

AIRSKIN® for KUKA Quantec Series

AIRSKIN turns a KUKA Quantec into the largest collaborative robot to date. Combining our soft pressure sensitive safety skin with a high performance industrial robot gives you the best of both worlds – high payload/reach with proven robustness/precision plus collaborative operation – opening up limitless possibilities for fenceless automation.



AIRSKIN is available for the whole line of KUKA Quantec Robots

Payload from 120–300 kg
Reach from 2700–3100 mm
Supports KR C4 and KR C5 Robot Controller

EoAT-Safety with AIRSKIN

With 10 years of experience in fenceless and collaborative applications in the industry, AIRSKIN offers fitting solutions for all End of Arm Tools (EoAT).

AIRSKIN Modules

Modular Pads fit together for one flexible solution on grippers and work objects

Customized AIRSKIN

Any 3D form possible in lot-size 1

Speed

Who said a large collaborative robot would have to be slow? The soft highly sensitive AIRSKIN allows fenceless operation at up to 2 m/s in free space.

Space

With AIRSKIN® a large robot does not need a large fence around it. Save valuable floor space to get more productivity out of your facility.

Flexibility

Without fences cluttering your floor space, quickly reroute material flow as demands on your production keep changing.

Safety

Proven AIRSKIN technology meeting highest safety standards (ISO 13849-1 PL_e/ Cat3, IEC 62061 SIL 3)

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General

Reaction time	< 9 ms
Actuation force	-5 N
Lifetime	10 years / 1 000 000 activations
Mounting system	screw-on support structure with magnetic snap-on AIRSKIN pads
Visual feedback	RGB status LEDs

Operating conditions

Ambient temperature during operation	5-50 °C
Humidity level	0-85 %
IP rating	IP54
Chemical resistance	Common cleaning agents, oil, alcohol, sanitizer
UV resistance	100 %
Tolerable g-force	15 g

Robot payload with AIRSKIN

PA (palletizing) mode includes a Palletizing Safetyflange
Calculated values according to KUKA.Load, assuming
a distance of 80 mm between tool COG and TCP.

Payload in kg	Nominal	Normal mode
KR 120 R2700-2	120	117
KR 120 R3100-2	120	116
KR 150 R2700-2	150	147
KR 150 R3100-2	150	146
KR 180 R2900-2	180	176
KR 210 R2700-2	210	207
KR 210 R3100-2	210	206
KR 240 R2900-2	240	236
KR 250 R2700-2	250	247
KR 300 R2700-2	300	297

Electrical connection

Supply voltage	24 V DC
Current consumption	typ. 420 mA, max. 1500 mA
Electrical interface	OSSD (6 Wires: 2 Safety Channels IN/OUT, 24 V, Ground)
AIRSKIN topology	6 lanes with up to 15 AIRSKIN pads, each connected to AIRSKIN Connection Box (ACB)
Connection to robot	6 ACBs to safety PLC or X13 connector

Robot motion range with AIRSKIN

All models, in °

	Nominal		with AIRSKIN	
A1	-185	185	-185	185
A2	-140	-5	-125	-5
A3	-120	168	-77	161
A4	-350	350	-350*	350*
A5	-125	125	-69	115
A6	-350	350	-350*	350*

* Limitation by cable length

Certificates

ISO 13849-1	PLe / Cat 3
EN/IEC 62061	SIL CL 3
UL 1740:2018	
ANSI/RIA R15.06-2012	
CAN/CSA-Z434-14 + G11	
Flammability	UL 94 V-2
EC type examination Nr.	TÜV-A-MHF/MG17-00411
TUV Rheinland certificate Nr.	CU 72192170 0001

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