

**KUKA**



**KUKA KR C4 and smartPAD:  
the control system of the future**

Control system/Control panel  
**KR C4/smartPAD**

»KR C4 – THE CONTROL SYSTEM OF THE FUTURE.

More powerful, safer, more flexible, and above all more intelligent. The revolutionary concept of the KR C4 provides a firm foundation for the automation of tomorrow. It reduces costs in automation for integration, maintenance and servicing. The long-term efficiency and flexibility of the systems are increased at the same time. For this reason, KUKA has developed a new ground-breaking, clearly-structured system architecture that concentrates on open and powerful data standards. In this architecture, all integrated controllers – from SafetyControl, RobotControl and MotionControl to LogicControl and ProcessControl – have a joint database and infrastructure which they use and share intelligently. For maximum performance, scalability and flexibility. Today and in the future – and not just for KUKA robots.

»KR C4 – THE FEATURES AT A GLANCE:

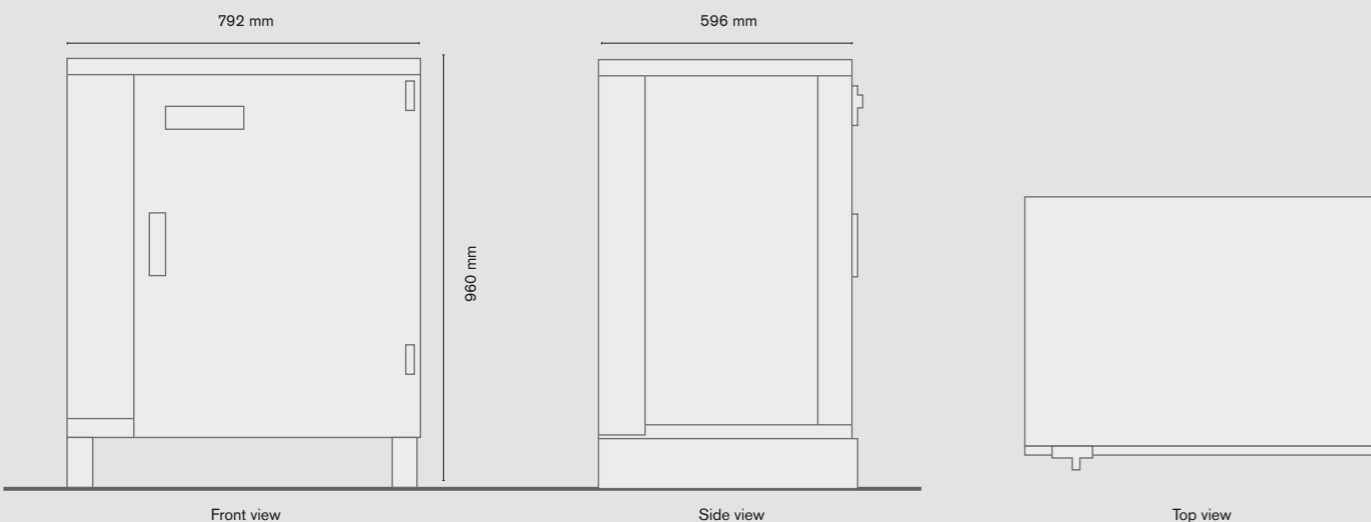
- Simple to plan, operate and maintain
- Continuation of service-proven PC-based control technologies
- Quick and easy operation thanks to continued use of familiar operator control concepts
- Expansion of the set of commands for more user-friendly path programming
- High compatibility with previous programs for the KR C2
- Robot, Logic, Motion, Process and SafetyControl in a single control system
- Real-time communication between the dedicated control modules
- Central basic services for maximum data consistency
- Maximum availability
- Seamless integration of safety technology for entirely new fields of application
- Integrated software firewall for greater network security
- Innovative software functions for utmost energy efficiency
- Future-compatible technology platform without proprietary hardware
- Multi-core processor support for scalable performance
- Fast communication via Gigabit Ethernet
- Integrated memory cards for important system data
- Designed for 400-480 VAC
- New fan concept for maximum energy efficiency
- Maintenance-free cooling without filter mats
- Highest performance in the smallest possible space



»TECHNICAL DETAILS OF THE KR C4

Systematically implemented on the basis of pioneering mainstream technologies, such as Ethernet and multi-core. The highest standard for future compatibility.

»KR C4 – dimensions.



»TECHNICAL DETAILS OF THE KR C4

5 dedicated control modules in a future-oriented control system.

Use of powerful standards, such as "Ethernet" and "multi-core technology".



Open for kinematic systems from third-party manufacturers.

Innovative hardware and software functions for optimized energy efficiency.

Utmost performance without proprietary hardware.

»TECHNICAL DETAILS OF THE smartPAD

Simple, intuitive operator control via touch panel with context-sensitive floating windows.

Separate jog keys for direct control of eight axes/external axes without switching.

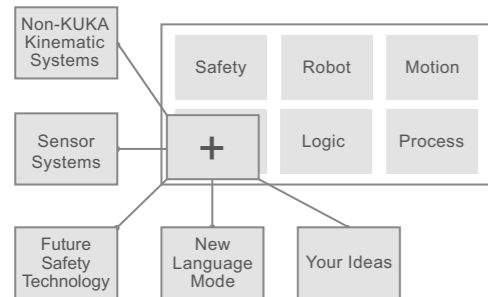


Direct saving and loading of configurations directly on the smartPAD.

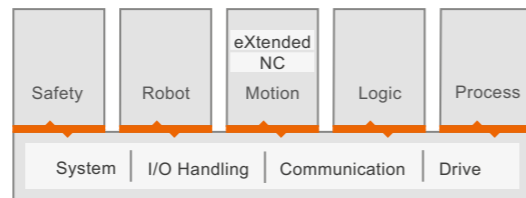
Hot-pluggable.

Low weight of approx. 1,000 g.

Suitable for international use, as functions firmly anchored in the software.



KR C4. Structured, open system architecture with almost unlimited possibilities.



On the basis of the new hardware and software architecture of the KR C4, all dedicated control modules communicate directly. Without interface limitations. In real time.



State-of-the-art drive technology with Ethernet-based communication.



Systematic reduction of hardware.

»smartPAD – THE SIMPLEST WAY OF CONTROLLING ROBOTS.

Touch screen. Graphics support. Flexible interaction. The more powerful the capabilities of the robots become, the more intuitive user interfaces for operator control of the robots are pushed into the foreground. The new KUKA smartPAD brilliantly demonstrates, on a large, high-resolution, antireflection touch screen, how robots can be operated intuitively. Operations are presented to the user in a transparent manner by means of intelligent, interactive dialogs. The user always has at his disposal precisely the operator control elements that he actually needs at any given moment. With the aim of focusing attention on what is important, so that users can work more intuitively and thus more easily, quickly and efficiently. Simply smarter in every respect.

»SMARTPAD – THE ADVANTAGES AT A GLANCE:

- Simple, intuitive operator control via touch panel with context-sensitive floating windows
- Separate jog keys for direct control of eight axes / external axes – without switching
- Efficient programming with 6D mouse and ergonomic keypad in touch panel
- Systematic further development of the tried-and-tested KUKA operator control and programming concept
- No training required
- Direct saving and loading of configurations via USB port on the smartPAD itself
- Hot-pluggable. If the smartPAD is not required, it can be simply unplugged
- High screen resolution and generously-sized antireflection display for work that is easy on the eyes
- High mobility and work that is non-tiring thanks to the low weight of just 1,000 g



6D mouse.

»TECHNICAL DETAILS OF THE smartPAD

Basic data	
Cabinet type	KR C4
Number of axes	Max. 8
Weight	150 kg
Protection classification	IP 54
Sound level according to DIN 45635-1	50 - 67 dB (A) (dependent on load)
Installation with other cabinets	Side-by-side, clearance 50 mm, or stacked
Power supply connection	
Standard rated supply voltage acc. to DIN / IEC 38	3 x 400 - 480V AC (direct connection if system has grounded neutral); alternative mains supply or voltages via transformers
Permissible tolerance of rated voltage	-10% / 10%
Mains frequency	49 ... 61 Hz
Rated power input	7.3 kVA (13.5 kVA)
Mains-side fusing	Min. 3x25 A slow-blowing, max. 3x32 A slow-blowing, see rating plate

Environmental conditions	
Ambient temperature during operation without cooling unit	+5 ... 45 °C, optionally up to 55 °C
Controller	
Controller	KUKA PC
Processor	Multi-core technology 2.6 GHz
Hard drive	HDD 30 GB, SSD optional
Interface	USB, Ethernet
Main memory	1 GB RAM
Field buses	PROFINET, PROFIBUS, Interbus, EtherCAT
Dimensions of KR C4	
Height	960 mm
Width	792 mm
Depth	596 mm



A USB port integrated into the housing allows the simple saving and loading of configurations directly on the smartPAD.

KUKA smartPAD	
Dimensions (W x H x D)	Approx. 33 x 26 x 8 cm <sup>33</sup>
Display	Touch-sensitive color display, 600 x 800 pixels
Display size	8.4"
Weight	1.1 kg



## »THE KUKA ROBOT GROUP: YOUR STRONG PARTNER

Quality made in Germany, creativity and the utmost commitment to customers and business partners: these form the basis on which KUKA develops the best possible technologies and thus the optimal automation concepts. The result is that you receive custom-tailored solutions and benefit from decisive process optimization.

Genuine passion for the fascination of robotics is reflected in our slogan “KUKA YOUR IDEAS”, which is also our promise to you: Whatever you want to do, and however unusual your idea may be, with us you can implement anything – irrespective of the specific branch of industry and irrespective of whether or not a similar application has existed before.

Whatever task you give us, KUKA has the required specialists. In close cooperation with experienced system partners with competence in their respective industries, we do everything in our power to implement your ideas. Let us work on them together.

## »KUKA SERVICES: ALWAYS THERE FOR YOU

You can rely on us to stand by you in every phase of a project: from planning and commissioning to maintenance and conversion. 24 hours a day. 365 days a year. The high-density KUKA service network ensures that we are always in your vicinity and can start your production in record time.

# KUKA YOUR IDEAS

## Everything for your HMI running



Touch.Keypad.Display



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