

APPLICATION NOTE



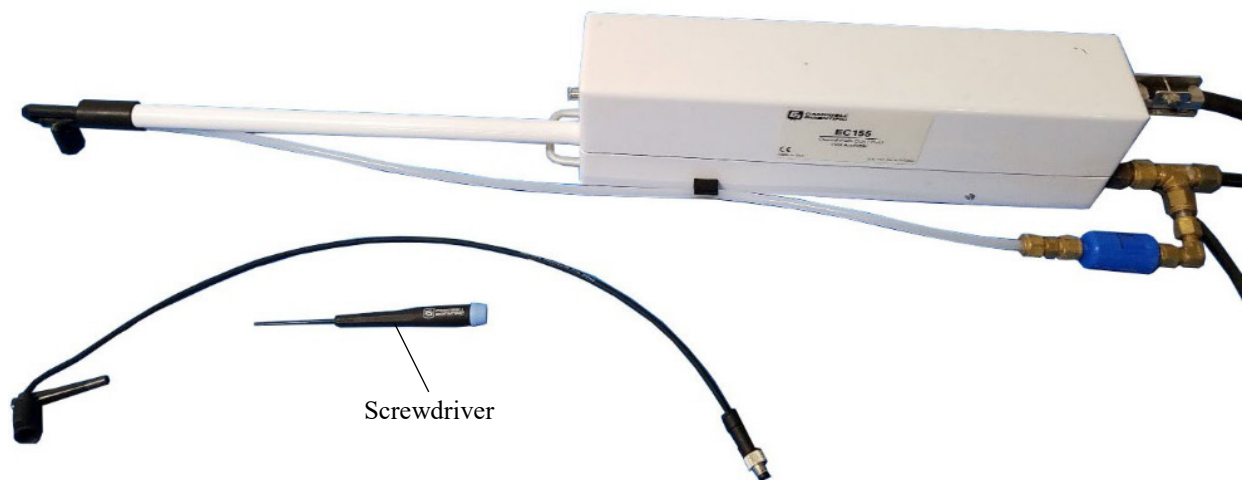
Replacing the Vortex Intake in an Older EC155

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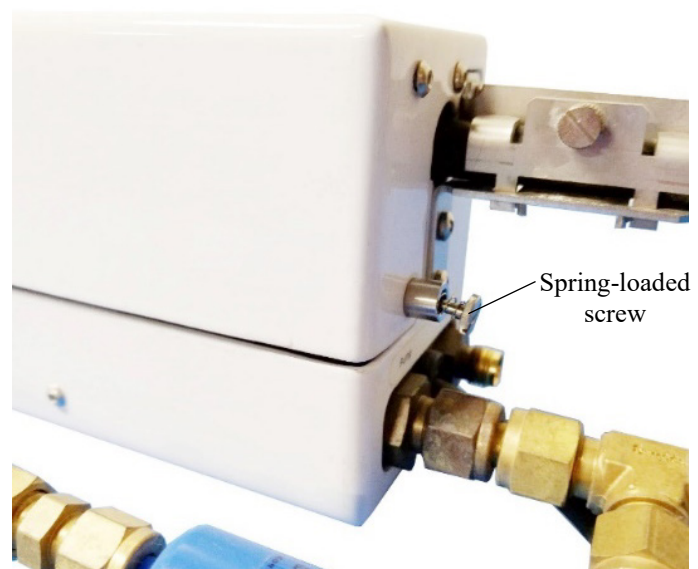
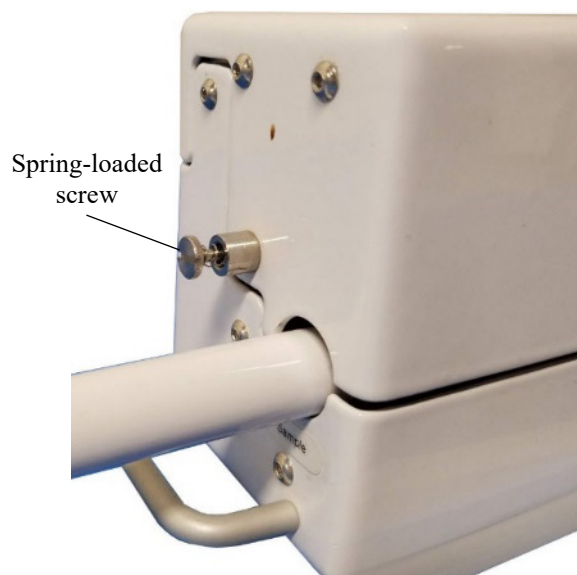
Replacing the Vortex Intake in an Older EC155

In 2016, Campbell Scientific added the patented vortex technology to the EC155. This technology reduces maintenance by supplying clean sample gas to the analyzer sample cell. However, the process of designing the CPEC300-series Compact Closed-Path Eddy-Covariance System resulted in improvements to the vortex intake design. This document provides the instructions for replacing an older vortex intake with a new vortex intake.

Step 1: Obtain a small flathead screwdriver.



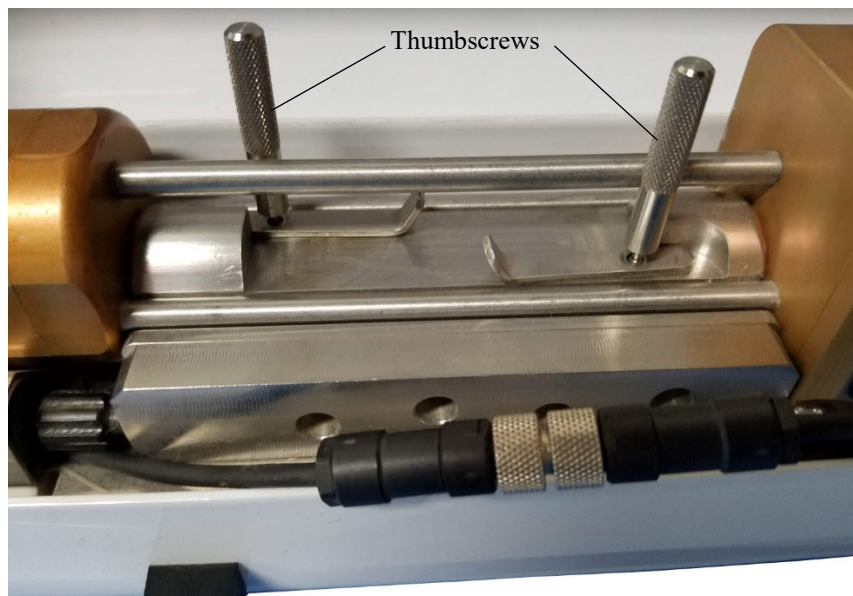
Step 2: Loosen spring-loaded screws on both sides of the sample cell assembly lid.



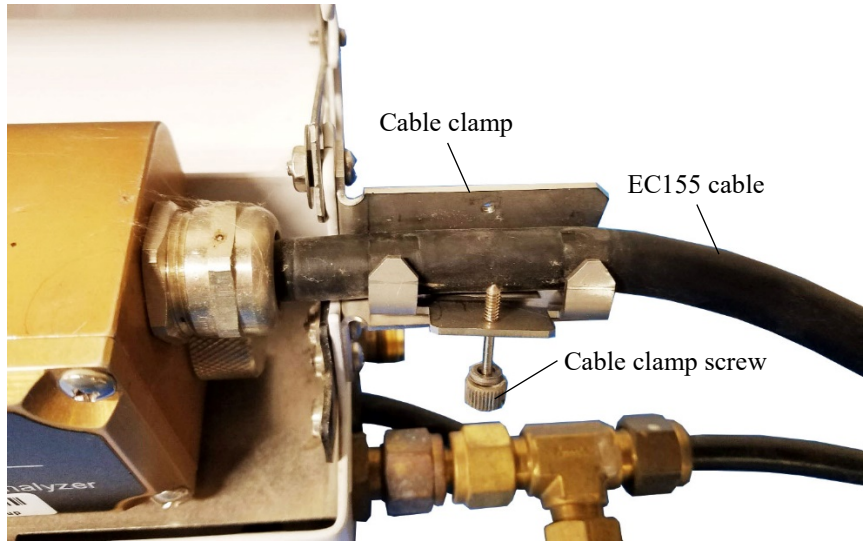
Step 3: Open the sample cell assembly lid.



Step 4: Loosen the thumbscrews and position the latches so the struts of the analyzer are free.



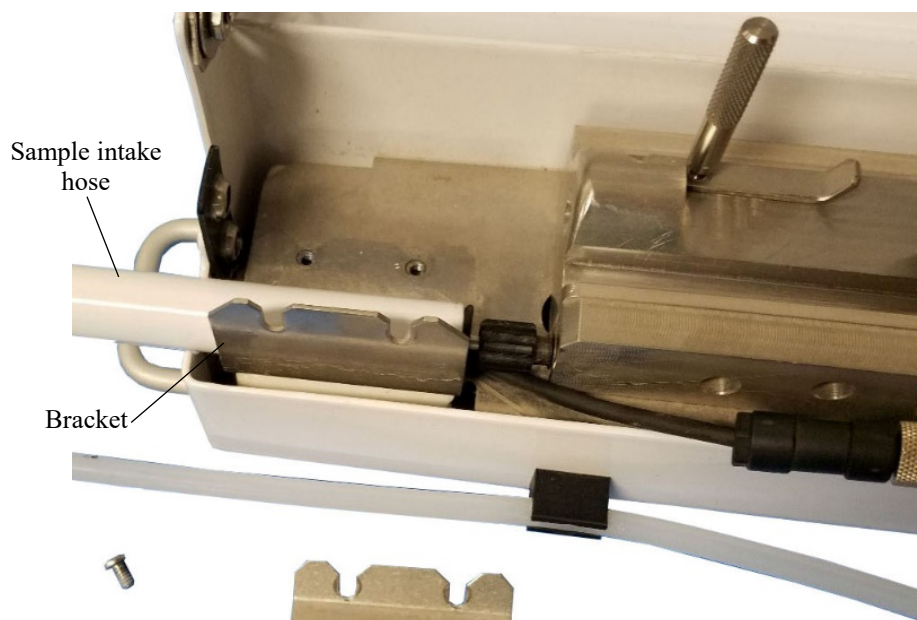
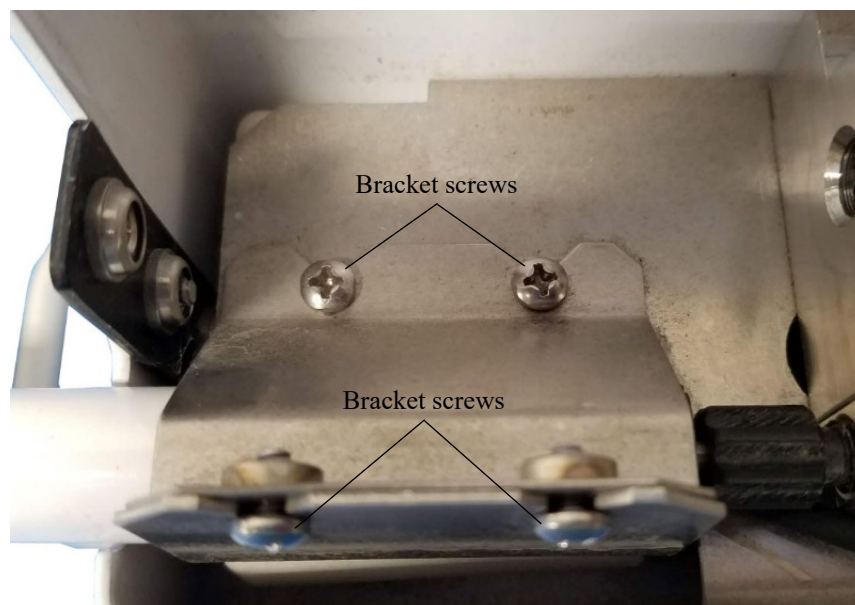
Step 5: Unscrew the cable clamp to free the EC155 cable.



Step 6: Remove the EC155 gas analyzer from the sample cell assembly.

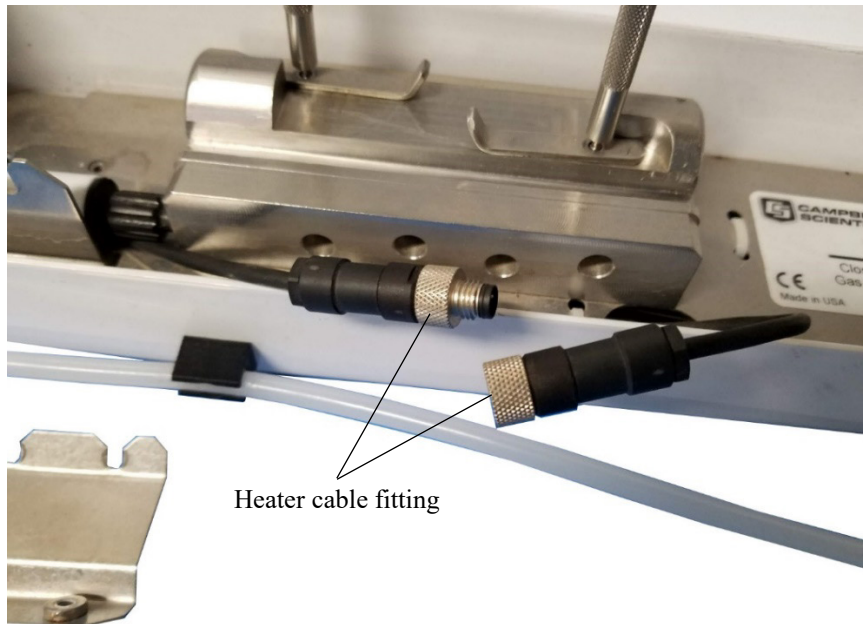


Step 7: Unscrew the bracket securing the sample intake tube.

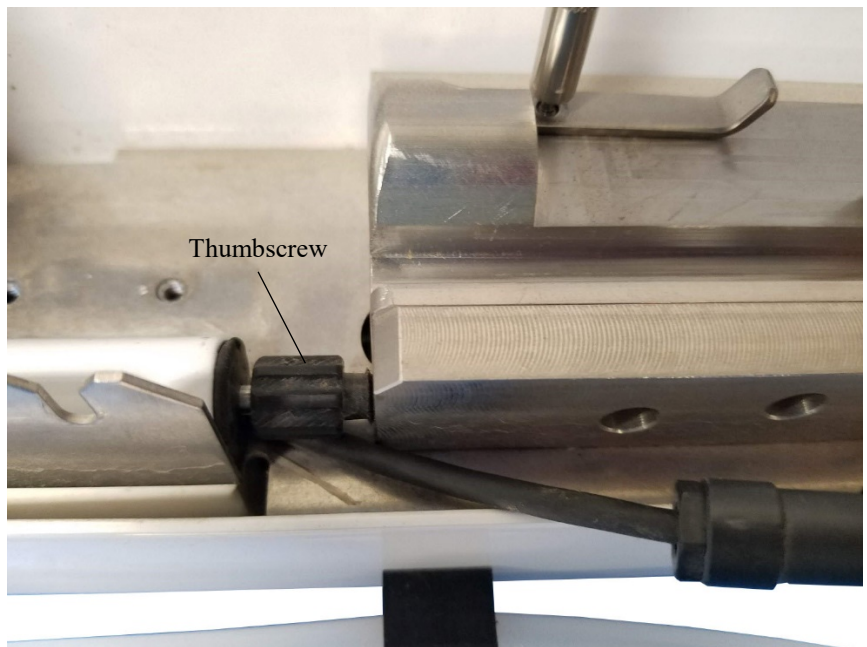


Bracket and screws removed from sample cell assembly

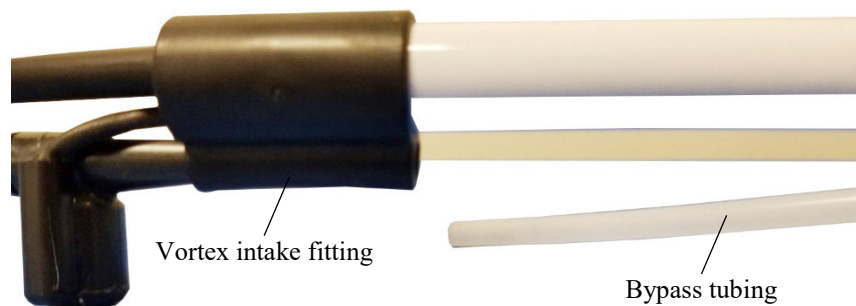
Step 8: Detach the heater cable from the power source by unscrewing the fitting.



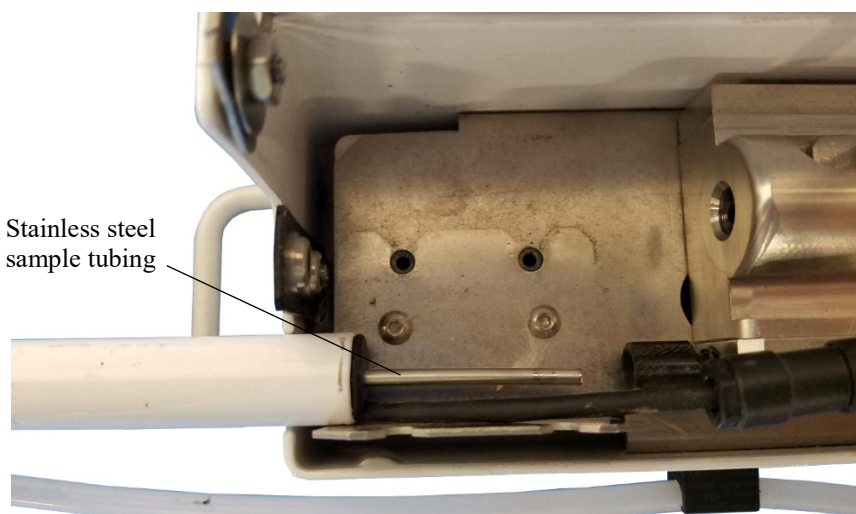
Step 9: Loosen the thumbscrew, holding the stainless steel sample tubing in place, by roughly two full turns.



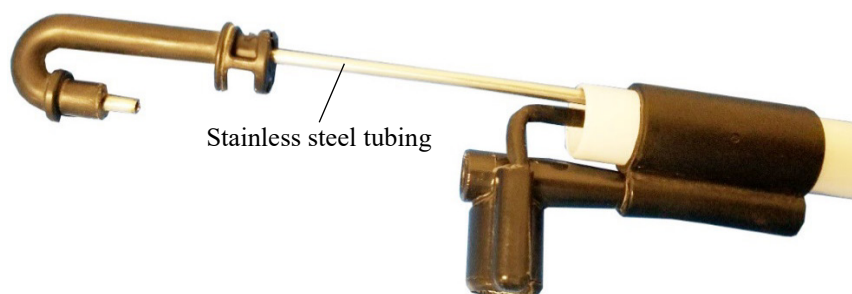
Step 10: Carefully slip the bypass tubing away from the vortex intake fitting.



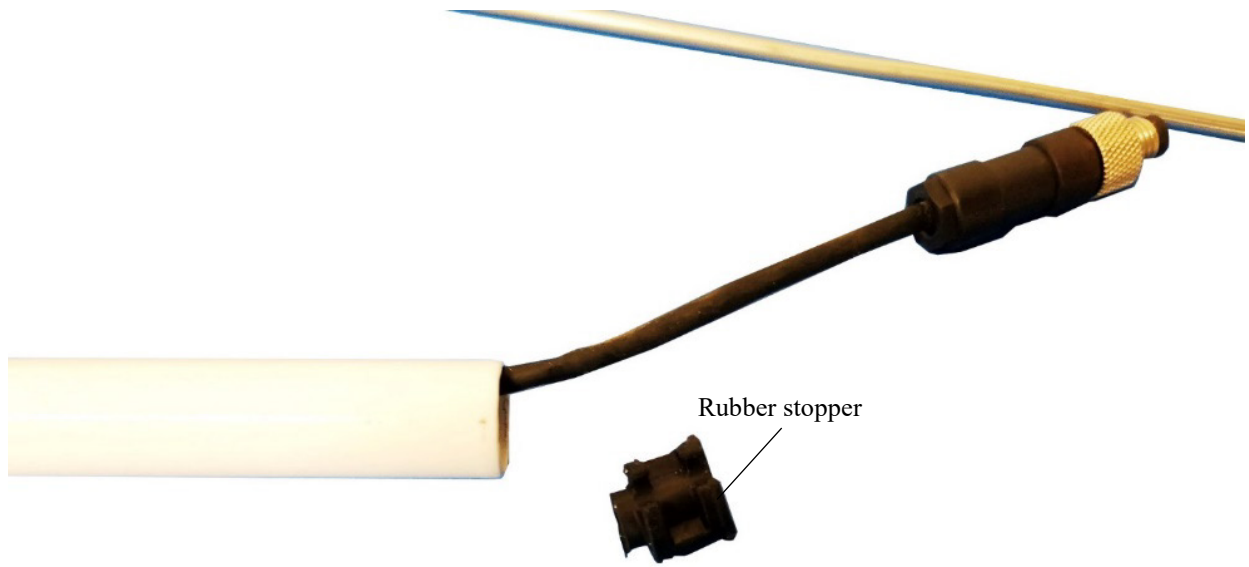
Step 11: Remove the intake from the sample cell. Slide the stainless steel sample tubing from the sample cell.



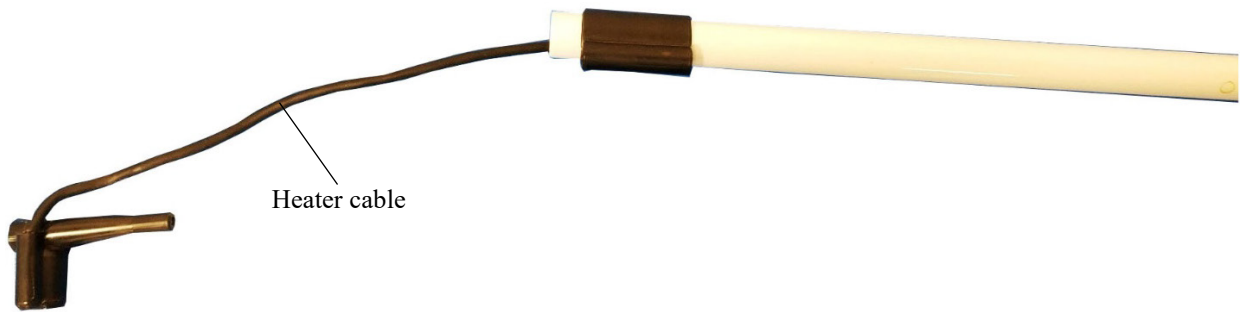
Step 12: Remove the stainless steel sample tubing by gently pulling it from the outer tube.



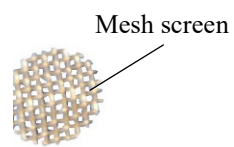
Step 13: Remove rubber stopper from the bottom of the outer tube.



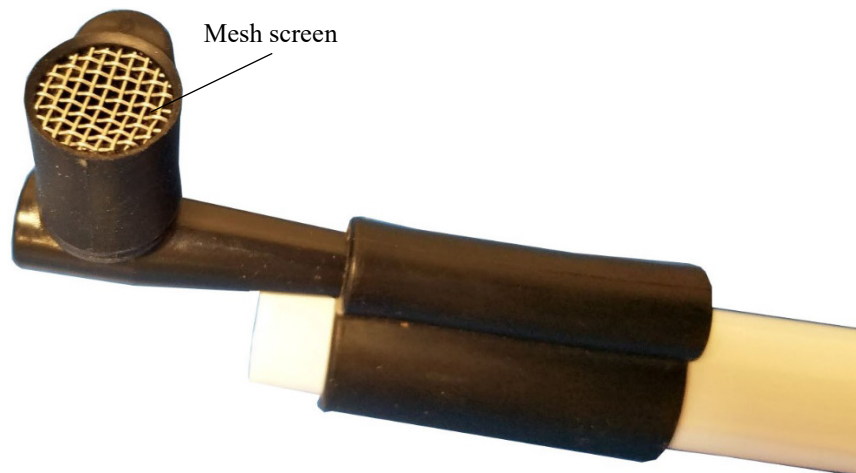
Step 14: Pull the heater cable out of the outer tube.



Step 15: Save the mesh screen from the old vortex intake.



Step 16: Insert the mesh screen into the new intake.



Step 17: Reconstruct the assembly by doing the steps in the reverse order.

Campbell Scientific Worldwide Offices

Australia

Location: Garbutt, QLD Australia
Email: info@campbellsci.com.au
Website: www.campbellsci.com.au

Brazil

Location: São Paulo, SP Brazil
Email: andread@campbellsci.com.br
Website: www.campbellsci.com.br

Canada

Location: Edmonton, AB Canada
Email: dataloggers@campbellsci.ca
Website: www.campbellsci.ca

China

Location: Beijing, P. R. China
Email: info@campbellsci.com.cn
Website: www.campbellsci.com.cn

Costa Rica

Location: San José, Costa Rica
Email: info@campbellsci.cc
Website: www.campbellsci.cc

France

Location: Antony, France
Email: info@campbellsci.fr
Website: www.campbellsci.fr

Germany

Location: Bremen, Germany
Email: info@campbellsci.de
Website: www.campbellsci.de

South Africa

Location: Stellenbosch, South Africa
Email: sales@csafrica.co.za
Website: www.campbellscientific.co.za

Southeast Asia

Location: Bangkok, Thailand
Email: info@campbellsci.asia
Website: www.campbellsci.asia

Spain

Location: Barcelona, Spain
Email: info@campbellsci.es
Website: www.campbellsci.es

UK

Location: Shepshed, Loughborough, UK
Email: sales@campbellsci.co.uk
Website: www.campbellsci.co.uk

USA

Location: Logan, UT USA
Email: info@campbellsci.com
Website: www.campbellsci.com

Please visit www.campbellsci.com/contact to obtain contact information for your local US or international representative.