KeTop Operation & Monitoring







KeTop Operation and Monitoring

Mobile and stationary visualization solutions

KeTop offers both stationary as well as mobile operating devices for easy implementation of all possible visualization and operating tasks. Performance and size of the devices are scalable; depending on the model, membrane keyboards, touchscreens as well as multitouch monitors – on request with unique haptic elements – are available.

Maximum ergonomics and best-possible operating efficiency have priority and ensure maximum productivity.

Another strength of the KeTops are the extensive customization possibilities that allow the customer to make specific modifications to the hardware and software. In addition, there are also three different software packages.

KeTops are available with three software packages: Embedded, Trend and Style.

Embedded contains only an operating system and also forms the basis for the Trend and Style versions. The Trend software package also contains a standard visualization application and the Style variant offers modern multitouch visualization.

Embedded Trend Style Customizing in hardware and software KeStudio + Style editor Extensive customizing can be easily implemented with the KeTop devices for hous-KeStudio Multitouch gestures ings, keyboard layout and software. In addition to machine visualizations in the KeView Trend **KeView Style** customer's own design, individually designed housings and housing variants are also possible. **Optional packages** Linux / Windows





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KeTop T10 directMove Handheld terminal

Product properties

- Ideal for the intuitive teach-in of 6-axis robots
- Can be used without robot programming knowledge
- Time saving of approximately 20% during teach-in
- Detects its orientation in space
- Customizing of keyboard and display icons optional



Short description

The KeTop T10 directMove detects its orientation and direction in three-dimensional space. The operator can therefore easily specify the desired movement or rotation of the robot's TCP by indicating the KeTop T10 directMove in the direction of motion and then by deflecting a small joystick – regardless of his/her position relative to the robot. The speed of motion can be changed by adjusting the intensity of the joystick deflection. With the KeTop T10 directMove, the individual path points are thereby determined and finely adjusted. If necessary, standard operating devices and screen devices such as laptops can also be used for programming.

Maximum flexibility is achieved through four operating modes that are displayed on the 1.5" color display using icons:

directMove mode: the robot follows the direction instructions from the KeTop T10 directMove completely free in space.

snap2grid mode: use of defined coordinate systems as reference directions for the KeTop T10 directMove for precisely directed movements of the robot.

virtual handle mode: the KeTop T10 directMove acts as a virtual handle on the Tool Center Point to change its alignment quickly and easily.

axial movement mode: for the direct movement of individual robot axes as with a conventional handheld operating device.

Display	
Туре	TFT
Size	1.45" (1:1)
Resolution	128 x 128 pixels
Backlight	LED

Operating elements	
Membrane keyboard	Max. 10 buttons
Joystick	2-axis with button functionality
Characteristics	KEBA robotics



Safety elements	
Enabling switch	3 positions, 2 channels, B10d=1,000,000
Emergency-stop button / gray stop button	2 channels, B10d=250,000
Safety category	PLe acc. to EN 13849-1 or SIL3 acc. to EN 61508 can be achieved

Interfaces	
Communication	Ethernet 10 Mbit/s

Dimensions, weight	
Dimensions LxWxH	210 x 62 x 75 mm
Weight	Approx. 250 g

Environmental conditions	
Operating temperature	0 °C to 45 °C
Storage temperature	-25 °C to 70 °C
Relative air humidity	5% to 95% (non-condensing)
Vibration resistance	10 Hz \leq f \leq 57 Hz with 0.075 mm, 57 Hz \leq f \leq 150 Hz with 1 g (EN 61131-2)
Shock resistance	15 g / 11 ms (EN 61131-2)

General	
Power supply	24 V DC
Max. switch-on current	<1 A
Power consumption	1.2 W
Protection class	III acc. to EN 61131-2 or EN 50178
Protection rating	IP54
Certification	UL, CE
Sensor system	6D IMU (acceleration and gyro sensors)
Accessories	Wall mount Cable 3 m / 10 m Connection box IP20
Directives	Machinery Directive 2006/42/EC EMC Directive 2004/108/EC RoHs Directive 2011/65/EU



KeTop T20 eco / techno Handheld terminal

Product properties

- Robust design guarantees maximum availability
- Compact and ergonomic construction with low weight for comfortable, fatigue-free operation
- KeTop T20 techno with smart keypad: unlimited number of keyboard layouts on one device by means of a freely programmable display keyboard with tactile keys



КеТор Т20 есо

KeTop T20 techno

Short description

Handheld operating devices of the KeTop T20 series are compact, lightweight and feature a high-performance ARM-Cortex A8 processor. They are very versatile and can be equipped with various optional operating elements, such as key switches, push buttons, hand wheel and/or (axis) selection switch. KeTop T20 devices can thus be optimized for any application.

The low weight and the compact and ergonomic design make long, fatigue-free operation possible. The devices are equally suited for left- and right-hand operation and can be optimally adapted to the user's hand by means of an adjustable strap.

Display

	T20 eco	T20 techno	
Туре	TFT		
Size	3.4" (16:9)		
Resolution	WQVGA 480 x 272 pixels		
Touchscreen	Analog resistive		
Backlight	LED		

Operating elements

	Т20 есо	T20 techno	
Membrane keyboard	Max. 36 buttons, 4 LEDs	28 buttons, tactile LCD keyboard	
Selector switch*	2, 4 or 16 levels		
Key switch*	2 or 3 positions		
Push button*	No-detent / detent		
Hand wheel (optional in keyboard section)	Magnetic locking, 100 impulses/rotation	-	
Characteristics	KEBA standard / KEBA robotics		

*... internally or externally wired // up to two elements marked with * can be selected of which up to one may be externally wired



Safety elements		
	Т20 есо	T20 techno
Enabling switch	3 positions, 2 channels, B10d=1,000,000	
Emergency-stop button / gray stop button	2 channels, B10d=250,000	
Safety category	PLe acc. to EN 13849-1 or SIL3 acc. to EN 61508 can be achieved	

Software packages		
	Т20 есо	T20 techno
KeTop T20 Embedded	Windows CE® 6.0 / Kebian Linux	Windows CE® 6.0
KeTop T20 Trend	For details, see KeView visualization software	

CPU board		
	Т20 есо	T20 techno
CPU	ARM Cortex A8	
Onboard memory	Up to 256 MB flash, 128 MB SDRAM	128 MB flash, 128 MB SDRAM
Removable storage	MicroSD card (optional)	MicroSD card

Interfaces		
	T20 eco	T20 techno
Communication	1x Ethernet 10/100 Mbit/se	c, 1x RS-422-A / RS-232-C
Transfer	USB 2.0 (optional)	USB 2.0

Dimensions, weight		
	Т20 есо	T20 techno
Dimensions LxWxH	226 x (82-162) x 55 mm	
Weight	Approx. 480 g (without optional hand wheel)	Approx. 520 g

Environmental conditions		
	Т20 есо	T20 techno
Operating temperature	0 °C to	9 45 °C
Storage temperature	-20 °C to 70 °C	
Relative air humidity	5% to 95% (no	on-condensing)
Vibration resistance	10 Hz \leq f \leq 57 Hz with 0.075 mm, 57 Hz \leq f \leq 150 Hz with 1 g (EN 61131-2)	
Shock resistance	15 g / 11 ms	(EN 61131-2)



KeTop T20 eco / techno Handheld terminal

General		
	T20 eco	T20 techno
Power supply	24 \	/ DC
Max. switch-on current	5.6 A	
Power consumption	6 W	7.7 W
Protection class	III acc. to EN 61131-2 or EN 50178	
Protection rating	IP65	
Certification	UL, CE	
Accessories	Magnetic holder, wall mount (various)	
	Cable 2.5 m / 5 m / 7 m / 10 m / 15 m / 20 m	
	Connection box IP20	
	-	Key editor software
	Machinery Directive 2006/42/EC	
Directives	EMC Directive 2004/108/EC	
	RoHs Directive 2011/65/EU	



Overview of the available operating and safety elements



Overview of the keyboards



KeTop T20 eco Standard/robotics Keyboard



KeTop T20 eco Numeric keyboard with hand wheel



KeTop T20 techno LCD smart keypad



KeTop T55 Handheld terminal

Product properties

- The high-performance, proven universal device for performing all operating and visualization tasks
- High-quality display (6.5" TFT VGA) for clear and well-arranged presentation, also suitable for complex processes
- Many equipment options for individual adaptations



Short description

With the high-performance ARM Cortex A8 processor, the KeTop T55 forms a powerful embedded platform with low power consumption. Available as operating system is either Windows CE 6.0 or KeBian Linux. Data can be transferred via USB port.

To increase the operational safety of the devices, the product design is based on a modern FE computer simulation. The round shape and the double-walled housing are the result of this development, whereby shock resistance is ensured to drop heights of up to 1.5 m. With its many grip and holding positions, the KeTop T55 can be used comfortably and fatigue-free by right- and left-handed persons.

Display	
Туре	TFT
Size	6.5" (4:3)
Resolution	VGA 640 x 480 pixels
Touchscreen	Analog resistive
Backlight	LED

Operating elements		
Membrane keyboard	Max. 3x 16 buttons, 4 LEDs	
Key switch*	2 or 3 positions	
Potentiometer*	\checkmark	
Push button*	No-detent / detent	
Hand wheel**	50 impulses/rotation	
Joystick**	3-axis	
Characteristics	KEBA standard / KEBA robotics	

*... possible built-in elements at left: an element marked with * can be selected for the left operating area

**... possible built-in elements in middle: an element marked with ** can be selected for the middle operating area



Safety elements	
Enabling switch	2x: 3 positions, 2 channels, integrated safety electronics
Emergency-stop button / gray stop button	2 channels
Safety category	PLe acc. to EN 13849-1 or SIL3 acc. to EN 61508

Software packages	
KeTop T55 Embedded	Windows CE® 6.0 / Kebian Linux
KeTop T55 Trend	For details, see KeView visualization software

CPU board	
CPU	ARM Cortex A8
Onboard memory	Up to 256 MB flash, 256 MB SDRAM

Interfaces	
Communication	1x Ethernet 10/100 Mbit/s, 1x RS-422-A / RS-232-C, 1x RS-232-C (Debug)
Transfer	USB 2.0

Dimensions, weight	
Dimensions LxWxH	250 x 250 x 125 mm (incl. handle)
Weight	Арргох. 1330 g

Environmental conditions	
Operating temperature	0 °C to 45 °C
Storage temperature	-20 °C to 70 °C
Relative air humidity	5% to 95% (non-condensing)
Vibration resistance	10 Hz \leq f \leq 57 Hz with 0.075 mm, 57 Hz \leq f \leq 150 Hz with 1 g (EN 61131-2)
Shock resistance	15 g / 11 ms (EN 61131-2)



KeTop T55 Handheld terminal

General	
Power supply	24 V DC
Max. switch-on current	5.6 A
Power consumption	8.6 W
Protection class	III acc. to EN 61131-2 or EN 50178
Protection rating	IP65
Certification	UL, CE, SIBE
Accessories	Wall mount (various, optionally with magnet) Cable 2.5 m / 5 m / 7 m / 10 m / 15 m / 20 m Connection box IP20
Directives	Machinery Directive 2006/42/EC EMC Directive 2004/108/EC RoHs Directive 2011/65/EU

Overview of the available operating and safety elements









KeTop T70 Handheld terminal

Product properties

- Maximum operating efficiency thanks to optional additional keyboard on rear of device
- High-resolution, brilliant display
- Scalable performance
- Ergonomic design



Short description

The KeTop T70 mobile terminal features a high-resolution display and can be equipped with a selection of high-performance ARM processors. It is ideally suited for demanding visualization and operating applications. The robust housing is lightweight and ergonomic and enables long and fatigue-free operation.

Unique features, such as the modular construction, which facilitates easy upgrades to newer processor technologies as application requirements grow, as well as an additional, optional keyboard on the rear of the device make the KeTop T70 a versatile handheld operating device built for the long term.

Display

Туре	TFT
Size	7" (9:16)
Resolution	WSVGA, 600 x 1024 pixels
Touchscreen	Analog resistive
Backlight	LED

Operating elements	
Membrane keyboard	Front: max. 21 buttons, rear (optional): max. 12 buttons
Selector switch*	2, 4 or 16 levels
Key switch*	2 or 3 positions
Push button*	No-detent / detent
Characteristics	KEBA standard / KEBA robotics

*... internally or externally wired // an element marked with * can be selected

Safety elements	
Enabling switch	3 positions, 2 channels, B10d=1,000,000, optional safety electronics
Emergency-stop button / gray stop button	2 channels, B10d=250,000
Safety category	PLe acc. to EN 13849-1 or SIL3 acc. to EN 61508 can be achieved

Software packages	
KeTop T70 Embedded	Windows Embedded Compact® (on request) / Kebian Linux
KeTop T70 Trend	For details, see KeView visualization software

CPU board	
CPU	ARM Cortex A9
Cores	Single-core / dual-core 1 GHz
Onboard memory	4 GB flash, at least 1 GB RAM

Interfaces	
Communication	1x Ethernet 10/100 Mbit/s
Transfer	USB 2.0

Dimensions, weight	
Dimensions LxWxH	251 x 212 x 73 mm
Weight	Approx. 950 g

Environmental conditions	
Operating temperature	0 °C to 45 °C single-core / 40 °C dual-core
Storage temperature	-25 °C to 70 °C
Relative air humidity	5% to 95% (non-condensing)
Vibration resistance	10 Hz < f < 57 Hz with 0.075 mm, 57 Hz < f < 150 Hz with 1 g (EN 61131-2)
Shock resistance	15 g / 11 ms (EN 61131-2)

General	
Power supply	24 V DC
Max. switch-on current	5.6 A
Power consumption	Up to 12 W
Protection class	III acc. to EN 61131-2 or EN 50178
Protection rating	IP65
Certification	UL, CE
Accessories	Magnetic holder, wall mount (various) Cable 2.5 m / 5 m / 7 m / 10 m / 15 m / 20 m Connection box IP20
Directives	Machinery Directive 2006/42/EC EMC Directive 2004/108/EC RoHs Directive 2011/65/EU



KeTop T70 Handheld terminal

Overview of the available operating and safety elements









KeTop T200 Handheld terminal

Product properties

- Safe and rugged the tablet for industry
- Mobile PC performance with investment protection
- Replacement for stationary panels
- Ergonomic housing
- HD-ready display



Short description

The mobile KeTop T200 terminal features an ergonomic housing with brilliant, HD-ready display. Fast processors make possible demanding visualization and operating applications. With integrated safety elements, performance on a PC level and Windows Embedded Standard 7[®], it is a full-fledged replacement for stationary panels.

Unique features, such as the modular construction, which facilitates easy upgrades to newer processor technologies as application requirements grow, as well as an additional, optional keyboard on the rear of the device make the KeTop T200 a versatile handheld operating device built for the long term. For the performance upgrade, neither modifications to the visualization solution and software nor interventions in the machine concept are necessary.

Display	
Туре	TFT
Size	10.1"(16:10)
Resolution	WXGA 1280 x 800 pixels
Touchscreen	Analog resistive
Backlight	LED

Operating elements		
Membrane keyboard	Front: max. 36 buttons, rear (optional): max. 12 buttons	
Selector switch*	2, 4 or 16 levels	
Key switch*	2 or 3 positions	
Push button*	No-detent / detent	
Characteristics	KEBA Standard	

*... internally or externally wired // an element marked with * can be selected



Safety elements	
Enabling switch	1x (optional safety electronics) / 2x (integrated safety electronics), 3 positions, 2 channels, B10d=1,000,000
Emergency-stop button / gray stop button	2 channels, B10d=250,000
Safety category	without safety electronics: PLe acc. to EN 13849-1 or SIL3 acc. to EN 61508 can be achieved with safety electronics: PLe acc. to EN 13849-1 or SIL3 acc. to EN 61508 (with 2 enabling switches as standard)

Software packages	
KeTop T200 Embedded	Windows Embedded Standard 7® (64 bit) / Kebian Linux (on request)
KeTop T200 Trend	For details, see KeView visualization software
KeTop T200 Style (on request)	For details, see KeView visualization software

CPU board	
CPU	Intel Atom E3815
Cores	Single-core 1.46 GHz
GPU	Intel HD Graphics
Onboard memory	32 GB flash, 4 GB RAM (DDR3L)
Removable storage	SD card

Interfaces	
Communication	1x Ethernet 10/100 Mbit/s
Transfer	USB 2.0

Dimensions, weight	
Dimensions LxWxH	350 x 275 x 110 mm (incl. handle)
Weight	Approx. 1850 g

Environmental conditions	
Operating temperature	0 °C to 45 °C
Storage temperature	-25 °C to 70 °C
Relative air humidity	5% to 95% (non-condensing)
Vibration resistance	10 Hz < f < 57 Hz with 0.075 mm, 57 Hz < f < 150 Hz with 1 g (EN 61131-2)
Shock resistance	15 g / 11 ms (EN 61131-2)



KeTop T200 Handheld terminal

General		
Power supply	24 V DC	
Max. switch-on current	5.6 A	
Power consumption	Up to 15 W	
Protection class	III acc. to EN 61131-2 or EN 50178	
Protection rating	IP65	
Certification	UL, CE, SIBE (if enabling-switch safety electronics installed)	
Accessories	Wall mount (various) Cable 3 m / 5 m / 10 m / 15 m Connection box IP20 Touch stylus holder	
Directives	Machinery Directive 2006/42/EC EMC Directive 2004/108/EC RoHs Directive 2011/65/EU	

Overview of the available operating and safety elements









KeTop OP 4x0-LD/A Stationary operating device

Product properties

- For industrial applications
- Industrial-grade touch operation
- Expandable and adaptable



Short description

OP 4x0 operating panels are stationary operating devices for use in industrial environments. Thanks to the flexible construction, expansion is possible by means of additional modules, thereby facilitating an optimum, system-specific adaptation. The OP 4x0 series is designed as a monitor solution, i.e., the visualization runs centrally on the controller CPU.

Elegant front plate made of milled aluminum with opening for emergency-stop or additional toggle switch.

Display			
	OP 430-LD/A	OP 450-LD/A	OP 460-LD/A
Туре	TFT		
Size	8.4"	12.1"	15"
Resolution	800 x 600 pixels	800 x 600 pixels	1024 x 768 pixels
Touchscreen	Analog resistive		
Colors	256,000	256,000	16 million

Operating elements	
Membrane keyboard	10 membrane keys with tactile feedback

Optional RFID unit	
Reading range	40 mm from the front
Antenna installation	Fixed installation in the front plate
Communication protocol	Acc. to ISO 15693 or ISO 18000-3, Euromap 65 suitable
Signaling	Status LED on antenna print, can be read on the front plate of the operating panel
Signal frequency	13.56 MHz
Transmission power	200 mW (max. 250 mW)
Scanning rate	Configurable (standard: 10 scans/second)



Digital inputs	
Number of inputs	16 (DI0 - DI15) (not EN 61131-2 compliant)
Nominal voltage	24 V DC
Applied contact current	5 mA (supply exclusively by Vout)
Galvanic isolation	No
Status display	None
Min. update cycle	60 ms

Interfaces			
	OP 430-LD/A	OP 450-LD/A	OP 460-LD/A
Serial interface 115 kbit/s	RS-485-A		
Graphic interface	1x PL (Panel Link)		
Transmission range	Up to 30 m Up to 30 m Up to 20 m		

Dimensions, weight			
	OP 430-LD/A	OP 450-LD/A	OP 460-LD/A
Dimensions LxWxH	269 x 298 x 62.4 mm	336 x 372 x 63.2 mm	390 x 432 x 64.6 mm
Weight (without / with RFID)	2.83 / 2.87 kg	4.02 / 4.06 kg	6.12 / 6.16 kg

Environmental conditions		
Operating temperature	+5 °C to +55 °C	
Storage temperature	-40 °C to +70 °C	
Relative air humidity	5% to 95% (non-condensing)	
Vibration resistance / shock resistance	Acc. to EN 61131-2	

General			
	OP 430-LD/A	OP 450-LD/A	OP 460-LD/A
Nominal supply voltage	24 V DC (voltage limits acc. to EN 61131-2)		
Max. switch-on current	10 A		
Power consumption (without / with RFID)	12 W / 13 W 14 W / 15 W		
Max. power consumption (without / with RFID)	29 W / 30 W 31 W / 32 W		
Max. power consumption (USB module)	14 W at 12 V DC (optional)		
Max. power consumption (digital inputs)	3 W at 24 V DC (optional)		
Protection class	III acc. to EN 61131-2		
Protection rating	IP65 front side, IP20 rear side		



KeTop AP5xx Realtime-capable multitouch panel

Product properties

- Unique, realtime-capable multitouch
- Blind operation through haptic printing
- Extensive customizing options
- Perfect in combination with KeView Style



Short description

The new KeTop AP5xx panel line offers robust gesture operation though an industrial multitouch with integrated touch booster for use with gloves. The RealTime Multitouch is able to transmit user interactions directly to the control in realtime via EtherCAT or ProfiNet. This makes many mechanical built-in elements and membrane keys a thing of the past. With the new KeTop AP5xx line, your reduce your HMI variants to one panel and have full flexibility in the user interface thanks to the appropriate KeView Style software solution.

With the new Intel Atom CPU with 7th gen. Intel HD graphics acceleration, the KeTop AP5xx panel line is an ideal platform for visualization tasks. Multitouch gesture operation and modern graphic effects ensure a new user experience in machine operation.

Display		
	AP 515	AP 521
Туре	TF	-T
Size	15.6"	21.5"
Resolution	WXGA 1366 x 768 pixels	FullHD 1920 x 1080 pixels
Touchscreen	Projected capacitive multitouch	
Glass surface	High-gloss (optional anti-reflective)	
Backlight	LED (50,000 h)	

Operating elements	
Expansion panels	Optional expansion panels for emergency-stop, USB,
RealTime Widgets	RealTime Multitouch with RealTime Widgets (only available in KeTop AP5xx Style software package)

Software packages	
KeTop AP5xx Embedded	Kebian Linux / Windows (on request)
KeTop AP5xx Style	For details, see KeView visualization software



Digital I/Os	
Digital inputs	12 digital inputs (not EN 61131-2 compliant)
Digital outputs	4 digital outputs (not EN 61131-2 compliant)
Nominal voltage	24 V
Voltage ranges	-3 to 5 volt low, 15 to 30 volt high
Applied contact current	5 mA (supply exclusively by Vout)
Galvanic isolation	No
Min. update cycle	60 ms
Detached I/Os (optional)	XE040 module (24DI/8DO)

CPU board	
CPU	Intel Atom E3845
Memory	4 GB RAM
Cores	Quad-core 4 x 1.91 GHz
GPU	7th gen. Intel HD graphics
Removable storage	CFast card, SD card

Interfaces	
Communication	1x Gbit Ethernet LAN interface, 1x 100 Mbit Ethernet PLC interface
Transfer	4 x USB 2.0, 480 Mbit/s
Realtime Ethernet slave (optional)	EtherCAT / ProfiNet

Dimensions, weight		
Dimensions LxWxH	425 x 274 x 70 mm	552 x 343 x 70 mm
Weight	Approx. 4.9 kg	Approx. 6.9 kg

Environmental conditions	
Operating temperature	0 °C to 55 °C
Intelligent power management (optional)	Derating of backlight and CPU
Storage temperature	-20 °C to 60 °C
Relative air humidity	5% to 95% (non-condensing)
Vibration resistance	Acc. to EN 61131-2

General	
Power supply	24 V DC
Max. switch-on current	10 A
Power consumption	45-70 W
Protection class	III acc. to EN 61131-2
Protection rating	IP65 front side, if correctly installed
Certification	UL, CE
Accessories	RFID
Directives	EMC Directive 2004/108/EC. RoHs Directive 2011/65/EU



KeView Visualization software

Product properties

- Simple graphical editor for efficient project planning without programming knowledge
- Modern look and feel
- Intuitive gesture navigation
- Individual combinations of complex composite widgets
- Dynamic widgets
- Ideally matched to KeTop hardware solutions



Short description

KeView Trend, an HMI software program for efficient use and fast visualization creation with the help of a powerful function library, even without programming knowledge. Thanks to freely definable widgets and excellent interaction with KEBA operating devices, a short time-to-market is ensured. Freely programmable JAVA extensions open the door to nearly unlimited applications.

KeView Style is based on the latest Java 8 with JavaFX. Innovative application concepts can be easily implemented using ViewEdit, the graphic designer. With the integrated multitouch gestures and the diverse graphical possibilities, it is very easy to create modern HMI applications. A machine can thereby be operated as intuitively as a smartphone. With the RealTime Widgets developed by KEBA, a machine can be directly operated in real-time. By means of this innovation, hardware variants can be reduced and the HMI can be used to create a true user experience.





Pre-made functionalities			
		KeView Trend	KeView Style
Layouts		Predefined with Layout Manager	Freely selectable with Layout Manager
Side panels	Fade-in side panels		Х
Navigation concept			Gestures
User management		Level-based	Role-based
Alarm management		Х	Х
Diagnostic tools	SW oscilloscope	X*	Χ*
	I/O monitor	Χ*	Χ*
	Variable monitor	Χ*	Χ*
Process data management	Logging	Χ*	Χ*
	Graphical monitoring	Χ*	Χ*
	Envelope curve monitoring	Χ*	Χ*
Statistical evaluations	Histogram	Χ*	Χ*
	Correlation	Χ*	Χ*
Data management	Recipe management	Χ*	Χ*
	InfoLog (audit trail)	Χ*	Χ*
Navigation service	Menu editor		Х
	Predefined multitouch gestures		Х
Internationalization	Integrated language translation help	Х	Х
	Unit changeover feature	Х	Х

*...in development

Features											
		KeView Trend	KeView Style								
	Basic (numeric fields, labels, etc.)	Х	Х								
Predefined libraries	Advanced (radio buttons, analog meter, etc.)	Х	Х								
	Variable links (charts, graphs, etc.)	Х	Х								
Dynamic functions	Simple dynamization of characteristics through pre-made functions	Х	Х								
Composite widgets	Combination of complex widgets for working efficiently	Х	Х								
Central attribute management	Central assignment of texts, units and plausibility limits	Х	Х								
Video player	Playing of videos and audio files		Х								
3D model viewer	Display of 3D models and manipulation with gestures		Х								



KeView Visualization software

Adaptation possibilities										
		KeView Trend	KeView Style							
Styling	Simple adaptation to corporate design		CSS							
Openness	Flexible programmatic expansion through Java code	Х	Х							
Platform independence	Through Java virtual machine	Х	Х							

ViewEdit graphical editor										
	KeView Trend	KeView Style								
WYSIWYG editor	Preview of the finished application	Х	Х							
	Creation of applications without programming work	Х	Х							
Drag-n-Drop	Simple placement of elements on the canvas	Х	Х							
Alignment aids	Ruler, automatic centering, flushness, justification	Х	Х							
Target download	Download the finished application to the device with the press of a button	Х	Х							
Simulation	Simulation of the application with controller connection and variable update	Х	Х							
Style editor	Graphical editor for adapting the visual design of the applica- tion		Х							

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Manufacturer-independent connectivity											
	KeView Trend	KeView Style									
OPC UA	Х	Х									
Beckhoff ADS	Χ*	Χ*									
Siemens	Х	Х*									

*...in development

Technologies		
	KeView Trend	KeView Style
Programming language	Java	Java
Application model		Eclipse e4
Web viewer		Х
PDF viewer		Х
Web browser	Optional*	Optional*
VNC client	Optional	Optional

*...in development

System requirements												
	KeView Trend	KeView Style										
Hardware acceleration		Х										
Analog resistive touch	Х	X**										
Projected capacitive touch		Х										

**...with limited gesture function



KeTop Notes









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