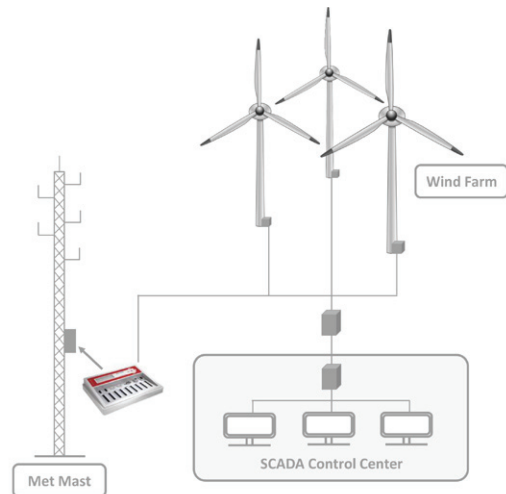


## Data Logger Meteo-40 for SCADA

### Integrating Meteo-40 in SCADA systems

Once the wind farm is set up and running, it has to be ensured that it performs at its best. To do so, it is essential to monitor and control its performance. Meteo-40 can easily be integrated in SCADA (Supervisory Control and Data Acquisition) systems to provide reliable comparative meteorological data. Considering the measurement data recorded by Meteo-40, for example predictions about the annual production of the wind farm can be verified. Meteo-40 records measurement data which is used by wind farm operators and investors as well as for forecasting reasons.

**With its configurable Modbus Register Map Meteo-40 is designed for operation in any existing SCADA system.** The necessary parameters are configured via the user-friendly Meteo-40 web interface.



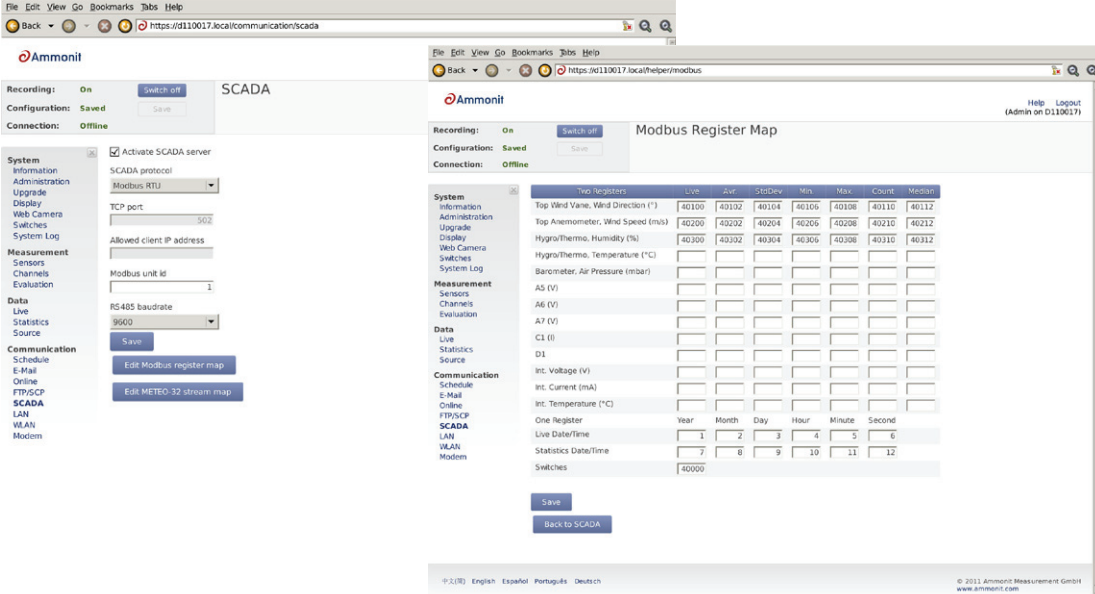
### Your Advantages

- Compatible with any existing SCADA system
- User-friendly web interface for configuration
- Data communication via Ethernet (TCP/IP) or RS485
- Configurable Modbus Register Map for data retrieval
- Powerful Linux™ computer for data evaluation
- Data transmission via standard protocols Modbus TCP/IP and Modbus RTU

### Implementing Meteo-40 in your SCADA system

In order to install the data logger in a SCADA system, it has to be connected via RS485 or Ethernet (TCP/IP) to the wind farm network. Meteo-40 uses the standard protocols Modbus TCP/IP and Modbus RTU for data transmission. The measurement data can be retrieved via the Modbus Register Map. During SCADA operation the Linux processor of Meteo-40 has to be permanently on.

SCADA details are entered over the Meteo-40 web interface in menu Communication ► SCADA. After having selected the SCADA protocol and entering the required parameters, the Modbus Register Map has to be configured. All active channels and evaluated data can be accessed. By clicking on the button Edit Modbus register map you assign register numbers to each value. All entries are checked for plausibility.



The screenshot displays two overlapping browser windows from the Ammonit web interface. The left window shows the 'SCADA' configuration page with options for 'Activate SCADA server', 'SCADA protocol' (set to Modbus RTU), 'TCP port' (502), and 'Allowed client IP address'. The right window shows the 'Modbus Register Map' configuration page, which includes a table for defining register values and a 'Save' button.

Two Registers	Live	Avg	StdDev	Min	Max	Count	Median
Top Wind Vane, Wind Direction (°)	40100	40102	40104	40106	40108	40110	40112
Top Anemometer, Wind Speed (m/s)	40200	40202	40204	40206	40208	40210	40212
Hygro/Thermo, Humidity (%)	40300	40302	40304	40306	40308	40310	40312
Hygro/Thermo, Temperature (°C)							
Barometer, Air Pressure (mbar)							
Measurement Sensors							
A5 (V)							
A6 (V)							
A7 (V)							
Data							
C1 (I)							
D1							
Communication							
Int. Voltage (V)							
Int. Current (mA)							
Int. Temperature (°C)							
One Register	Year	Month	Day	Hour	Minute	Second	
Live Date/Time	1	2	3	4	5	6	
Statistics Date/Time	7	8	9	10	11	12	
Switches	40000						