

Embedded System Design Workshop 1

Pre-workshop Question

Wednesday 12:00

Hongbo Zhou 1067814

Question 1

Distance measuring range: 20 to 150 cm

Question 2

(a)

0.4-2.45 V

Typical output at 150cm: 0.4V

Typical output voltage differential between 20-150 cm: 2.05 V

From figure 3, $V(20\text{cm}) > V(150\text{cm})$.

Typical output at 20cm: $0.4 + 2.05 = 2.45$ V

(b)

The measurements in data-sheet are for reference only. We need to consider noises from the environment and measurements. Different environments and measuring equipments may vary the performance of the sensor.