

High Speed Roll-Up Door Pass-Through

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Your Comprehensive Equipment Source





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Safety Notice

A thorough familiarity with all operating guidelines is essential to safe operation of the product. Failure to observe safety precautions could result in poor performance, damage to the system or other property, or serious bodily injury or death. The following symbols are intended to call your attention to two levels of hazard involved in operation.



CAUTION

Cautions are used when failure to observe instructions could result in significant damage to equipment.



WARNING

Warnings are used when failure to observe instructions or precautions could result in injury or death.

The information presented here is subject to change without notice.

1.0 Description

This space-saving pass-through features dual-side vinyl access doors that roll up and down at the press of a button. The ergonomic design eliminates door clearance requirements, allows transfer of large equipment into/out of the cleanroom, and simplifies operation by gloved personnel.

Keyed interlock controls prevent accidental cross-contamination. During normal operation, the key switch is in the NORMAL position and the two doors are electronically interlocked so that only one can be opened at a time. To prevent tampering with the interlock, the key can be removed. During installation or maintenance, the key switch can be placed in the BYPASS position to allow both doors to open.

The High Speed Roll-Up Door Pass-Through is operated by a touch-activated control panel adjacent to each door of the pass-through. In addition to the opening/closing buttons, the touch panel includes an emergency stop function and a lock down function. As an additional safety feature, the pass-through includes an infrared beam sensor located at the bottom of each doorway that stops and reverses the door when the beam is interrupted.



Figure 1: Model No. 6705-13A-220



CAUTION

Door motors are rated for 70 cycles per hour. Overuse may result in overheating of essential parts. If motor overheats, wait 30 minutes for motor to cool before resuming operation.



2.0 Installation

This Pass-Through is designed for installation in standard cleanroom walls. Wall brackets are included to secure the pass-through to the wall perimeter. The unit is shipped with internal cross braces that will be removed after installation is complete.

The wall cutout should be measured carefully to allow ample clearance for all hardware. Generally, a 0.25" gap along the pass-through perimeter provides enough space for the mounting brackets, but you should always take measurements to avoid later difficulties. Once the pass-through has been mounted to the wall, remove the cross-braces by removing the screws at each end and carefully pulling the end of the brace out of its position.

3.0 Operation

Initial System Start-Up



The High Speed Roll-Up Door Pass-Through is initially shipped with both doors rolled completely open.

- A) Prior to connecting the pass-through to a power source:
 - 1. Make sure both Bypass key switches on both sides of the pass-through are turned to the NORMAL position. See Figure 1.
 - 2. Clear any obstructions from the path of the doors.
- B) Connect the pass-through to a grounded power supply and both doors should immediately roll down to close completely.
- C) If one of the key switches was left in the BYPASS position, the system will malfunction and have to be reset.

To reset the system:

- 1. Turn the key switch to the NORMAL position.
- 2. Press and hold either reset button for at least one second before releasing.
- 3. The doors will roll down when the system restarts.

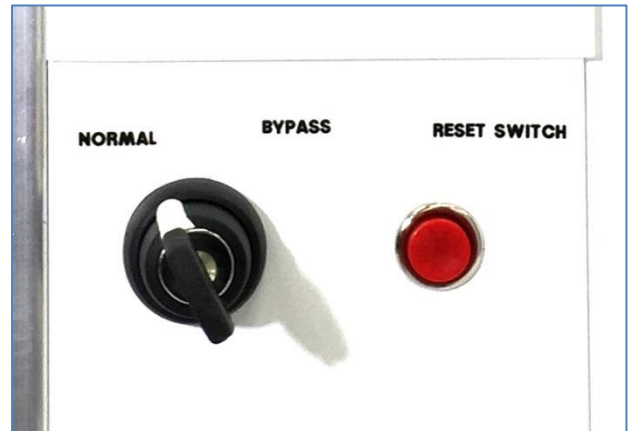


Figure 1: Key switch and Reset button located below the control panel (key switch in NORMAL position)

User Interface

The High Speed Roll-Up Door Pass-Through features a touch panel on each side of the pass-through that controls its respective roll-up door. Each touch panel has four (4) buttons.



Touch Panel Functions (Figure 2):

UP:	Press once to open the roll-up door.
DOWN:	Press once to close the roll-up door.
LOCK:	Press once to close the pass-through door and lock both doors in the closed position. Disable the Lock Down function by pressing the LOCK button three times in succession. An internal alarm will beep as long as the Lock Down function is activated.
E-STOP:	Press once to open the pass-through door and lock it in the open position. All status indicator lights will blink alternating between red and green until E-STOP is disabled. Disable the Emergency Stop function by pressing and holding the reset button for at least one second before releasing it.



Figure 2: Touch Panel

Reset Button:

The reset button cuts power to the system as long as it is pressed. To fully reset the system, either reset button must be depressed for at least one second before being released. Both reset buttons affect the entire system. This is most useful if the system encounters an error. Figure 1 illustrates the reset button.



The reset buttons WILL NOT work if either key switch is in the BYPASS position.

Bypass Key Switch:

The Bypass key switch activates Bypass mode. NORMAL mode indicates normal operation with electronic interlock engaged; only one door may be open at a time, even partially open. BYPASS mode automatically fully opens the door of the side the key switch was activated on. If one door is in BYPASS mode, the other will not open in NORMAL mode. BYPASS mode on both doors allows both doors to open. The key can be removed and stored securely to prevent interlock tampering and unintended cross-contamination. Figure 1 illustrates the Bypass key switch.

Photoelectric Sensors

Each pass-through door is monitored by two photoelectric sensors (Figure 3). The sensors operate with an infrared beam the units send to each other. When the cross-beam is disrupted, the corresponding door will not close. If the cross-beam is disrupted while the door is closing, it will reverse to its fully open state.

Each sensor contains a green and an amber LED to indicate status. A fully functional unit will have both green and amber lights lit. Green without amber means the unit is functioning, but the infrared beam is broken. No lights indicate the unit is not receiving power.

Figure 3: Photoelectric sensor inside bottom of door





The photoelectric sensors will stop and retract the door if the infrared beam is disrupted by a moving or stationary object. While doors are lightweight and relatively harmless, an accidental impact with an object in its path may dislodge the door from its track. Ensure that the door path is clear each time before operating the pass-through.

Status Indicator Lights

Within the two control boxes inside the pass-through, there are eight bi-color (red and green) LED lights that indicate the status of the pass-through and its various systems (Figure 4). These status indicators can be used as a diagnostic tool during troubleshooting.

The system status LED blinks between red and green when the system is functioning properly. If the system crashes, the system status light will stop blinking and will be a solid color. If the optional air shower has not been included, the air shower indicator light will always be red.

Use the legend below to troubleshoot using the status indicator lights.

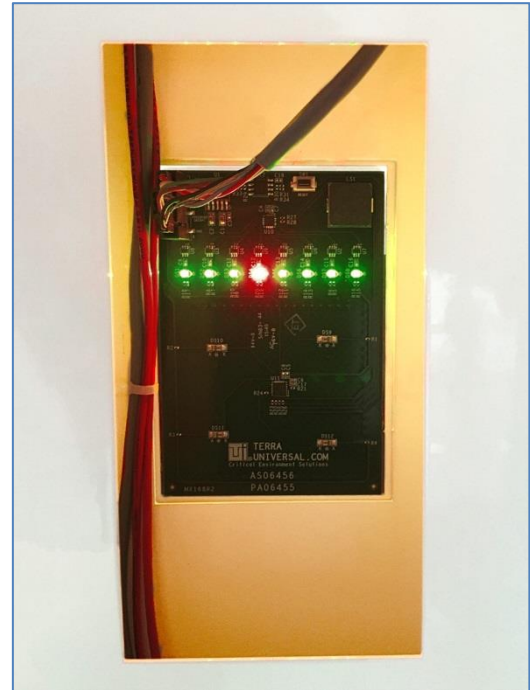


Figure 4: View of the Status Indicator Lights after removing the back panel

	OPPOSITE DOOR STATUS	AIR SHOWER STATUS	THIS SIDE DOOR STATUS	MOTOR ON STATUS	LOWER OPTICAL SENSOR STATUS	UPPER OPTICAL SENSOR STATUS	DOOR LIMIT TRIGGERED STATUS	SYSTEM STATUS
	CLOSED	ON	CLOSED	ON	DOOR IS CLOSED	DOOR IS OPEN	ON	OK
	OPEN	OFF	OPEN	OFF	N/A	N/A	OFF	



NOTE

High-speed roll-up doors do not have a Door Limit Switch. The Door Limit Triggered Status light will always be green. The Air Shower Status light will be green if the pass-through is equipped with the optional Air Shower module.



5.0 Troubleshooting

Problem: The system has malfunctioned and/or the system status indicator has stopped alternating between red and green.

Possible Solution(s): Check to make sure that the Bypass key switches are turned to the NORMAL position and then reset the system by pressing one of the reset buttons to return the doors to the closed position.

Problem: One or both of the pass-through doors will not close.

Possible Solution(s): Check to make sure that the Bypass key switches are turned to the NORMAL position. Try disabling the Emergency Stop function by pressing E-STOP three times in succession. If the problem persists, press the reset button.

Problem: One or both of the pass-through doors will not open.

Possible Solution(s): Ensure both doors are closed before attempting to open a door. If the Lock Down function has been activated, there will be an audible beeping from inside the chamber. Press LOCK three times in succession to disable it. If the problem persists, press the reset button.

Problem: The vinyl door has fallen out of the track, or is stuck.

Possible Solution(s): If the door has derailed, manually replace the door's main bar into the track. If necessary, press DOWN on the control panel and carefully pull door down to create sufficient slack to replace the door, then straighten it after replacing the door. If the doors won't activate after replacing them, press the reset button.

Problem: The doors do not stop at the proper open and closed positions.

Possible Solution(s): The internal cams may have become de-calibrated. Contact Terra Universal for further instruction.

Problem: The touch panel does not respond when any button is pressed.

Possible Solution(s): The system may have crashed. Press and hold one of the reset buttons to reboot the system.

Problem: Power to the system has completely shut off. The status indicators inside the control panels and TUI logo do not light up.

Possible Solution(s): The system's main circuit breaker may have been tripped. The circuit breaker can be accessed through the top panel of the pass-through. Check for any blown fuses, any visible damage to the main circuit board, or any visible damage to the other components.



6.0 Manual Override for Service and Cleaning



Disconnect the unit from power before servicing.



To prevent cross-contamination, make sure that both doors are fully closed with key switches in the NORMAL position before resuming normal operation.

For service and cleaning, the Roll-Up Door Pass-Through has two Bypass key switches. The key can be removed to prevent inadvertent operation of the pass-through during maintenance procedures or to prevent tampering with the interlock system.

To raise both doors to the fully open position:

1. Turn both Bypass key switches to the BYPASS position.

To move both doors into the down position:

1. One at a time, turn the key switches to the NORMAL position and allow the door to fully close.
2. Remove the key from the key switch to prevent tampering with the interlock system.

Cleaning

Powder-coated steel and vinyl should always be cleaned with a mild cleaning agent and a damp cloth. Alcohol and other solvents may degrade surfaces.

7.0 Specifications



Refer to the original order form for more specifications applicable to your unit.

General Specifications	
Motor	Water/dust proof, direct quill drive, sealed oil bath right angle drive
Power Requirements	110VAC, 60Hz, 10 amp
Pass-through Housing	Powder-coated stainless steel
Window Material	Clear flexible PVC
Door Material	UV-resistant solid-colored vinyl
Door Speed	28" per second



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Generally, customers can improve the chance of collecting on a freight claim by following these procedures: 1) formally requesting that the carrier inspect the shipment immediately upon suspecting damage or shortage to verify condition; 2) notifying the carrier upon discovery of concealed damage and requesting an inspection within 15 days of receipt, both in person or phone and following up via mail; 3) keeping the shipment as intact as possible, including retaining original packaging materials and keeping the product as close to the original receiving location as possible; 4) holding salvage for disposition by the carrier.

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Thank you for ordering from Terra Universal!!