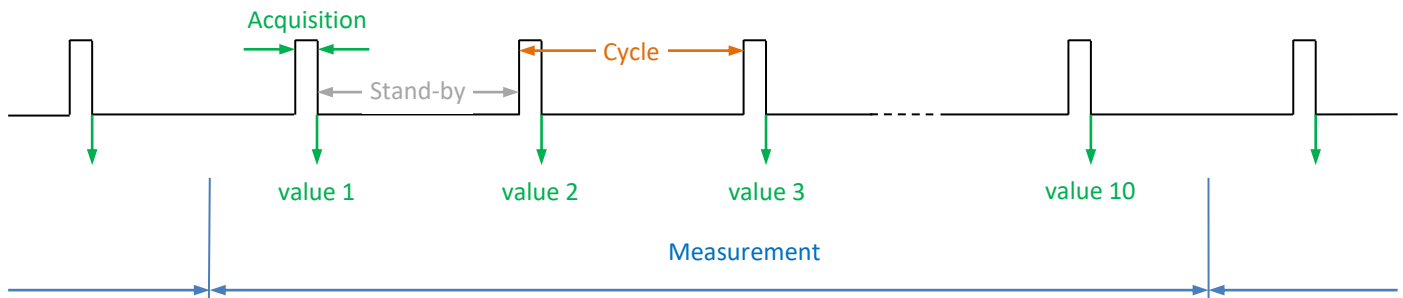


ISAW SENSOR OPERATION

Your ISAW sensor model FlowCapt FC4, SandFlow SF4, RainFlow RF4 or WindFlow WF4 is delivered completely configured, ready to be plugged into a power supply and into your reading peripheral (I/O module, data logger, automation server, controller, computer, etc.).

■ The sensor measures physical phenomena every minute during 6 seconds and delivers MIN, AVG, MAX numerical values or AVG voltages every 10 minutes:



MEASUREMENT SETTINGS

Settings	Description	Default value
Acquisition duration	True observation time of the physical phenomena, also called <i>time integration window</i> .	6 seconds
Cycle duration	Sum of the acquisition duration and a stand-by duration.	1 minute
Measurement duration	Reading/writing data interval, called <i>averaging duration</i> .	10 minutes
Duty cycle	Ratio between acquisition duration and cycle duration, i.e. fraction of time in which the sensor is effectively active.	10%

■ If you read the output data on the **analog reading connection** of the sensor (i.e. positive voltages on green and/or yellow wires), you will only get the **average value**.

■ If you read the output data on a **serial mode** of communication of the sensor (SDI-12 and/or serial interface, respectively blue or grey/pink wires), you will be able to get **average, min. and max. values**.

■ The analog voltage outputs are persistent, so if your reading device is programmed to read a voltage value every ten minutes, you will always get a new result whatever the synchronization between the reading device and the ISAW sensor is.

■ Measurement settings and other configuration parameters can be changed using the USB Link accessory and the free ISAW-Toolbox software suite. To know more about how to change your sensor's configuration, please refer to the User Guide available at www.isaw-products.com.



Sensor settings

■ WIRING

Wire	Signal	Plug and Play default factory settings	FC4	SF4	RF4	WF4
White	Power +	Positive power supply (6 to 30) VDC	•	•	•	•
Brown	Signals GND	OUT1 GND, OUT2 GND and SDI-12 GND	•	•	•	•
Green	OUT1	Particle flux, persistent, +0V to +5V	•	•		
		Rain intensity, persistent, +0V to +5V			•	
		Wind speed, persistent, +0V to +5V				•
Yellow	OUT2	Wind speed, persistent, +0V to +5V	•	•		
Blue	SDI-12 (address: 0)	Wind speed and particle flux	•	•		
		Rain intensity			•	
		Wind speed				•
Grey Pink	RX TX	RS-232 active, Wind speed and particle flux	•	•		
		RS-232 active, Rain intensity with disdrometer output			•	
		RS-232 active, Wind speed				•
Black	Power GND	Power GND (0V)	•	•	•	•

■ MAXIMUM RATINGS

	Sensitivity @voltage range +5V	FC4	SF4	RF4	WF4
Particle flux	20 mV / (g/m ² /s) i.e. +5V corresponds to 250 g/m ² /s	•	•		
Rain (or hail)	100 mV / (mm/h) i.e. +5V corresponds to 50 mm/h			•	
Wind speed	20 mV/(km/h) i.e. +5V corresponds to 250 km/h	•	•		•

■ POWER SUPPLY

Supply	Ratings	FC4	SF4	RF4	WF4
Voltage	6 V to 30 V DC (9.6 V and 16 V DC in case of powering through the SDI-12 terminals)	•	•	•	•
Current	2.1 mA (nominal duty-cycle is 10%) < 1 mA in stand-by mode and 20 mA max. in acquisition mode.	•	•	•	•

