

# Longer than 100 m Sightings with the Zeiss DiNi12 Digital Level

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## ABSTRACT

The digital levelling technique is commonly applied in precise levelling today. In Finland the sighting distances used in line levelling are typically from 35 to 50 m, but sometimes the longer sightings are needed, e.g., for water crossings. The Zeiss DiNi12 digital levelling system is capable to operate until to 100 m, but crossing the sea or valley we need long, more than 500 m, sightings. Basically, the bar code scale of the rod can be copied with a certain magnification. In Japan, they have made some promising tests concerning this issue. According to the preliminary tests in Finland the Zeiss DiNi12 is able to process rod readings from the rod, which scale is of 4 fold and the sighting distance even 400m.

In the Finnish Geodetic Institute, we have initiated the developing work to construct a new rod with the magnified bar code scale of 2 or 4 times and to study the operational terms and accuracies of the Zeiss DiNi12 using longer than 100 m sighting distances.

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