



# DOBOT SAFESKIN

DOBOT's new flexible SafeSkin is an intelligent non-contact collision detection solution that guarantees safety and efficiency.

DOBOT SafeSkin is a silicone buffered wearable collision detection product customized by DOBOT for collaborative robots. It is characterized by a large coverage area, long sensing distance, fast response speed, and strong interference resistance. Different from traditional collision detection solutions for collaborative robots, DOBOT SafeSkin is designed with **pre-collision sensing technology** which can not only ensure the high production efficiency, but also can provide the collaborative robot with human-computer cooperation safety solutions such as non-contact proximity perception and collision prevention.



## Core function

### 1. Safety function

Proximity pause mode – dynamically perceive any intrusive body within 15cm close to the DOBOT SafeSkin, make a fast response within 0.01s, achieve emergency stop within 0.1s and thus operate efficient collision protection. When the intrusive body leaves, the robot will resume its operation automatically, without affecting the efficiency;

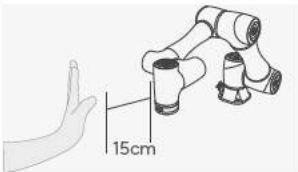
Proximity dodge mode – enter the detection space of the DOBOT SafeSkin; it can make avoidance actions through the intelligently planned avoidance route to bypass the intrusive body for normal production operations; therefore, it can achieve both safety and efficiency. Please use this function under the guidance of professionals.

### 2. Pre-collision sensing technology

It can quickly intervene in the robot action before a collision occurs, without the need for early warning and speed reduction; in this way, it can avoid damages and fully meet the requirements for high efficiency and high safety of the industrial production.

### 3. Silicone buffered wearable design

The non-contact safety solution provides an opportunity for the first time use of buffered silicone in the industry. It can result in a higher collision buffer than metal, plastic, and other materials. As a soft material, silicone is maintainable and self-healable. Designed with wearable integration, it can be installed quickly and operated simply; once installed, it will be ready for use.



### Long-distance space perception

With a 15cm ultra-long space sensing distance, it can effectively protect the operator from injury caused by the manipulator.



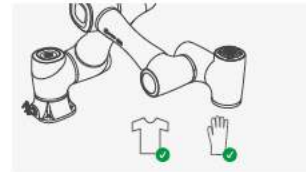
### High sensitivity and rapid response

It responds fast within 0.01s, achieving human-computer cooperation and safe interaction with higher sensitivity and responsiveness.



### Anti-interference and stable operation

It can resist the interference source signal at the worksite with the shielding technology, designed to create a stable operating environment for the robot.



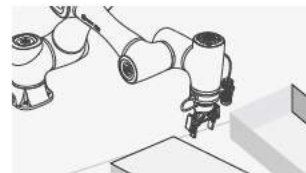
### All-around safety

Without being affected by such shielding materials as cloth and plastic gloves and light sources, its sensing ability can ensure safety in an all-around way.



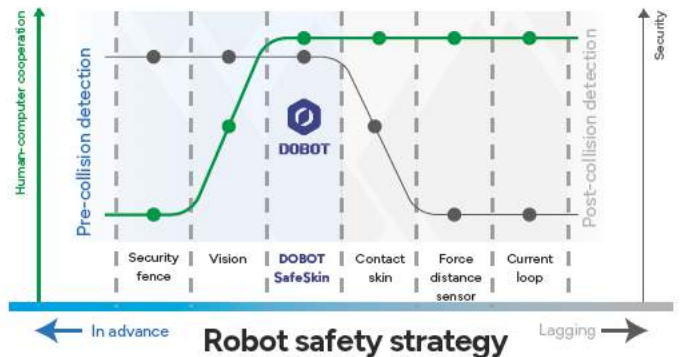
### Quick installation and easy operation

With the user-friendly design, users can operate the DOBOT SafeSkin simply and install it quickly, once installed, it will be ready for use.



### Ensure robot performance

During the use, DOBOT SafeSkin does not cause any loss to the robot's performance and ensures its efficient operation.



\*Measured results: DOBOT SafeSkin can avoid collision when the robot moves at a low-medium speed; it can reduce the collision damage by 90% when the robot moves fast, so it conforms to the safety standard of a collaborative robot.

## Parameters

Product name	DOBOT SafeSkin
Perception type	Proximity – tactile perception
Perception target	Human body, metal, liquid, etc. (conductor, slightly less sensitive to non-conductors)
Installation position	From the forearm to the end
Perception distance	5~15cm (it may be varied for different positions)
Response cycle	0.01s
Emergency stop time	0.1s

\*The non-conductor will not interfere with the DOBOT SafeSkin; the external wiring can be fixed through the fixed wire package of the non-conductor.



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