AIRSKIN® is a soft and pressure sensitive safety skin for industrial robotics that covers the whole robot as well as the tool. It allows you to rethink robot safety in new and unconventional ways beyond limiting power and reach or restricting access.

This patented technology is available for a wide range of robots and tools. AIRSKIN® offers possibilities for demanding use cases that wouldn’t be feasible otherwise. It can be provided as an OEM solution or as a flexible add-on kit to retrofit existing machines.
Soft, airtight sensor pads continuously monitor and reliably detect internal pressure changes due to deformations of the hull. Any collision immediately triggers a safe stop signal to the controller and initiates the robot’s braking sequence. Remaining mechanical forces due to the stopping distance of the robot are absorbed by the soft padding.

The autonomous pads are connected to the controller’s safety IOs by a 6-wire cable carrying two redundant safety channels. Functional safety is ensured by constant self-diagnosis of the sensor pads.

WHY AIRSKIN®?

- REMOVE THE FENCE AND SAVE FLOOR SPACE
- INCREASE SPEED FOR SHORTER CYCLE TIMES
- EASY AND FAST RISK ANALYSIS
- HIGHEST SAFETY LEVEL PLUS
- FAST INSTALLATION AND MAINTENANCE
- AVAILABLE FOR VARIOUS TOOLS
**TECHNICAL SPECIFICATIONS**

- **Reaction time**
  
  < 9 ms

- **Weight of a complete AIRSKIN® Set**
  
  For a full UR10 robot with 10 pads: 3.7 kg

- **Thickness on a robot**
  
  Variable thickness of 20 - 80 mm possible

- **Thickness on UR10**
  
  20 mm, on average

- **Mounting method / serviceability**
  
  Support structure with snap-on AIRSKIN® pads

- **Installation time**
  
  30 min

**ELECTRICAL SPECIFICATIONS**

- **Voltage supply**
  
  24 V DC (ground bonding required)

- **Electrical connection**
  
  Directly from robot controller on UR10

- **Operating current per AIRSKIN® pad**
  
  10 mA, max. 35 mA

- **Interface**
  
  OSSD (6 Wires: 2 Safety Channels IN/OUT, 24V, Ground)

- **Connection of AIRSKIN® to controller/PLC**
  
  AIRSKIN® Connection Module with push-in contacts

- **AIRSKIN® topology**
  
  Daisy chain, max. 15 AIRSKIN® pads in a row

- **Wiring**
  
  Included in support layer with magnetic connectors

**FEATURES**

- **IP classification**
  
  IP50

- **Chemical resistance**
  
  Common cleaning solutions, oil, alcohol, sanitizer

- **UV resistance**
  
  100 %

- **Tensile strength**
  
  15 MPa, DIN 53504

- **Skin shore hardness A**
  
  ~88, ISO 868

- **Colours**
  
  Standard white / grey, RAL on request

- **Ambient temperature range**
  
  5 – 40 °C

- **Humidity level**
  
  0 – 85 %

- **Visual feedback**
  
  RGB status LED per AIRSKIN® pad

**STANDARDS AND NORMS**

- **Product classification**
  
  ISO 13849 PLe / Cat 3
  
  EN 62061 SIL3

- **PFHd [1/h] with up to 15 AIRSKIN® pads**
  
  <= 2.7e-8

- **EC type examination No**
  
  TÜV A-MHF/MG/17-00411

- **UL VDE (TPU skin)**
  
  UL 94 V-2

- **Flammability (TPU skin)**
  
  UL 94 V-2
UNIVERSAL ROBOTS UR10

UR10 S2W
Shoulder2Wrist Kit
AIRSKIN® covering all moving axes. Best option to cover a wide variety of applications.

UR10 E2W
Elbow2Wrist Kit
Good choice when the robot reaches into workspace or mounted overhead.

UR10 2E
Elbow Safety Kit
For applications where only the elbow needs extra protection.

UR10 3W
Wrist Safety Kit
When only additional safety for the wrist and tool area is needed.

UNIVERSAL ROBOTS UR10
PALLETIZING

The new benchmark in safe palletizing applications: AIRSKIN® allows for faster movement speeds while completely eliminating clamping and shearing risks. ISO/TS 15066 compliance without a fence has never been easier!

APPLICATIONS

ONROBOT UR10

SCHMALZ CUBOT PUMP

CUSTOMIZE YOUR OWN

UP TO

800

MM/SEC

WITHOUT A FENCE

UP TO

500

NEWTON

FORCE REDUCTION
IN CLAMPING

100%

REDUCTION OF CLAMPING
AND SHEARING RISKS

2x

2x

DOUBLE THE SPEED
DOUBLE THE PAYLOAD
This new safety flange detects collisions in any direction of movement. This allows for real “finger safe” collaborative pick and place applications with almost any tool and end effectors. This safety flange is mounted between the robot and the EoAT and provides compliance for the tool and the workpiece. This flange is based on AIRSKIN® and comes with PLe/Cat3 ISO 13849 safety certification.