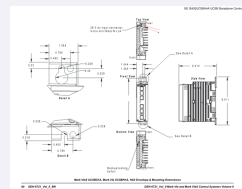


FIELD INSTALLATION QUICK GUIDE

Installation Instructions

IS420UCSBH4A

Embedded Industrial Controller Module



PRODUCT	IS420UCSBH4A
FAMILY	Mark VIe UCSB
FUNCTION	Embedded Industrial Controller Module
SOURCE	GEH-6721 Vol II BN, UCSB controller pp.76 to 86; GEH-6725R supply table p.22

01

OFFICIAL MOUNTING AND WIRING

- Mount the UCSBH4A directly to the panel using the shown H1A/H4A envelope and mounting dimensions.
- Maintain unobstructed vertical airflow around the controller cooling surfaces.
- Reconnect the documented supply and the individually identified supervisory-network and IONet cables.
- Follow the UCSB replacement and backup/restore procedure to restore the controlled ToolboxST configuration.

AMIKON PRODUCT SUPPORT

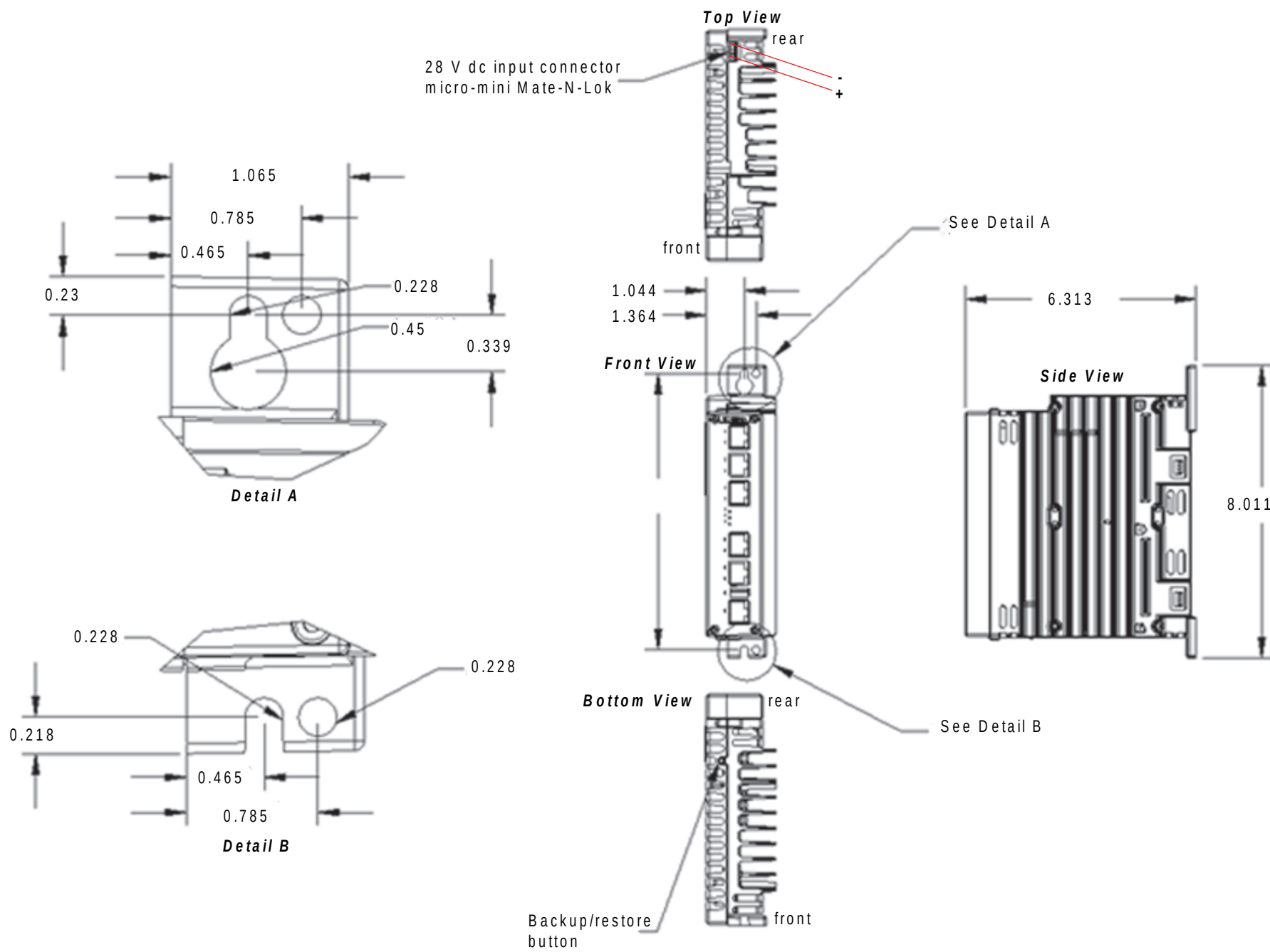
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1.2.2 UCSB Installation

The controller is contained in a single module that mounts directly to the panel sheet metal. The following diagrams display the module envelope and mounting dimensions. All dimensions are in inches. The UCSB is to be mounted to the panel as shown with vertical air flow through the fins to be unobstructed.



Mark VIeS UCSBS1A, Mark VIe UCSBH1A, H4A Envelope & Mounting Dimensions

1.2.7 UCSB Controller Replacement



To prevent personal injury or equipment damage caused by equipment malfunction, only adequately trained personnel should modify the following equipment.



Verify the controller being replaced has a RED LED. A RED LED indicates the controller is in a fault condition and is the one that needs to be replaced. Ensure the remaining two control loops are free of faults or alarms before proceeding. A failure on one of the remaining loops could cause a turbine trip.



If the Mark* VIE controller interfaces with a SecurityST* platform and Secure Mode is implemented on the controller, then the controller cores should be taken out of Secure Mode prior to executing this maintenance procedure. Once maintenance has been completed, the Mark VIE controller cores should be placed back into Secure Mode.

Note Maintenance of this component may cause loss of communication, loss of power, and a small change in valve position. When the portion of the null bias for the PSVO or PSVP I/O pack is lost, the valve might move slightly in the direction of the spring bias.

Note Refer to the Mark VIE site-specific wiring documentation for the UCSB power and communication connections. Main unit applications use three JPDCs, and feed pump turbine applications only use one JPDC in their power distributions.

Note Before performing this procedure, obtain the controller connector (serial port to Ethernet adapter, GE Part Number 342A4944P1) and an Ethernet cable long enough to connect from the controllers to a Mark VIE engineering workstation with access to the turbine controller software.

➤ To replace the Mark VIE UCSBHxx or Mark VIEs UCSBS1A

1. If possible, back up the old UCSB's NAND flash.
2. Disconnect the power plug JCR on the associated JPDC for the controller being replaced:
 - a. For <R> controller, plug JCR.
 - b. For <S> controller, plug JCS.
 - c. For <T> controller, plug JCT.
3. Disconnect the IONet cables.
4. Disconnect the VLAN cable.
5. Loosen the screws holding the controller in place. The mounting is a keyhole design.
6. Remove the controller by lifting to align the large portion of the keyhole with the mounting screws and pull forward.
7. Install the replacement controller by lining up the large open portion of the keyhole with the mounting screws and pushing it flush with the mounting backplane. Slide the replacement controller down so that the smaller portion of the

keyhole holds the controller in place. Tighten the mounting screws to firmly hold the controller in place. Do not apply power yet.

8. Connect the VLAN cable per its wire label or in accordance with the Mark VIe site wiring documentation.
9. Connect the IONet cables per their wire labels or in accordance with the Mark VIe site wiring documentation. Connect the power to the replacement controller per the controller power wire label or the Mark VIe site wiring documentation.
10. Connect the controller connector to one end of the Ethernet cable. Connect the controller connector to the engineering workstation.
11. Connect the opposite end of the Ethernet cable to the COM port on the replacement controller.
12. Update the replacement UCSB's NAND flash with the backup from step 1.
13. If backup/restore was not successful, configure the new controller's TCP/IP address. Refer to the *ToolboxST User Guide for Mark Controls Platform* (GEH-6700 or GEH-6703), the section *Controller Setup*.

1.2.8 UCSB Backup and Restore

If the UCSB controller fails, back up the UCSB configuration (including the UDH IP address), install a replacement controller, and restore the configuration to the replacement UCSB to allow for communication to the ToolboxST application. A software recovery push-button located on the bottom of the controller is used to update the NAND flash. A 2.0-compliant, non-encrypted USB with a minimum capacity of 4 GB must be used.

➤ To perform a UCSB backup

Note If a serial terminal is connected to the UCSB, open the Microsoft Hyperterminal program to display backup and restore status.

1. Insert a FAT32 DOS-formatted USB drive into the front USB port on the UCSB. The USB device must be USB 2.0-compliant, non-encrypted, with a minimum capacity of 4 GB.
2. From the bottom of the UCSB, press and hold in the backup/restore button until the USB *On* LED is lit.
3. Release the button and wait while the LED remains lit and the backup is in progress. The LED turns off when the backup completes successfully.
4. Remove the USB drive.
5. If the LED flashes at a 1 Hz rate, a failure has occurred. Remove the USB drive or retry.

➤ To perform a UCSB restore

1. Remove power from the UCSB.
2. Insert the backed-up USB drive into the USB port.
3. Press and continue to hold in the backup/restore button, apply power to the UCSB, and continue to hold in the backup/restore button until the USB *On* LED is lit.
4. Release the button and wait while the LED remains lit and the restore is in progress. The LED turns off when the restore completes successfully.
5. Remove the USB drive.

Note If the LED flashes at a 1 Hz rate, a failure has occurred. Remove the USB drive or retry.

6. After a restore, a download from ToolboxST may be required to bring the controller back online and in the controlling state.