

# **Instrumentation Mounts** for CSL Tripods & Towers



## Crossarms and Sensor Mounts

Campbell Scientific offers a variety of instrument mounts to attach sensors and peripherals to our lightweight tripods (CM110E, CM115E, CM120E), galvanized-steel tripods (CM10/2, CM10/3), and towers (ATW3, UT930). This equipment includes crossarms, brackets, solar radiation sensor mounts, and radiation shields. V-bolts are often included with our mounts to attach them to a tripod or tower mast, tower leg, sensor mounting pipe, antenna, or user-supplied pole. The most common V-bolts are supplied with 8 mm nuts. The V-bolts support the following outer diameters (OD):

V-bolt Description	OD Range	
46 mm	25 to 38 mm	
62 mm	33 to 54 mm	
62 mm w/plastic V-block	25 to 54 mm	

\*The size in the description is the centre to centre size.

## Crossarms, their Brackets and Fittings

#### Crossarms

The CM202E, CM204E, and CM206E crossarms place sensors some way from the midline of the tripod or tower, thereby reducing the effects of the tripod or tower on the sensor's measurement. These crossarms consist of a 33 mm OD anodized aluminium pipe and a CM210E bracket that attaches to the tripod or tower. Sensors are mounted to the end of the crossarm using an appropriate mount such as a CM220E Right Angle Mounting Bracket. A V-bolt mounting scheme allows customers to place the crossarm at the optimal measurement height for the sensor. The CM202E, CM204E, and CM206E differ in their length and the number of sensors that can be attached to them; typically one sensor is attached to the CM202E and up to two sensors can be attached to the CM204E and CM206E.



The CM204E and CM206E support up to two sensors (i.e. one sensor mount to each end) and the CM202E supports one sensor

SPECIFICATIONS			
Length: OD: Weight:	<b>CM202E</b> 0.6 m (2') 33 mm (1.3") 1.04 kg (2.3 lbs)	<b>CM204E</b> 1.2 m (4') 33 mm (1.3") 1.66 kg (3.65 lbs)	<b>CM206E</b> 1.8 m (6') 33 mm (1.3") 2.27 kg (5 lbs)

#### **CM210E Crossarm Mounting Kit**

The CM210E is included with our CM202E, CM204E, and CM206E crossarms but may also be ordered separately. When attaching a crossarm to a tower, purchasing a second CM210E may be desirable to secure the crossarm to two of the three tower legs. The CM210E is shipped with two 46 mm V-bolts and two 62 mm V-bolts allowing it to be attached to any of our tripods or towers. The CM210E weighs 0.66 kg (1.45 lbs); dimensions are 12.5 x 11 x 1.5 cm.

## **NU-RAIL® Slip-on Crossover Fittings**

Campbell Scientific offers two NU-RAIL® Slip-on Offset Crossover Fittings that can be used to connect a sensor with a vertical pipe mount to a CM202E, CM204E, or CM206E crossarm. The 008158 NU-RAIL fitting is required for older sensors that have a 27 mm OD (0.75" IPS) mounting pipe, and the 008285 is required for sensors that have a 33 mm OD (1" IPS) mounting pipe.

## NU-RAIL Sensor Compatibility Sensors supplied with 33 mm OD (1" IPS) mounting pipe:

03001 Wind Sentry Set 05103 Wind Monitor 05106 Wind Monitor Marine 05305 Wind Monitor WXT520



# Other Sensor Mounts

These sensor mounts fit on the CM200 series arms. As long as the sensors do not interfere with each other several can be mounted on one arm.

# CM225E Solar Sensor Mounting Stand

The CM225E Pyranometer Mounting Stand includes one 62 mm V-bolt with plastic V-block for attaching a solar radiation sensor to a crossarm or mast. Compatible sensors include the SP1110, SKP215, CMP3, LP02, SR11 and CS300. The CM225E weighs 0.34 kg (0.75 lbs); dimensions are 8.9 x 11.3 x 6.4 cm (3.5" x 4.5" x 2.5").

## **Solar Radiation Sensor Levelling Bases**



The CM225E's V-bolt is placed in the holes on the bottom of the bracket for attachment to a crossarm.

Campbell Scientific offers two levelling bases that support different sensors fitted to the CM225E. The SKE211 levelling base supports the SP215 and SP1110 probes, and the CS300 levelling base supports the CS300 probe. Both levelling bases use a bubble level and three adjustable levelling screws to level the sensor. The CMP3, SR11 and LP02 pyranometers include their own bubble level and levelling screws allowing them to be attached directly to the CM225E Solar Sensor Mounting Stand.

# Net Radiation Sensor Mounting Kit

The 010759 Net Radiation Sensor Mounting Kit is used to attach a NR-Lite, CNR4, CNR2 or CNR1 (retired) sensor to a vertical pipe or to a CM200-series crossarm. Screws are used to level the sensor.



## **GPS-16X GPS Mount**

The GPS-16X can also be mounted on the CM225E.

## 008168 SR50A Bracket

This bracket is used to mount the SR50A/AT on a CM204E/206E arm.

## 010760 Windsonic Mounting Kit

Comprises a 0.2 m long, 44 mm OD stainless tube plus CM210E bracket for mounting a Windsonic sensor on a CM200 series crossarm.



008168 SR50A Bracket

## Special Crossarms

## 011ECrossarm

This arm is 0.9 m long, 27 mm OD anodized aluminium and has two tabs at either end for mounting the Vector A100 series anemometer or W200P windvane. It is supplied with bolts, spacers and fittings for two sensors and a bracket to mount the arm to a pole up to 54 mm in diameter.

## 009905 CSD3/IR1 x 0 Mounting Arm

An arm 0.9 m in length, of 27 mm anodized aluminium with a single mounting tab at one end designed to accept our CSD3 or IR100/IR120 sensor. Supplied with a bracket kit for poles up to 54 mm in diameter.

## Miscellaneous Mounts



## CM216E Mount

The CM216E provides a 27 mm OD (3/4" IPS) or 33 mm OD (1" IPS) mounting pipe that extends 10 cm (4") above the mast. It allows sensors with a 27 mm or 33 mm OD fitting (typically a wind sensor) to be attached directly to the top of a stainless steel CM110E, CM115E, or CM120E tripod. Please note that use of a lightning rod is recommended; a lightning rod can be attached to this configuration but cannot be attached to a configuration that deploys a Wind Monitor. Therefore, the Wind Monitor configuration is recommended for short-term deployments only.

Typically, the CM216E is used to mount a wind sensor to the top of a mast (without a crossarm)

We reserve the right to alter specifications without notice