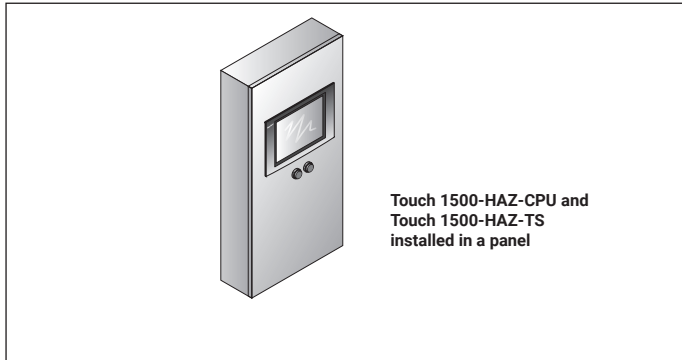




RAYCHEM

TOUCH 1500

User Interface Terminal for RAYCHEM NGC Systems Installation Instructions



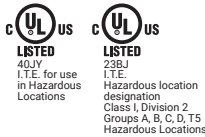
APPROVALS / CERTIFICATIONS

Hazardous Locations

Class I, Division 2 Groups A, B, C, D



Touch 1500-HAZ-CPU



Touch 1500-HAZ-TS



General

Area of use	Nonhazardous or hazardous locations, indoor or outdoor (Type 4X, IP66)
Supply voltage	Touch 1500-HAZ-CPU: 10 – 36 Vdc Touch 1500-HAZ-TS: 19 – 30 Vdc
Amperage rating	Touch 1500-HAZ-CPU: 2 A @ 24 Vdc Touch 1500-HAZ-TS: 2.62 A @ 24 Vdc
Operating temp (CE)*	Touch 1500-HAZ-CPU: -20°C to 60°C (-4°F to 140°F) Touch 1500-HAZ-TS: -20°C to 60°C (-4°F to 140°F)
Operating temp (UL)*	Touch 1500-HAZ-CPU: -10°C to 60°C (14°F to 140°F) Touch 1500-HAZ-TS: 0°C to 50°C (32°F to 122°F)
Storage temperature	-30°C to 80°C (-22°F to 176°F)
Dimensions (W x D x H)	Touch 1500-HAZ-CPU: 85.5 x 139 x 152 mm (3.4 x 5.5 x 6 in) Touch 1500-HAZ-TS: 422 x 68 x 338 mm (16.61 x 2.68 x 13.31 in)

Alarm Outputs

Relay output	One Form C relay rated 3 A @ 250 Vac. Relay is used as a common alarm.
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* Note: Temperature ratings are without space heaters

DESCRIPTION

The Touch 1500-HAZ nVent RAYCHEM is a panel mounted touch screen display used in conjunction with RAYCHEM NGC-40 and NGC-20 (Europe only) control and monitoring devices. The Touch 1500-HAZ display is rated NEMA 4X (IP65) and can be mounted indoors or outdoors in a hazardous location. For outdoor installation, a space heater will be required in the panel for low ambient conditions. The Touch 1500-HAZ kit includes all hardware required for mounting in a suitable electrical panel. Additional materials are required for electrical connections and are detailed below. These instructions describe how to mount the Touch 1500-HAZ in an electrical panel and are intended only for personnel experienced in panel construction.

TOOLS REQUIRED

- Metal file
- Masking tape
- Phillips screwdriver
- #16 (3/16) drill bit
- Jig saw (recommend using carbon steel blade with 24TPI)

ADDITIONAL MATERIALS (TO BE ORDERED SEPARATELY)

Qty	Catalog number	Description	Mfg	Mfg/PTM PN
1	Touch 1500-HAZ-TS	Touch Screen	TTC	10332-011
1	Touch 1500-HAZ-CPU	Computer	TTC	10332-010
1	Touch 1500-HAZ-CK	Cables/Mounting Hardware: 4-ft USB A/B Cable 4-ft VGA Cable Touchscreen Mounting Clips (1) 8-ft DB9 to RS-485 Cable	TTC	10332-027
1	ADAM-4069-C1D2	Alarm Module	Advantech	
1		Push-to-Test Alarm Light (24 Vdc)		

Network Connection

Remote Port (com 3)	Connects to common alarm module (ADAM-4069)
RS-485	A non-insulated 9 pin D sub male
Data rate	To 9600 to 57000 baud
Field Port (com 4)	Not used
RS-485	A non-insulated 9 pin D sub male
Data rate	To 9600 baud
LAN	10/100 Base-T Ethernet port with Link and Activity Status LEDs (X3)
USB Ports	USB 2.0 host ports (X4)

LCD Display

Display	LCD is a 15-in XGA, color TFT transfective device with integral LED backlighting.
Touch Screen	5-wire resistive touch screen interface with enhanced ITO film for user entry.

WARNING:

The TOUCH 1500 is an electronic unit. During installation, take the following precautions to avoid damage to its electronic components.

- Handle with care to avoid mechanical damage.

- Keep electronics dry.
- Avoid exposure to static electricity.
- Avoid contamination with metal filings, liquids, or other foreign matter.

- Use agency-approved conduit bushings, adapters, and cable glands to keep the enclosure protected from dust and fluids.

Provide Suitable Panel Enclosure, and Determine Locations for TOUCH 1500-HAZ Assembly in Panel

1. Provide suitable panel enclosure

To protect its electronic components, the Touch 1500-HAZ must be mounted in a non-hazardous location panel with a minimum of IP32 (NEMA 1) enclosure or hazardous location panel with a minimum IP65 (NEMA 4) enclosure. The Touch 1500 assembly comes with a sealing gasket and hardware to mount the touchscreen.

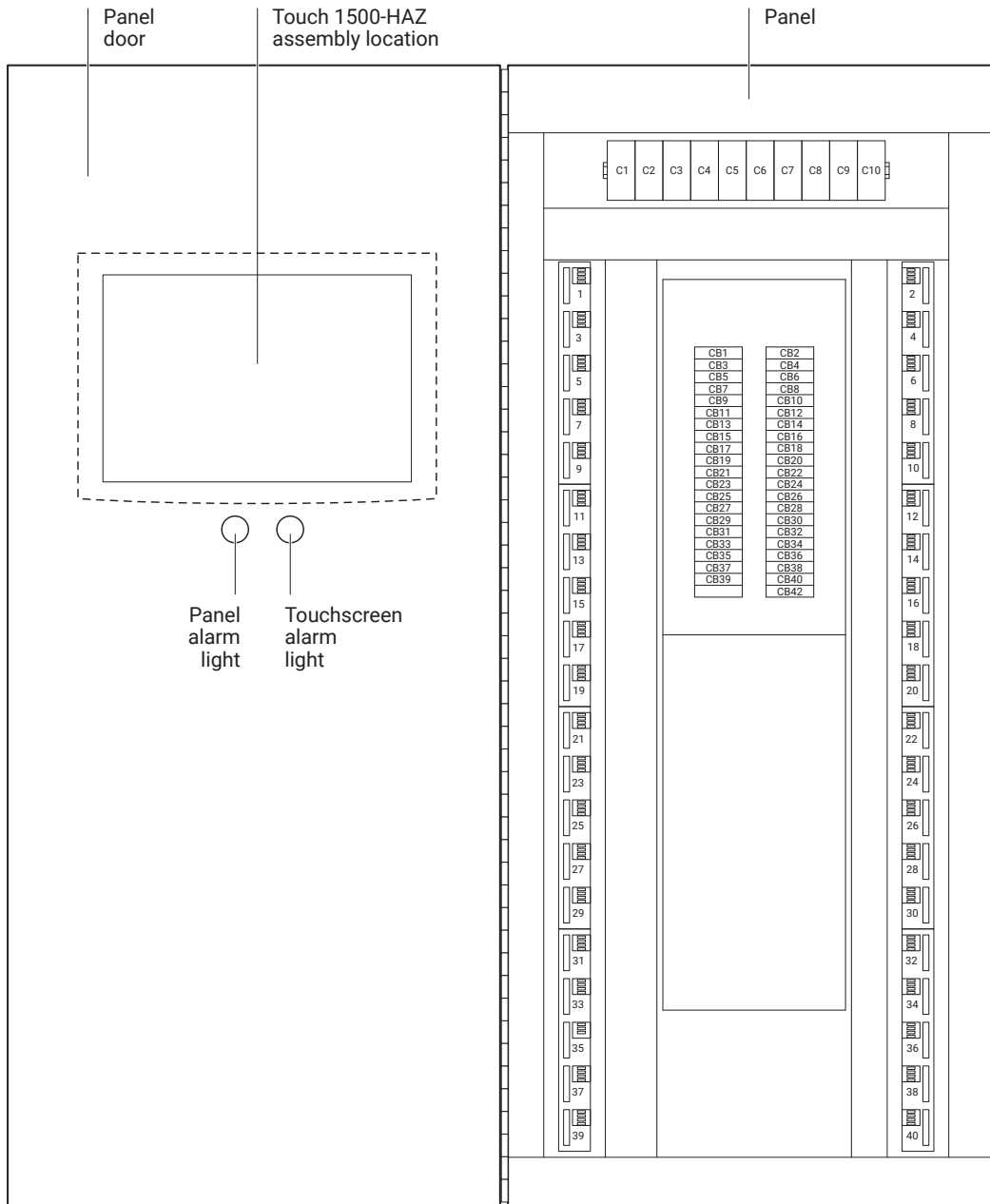
Note: The RAYCHEM Touch 1500-HAZ is designed for operation in ambient temperatures from 0°C to 50°C (32°F to 122°F). If the ambient temperature is outside this range, a space heater with screen window kit and/or cooling fan will be required in the panel.

2. Determine locations for the Touch 1500-HAZ-TS and Touch 1500-HAZ-CPU assembly in the electrical panel

The Touch 1500-HAZ-TS should be located on the front of the panel near eye level (for convenient viewing).

The Touch 1500-HAZ-CPU should be located on the sidewall or backpan of the enclosure.

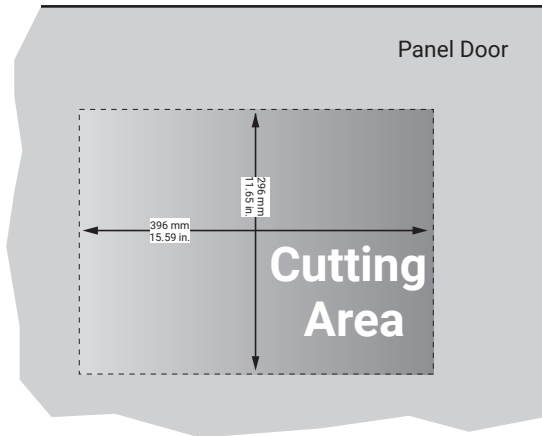
The Touch 1500-HAZ assembly is an electronic unit and must not be located where it will be exposed to strong magnetic fields or excessive vibration.



Cut Opening and Mount TOUCH 1500-HAZ on Front of Panel

1. Locate the TOUCH 1500-HAZ on the front of panel

Locate the Touch 1500-HAZ assembly on the front of the panel at the level convenient for viewing. Make sure the cover on the back of the assembly will not interfere with existing panel hardware.



Note: Cutting the opening for the display is a craft sensitive procedure; if it is not done correctly, the panel door can be damaged. The procedure for laying out and cutting the opening for the display must be undertaken with care and by personnel qualified and experienced in panel construction.

2. Prepare and mark the position of the display opening and mounting holes

- Use the cut-out directions to lay out the opening for the Touch 1500-HAZ-TS.
- Apply two layers of masking tape around the outer perimeter of the intended opening to prevent scratching the panel surface with the jigsaw.

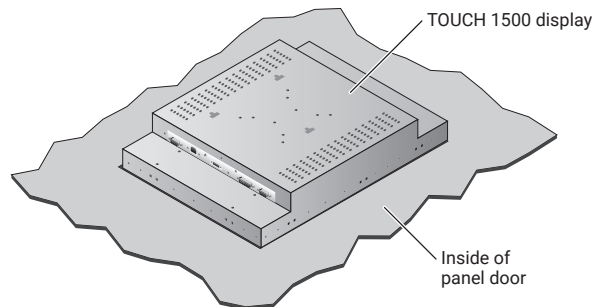
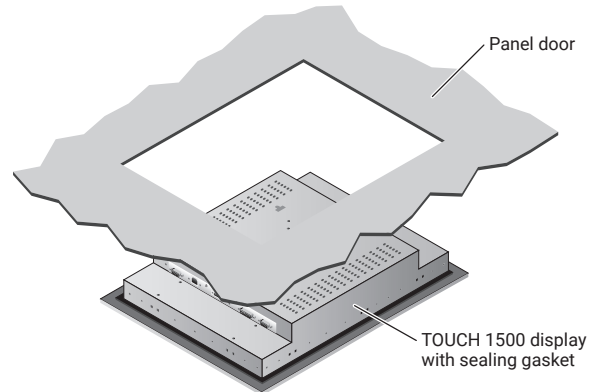
3. Cut the display opening

Cut the opening for the Touch 1500-HAZ-TS with a jigsaw using a 24 TPI blade. Take care not to damage the panel door. Remove all rough edges and burrs with a metal file before proceeding.

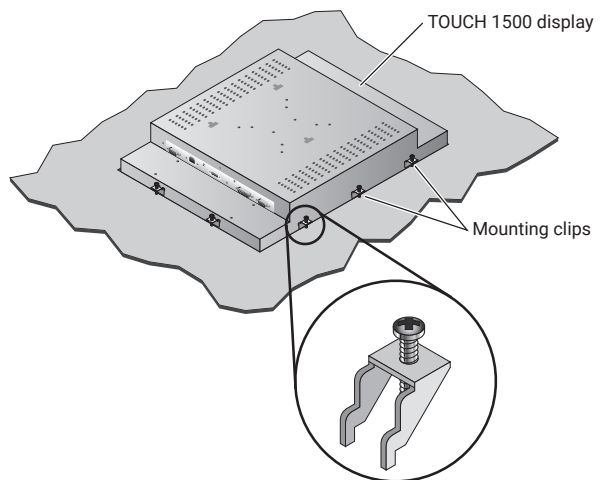
Note: The following steps are most easily accomplished if the panel door is on a horizontal surface.

4. Mount the user interface assembly on the panel door

- Place the Touch 1500-HAZ-TS assembly in position. Secure the screen to the enclosure with the 10 mounting clips.

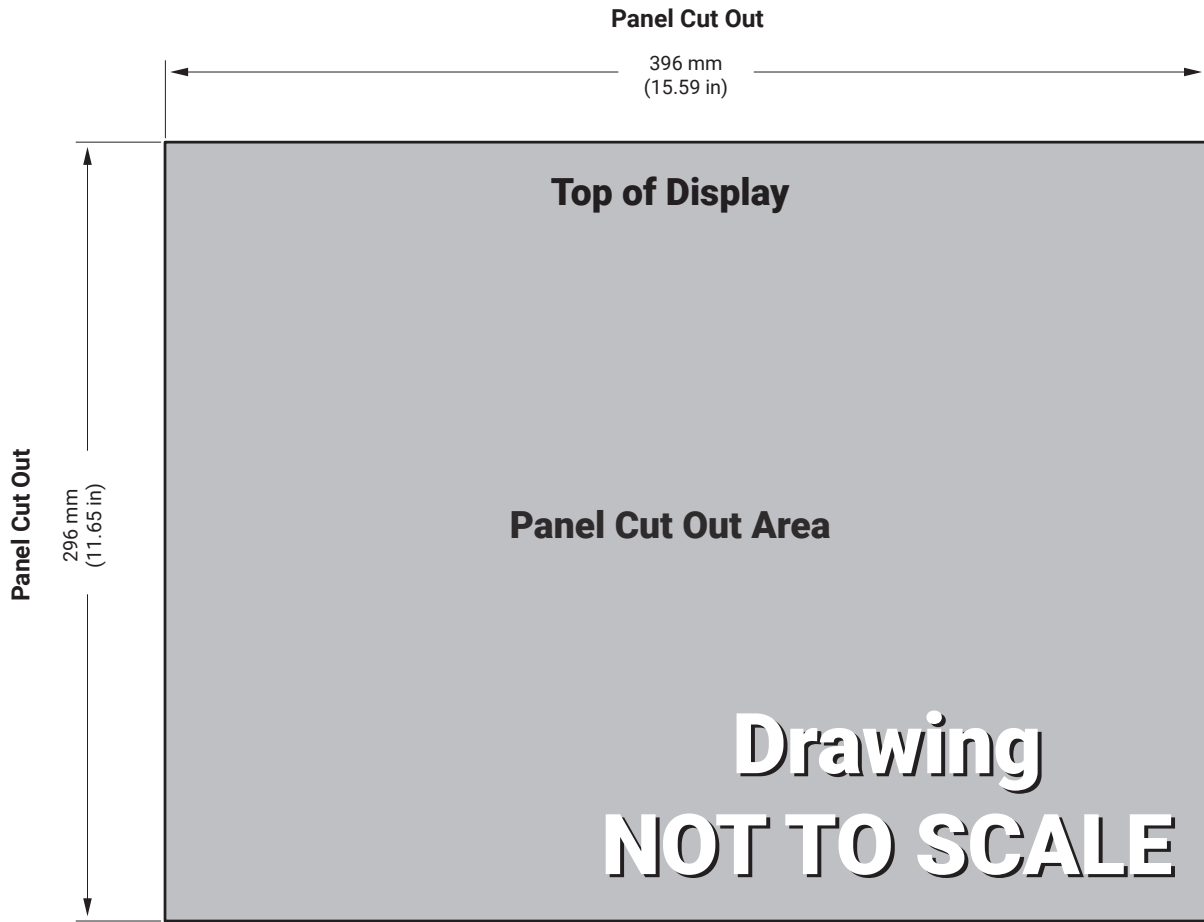


- Place the supplied mounting clips in each slot along the sides of the Touch 1500-HAZ-TS. Only fasten hand tight.

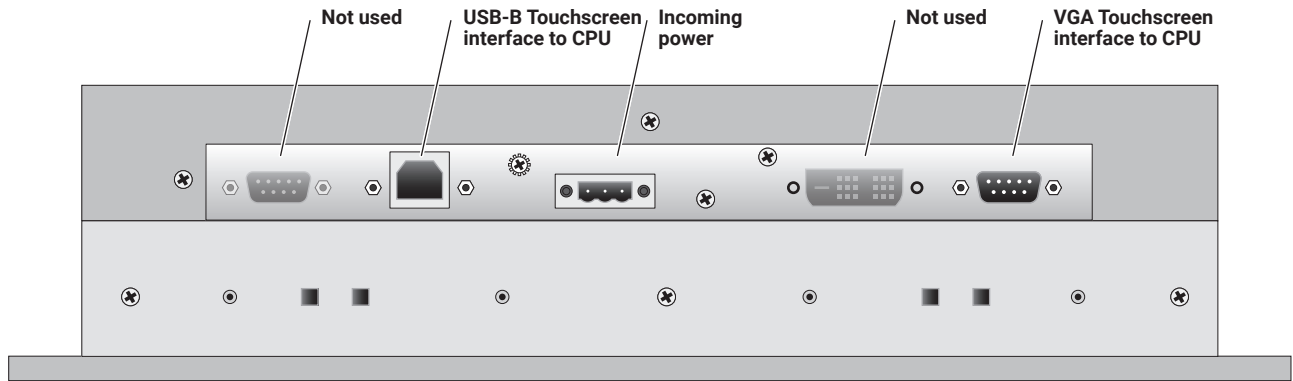


- Look at the front of the panel, and align the Touch 1500-HAZ-TS assembly so it is level (loosen clips if necessary to reposition the assembly).
- After the display is properly positioned, tighten the mounting clips. **Do not overtighten and risk damage to hardware.**

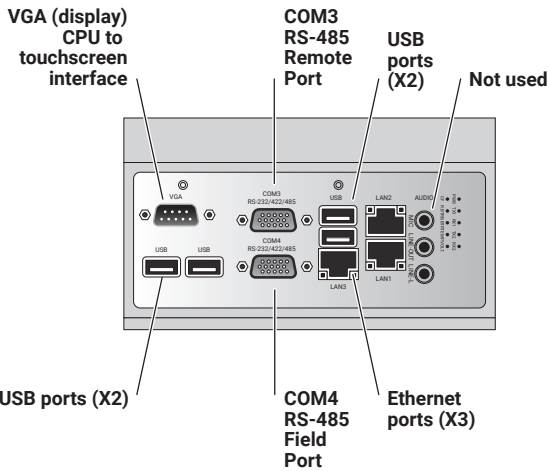
TOUCH 1500 Cut Out Dimensions



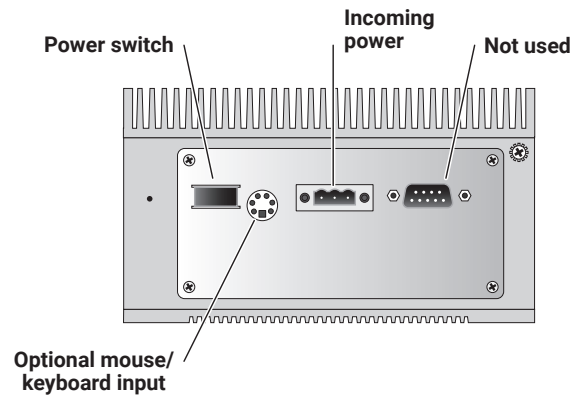
Touch 1500-HAZ-TS Port Diagram



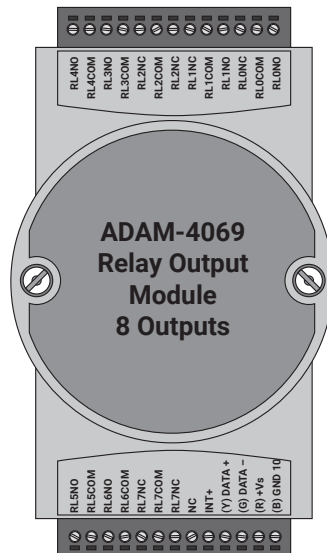
Touch 1500-HAZ-CPU Port Diagram (Back view)



Touch 1500-HAZ-CPU Port Diagram (Side view)

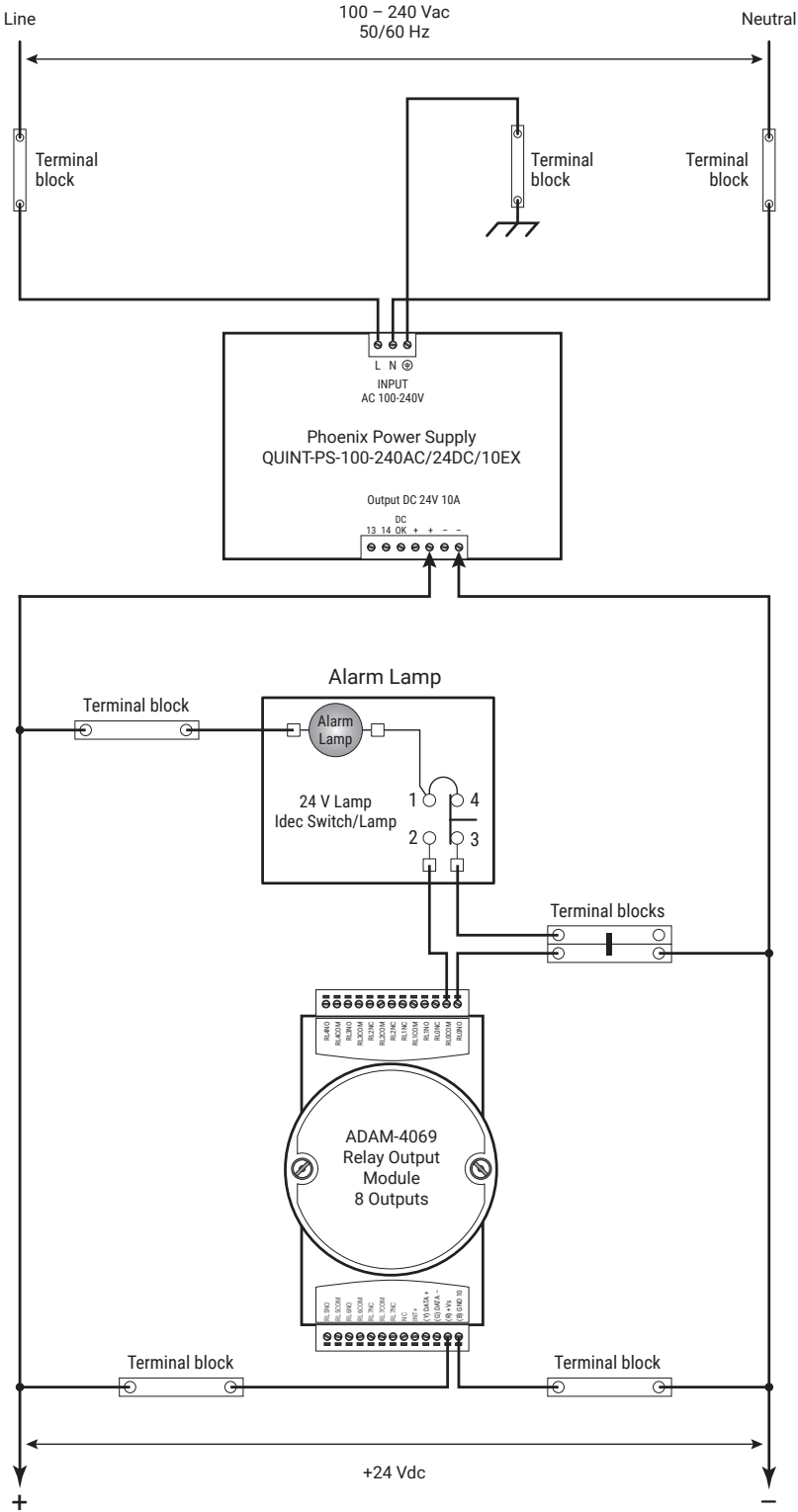


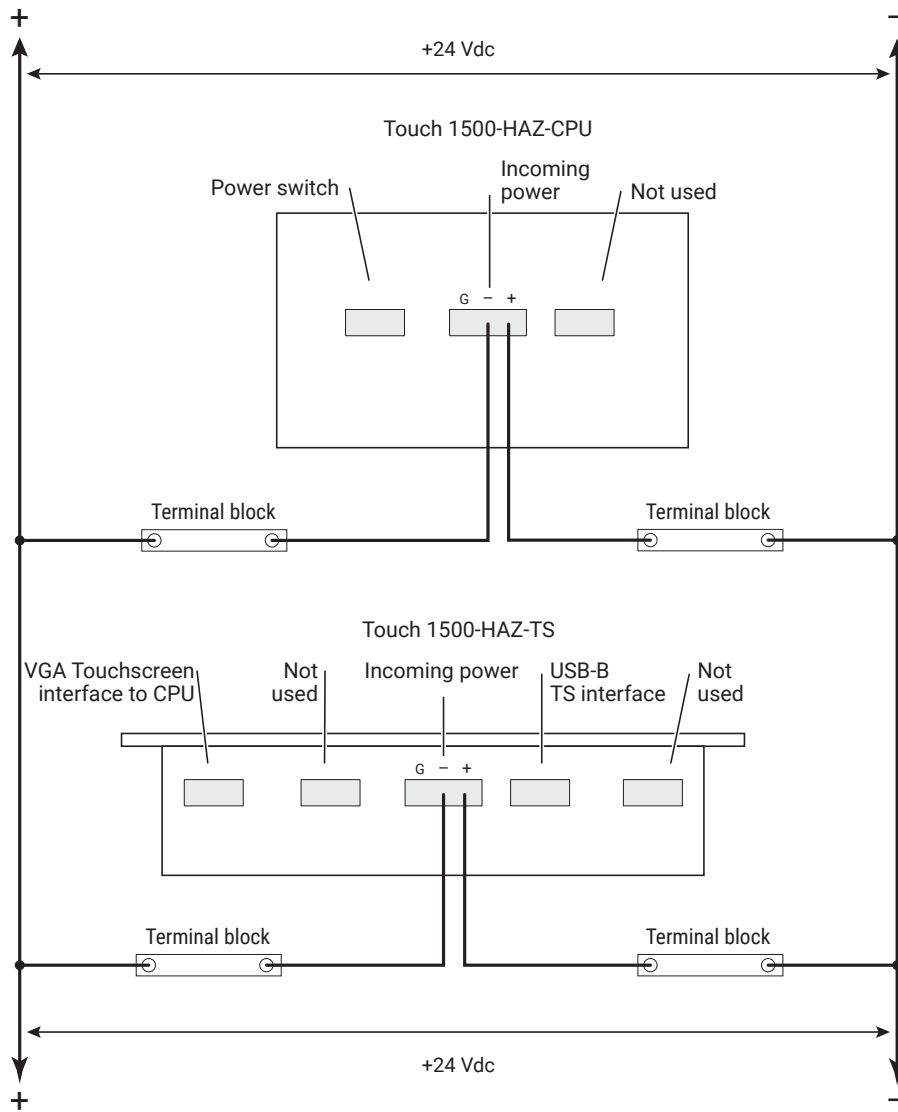
ADAM-4069 Pin Diagram



Connect Power

Connect 24 Vdc to the connection fittings to the Touch 1500-HAZ-CPU, Touch 1500-HAZ-TS, ADAM-4069 module, and ADAM-45101 modules per the schematic on the following pages.

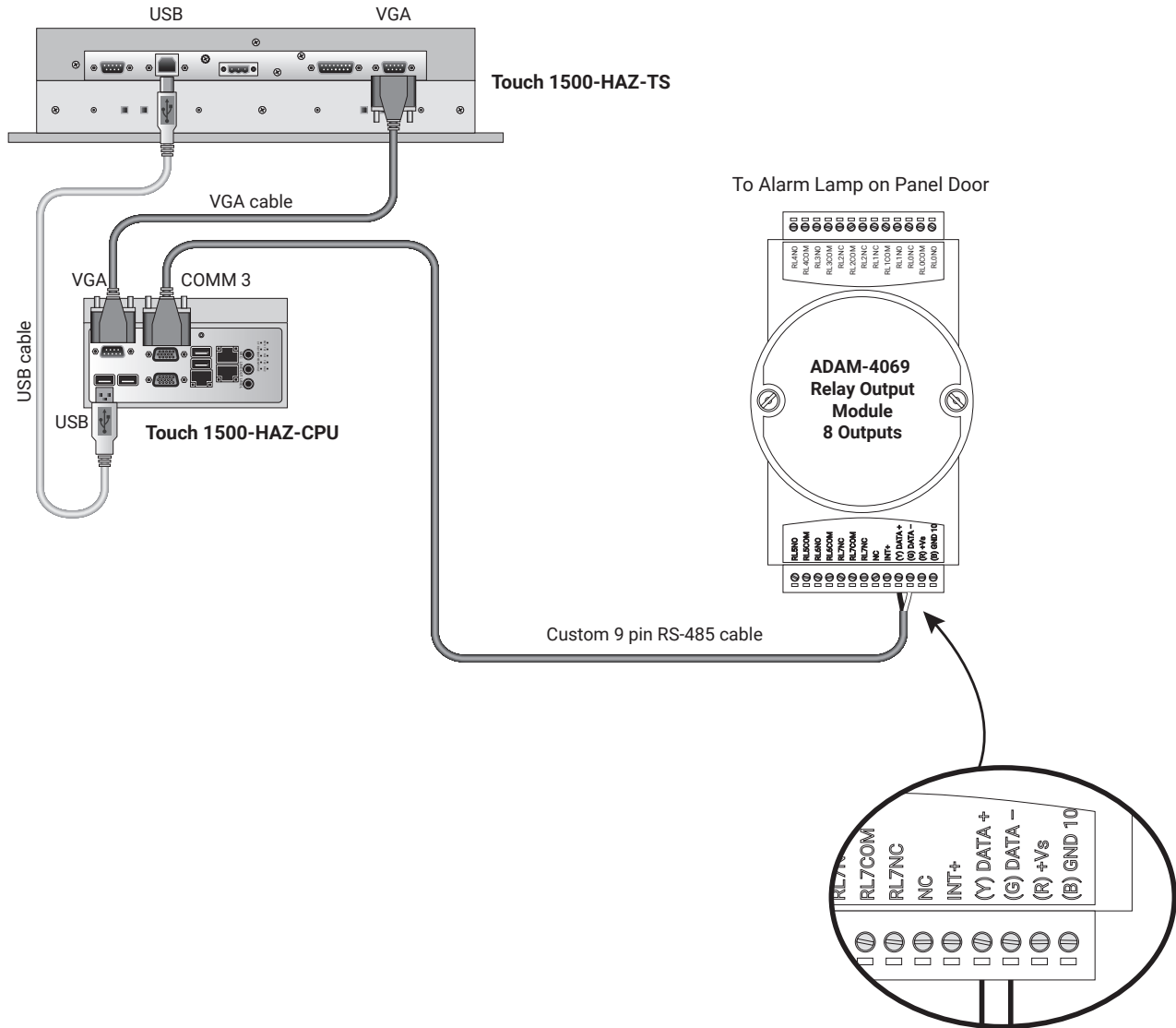




Field Port Communication RS-485 Common Alarm Light and Alarm Relay

Mount the supplied ADAM-4069 modules on a DIN rail inside the panel enclosure. Mount the alarm lights on the panel's door below the touch screen.

Wire per the schematic below.



Servicing

The Touch 1500-HAZ-CPU and Touch 1500-HAZ-TS contains no user-serviceable parts. Contact your nVent representative for service and an authorization number if required.

Cleaning

The touchscreen are of the Touch 1500-HAZ-TS may be cleaned with a damp or dry cloth. Typical window cleaning agents may be applied to aid in the removal of dirt, dust and grease. **Do not use abrasive cleaners.**

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