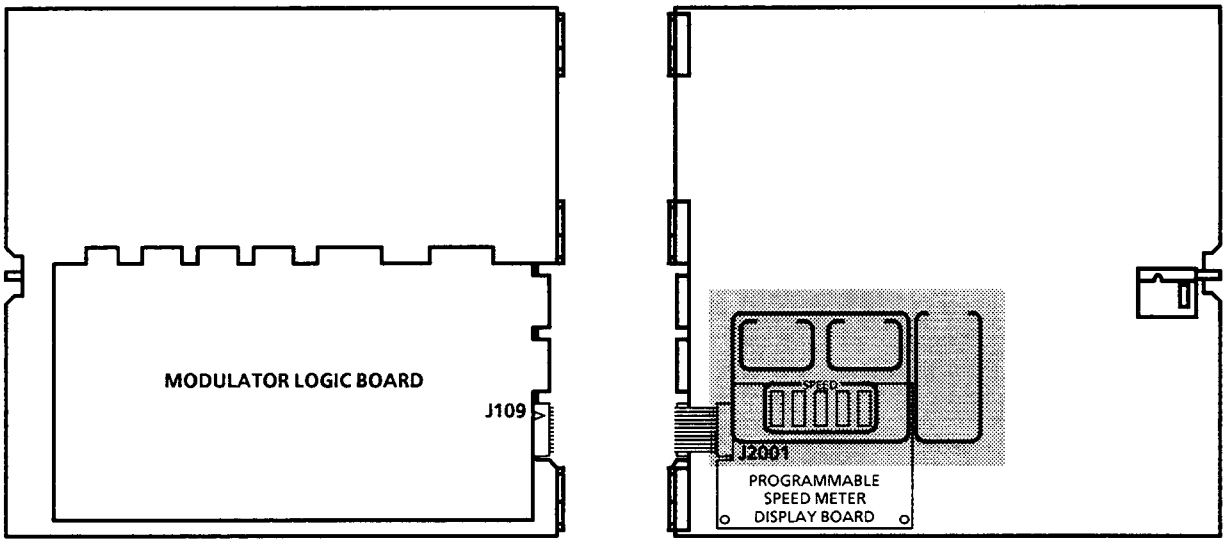
Route and connect the ribbon cable between Programmable Speed Meter Display Board connector **J2001** and Modulator Logic Board connector **J109**. Ensure that the notched triangle on both ends of the ribbon cable is as shown. For 1334 15-50 HP Drives & 1335 22-96 Amp Drives, install the ribbon cable grommet to protect the ribbon cable against abrasion where it crosses the door edge. Secure the ribbon cable by installing the adhesive backed ribbon cable clamps as required.



Programmable Speed Meter Display Board & Cable Installation

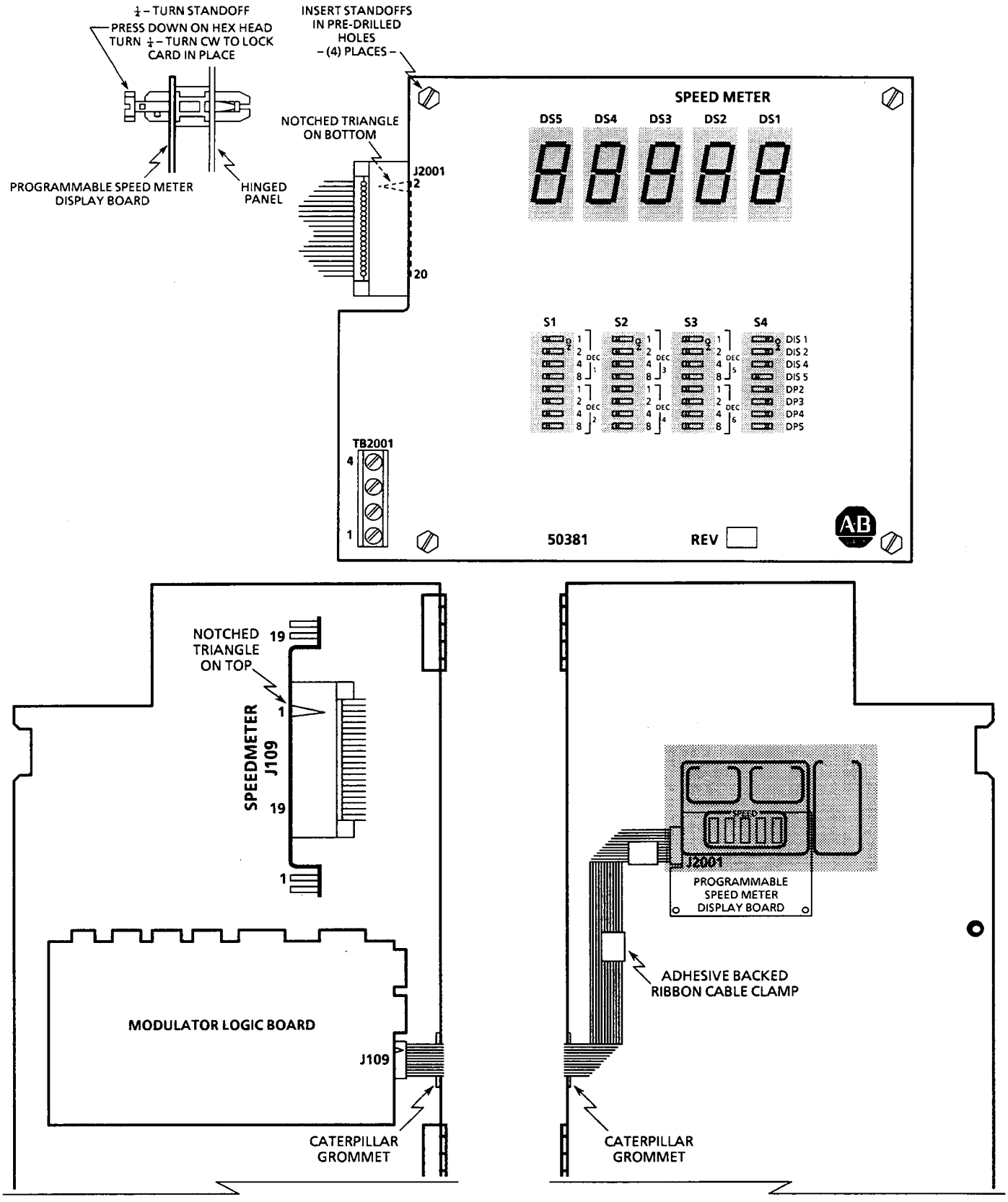
– Bulletin 1334 5-10 HP 460V Series A Drives –





Programmable Speed Meter Display Board & Cable Installation

– Bulletin 1334 3-10 HP 460V Series B Drives –
– Bulletin 1335 12 & 16 Amp Variable Torque Drives –



Programmable Speed Meter Display Board & Cable Installation

– Bulletin 1334 15-50 HP 460V Series A Drives –
– Bulletin 1334 15-50 HP 575V Drives –
– Bulletin 1335 22-96 Amp Variable Torque Drives –

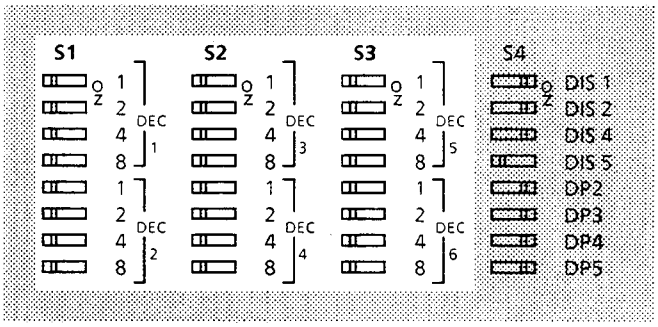
Programming

CAUTION

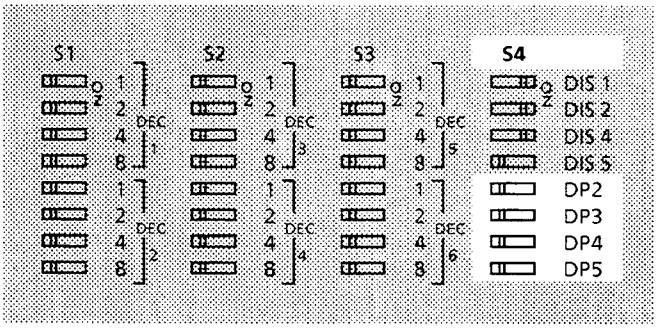
Never set switches using a pen or pencil. Switches contaminated with conductive debris may become damaged and cause false values to be displayed.

Initial Setup

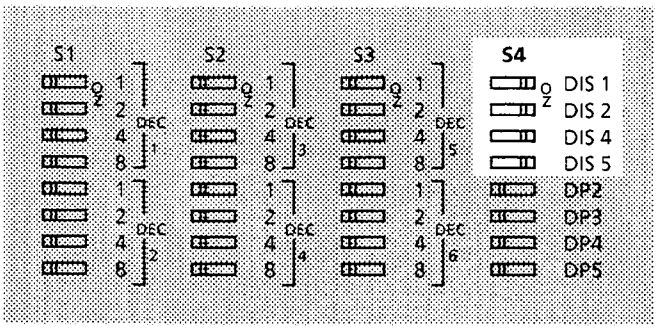
1. Remove the protective plastic tape on dip switches **S1**, **S2**, **S3**, & **S4** and turn **OFF** all (24) **DEC**ade switches at **S1**, **S2**, and **S3**.



2. Turn **OFF** all (4) **D**ecimal **P**oint switches at **S4**.



3. Turn **ON** all (4) **DIS**play switches at **S4**.



Programming
(continued)

Decade Switch Settings

1. Determine the maximum number you wish to display at the corresponding maximum Drive frequency.
2. Using this data and the following formula, determine the decade switch settings and round the calculated value to a whole number.

$$\frac{\text{MAXIMUM NUMBER TO BE DISPLAYED (disregarding the decimal point)}}{\text{CORRESPONDING MAXIMUM FREQUENCY}} \times 1200 = \begin{array}{cccccc} X & X & X & X & X & X \\ [\ ] & [\ ] & [\ ] & [\ ] & [\ ] & [\ ] \\ \text{DEC } 6 & \text{DEC } 5 & \text{DEC } 4 & \text{DEC } 3 & \text{DEC } 2 & \text{DEC } 1 \end{array}$$

The following table lists the integer settings for all decade switches.

INTEGER	DEC 1 – DEC 6			
	switch 1	switch 2	switch 4	switch 8
0	OFF	OFF	OFF	OFF
1	***ON***	OFF	OFF	OFF
2	OFF	***ON***	OFF	OFF
3	***ON***	***ON***	OFF	OFF
4	OFF	OFF	***ON***	OFF
5	***ON***	OFF	***ON***	OFF
6	OFF	***ON***	***ON***	OFF
7	***ON***	***ON***	***ON***	OFF
8	OFF	OFF	OFF	***ON***
9	***ON***	OFF	OFF	***ON***

Decimal Point Switch Settings

To set the decimal point, turn on one and only one of the Decimal Point switches at **S4**. The decimal point cannot be displayed at DS1.

Turning on DP2 sets the decimal point at display DS2.

Turning on DP3 sets the decimal point at display DS3.

Turning on DP4 sets the decimal point at display DS4.

Turning on DP5 sets the decimal point at display DS5.

Display Switch Settings

The display switch settings allow the elimination of leading or trailing display zeros, by turning off unused LED displays.

Turning off DIS1 eliminates display DS1.

Turning off DIS2 eliminates display DS2.

Turning off DIS4 eliminates display DS4.

Turning off DIS5 eliminates display DS5.

Programming (continued)

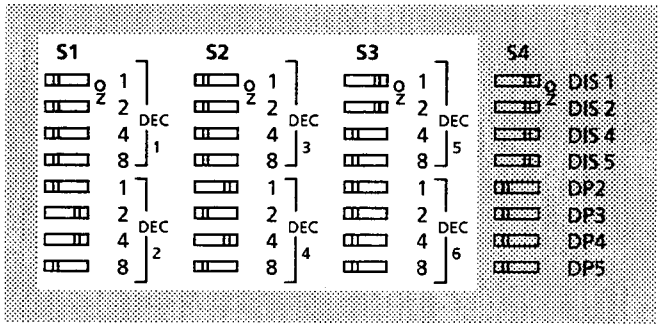
EXAMPLE 1

A four pole AC induction motor with a full load speed of 1753 RPM at 60 Hz is to be displayed. Decimal point indication is not required.

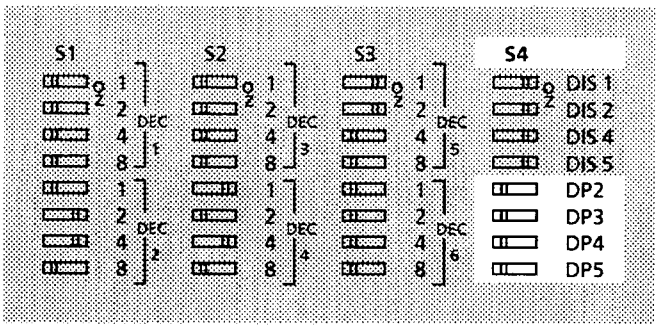
1. Calculate the decade number.

$$\frac{1753}{60} \times 1200 = \underset{\text{DEC } 6}{[0]}\ \underset{\text{DEC } 5}{[3]}\ \underset{\text{DEC } 4}{[5]}\ \underset{\text{DEC } 3}{[0]}\ \underset{\text{DEC } 2}{[6]}\ \underset{\text{DEC } 1}{[0]}$$

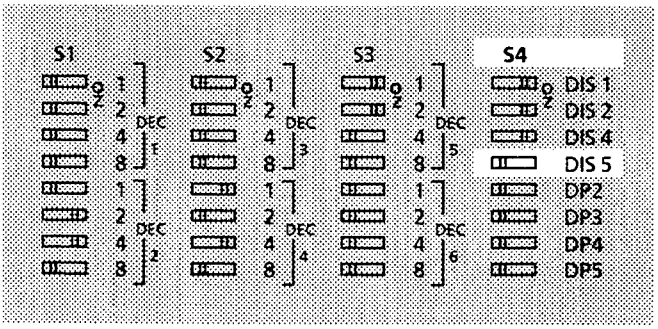
2. Set the decade switches as shown.



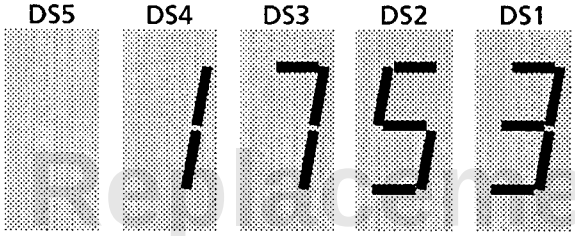
3. Since a decimal point is not required, set the decimal point switches as shown.



4. Since display DS5 is insignificant, it may be suppressed by turning off DIS 5 for a faster update –



– and the readout will be as shown below.



Programming
(continued)

EXAMPLE 2

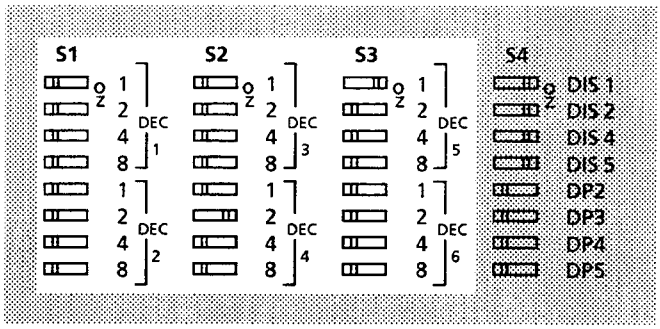
60.0 is to be displayed at the maximum Drive frequency of 60 Hz with the decimal point displayed.

1. Calculate the decade number.

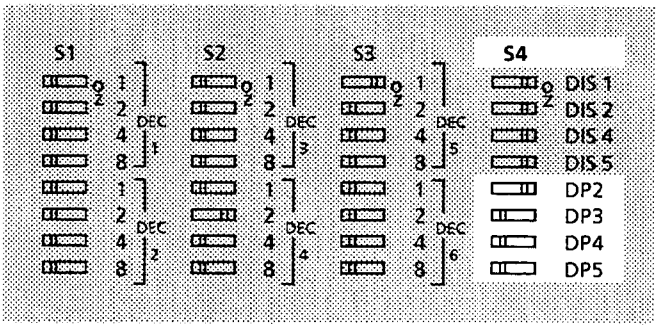
$$\frac{600}{60} \times 1200 = \begin{array}{cccccc} [0] & [1] & [2] & [0] & [0] & [0] \\ \text{DEC} & \text{DEC} & \text{DEC} & \text{DEC} & \text{DEC} & \text{DEC} \\ 6 & 5 & 4 & 3 & 2 & 1 \end{array}$$

2. Set the decade switches as shown.

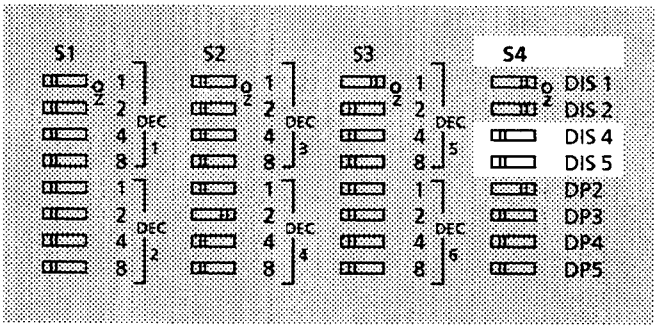
(continued)



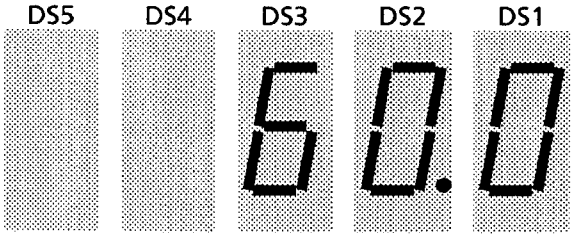
3. Since a decimal point is required to represent the number in tenths, turn on DP2.



4. Since displays DS4 & DS5 are insignificant, they may be turning off for a faster update –



– and the readout at full speed will be as shown below.



ALLEN-BRADLEY
A ROCKWELL INTERNATIONAL COMPANY

MOTION CONTROL DIVISION

Publication 1334-5.0.5 — January, 1990
Supersedes March, 1988

P/N 201407-011

Printed in U.S.A