

Instruction Manual

This Manual covers:

A76-SD

A76-T10

A76-T15

A76-X5

A76-W

A76H-MultiMount

A96-100

A96-200

A76-485OP

A70-EO

A70H-11 Shield

A70H-11 Screen



A76-SD w/ Sensors



A76-T10 w/ A76-SD



A76-T10



A96-100 & A96-200



A76H-MultiMount



A76-W



A70H-11 Shield w/ Mounting Hardware



A70-E0

FEATURES

- Galvanized Steel Tubing
 - Adjustable Mounting Feet
 - Mast provided
- Total Height 10 Feet (3 Meters)

ORIENTATION

One side of the base should be mounted parallel to the True North/South line for correct sensor orientation

APPLICATIONS

- Building Automation and Controls
- Environmental Monitoring
- Sensor Mounting

SENSOR EXPOSURE

Wind Speed:	Mounting Height - Top of Mast
Wind Direction:	Mounting Height - Top of Mast
Air Temperature:	Mounting Height - 4-5 feet (1-2 meters) Exposure - North
Relative Humidity:	Mounting Height - 4-5 feet (1-2 meters) Exposure - North
Fuel Temperature:	Mounting Height - 10-12 inches (25-30 cm) Exposure - South
Insolation:	Mounting Height - 4-5 feet (1-2 meters) Exposure - South
Soil Temperature:	Mounting Depth - 4-20 inches (10-50 cm)
Soil Moisture*:	Mounting Depth - 4-20 inches (10-50 cm)

*Soil Moisture - Locate Sensors atleast 10 feet (3 meters) away from any metallic object such as tower leg or ground rod

KITS

A76-SD	Sensor Mount
A76-T10	Tripod Tower Base
A76-T15	A76-T10 and A76-X5
A76-X5	5 Foot Cross Arm

FEATURES

- Galvanized Steel Tubing
 - Adjustable Mounting Feet
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- Total Height 10 Feet (3 Meters)



APPLICATIONS

- Building Automation and Controls
- Environmental Monitoring
- Sensor Mounting

ORIENTATION

One side of the base should be mounted parallel to the True North/South line for correct sensor orientation

Sensors not Included*

SENSOR EXPOSURE

A76-T10

- Wind Speed: Mounting Height - Top of Mast
- Wind Direction: Mounting Height - Top of Mast

A76-T15

- Air Temperature: Mounting Height - 4-5 feet (1-2 meters)
Exposure - North
- Relative Humidity: Mounting Height - 4-5 feet (1-2 meters)
Exposure - North
- Fuel Temperature: Mounting Height - 10-12 inches (25-30 cm)
Exposure - South
- Insolation: Mounting Height - 4-5 feet (1-2 meters)
Exposure - South
- Soil Temperature: Mounting Depth - 4-20 inches (10-50 cm)
- Soil Moisture*: Mounting Depth - 4-20 inches (10-50 cm)

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FEATURES

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APPLICATIONS

- Building Automation and Controls
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FEATURES

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 - Mast provided
- Total Height 10 Feet (3 Meters)

APPLICATIONS

- Building Automation and Controls
- Environmental Monitoring
- Sensor Mounting

SPECIFICATIONS



INFORMATION

This cross arm is intended to support a variety of sensors designed to couple with one inch electro-mechanical tubing.

The A76-X5 Cross Arm should be generally be aligned with the East / West line to provide proper exposure for the sensors.

See Figure 1. Attach the cross arm to the tower (A76-T10) at a height of 3 - 5 feet (1 - 1.5 M) using the stainless steel U bolt arrangement shown in Figure 3. The U bolt plates should be located on the inside of the tower leg to make the cross arm as stiff as possible. Use a carpenter's level or other means to make the cross arm as level as possible.



APPLICATIONS

- Building Automation and Controls
- Environmental Monitoring
- Sensor Mounting

SPECIFICATIONS

Align along the East / West line to provide proper exposure for sensors

Mount 3-5 feet (1-1.5 meters) above the ground using included Stainless Steel U-Bolts arrangement

FEATURES

-Constructed from 1.25 inch 12 gauge Galvanized Steel -Mounts 1 inch to 2 inch diameter mast 4 inches from the wall

-MAST NOT INCLUDED

APPLICATIONS

- Building Automation and Controls
- Environmental Monitoring
- Sensor Mounting



INFORMATION

This mount is for applications where the A76- Tripod Tower is not suitable. It is ideally suited for wall mounting of a 1" mast to support the A76-SD.

The A76-W is a "W" mount design made from 1.25" galvanized 12 gauge steel. The mast will be 4" away from the wall. Mounting hardware is included. Mast is not included.

[Tripod Information](#)

GROUNDING

A ground rod should be installed as close to the tower as possible. It should be electrically connected to the mast and tower legs with a length of wire with as straight a run as possible.

ESTABLISHING EARTH GROUND

A copper-clad rod should be driven into the ground eight feet or more. Since frozen soil is a poor conductor of electricity, the ground rod should extend three feet below the deepest frost line for your area. If the latter is not feasible because of rock formations or other problems, contact the factory for advice.

The type of soil influences the ability of the ground rod to dissipate energy. Clay and loam are best; sand or gravel poor. Ground rods should be installed as vertically as possible since surface soil generally has a lower conductivity than subsoil.

Buried Cable

Close lightning strikes present special problems for systems using buried cable. Energy dissipating from a lightning strike can result in earth potentials of several thousand volts per meter. For cable lengths over 5

meters, the potential voltage difference from one end of the cable to the other can easily exceed the insulation breakdown voltage. This can damage attached circuitry and the cable.

To help avoid this problem, AWG # 8 or larger bare copper wire should be buried adjacent to the signal cable and attached to earth ground at both ends. Avoid sharp turns and coils in the bare copper wire. The bare copper wire will conduct the majority of the lightning-induced current and keep the components tied to the signal cable at nearly the same potential, thus preventing damage.

Mounting

The Tripod Tower can be attached to a wooden roof using the screws provided. All penetrations of the roof membrane must be sealed after installation.

If the tower is to be deployed at a remote site, a concrete foundation 3 feet square (1 meter square) and 6 inches deep (6.5 cm) should be provided. Attach the tower using bolts preset in the foundation. The spacing of the tower legs is adjustable + 0.5 inch (+ 1.2 cm).

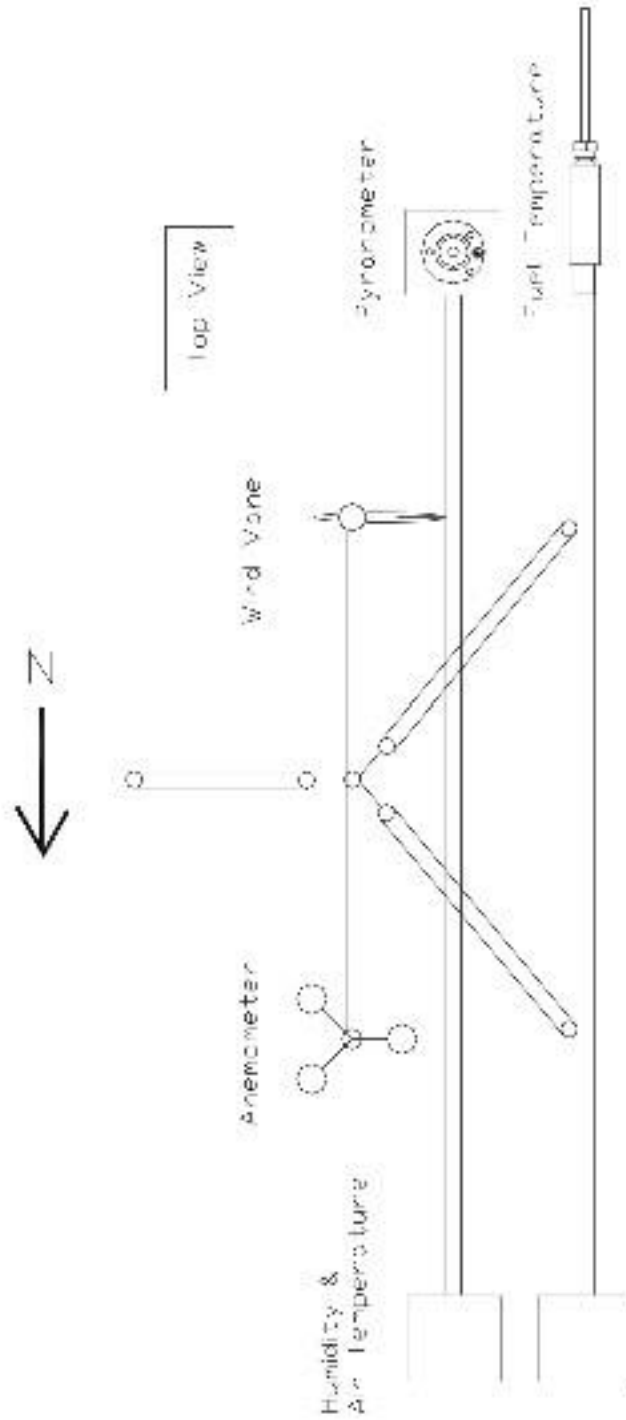
Mast

Insert mast through frame at top of tower into triangular bottom support. The “L” shaped bracket attached to the bottom support is to prevent the mast from slipping down. It should be positioned inside the mast tube. Tighten six screws supporting the mast.

Lightning protectors should be attached to this mast as close to their respective sensors as possible.

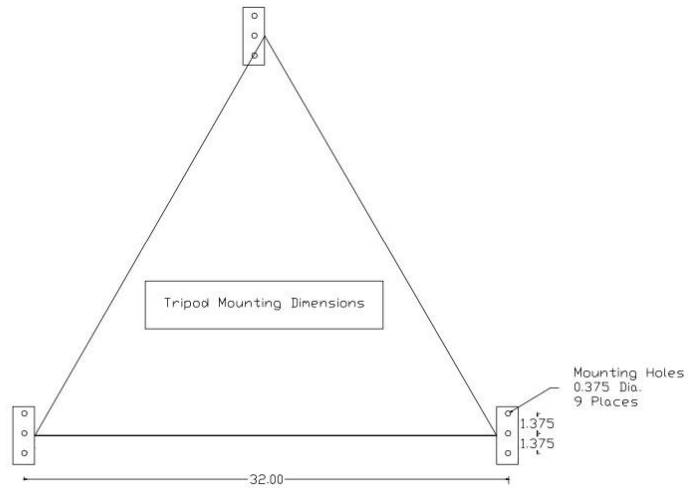
Tower Orientation

Figure 1



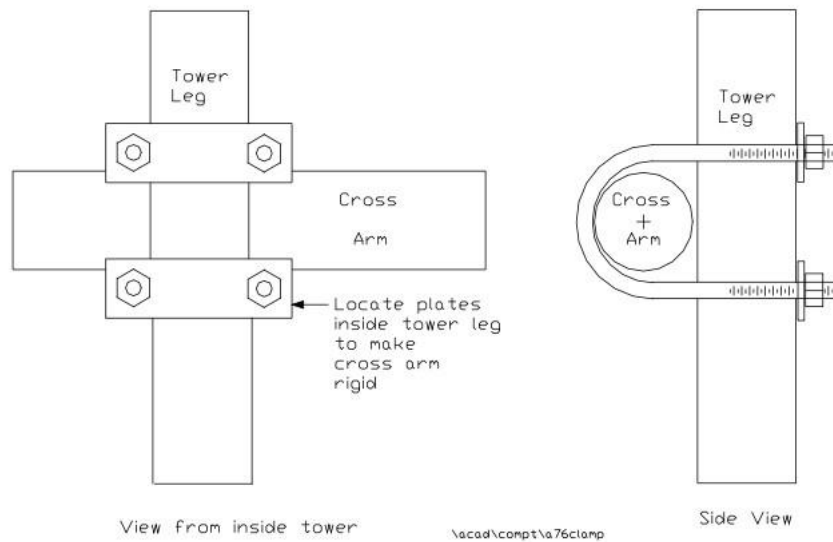
Tripod Mounting Dimensions

Figure 2



Cross Arm Clamp Detail

Figure 3



FEATURES

- Stainless Steel Bracket
- Stainless Steel Hardware

APPLICATIONS

- Building Automation and Controls
- Environmental Monitoring
- Sensor Mounting



A96-100

RECOMMENDED USE

- Installations with Buried Cable
- Sensors more than 20 feet (6.5 meters) above ground
- Locations with high lightning activity

Wall Mount A96-100W Pole Mount A96-100P



APPLICATIONS

- Building Automation and Controls
- Environmental Monitoring
- Electrical Surge Protection

SPECIFICATIONS

2 Wire

Electrode Gas Tubes: 1

Ionization Voltage: $\geq 300V$

Ionization Time: ≤ 5 microseconds

Ionization Duration: Constant until line voltage drops below 30V

A96-200

RECOMMENDED USE

- Installations with Buried Cable
- Sensors more than 20 feet (6.5 meters) above ground
- Locations with high lightning activity

Wall Mount A96-200W Pole Mount A96-200P



APPLICATIONS

- Building Automation and Controls
- Environmental Monitoring
- Electrical Surge Protection

SPECIFICATIONS

4 Wire

Electrode Gas Tubes: 2

Ionization Voltage: $\geq 300V$

Ionization Time: ≤ 5 microseconds

Ionization Duration: Constant until line voltage drops below 30V

A76-485OP

FEATURES

- Optical isolated RS-422/485 signal repeater
- Terminal blocks for easy installation
- Includes required 12 VDC power supply



APPLICATIONS

- Building Automation and Controls
- Environmental Monitoring
- Applications where signal needs to be extended up to 4,000 ft (1.2 km)

SPECIFICATIONS

Isolation:

Lines protected - Data Lines

Method - Optical

Rating - 2000 V

Surge Suppression:

Lines Protected - Data Lines

Method - TVS
Rating - 6.5V bi-directional
600W peak power dissipation

Power:

Connector - Terminal Block
Voltage - 10 - 14 VDC
Power Consumption - 1.0W
Source - External 12 VDC source required
(One (1) Wall transformer power supply included)

A70-EO

FEATURES

- Provides operating power for up to five (5) transmitters using 4-20mA output
- Can also provide power for up to twenty (20) loop powered displays on four (4) different 4-20mA loops



APPLICATIONS

- Building Automation and Controls
- Environmental Monitoring
- Power Supply

SPECIFICATIONS

Input Voltage: A70-EX6 - 105-132 VAC
A70-EX7 - 210-264 VAC
47-420 Hz Output

Voltage: A70-E1Y - 12 VDC
A70-E2Y - 24VDC

Output Current: 100mA

Operating Temperature: -25°C to 70°C

Mounting: 4-40 threaded brass inserts, 4 places

Dimensions: 2.5 in W x 3.5 in L x 1.25 in D

Weight: 340 grams (12 oz)

A70H-11 Shield

(Replacement Part)

FEATURES

- 11 Ring Solar Radiation Shield
- Mount Included

APPLICATIONS

- Building Automation and Controls
- Environmental Monitoring



A70H-11 Screen
(Replacement Part)

FEATURES

- Screen for Debris Collection
- Accessory for Comptus 2304 Rain Bucket and A70-RL



APPLICATIONS

- Building Automation and Controls
- Environmental Monitoring

INFORMATION

REPLACEMENT PART FOR 2302 Tipping Gauge Rain Bucket and A70-R Transmitter