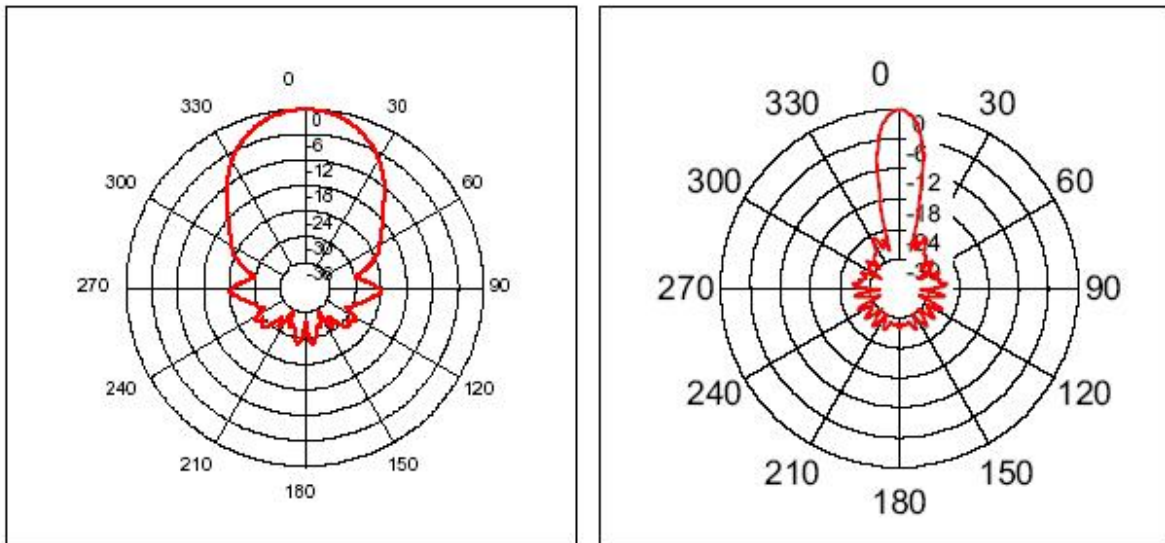


Comparing the Sensors

The following table shows a comparison of the six Devantech SRF sensors. The minimum and maximum range describe the sensor limits at 0 degrees (straight on from the sensor), while the angle describes the rough shape of the sensor cone at 1/2 the sensor's range. In actuality, the sensors do not detect in a perfect cone, as shown in the beam pattern graphs below.

The echoes column lists the number of echoes recorded by the sensor. This always refers to the number of echoes recorded by the most recent ranging; with each new ranging, old values are overwritten. The range time column refers to the time to perform a ranging. The sensors using digital communication respond as soon as an echo is received, which is why the ranging time for these units is variable. Several other sensors have an adjustable gain to change the range time, as noted.



Beam Patterns for the SRF04 / 05 (left) and SRF235 (right)

Sensor	Communication	Range		Angle*	Echoes**	Ranging Time	Notes
		Minimum	Maximum				
SRF02	I2C / Serial	15 cm	6 m	45°	One	70 ms	A
SRF04	Digital	3 cm	3 m	45°	One	100 μ s - 36 ms	
SRF05	Digital	3 cm	4 m	45°	One	100 μ s - 36 ms	
SRF08	I2C	3 cm	6 m	45°	17	65 ms	B C
SRF10	I2C	3 cm	6 m	60°	One	65 ms	A B
SRF235	I2C	10 cm	1.2 m	15°	One	10 ms	A D

*: Approximate angle of the sensor cone at 1/2 sensor range (see diagram above).

** : The number of echoes recorded by the sensor. These are the recorded echoes from the most recent reading, and are overwritten with each new ranging.

A: These sensors are smaller than the typical (SRF 04 / 05 / 08) size.

B: Range time can be adjusted down by adjusting the gain.

C: This sensor also includes a photocell on the front for light detection.

D: Operates at a higher 235kHz frequency. See the [SRF235 Tech. Specs](#) page for how this affects sensor performance.