
Application note Wireless datalogger for crackmeter or potentiometric sensor

References : LGS31, LGS33



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1 PRODUCT DESCRIPTION

The Newsteo Logger LGS31 and LGP33 allow you to connect any potentiometric sensor. It is mainly used to transform crackmeters into wireless crackmeters. It records the measurement or transmits it by radio to the supervision centre. The installation and maintenance of the sensor are thus simplified.



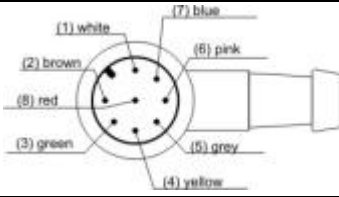
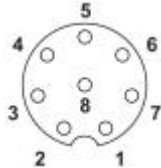
Sensors to connect:

- Crackmeter, linear displacement sensors
- Extensometer
- Pressure sensor
- Photoresistor
- Potentiometer for angular measure

2 references are available:

- LGS31: wireless transmission and measurement system, 1 input
- LGP33: wireless transmission and measurement system, 3 inputs

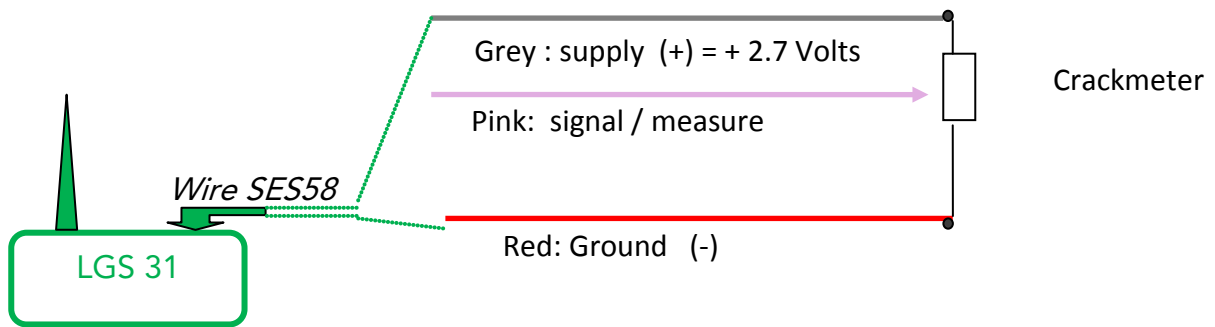
2 WIRING PLAN

			
SES58	CON08	Cable Plug bottom view	Socket external top view

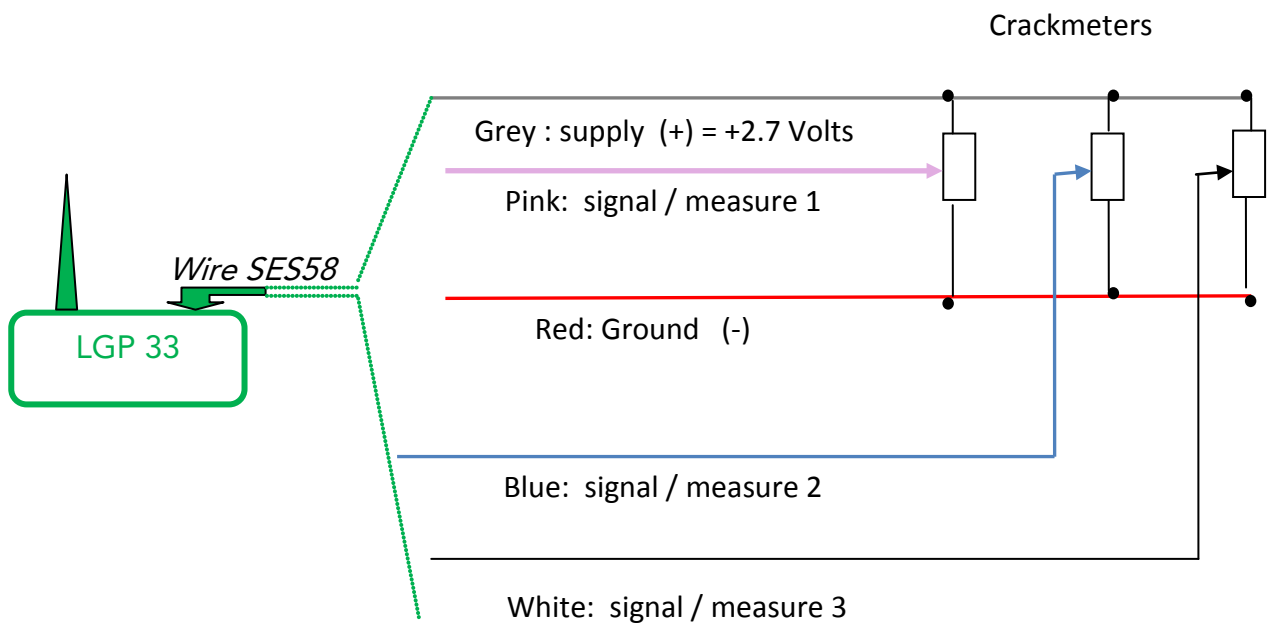
PRODUCT	Sensor TYPE	PIN	1	2	3	4	5	6	7	8
		Color	White	Brown	Green	Yellow	Grey	Pink	Blue	Red
LGS31	Potentiometric		-	-	-	-	Vsupply 2.7 V	Signal index	-	0V Ground
LGP33	Potentiometric 3 wires		Signal Index3	-	-	-	Vsupply 2.7 V	Signal Index1	Signal index2	0V Ground

Insulate electrical wires not connected (electrical tape...)

2.1 LGS31: Wiring plan (1 input)



2.2 LGP33 : Wiring plan (3 inputs)



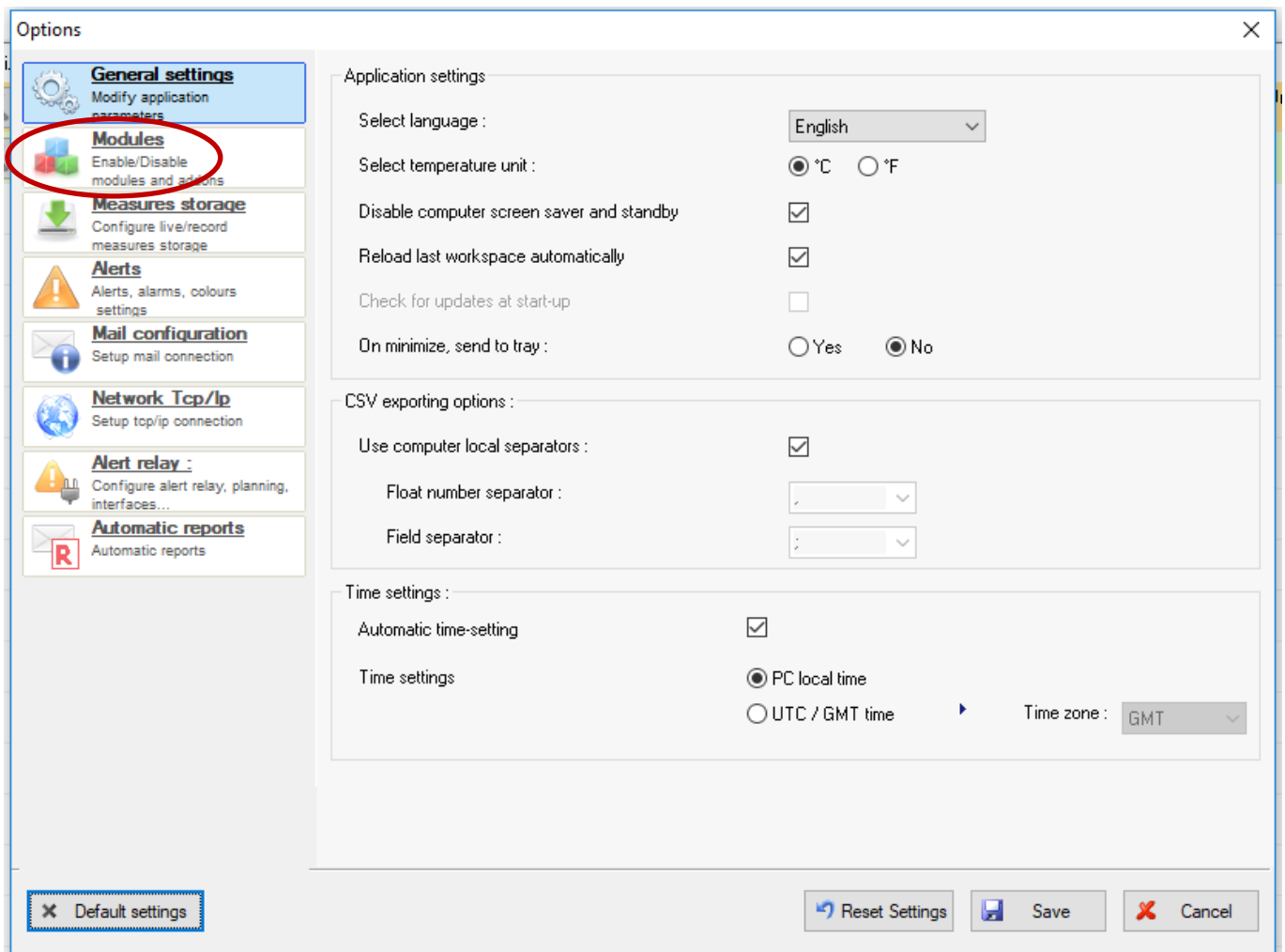
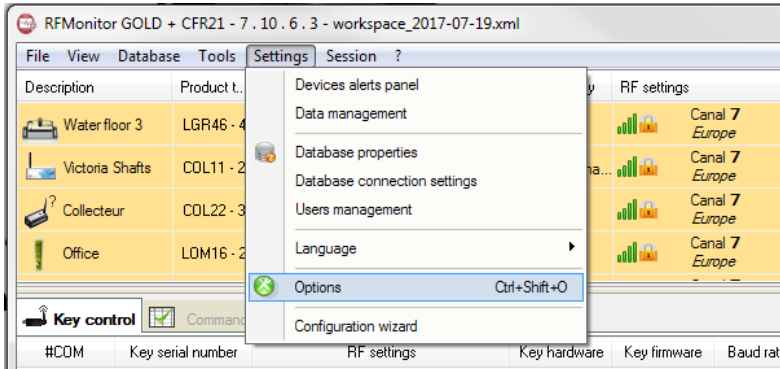
3 SETTING

- To set the datalogger, launch RFmonitor, insert the USB radio key (see RFmonitor manual guide)
- Devices formulas settings

3.1 Launch RFM, enable devices formulas

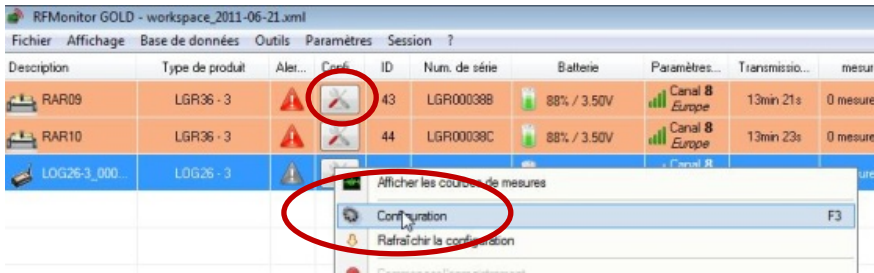
- Start RFMonitor
- Insert USB radio key
- Swipe the magnet at the magnet area

- Enable devices formulas edition :
 - Click on Settings/Options/Modules
 - Select Enable devices formulas edition
 - Click on Save

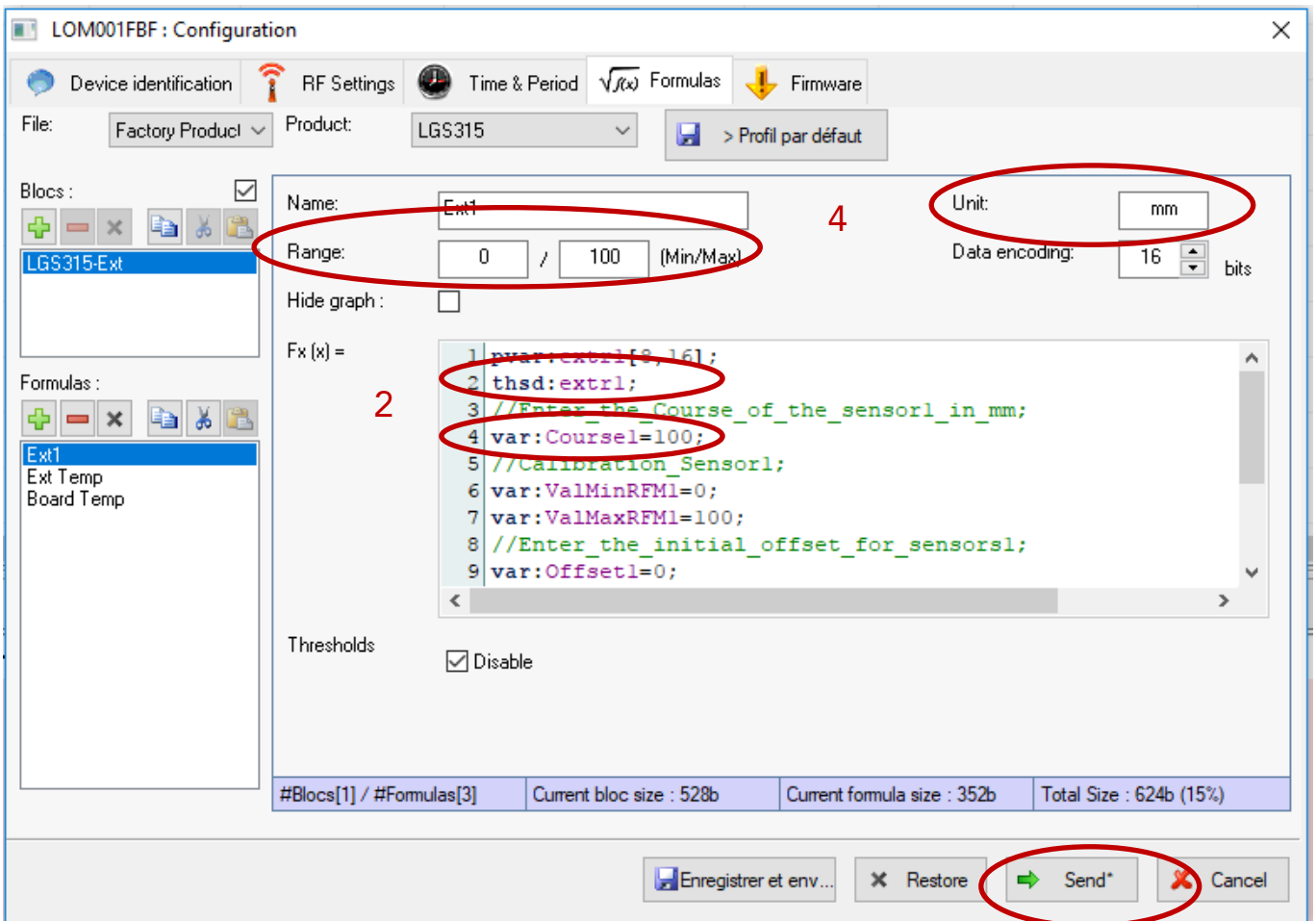


3.2 Formulas setting access

- Click on tools symbol
- Click on Configuration



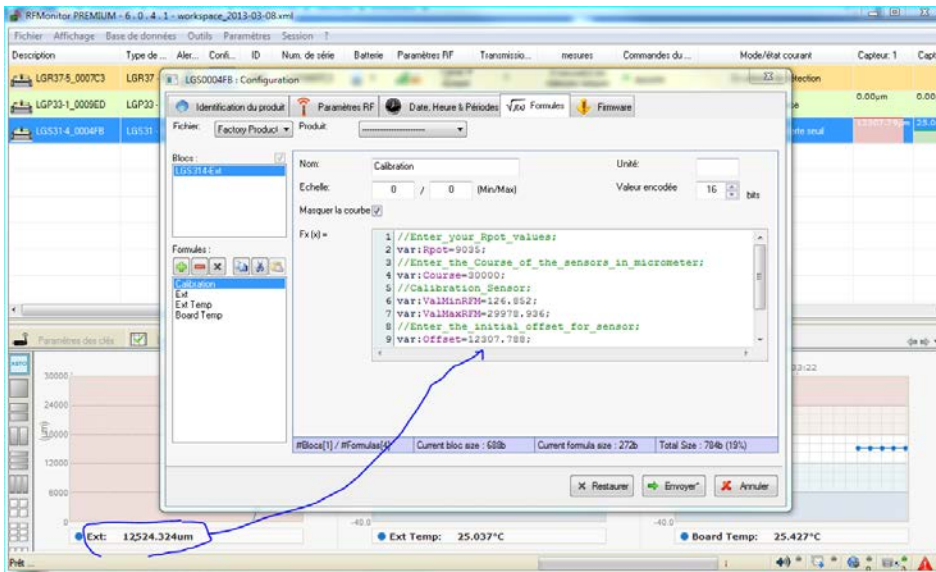
1. Formulas settings



2. Set the crack length (line4 - line7) 5
3. Example : the maximal length is 30mm => Course=30 et ValMaxRFM=30
If you set Course=100, the measures are percentages values %
4. Set the Range and the unit
5. Click on send

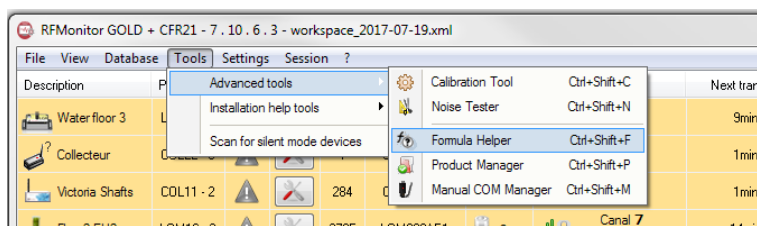
4 OFFSET SETTING

- Select monitoring mode, note the offset value
- Select formulas tab
- Fill the offset value (line 9)



- Click on Send

5 FORMULA HELPER



6 FORMULAS SYNTAXES

pvar: Positive value ou svar: positive an negative values → Declaration of the values returned by the logger

var: at the start of new line

; at the end of each line

thsd: to activate the threshold for a variable

No ; at the last line to display the variable

7 CALIBRATION

Each new product LGS31 or LGP33 is calibrated before sending.

8 BATTERIES REPLACEMENT

If you need to replace the batteries, use the Newsteo battery reference.

Newsteo supplies battery if you need.

Ref : *XENO XL-060F with wires and fast connector (3.6 V, AA model)*

9 SUPPORT

<http://support.newsteo.com/>

- For a remote support we use AMMY software

To download AMMY, you have to use Internet Explorer, you need to be administrator of your PC

Download :

<http://support.newsteo.com/customer/en/portal/articles/1155444-prise-en-main-%C3%A0-distance-par-le-support-technique>

10 NEWSTEO ADDRESS

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