

# Technical data

## S4C Industrial Robot Controller

PERFORMANCE	
Controlled axes	12
Control principles	Dynamic model Self optimising Completely coordinated 12 axes interpolation 7-frame coordinate chain Corner path concept Automatic singularity handling
Control hardware	Multi-processor system 32 bit with floating point Up to 24 Mb RAM memory RAM disk Up to 35,000 instructions
Control software	Object-oriented design High-level RAPID robot language Portable, open, expandable PC-DOS file format RobotWare software products
ELECTRICAL CONNECTIONS	
Supply voltage	200-600 V, 50-60 Hz Transformer included
PHYSICAL	
Cabinet size (H x W x D)	950 x 800 x 540 mm same size for complete robot range
Weight	240 kg
Cabinet variants	For process hardware
Lifting eyes	Can be removed
Wheels	Can be mounted
ENVIRONMENT	
Ambient temperature	5-52°C
Relative humidity	max 95%
Form of protection	IP 54
EMC	Immune and emission-free
USER INTERFACES	
Control panel	On cabinet or external
Control pendant	Portable and light Joystick and keypad 5 user-designated keys Display 16 lines x 40 characters Windows-style communication Emergency stop All programming functions available
PC	Connection for PC PC monitoring and control
Off-line	"S4 software on a PC" DeskWare™ software for PC Off-line ProgramMaker™ Virtual robot on PC RRS from simulation companies QuickTeach™ training on PC
Languages	Choice between 10 national languages for MMC and Manuals Possibility to add user dialogues and references
Maintenance	LEDs and test points for electronic boards Diagnostic software Recovery procedures Logging with clock

Safety	Safety and emergency stops Software functions Passwords 2-channel safety circuits with supervision 3-position enable device
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### MACHINE INTERFACES

Digital inputs/outputs	up to 512 signals, 24V DC 120V AC or relay outputs
Analogue inputs/outputs	up to 120 signals $\pm 10V \pm 20 mA$
Serial channels	RS 232 and RS 485
Network	Ethernet (10 Mbits per second)
Fieldbuses	Allen Bradley PLC CAN Interbus-S Profibus
Process interfaces	Media and signals for upper arm Space in controller for equipment
Robot vision	OptiMaster integrated
Diskette drive	For 3.5" MS-DOS

### SENSOR INTERFACES

Search stop with automatic program shift	
Vision system	
Seam tracking	
Contour tracking	
Conveyor following	

### USER DEFINED FUNCTIONALITY

Program instructions	
Operator dialogues	
Names for all objects and data	
I/O and instruction pick lists	
Predefined data	
Robot configuration	
Start-up sequences	
Corner paths	
Process monitoring	
Event logging	
Diagnostics, error messages	
Error handling	

### PROGRAM FEATURES

Pull-down menus, dialogues and joystick for robot motion, function keys and windows	
Cut-and-paste, copy, delete, search, change functions, undo	
Manager functions for different user needs	
File handling	
RAPID – powerful and open robot language	
ProcessWare, application software packages	
Motion to a position or fly-by at a defined distance	
Linear, joint and circular interpolation	
Mirror function	
Soft servo function	
Unlimited rotating axes 4 and 6	
Restart on path	
Forward/backward/simulated wait and input testing	
Multi-tasking functions	
Concurrent I/O function	
Independent motion of external axes	
Position fixed I/O function	
Master-slave functions	
Real time clock function	
Hot-edit functions	
Unlimited number of data	

*Data and dimensions may be changed without notice.*



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