

# AIRSKIN SPECIFICATION

## TECHNICAL SPECIFICATIONS AND FEATURES

- Reaction time: < 9 ms
- Thickness on a robot:  
Variable thickness of 20 to 80 mm possible
- Mounting method /serviceability: screw-on support structure with magnetic snap-on AIRSKIN® pads
- Installation time: 30-60 min
- IP classification: IP54
- 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.
- Ambient temperature range: 0-55 °C
- Humidity level: 0 - 85 %
- Visual feedback: RGB status LED per AIRSKIN® pad
- Lifetime: 10 years
- Number activations electronics:  
min. 1 000 000 activations
- Magnetic release force / acceleration:  
10G to 15G for flat AIRSKIN Modules,  
20G-30G for complex shaped AIRSKIN
- Resistance to vibration: Active AIRSKIN tested for with robot mounted on vibrating plate. 10 minutes of operation showed no erroneous activation, while AIRSKIN continued to function properly in detecting contacts.

## ELECTRICAL SPECIFICATIONS

- Voltage supply: 24 V DC (ground bonding required)
- Electrical connection: Directly from robot controller or SPS depending on robot model
- 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

## STANDARDS AND NORMS

- ISO 13849-1 PL e / Cat 3
- EN/IEC 62061 SILCL3
- UL 1740:2018
- ANSI/RIA R15.06-2012
- CAN/CSA-Z434-14 + G11
- PFHd [1/h] with up to 15 AIRSKIN® pads:  
<= 2.7e-8
- MTTFd: 91 Years, DC = 99%
- Safety parameter based upon 1095 switching cycles per year (1 activation per shift)
- EC type examination number:  
TÜV-A-MHF/MG/17-00411
- TÜV Rheinland: CU 72192170 0001
- UL VDE (TPU skin):UL 94 V-2
- Flammability (TPU skin): UL 94 V-2