EMA55
Automatic Weather Station

Overview
This station has been designed with the latest technology and has the most powerful features on the market. It integrates Ethernet, 3G/GPRS and GPS. Preferentially oriented to work with serial digital output sensors, can communicate with any digital intelligent available sensor

Multiple inputs

The data logger of the station has up to 5 serial inputs.

Analog and digital data can be accessed through an optional interface board.

Severe weather conditions

Designed to be installed and operate in any weather conditions. All the elements of the station are housed in a glass fiber enclosure with IP65 rating.

Easy handling

The station has multiple connecting elements clearly identified for the easy installation of the sensors.

Most of the internal elements are mounted on Din rail.

Data output

The station has up to 5 serial ports (RS232, RS485, SDI12) to send the information by any means.

The data logger has an internal ethernet interface, 3G/GPRS with built in TCP/IP interface and wifi to access the stored data. The information can be sent through several protocols: FTP, HTTP, webservices, SNMP, etc.

Communication by radio modem, satellite, etc. is also possible through another RS232 port.

This operation makes it possible shared communication among several institutions.

Seac's Copernico system can handle the data processing, communications, display, etc.

Power options

The Seac station EMA55 has a low power consumption even with several connected active sensors.

The station can be powered by a solar panel with battery of 38Ah or with 110-220VAC and battery of 17Ah. (Optionally other capacities).

Scalability

The Met. station SEAC EMA55 can be easily scalable just plugging in the new sensors and setting inputs and measuring ranges.

Management

Seac provides an easy handling graphic program for supervision and configuration of the met. station and sensors. This program allows: to replace and attach new sensors, extract and use data, display in real time, modify logging intervals etc.

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Technical Data EMA55

Communications

RS232	2 ports
RS485	2 ports
SDI-12	1 port
Ethernet	
Wifi	
GPRS/3G	

Display & Keypad

Display	4.3” Touch display

Processor & OS

Processor	ARM Cortex A5
Operating System	Windows embedded

Power Supply Features

Power supply	8~32VDC
Max power consumption	1.5W
Operating temperature range	-40ºC~60ºC
100-240 VAC with SAI	
Optional solar panel	

Real-Time Clock

Type	dd/mm/yyyy - hh:mm:ss
Resolution & Drift	1 second - 10 ppm
Synchronization	By internal GPS or SNTP (IP)

Masts

10 meters tiltable	
10 meters aeronautical painting	170mm
4 meters tiltable	130mm
2 meters	60mm

Sensors

Multi-parameter weather sensor
Humidity and temperature
Wind speed and direction
Ultrasonic wind sensor
Pressure
Soil and subsoil temperature
Weighing Rain Gauge
Tipping bucket Rain Gage
Visibility and Present Weather
Snow height
Cloud Height
Road Sensors
Solar Radiation sensors
Water flow meter
Other Modbus and SDI12 sensors

Optional Inputs board

Analog	Voltage Mode - 4 single-ended - 2 differential Resistor mode - 2 inputs (e.g. PT100) Current Mode - 4 inputs (e.g. 4-20 mA)
Digital	3 Inputs: - 2 frequency/counter - 1 8-bits parallel / synchronous serial

Range, Resolution and Accuracy

	Range	Resolution	Accuracy
Analog	0÷2.4 V	50 µV	500 µV
	0÷70 mV	10 µV	100 µV
Digital frequency	10 KHz	1 Hz	1 Hz
Counter	65535	1 pulse	1 pulse

Enclosure

Type	Polyester with fiberglass
Depth	150 mm
Width	250 mm
Height	350 mm

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