

SIEMENS

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SITRANS F

Flowmeters

SysCom Upgrade Kit IP65 (NEMA 4X) Multi-Channel

Hardware Installation Instructions

1/2010

A5E02518333A Revision 04

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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.

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.

1.2 Items supplied-MN

Tools and Materials

Tools List

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

Parts List

Table 1- 1 Parts List

Item No.	QTY	Part No.	Description
2	1	A6X30022306	Shield, SysCom MN
3	1	A6X30022308	Label, Power Connector Wiring
4	1	A6X30022309	Label, Power Connector Wiring, DC
5	1	A6X30022332	Insulator, Fuseholder Bracket
6	1	A6X30022333	Cover, Power Supply, MN
7	1	A6X30022334	Insulator, SysCom Shield, MN
8	1	A6X30022336	Pan. Bottom, MN SysCom
9	1	A6X30022338	Bracket Fuseholder
10	2	A6X30024703	Screw Sems, 6-32 x 5/8 Pan Phil, SS
11	1	JN1093118	4-40 x 9/16 Screw Pan, HD, Phil Nyl
12	8	NAS671C4	4-40 Hex Nut Small Dia
13	8	MS3533370	#4 Starwasher Internal Tooth
14	2	A6X30024702	Screw, Sems, 4-40 x 5/8 Pan, Phil, SS
15	4	A6X30024724	Nut, Hex, Keps, 10-32, SS
16	4	S1073M04F13I	3/8 Spacer, Rd, Al, 194ID, 13/32L
17	1	1010-306	Label, Pwr/Fuse/Caution
18	1	1010-258	Label, Power Supply-Power Ident AC
19	1	1010-320	Label, Pwr Supply-Pwr Ident
20	2	A6X1060432	Screw Lg Flt Hd Ph 100 Seal
21	4	A6X30024704	Screw, Sems, 10-32 x 3/8 Pan, Phil SS
22	3	0310100	Cable Clip
23	1	A5E02518333	Instructions, 1010MN Family Upgrade Kit
24	4	A6X1060221	4-40 x 7/8 Screw Socket Set
25	4	P545M06F13440	1/4 Standoff, Hex, Al, L=3/4
26	1	A5E02617314	Hex Key, .050, L-Handle
27	4	MS3533373	#10 Starwasher, Internal Tooth
28	0	A5E02765861	Tool, Feeler Gauge
29	1	A5E02765862	Shim, 0.062"
30	1	ORIGINAL EQUIPMENT	Power Supply
31	2	ORIGINAL EQUIPMENT	Screw, #6-32
32	1	ORIGINAL EQUIPMENT	Amplifier Module
33	1	VARIABLES	SysCom PCB

- For additional items refer to your packing slip.

Installing/Mounting

2.1 Preliminary Installation Procedures

 WARNING
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Only qualified personnel may carry out work on the electrical connections.
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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.

 WARNING
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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.
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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.
6. Remove I/O Module board cover and remove I/O Module PC boards sequentially. Set aside I/O Module boards. Modules will vary according to type of unit.

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. Remove four (4) cross-head (Phillips) screws located in the four corners of the SysCom Board that connect to the bottom of the unit. Discard these screws.
9. 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.
10. Remove the old SysCom board/shield combination, and discard. Clean out the transmitter enclosure. Remove all debris, especially any metal fragments.

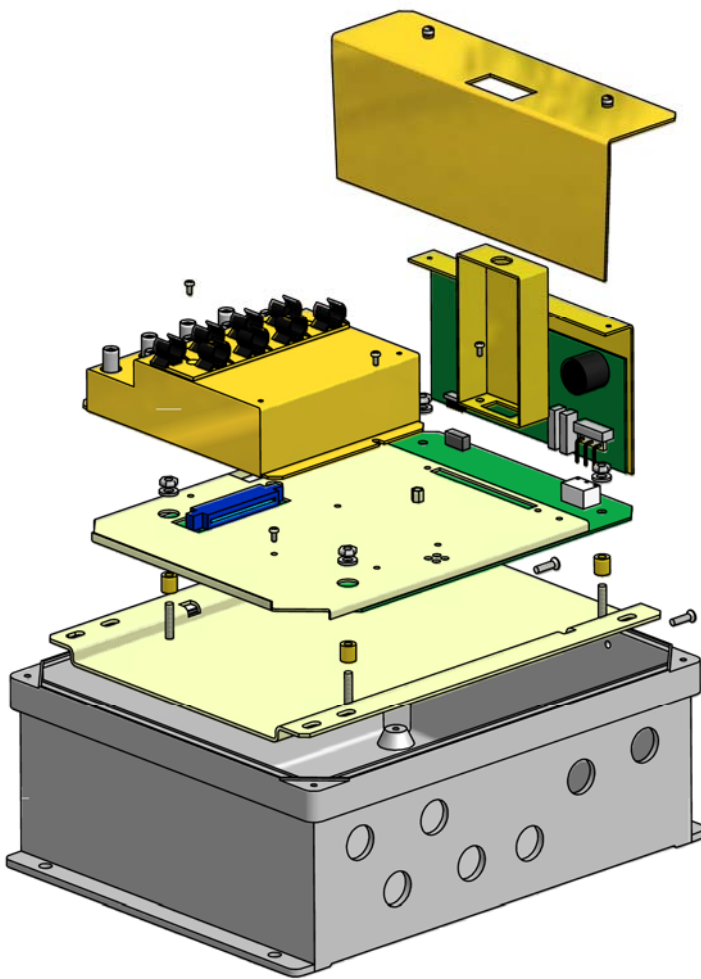


Figure 2-1 Removal

2.3 SysCom PC Board Installation

Note

Refer to Figures 2-2 and 2-3 when installing the new SysCom PC board.

Item part numbers are listed in Table 1.

1. Install shim (29) onto bottom of pan (8) as shown in Figure 2-3. Install the bottom pan (8) 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. Install the four new 10-32 cross-head (Phillips) screws (21) into the four corner mounting holes of the case, holding the bottom pan in place.
3. Install four (4) #10 star washers [27] and four 3/8" spacers (16) onto four 10-32 threaded studs in the four bottom corners of the SysCom bottom pan. The threaded studs are part of the bottom pan assembly. The #10 starwashers are placed under the spacers.
4. **IMPORTANT-** Install the new SysCom (33) board onto the four 3/8" spacers (16) in the corner of the bottom pan. Install the four new 10-32 hex nuts (15) into the four corner mounting holes of the case. Do not tighten as this allows the SysCom PC board to be aligned in Step 7.
5. Re-Install the Power Supply (30), carefully guiding the two connectors (J2 & J11) into place.
6. Install two flat head seal screws (20) to secure Power Supply (right top edge of case) and tighten.
7. Tighten the four new 10-32 hex nuts (15).
8. Attach two ribbon cables to left side of new SysCom (33). Take care to make sure pins are aligned.
9. Remove adhesive backing and adhere the Insulator (7) to the SysCom Top Shield (2). Follow and align access holes for placement.
10. Install SysCom Top Shield (2) onto bottom pan (8). Ensure that fuse and fuse wires are not pinched between the top pan and SysCom PC board.
11. Install two pan head screws, 4-40 x 5/8" (14) into two locations as shown.
12. Install Nylon 4-40 x 9/16" pan head screw (11) located on middle left-side of case as shown.
13. Install top (upper) Amplifier Module mounting screws (31) retained from Removal procedure 2.2 Step 7. Leave at least 1/8" screw head clearance for Amplifier Module installation.
14. Install eight #4 lock washers (13) and eight nuts, (12) onto bottom pan (8) and Top Shield (2) where they meet at the case top and bottom edges.
15. Remove adhesive backing and place Insulator (5) on Fuse Holder Bracket (9).
16. Attach Fuse Holder Bracket (9) to Top Shield (2) using two 6-32 x 5/8" pan head screws (10). 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.

17. Install Amplifier Module Assembly (32) by sliding Amplifier Module towards top of unit. Install remaining mounting screw (31) and tighten both screws.

Note

If the meter is a 1010MN1 or 1010MN3, perform steps 18-21. If not, go to step 22.

18. Install four 4-40 x 7/8" socket set screws (24) using hex key tool (26). Leave approximately 1/2" thread protruding from above the SysCom Top Shield (2).
19. Re-Install the 1010N-2MK2 or 1010N-2MK3 PCB onto these four socket set screws.
20. Install four 1/4" Hex Standoffs (25) onto the four socket set screws (24), Tighten down to secure the 1010N-2MK2 or 1010N-2MK3 PCBs.
21. Re-Install the 1010N-8M PCBs and attach ribbon cable between this board and the 1010N-2MK2 or 1010N-2MK3 PCB.
22. Re-Install the I/O Module PC boards and the I/O Module board cover in reverse order of removal. Use hardware that came with the board removal process.
23. Prepare Power Supply cover (6) by applying appropriate labels as shown. Use AC labels (3) and (18) or DC labels (4) and (19) as determined by unit configuration. Add Power/Fuse/Caution label (17) to top of Power Supply cover as shown.
24. Return unit to original mounting, and attach all original installation wiring.

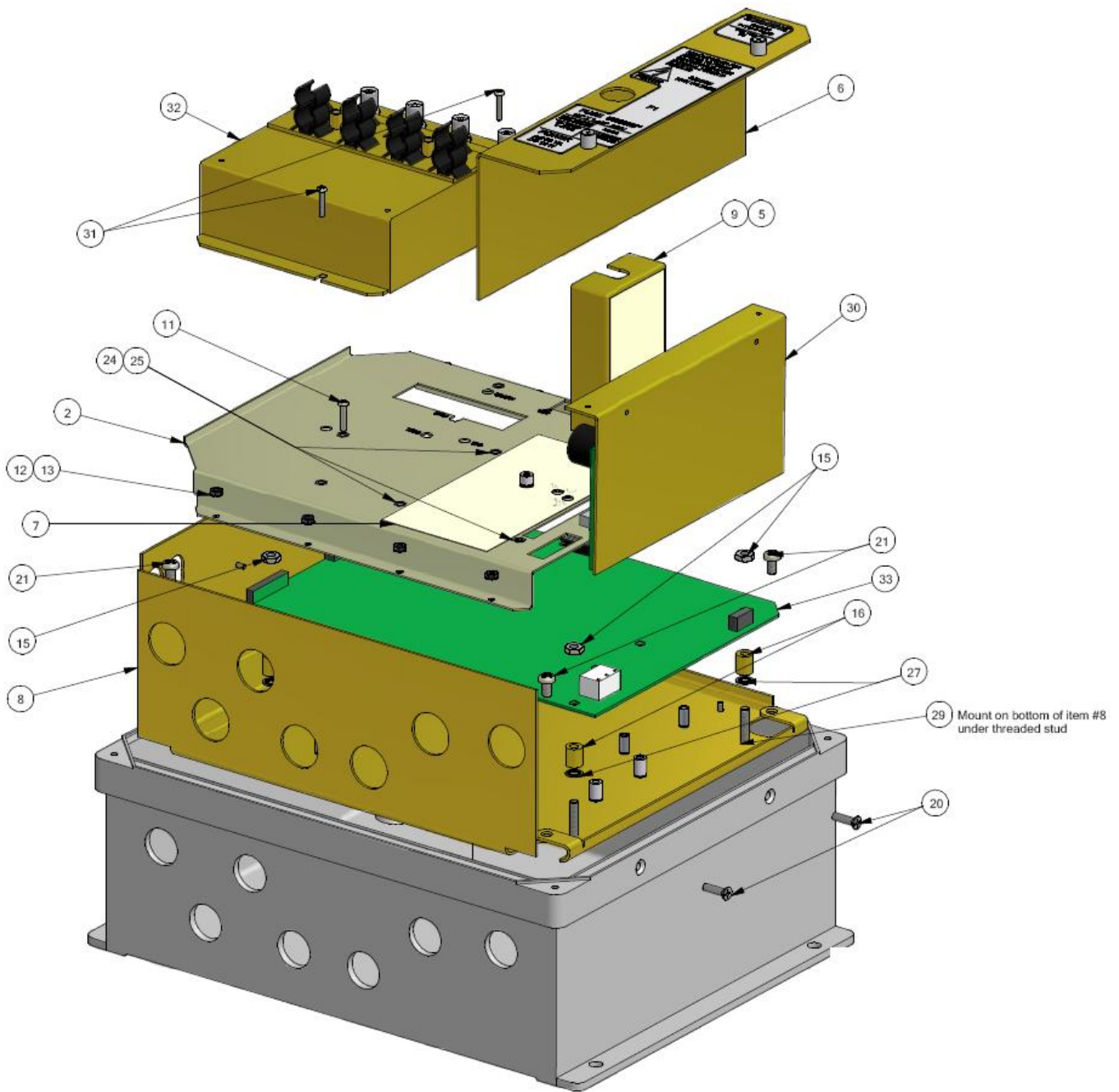


Figure 2-3 Installation Part 2