



Weather Forecast Library

With the Weather Forecast Library, current weather data and forecasts can be queried for any city by means of the “OpenWeatherMap” online service.

Product description

Licensing:

No license is required.



“OpenWeatherMap” (<https://openweathermap.org>) is an online service that provides an open API for weather data and forecasts. With the Weather Forecast Library, weather data of “OpenWeatherMap” can be queried for any city. Using “OpenWeatherMap” requires an API key (APPID). To get the free API key, go to <https://openweathermap.org/appid>.

Range of Functions

The CODESYS package “Weather Forecast Library” includes the following components:

- Weather Forecast Library
- Sample “WeatherForecastExample.project”
- Description of the library as a CHM help file

The library can be used for querying the following data:

Current weather data:

- Date and time
- Name of city
- Time of sunrise
- Time of sunset
- Humidity
- Wind velocity
- Cloudiness
- Temperature
- Air pressure

Five-day weather forecast in three-hour intervals:

- Date and time
- Description
- Temperature
- Humidity
- Wind velocity
- Cloudiness

Functional description

With the `WeatherForecast` function block, weather data can be queried for a specific city. The name of the city is set over the `sCity` input. The language can be set over the `sLanguage` input.

Using “OpenWeatherMap” requires an API key (APPID). To get the free API key, go to <https://openweathermap.org/appid>. The API key must be passed over the `sAppId` input.

Note: Unlocking the API key can take several minutes.

A rising edge at xExecute starts the query. The current weather data is available at the weatherData output. The weather forecast is stored at the aForecast output as an array of structures of type weatherData. Each element of the array corresponds to a forecast for a specific time of day. The five-day weather forecast is in three-hour intervals.

Screenshots

Weather Forecast Example

Please enter the name of the city:

Request Successful ●
Error Occured ●

Current Weather Data

Date: <input type="text" value="10/02/2018"/>	Humidity: <input type="text" value="81.0 %"/>	<p>Temperature: 6.7 °C</p> <p style="text-align: center;">Degrees Celsius</p>
Name of City: <input type="text" value="Kempten"/>	Wind Speed: <input type="text" value="2.1 m/s"/>	
<input type="text" value="CH"/>	Cloudiness: <input type="text" value="90.0 %"/>	
Description: <input type="text" value="Clouds"/>	Minimum Temperature: <input type="text" value="8.0 °C"/>	
Time of Sunrise: <input type="text" value="07:05:43"/>	Maximum Temperature: <input type="text" value="8.0 °C"/>	
Time of Sunset: <input type="text" value="17:10:16"/>	Pressure: <input type="text" value="1000.0 hPa"/>	

5 day forecast (weather data every 3 hours)

	Description	Temperature	Humidity	Wind	Cloudiness	Date And Time	
4	clear sky	-1.4 °C	95.0 %	1.4 m/s	0.0 %	Wednesday October 10/01/18 01:00:00	
5	clear sky	-2.8 °C	94.0 %	1.2 m/s	0.0 %	Wednesday October 10/01/18 04:00:00	
6	broken clouds	-2.1 °C	93.0 %	1.4 m/s	68.0 %	Wednesday October 10/01/18 07:00:00	
7	few clouds	4.5 °C	99.0 %	1.7 m/s	24.0 %	Wednesday October 10/01/18 10:00:00	
8	scattered clouds	8.4 °C	98.0 %	1.8 m/s	32.0 %	Wednesday October 10/01/18 13:00:00	
9	broken clouds	8.7 °C	98.0 %	1.4 m/s	68.0 %	Wednesday October 10/01/18 16:00:00	
10	broken clouds	3.8 °C	95.0 %	1.5 m/s	56.0 %	Wednesday October 10/01/18 19:00:00	
11	few clouds	1.9 °C	93.0 %	1.2 m/s	20.0 %	Wednesday October 10/01/18 22:00:00	
12	broken clouds	0.4 °C	89.0 %	1.2 m/s	80.0 %	Thursday November 11/01/18 01:00:00	

General information

Supplier:

CODESYS GmbH
 Memminger Strasse 151
 87439 Kempten
 Germany

Support:

<https://support.codesys.com>

Item:

Weather Forecast Library

Item number:

000090

Sales / Source of supply:

CODESYS Store

<https://store.codesys.com>

Included in delivery:

CODESYS Package with library and sample project

System requirements and restrictions

Programming System	CODESYS Development System V3.5.16.0 or higher
Runtime System	CODESYS Control V3.5.16.0
Supported Platforms/ Devices	All
	Note: Use the project "Device Reader" to find out the supported features of your device. "Device Reader" is available for free in the CODESYS Store.
Additional Requirements	"OpenWeatherMap" requires an API key (APPID). To get the free API key, go to https://openweathermap.org/appid .
Restrictions	-
Licensing	<div style="text-align: center;">  <p>NO LICENSE</p> </div> <p>No license is required.</p>
Required Accessories	-

Note: Not all CODESYS features are available in all territories. For more information on geographic restrictions, please contact sales@codesys.com.

Note: Technical specifications are subject to change. Errors and omissions excepted. The content of the current online version of this document applies.