

## 68-302 FAAST

# Fire Alarm Aspiration Sensing Technology®

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### SPECIFICATIONS

#### Electrical Characteristics

External Supply Voltage	18 – 30 VDC
Average SLC Operating Current	300 µA
Power Reset	1 sec
Relay Contact Ratings	3.0A @ 30VDC, 0.5A @ 125VAC

#### Environmental Ratings

Operating Temperature	32F (0C) to 100F (38C)
Sampled Air Temperature	-4F (-20C) to 140F (60C)
Humidity	10 to 95% non-condensing
IP Rating	IP30

The purpose of this document is to provide practical information for mounting and connecting to FAAST XT. For full product information, which includes installation guidelines, instructions for safe use, and warranty and safety information, refer to the FAAST XT Comprehensive User Guide available at [systemsensor.com/68-302userguide](http://systemsensor.com/68-302userguide) or by scanning the QR code.

#### ITEMS INCLUDED WITH UNIT

- FAAST XT (68-302) unit
- Mounting bracket and hardware
- Installation and Maintenance Instructions
- USB interface cable
- PipeIQ software, comprehensive manual, and other helpful documents may be downloaded at [systemsensor.com/faast](http://systemsensor.com/faast)



#### CONNECTING TO FAAST XT

FAAST XT requires a configuration download from PipeIQ in order to initialize. This connection can be achieved using either the USB port located on the front of the device, or the Ethernet port located inside the wiring cabinet.

#### CONNECTING TO FAAST XT VIA USB

NOTE: In order to connect your computer to the FAAST XT using a USB connection, a USB driver must first be installed. The driver installation occurs during the installation of PipeIQ version 2.0 or later. Once the driver is installed, connect to the device using the following steps.

1. Launch PipeIQ.
2. Create a new project and select FAAST XT device, or open an existing project
3. Expand the tree view in the left side navigation pane to reveal the device
4. Right click on the device and select 'Connect Device'
5. Select USB, The USB combo box should already be populated with FAAST XT (Com Port Number).
6. Select Read only/Administrator (requires password – default is 'password') mode Click Connect.

#### CONNECTING TO FAAST XT VIA ETHERNET

Default Device IP Configuration

IP Address:	192.168.1.10
Subnet Mask:	255.255.255.0
Default Gateway:	192.168.1.1
Primary DNS:	0.0.0.0
Secondary DNS:	0.0.0.0

#### CONFIGURE YOUR PC

Your PC will need to be sitting on the same local area network as the FAAST XT device in order to establish communication. Change your PC's IP address to 192.168.1.15 by:

1. Accessing your network setting in your PC's control panel
2. Open 'Local Area Connection' settings and select 'Properties'
3. Select 'Internet Protocol Version 4 (TCP/IPv4) and then select 'Properties'

4. Select 'Use the following IP address and enter 192.168.1.15. If the subnet mask does not automatically populate, enter 255.255.255.0 into the subnet mask field.
5. Hit OK and close out of the network menus.

(Important Note: Before changing your PC's IP address, be sure to take note of whether your IP is currently dynamically set, or is a static IP address. If your PC is assigned a static IP address, make note of the IP address and subnet mask so that you can change back to the proper settings after the FAAST XT is configured.)

#### CONNECT USING PIPEIQ

1. Launch PipeIQ. (PipeIQ may be downloaded from [systemsensor.com/faast](http://systemsensor.com/faast))
2. Create and save a new project, or open an existing project
3. Expand the tree view in the left side navigation pane to reveal the device
4. Right click on the device and select 'Connect Device'
5. Change the User field to 'Administrator' and enter the password – the default password is 'password' – then hit 'Connect'
6. Upon connection, a green check will appear next to the device in the navigation tree

#### INSTALLATION

This equipment must be installed in accordance with all local and national codes and regulations.

#### PIPE INSTALLATION

The pipe layout is designed using the PipeIQ software package. Refer to the Comprehensive Instruction Manual to design the pipe network. All pipe must be installed in accordance with local and national codes and regulations. The pipe network should be complete before proceeding with the physical and electrical system installation.

#### PHYSICAL UNIT INSTALLATION



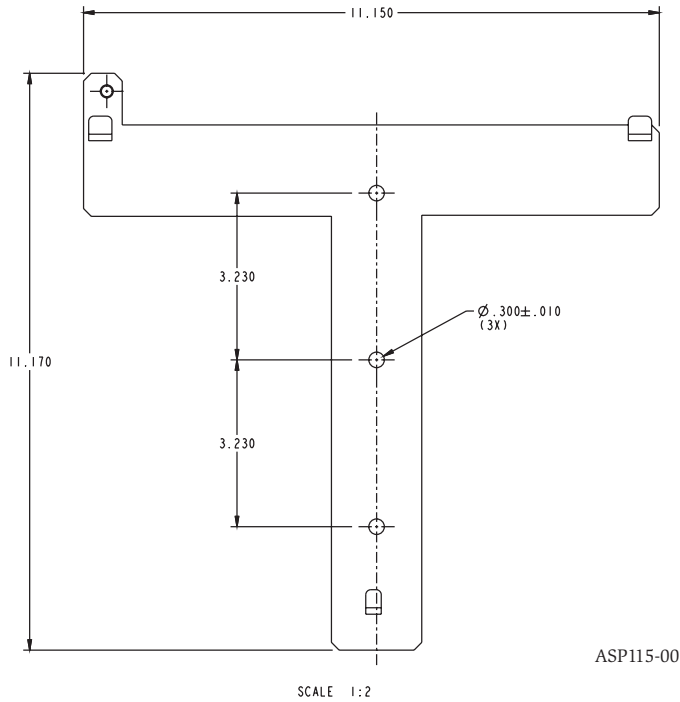
Make sure that there are no pipes or electrical wires within the wall before drilling any mounting holes

#### SECURING THE MOUNTING BRACKET

The typical mounting location for the FAAST XT unit is on the wall. The unit is mounted to the wall using the enclosed mounting plate. Figure 1 shows the wall mounting plate. For easier access to the FAAST XT unit, it is preferred to position the mounting plate in an easily accessible location.

1. Place the mounting bracket on the wall in the desired location and use it as a template to locate the necessary mounting holes.
2. Mark the hole locations and remove the bracket. It is recommended to secure the bracket using the 4 outer mounting holes.
3. Using a drill and the proper size bit for your mounting hardware, drill the necessary holes.
4. Use appropriate fasteners to accommodate the mounting surface and FAAST XT device weight.
5. Secure the bracket to the wall.

**FIGURE 1: WALL MOUNTING PLATE**

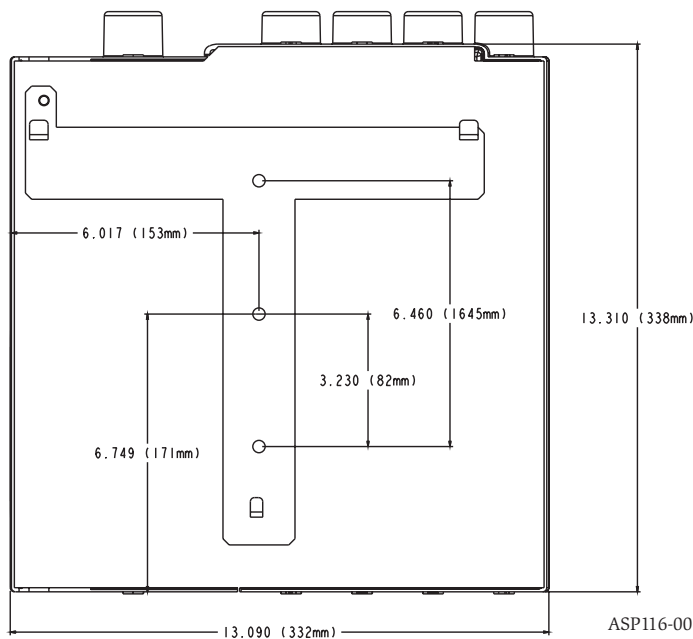


**MOUNTING THE DETECTOR TO THE BRACKET**

Once the mounting plate is attached, the unit is ready to be mounted on to the plate. Perform the following procedure to mount the unit.

1. Before installing the unit onto the bracket, remove the appropriate conduit caps from the top or bottom left side of the unit to match the orientation of the wiring. See Figure 4 for location of the wiring access plugs.
2. Line up the unit with the four mounting clips and the mounting studs on the left side.
3. Push the unit down onto the mounting clips and secure it with the supplied washer and nut on the mounting stud protruding through the mounting slot shown in Figure 2.

**FIGURE 2: MOUNTING SLOTS FOR MOUNTING STUDS**



**CONNECTING THE AIR SAMPLING PIPE**



Detailed pipe network information and best practices can be found in the Pipe Installation Guide, available for download at [systemsensor.com/faast](http://systemsensor.com/faast)

The input and output ports are designed to accept nominal one inch pipe (25mm). The input and output ports are tapered to provide fast, easy, pushfit connection of the sampling pipe to the unit. Perform the following procedure to connect the air sampling pipe to the unit.

1. Square off and de-burr the end of the sampling pipe. Ensure that the pipe is free from any particles that might interfere with the pipe connection.
2. Remove the input plug from the input port being used (either the top or bottom of the unit).
3. Inset the air sampling pipe into the port, ensuring a snug fit. DO NOT glue these pipes.

**EXHAUST PIPE**

The device should always be exhausted in to the space that it is monitoring. There are some circumstances where it may be necessary to connect a pipe to the exhaust port to divert the exhaust away from the location of the unit. Adding as little as 2ft of exhaust pipe also acts as a muffler for the fan – ensuring quieter operation. The output ports are tapered the same as the input ports, to provide fast, easy, push-fit connection of an exhaust pipe to the unit. Perform the following procedure to connect the exhaust pipe to the unit.

1. Square off and de-burr the end of the sampling pipe. Ensure that the pipe is free from any particles that might interfere with the pipe connection.
2. Remove the input plug from the input port being used (either the top or bottom of the unit).
3. Inset the air sampling pipe into the port, ensuring a snug fit. DO NOT glue these pipes.

**WIRING**



Before working on the FAAST XT system, notify all required authorities that the system will be temporarily out of service. Make sure all power is removed from the system before opening the unit. All wiring must be in accordance with local codes.

**POWER CABLES**

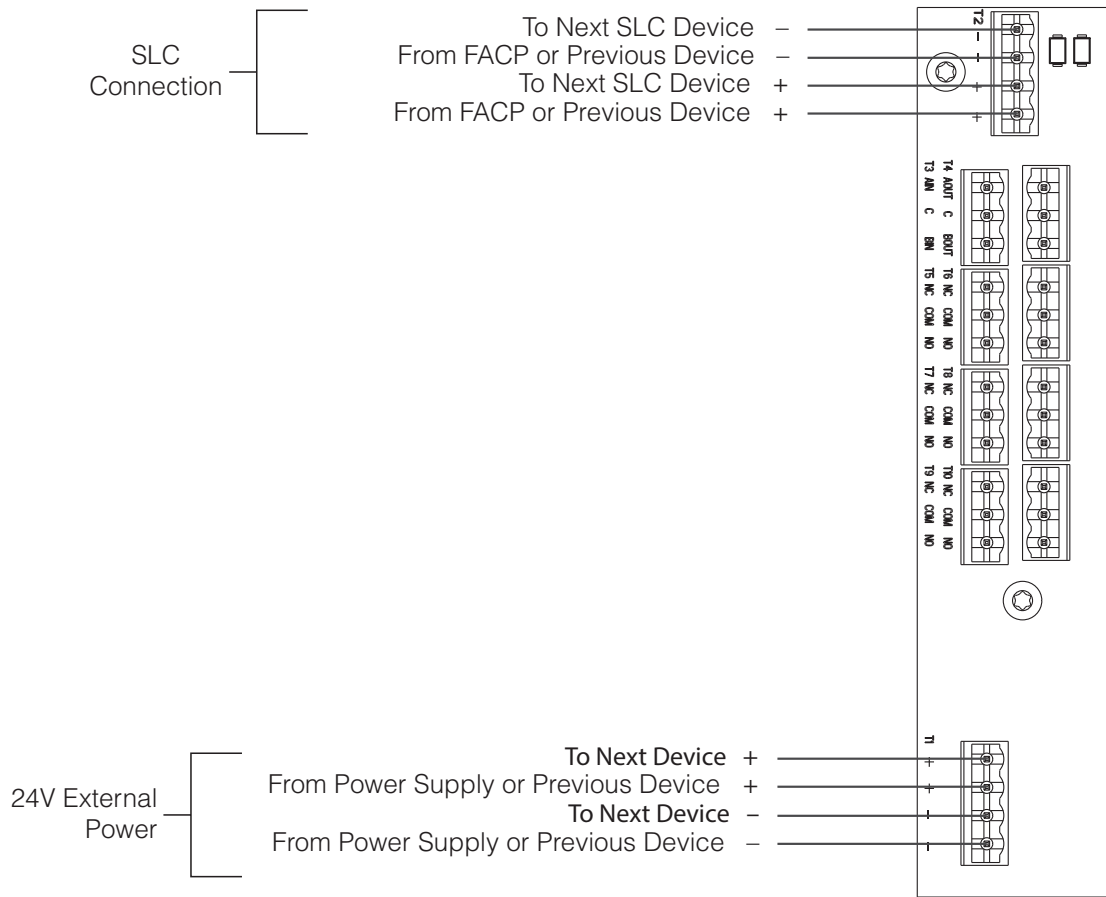
Use the power ratings of the unit to determine the required wire sizes for each connection. Use the power ratings of the connected products to determine the wire size.

**CONDUIT USAGE**

If electrical conduit is used for system wiring, terminate the conduits at the cable entry ports on the top or bottom of the unit, using the appropriate conduit connectors.

1. Run all wiring, both power and alarm, through the conduit and into the left side of the unit enclosure, as seen in Figure 3.
2. Attach the appropriate wires to the supplied Euro connector. Follow appropriate local codes and electrical standards for all cabling.
3. Plug the appropriate connector into the mating connector on the unit.

**FIGURE 3. POWER AND ALARM CONNECTION BLOCK**



ASP114-02

**TABLE 1. TERMINAL DESIGNATIONS**

TERMINAL BLOCK	
<b>T1</b>	External Power – Powers Aspirating Smoke Detector
<b>T2</b>	SLC power – Powers SLC Interface Circuit. Isolated from External Power
<b>T3</b>	RS 485 Rx Rx and Tx can be wired in a half duplex configuration
<b>T4</b>	RS 485 Tx Rx and Tx can be wired in a half duplex configuration
<b>T5</b>	Alert Relay – Maintains state on loss of power
<b>T6</b>	Action1 Relay – Maintains state on loss of power
<b>T7</b>	Action2 Relay – Maintains state on loss of power
<b>T8</b>	Fire1 Relay – Maintains state on loss of power
<b>T9</b>	Fire2 Relay – Maintains state on loss of power
<b>T10</b>	Fault Relay – Maintains state on loss of power

**CABLING REQUIREMENTS**

The FAAST XT system provides a series of Euro style pluggable terminals, located behind the left side door of the unit. Refer to Table 1 for the proper electrical connections to the unit. Refer to Table 2 for a typical connection for monitoring the FAAST XT system at a Fire Alarm Control Panel (FACP).

**SYSTEM POWERING**

The following procedure describes how to initially power up the FAAST XT system.

1. Unplug the unit’s power connector to the unit before turning on the power.
2. Turn on the power.
3. Check the voltage at the connector. Make sure it is within the required voltage range.
4. If the voltage is within the proper range, reconnect the power connector to the unit. Do not connect the SLC at this point in order to enable configuration.
5. Connect a computer, with PipeIQ installed, to the unit using either the USB connection on the front of the device, or the Ethernet port located in the left side wiring door. (See the ‘Connecting to FAAST XT’ for detailed connection instructions.)
6. Use the PipeIQ software to set up the unit configuration required for the particular application.
7. The PC may now be disconnected unless a permanent networked connection is desired.
8. Connect to SLC
9. Verify the system fan starts up and air begins to flow out of the exhaust port. The user interface will provide the device status.
10. The device will establish an airflow baseline during the first five minutes of operation. After five minutes, the airflow level display will provide the true measured airflow status. The device will give visual indication of the baselining period on the LCD screen.

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#### LASER SAFETY INFORMATION

This aspiration detector does not produce any hazardous laser radiation and is certified as a Class 1 laser product under the U.S. Department of Health and Human Services (DHHS) Radiation Performance Standard according to the Radiation Control for Health and Safety Act of 1968. Any radiation emitted inside the smoke detector is completely within the protective housings and external covers.

The laser beam cannot escape from the detector during any phase of operation. The Center of Devices and Radiological Health (CDRH) of the U. S. Food and Drug Administration implemented regulations for laser products on August 2, 1976. These regulations apply to laser products manufactured after August 1, 1976. Compliance is mandatory for products marketed in the United States.

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#### WARRANTY

Fike Industries warrants its enclosed smoke detector to be free from defects in materials and workmanship under normal use and service for a period of three years from date of manufacture. Fike Industries makes no other express warranty for this smoke detector. No agent, representative, dealer, or employee of the Company has the authority to increase or alter the obligations or limitations of this Warranty. The Company's obligation of this Warranty shall be limited to the repair or replacement of any part of the smoke detector which is found to be defective in materials or workmanship under normal use and service during the three year period commencing with the date of manufacture. After contacting your local Fike Industries representative for issuing a Return Authorization number (RA # \_\_\_\_\_) and arrange for return return of the defective units. Please

include a note describing the malfunction and suspected cause of failure. The Company shall not be obligated to repair or replace units which are found to be defective because of damage, unreasonable use, modifications, or alterations occurring after the date of manufacture. In no case shall the Company be liable for any consequential or incidental damages for breach of this or any other Warranty, expressed or implied whatsoever, even if the loss or damage is caused by the Company's negligence or fault. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This Warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

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#### FCC STATEMENT

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This Class B digital apparatus complies with Canadian ICES-003.