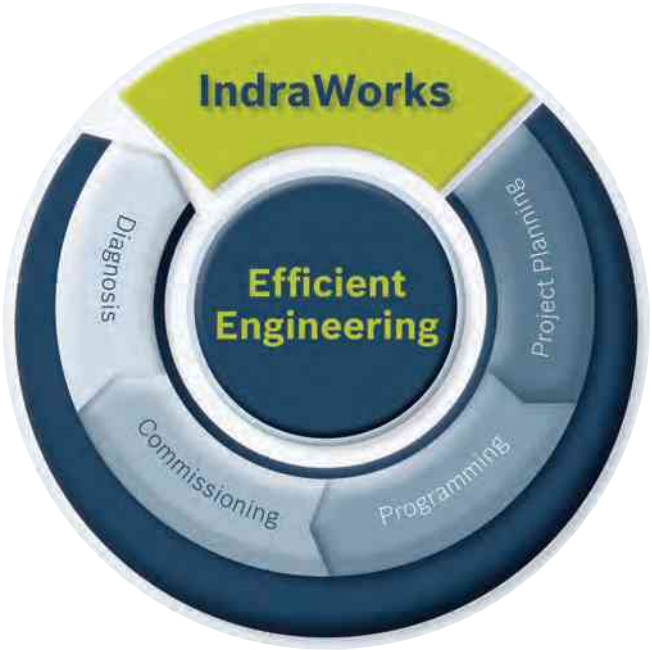
IndraWorks – one tool for all engineering tasks

Rexroth IndraWorks allows you to solve all tasks in a uniform and intuitive software environment – from project planning and programming to visualization and diagnosis.

The uniform engineering framework IndraWorks is consistently available for all systems. You, as user, profit from the fast and transparent access to all functions and system data of the automation components. The standardized tools and interfaces help you to solve all engineering tasks centrally with a single software program.

Your benefits

- Available for all IndraMotion and IndraLogic systems from Rexroth
- Integrated framework for all engineering tasks
- Consistent operating environment for project planning, programming, visualization and diagnosis
- Central project management with intuitive system navigation
- Intelligent operation with wizard support
- Comprehensive online help
- Uniform programming according to the PLC standard IEC 61131–3
- PLCopen-conforming function block and technology libraries
- Standardized interfaces for communication
- Transparent access to all system components
- Integrated FDT/DTM interface for integrating DTMs of third-party manufacturers



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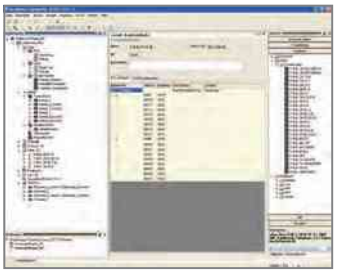
IndraWorks – the universal engineering framework

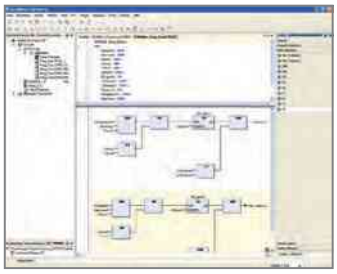
- One tool for all automation tasks
- Quick startup via dialog-driven commissioning
- Offline configuration of projects
- Comfortable programming environment

Project planning



Planning of the overall system is uniform and consistent for all solutions. User and multi-project management are available in all instances. The project and device explorers provide access to all automation systems and control components. With its clearly organized dialog boxes, IndraWorks guides you intuitively through the configuration of your system.

Programming

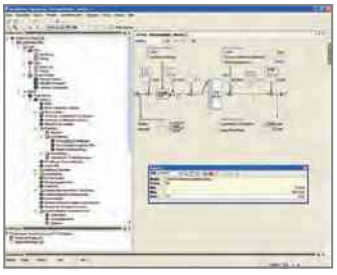


The IndraLogic runtime system that is integrated in all solutions is consistently programmed in IndraWorks. The complete language scope specified in IEC 61131-3 is available. System-specific additional functions, such as motion blocks according to PLCopen or technology blocks, can be quickly and transparently implemented in your logic programs.

Operation and visualization

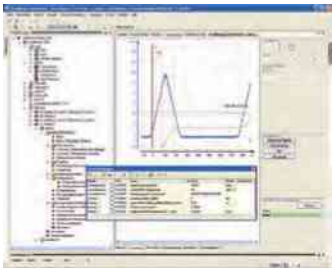
Apart from providing engineering functions, IndraWorks is also an HMI front end for various applications. IndraWorks allows you to create machine- or system-specific screens. Using the project development tool WinStudio, you can easily integrate standard screens in the user interface. In addition, you can easily use pre-developed ActiveX controls in your HMI applications.

Parameterization



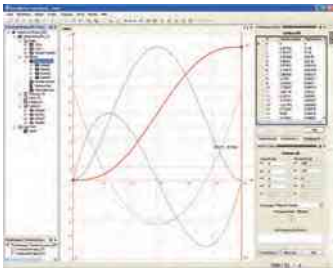
The project explorer provides access to all data of the system components. Wizards guide you through all engineering steps, interactively and in sequence. Control and drive options or motion axes can be parameterized easily and clearly, even offline. I/O peripherals and communication interfaces can be configured through the integrated configurators. The online help provides you with all necessary information.

Diagnosis



Comprehensive tools are implemented in IndraWorks to facilitate startup or service activities. Such tools cover the complete range from four-channel oscilloscope and logic analyzer through debugging functions of the PLC logic to manifold status messages and system diagnostics. At the push of a button comprehensive detailed information on controls, drives, HMI, and peripherals are provided.

Tools



The tools for all engineering tasks are integrated in IndraWorks. Additional solution-specific tools are consistently available in the software framework. Using menus or the project tree, you can access, for example, CamBuilder for creating cams, simulation tools, firmware management, or system-specific programming editors.

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IndraWorks Engineering – technical data

System		IndraDrive	IndraMotion MLC	IndraMotion MLD	IndraLogic XLC	IndraLogic L/V	IndraMotion MTX
IndraWorks variants							
IndraWorks ML*		●	●	●	●	●	–
IndraWorks MTX		●	–	●	●	●	●
IndraWorks MLD		●	–	●	–	–	–
IndraWorks D		●	–	–	–	–	–
IndraWorks Ds		●	–	–	–	–	–
Basic functions							
Supported operating systems	MS Windows XP, Windows 7	●	●	●	●	●	●
Multilinguality of framework		●	●	●	●	●	●
Multilinguality of projects		●	●	●	●	●	●
Export/import of texts of the PLC projects		●	●	●	●	●	●
Firmware management		●	●	●	●	●	●
Deactivating/parking drives in the project		●	●	●	●	●	●
Automatic scan of drives and I/O participants		●	●	●	●	●	●
Switching between online and offline modes		●	●	●	●	●	●
Automatic system monitoring	Display of messages and errors	●	●	●	●	●	●
Project comparison		●	●	●	●	●	●
Online change		●	●	●	●	●	●
Find/replace		●	●	●	●	●	●
Cross references		●	●	●	●	●	●
Call tree		●	●	●	●	●	●
Log file		●	●	●	●	●	●
Integration of third-party commissioning tools via FDT/DTMs		–	●[1)]	–	●	–	●
Working with version control (VCS) – Software option							
Supported VCS systems	Sub-version	–	●[1)]	–	●	–	▼
	Microsoft Visual Source Safe	–	●[1)]	–	●	–	▼
Check objects in/out		–	●[1)]	–	●	–	▼
Hijack objects		–	●[1)]	–	●	–	▼
Object comparison	Device, POE, function block, library, visualization	–	●[1)]	–	●	–	▼
Undo functions		–	●[1)]	–	●	–	▼
Update working copy		–	●[1)]	–	●	–	▼
Show version history		–	●[1)]	–	●	–	▼
Show versioned elements		–	●[1)]	–	●	–	▼
Configuration and project planning							
System configurator		●	●	●	●	●	●
Device library for controls, visualization, peripherals		●	●	●	●	●	●
Commissioning wizards		●	●	●	●	●	●
Project navigator		●	●	●	●	●	●
I/O configurator		●	●	●	●	●	●
Fieldbus configurator		●	●	●	●	●	●
Axis configurator	Real axes	●	●	●	●	–	●
	Virtual axes	–	●	●	●	–	●
	Encoder axes	–	●	●	●	–	–
	Link axes	–	●	●	–	–	–
	Control axes	–	●	–	–	–	–

System		IndraDrive	IndraMotion MLC	IndraMotion MLD	IndraLogic XLC	IndraLogic L/V	IndraMotion MTX
Configuration and project planning							
Drive configurator		●	●	●	●	●	●
Project archiving		●	●	●	●	●	●
Parameter monitor for controls and drives		●	●	●	●	●	●
Offline parameterization of controls and drives		●	●	●	●	●	●
FlexProfile configurator		●	●	–	●	–	–
Cam editor	CamBuilder	○	○	○	○	–	–
Robot control	Configuration of standard kinematics	–	●	–	–	–	–
	Definition of user-specific kinematics	–	●	–	–	–	–
	Integrated RCL editor	–	●	–	–	–	–
Extended project handling		●	●	●	●	●	●
PLC programming							
Graphical editors							
SFC – Sequential Function Chart		–	●	●	●	●	●
Time monitoring per step		–	●	●	●	●	●
Error analysis		–	●	●	●	●	●
Control flags		–	●	●	●	●	●
LD – Ladder Diagram		–	●	●	●	●	●
FBD – Function Block Diagram		–	●	●	●	●	●
CFC – Continuous Function Chart	Auto-routing of connections	–	●	●	●	●	●
	Possibility of macros to structure large networks	–	●	●	●	●	●
Textual editors		–					
IL – Instruction List		–	●	●	●	●	●
ST – Structured Text		–	●	●	●	●	●
SEQ.ST – Sequential programming	Based on ST	–	●	–	–	–	–
RCL – Robot Control Language		–	●	–	–	–	–
Language elements							
Operators	According to IEC 61131–3	–	●	●	●	●	●
Operands	Constants, variables, addresses, functions	–	●	●	●	●	●
Bit access		–	●	●	●	●	●
Typed pointers		–	●	●	●	●	●
Object-oriented language extension		–	●[1)]	▼	●	–	●
Data types							
Standard according to IEC 61131–3 incl. LREAL		–	●	●	●	●	●
User-defined: arrays, structures, enumeration, alias, pointer		–	●	●	●	●	●
Robot control: POINT, JC_POINT, BELT, TEXT, ARRAY, WC_FRAME, FILE		–	●	–	–	–	–
Special editor features							
Syntax coloring		–	●	●	●	●	●
Semantic coloring		–	●	●	●	●	●
Multiple undo/redo		–	●	●	●	●	●
Context-sensitive input assistance		–	●	●	●	●	●
Context-sensitive menus		–	●	●	●	●	●
Auto-declaration with type identification		–	●	●	●	●	●
Name spaces		–	●	●	●	●	●

● Default ▼ In preparation ○ Optional – Not available [1)] Not IndraMotion MLC 04VRS or below

IndraWorks Engineering – technical data

System		IndraDrive	IndraMotion MLC	IndraMotion MLD	IndraLogic XLC	IndraLogic L/V	IndraMotion MTX
Special editor features							
Auto-complete (IntelliSense) for structures, functions, function blocks		–	●	●	●	●	●
Pre-compile for permanent syntax check		–	●	●	●	●	●
Folding (fading in/out of program blocks and structures)		–	●	●	●	●	●
Extended find and replace		–	●	●	●	●	●
Smart coding (auto-complete and auto-format)		–	●	●	●	●	●
Library management							
Managed libraries (several library versions in one project)		–	●[1)]	▼	●	–	●
License management		–	●[1)]	▼	●	–	●
Programming assistance							
Offline programming		–	●	●	●	●	●
Automatic variable declaration of the system components		–	●	●	●	●	●
Structures for access to axis data		–	●	●	●	●	●
AXIS_REF (reference to axis data)		–	●	●	●	–	●
ML_AXISDATA (direct access to axis data)		–	●	●	●	–	–
Generic Application Template							
Automatic code generation	Program structure	–	●[1)]	●	●	–	–
	Error handling	–	●[1)]	●	●	–	–
	Possible to separate program frame and user code	–	●[1)]	–	–	–	–
Wizard-assisted creating, editing, deleting of	Operating modes	–	●[1)]	●	●	–	–
	Operating states	–	●[1)]	●	●	–	–
	Modules	–	●[1)]	●	–	–	–
	Axes	–	●[1)]	●	●	–	–
	Visualizations	–	●[1)]	–	●	–	–
Online debugging and commissioning							
Diagnosis							
Real-time logic analyzer		–	●	●	●	●	●
Oscilloscope function	Graphical output with zoom function	●	●	●	●	●	●
	Display of signal values of drives	●	●	●	●	●	●
	Scaling	●	●	●	●	●	●
	Measuring with/without trigger	●	●	●	●	●	●
Circular shape test		–	–	–	–	–	●
NC analyzer		–	–	–	–	–	●
Action recorder IndraMotion MTX acr		–	–	–	–	–	●
Cycle time analyzer IndraMotion MTX cta		–	–	–	–	–	●
Debugging							
Monitoring of variables	Trace	●	●	●	●	●	●
Forcing of variables and variable sets		●	●	●	●	●	●
Project debugging	Incl. robot control	–	●	–	–	–	–
Power flow	Sequential check	–	●	●	●	●	●
Online exchange of function blocks		–	●	●	●	●	●
Offline simulation of PLC variables		–	●	●	●	●	●
Parameter monitor		●	●	●	●	●	●

System		IndraDrive	IndraMotion MLC	IndraMotion MLD	IndraLogic XLC	IndraLogic L/V	IndraMotion MTX
Debugging							
Writing of variables		●	●	●	●	●	●
Breakpoint		–	●	●	●	●	●
Single step operation		–	●	●	●	●	●
Single cycle operation		–	●	●	●	●	●
Flow control		–	●	●	●	●	●
Libraries (choice)							
Basic libraries	System functions	–	●	●	●	●	●
	Communication	–	●	●	●	●	●
	PLCopen	–	●	●	●	●	●
	Data handling	–	●	●	●	●	●
	Diagnosis	–	●	●	●	●	●
	Axis interface	–	●	●	●	–	●
Technology libraries	Kinematics	–	●	–	●	–	–
	Programmable limit switch	–	●	–	●	–	–
	Gantry axes	–	●	○	●	–	–
	Probe evaluation	–	●	●	●	–	–
	Programmable limit switch	–	●	–	●	–	–
	PID controller	–	●	▼	●	●	–
	Temperature controller	–	●	▼	●	●	–
	Hydraulic functions	–	●	–	–	–	–
Technology libraries (industry-specific)	Register control – Basic	–	●	○	–	–	–
	Register control – Advanced	–	○	○	–	–	–
	Register control – Extended	–	○	–	–	–	–
	Tension control – 1 axis	–	●	○	–	–	–
	Tension control – 8 axes	–	○	–	–	–	–
	Cross cutter	–	●	○	–	–	–
	Sag control	–	●	–	–	–	–
	Flying shear	–	●	○	–	–	–
	Smart belt/magic belt	–	●	○	–	–	–
	Magic belt	–	●	–	–	–	–
	Crank/bell-crank kinematics	–	●	○	–	–	–
	Winder and dancer controller	–	●	○	–	–	–
HMI project planning							
WinStudio Lite	500 variables	–	●	–	●	●	●
WinStudio 1.5 k	1,500 variables	–	○	○	○	○	○
WinStudio 4 k	4,000 variables	–	○	○	○	○	○
WinStudio 64 k	64,000 variables	–	○	○	○	○	○
WinStudio 512 k	512,000 variables	–	○	○	○	○	○
VI-Composer		○	○	○	○	○	○
Simulation							
IndraMotion MTX workstation software	PLC emulation	–	–	–	–	–	●
	NC emulation	–	–	–	–	–	●
3D offline simulation of workpiece processing of NC parts programs		–	–	–	–	–	○
IndraWorks View 3D (3D machine volume simulation incl. process link)		–	–	–	–	–	○
IndraWorks Machine Simulator (SiL/HiL peripherals simulation)		–	–	–	–	–	○

● Default ▼ In preparation ○ Optional – Not available [1] Not IndraMotion MLC 04VRS or below

IndraWorks Operation – technical data

System		IndraMotion MLC	IndraLogic XLC	IndraLogic L/V	IndraMotion MTX
IndraWorks variants					
IndraWorks Operation ML*		●[1)]	●	●	–
IndraWorks Operation MTX		–	–	–	●
Supported operating systems					
MS Windows XP/XPe (32 bit)		●	●	●	●
MS Windows 7 (32/64 bit)		●	●	●	●
Basic function					
WinStudio runtime	Function scope of lite license (500 tags)	●	●	●	●
General operating scope concept	Pre-developed navigation bars (OP/F/M panels)	●	●	●	●
	Header display: System status, diagnostic messages, PLC state, etc.	●	●	●	●
	Pre-developed operator screens for moving axes manually, incl. a display of position, status, and feasibility	●	●	●	●
	ACI images (configurable screens to show pre-developed and customer-specific ActiveX and .NET controls)	●	●	●	●
	Show customer-specific HMI images (WinStudio)	●	●	●	●
Pre-developed operating scopes	Maintenance and diagnosis	●	●	●	●
	Prepare (machine-specific operator screens)	–	–	–	●
	Machine (axis position, override for feed/spindle, G-code, etc.)	–	–	–	●
	Program (CNC program editor, program selection)	–	–	–	●
	Tool management (tool identification, downtime management, correction value application, type definition)	–	–	–	●
	System (channel display and change)	–	–	–	●
	Production data	–	–	–	●
Localization					
Standard languages	German/English	●	●	●	●
Optional language modules	HMI interface texts	○	○	○	○
	NC messages	–	–	–	○
	Drive diagnosis (only with “OPDENG” language module)	○	○	○	○
Diagnosis					
Diagnostic systems	ProVi (PLC-based message system)	●	●	●	●
	MZA (machine error and status display)	–	–	–	●
	NC messages	–	–	–	●
Header message line	Display of active messages with the following classes: Warning, error, note	●	●	●	●
Diagnosis operating scope	Detailed list of all errors according to date/time	●	●	●	●
	Extended information on the cause and remedy (text or HTML)	●	●	●	●
	Filter according to message class	●	●	●	●
Log file	Logging of all message classes with time stamp: Note/warning/error/set-up diagnosis/start requirement	●	●	●	●
	Filter according to: time frame, source, message class, and text	●	●	●	●
	Export function in format: ASCII/CSV XML	●	●	●	●
Fieldbus diagnosis	PROFIBUS DP	●	●	●	●
	Overview and display of individual bus participants	●	●	●	●
Criteria analysis for sequences	Automatic display of sequence name and program instruction at the time the error occurred	●	●	●	●
Optional extensions					
Technology packages	E.g. shop programming, machining centers, NC simulation	–	–	–	○
WinStudio license packages	Function and variable extension from 1K5 ti 512K tags (Win XP max. 4K)	○	○	○	○

● Default ▼ In preparation ○ Optional – Not available ●[1)] From IndraMotion MLC 11VRS

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IndraWorks – ordering data

IndraWorks Engineering	
Description	**Type code**
Installation DVD for IndraMotion MLC, IndraLogic XLC, IndraLogic L/V	SWA-IWORKS-ML*-xxVRS-D0-DVD**
Installation DVD for IndraMotion MTX	SWA-IWORKS-MTX-xxVRS-D0-DVD**
Single license – IndraWorks Engineering for IndraMotion MLC, IndraLogic XLC and IndraLogic L/V	SWL-IWORKS-ML*-xxVRS-D0-ENG
25 single licenses – IndraWorks Engineering for IndraMotion MLC, IndraLogic XLC and IndraLogic L/V	SWL-IWORKS-ML*-xxVRS-D0-ENG*M25
Single license – IndraWorks Engineering for IndraLogic XLC and IndraLogic L/V	SWL-IWORKS-XLC-xxVRS-D0-ENG
25 single licenses – IndraWorks Engineering for IndraLogic XLC and IndraLogic L/V	SWL-IWORKS-XLC-xxVRS-D0-ENG*M25
Single license – IndraWorks Operation + Engineering for IndraMotion MTX	SWL-IWORKS-MTX-xxVRS-D0-OPDENG
25 single licenses – IndraWorks Operation + Engineering for IndraMotion MTX	SWL-IWORKS-MTX-xxVRS-D0-OPDENG*M25
Single license – IndraWorks Engineering for IndraMotion MTX micro	SWL-IWORKS-MTX-xxVRS-D0-MICRO
25 single licenses – IndraWorks Operation + Engineering for IndraMotion MTX micro	SWL-IWORKS-MTX-xxVRS-D0-MICRO*M25
Single license – IndraWorks MTX Workstation	SWL-IWORKS-MTX-xxVRS-D0-WORKSTATION
25 single licenses – IndraWorks MTX Workstation	SWL-IWORKS-MTX-xxVRS-D0-WORKSTATION*25
Single license – IndraWorks Communication (OPC server) and WinStudio Lite for IndraMotion MLC, IndraLogic XLC and IndraLogic L/V	SWL-IWORKS-ML*-xxVRS-D0-COM
25 single licenses – IndraWorks Communication (OPC server) and WinStudio Lite for IndraMotion MLC, IndraLogic XLC and IndraLogic L/V	SWL-IWORKS-ML*-xxVRS-D0-COM*M25
Single license – IndraWorks Communication (OPC server) and WinStudio Lite for IndraMotion MTX	SWL-IWORKS-MTX-xxVRS-D0-COM
25 single licenses – IndraWorks Communication (OPC server) and WinStudio Lite for IndraMotion MTX	SWL-IWORKS-MTX-xxVRS-D0-COM*M25
IndraWorks Operation	
Description	**Type code**
Installation DVD for IndraMotion MLC, IndraLogic XLC, IndraLogic L/V	SWA-IWORKS-ML*-xxVRS-D0-DVD**
Installation DVD for IndraMotion MTX	SWA-IWORKS-MTX-xxVRS-D0-DVD**
Single license – IndraWorks Operation for IndraMotion MLC, IndraLogic XLC and IndraLogic L/V	SWL-IWORKS-ML*-xxVRS-D0-OPD
25 single licenses – IndraWorks Operation for IndraMotion MLC, IndraLogic XLC and IndraLogic L/V	SWL-IWORKS-ML*-xxVRS-D0-OPD*M25
Single license – IndraWorks Operation for IndraMotion MTX	SWL-IWORKS-MTX-xxVRS-D0-OPD
25 single licenses – IndraWorks Operation for IndraMotion MTX	SWL-IWORKS-MTX-xxVRS-D0-OPD*M25
IndraWorks options	
Description	**Type code**
Single license – IndraWorks CamBuilder for IndraMotion MLC, IndraLogic XLC	SWS-IWORKS-CAM-xxVRS-D0
25 single licenses – IndraWorks CamBuilder for IndraMotion MLC, IndraLogic XLC	SWS-IWORKS-CAM-xxVRS-D0-M25
Single license – IndraWorks TeamClient for IndraMotion MLC, IndraLogic XLC	SWS-IWORKS-VCS-xxVRS-D0
10 single licenses – IndraWorks TeamClient for IndraMotion MLC, IndraLogic XLC	SWS-IWORKS-VCS-xxVRS-D0-M10
25 single licenses – IndraWorks TeamClient for IndraMotion MLC, IndraLogic XLC	SWS-IWORKS-VCS-xxVRS-D0-M25
Single license – IndraWorks View 3D for IndraMotion MTX	SWS-IWORKS-V3D-xxVRS-D0
Single license – IndraWorks machine simulator (HiL) for IndraMotion MTX	SWS-IWORKS-MAS-xxVRS-D0
Single license – IndraWorks machine simulator (SiL) for IndraMotion MTX	SWS-IWORKS-MAS-xxVRS-D0-NOHAWA

IndraWorks – ordering data

IndraWorks language modules	
Description	**Type code**
Installation DVD for IndraWorks language modules	SWA-IWORKS-SED-xxVRS-NN-DVD**
Single license – Language module for IndraWorks Operation	SWL-IWORKS-SED-xxVRS-xx-OPD
Single license – Language module for IndraWorks Operation & Engineering	SWL-IWORKS-SED-xxVRS-xx-OPDENG
WinStudio runtime options	
Description	**Type code**
Single license – WinStudio 07VRS Runtime 1500 variables, Windows 7/XP/Xpe	SWS-WINSTU-RUN-07VRS-D0-1K5
Single license – WinStudio 07VRS Runtime 4000 variables, Windows 7/XP/Xpe	SWS-WINSTU-RUN-07VRS-D0-4K
Single license – WinStudio 07VRS Runtime 64000 variables, Windows 7/XP/Xpe	SWS-WINSTU-RUN-07VRS-D0-64K
Single license – WinStudio 07VRS Runtime 512000 variables, Windows 7/XP/Xpe	SWS-WINSTU-RUN-07VRS-D0-512K
Single license – WinStudio 07VRS Runtime 1500 variables, 1 Web client, Windows 7/XP/Xpe	SWS-WINSTU-RUW-07VRS-D0-1K5-1CL
Single license – WinStudio 07VRS Runtime 4000 variables, 1 Web client, Windows 7/XP/Xpe	SWS-WINSTU-RUW-07VRS-D0-4K-1CL
Single license – WinStudio 07VRS Runtime 64000 variables, 1 Web client, Windows 7/XP/Xpe	SWS-WINSTU-RUW-07VRS-D0-64K01CL
Single license – WinStudio 07VRS Runtime 512000 variables, 1 Web client, Windows 7/XP/Xpe	SWS-WINSTU-RUW-07VRS-D0-512K-1CL
Single license – WinStudio 07VRS Runtime 1500 variables, 4 Web clients, Windows 7/XP/Xpe	SWS-WINSTU-RUW-07VRS-D0-1K5-4CL
Single license – WinStudio 07VRS Runtime 4000 variables, 4 Web clients, Windows 7/XP/Xpe	SWS-WINSTU-RUW-07VRS-D0-4K-4CL
Single license – WinStudio 07VRS Runtime 64000 variables, 4 Web clients, Windows 7/XP/Xpe	SWS-WINSTU-RUW-07VRS-D0-64K-4CL
Single license – WinStudio 07VRS Runtime 512000 variables, 4 Web clients, Windows 7/XP/Xpe	SWS-WINSTU-RUW-07VRS-D0-512K-4CL
Single license – WinStudio 07VRS Runtime 1500 variables, 8 Web clients, Windows 7/XP/Xpe	SWS-WINSTU-RUW-07VRS-D0-1K5-8CL
Single license – WinStudio 07VRS Runtime 4000 variables, 8 Web clients, Windows 7/XP/Xpe	SWS-WINSTU-RUW-07VRS-D0-4K-8CL
Single license – WinStudio 07VRS Runtime 64000 variables, 8 Web clients, Windows 7/XP/Xpe	SWS-WINSTU-RUW-07VRS-D0-64K-8CL
Single license – WinStudio 07VRS Runtime 512000 variables, 8 Web clients, Windows 7/XP/Xpe	SWS-WINSTU-RUW-07VRS-D0-512K-8CL
Single license – WinStudio 07VRS Runtime 1500 variables, Windows CE	SWS-WINSTU-RUN-07VRS-D0-WCE1K5
Single license – WinStudio 07VRS Runtime 4000 variables, Windows CE	SWS-WINSTU-RUN-07VRS-D0-WCE4K
Single license – WinStudio 07VRS Runtime 1500 variables, 1 Web client, Windows CE	SWS-WINSTU-RUW-07VRS-D0-WCE1K5-1CL
Single license – WinStudio 07VRS Runtime 4000 variables, 1 Web client, Windows CE	SWS-WINSTU-RUW-07VRS-D0-WCE4K-1CL
Single license – WinStudio 07VRS Runtime 1500 variables, 4 Web clients, Windows CE	SWS-WINSTU-RUW-07VRS-D0-WCE1K5-4CL
Single license – WinStudio 07VRS Runtime 4000 variables, 4 Web clients, Windows CE	SWS-WINSTU-RUW-07VRS-D0-WCE4K-4CL
Single license – WinStudio 07VRS Runtime 1500 variables, 8 Web clients, Windows CE	SWS-WINSTU-RUW-07VRS-D0-WCE1K5-8CL
Single license – WinStudio 07VRS Runtime 4000 variables, 8 Web clients, Windows CE	SWS-WINSTU-RUW-07VRS-D0-WCE4K-8CL
WinStudio engineering & runtime options	
Description	**Type code**
Single license – WinStudio 07VRS Engineering and Runtime 1500 variables, Windows 7/XP/Xpe	SWS-WINSTU-RUD-07VRS-D0-1K5
Single license – WinStudio 07VRS Engineering and Runtime 4000 variables, Windows 7/XP/Xpe	SWS-WINSTU-RUD-07VRS-D0-4K
Single license – WinStudio 07VRS Engineering and Runtime 64000 variables, Windows 7/XP/Xpe	SWS-WINSTU-RUD-07VRS-D0-64K
Single license – WinStudio 07VRS Engineering and Runtime 512000 variables, Windows 7/XP/Xpe	SWS-WINSTU-RUD-07VRS-D0-512K

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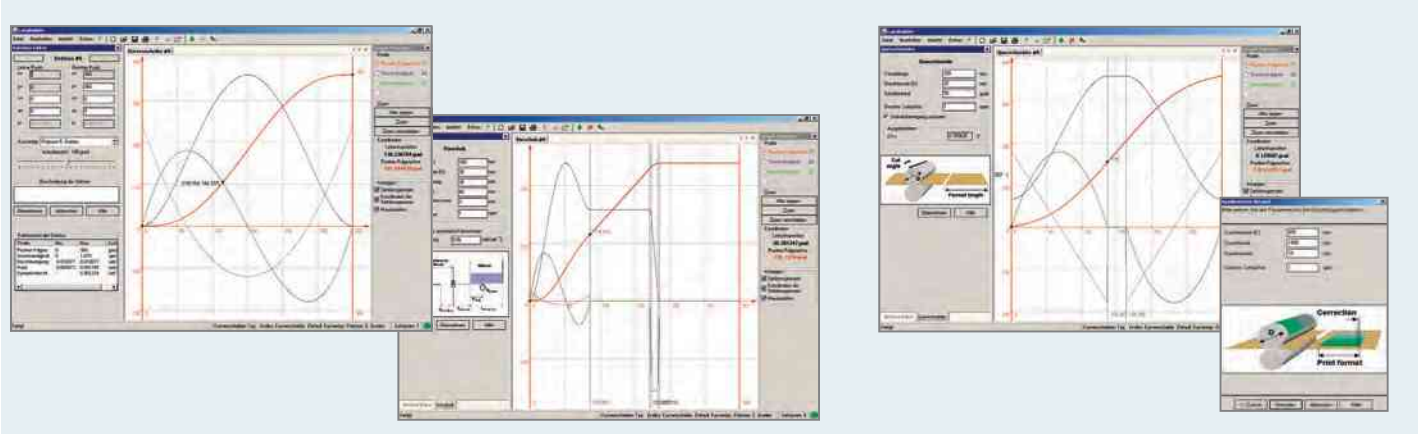
IndraWorks tool: CamBuilder – intuitive software tool for cam creation

The graphics-oriented software tool CamBuilder facilitates the creation of cams on the PC. With the help of dialog-controlled inputs, all requirements and special features of applications, such as cross cutters, feed axes or printing length corrections, are implemented quickly and reliably. With minor effort, the data is transferred to our drives or controls in a short time.

CamBuilder is the optional toolbox integrated in the IndraWorks engineering framework. But CamBuilder is also available as a stand-alone tool and can be used independently of the controls and drive systems used.

Your benefits

- Easy creation of cams with the help of graphical objects
- Convenient editing of existing cams
- Editing of several cams at the same time
- Utilization of motion laws according to VDI 2143
- Transmitting and receiving of cams in Rexroth drives and controls
- Automatic display of position, acceleration, velocity, and jerk
- Support for frequent requirements provided by wizards
- Import of point tables for partial areas of the cam
- Automatic detection and calculation of marginal conditions of the cam
- Zoom functionality
- Switching between standardized and evaluated views
- Import/export functionality with various formats



CamBuilder – software tool for fast and easy creation of cams

Bosch Rexroth AG, 72 604 EN/2012-04

CamBuilder – technical data

System		IndraDrive	IndraMotion MLC	IndraMotion MLD	IndraLogic XLC
IndraWorks variants					
IndraWorks ML*		●	●	●	●
IndraWorks MTX		●	–	●	–
IndraWorks MLD		●	–	●	–
IndraWorks D		●	–	–	–
IndraWorks Ds		●	–	–	–
General					
Motion laws according to VDI 2143		●	●	●	●
Graphical editing of cams		●	●	●	●
Creation of cams		●	●	●	●
Creation of segmented motion profiles		●	●	●	●
Graphical output of the calculated cam		●	●	●	●
List of extreme values of the cam		●	●	●	●
Cam table display		●	●	●	●
Data management incl. import/export		●	●	●	●
Cam conversion to cam table		●	●	●	●
Conversion of cam to MotionProfile		●	●	●	●
Conversion of cam to FlexProfile		–	●	–	●
Display of position, acceleration, velocity, and jerk		●	●	●	●
Creation of function block for PLC program		–	●	–	●
Processing aids					
Graph editor		●	●	●	●
Motion editor		●	●	●	●
Event editor		–	•	–	•
Variable editor		●	●	●	●
Formula editor		●	●	●	●
Cam table editor		●	●	●	●
Project explorer		●	●	●	●
Application-specific wizards					
Cross cutter		●	●	●	●
Feeder		●	●	●	●
Printing length correction		●	●	●	●
Flying cut-off		●	●	●	●
Motion laws					
Rest in rest	Standstill	●	●	●	●
	Sine curve	●	●	●	●
	Inclined sine curve	●	●	●	●
	Acceleration-optimal inclined sine curve	●	●	●	●
	Moment-inclined sine curve	●	●	●	●
	Sinusoid of Gutman	●	●	●	●
	Modified sine curve	●	●	●	●
	Modified acceleration trapezoid	●	●	●	●
	Quadratic parabola	●	●	●	●
	Polynomial 5th order	●	●	●	●
	Polynomial 7th order	●	●	●	●
	Polynomial 8th order	●	●	●	●

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CamBuilder – technical data/ordering data

System			IndraDrive	IndraMotion MLC	IndraMotion MLD	IndraLogic XLC
Motion laws						
Rest to velocity	Polynomial 5th order		●	●	●	●
	Polynomial 7th order		●	●	●	●
Velocity to velocity	Constant velocity		●	●	●	●
	Polynomial 5th order		●	●	●	●
	Polynomial 7th order		●	●	●	●
	Modified sine curve		●	●	●	●
Velocity to rest	Polynomial 5th order		●	●	●	●
	Polynomial 7th order		●	●	●	●
General motion	Polynomial 2nd order		●	●	●	●
	Polynomial 3rd order		●	●	●	●
	Polynomial 4th order		●	●	●	●
	Polynomial 5th order		●	●	●	●
	Polynomial 7th order		●	●	●	●
	Polynomial 8th order		●	●	●	●
Extended motion	Resulting hub	Velocity 2nd order (Startacc. zero)	●	●	●	●
		Velocity 2nd order (Endacc. zero)	●	●	●	●
		Linear velocity	●	●	●	●
		Linear acceleration	●	●	●	●
	Resulting master axis range	Acceleration-limited motion (trapezoid profile)	●	●	●	●
		Acceleration-limited motion (sinusoid profile)	●	●	●	●
		Jerk-limited motion (trapezoid profile)	●	●	●	●
	Miscellaneous	Velocity-limited polynomial 5th order	●	●	●	●
		Free of harmonics polynomial 5th order	●	●	●	●
		Acceleration-limited (trapezoid profile)	●	●	●	●
Free cam table for user-defined motion definition			●	●	●	●

● Default ▼ In preparation ○ Optional – Not available

Ordering data for software	
Description	**Type code**
Software CD, cam editor CamBuilder	SWA-CAM*PC-INB-xxVRS-D0-CD650
Single-license, cam editor CamBuilder in IndraWorks	SWS-IWORKS-CAM-xxVRS-D0
Multiple-license (25), cam editor CamBuilder in IndraWorks	SWS-IWORKS-CAM-xxVRS-D0-M25
Ordering data for documentation	
Description	**Type code**
Application manual, user manual	DOK-IWORKS-CAMBUIL*Vxx-FKxx-DE-P

xx = software/firmware version

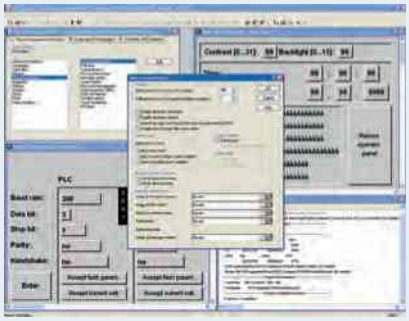
IndraWorks tool: VI-Composer – the comfortable software for easy visualization and parameterization

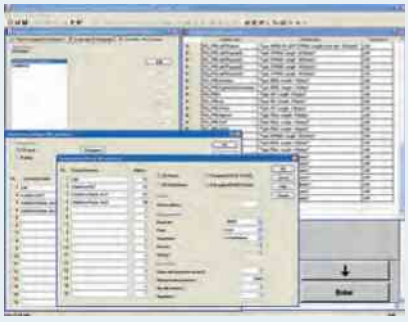
VI-Composer is an easy but powerful project development tool for the visualization and parameterization of system-related data of the IndraControl VCP and VCH devices. In this convenient development environment, you can efficiently create your individual application, based on the usual Windows look-and-feel. The programming result can then be used on the various IndraControl VCP and VCH devices as often as desired.

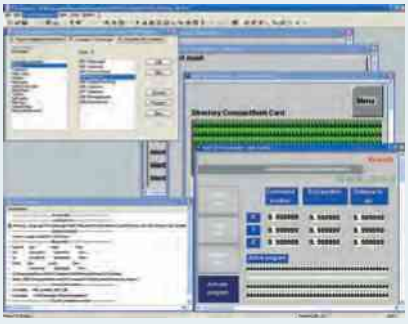
The fully graphical VI-Composer software allows you to develop projects for IndraControl VCP and VCH devices according to the WYSIWYG (What You See Is What You Get) principle. Text, variables and graphics are immediately represented just as they will be displayed by the IndraControl VCP and VCH devices. Predefined masks and comprehensive graphics libraries with numerous industry-compatible screen objects facilitate the creation of your applications. Based on Windows-conforming operation, you describe all variables depending on the particular control, whereas masks, graphics, recipes and the like can be created independently of any control. VI-Composer provides direct access to the IndraWorks database and, thus, to all variables of the controls and drives. The performance is completed by comprehensive help functions.

Your benefits

- Language management of the application with up to 16 languages
- Messaging and recording system
- Font editor for creating your own character sets
- Easy graphics incorporation via OLE
- Direct access to all control and drive variables
- Project and firmware download for downloadable functions
- Integrated creation of documentation and online help
- Predefined masks, curves and bar graphs
- Definition of free menu structures
- Screen elements: texts, variables, graphics, switches, buttons, drop-down list boxes, tables, etc.







VI-Composer – efficient programming of your application in a convenient development environment

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VI-Composer – technical data/ordering data

IndraWorks VI-Composer	
Development license for operation system	Windows XP/2000/NT/7
Firmware	Integrated in all VCP/VCH devices
Variables	65,535
Connections	Download: Ethernet TCP/IP
Communication	Serial, PROFIBUS
Messages	9,999
Messaging buffer	3,000
Protocol driver	3S serial, Rexroth BUEP19E, BRC-Symbolic, DeviceNet, IndraLogic, PROFIBUS
Support of Asian characters	●
Print reports	●
Firmware download	●
Application upload	●
Recipe handling	●
Messaging and recording system	●
Online help	●
Integrated creation of documentation	●
Variables represented by curves and bar graphs	●
Translation support for multi-lingual projects	●
Graphics incorporation via OLE	With terminals with graphics capability
Development license	German/English

● Default

Ordering data for software	
Description	**Type code**
VI-Composer software CD	SWA-VIC*PC-INB-xxVRS-D0-CD650
Ordering data for documentation	
Description	**Type code**
Application manual, user manual	DOK-SUPPL*-VIC*BEDIEN*-AWxx-DE-P

● Default; xx = software/firmware version

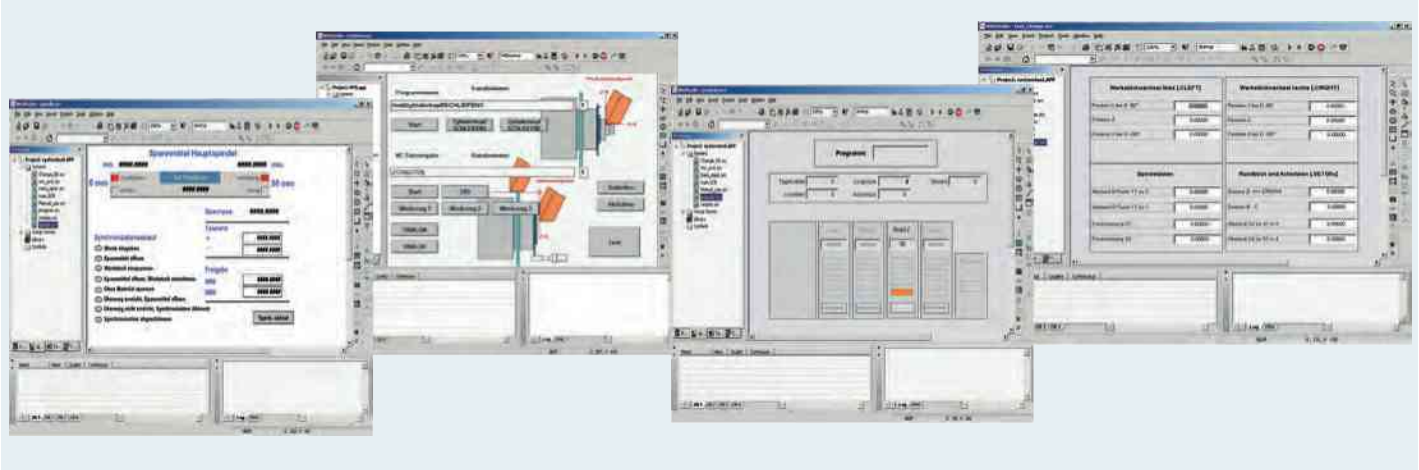
IndraWorks tool: WinStudio – intelligent software for creating graphical HMI interfaces

WinStudio is the innovative visualization module of the IndraWorks software framework for consistent engineering and user-friendly operation. WinStudio allows you to create your individual applications quickly, easily and efficiently – with one tool for all applications.

Together with the embedded PCs and the PC-based HMI solutions from Rexroth, WinStudio ensures maximum functionality and optimum performance. The flexible licensing model is available in development and runtime versions. Needing only one development version, you can adapt your applications as often as desired and use them with various Runtime versions. This design allows continuous improvement to your machines and is also very cost effective.

Your benefits

- Less project development and maintenance work through a uniform visualization software
- Clearly organized selection of objects via the project explorer
- Easy creation of screens with comprehensive libraries
- Dynamic generation of websites
- Easy project planning without knowledge of high-level languages
- Graded software packages for individual adaptation
- UNICODE characters
- Auto-screen scaling



WinStudio – easy and effective project planning in the development environment by drag-and-drop

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WinStudio – technical data/ordering data

Type	WinStudio lite	WinStudio 1.5 k	WinStudio 4 k	WinStudio 64 k	WinStudio 512 k	WinStudio lite	WinStudio 1.5 k	WinStudio 4 k
Operating system Runtime license	WinXP/2000/ Server 2003/ Vista	WinXP/2000/ Server 2003/ Vista	WinXP/2000/ Server 2003/ Vista	WinXP/2000/ Server 2003/ Vista	WinXP/2000/ Server 2003/ Vista	WinCE	WinCE	WinCE
Operating system development license	WinXP/2000/ Server 2003/ Vista	WinXP/2000/ Server 2003/ Vista	WinXP/2000/ Server 2003/ Vista	WinXP/2000/ Server 2003/ Vista	WinXP/2000/ Server 2003/ Vista	–	–	–
Max. number of variables	500	1,500	4,000	64,000	512,000	500	1,500	4,000
Max. array size	256	256	512	1,024	16,384	256	256	512
Max. number of classes	32	32	32	64	512	32	32	32
Recipe handling (UNICODE, XML)	–	●	●	●	●	–	●	●
.NET controls	●	●	●	●	●	–	–	–
ODBC	●	●	●	●	●	–	–	–
Mathematics	●	●	●	●	●	●	●	●
Alarm/events	–	●	●	●	●	–	●	●
History	–	●	●	●	●	–	●	●
Driver	1	3	5	8	8	1	3	3
OPC server	–	●	●	●	●	–	●	●
OPC client	●	●	●	●	●	●	●	●
TCP/IP server	●	●	●	●	●	●	●	●
TCP/IP client	–	●	●	●	●	–	●	●
DDE server/client	–	●	●	●	●	–	–	–
Tags database	●	●	●	●	●	●	●	●
Web clients (optional from WinStudio 7.2)	–	1/4/8	1/4/8	1/4/8	1/4/8	–	1/4/8	1/4/8

● Default – Not available

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WinStudio – ordering data

Ordering data for software	
Description	**Type code**
WinStudio software DVD	SWA-WINSTU-RUD-xxVRS-D0-DVD
RUD/1.5K (Editor licenses Windows 2K/XP)	SWS-WINSTU-RUD-xxVRS-D0-1K5
RUD/4K (Editor licenses Windows 2K/XP)	SWS-WINSTU-RUD-xxVRS-D0-4K
RUD/64K (Editor licenses Windows 2K/XP)	SWS-WINSTU-RUD-xxVRS-D0-64K
RUD/512K (Editor licenses Windows 2K/XP)	SWS-WINSTU-RUD-xxVRS-D0-512K
RUN/1.5K (Runtime licenses Windows 2K/XP)	SWS-WINSTU-RUN-xxVRS-D0-1K5
RUN/4K (Runtime licenses Windows 2K/XP)	SWS-WINSTU-RUN-xxVRS-D0-4K
RUN/64K (Runtime licenses Windows 2K/XP)	SWS-WINSTU-RUN-xxVRS-D0-64K
RUN/512K (Runtime licenses Windows 2K/XP)	SWS-WINSTU-RUN-xxVRS-D0-512K
RUN/4K – 1 Web client (Runtime licenses Windows 2K/XP with Web client)	SWS-WINSTU-RUW-xxVRS-D0-1K5-1CL
RUN/1K5 – 1 Web client (Runtime licenses Windows 2K/XP with Web client)	SWS-WINSTU-RUW-xxVRS-D0-4K-1CL
RUN/64K – 1 Web client (Runtime licenses Windows 2K/XP with Web client)	SWS-WINSTU-RUW-xxVRS-D0-64K0-1CL
RUN/512K – 1 Web client (Runtime licenses Windows 2K/XP with Web client)	SWS-WINSTU-RUW-xxVRS-D0-512K-1CL
RUN/1K5 – 4 Web clients (Runtime licenses Windows 2K/XP with Web client)	SWS-WINSTU-RUW-xxVRS-D0-1K5-4CL
RUN/4K – 4 Web clients (Runtime licenses Windows 2K/XP with Web client)	SWS-WINSTU-RUW-xxVRS-D0-4K-4CL
RUN/64K – 4 Web clients (Runtime licenses Windows 2K/XP with Web client)	SWS-WINSTU-RUW-xxVRS-D0-64K0-4CL
RUN/512K – 4 Web clients (Runtime licenses Windows 2K/XP with Web client)	SWS-WINSTU-RUW-xxVRS-D0-512K-4CL
RUN/1K5 – 8 Web clients (Runtime licenses Windows 2K/XP with Web client)	SWS-WINSTU-RUW-xxVRS-D0-1K5-8CL
RUN/4K – 8 Web clients (Runtime licenses Windows 2K/XP with Web client)	SWS-WINSTU-RUW-xxVRS-D0-4K-8CL
RUN/64K – 8 Web clients (Runtime licenses Windows 2K/XP with Web client)	SWS-WINSTU-RUW-xxVRS-D0-64K-8CL
RUN/512K – 8 Web clients (Runtime licenses Windows 2K/XP with Web client)	SWS-WINSTU-RUW-xxVRS-D0-512K-8CL
RUN/1.5K – CE devices (Runtime licenses for Windows CE devices)	SWS-WINSTU-RUN-xxVRS-D0-WCE1K5
RUN/4K – CE devices (Runtime licenses for Windows CE devices)	SWS-WINSTU-RUN-xxVRS-D0-WCE4K
RUN/1K5 – 1 Web client (Runtime licenses Windows CE with Web client)	SWS-WINSTU-RUW-xxVRS-D0-WCE1K5-1CL
RUN/4K – 1 Web client (Runtime licenses Windows CE with Web client)	SWS-WINSTU-RUW-xxVRS-D0-WCE4K-1CL
RUN/1K5 – 4 Web clients (Runtime licenses Windows CE with Web client)	SWS-WINSTU-RUW-xxVRS-D0-WCE1K5-4CL
RUN/4K – 4 Web clients (Runtime licenses Windows CE with Web client)	SWS-WINSTU-RUW-xxVRS-D0-WCE4K-4CL
RUN/1K5 – 8 Web clients (Runtime licenses Windows CE with Web client)	SWS-WINSTU-RUW-xxVRS-D0-WCE1K5-8CL
RUN/4K – 8 Web clients (Runtime licenses Windows CE with Web client)	SWS-WINSTU-RUW-xxVRS-D0-WCE4K-8CL
Ordering data for accessories	
Description	**Type code**
USB dongle	B-AC USB-Dongle
Ordering data for documentation	
Description	**Type code**
Application manual, user manual	DOK-CONTRL-WIS*PC**Vxx-KBxx-DE-P

xx = software/firmware version