



The Campbell Scientific RWIS Solution

CSI Facts

- Based in Logan, UT
- Approx. 300 employees
- Incorporated in 1974
 - Family business, privately held
 - Roots in Utah State University's Soils Laboratory
- Datalogger and sensor manufacturing done in-house
- Emphasis on quality, rugged, remote operation.



CSI Around the World



Datalogger Capabilities

» Measurements

- Analog
 - Voltage
 - Current
 - Resistive
 - Voltage/Current excitation
- Digital/Serial
- Pulse
 - Pulse counts
 - High frequency

» Communications

- NTCIP
- ModBus
- Radio Networks
- TCP/IP
- DNP3
- Satellite
- FTP
- RS-485
- SDI-12
- Etc.



Extensive Sensor Support

▶ Sensor Types

- Resistive/Wheatstone Bridge
- Analog inputs
 - Single ended and differential
- Pulse counters
- Switched voltage excitation
- Switched current excitation
- Vibrating Wire gauges
- Smart Sensors
- Continuous analog outputs
- SDI-12 inputs
- Serial I/O ports

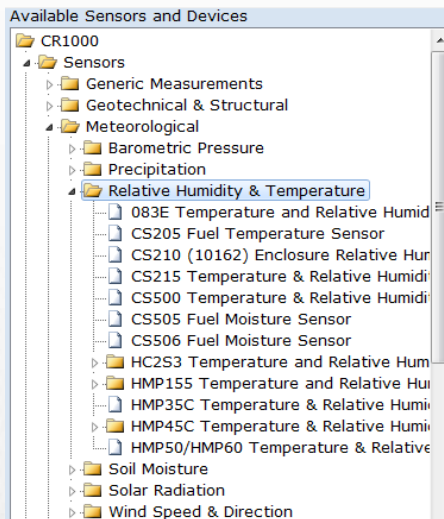
▶ Manufacturers

- RM Young
- Met One
- Texas Electronics
- Vaisala
- Apogee
- Lufft
- Etc.



Flexibility

- ▶ User-programmable dataloggers (RPU's)
 - Short Cut, CRBasic
 - Training classes available
 - Work with Application Engineers



BeginProg

'Main Scan

Scan(5,Sec,1,0)

'Default Datalogger Battery Voltage measure

*Battery(**BattV**)*

'Default Wiring Panel Temperature measurem

*PanelTemp(**PTemp_C**,_60Hz)*

'HMP50/HMP60 Temperature & Relative Hum

*VoltSE(**AirTC**,1,mV2500,1,0,0,_60Hz,0.1,-40)*

*VoltSE(**RH**,1,mV2500,2,0,0,_60Hz,0.1,0)*

*If (**RH**>100) And (**RH**<108) Then **RH**=100*

'CS106 Barometric Pressure Sensor measurem



CalTrans

- › CR1000s in place of former RPU
- › Measure existing sensors
- › NTCIP compatibility allowed the use of existing software
- › Programming, installation, maintenance done in-house

UDOT

- › Complete Campbell systems
- › Meteorologists incorporated into TOC access RWIS data directly
- › Add sensors as funds become available



Colorado: RWIS Data from ALERT System

- ▶ Douglas County, CO in conjunction with Denver's Urban Drainage Flood Control District





www.campbellsci.com

Thank You