

# SIEMENS

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## SITRANS F

### Flowmeters

### SysCom Upgrade Kit IP65 (NEMA 4X) Single/Dual Channel

#### Hardware Installation Instructions

3/2011

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## Legal information

### Warning notice system

This manual contains notices you have to observe in order to ensure your personal safety, as well as to prevent damage to property. The notices referring to your personal safety are highlighted in the manual by a safety alert symbol, notices referring only to property damage have no safety alert symbol. These notices shown below are graded according to the degree of danger.

<b>⚠ DANGER</b>
indicates that death or severe personal injury <b>will</b> result if proper precautions are not taken.
<b>⚠ WARNING</b>
indicates that death or severe personal injury <b>may</b> result if proper precautions are not taken.
<b>⚠ CAUTION</b>
with a safety alert symbol, indicates that minor personal injury can result if proper precautions are not taken.
<b>CAUTION</b>
without a safety alert symbol, indicates that property damage can result if proper precautions are not taken.
<b>NOTICE</b>
indicates that an unintended result or situation can occur if the corresponding information is not taken into account.

If more than one degree of danger is present, the warning notice representing the highest degree of danger will be used. A notice warning of injury to persons with a safety alert symbol may also include a warning relating to property damage.

### Qualified Personnel

The product/system described in this documentation may be operated only by **personnel qualified** for the specific task in accordance with the relevant documentation for the specific task, in particular its warning notices and safety instructions. Qualified personnel are those who, based on their training and experience, are capable of identifying risks and avoiding potential hazards when working with these products/systems.

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We have reviewed the contents of this publication to ensure consistency with the hardware and software described. Since variance cannot be precluded entirely, we cannot guarantee full consistency. However, the information in this publication is reviewed regularly and any necessary corrections are included in subsequent editions.

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# Introduction

## 1.1 Preface

The SITRANS F SysCom hardware upgrade kit converts older SITRANS F flowmeter models to conform to the latest SITRANS F hardware specifications.

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**Note**

This hardware installation procedure applies to the following SITRANS F NEMA 4X and NEMA 7 operating systems: Version 3.03.00H and later / Version 5.03.00H and later.

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## 1.2 Items supplied-DN

### Tools and Materials

#### Tools List

- Cross-head (Phillips) screwdriver
- Flat blade screwdriver
- Nut Driver (3/16-inch)
- Pliers

Introduction

1.2 Items supplied-DN

Parts List


Table 1- 1 Parts List

Item No.	QTY	Part No.	Description
1	1	A6X30022335	Pan, Bottom, N/DN, SysCom
2	4	A6X30024704	Screw, SEMS, 10-32 x 3/8, Pan, Phil, SS
3	2	A6X1060432	Screw, LG FLT HD PH, 100 Seal
4	1	A6X30022331	Insulator, SysCom Shield, N/DN
5	1	A6X30022305	Shield, SysCom, N/DN
6	2	A6X30024702	Screw, SEMS, 4-40 x 5/8, Pan, Phil, SS
7	1	JN1093118	4-40 x 9/16, screw, Pan HD, Phil, NYL
8	4	MS3533370	#4 Star Washer, Internal Tooth
9	4	P327M06F13440	3/16", Standoff, HX, AL, L=25/32
10	1	A6X30022332	Insulator, Fuse Holder Bracket
11	1	A6X30022338	Bracket, Fuse Holder
12	2	A6X30024703	Screw, SEMS, 6-32 x 5/8, Pan, Phil, SS
13	1	A6X30022307	Cover, Power Supply, N/DN
14	1	A6X30022308	Label, Power Connector wiring, AC
15	1	1010-258	Label, Power Supply, - Power ID
16	1	A6X30022309	Label, Power Connector wiring, DC
17	1	1010-320	Label, Power Supply, - Power ID
18	1	1010-306	Label, PWR/FUSE/CAUTION
19	1	Original Equipment	Power Supply
20	2	Original Equipment	Amplifier Module screws
21	1	Varies, Unit Specific	System Computer PCB

- For additional items refer to your packing slip.


## Installing/Mounting

### 2.1 Preliminary Installation Procedures

 <b>WARNING</b>
Only qualified personnel may carry out work on the electrical connections.

In order to install the upgraded System Computer (SysCom) Printed Circuit Board, the following preparations are required:

1. Verify all parts are included within the upgrade kit.
2. If possible, retain all current setup information for your application. The new SysCom PCB will require the setting up of the transducers on the pipe.

 <b>WARNING</b>
Before opening the transmitter cover check that no explosion hazard exists, local safety codes and policy requirements have been followed and all connection leads are potential free.

3. Remove all electrical connections to the SITRANS FUS Transmitter. This is especially true for the power connection, where hazardous (lethal) voltage levels may exist. Mark wires as needed. All original circuit boards will be re-used except for the old SysCom board.
4. It is recommended that the unit be removed from its wall mounting. Installation of the upgrade kit is easier if done on a workbench or table.

### 2.2 SysCom PC Board Removal

The removal of the old SysCom PC board from the transmitter requires the disassembly of the transmitter components. Refer to Figure 1 as needed.

1. Unlock the transmitter latch and open the transmitter cover.
2. Remove Power Supply cover, using either thumb screws or cross-head (Phillips) screwdriver as required. Discard old Power Supply cover.
3. Remove Power Input Connector J10 from P10 by loosening two securing flat head screws.
4. Remove Power Supply by removing the two flat head seal screws along the top right hand edge of the unit. Discard these screws.
5. Remove Power Supply from unit by pulling Power Supply straight up, using the top bracket edge for leverage. Set aside.

*2.2 SysCom PC Board Removal*

6. Remove I/O Module board cover and remove I/O Module PC boards sequentially. Set aside I/O Module boards.
7. Using a flat blade screwdriver, remove the Amplifier Tx/Rx Module (located on left side) by removing two mounting screws and sliding Amplifier towards bottom of unit. Retain Amplifier assembly and the two mounting screws.
8. Disconnect LCD Display and Keypad ribbon cables located on left side of unit. Take care to pull slowly and apply pressure evenly to the width of the ribbon cable--do not pull from only 1 edge. Do not disconnect the LCD side of the ribbon cable.
9. Remove four (4) cross-head (Phillips) screws located in the four corners of the SysCom Board that connect the board to the bottom of the unit. Discard these screws.
10. Remove the old SysCom board and discard.
11. Clean out the transmitters. Remove all debris, especially any metal fragments.



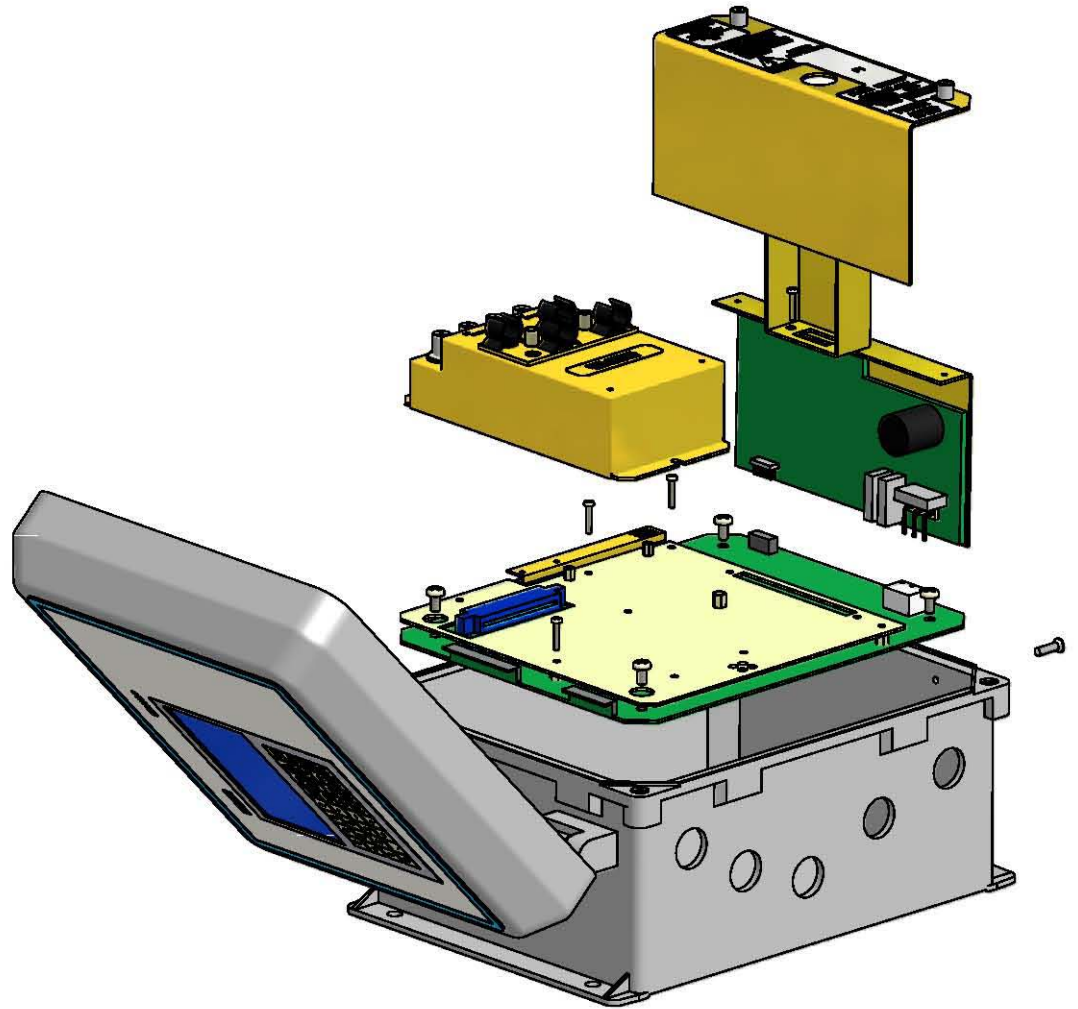


FIGURE 1

Figure 2-1 Syscom Upgrade Kit 2 - Fig 1

## 2.3 SysCom PC Board Installation

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### Note

Refer to Figure 2 when installing the new SysCom PC board.

Bulleted items are listed in Parts List Table 1.

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1. Install the bottom pan ① into the case. In some cases, the hinge screws may need to be backed out slightly and the pan side adjusted with the holes placed behind the case hinge screws.
2. IMPORTANT: Install the new SysCom board onto the four (4) raised pads in the corner of the transmitter case. Install the four (4) new 10-32 cross-head (Phillips) screws ② into the four corner mounting holes of the case. Do not tighten as this allows the SysCom PC board to be realigned later in Step 10.
3. Re-Install the Power Supply ⑱, carefully guiding the two connectors (J2 & J11) into place.
4. Install two flat head seal screws ③ to secure Power Supply (right top edge of case) and tighten.
5. Remove adhesive backing and adhere the Insulator ④ to the SysCom Top Shield ⑤. Follow and align access holes for placement.
6. Install SysCom Top Shield ⑤ onto bottom pan ①. Ensure that fuse and fuse wires are not pinched between the top pan and SysCom PC board.
7. Align SysCom board with through holes of top and bottom pan. Install two pan head screws, 4-40 x 5/8" ⑥ into two locations as shown.
8. Install top [upper] Amplifier Module mounting screws ⑳ retained from Removal procedure 3.2 Step 7. Leave at least 1/8" screw thread clearance for Amplifier Module installation.
9. Install Nylon 4-40 x 9/16" pan head screw ⑦ located on middle left-side of case as shown.
10. Tighten four (4) 10-32 cross-head (Phillips) SysCom board screws ② located at the corner mounting holes of the case.
11. Install four #4 lock washers ⑧ and using nut driver, four 3/16" Standoffs ⑨ onto bottom pan and Top Shield ⑤ where they meet at the case bottom.
12. Remove adhesive backing and place Insulator ⑩ on Fuse Holder Bracket ⑪.
13. Attach Fuse Holder Bracket to Top Shield pan using two 6-32 x 5/8" pan head screws ⑫. Note that open side of the Fuse Holder Bracket is away from Power Supply. Insert Fuse Holder into bracket notch and tighten plastic Fuse Holder nut.
14. Attach two ribbon cables to left side of unit. Take care to make sure pins are aligned.
15. Install Amplifier Module assembly by sliding Amplifier Module towards top of unit. Install remaining mounting screws and tighten both.
16. Re-Install the I/O Module PC boards and the I/O Module board cover in reverse order of removal.

17. Prepare Power Supply cover ⑬ by applying appropriate labels as shown. Use AC labels ⑭ and ⑮ or DC labels ⑯ and ⑰ as determined by unit configuration. Add Power/Fuse/Caution label ⑱ to top of Power Supply cover as shown.
18. Attach all original installation wiring.

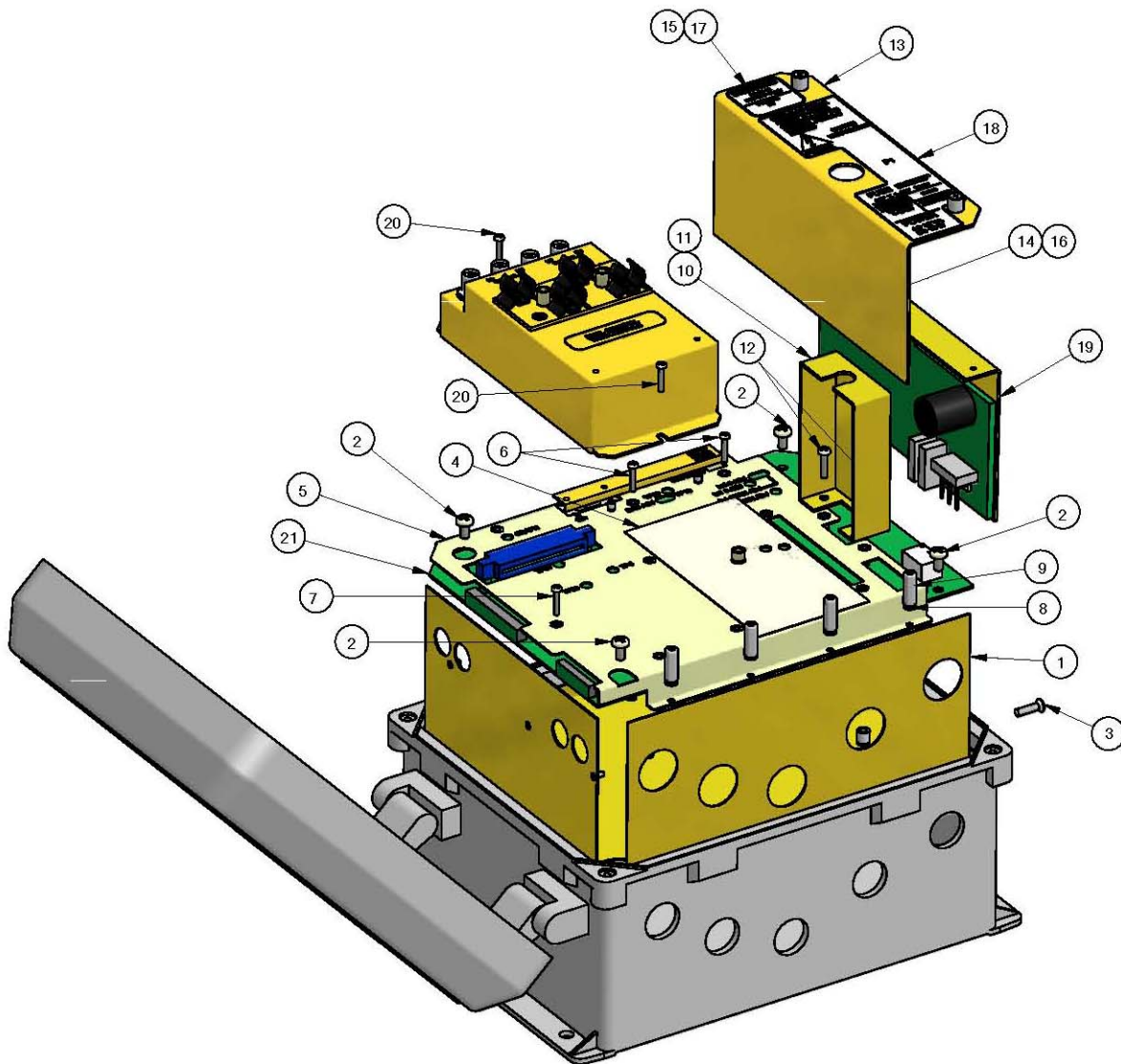


FIGURE 2

Figure 2-2 Syscom Upgrade Kit 2 - Fig 2

