

Interactive comment on “Brief Communication: A low cost Arduino[®]-based wire extensometer for earth flow monitoring” by Luigi Guerriero et al.

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Dear Reviewer,

Thank you for proving comments to our manuscript. Below, we report the response to individual comments. The line numbers refer to the submitted manuscript.

Best regards,

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Anonymous Referee #2

C1

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+ One limitation of this work is that it cannot monitor the displacement in the real time manner. The real time measurement will be useful for reducing the risk. In fact, integrating the RF module for Arduino board is not a difficult task. + Response. We agree with the reviewer that the integration of a RF module would improve our extensometer extending its applicability. However, this task is planned for the near future (see page 4, lines 14-16) and does not affect the performance of the instrument.

+ The author should show what the value of sampling time. +Response. The sampling time is already indicated, see page 3, lines 18-19.

+ What is the power scheme which is designed for this device in order to save the power. +Response. In designing the power system, we considered the factory declared power consumption of each component used in our monitoring system. We will add this detail in the text.

+ The device shown in Fig. 1 is not suitable to use in a long time with the different weather conditions. +Response. We disagree with this comment. Figure 1 shows major electronic components of the device. In field conditions, the power system is protected by a waterproof box and the Arduino board, the datalogging shield and the sensors are protected by an additional inner waterproof box. These make them protected by severe weather conditions and suitable for long term monitoring.

+ Author should discuss about the associate accuracy of ± 1 mm, is this from the datasheet or the calibration process. +Response. We derived this accuracy from sensor datasheet (accuracy of 0.1% of the range). We will add this detail in the text.

Interactive comment on Nat. Hazards Earth Syst. Sci. Discuss., doi:10.5194/nhess-2017-79, 2017.

C2